NEW ISSUES
Book-Entry-Only

Electric Ratings: **S&P: "AA-"**
Moody's: "Aa2"
Wastewater Ratings: **S&P: "AA+"**
Moody's: "Aa2"
(See "MISCELLANEOUS: Ratings" herein)

PRELIMINARY OFFICIAL STATEMENT

$88,995,000*
CITY OF KNOXVILLE, TENNESSEE

$79,000,000* Electric System Revenue Bonds, Series OO-2022

OFFERED FOR SALE AT
10:15 A.M. E. S. T.
Wednesday, November 30, 2022

$9,995,000* Wastewater System Revenue Bonds, Series 2022C

OFFERED FOR SALE AT
11:15 A.M. E. S. T.
Wednesday, November 30, 2022

Cumberland Securities Company, Inc.
Municipal Advisor

November 17, 2022

*Subject to Change

This *Preliminary Official Statement* and the information contained herein are subject to completion or amendment. These securities may not be sold nor may offers to buy be accepted prior to the time the *Official Statement* is delivered in final form. Under no circumstances shall this *Preliminary Official Statement* constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such jurisdiction.

PRELIMINARY OFFICIAL STATEMENT DATED NOVEMBER 17, 2022

NEW ISSUES
Book-Entry-Only

Electric Ratings:	**S&P:**	**"AA-"**
	Moody's:	**"Aa2"**
Wastewater Ratings:	**S&P:**	**"AA+"**
	Moody's:	**"Aa2"**

In the opinion of Bond Counsel, based on existing law and assuming compliance with certain tax covenants of the Knoxville Utilities Board ("KUB"), interest on the Bonds will be excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax, except as described under the heading "LEGAL MATTERS-Tax Matters" herein. For an explanation of certain tax consequences under federal law which may result from the ownership of the Bonds, see the discussion under the heading "LEGAL MATTERS – Tax Matters" herein. Under existing law, the Bonds and the income therefrom will be exempt from all state, county and municipal taxation in the State of Tennessee, except Tennessee franchise and excise taxes. (See "LEGAL MATTERS – Tax Matters" herein).

$88,995,000*
CITY OF KNOXVILLE, TENNESSEE
$79,000,000* Electric System Revenue Bonds, Series OO-2022
$9,995,000* Wastewater System Revenue Bonds, Series 2022C

Dated: Date of Issuance (assume December 16, 2022) Due: As shown herein

The $79,000,000* Electric System Revenue Bonds, Series OO-2022 ("Electric Bonds" or "Electric Series OO-2022 Bonds") and the $9,995,000* Wastewater System Revenue Bonds, Series 2022C ("Wastewater Bonds" or "Series 2022C Bonds"), collectively, referred to as the "Bonds" are issuable in book-entry-only form. The Bonds will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"). DTC will act as securities depository of the Bonds. So long as Cede & Co. is the registered owner of the Bonds, as the nominee for DTC, principal and interest with respect to the Bonds shall be payable to Cede & Co., as nominee for DTC, which will, in turn, remit such principal and interest to the DTC participants for subsequent disbursements to the Beneficial Owners of the Bonds. Individual purchases of the Bonds will be made in book-entry-only form only, in denominations of $5,000 or integral multiples thereof and will bear interest at the annual rates as shown on the inside cover. Interest on the Electric Bonds will be payable semi-annually on January 1 and July 1 each year, commencing July 1, 2023. Interest on the Wastewater Bonds will be payable semi-annually on April 1 and October 1 each year, commencing April 1, 2023. Beneficial Owners of the Bonds will not receive physical delivery of Bond certificates. (See "The Bonds" - Book-Entry-Only System herein.)

The Bonds are being issued to provide funds to pay the costs of extensions and improvements to the Electric System and the Wastewater System, as described herein, and to pay the cost of issuing the Bonds as more fully described in a subsequent part of this *Preliminary Official Statement*.

The Bonds will be issued pursuant to and secured by bond resolutions of the City of Knoxville ("City") and will be payable solely from the net revenues of the Electric System and the Wastewater System, respectively, of the City, which are operated by the Knoxville Utilities Board ("KUB"). The Bonds do not constitute a debt of the City within the meaning of any constitutional, City Charter or statutory limitation, and neither the faith and credit of the State of Tennessee nor the faith and credit of the City or any other political subdivision are pledged to the payment of the principal of or premium or interest on the Bonds.

A portion of the Bonds are subject to optional redemption prior to maturity as described herein.

Bonds are offered when, as and if issued by the City subject to the approval of the legality thereof by Bass, Berry & Sims PLC, Knoxville, Tennessee, Bond Counsel, whose opinions will be delivered with the Bonds. Certain legal matters will be passed upon for Knoxville Utilities Board by Hodges, Doughty & Carson, PLLC, Knoxville, Tennessee, General Counsel to the Knoxville Utilities Board. It is expected the Bonds will be available for delivery in book-entry-only form, through the facilities of The Depository Trust Company, New York, New York on or about December __, 2022.

Cumberland Securities Company, Inc.
Municipal Advisor

__, 2022

* Subject to change.

ELECTRIC SYSTEM REVENUE BONDS
SERIES OO-2022

Maturity (July 1)	Amount*	Interest Rate	Yield	CUSIP**	Maturity (July 1)	Amount*	Interest Rate	Yield	CUSIP**
2024	$1,470,000				2039	$2,685,000			
2025	1,530,000				2040	2,790,000			
2026	1,595,000				2041	2,905,000			
2027	1,660,000				2042	3,025,000			
2028	1,730,000				2043	3,150,000			
2029	1,800,000				2044	3,275,000			
2030	1,870,000				2045	3,410,000			
2031	1,950,000				2046	3,550,000			
2032	2,030,000				2047	3,695,000			
2033	2,110,000				2048	3,845,000			
2034	2,195,000				2049	4,000,000			
2035	2,285,000				2050	4,165,000			
2036	2,380,000				2051	4,335,000			
2037	2,475,000				2052	4,510,000			
2038	2,580,000								

(Accrued Interest to be Added)

WASTEWATER SYSTEM REVENUE BONDS
SERIES 2022C

Maturity (April 1)	Amount*	Interest Rate	Yield	CUSIP**	Maturity (April 1)	Amount*	Interest Rate	Yield	CUSIP**
2024	$190,000				2039	$340,000			
2025	195,000				2040	355,000			
2026	205,000				2041	365,000			
2027	210,000				2042	380,000			
2028	220,000				2043	395,000			
2029	230,000				2044	415,000			
2030	240,000				2045	430,000			
2031	250,000				2046	445,000			
2032	260,000				2047	465,000			
2033	270,000				2048	485,000			
2034	280,000				2049	505,000			
2035	290,000				2050	525,000			
2036	300,000				2051	545,000			
2037	315,000				2052	565,000			
2038	325,000								

(Accrued Interest to be Added)

*Subject to Change.

** Copyright, American Bankers Association (the "ABA"). CUSIP data herein are provided by CUSIP Global Services, which is managed on behalf of the ABA by S&P Global Market Intelligence, a division of S&P Global Inc. The CUSIP numbers listed above are being provided solely for the convenience of Bondholders only at the time of issuance of the Bonds and the Municipality makes no representation with respect to such numbers nor undertakes any responsibility for their accuracy now or at any time in the future. The CUSIP number for a specific maturity is subject to being changed after the issuance of the Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the Bonds.

This *Preliminary Official Statement* speaks only as of its date, and the information contained herein is subject to change.

This *Preliminary Official Statement* may contain forecasts, projections, and estimates that are based on current expectations but are not intended as representations of fact or guarantees of results. If and when included in this *Preliminary Official Statement*, the words "expects," "forecasts," "projects," "intends," "anticipates," "estimates," and analogous expressions are intended to identify forward-looking statements as defined in the Securities Act of 1933, as amended, and any such statements inherently are subject to a variety of risks and uncertainties, which could cause actual results to differ materially from those contemplated in such forward-looking statements. These forward-looking statements speak only as of the date of this *Preliminary Official Statement*. The Issuer disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in the Issuer's expectations with regard thereto or any change in events, conditions, or circumstances on which any such statement is based.

This *Preliminary Official Statement* and the Appendices hereto contain brief descriptions of, among other matters, KUB, the Bonds, the Resolution, the Disclosure Certificate (as defined herein), and the security and sources of payment for the Bonds. Such descriptions and information do not purport to be comprehensive or definitive. The summaries of various constitutional provisions and statutes, the Resolution, the Disclosure Certificate, and other documents are intended as summaries only and are qualified in their entirety by reference to such documents and laws, and references herein to the Bonds are qualified in their entirety to the forms thereof included in the Resolution.

The Bonds have not been registered under the Securities Act of 1933, and the Resolution has not been qualified under the Trust Indenture Act of 1939, in reliance on exemptions contained in such Acts. This *Preliminary Official Statement* does not constitute an offer to sell or the solicitation of an 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.

No dealer, broker, salesman, or other person has been authorized by the Issuer or the Underwriter to give any information or to make any representations other than those contained in this *Preliminary Official Statement*, and, if given or made, such other information or representations should not be relied upon as having been authorized by the Issuer or the Underwriter. Except where otherwise indicated, all information contained in this *Preliminary Official Statement* has been provided by KUB. The information set forth herein has been obtained by KUB from sources which are believed to be reliable but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of the Underwriter. The information contained herein is subject to change without notice, and neither the delivery of this *Preliminary Official Statement* nor any sale made hereunder shall under any circumstances create an implication that there has been no change in the affairs of the Issuer, or the other matters described herein since the date hereof or the earlier dates set forth herein as of which certain information contained herein is given.

In connection with this offering, the Underwriter may over-allot or effect transactions which stabilize or maintain the market prices of the Bonds at a level above that which might otherwise prevail in the open market. Such stabilizing, if commenced, may be discontinued at any time.

CITY OF KNOXVILLE, TENNESSEE
KNOXVILLE UTILITIES BOARD

COMMISSIONERS

Jerry Askew, Chair
Adrienne Simpson-Brown, Vice Chair
Claudia Caballero
Kathy Hamilton
Celeste Herbert
Ron Feinbaum
Tyvi Small

OFFICERS

Gabriel J. Bolas II, President and Chief Executive Officer
Mark A. Walker, Senior Vice President and Chief Financial Officer
Susan F. Edwards, Senior Vice President and Chief Administrative Officer
Derwin G. Hagood, Senior Vice President of Operations
John W. Williams III, Senior Vice President of Engineering and Construction
Tiffany Martin, Vice President and Chief Customer Officer
Jamie Davis, Vice President Fiber and Chief Technology Officer

GENERAL COUNSEL

Hodges, Doughty & Carson, PLLC
Knoxville, Tennessee

MUNICIPAL ADVISOR

Cumberland Securities Company, Inc.
Knoxville, Tennessee

BOND COUNSEL

Bass, Berry & Sims PLC
Knoxville, Tennessee

INDEPENDENT ACCOUNTANTS

Coulter & Justus, P.C.
Knoxville, Tennessee

REGISTRATION AND PAYING AGENT

Regions Bank
Nashville, Tennessee

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SUMMARY STATEMENT

The information set forth below is provided as a summary for convenient reference only; the information is not and does not purport to be complete and is qualified in its entirety by the information and financial statements appearing elsewhere in this *Preliminary Official Statement*. No person is authorized to distribute or rely upon all or any part of the information in this "Summary Statement" without the balance of this *Preliminary Official Statement*, including, all exhibits and appendices hereto.

The Bonds.....City of Knoxville, Tennessee (the "City") $79,000,000* Electric System Revenue Bonds, Series OO-2022 ("Electric Bonds" or "Electric Series OO-2022 Bonds") and the $9,995,000* Wastewater System Revenue Bonds, Series 2022C ("Wastewater Bonds" or "Series 2022C Bonds"), dated the date of issuance (assume December 16, 2022). The Electric Bonds and the Wastewater Bonds will be collectively referred to as the "Bonds".

Purpose .....The Bonds are being issued to provide funds to pay the costs of extensions and improvements to the Electric System and the Wastewater System (collectively, the "Systems"), as described herein, and to pay the cost of issuing the Bonds.

Security.....The Bonds will be issued pursuant to and secured by bond resolutions of the City and will be payable solely from the net revenues of the Systems, respectively, as further described herein.

Redemption.....The Electric Bonds maturing on and after July 1, 2032 will be subject to redemption prior to maturity at the option of the Board on or after July 1, 2031 at the redemption price of par plus accrued interest as provided herein. The Wastewater Bonds maturing on and after April 1, 2032 will be subject to redemption prior to maturity at the option of the Board on or after April 1, 2031 at the redemption price of par plus accrued interest as provided herein.

Rates .....Rates and fees for services provided by the Systems are established by the Board of Commissioners of the Knoxville Utilities Board (the "Board"). The Electric System and the Wastewater System are not otherwise subject to rate regulation, and KUB is not aware of any pending legislation which would make its rates and fees subject to regulation.

Rate Covenants.....The bond resolutions require the Board to fix rates as to each System to provide revenues sufficient to pay related expenses and obligations and to meet a 1.20 debt service coverage ratio, all as more fully hereinafter described.

Additional Electric Revenue Bonds.....The City, acting by and through KUB may issue additional bonds, notes or other obligations pursuant to the Electric Bond Resolution provided that all payments required to be made to the Electric Debt Service Fund and into any reserve fund which may be required under resolutions authorizing parity indebtedness are current as of the date of issuance of the additional bonds, notes or other obligations, on a parity and equality of lien with the outstanding parity indebtedness under the Electric Bond Resolution, with respect to the lien and claim of such additional bonds, notes or other obligations to the net revenues of the Electric System and the money on deposit in the Electric Debt Service Fund (i) for the purpose of refunding any outstanding parity indebtedness, subordinate bonds, notes, loan agreements or other obligations, provided that after the issuance of such additional parity indebtedness, the Aggregate Debt Service (as defined in the Electric Bond Resolution) on all outstanding parity indebtedness, including the additional parity indebtedness to be issued, in any fiscal year shall not increase by more than ten percent (10%) after the issuance of such additional parity indebtedness; (ii) for the purpose of financing the completion or equipping of improvements to the Electric System for which outstanding parity indebtedness have previously been issued but only to the extent necessary to complete such improvements in the manner contemplated at the time of the issuance of the outstanding parity indebtedness that financed such improvements; and (iii) for the purposes of refunding any outstanding parity indebtedness or any prior lien bonds, subordinated bonds, notes or other obligations or extending, improving or replacing the Electric System or for any other lawful purpose under applicable law, if one of the following conditions shall have been met: (A) the Net Revenues (as defined in the Electric Bond Resolution) for

*Subject to Change.

any twelve-month period selected by the Board ending within the twelve months prior to the date of the issuance of the additional parity indebtedness must have been equal to at least 120% of the Maximum Annual Aggregate Debt Service (as defined in the Electric Bond Resolution) on outstanding parity indebtedness plus the Debt Service on the additional parity indebtedness proposed to be issued or (B) the estimated Net Revenues of the Electric System for each of the three fiscal years next succeeding the issuance of the additional parity indebtedness, must be equal at least to 120% of Maximum Annual Aggregate Debt Service, any other outstanding parity indebtedness and all outstanding prior lien bonds plus the Debt Service on the additional parity indebtedness proposed to be issued; provided, however, that if the additional parity indebtedness is to be issued for the acquisition or construction of any extension, improvement or replacement to the Electric System, then the estimate of Net Revenues may be for the three fiscal years ensuing after the time that such improvement, extension or replacement is expected to be placed in service.

Additional Wastewater Revenue Bonds.....The City, acting by and through KUB, or KUB may issue additional bonds, notes or other obligations pursuant to the Wastewater Bond Resolution provided that all payments required to be made to the Wastewater Debt Service Fund and into any reserve fund which may be required under resolutions authorizing parity indebtedness are current as of the date of issuance of the additional bonds, notes or other obligations, on a parity and equality of lien with the outstanding parity indebtedness under the Wastewater Bond Resolution, with respect to the lien and claim of such additional bonds, notes or other obligations to the net revenues of the Wastewater System and the money on deposit in the Wastewater Debt Service Fund (i) for the purpose of refunding any outstanding parity indebtedness, subordinate bonds, notes, loan agreements or other obligations, provided that after the issuance of such additional parity indebtedness, the Aggregate Debt Service (as defined in the Wastewater Resolution) on all outstanding parity indebtedness, including the additional parity indebtedness to be issued, in any fiscal year shall not increase by more than ten percent (10%) after the issuance of such additional parity indebtedness; (ii) for the purpose of financing the completion or equipping of improvements to the Wastewater System for which outstanding parity indebtedness have previously been issued but only to the extent necessary to complete such improvements in the manner contemplated at the time of the issuance of the outstanding parity indebtedness that financed such improvements; and (iii) for the purposes of refunding any outstanding parity indebtedness or any prior lien bonds, subordinated bonds, notes or other obligations or extending, improving or replacing the Wastewater System or for any other lawful purpose under applicable law, if one of the following conditions shall have been met: (A) the Net Revenues (as defined in the Wastewater Bond Resolution) for any twelve-month period selected by the Board ending within the twelve months prior to the date of the issuance of the additional parity indebtedness must have been equal to at least 120% of the Maximum Annual Aggregate Debt Service (as defined in the Wastewater Bond Resolution) on outstanding parity indebtedness plus the Debt Service on the additional parity indebtedness proposed to be issued or (B) the estimated Net Revenues of the Wastewater System for each of the three fiscal years next succeeding the issuance of the additional parity indebtedness, must be equal at least to 120% of Maximum Annual Aggregate Debt Service, any other outstanding parity indebtedness and all outstanding prior lien bonds plus the Debt Service on the additional parity indebtedness proposed to be issued; provided, however, that if the additional parity indebtedness is to be issued for the acquisition or construction of any extension, improvement or replacement to the Wastewater System, then the estimate of Net Revenues may be for the three fiscal years ensuing after the time that such improvement, extension or replacement is expected to be placed in service.

Combined Operation of Any System Permitted in the Future.....To the extent permitted by law, the Board may combine any or all the City's utility systems into a single unified operation (the "Combined System") and commingle the revenues of the System in the Combined System without keeping separate accounts of the funds of each of such System, provided payments from the funds of the Combined System are required to be made into the respective Debt Service Funds from time to time in amounts sufficient to pay the principal of and interest as such principal and interest becomes due. Bonds and notes ("Parity Bonds") payable from revenues of the Combined System may be issued on a parity with outstanding

bonds secured by a System's revenues provided at the time of the issuance of any such Parity Bonds, among other things, the net earnings of the Combined System after making provision for the payment of periodic installments of principal and interest on any bonds having a superior lien on a system or the revenues of any such system, for a period of twelve consecutive months (the "Twelve-Month Period") out of the fifteen months immediately preceding the issuance of such Parity Bonds shall be equal to at least 1.2 times the highest combined principal and interest requirement for any period of twelve consecutive months beginning on July 1 of any succeeding calendar year on all bonds outstanding and to be then issued directly payable from the revenues of the Combined System.

If within twelve months prior to the issuance of the Parity Bonds, the Board shall have put into effect a revised schedule of rates for the Combined System or any part thereof, then the net earnings of the Combined System for the Twelve-Month Period, as certified by independent consultants, that would have resulted from such revised rates had they been in effect for the Twelve-Month Period, may be used in lieu of the actual net earnings for such Twelve-Month Period.

Tax Matters.....In the opinion of Bond Counsel, based on existing law and assuming compliance with certain tax covenants by KUB, interest on the Bonds will be excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax, except as described under the heading "LEGAL MATTERS-Tax Matters" herein. For an explanation of certain tax consequences under federal law which may result from the ownership of the Bonds, see the discussion under the heading "LEGAL MATTERS – Tax Matters" herein. Under existing law, the Bonds and the income therefrom will be exempt from all state, county and municipal taxation in the State of Tennessee, except Tennessee franchise and excise taxes. (See "LEGAL MATTERS – Tax Matters" herein).

Registration and Paying Agent .....Regions Bank, Nashville, Tennessee.

Bond Counsel .....Bass, Berry & Sims PLC, Knoxville, Tennessee.

Municipal Advisor.....Cumberland Securities Company, Inc.

General.....The Bonds will be issued pursuant to Chapter 34, Title 7, and Chapter 21, Title 9, *Tennessee Code Annotated*, as amended (the "Act"). See the sections entitled SECURITIES OFFERED, herein. The Bonds will be issued with CUSIP numbers through the facilities of The Depository Trust Company, New York, New York.

Disclosure .....In accordance with Rule 15c2-12 promulgated under the Securities Exchange Act of 1934 as amended, the City, acting by and through KUB, will provide the Municipal Securities Rulemaking Board ("MSRB") through the operation of the Electronic Municipal Market Access system ("EMMA") and the State Information Depository ("SID") established in Tennessee, if any, annual financial statements and other pertinent credit information, including the Comprehensive Annual Financial Reports of KUB for the Systems. For additional information, see the section entitled "MISCELLANEOUS - Continuing Disclosure" for additional information.

Other Information.....The information in the *Preliminary Official Statement* is deemed "final" within the meaning of Rule 15c2-12 promulgated under the Securities Exchange Act of 1934 as of the date which appears on the cover hereof except for the omissions of certain pricing information allowed to be omitted pursuant to such Rule 15c2-12. For more information concerning the City and the Board or the *Preliminary Official Statement*, Cumberland Securities Company, Inc., Knoxville, Tennessee, Telephone: (865) 988-2663. Additional information regarding BiDCOMP™/PARITY™ may be obtained from PARITY™, 1359 Broadway - 2nd Floor, New York, NY 10018, Telephone: 800.850.7422.

ELECTRIC DIVISION
For the Years Ended June 30

	2018	2019	2020	2021**	2022
Operating Revenues	$560,110,507	$558,369,583	$547,686,983	$553,897,585	$606,335,419
Operating Expenses*	(480,157,565)	(479,218,014)	(463,108,450)	(451,148,965)	(505,256,932)
Net Income Before Depreciation & Taxes	$79,952,942	$79,151,569	$84,578,533	$102,5748,620	$101,078,487
Other Revenue	1,635,170	2,666,532	1,579,182	236,934	716,419
FICA Tax Expense	(2,156,841)	(2,251,026)	(2,265,718)	(2,256,238)	(2,502,307)
Income Available for Debt Service	$79,431,271	$79,567,075	$83,891,997	$100,729,316	$99,292,599
Debt Service on Senior Bonds	$21,318,583	$23,535,838	$25,456,523	$26,715,582	$24,632,436
Bond Coverage	3.73x	3.38x	3.30x	3.77x	4.03x

Source: The above amounts have been derived from the Annual Audited Financial Statements for the Knoxville Utilities Board and Electric Divisions and should be read in conjunction therewith.
* Excluding Provision for Depreciation and Taxes.
** Restated per GASB 87. For more information, see the notes to the Financial Statements included herein.

WASTEWATER DIVISION
For the Years Ended June 30

	2018	2019	2020	2021**	2022
Operating Revenues	$94,715,764	$98,482,153	$101,335,524	$100,360,933	$102,936,574
Operating Expenses*	(30,939,200)	(35,653,145)	(36,122,051)	(34,123,992)	(37,434,982)
Net Income Before Depreciation & Taxes	$63,776,564	$62,829,008	$65,213,473	$66,236,941	$65,501,592
Other Revenue	1,205,290	1,906,274	1,484,440	312,553	297,132
FICA Tax Expense	(820,374)	(888,376)	(923,081)	(961,050)	(1,050,890)
Income Available for Debt Service	$64,161,480	$63,846,906	$65,774,832	$65,588,444	$64,747,834
Debt Service on Senior Bonds	$32,372,447	$33,447,001	$34,204,172	$35,995,573	$32,940,268
Bond Coverage	1.98x	1.91x	1.92x	1.82x	1.97x

Source: The above amounts have been derived from the Annual Audited Financial Statements for the Knoxville Utilities Board and Wastewater Divisions and should be read in conjunction therewith.
* Excluding Provision for Depreciation and Taxes.
** Restated per GASB 87. For more information, see the notes to the Financial Statements included herein.

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SUMMARY NOTICE OF SALE

$88,995,000*
CITY OF KNOXVILLE, TENNESSEE
$79,000,000* Electric System Revenue Bonds, Series OO-2022
$9,995,000* Wastewater System Revenue Bonds, Series 2022C

NOTICE IS HEREBY GIVEN that separate electronic or written bids will be received by the President and CEO of KUB, at the offices of Cumberland Securities Company, Inc., Knoxville, Tennessee, until **10:15 a.m. E.S.T.** on **Wednesday, November 30, 2022** on behalf of the City for the purchase of $79,000,000* Electric System Revenue Bonds, Series OO-2022 ("Electric Bonds" or "Electric Series OO-2022 Bonds"). Prior to accepting bids, the Board, or the President and CEO of KUB, as its designee, reserves the right to postpone the sale to a later date, or to cancel the sale based upon market conditions via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System not later than 9:30 a.m., Eastern Standard Time, on the day of the bid opening. Such notice will specify the revised principal amounts, if any, and any later date selected for the sale, which may be postponed or cancelled in the same manner. If the sale is postponed, a later public sale may be held at the hour and place and on such date as communicated upon at least forty-eight hours' notice via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System.

NOTICE IS HEREBY GIVEN that separate electronic or written bids will be received by the President and CEO of KUB, at the offices of Cumberland Securities Company, Inc., Knoxville, Tennessee, **11:15 a.m. E.S.T.** on **Wednesday, November 30, 2022,** on behalf of the City for the purchase of $9,995,000* Wastewater System Revenue Bonds, Series 2022C ("Wastewater Bonds" or "Series 2022C Bonds"). Prior to accepting bids, the Board, or the President and CEO of KUB, as its designee, reserves the right to postpone the sale to a later date, or to cancel the sale based upon market conditions via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System not later than 10:30 a.m., Eastern Standard Time, on the day of the bid opening. Such notice will specify the revised principal amounts, if any, and any later date selected for the sale, which may be postponed or cancelled in the same manner. If the sale is postponed, a later public sale may be held at the hour and place and on such date as communicated upon at least forty-eight hours' notice via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System.

The Electric Bonds and the Wastewater Bonds are collectively referred to herein as the "Bonds".

Electronic bids for the Bonds must be submitted through ***BiDCOMP™/PARITY™*** and no other provider of electronic bidding services will be accepted. Subscription to the i-Deal LLC Dalcomp Division's ***BiDCOMP™*** Competitive Bidding System is required in order to submit an electronic bid. Neither the City nor KUB will confirm any subscription nor be responsible for the failure of any prospective bidders to subscribe. For the purposes of the bidding process, the time as maintained by ***BiDCOMP™/PARITY™*** shall constitute the official time with respect to all bids whether in electronic or written form. To the extent any instructions or directions set forth in ***BiDCOMP™/PARITY™*** conflict with the terms of the Detailed Notice of Sale, such Notice shall prevail.

The Electric Bonds will be dated the date of issuance (assume December 16, 2022). The Electric Bonds will mature on July 1 in the years 2024 through 2052, inclusive, and will be subject to optional redemption prior to maturity on or after July 1, 2031. The approving opinion for the Electric Bonds will be furnished at the expense of KUB by Bass, Berry & Sims PLC, Bond Counsel, Knoxville, Tennessee. No rate or rates bid for the Electric Bonds shall be less than four (4.00%) percent or exceed five percent (5.00%). No bid will be considered for the Electric Bonds for less than one hundred percent (100.00%) of par and accrued interest or more than one hundred and twenty-five percent (125%) of par and accrued interest. Unless bids are rejected, the Electric Bonds will be awarded separately by the President and CEO on the sale date to the bidder whose bid result in the lowest true interest rate on the Electric Bonds.

The Wastewater Bonds will be dated the date of issuance (assume December 16, 2022). The Wastewater Bonds will mature on April 1 in the years 2024 through 2052, inclusive, and will be subject to optional redemption prior to maturity on or after April 1, 2031. The approving opinion for the Wastewater Bonds will be furnished at the expense of KUB by Bass, Berry & Sims PLC, Bond Counsel, Knoxville, Tennessee. No rate or rates bid for the Wastewater Bonds shall be less than four (4.00%) percent or exceed five percent (5.00%). No bid will be considered for the Wastewater Bonds for less than one hundred percent (100.00%) of par and accrued interest or more than one hundred and twenty-five percent

*Subject to Change.

(125%) of par and accrued interest. Unless bids are rejected, the Wastewater Bonds will be awarded separately by the President and CEO on the sale date to the bidder whose bid result in the lowest true interest rate on the Wastewater Bonds.

In the event that the competitive sale requirements of applicable Treasury Regulations are not met as to a series of the Bonds, the City will require bidders to comply with the "hold-the-offering-price rule" for purposes of determining the issue price for such series of the Bonds as described in the Detailed Notice of Sale. Bids will not be subject to cancellation in the event that the competitive sale requirements of applicable Treasury Regulations are not satisfied.

Electronic bids made through the facilities of ***BiDCOMP™/PARITY™*** shall be deemed an offer to purchase in response to the Detailed Notice of Sale and shall be binding upon the bidders as if made by signed, written bids delivered to KUB. KUB, Bond Counsel and the Municipal Advisor shall not be responsible for any malfunction or mistake made by or as a result of the use of the electronic bidding facilities provided and maintained by ***BiDCOMP™/PARITY™***. The use of the ***BiDCOMP™/PARITY™*** facility is at the sole risk of the prospective bidders.

Additional information, including the *Preliminary Official Statement* in near final form and the Detailed Notice of Sale, may be obtained through www.prospectushub.com or Gabriel J. Bolas II, President and CEO, Knoxville Utilities Board, 445 South Gay Street, Knoxville, Tennessee 37902 or from KUB's Municipal Advisor, Cumberland Securities Company, Inc., Knoxville, Tennessee (865) 988-2663 or Munihub at (www.prospectushub.com). Further information regarding ***BiDCOMP™/PARITY™*** may be obtained from PARITY™, 1359 Broadway - 2nd Floor, New York, NY 10018, Telephone: 800.850.7422.

CITY OF KNOXVILLE, TENNESSEE
By and Through
KNOXVILLE UTILITIES BOARD

By: Gabriel J. Bolas II
President and CEO
Knoxville Utilities Board

DETAILED NOTICE OF SALE

$88,995,000*
CITY OF KNOXVILLE, TENNESSEE
$79,000,000* Electric System Revenue Bonds, Series OO-2022
$9,995,000* Wastewater System Revenue Bonds, Series 2022C

NOTICE IS HEREBY GIVEN that separate electronic or written bids will be received by the President and CEO of KUB, at the offices of Cumberland Securities Company, Inc., Knoxville, Tennessee, until **10:15 a.m. E.S.T.** on **Wednesday, November 30, 2022** on behalf of the City for the purchase of $79,000,000* Electric System Revenue Bonds, Series OO-2022 ("Electric Bonds" or "Electric Series OO-2022 Bonds"). Prior to accepting bids, the Board, or the President and CEO of KUB, as its designee, reserves the right to postpone the sale to a later date, or to cancel the sale based upon market conditions via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System not later than 9:30 a.m., Eastern Standard Time, on the day of the bid opening. Such notice will specify the revised principal amounts, if any, and any later date selected for the sale, which may be postponed or cancelled in the same manner. If the sale is postponed, a later public sale may be held at the hour and place and on such date as communicated upon at least forty-eight hours' notice via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System.

NOTICE IS HEREBY GIVEN that separate electronic or written bids will be received by the President and CEO of KUB, at the offices of Cumberland Securities Company, Inc., Knoxville, Tennessee, **11:15 a.m. E.S.T.** on **Wednesday, November 30, 2022,** on behalf of the City for the purchase of $9,995,000* Wastewater System Revenue Bonds, Series 2022C ("Wastewater Bonds" or "Series 2022C Bonds"). Prior to accepting bids, the Board, or the President and CEO of KUB, as its designee, reserves the right to postpone the sale to a later date, or to cancel the sale based upon market conditions via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System not later than 10:30 a.m., Eastern Standard Time, on the day of the bid opening. Such notice will specify the revised principal amounts, if any, and any later date selected for the sale, which may be postponed or cancelled in the same manner. If the sale is postponed, a later public sale may be held at the hour and place and on such date as communicated upon at least forty-eight hours' notice via munihub at the internet website address (www.prospectushub.com) and/or the ***BiDCOMP™/PARITY™*** System.

The Electric Bonds and the Wastewater Bonds are collectively referred to herein as the "Bonds".

Description of the Bonds.

The Electric Bonds are being issued pursuant to Chapter 34, Title 7, and Chapter 21, Title 9, *Tennessee Code Annotated,* as amended (the "Act"), the Charter of the City (the "City Charter"), other applicable statutes, and pursuant to Resolution No. 1644 adopted by the City on January 4, 1949 as amended and supplemented by Resolution No. 2171 adopted February 22, 1955; Resolution No. 3491 adopted by the City on February 21, 1967; Resolution R-317-90 adopted by the City on October 30, 1990; Resolution No. R-422-98 adopted by the City on October 20, 1998; Resolution No. R-149-01 adopted by the City on March 20, 2001; Resolution No. R-332-2010 adopted by the City on November 2, 2010; and Resolution No. R-230-2018 adopted by the City on June 20, 2018 and as supplemented by Resolution No. R-221-2022 adopted by the City on July 26, 2022 (collectively, the "Electric Bond Resolutions"). All Electric System Revenue Bonds issued pursuant to such Electric Bond Resolutions are hereinafter referred to as the "Electric System Bonds."

The Wastewater Bonds are being issued pursuant to the Act, the City Charter, other applicable statutes for the purpose of providing funds to pay for the construction of improvements to and extending of the City's Wastewater System, and pursuant to Resolution No. R-129-90 adopted by the City on May 15, 1990, as amended and supplemented by Resolution No. R-5-98 adopted by the City on January 27, 1998; Resolution No. R-148-01 adopted by the City on March 20, 2001; Resolution No. R-11-S adopted by the City on December 15, 2009 and as supplemented by Resolution No. R223-2022 adopted by the City on July 26, 2022 (collectively, the "Wastewater Bond Resolutions"). All Wastewater System Revenue Bonds issued pursuant to such Wastewater Bond Resolutions are hereinafter referred to as the "Wastewater System Bonds."

The Bonds will be issued in fully registered book-entry-only form without coupons, be dated the date of issuance, be issued, or reissued upon transfer, in $5,000 denominations or multiples thereof, as shall be requested by the purchaser or

*Subject to Change.

registered owner thereof, as applicable, and will mature (subject to the right of redemption as hereinafter set forth) and be payable as listed on below:

ELECTRIC BONDS

Maturity (July 1)	Amount*	Maturity (July 1)	Amount*
2024	$1,470,000	2039	$2,685,000
2025	1,530,000	2040	2,790,000
2026	1,595,000	2041	2,905,000
2027	1,660,000	2042	3,025,000
2028	1,730,000	2043	3,150,000
2029	1,800,000	2044	3,275,000
2030	1,870,000	2045	3,410,000
2031	1,950,000	2046	3,550,000
2032	2,030,000	2047	3,695,000
2033	2,110,000	2048	3,845,000
2034	2,195,000	2049	4,000,000
2035	2,285,000	2050	4,165,000
2036	2,380,000	2051	4,335,000
2037	2,475,000	2052	4,510,000
2038	2,580,000		

WASTEWATER BONDS

Maturity (April 1)	Amount*	Maturity (April 1)	Amount*
2024	$190,000	2039	$340,000
2025	195,000	2040	355,000
2026	205,000	2041	365,000
2027	210,000	2042	380,000
2028	220,000	2043	395,000
2029	230,000	2044	415,000
2030	240,000	2045	430,000
2031	250,000	2046	445,000
2032	260,000	2047	465,000
2033	270,000	2048	485,000
2034	280,000	2049	505,000
2035	290,000	2050	525,000
2036	300,000	2051	545,000
2037	315,000	2052	565,000
2038	325,000		

*Subject to change

Registration and Depository Participation. The Bonds will be issued by means of a Book-Entry-Only System and no physical distribution of bond certificates will be made to the public. One Bond certificate for each maturity will be issued to the Depository Trust Company, New York, New York ("DTC"), and immobilized in its custody. The Book-Entry-Only System will evidence beneficial ownership interests of the Bonds in the principal amount of $5,000 and any integral multiple of $5,000, with transfers of beneficial ownership interest effected on the records of DTC participants and, if necessary, in turn by DTC pursuant to rules and procedures established by DTC and its participants. The successful bidder for each series of the Bonds, as a condition to delivery of the Bonds, shall be required to deposit the bond certificates with DTC, registered in the name of Cede & Co., nominee of DTC. Interest on the Bonds will be payable semiannually and principal of the Bonds will be payable, at maturity or upon redemption, to DTC or its nominee as registered owner of the Bonds. Transfer of principal and interest payments to participants of DTC will be the responsibility of DTC, and transfer of principal and interest payments to Beneficial Owners of the Bonds by Participants of DTC, will be the responsibility of such participants and of the nominees of Beneficial Owners. Neither the City nor KUB will be responsible or liable for such transfer of payments or for maintaining, supervising or reviewing the records maintained by DTC, its participants or persons acting through such participants. Notwithstanding the foregoing, if the successful bidder for a series of Bonds certifies that it intends to hold the Bonds for its own account and has no present intent to re-offer the Bonds, then the use the Book-Entry-Only System is not required.

In the event that the Book-Entry-Only System for the Bonds is discontinued and a successor securities depository is not appointed by the Board, Bond Certificates in fully registered form will be delivered to, and registered in the names of, the DTC participants or such other persons as such DTC participants may specify (which may be the indirect participants or Beneficial Owners), in authorized denominations of $5,000 or integral multiples thereof. The ownership of Bonds so delivered shall be registered in registration books to be kept by the Registration Agent (named herein), and KUB and the Registration Agent shall be entitled to treat the registered owners of the Bonds, as their names appear in such registration books as of the appropriate dates, as the owners thereof for all purposes described herein and in the resolutions authorizing the Bonds.

Security Pledged. The Electric Bonds and Wastewater Bonds will be issued pursuant to and secured by the Electric Bond Resolution and the Wastewater Bond Resolution, respectively, and will be payable solely from the net revenues of the applicable System, as further described herein.

Rate Covenants. The bond resolutions require the Board to fix rates as to each Systems to provide revenues sufficient to pay related expenses and obligations and to meet a 1.20 debt service coverage ratio, all as more fully hereinafter described.

Purpose. The Bonds are being issued to provide funds to pay the costs of extension to and improvements to the Electric System and Wastewater System (the "Systems"), and the payment of legal, fiscal, administrative and engineering costs incident thereto and incident to the issuance and sale of the Bonds.

Optional Redemption. The Electric Bonds maturing on and after July 1, 2032 will be subject to redemption prior to maturity at the option of the Board on or after July 1, 2031 at the redemption price of par plus accrued interest as provided herein. The Wastewater Bonds maturing on and after April 1, 2032 will be subject to redemption prior to maturity at the option of the Board on or after April 1, 2031 at the redemption price of par plus accrued interest as provided herein.

If less than all the Bonds shall be called for redemption, the Board, in its discretion, shall designate the maturity or maturities which will be redeemed. If less than all of the Bonds within a single maturity shall be called for redemption, the interests within the maturity to be redeemed shall be selected as follows:

(i) if the Bonds are being held under a Book-Entry-Only System by DTC, or a successor Depository, the Bonds to be redeemed shall be determined by DTC, or such successor Depository, by lot or such other manner as DTC, or such successor Depository, shall determine; or

(ii) if the Bonds are not being held under a Book-Entry-Only System by DTC, or a successor Depository, the Bonds within the maturity to be redeemed shall be selected by the Registration Agent by lot or such other random manner as the Registration Agent in its discretion shall determine.

Term Bond Option; Mandatory Redemption. Bidders shall have the option to designate certain consecutive serial maturities of each series of the Bonds as one or more term bonds ("Term Bonds") bearing a single interest rate. If the successful bidder for a series of the Bonds designates certain consecutive serial maturities of such series of Bonds to be combined as one or more Term Bonds as allowed herein, then each Term Bond shall be subject to mandatory sinking fund redemption by the Board at a redemption price equal to one hundred percent (100%) of the principal amount thereof, together with accrued interest to the date fixed for redemption at the rate stated in the Term Bonds to be redeemed. Each such mandatory sinking fund redemption shall be made on the date on which a consecutive maturity included as part of a Term Bond is payable in accordance with the proposal of the successful bidder for such series of the Bonds and in the amount of the maturing principal installment for such series of the Bonds listed herein for such principal payment date.

Bidding Instructions. Bidders are requested to name the interest rate or rates the Bonds are to bear in multiples of one-eighth of one percent and/or one-hundredth of one percent (.01%) or one (1) basis point, but no rate specified shall be less than four percent (4.00%) or in excess of five percent (5.00%) per annum for the Bonds. There will be no limitation on the number of rates of interest that may be specified in a single bid for the Bonds, but a single rate shall apply to all Bonds of a single maturity. Bidders must bid not less than one hundred percent (100.00%) of par or more than one hundred and twenty-five percent (125%) of par for all of the Bonds.

Electronic bids for the Bonds must be submitted through BiDCOMP™/PARITY™ and no other provider of electronic bidding services will be accepted. Subscription to i-Deal LLC Dalcomp Division's BiDCOMP™ Competitive Bidding System is required in order to submit an electronic bid. Neither the City nor KUB will not confirm any subscription nor be responsible for the failure of any prospective bidders to subscribe. For the purposes of the bidding process, the time as maintained by BiDCOMP™/PARITY™ shall constitute the official time with respect to all bids whether in electronic or written form. To the extent any instructions or directions set forth in BiDCOMP™/PARITY™ conflict with the terms of this Detailed Notice of Sale, this Notice shall prevail. Electronic bids made through the facilities of BiDCOMP™/PARITY™ shall be deemed an offer to purchase in response to this Detailed Notice of Sale and shall be binding upon the bidders as if made by signed, written bids delivered to KUB. KUB, the Board, the Bond Counsel and the Municipal Advisor shall not be responsible for any malfunction or mistake made by or as a result of the use of the electronic bidding facilities provided and maintained by PARITY™. The use of the BiDCOMP™/PARITY™ facilities is at the sole risk of the prospective bidders. For further information regarding PARITY™, potential bidders may contact BiDCOMP™/PARITY™ at 1359 Broadway - 2nd Floor, New York, NY 10018, Telephone: 800-850-7422.

In the event of a system malfunction in the electronic bidding process, bidders may submit bid(s) prior to the established date and time by FACSIMILE transmission sent to KUB's Municipal Advisor, Cumberland Securities Company, Inc. at 865-988-1863. Any facsimile submission is made at the sole risk of the prospective bidder. KUB and the Municipal Advisor shall not be responsible for confirming receipt of any facsimile bid or for any malfunction relating to the transmission and receipt of such bids.

Any written bids should be submitted by facsimile to the President and CEO of KUB at the offices of KUB's Municipal Advisor at 865-988-1863. Written bids must be submitted on the Bid Forms included with the *Preliminary Official Statement*.

KUB reserves the right to reject all bids for either series of the Bonds or any series of the Bonds and to waive any informalities in the bids accepted.

Unless all bids for a series of the Bonds are rejected, each series of the Bonds will be awarded to the bidder(s) whose bid complies with this notice and results in the lowest true interest rate on such series of the Bonds to be calculated as that rate that, when used in computing the present worth of all payments of principal and interest on such series of the Bonds (compounded semi-annually from the date of such series of the Bonds), produces an amount equal to the purchase price of such series of the Bonds. For purposes of calculating the true interest cost, the principal amount of Term Bonds scheduled for mandatory sinking fund redemption as part of the Term Bond shall be treated as a serial maturity in such year. In the event that two or more bidders offer to purchase a series of the Bonds at the same lowest true interest rate, the President and CEO shall determine in his sole discretion which of the bidders shall be awarded such series of the Bonds.

After receipt of the bids, the Board, or the President and CEO of KUB, as its designee, reserves the right to make adjustments and/or revisions to the Bonds, as described below.

Bidder Certification Regarding Non-Engagement in a Boycott of Israel. By submitting a bid, each bidder shall be deemed to have certified to the Issuer that, to the extent that the award of the Bonds would constitute a "contract with a company to acquire or dispose of service", as described by Tenn. Code Ann. Section 12-4-119, neither the bidder, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies or affiliates, are currently engaged in nor will they engage in a boycott of Israel through the issue date of the Bonds, as described by Section 12-4-119. For purposes of Section 12-4-119, "boycott of Israel" shall mean engaging in refusals to deal, terminating business activities, or other commercial actions that are intended to limit commercial relations with Israel, or companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel to do business, or persons or entities doing business in Israel, when such actions are taken (i) in compliance with, or adherence to, calls for a boycott of Israel, or (ii) in a manner that discriminates on the basis of nationality, national origin, religion, or other unreasonable basis, and is not based on a valid business reason. The winning bidder shall be required to include a written certification to such effect as a condition to the issuance of the Bonds. The provisions of this paragraph shall not apply, and a bidder shall not be required to provide a written certification as provided above, if the bidder's compensation as a result of the purchase of a series of the Bonds is less than $250,000.

Adjustment and/or Revision. While it is KUB's intention to sell and issue the approximate par amounts of each respective series of the Bonds as offered herein, there is no guarantee that adjustment and/or revision may not be necessary in order to properly size each series of Bonds. The Municipal Advisor has assumed a premium structure in sizing the par amount of each series. Accordingly, the President and CEO, as the Board's designee, reserves the right, in his sole discretion, to adjust up or down the original par amount of each series of the bonds by up to twenty-five percent (25.0%). The primary factor that will be considered in adjusting the par amount is the amount of premium, if any, that is bid. Among other factors the President and CEO as its designee, may (but shall be under no obligation to) consider in sizing the par amounts and individual maturities of each series of the Bonds is the size of individual maturities or sinking fund installments and/or other preferences of KUB. KUB also reserves the right to change the dated date of the Bonds.

In the event of any such adjustment and/or revision with respect to the Bonds, no rebidding will be permitted, and the portion of such premium or discount (as may have been bid for series of the Bonds) shall be adjusted in the same proportion as the amount of such revision in par amount of series of the Bonds bears to the original par amount of such series of Bonds offered for sale.

The successful bidder for a series of the Bonds will be tentatively notified by not later than 5:00 p.m. (Eastern Standard Time), on the sale date of the exact revisions and/or adjustments required, if any.

Good Faith Deposit. No good faith check will be required to accompany any bid submitted. Each successful bidder for a series of Bonds shall be required to deliver to KUB's Municipal Advisor (wire transfer) the amount of up to two percent (2%) of the aggregate principal amount of the applicable series of the Bonds offered for sale which will secure the faithful performance of the terms of the bid. A certified check or wire transfer must be received by KUB's Municipal Advisor no later than the close of business on the day following the competitive sale. The winning bidders will be emailed wiring instructions after the sale.

The good faith deposit shall be applied (without interest) to the purchase price of the series of Bonds. If the successful bidder(s) should fail to accept or pay for the series of Bonds when tendered for delivery and payment, the good faith deposit will be retained by KUB as liquidated damages.

In the event of the failure of KUB to deliver a series of the Bonds to the purchaser in accordance with the terms of this Notice within forty-five (45) days after the date of the sale, the good-faith deposit for such series will be promptly returned to the purchaser unless the purchaser directs otherwise.

Establishment of Issue Price

Undertakings of the Successful Bidder. The successful bidder for each series of Bonds shall make a bona fide public offering of such series of the Bonds and shall, within 30 minutes after being notified of the award of such series of the Bonds, advise KUB in writing (via facsimile transmission or electronic mail) of the initial public offering prices of such series of the Bonds (the "Initial Reoffering Prices"). The successful bidder for such series must, by facsimile transmission or delivery received by KUB within 24 hours after award, furnish the following information to KUB to complete the *Official Statement* in final form, as described below:

A. Selling compensation (aggregate total anticipated compensation to the underwriters expressed in dollars, based on the expectation that all the Bonds of such series are sold at the prices or yields at which the successful bidder advised KUB that the Bonds were initially offered to the public).

B. The identity of the other underwriters if the successful bidder is part of a group or syndicate.

C. Any other material information that KUB determines is necessary to complete the *Official Statement* in final form.

After the award of the Bonds, KUB will prepare copies of the final *Official Statement* and will include therein such additional information concerning the reoffering of the Bonds as the successful bidder may reasonably request; provided, however, that KUB will not include in the final *Official Statement* a "NRO" ("not reoffered") designation with respect to any maturity of the Bonds. The successful bidder will be responsible to KUB in all aspects for the accuracy and completeness of information provided by such successful bidders with respect to such reoffering.

KUB expects the successful bidders to deliver copies of such *Official Statement* in final form (the "Final Official Statement") to persons to whom such bidders initially sells the Bonds and the Municipal Securities Rulemaking Board ("MSRB") via the MSRB's Electronic Municipal Market Access System ("EMMA"). The successful bidders will be required to acknowledge receipt of the Final Official Statement, to certify that each has made delivery of the Final Official Statement to the MSRB, to acknowledge that KUB expects the successful bidders to deliver copies of such Final Official Statement to persons to whom such bidder initially sells the Bonds and to certify that the applicable series of the Bonds will only be offered pursuant to the Final Official Statement and only in states where the offer is legal.

Establishment of Issue Price

a. The successful bidders shall assist KUB in establishing the issue price of the Bonds and shall execute and deliver to KUB, on or prior to the date of issuance and delivery of the Bonds (the "Closing Date"), an "issue price" or similar certificate setting forth the reasonably expected initial offering prices to the public or the sales price or prices of the Bonds, as is provided herein. All actions to be taken by KUB under this Detailed Notice of Bond Sale to establish the issue price of the Bonds may be taken on behalf of KUB by the Municipal Advisor and any notice or report to be provided to KUB may be provided to the Municipal Advisor.

b. KUB intends that the provisions of Treasury Regulation Section 1.148-1(f)(3)(i) (defining "competitive sale" for purposes of establishing the issue price of the Bonds) will apply to the initial sale of each series of the Bonds (the "Competitive Sale Requirements") because:

    1. KUB shall disseminate this Detailed Notice of Bond Sale to potential underwriters in a manner that is reasonably designed to reach potential underwriters;

    2. All bidders shall have an equal opportunity to bid;

    3. KUB expects to receive bids for each series of the Bonds from at least three underwriters of municipal bonds who have established industry reputations for underwriting new issuances of municipal bonds;

4. KUB anticipates awarding the sale of each series of the Bonds to the bidder who submits a firm offer to purchase the series of Bonds at the highest price (or lowest interest cost), as set forth in this Detailed Notice of Bond Sale; and

Any bid submitted pursuant to this Detailed Notice of Bond Sale shall be considered a firm offer for the purchase of the applicable series of Bonds, as specified in the bid.

c. In the event that the Competitive Sale Requirements are not satisfied as to a series of Bonds, KUB shall so advise the successful bidder for such series. In such event, KUB may determine to treat (i) the first price at which 10% of a maturity of a series of the Bonds (the "10% Test") is sold to the public as the issue price of that maturity and/or (ii) the initial offering price to the public as of the sale date of any maturity of the Bonds as the issue price of that maturity (the "Hold-the-Offering-Price Rule"), in each case applied on a maturity-by-maturity basis (and if different interest rates apply within a maturity, to each separate CUSIP number within that maturity). The winning bidder shall advise KUB promptly after the award of the Bonds if any maturity of the Bonds satisfy the 10% Test as of the date and time of the award of the Bonds. The Hold-the-Offering-Price Rule shall apply to all maturities that do not satisfy the 10% Test as of the sale date. KUB shall promptly advise the successful bidder, at or before the time of award of the Bonds, which maturities (and if different interest rates apply within a maturity, which separate CUSIP number within that maturity) of Bonds shall be subject to the 10% Test or shall be subject to the Hold-the-Offering-Price Rule. Bids will not be subject to cancellation in the event that KUB determines to apply the Hold-the-Offering-Price Rule to a series of the Bonds. Bidders should prepare their bids on the assumption that each series of the Bonds will be subject to the Hold-the-Offering-Price Rule in order to establish the issue price of the Bonds.

d. By submitting a bid, in the event of application of the Hold-the-Offering-Price Rule, the successful bidder for a series of Bonds shall deemed to have (i) confirm that the underwriters have offered or will offer such Bonds to the public on or before the date of award at the offering price or prices (the "Initial Offering Price"), or at the corresponding yield or yields, set forth in the bid submitted by the successful bidder and (ii) agree, on behalf of the underwriters participating in the purchase of such Bonds, that the underwriters will neither offer nor sell unsold Bonds of any maturity to which the Hold-the-Offering-Price Rule shall apply to any person at a price that is higher than the Initial Offering Price to the public during the period starting on the sale date and ending on the earlier of the following:

1. the close of the fifth (5th) business day after the sale date; or

2. the date on which the underwriters have sold at least 10% of that maturity of the applicable series of Bonds to the public at a price that is no higher than the Initial Offering Price to the public.

In the event of application of the Hold-the-Offering-Price Rule, any successful bidder will advise KUB promptly after the close of the fifth (5^{th}) business day after the sale date whether it has sold 10% of that maturity of the applicable series of Bonds to the public at a price that is no higher than the Initial Offering Price to the public.

e. By submitting a bid, each bidder confirms that:

(i) any agreement among underwriters, any selling group agreement and each third-party distribution agreement (to which the bidder is a party) relating to the initial sale of the applicable series of Bonds to the public, together with the related pricing wires, contains or will contain language obligating each underwriter, each dealer who is a member of the selling group, and each broker-dealer that is a party to such third-party distribution agreement, as applicable:

(A) (1) to report the prices at which it sells to the public any unsold Bonds of each maturity allocated to it to which the Hold-the-Offering-Price Rule applies until the close of the fifth (5^{th}) business day after the sale date and (2) comply with the Hold-the-Offering-Price Rule, if applicable, if and for so long as directed by the successful bidder and as set forth in the related pricing wires,

(B) to promptly notify the successful bidder of any series of Bonds that, to its knowledge, are made to a purchaser who is a related party to an underwriter participating in the initial sale of the Bonds to the public, and

(C) to acknowledge that, unless otherwise advised by the underwriter, dealer or broker-dealer, the successful bidder shall assume that each order submitted by the underwriter, dealer or broker-dealer is a sale to the public.

(ii) any agreement among underwriters or selling group agreement relating to the initial sale of a series of the Bonds to the public, together with the related pricing wires, contains or will contain language obligating each underwriter or dealer that is a party to a third-party distribution agreement to be employed in connection with the initial sale of the Bonds of such series to the public to require each broker-dealer that is a party to such third-party distribution agreement to (A) report the prices at which it sells to the public the unsold Bonds of each maturity to which the Hold-the-Offering-Price Rule applies allocated to it until the close of the fifth (5^{th}) business day after the sale date and (B) comply with the Hold-the-Offering-Price Rule, if applicable, if and for so long as directed by the successful bidder or the underwriter and as set forth in the related pricing wires.

f. KUB acknowledges that, in making the representations set forth above, each successful bidder will rely on (i) the agreement of each underwriter to comply with the requirements for establishing issue price of the Bonds, including, but not limited to, its agreement to comply with the Hold-the-Offering-Price Rule, if applicable to the Bonds, as set forth in an agreement among underwriters and the related pricing wires, (ii) in the event a selling group has been created in connection with the initial sale of the Bonds to the public, the agreement of each dealer who is a member of the selling group to comply with requirements for establishing issue price of the Bonds, including, but not limited to, its agreement to comply with the Hold-the-Offering-Price Rule, if applicable to the Bonds, as set forth in a selling group agreement and the related pricing wires, and (iii) in the event that an underwriter is a party to a third-party distribution agreement that was employed in connection with the initial sale of the applicable series of Bonds to the public, the agreement of each broker-dealer that is a party to such agreement to comply with requirements for establishing issue price of the Bonds, including, but not limited to, its agreement to comply with the Hold-the-Offering-Price Rule, if applicable to the Bonds, and that no underwriter shall be liable for the failure of any other underwriter, or of any dealer who is a member of a selling group, or of any broker-dealer that is a party to a third-party distribution agreement to comply with its corresponding agreement to comply with the requirements for establishing issue price of the applicable series of the Bonds.

g. Sales of any Bonds to any person that is a related party to an underwriter participating in the initial sale of the Bonds to the public shall not constitute sales to the public for purposes of this Detailed Notice of Bond Sale. Further, for purposes of this Detailed Notice of Bond Sale:

1. "public" means any person other than an underwriter or a related party;

2. "underwriter" means (A) any person that agrees pursuant to a written contract with KUB (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of a series of the Bonds to the public and (B) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (A) to participate in the initial sale of a series of the Bonds to the public (including a member of a selling group or a party to a third-party distribution agreement participating in the initial sale of a series of the Bonds to the public);

3. a purchaser of any of the Bonds is a "related party" to an underwriter if the underwriter and the purchaser are subject, directly or indirectly, to (A) more than 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (B) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (C) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interests of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interests by one entity of the other); and

4. "sale date" means the date that a series of the Bonds are awarded by KUB to the successful bidder.

Issue Price Certificate. Each winning bidder will be required to provide KUB, at closing, with an issue price certificate consistent with the foregoing and meeting the requirements of the bond counsel. The form of the issue price certificate is attached to this Detailed Notice of Sale as Exhibit A if the Competitive Sale Requirements are met and the form of the issue price certificate is attached to this Detailed Notice of Sale as Exhibit B if the Competitive Sale Requirements are not met.

Legal Opinions. The approving opinions of Bass, Berry & Sims PLC, Knoxville, Tennessee, Bond Counsel along with other certificates including, but not limited to, tax certificates and a continuing disclosure certificates dated as of the date of delivery of the Bonds will be furnished to the purchaser at the expense of KUB. As set forth in the *Preliminary Official Statement*, Bond Counsel's opinion with respect to the Bonds will state that interest on the Bonds will be excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal law alternative minimum tax. As set forth in the *Preliminary Official Statement*, the owners of the Bonds, however, may be subject to certain additional taxes or tax consequences arising with respect to ownership of the Bonds, reference is hereby made to the *Preliminary Official Statement* and the form of the opinion contained in Appendix A.

Continuing Disclosure. At the time the Bonds are delivered, KUB will execute a Continuing Disclosure Certificate in which it will covenant for the benefit of holders and Beneficial Owners of the Bonds to provide certain financial information and operating data relating to KUB by not later than twelve months after each of KUB's fiscal years, (the "Annual Report"), and to provide notice of the occurrence of certain enumerated events. The Annual Report (and audited financial statements, if filed separately) will be filed with the Municipal Securities Rulemaking Board (the "MSRB") through the operation of the Electronic Municipal Market Access system (the "EMMA") and any State Information Depository established in the State of Tennessee (the "SID"). If KUB is unable to provide the Annual Report to the MSRB and the SID by the date required, notice of each failure will be sent to the MSRB and the SID on or before such date. The notices of material events will be filed by KUB either with the MSRB and the SID. The specific nature of the information to be contained in the Annual Report or the notices of events are summarized in *Preliminary Official Statement*.

Delivery of Bonds. Delivery of the Bonds is expected within forty-five (45) days. At least five (5) days' notice will be given each successful bidder of such delivery. Delivery will be made in book-entry-only form through the facilities of The Depository Trust Company, New York, New York. Payment for the Bonds must be made in *Federal Funds* or other immediately available funds.

CUSIP Numbers. CUSIP numbers will be assigned to the Bonds at the expense of KUB. KUB will assume no obligation for assignment of such numbers or the correctness of such numbers, and neither failure to record such numbers on Bonds nor any error with respect thereto shall constitute cause for failure or refusal by the purchaser thereof to accept delivery of and make payment for the Bonds.

Official Statements; Other. The Board has deemed the *Preliminary Official Statement* to be final as of its date within the meaning of Rule 15c2-12 of the Securities and Exchange Commission (the "SEC") except for the omission of certain pricing and other information. KUB will furnish the successful bidder(s) at the expense of KUB a reasonable number of copies of *Official Statement* in final form, containing the pricing and other information to be supplied by such successful bidder(s) and to be dated the date of the sale, to be delivered by the successful bidder(s) to the persons to whom each such bidder and members of its bidding group initially sell the applicable series of Bonds. Acceptance of a bid as to a series of Bonds will constitute a contract between KUB and the successful bidder for the provision of such copies within seven business days of the sale date.

Further Information. Additional information, including the *Preliminary Official Statement*, the Detailed Notice of Sale and the Official Bid Form, may be obtained from munihub at (www.prospectushub.com) or KUB's Municipal Advisor, Cumberland Securities Company, Inc., Knoxville, Tennessee, Telephone: 865-988-2663. Further information regarding ***BiDCOMP™/PARITY™*** may be obtained from ***BiDCOMP™/PARITY™***, 1359 Broadway - 2nd Floor, New York, NY 10018, Telephone: 800.850.7422.

CITY OF KNOXVILLE, TENNESSEE
By and Through
KNOXVILLE UTILITIES BOARD

By: Gabriel J. Bolas II
President and CEO
Knoxville Utilities Board

EXHIBIT A

CITY OF KNOXVILLE, TENNESSEE

[$_____ Electric System Revenue Bonds, Series OO-2022]
[$_____ Wastewater System Revenue Bonds, Series 2022C]

ISSUE PRICE CERTIFICATE
(if Competitive Sale Requirements are met)

The undersigned, on behalf of [NAME OF UNDERWRITER] ("[SHORT NAME OF UNDERWRITER]"), hereby certifies as set forth below with respect to the sale of the above-captioned obligations (the "Bonds") of the City of Knoxville, Tennessee (the "Issuer").

1. ***Reasonably Expected Initial Offering Price***.

   (a) As of the Sale Date, the reasonably expected initial offering prices of the Bonds to the Public by [SHORT NAME OF UNDERWRITER] are the prices listed in Schedule A (the "Expected Offering Prices"). The Expected Offering Prices are the prices for the Maturities of the Bonds used by [SHORT NAME OF UNDERWRITER] in formulating its bid to purchase the Bonds. Attached as Schedule B is a true and correct copy of the bid provided by [SHORT NAME OF UNDERWRITER] to purchase the Bonds.

   (b) [SHORT NAME OF UNDERWRITER] was not given the opportunity to review other bids prior to submitting its bid.

   (c) The bid submitted by [SHORT NAME OF UNDERWRITER] constituted a firm offer to purchase the Bonds.

2. ***Defined Terms***.

   (a) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate Maturities.

   (b) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a related party to an Underwriter.

   (c) *Related party* means an entity that shares with another entity (1) more than 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (2) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (3) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interest of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interest by one entity of the other).

   (d) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is November 30, 2022.

   (e) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Issuer (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or

indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a third-party distribution agreement participating in the initial sale of the Bonds to the Public).

The representations set forth in this certificate are limited to factual matters only. Nothing in this certificate represents [SHORT NAME OF UNDERWRITER]'s interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by the Issuer with respect to certain of the representations set forth in the Tax Certificate with respect to the Bonds and with respect to compliance with the federal income tax rules affecting the Bonds, and by Bass, Berry & Sims PLC in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Issuer from time to time relating to the Bonds.

Dated: _____

[NAME OF UNDERWRITER]

By: _____

Name: _____

Title: _____

EXHIBIT B

CITY OF KNOXVILLE, TENNESSEE

[$_____ Electric System Revenue Bonds, Series OO-2022]
[$_____ Wastewater System Revenue Bonds, Series 2022C]

ISSUE PRICE CERTIFICATE
(if Competitive Sale Requirements are NOT met)

The undersigned, on behalf of [NAME OF UNDERWRITER] ("[SHORT NAME OF UNDERWRITER]") [and the other members of the underwriting syndicate (together, the "Underwriting Group")], hereby certifies as set forth below with respect to the sale and issuance of the above-captioned obligations (the "Bonds") of the City of Knoxville, Tennessee (the "Issuer").

1. ***Sale of the General Rule Maturities***. As of the date of this certificate, for each Maturity of the General Rule Maturities, the first price at which at least 10% of such Maturity was sold to the Public is the respective price listed in Schedule A.

2. ***Initial Offering Price of the Hold-the-Offering-Price Maturities***.

(a) [SHORT NAME OF UNDERWRITER] [The Underwriting Group] offered the Hold-the-Offering-Price Maturities to the Public for purchase at the respective initial offering prices listed in Schedule A (the "Initial Offering Prices") on or before the Sale Date. A copy of the pricing wire or equivalent communication for the Bonds is attached to this certificate as Schedule B.

(b) As set forth in the Detailed Notice of Sale and bid award, [SHORT NAME OF UNDERWRITER] agreed in writing on or prior to the Sale Date that, (i) for each Maturity of the Hold-the-Offering-Price Maturities, [it][they] would neither offer nor sell any of the Bonds of such Maturity to any person at a price that is higher than the Initial Offering Price for such Maturity during the Holding Period for such Maturity (the "Hold-the-Offering-Price Rule"), and (ii) any selling group agreement shall contain the agreement of each dealer who is a member of the selling group, and any third-party distribution agreement shall contain the agreement of each broker-dealer who is a party to the third-party distribution agreement, to comply with the Hold-the-Offering-Price Rule. Pursuant to such agreement, no Underwriter (as defined below) offered or sold any Maturity of the Hold-the-Offering-Price Maturities at a price that is higher than the respective Initial Offering Price for that Maturity of the Bonds during the Holding Period.

3. ***Defined Terms***.

(a) *General Rule Maturities* means those Maturities of the Bonds listed in Schedule A hereto as the "General Rule Maturities."

(b) *Hold-the-Offering-Price Maturities* means those Maturities of the Bonds listed in Schedule B hereto as the "Hold-the-Offering-Price Maturities."

(c) *Holding Period* means, with respect to a Hold-the-Offering-Price Maturity, the period starting on the Sale Date and ending on the earlier of (i) the close of the fifth business day after the Sale Date, or (ii) the date on which [SHORT NAME OF UNDERWRITER] sold at least 10% of such Hold-the-Offering-Price Maturity to the Public at prices that are no higher than the Initial Offering Price for such Hold-the-Offering-Price Maturity.

(d) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate maturities.

(e) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than an Underwriter or a related party to an Underwriter.

(f) *Related party* means an entity that shares with another entity (1) more than 50% common ownership of the voting power or the total value of their stock, if both entities are corporations (including direct ownership by one corporation of another), (2) more than 50% common ownership of their capital interests or profits interests, if both entities are partnerships (including direct ownership by one partnership of another), or (3) more than 50% common ownership of the value of the outstanding stock of the corporation or the capital interests or profit interest of the partnership, as applicable, if one entity is a corporation and the other entity is a partnership (including direct ownership of the applicable stock or interest by one entity of the other).

(g) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is November 30, 2022.

(f) *Underwriter* means (i) any person that agrees pursuant to a written contract with the Issuer (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a third-party distribution agreement participating in the initial sale of the Bonds to the Public).

The representations set forth in this certificate are limited to factual matters only. Nothing in this certificate represents [SHORT NAME OF UNDERWRITER]'s interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by the Issuer with respect to certain of the representations set forth in the Tax Certificate with respect to the Bonds and with respect to compliance with the federal income tax rules affecting the Bonds, and by Bass, Berry & Sims PLC in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Issuer from time to time relating to the Bonds.

Dated: _____

[NAME OF UNDERWRITER]

By:_____

BID FORM – ELECTRIC BONDS

Mr. Gabriel J. Bolas II, President and CEO
Knoxville Utilities Board
445 Gay Street
Knoxville, Tennessee 37902

November 30, 2022

Dear Mr. Bolas:

For your legally issued, properly executed $79,000,000* Electric System Revenue Bonds, Series OO-2022 ("Electric Bonds" or "Electric Series OO-2022 Bonds") of the City of Knoxville, Tennessee, in all respects as more fully outlined in your Detailed Notice of Sale, which by reference are made a part hereof, we will pay you a sum of _____ ($_____).

The Electric Bonds shall be dated the date of issuance (assume December 16, 2022) and shall be callable in accordance with the Detailed Notice of Sale. The Electric Bonds shall mature on July 1 and bear interest at the following rates:

Maturity (July 1)	Amount*	Rate	Maturity (July 1)	Amount*	Rate
2024	$1,470,000	_____	2039	$2,685,000	_____
2025	1,530,000	_____	2040	2,790,000	_____
2026	1,595,000	_____	2041	2,905,000	_____
2027	1,660,000	_____	2042	3,025,000	_____
2028	1,730,000	_____	2043	3,150,000	_____
2029	1,800,000	_____	2044	3,275,000	_____
2030	1,870,000	_____	2045	3,410,000	_____
2031	1,950,000	_____	2046	3,550,000	_____
2032	2,030,000	_____	2047	3,695,000	_____
2033	2,110,000	_____	2048	3,845,000	_____
2034	2,195,000	_____	2049	4,000,000	_____
2035	2,285,000	_____	2050	4,165,000	_____
2036	2,380,000	_____	2051	4,335,000	_____
2037	2,475,000	_____	2052	4,510,000	_____
2038	2,580,000	_____			

We have the option to designate two or more consecutive serial maturities as term bond maturities as indicated:

Term Bond 1 includes the following maturities: From July 1, 20__ to July 1, 20__; at the rate of ____%.
Term Bond 2 includes the following maturities: From July 1, 20__ to July 1, 20__; at the rate of ____%.
Term Bond 3 includes the following maturities: From July 1, 20__ to July 1, 20__; at the rate of ____%.
Term Bond 4 includes the following maturities: From July 1, 20__ to July 1, 20__; at the rate of ____%.
Term Bond 5 includes the following maturities: From July 1, 20__ to July 1, 20__; at the rate of ____%.

It is our understanding that the Electric Bonds are offered for sale subject to the final approving opinion of Bass, Berry & Sims PLC, Knoxville, Tennessee, as Bond Counsel, whose opinion together with the executed Electric Bonds will be furnished by KUB without cost to us.

If our bid is accepted, we agree to provide a good faith deposit of up to 2% of the Electric Bonds on which we have bid by the close of business on the day following the competitive public sale. Should for any reason we fail to comply with the terms of this bid, this good faith deposit shall be forfeited by us as full liquidated damages. Otherwise, this good faith deposit shall be applied to the purchase price of the Electric Bonds on which we have bid.

This bid is a firm offer for the purchase of the Bonds identified in the Notice of Sale, on the terms set forth in this bid form and the Notice of Sale, and is not subject to any conditions, except as permitted by the Notice of Sale. By submitting this bid, we confirm that we have an established industry reputation for underwriting new issuances of municipal bonds. [If the bidder cannot confirm an established industry reputation for underwriting new issuances of municipal bonds, the preceding sentence should be crossed out.]

ACCEPTED this 30th day of November 2022,
by the Knoxville Utilities Board.

Very truly yours,

(Name)
_____
(Firm)
_____
(Mailing Address)
(_____)_____
(Telephone)

_____
Gabriel J. Bolas II, President and CEO

_____
Mark Walker, Senior Vice President and CFO

Total interest cost from date of bonds to maturity ..... $_____
Less premium bid, if any, or plus discount, if any ..... $_____
Net Interest Cost ..... $_____
True Interest Rate ..... _____% (four decimals)

The above computations of net interest cost and true interest rate are for comparison purposes only and are not to be considered as part of this proposal.

*Subject to change.

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BID FORM – WASTEWATER BONDS

Mr. Gabriel J. Bolas II, President and CEO
Knoxville Utilities Board
445 Gay Street
Knoxville, Tennessee 37902

November 30, 2022

Dear Mr. Bolas:

For your legally issued, properly executed the $9,995,000* Wastewater System Revenue Bonds, Series 2022C ("Wastewater Bonds" or "Series 2022C Bonds") of the City of Knoxville, Tennessee, in all respects as more fully outlined in your Detailed Notice of Sale, which by reference are made a part hereof, we will pay you a sum of _____ ($_____).

The Wastewater Bonds shall be dated the date of issuance (assume December 16, 2022) and shall be callable in accordance with the Detailed Notice of Sale. The Wastewater Bonds shall mature on April 1 and bear interest at the following rates:

Maturity (April 1)	Amount*	Rate	Maturity (April 1)	Amount*	Rate
2024	$190,000	_____	2039	$340,000	_____
2025	195,000	_____	2040	355,000	_____
2026	205,000	_____	2041	365,000	_____
2027	210,000	_____	2042	380,000	_____
2028	220,000	_____	2043	395,000	_____
2029	230,000	_____	2044	415,000	_____
2030	240,000	_____	2045	430,000	_____
2031	250,000	_____	2046	445,000	_____
2032	260,000	_____	2047	465,000	_____
2033	270,000	_____	2048	485,000	_____
2034	280,000	_____	2049	505,000	_____
2035	290,000	_____	2050	525,000	_____
2036	300,000	_____	2051	545,000	_____
2037	315,000	_____	2052	565,000	_____
2038	325,000	_____			

We have the option to designate two or more consecutive serial maturities as term bond maturities as indicated:

Term Bond 1 includes the following maturities: From April 1, 20__ to April 1, 20__; at the rate of ____%.
Term Bond 2 includes the following maturities: From April 1, 20__ to April 1, 20__; at the rate of ____%.
Term Bond 3 includes the following maturities: From April 1, 20__ to April 1, 20__; at the rate of ____%.
Term Bond 4 includes the following maturities: From April 1, 20__ to April 1, 20__; at the rate of ____%.
Term Bond 5 includes the following maturities: From April 1, 20__ to April 1, 20__; at the rate of ____%.

It is our understanding that the Wastewater Bonds are offered for sale subject to the final approving opinion of Bass, Berry & Sims PLC, Knoxville, Tennessee, as Bond Counsel, whose opinion together with the executed Wastewater Bonds will be furnished by KUB without cost to us.

If our bid is accepted, we agree to provide a good faith deposit of up to 2% of the Wastewater Bonds on which we have bid by the close of business on the day following the competitive public sale. Should for any reason we fail to comply with the terms of this bid, this good faith deposit shall be forfeited by us as full liquidated damages. Otherwise, this good faith deposit shall be applied to the purchase price of the Wastewater Bonds on which we have bid.

This bid is a firm offer for the purchase of the Bonds identified in the Notice of Sale, on the terms set forth in this bid form and the Notice of Sale, and is not subject to any conditions, except as permitted by the Notice of Sale. By submitting this bid, we confirm that we have an established industry reputation for underwriting new issuances of municipal bonds. [If the bidder cannot confirm an established industry reputation for underwriting new issuances of municipal bonds, the preceding sentence should be crossed out.]

ACCEPTED this 30th day of November 2022,
by the Knoxville Utilities Board.

_____
Gabriel J. Bolas II, President and CEO

_____
Mark Walker, Senior Vice President and CFO

Very truly yours,

(Name)
_____
(Firm)
_____
(Mailing Address)
(_____)_____
(Telephone)

Total interest cost from date of bonds to maturity ..... $_____
Less premium bid, if any, or plus discount, if any ..... $_____
Net Interest Cost ..... $_____
True Interest Rate ..... _____% (four decimals)

The above computations of net interest cost and true interest rate are for comparison purposes only and are not to be considered as part of this proposal.

*Subject to change.

$88,995,000*
CITY OF KNOXVILLE, TENNESSEE

$79,000,000* Electric System Revenue Bonds, Series OO-2022
$9,995,000* Wastewater System Revenue Bonds, Series 2022C

SECURITIES OFFERED

AUTHORITY AND PURPOSE

This *Preliminary Official Statement*, which includes the cover page and "Summary Statement" hereof and the appendices hereto, is furnished in connection with the offering by the City of Knoxville, Tennessee (the "City") of its $79,000,000* Electric System Revenue Bonds, Series OO-2022 ("Electric Bonds" or "Electric Series OO-2022 Bonds") and the $9,995,000* Wastewater System Revenue Bonds, Series 2022C ("Wastewater Bonds" or "Series 2022C Bonds"). The Electric Bonds and Wastewater Bonds will be collectively referred to as the "Bonds".

The Electric Bonds are being issued pursuant to Chapter 34, Title 7, and Chapter 21, Title 9, *Tennessee Code Annotated,* as amended (the "Act"), the Charter of the City (the "City Charter"), other applicable statutes, and pursuant to Resolution No. 1644 adopted by the City on January 4, 1949 as amended and supplemented by Resolution No. 2171 adopted February 22, 1955; Resolution No. 3491 adopted by the City on February 21, 1967; Resolution R-317-90 adopted by the City on October 30, 1990; Resolution No. R-422-98 adopted by the City on October 20, 1998; Resolution No. R-149-01 adopted by the City on March 20, 2001; Resolution No. R-332-2010 adopted by the City on November 2, 2010; and Resolution No. R-230-2018 adopted by the City on June 20, 2018 and as supplemented by Resolution No. R-221-2022 adopted by the City on July 26, 2022 (collectively, the "Electric Bond Resolutions"). All Electric System Revenue Bonds issued pursuant to such Electric Bond Resolutions are hereinafter referred to as the "Electric System Bonds."

The Wastewater Bonds are being issued pursuant to the Act, the City Charter, other applicable statutes for the purpose of providing funds to pay for the construction of improvements to and extending of the City's Wastewater System, and pursuant to Resolution No. R-129-90 adopted by the City on May 15, 1990, as amended and supplemented by Resolution No. R-5-98 adopted by the City on January 27, 1998; Resolution No. R-148-01 adopted by the City on March 20, 2001; Resolution No. R-11-S adopted by the City on December 15, 2009 and as supplemented by Resolution No. R-223-2022 adopted by the City on July 26, 2022 (collectively, the "Wastewater Bond Resolutions"). All Wastewater System Revenue Bonds issued pursuant to such Wastewater Bond Resolutions are hereinafter referred to as the "Wastewater System Bonds."

In 1939 the City Charter was amended to create the Knoxville Electric Power and Water Board which name was changed in 1947 to the Knoxville Utilities Board ("KUB"). KUB provides electric, fiber, gas, water and wastewater utility services through separate City owned electric, fiber, gas, water, and wastewater systems (collectively, the "Systems"), and is governed by a seven-member Board of Commissioners (the "Board").

The Bonds are being issued to provide funds to pay the costs of extensions and improvements to the Electric System and the Wastewater System (collectively, the "Systems"), as described herein and incident to the issuance and sale of the Bonds.

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*Subject to Change.

DESCRIPTION OF THE BONDS

General Terms

The Bonds will be initially dated the date of issuance (assume December 16, 2022) and will be issued in book-entry-only form, without coupons, in denominations of $5,000 each and integral multiples thereof.

The Electric Bonds will bear interest from their dated date at the rate or rates per annum set forth on the inside cover page hereof, such interest (computed on the basis of a 360-day year of twelve 30-day months) being payable semi-annually on the first days of January and July of each year, commencing on July 1, 2023.

The Wastewater Bonds will bear interest from their dated date at the rate or rates per annum set forth on the inside cover page hereof, such interest (computed on the basis of a 360-day year of twelve 30-day months) being payable semi-annually on the first days of April and October of each year, commencing on April 1, 2023.

The Bonds will be initially registered only in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC"), which will act as securities depository for the Bonds. Regions Bank, Nashville, Tennessee (the "Registration Agent") will make all interest payments with respect to the Bonds on each interest payment date directly to Cede & Co., as nominee of DTC, the registered owner as shown on the Bond registration records maintained by the Registration Agent as of the close of business on the fifteenth day of the month next preceding the interest payment date (the "Regular Record Date") by check or draft mailed to such owner at its address shown on said Bond registration records, without, except for final payment, the presentation or surrender of such registered Bonds, and all such payments shall discharge the obligations of KUB in respect of such Bonds to the extent of the payments so made. Payment of principal of the Bonds shall be made upon presentation and surrender of such Bonds to the Registration Agent as the same shall become due and payable.

Any interest on any Bond which is payable but is not punctually paid or duly provided for on any interest payment date (hereinafter "Defaulted Interest") shall forthwith cease to be payable to the registered owner on the relevant Regular Record Date; and, in lieu thereof, such Defaulted Interest shall be paid by KUB to the persons in whose names the Bonds are registered at the close of business on a date (the "Special Record Date") for the payment of such Defaulted Interest, which shall be fixed in the following manner: KUB shall notify the Registration Agent in writing of the amount of Defaulted Interest proposed to be paid on each Bond and the date of the proposed payment, and at the same time KUB shall deposit with the Registration Agent an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Registration Agent for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the persons entitled to such Defaulted Interest. Thereupon, not less than ten (10) days after the receipt by the Registration Agent of the notice of the proposed payment, the Registration Agent shall fix a Special Record Date for the payment of such Defaulted Interest which date shall be not more than fifteen (15) nor less than ten (10) days prior to the date of the proposed payment to the registered owners. The Registration Agent shall promptly notify KUB of such Special Record Date and, in the name and at the expense of KUB, not less than ten (10) days prior to such Special Record Date, shall cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first class postage prepaid, to each registered owner at the address thereof as it appears in the Bond registration records maintained by the Registration Agent as of the date of such notice. Nothing contained in the Electric Bond Resolutions or the Wastewater Bond Resolutions (collectively, the "Resolutions") or in the Bonds shall impair any statutory or other rights in law or in equity of any registered owner arising as a result of the failure of KUB to punctually pay or duly provide for the payment of principal of, premium, if any, and interest on the Bonds when due.

So long as Cede & Co. is the Registered Owner of the Bonds, as nominee of DTC, references herein to the Bondholders, Holders or Registered Owners of the Bonds shall mean Cede & Co. and shall not mean the Beneficial Owners of the Bonds. See "The Book-Entry-Only System."

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Optional Redemption

The Electric Bonds maturing on and after July 1, 2032 will be subject to redemption prior to maturity at the option of the Board on or after July 1, 2031 at the redemption price of par plus accrued interest as provided herein. The Wastewater Bonds maturing on and after April 1, 2032 will be subject to redemption prior to maturity at the option of the Board on or after April 1, 2031 at the redemption price of par plus accrued interest as provided herein.

Mandatory Redemption Of The Bonds

Electric Bonds. Subject to the credit hereinafter provided, the City, acting by and through KUB, shall redeem Electric Bonds maturing July 1, 20__ on the redemption dates set forth on the following table, in aggregate principal amounts equal to the respective dollar amounts set forth below opposite the respective redemption dates at a price of par plus accrued interest thereon to the date of redemption. DTC, as securities depository for the Electric Bonds or such Person as shall then be serving as the securities depository for the Bonds, shall determine the interest of each Participant in the Electric Bonds to be redeemed using its procedures generally in use at that time. If DTC, or another securities depository is no longer serving as securities depository for the Electric Bonds, the Electric Bonds to be redeemed within a maturity shall be selected by the Registration Agent by lot or such other random manner as the Registration Agent in its discretion shall select. The dates of redemption and principal amount of Electric Bonds to be redeemed on said dates are as follows:

Final Maturity	Redemption Date	Principal Amount of Electric Bonds Redeemed

*Final Maturity of Electric Bonds

Wastewater Bonds. Subject to the credit hereinafter provided, the City, acting by and through KUB, shall redeem Wastewater Bonds maturing April 1, 20__ on the redemption dates set forth on the following table, in aggregate principal amounts equal to the respective dollar amounts set forth below opposite the respective redemption dates at a price of par plus accrued interest thereon to the date of redemption. DTC, as securities depository for the Wastewater Bonds or such Person as shall then be serving as the securities depository for the Bonds, shall determine the interest of each Participant in the Wastewater Bonds to be redeemed using its procedures generally in use at that time. If DTC, or another securities depository is no longer serving as securities depository for the Wastewater Bonds, the Wastewater Bonds to be redeemed within a maturity shall be selected by the Registration Agent by lot or such other random manner as the Registration Agent in its discretion shall select. The dates of redemption and principal amount of Wastewater Bonds to be redeemed on said dates are as follows:

Final Maturity	Redemption Date	Principal Amount of Wastewater Bonds Redeemed

*Final Maturity of Wastewater Bonds

At its option, to be exercised on or before the forty-fifth (45th) day next preceding any such redemption date, the City, acting by and through KUB, may (i) deliver to the Registration Agent for cancellation Bonds of the applicable series to be redeemed, in any aggregate principal amount desired, and/or (ii) receive a credit in respect of its redemption obligation under this mandatory redemption provision for any Bonds of the maturity to be redeemed which prior to said date have been purchased or redeemed (otherwise than through the operation of this mandatory sinking fund redemption provision) and canceled by the Registration Agent and not theretofore applied as a credit against any redemption obligation under this mandatory sinking fund provision. Each Bond so delivered or previously purchased or redeemed shall be credited by the Registration Agent at 100% of the principal amount thereof on the obligation of KUB on such payment date and any excess shall be credited on future redemption obligations in chronological order, and the principal amount of Bonds to be redeemed by operation of this mandatory sinking fund provision shall be accordingly reduced.

Selection Of Bonds For Redemption And Notice Of Redemption

If less than all the Bonds of a series shall be called for redemption, the maturities to be redeemed shall be designated by the Board, in its discretion. If less than all the principal amount of the Bonds of a maturity shall be called for redemption, the interests within the maturity to be redeemed shall be selected as follows:

(i) if the Bonds are being held under a Book-Entry-Only System by DTC, or a successor Depository, the amount of the interest of each DTC Participant in the Bonds to be redeemed shall be determined by DTC, or such successor Depository, by lot or such other manner as DTC, or such successor Depository, shall determine; or

(ii) if the Bonds are not being held under a Book-Entry-Only System by DTC, or a successor Depository, the Bonds within the maturity to be redeemed shall be selected by the Registration Agent by lot or such other random manner as the Registration Agent in its discretion shall determine.

Notice of call for redemption, whether optional or mandatory, shall be given by the Registration Agent not less than twenty (20) nor more than sixty (60) days prior to the date fixed for redemption by sending an appropriate notice to the registered owners of the Bonds to be redeemed by first-class mail, postage prepaid, at the addresses shown on the Bond registration records of the Registration Agent as of the date of the notice; but neither failure to mail such notice nor any defect in any such notice so mailed shall affect the sufficiency of the proceedings for the redemption of any of the Bonds for which proper notice was given. The notice may state that it is conditioned upon the deposit of moneys in an amount equal to the amount necessary to effect the redemption with the Registration Agent no later than the redemption date ("Conditional Redemption"). As long as DTC, or a successor Depository, is the registered owner of the Bonds, all redemption notices shall be mailed by the Registration Agent to DTC, or such successor Depository, as the registered owner of the Bonds, as and when above provided, and neither the District nor the Registration Agent shall be responsible for mailing notices of redemption to DTC Participants or Beneficial Owners. Failure of DTC, or any successor Depository, to provide notice to any DTC Participant will not affect the validity of such redemption. From and after any redemption date, all Bonds called for redemption shall cease to bear interest if funds are available at the office of the Registration Agent for the payment thereof and if notice has been duly provided as set forth in the Resolution. In the case of a Conditional Redemption, the failure of the Board to make funds available in part or in whole on or before the redemption date shall not constitute an event of default, and the Registration Agent shall give immediate notice to the Depository or the affected Bondholders that the redemption did not occur and that the Bonds called for redemption and not so paid remain outstanding.

ESTIMATED SOURCES AND USES OF FUNDS

The tables on the following pages set forth the estimated sources and uses of funds in connection with the issuance of the Bonds.

The Electric Bonds

Sources:

Principal amount of the Electric Bonds	$
Net Reoffering Premium	$
Total Sources	$

Uses:

Underwriter's Discount	$
Cost of Issuance	$
Deposit to the Construction Fund	$
Total Uses:	$

The Wastewater Bonds

Sources:

Principal amount of the Wastewater Bonds	$

Net Reoffering Premium ..... $
Total Sources ..... $

Uses:

Underwriter's Discount ..... $
Cost of Issuance ..... $
Deposit to the Construction Fund ..... $
Total Uses: ..... $

PAYMENT OF BONDS

The Bonds will bear interest from their date or from the most recent interest payment date to which interest has been paid or duly provided for, on the dates provided herein, such interest being computed upon the basis of a 360-day year of twelve 30-day months. Interest on each Bond shall be paid by check or draft of the Registration Agent to the person in whose name such Bond is registered at the close of business on the 15th day of the month next preceding the interest payment date. The principal of and premium, if any, on the Bonds shall be payable in lawful money of the United States of America at the designated trust office of the Registration Agent.

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SECURITY FOR THE ELECTRIC SYSTEM REVENUE BONDS, SERIES OO-2022

Pledge Under the Bond Resolutions.

The Electric Bonds constitute and, when issued, will be part of an issue of bonds known as "Electric System Revenue Bonds" under the Electric Bond Resolutions. All Electric Bonds are limited obligations of the City payable solely and ratably from the net revenues of the Electric System and are on a parity and equality of lien with the City's outstanding: (i) Electric System Revenue Refunding Bonds, Series EE-2015, dated May 1, 2015, (ii) Electric System Revenue Bonds, Series FF-2015, dated May 20, 2015, (iii) Electric System Revenue Bonds, Series GG-2016, dated August 5, 2016, (iv) Electric System Revenue Refunding Bonds, Series HH-2017, dated April 7, 2017, (v) Electric System Revenue Bonds, Series II-2017, dated September 15, 2017, (vi) Electric System Revenue Bonds, Series JJ-2018, dated September 14, 2018, (vii) Electric System Revenue Refunding Bonds, Series KK-2020, dated May 22, 2020, (viii) Electric System Revenue Refunding Bonds, Series LL-2021, dated April 19, 2021, (ix) Electric System Revenue Bonds, Series MM-2022, dated April 29, 2022 and (x) Electric System Revenue Refunding Bonds, Series NN-2022, dated May 13, 2022 (collectively, the "Outstanding Electric System Bonds") issued pursuant to the Electric Bond Resolutions in addition to the Electric Bonds. The Electric Bonds, the Outstanding Electric Bonds and any future parity bonds are sometimes hereinafter referred to as the "Electric System Bonds".

Neither the Electric Bonds nor any of the Outstanding Electric System Bonds are general obligations of the City, and no owner thereof shall have the right to compel the City to exercise its taxing power to pay principal of or premium or interest on the Electric Bonds or any other Outstanding Electric System Bonds of the City.

Rate Covenant

The Electric Bond Resolutions provide that the Board will fix rates and collect charges for electric energy and the services, facilities and commodities furnished by the Electric System to provide revenues sufficient to pay expenses and obligations related to the Electric System and to meet a 1.20 debt service coverage ratio. See APPENDIX F "Summary of Certain Provisions of the Electric Bond Resolutions – Rate Covenant" for additional information.

Additional Electric Bonds

The City and the Board have covenanted in the Electric Bond Resolutions that no indebtedness will be incurred payable from the revenues of the Electric System having priority over the Electric System Bonds, including the Electric Bonds.

The City, acting by and through KUB, or KUB may issue additional bonds, notes or other obligations pursuant to the Electric Bond Resolutions provided that all payments required to be made to the Electric Debt Service Fund and into any reserve fund which may be required under resolutions authorizing parity indebtedness are current as of the date of issuance of the additional bonds, notes or other obligations, on a parity and equality of lien with the outstanding parity indebtedness under the Electric Bond Resolution with respect to the lien and claim of such additional bonds, notes or other obligations to the net revenues of the Electric System and the money on deposit in the Electric Debt Service Fund (i) for the purpose of refunding any outstanding parity indebtedness, subordinate bonds, notes, loan agreements or other obligations, provided that after the issuance of such additional parity indebtedness, the Aggregate Debt Service (as defined in the Electric Bond Resolutions) on all outstanding parity indebtedness, including the additional parity indebtedness to be issued, in any fiscal year shall not increase by more than ten percent (10%) after the issuance of such additional parity indebtedness; (ii) for the purpose of financing the completion or equipping of improvements to the Electric System for which outstanding parity indebtedness have previously been issued but only to the extent necessary to complete such improvements in the manner contemplated at the time of the issuance of the outstanding parity indebtedness that financed such

improvements; and (iii) for the purposes of refunding any outstanding parity indebtedness or any prior lien bonds, subordinated bonds, notes or other obligations or extending, improving or replacing the Electric System or for any other lawful purpose under applicable law, if one of the following conditions shall have been met: (A) the Net Revenues (as defined in the Electric Resolution) for any twelve-month period selected by the Board ending within the twelve months prior to the date of the issuance of the additional parity indebtedness must have been equal to at least 120% of the Maximum Annual Aggregate Debt Service (as defined in the Electric Resolution) on outstanding parity indebtedness plus the Debt Service on the additional parity indebtedness proposed to be issued or (B) the estimated Net Revenues of the Electric System for each of the three fiscal years next succeeding the issuance of the additional parity indebtedness, must be equal at least to 120% of Maximum Annual Aggregate Debt Service, any other outstanding parity indebtedness and all outstanding prior lien bonds plus the Debt Service on the additional parity indebtedness proposed to be issued; provided, however, that if the additional parity indebtedness is to be issued for the acquisition or construction of any extension, improvement or replacement to the Electric System, then the estimate of Net Revenues may be for the three fiscal years ensuing after the time that such improvement, extension or replacement is expected to be placed in service. **See APPENDIX E "Summary of Certain Provisions of the Electric Bond Resolutions – Additional Indebtedness" for additional information.**

SECURITY FOR THE WASTEWATER SYSTEM REVENUE BONDS, SERIES 2022C

Pledge Under the Bond Resolution

The Wastewater Bonds constitute and, when issued, will be part of an issue known as "Wastewater System Revenue Bonds" under the Wastewater System Bond Resolutions. All Wastewater Bonds are limited obligations of the City payable solely and ratably from the net revenues of the Wastewater System of the City and are on a parity and equality of lien with the City's outstanding: (i) Wastewater System Revenue Bonds, Series 2010C (Federally Taxable Build America Bonds), dated December 8, 2010, maturing April 1, 2040; (ii) Wastewater System Revenue Refunding Bonds, Series 2015A, dated May 1, 2015; (iii) Wastewater System Revenue Bonds, Series 2015B, dated May 20, 2015; (iv) Wastewater System Revenue Bonds, Series 2016, dated August 5, 2016; (v) Wastewater System Revenue Refunding Bonds, Series 2017A, dated April 7, 2017; (vi) Wastewater System Revenue Bonds, Series 2017B, dated September 15, 2017; (vii) Wastewater System Revenue Bonds, Series 2018, dated September 14, 2018; (viii) Wastewater System Revenue Bonds, Series 2019, dated August 20, 2019; (ix) Wastewater System Revenue Refunding Bonds, Series 2020A, dated May 22, 2020; (x) Wastewater System Revenue Bonds, Series 2020B, dated October 30, 2020, (xi) Wastewater System Revenue Refunding Bonds, Series 2021A, dated April 19, 2021, (xii) Wastewater System Revenue Bonds, Series 2022A, dated April 29, 2022, and (xiii) Wastewater System Revenue Refunding Bonds, Series 2022B, dated May 13, 2022 (collectively, the "Outstanding Wastewater System Bonds"). The Wastewater Bonds, the Outstanding Wastewater System Bonds and any future parity bonds are sometimes hereinafter referred to as the "Wastewater System Bonds".

Neither the Wastewater Bonds nor any of the Outstanding Wastewater System Bonds are general obligations of the City, and no owner thereof shall have the right to compel the City to exercise its taxing power to pay principal of or premium or interest on the Wastewater Bonds or any other Outstanding Wastewater System Bonds of the City.

Rate Covenant

The Wastewater Bond Resolutions provide that the Board will fix rates and collect charges for the treatment of wastewater and the services, facilities and commodities furnished by the Wastewater System to provide revenues sufficient to pay expenses and obligations related to the Wastewater System and to meet a 1.20 debt service coverage ratio. See APPENDIX H "Summary of Certain Provisions of the Wastewater Bond Resolutions – Rate Covenant" for additional information.

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Additional Wastewater Bonds

The City and the Board have covenanted in the Wastewater Bond Resolutions that it will incur no indebtedness payable from the revenues of the Wastewater System having priority over the Wastewater System Bonds, including the Wastewater Bonds.

The City, acting by and through KUB, or KUB may issue additional bonds, notes or other obligations pursuant to the Wastewater Bond Resolutions provided that all payments required to be made to the Wastewater Debt Service Fund and into any reserve fund which may be required under resolutions authorizing parity indebtedness are current as of the date of issuance of the additional bonds, notes or other obligations, on a parity and equality of lien with the outstanding parity indebtedness under the Wastewater Bond Resolution, with respect to the lien and claim of such additional bonds, notes or other obligations to the net revenues of the Wastewater System and the money on deposit in the Wastewater Debt Service Fund (i) for the purpose of refunding any outstanding parity indebtedness, subordinate bonds, notes, loan agreements or other obligations, provided that after the issuance of such additional parity indebtedness, the Aggregate Debt Service (as defined in the Wastewater Resolution) on all outstanding parity indebtedness, including the additional parity indebtedness to be issued, in any fiscal year shall not increase by more than ten percent (10%) after the issuance of such additional parity indebtedness; (ii) for the purpose of financing the completion or equipping of improvements to the Wastewater System for which outstanding parity indebtedness have previously been issued but only to the extent necessary to complete such improvements in the manner contemplated at the time of the issuance of the outstanding parity indebtedness that financed such improvements; and (iii) for the purposes of refunding any outstanding parity indebtedness or any prior lien bonds, subordinated bonds, notes or other obligations or extending, improving or replacing the Wastewater System or for any other lawful purpose under applicable law, if one of the following conditions shall have been met: (A) the Net Revenues (as defined in the Wastewater Resolution) for any twelve-month period selected by the Board ending within the twelve months prior to the date of the issuance of the additional parity indebtedness must have been equal to at least 120% of the Maximum Annual Aggregate Debt Service (as defined in the Wastewater Resolution) on outstanding parity indebtedness plus the Debt Service on the additional parity indebtedness proposed to be issued or (B) the estimated Net Revenues of the Wastewater System for each of the three fiscal years next succeeding the issuance of the additional parity indebtedness, must be equal at least to 120% of Maximum Annual Aggregate Debt Service, any other outstanding parity indebtedness and all outstanding prior lien bonds plus the Debt Service on the additional parity indebtedness proposed to be issued; provided, however, that if the additional parity indebtedness is to be issued for the acquisition or construction of any extension, improvement or replacement to the Wastewater System, then the estimate of Net Revenues may be for the three fiscal years ensuing after the time that such improvement, extension or replacement is expected to be placed in service. **See APPENDIX F "Summary of Certain Provisions of the Wastewater Bond Resolutions – Additional Indebtedness" for additional information.**

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BOOK-ENTRY-ONLY SYSTEM

The Bonds, when issued, will be registered in the name of Cede & Co., DTC's partnership nominee. When the Bonds are issued, ownership interests will be available to purchasers only through a book-entry-only system maintained by DTC (the **"Book-Entry-Only System"**). One or more fully-registered bond certificates will be issued for each maturity, in the entire aggregate principal amount of the Bonds and will be deposited with DTC.

DTC and its Participants. DTC is a limited-purpose trust company organized under the New York Bank 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 securities that its participants (the **"Direct Participants"**) deposit with DTC. DTC also facilitates the settlement among Direct Participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerized book-entry-only changes in DTC Participants' accounts, thereby eliminating 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, in turn, is owned by a number of its Direct Participants and Members of the National Securities Clearing Corporation, Government Securities Clearing Corporation, MBS Clearing Corporation, and Emerging Markets Clearing Corporation, (the **"NSCC"**, **"GSCC"**, **"MBSCC"**, and **"EMCC"**, also subsidiaries of DTCC), as well as by the New York Stock Exchange, Inc. (the **"NYSE"**), the American Stock Exchange LLC and the National Association of Securities Dealers, Inc. Access to the DTC system is also available to others, such as both U.S. and non-U.S. securities brokers and dealers, banks and trust companies that clear through or maintain a custodial relationship with a Direct DTC Participant, either directly or indirectly (the **"Indirect Participants"** and, together with the Direct Participants, the **"Participants"**). The rules applicable to DTC and its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchase of Ownership Interests. Purchases of the 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 actual purchaser of each Bond (a **"Beneficial Owner"**) is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are 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 whom such Beneficial Owners 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 as specifically provided in the Bonds in the event that use of the Book-Entry-Only System is discontinued.

Payments of Principal and Interest. Principal and interest 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 Registration Agent on the payable date in accordance with their respective holdings shown on DTC's records, unless DTC has reason to believe it will not receive payment on such date. Payments by Direct and Indirect Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with municipal securities 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 City or the Registration Agent subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, principal, tender price and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Registration 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.

Notices. 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 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. Beneficial Owners of the Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners, or in the alternative, Beneficial Owners may wish to provide their names and addresses to the Registration Agent and request that copies of the notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the 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 procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the City as soon as practicable 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).

NONE OF THE CITY, KUB, THE MUNICIPAL ADVISOR, THE UNDERWRITER OR THE REGISTRATION AGENT WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO SUCH PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE PAYMENT TO, OR THE PROVIDING OF NOTICE FOR, SUCH PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES.

Transfers of Bonds. 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 the Bonds with DTC and their registration in the name of Cede & Co. or such other nominee do not effect 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.

None of the City, KUB, the Municipal Advisor, the Registration Agent or the Underwriter will have any responsibility or obligation, legal or otherwise, to any party other than to the registered owners of any Bond on the registration books of the Registration Agent.

NO ASSURANCE REGARDING DTC PRACTICES

The foregoing information in this section concerning DTC and DTC's Book-Entry-Only System has been obtained from sources that the City acting by and through KUB, believes to be reliable, but the City, KUB, the Registration Agent and the Underwriter do not take any responsibility for the accuracy thereof.

So long as Cede & Co. is the registered owner of the Bonds as nominee of DTC, references herein to the holders or registered owners of the Bonds will mean Cede & Co. and will not mean the Beneficial Owners of the Bonds.

None of the City, KUB, the Registration Agent, the Municipal Advisor or the Underwriter will have any responsibility or obligation to the Participants, DTC or the persons for whom they act with respect to (i) the

accuracy of any records maintained by DTC or by any Direct or Indirect Participant of DTC, (ii) payments or the providing of notice to Direct Participants, the Indirect Participants or the Beneficial Owners or (iii) any other action taken by DTC or its partnership nominee as owner of the Bonds.

For more information on the duties of the Registration Agent, please refer to the Resolution.

DEBT LIMITATIONS

Pursuant to Title 7, Chapter 34, Tennessee Code Annotated, as amended, there is no limit on the amount of bonds that may be issued when the City uses the statutory authority granted therein to issue bonds.

DISPOSITION OF BOND PROCEEDS

Electric Bonds

The proceeds of the sale of the Electric Bonds shall be used to pay the costs of the construction of improvements to and extensions to the Electric System, cost related to the issuance and sale of the Electric Bonds, including necessary legal, accounting and fiscal expenses, printing, engraving, advertising and similar expenses, administrative and clerical costs, rating agency fees, Registration Agent Fees and other necessary miscellaneous expenses incurred in connection with the issuance and sale of the Electric Bonds and other necessary miscellaneous expenses incurred in connection with the issuance and sale of the Electric Bonds;

Wastewater Bonds

The proceeds of the sale of the Wastewater Bonds shall be used to pay the costs of the construction of improvements to and extensions to the Wastewater System, cost related to the issuance and sale of the Wastewater Bonds, including necessary legal, accounting and fiscal expenses, printing, engraving, advertising and similar expenses, administrative and clerical costs, rating agency fees, Registration Agent Fees and other necessary miscellaneous expenses incurred in connection with the issuance and sale of the Wastewater Bonds and other necessary miscellaneous expenses incurred in connection with the issuance and sale of the Wastewater Bonds; and

DISCHARGE AND SATISFACTION OF BONDS

The respective series of Bonds may be discharged and deemed paid as described in Appendix E and Appendix F which are "Summaries of Resolutions".

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LEGAL MATTERS

LITIGATION

There are no suits pending or, to KUB's knowledge, threatened challenging the legality or validity of the Bonds or the right of KUB to sell or issue the Bonds, or that will have an adverse impact on KUB's ability to pay debt service on the Bonds.

TAX MATTERS

Federal

General. Bass, Berry & Sims PLC, Knoxville, Tennessee, is Bond Counsel for the Bonds. Their opinion under existing law, relying on certain statements by KUB and assuming compliance by KUB with certain covenants, is that interest on the Bonds:

- is excluded from a bondholder's federal gross income under the Internal Revenue Code of 1986, as amended (the "Code"), and
- is not a preference item for a bondholder under the federal alternative minimum tax; however, such interest is taken into account in determining the annual adjusted financial statement income of applicable corporations (as defined in Section 59(k) of the Code) for the purpose of computing the alternative minimum tax imposed on corporations for tax years beginning after December 31, 2022.

The Code imposes requirements on the Bonds that KUB must continue to meet after the Bonds are issued. These requirements generally involve the way that Bond proceeds must be invested and ultimately used. If KUB does not meet these requirements, it is possible that a bondholder may have to include interest on the Bonds in its federal gross income on a retroactive basis to the date of issue. KUB has covenanted to do everything necessary to meet these requirements of the Code.

A bondholder who is a particular kind of taxpayer may also have additional tax consequences from owning the Bonds. This is possible if a bondholder is:

- an S corporation,
- a United States branch of a foreign corporation,
- a financial institution,
- a property and casualty or a life insurance company,
- an individual receiving Social Security or railroad retirement benefits,
- an individual claiming the earned income credit or
- a borrower of money to purchase or carry the Bonds.

If a bondholder is in any of these categories, it should consult its tax advisor.

Bond Counsel is not responsible for updating its opinion in the future. It is possible that future events or changes in applicable law could change the tax treatment of the interest on the Bonds or affect the market price of the Bonds. See also the section "CHANGES IN FEDERAL AND STATE LAWS" below.

Bond Counsel expresses no opinion on the effect of any action taken or not taken in reliance upon an opinion of other counsel on the federal income tax treatment of interest on the Bonds, or under State, local or foreign tax law.

Bond Premium. If a bondholder purchases a Bond for a price that is more than the principal amount, generally the excess is "bond premium" on that Bond. The tax accounting treatment of bond premium is complex. It is amortized over time and as it is amortized a bondholder's tax basis in that Bond will be reduced. The holder of a Bond that is callable before its stated maturity date may be required to amortize the premium over a shorter

period, resulting in a lower yield on such Bonds. A bondholder in certain circumstances may realize a taxable gain upon the sale of a Bond with bond premium, even though the Bond is sold for an amount less than or equal to the owner's original cost. If a bondholder owns any Bonds with bond premium, it should consult its tax advisor regarding the tax accounting treatment of bond premium.

Original Issue Discount. A Bond will have "original issue discount" if the price paid by the original purchaser of such Bond is less than the principal amount of such Bond. Bond Counsel's opinion is that any original issue discount on these Bonds as it accrues is excluded from a bondholder's federal gross income under the Internal Revenue Code. The tax accounting treatment of original issue discount is complex. It accrues on an actuarial basis and as it accrues a bondholder's tax basis in these Bonds will be increased. If a bondholder owns one of these Bonds, it should consult its tax advisor regarding the tax treatment of original issue discount.

Information Reporting and Backup Withholding. Information reporting requirements apply to interest 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 if the recipient is one of a limited class of exempt recipients. 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 a Bond through a brokerage account has executed a Form W-9 in connection with the establishment of such account, as generally can be expected, 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 Internal Revenue Service.

State Taxes

Under existing law, the Bonds and the income therefrom are exempt from all present state, county and municipal taxes in Tennessee except (a) Tennessee excise taxes on interest on the Bonds during the period the Bonds are held or beneficially owned by any organization or entity, or other than a sole proprietorship or general partnership doing business in the State of Tennessee, and (b) Tennessee franchise taxes by reason of the inclusion of the book value of the Bonds in the Tennessee franchise tax base of any organization or entity, other than a sole proprietorship or general partnership, doing business in the State of Tennessee.

CHANGES IN FEDERAL AND STATE TAX LAW

From time to time, there are Presidential proposals, proposals of various federal committees, and legislative proposals in the Congress and in the states that, if enacted, could alter or amend the federal and state tax matters referred to herein or adversely affect the marketability or market value of the Bonds or otherwise prevent holders of the Bonds from realizing the full benefit of the tax exemption of interest on the Bonds. Further, such proposals may impact the marketability or market value of the Bonds simply by being proposed. It cannot be predicted whether or in what form any such proposal might be enacted or whether if enacted it would apply to bonds issued prior to enactment. In addition, regulatory actions are from time to time announced or proposed and litigation is threatened or commenced which, if implemented or concluded in a particular manner, could adversely affect the market value, marketability or tax status of the Bonds. It cannot be predicted whether any such regulatory action will be implemented, how any particular litigation or judicial action will be resolved, or whether the Bonds would be impacted thereby. Purchasers of the Bonds should consult their tax advisors regarding any pending or proposed legislation, regulatory initiatives or litigation. The opinions expressed by Bond Counsel are based upon existing legislation and regulations as interpreted by relevant judicial and regulatory authorities as of

the date of issuance and delivery of the Bonds, and Bond Counsel has expressed no opinion as of any date subsequent thereto or with respect to any proposed or pending legislation, regulatory initiatives or litigation.

Prospective purchasers of the Bonds should consult their own tax advisors regarding the foregoing matters.

CLOSING CERTIFICATES

Upon delivery of the Bonds, the Board and / or KUB will execute in a form satisfactory to Bond Counsel, certain closing certificates (which may be combined into one or more certificates) including the following: (i) A certificate as to the *Official Statement*, in final form, signed by the President & Chief Executive Officer and the Chief Financial Officer of KUB acting in their official capacity to the effect that to the best of their knowledge and belief, and after reasonable investigation, (a) neither the *Official Statement*, in final form, nor any amendment or supplement thereto, contains any untrue statements of material fact or omits to state any material fact necessary to make statements therein, in light of the circumstances in which they are made, misleading, (b) since the date of the *Official Statement*, in final form, no event has occurred which should have been set forth in such a memo or supplement, (c) there has been no material adverse change in the operation or the affairs of KUB since the date of the *Official Statement*, in final form, and having attached thereto a copy of the *Official Statement*, in final form, and (d) there is no litigation of any nature pending or threatened seeking to restrain the issuance, sale, execution and delivery of the Bonds, or contesting the validity of the Bonds or any proceeding taken pursuant to which the Bonds were authorized; (ii) a non-arbitrage certificate which supports the conclusions that based upon facts, estimates and circumstances in effect, upon delivery of the Bonds, the proceeds of the Bonds will not be used in a manner which would cause the Bonds to be arbitrage Bonds; (iii) certificates as to the delivery and payment, signed by the President and CEO and the CFO acting in their official capacity, evidencing delivery of and payment for the Bonds; and (iv) a signature identification and incumbency certificate, signed by the President and Chief Executive Officer and the CFO of KUB acting in their official capacities certifying as to the due execution of the Bonds.

APPROVAL OF LEGAL PROCEEDINGS

Certain legal matters relating to the authorization and the validity of the Bonds are subject to the approval of Bass, Berry & Sims PLC, Knoxville, Tennessee, Bond Counsel. Bond counsel has not prepared the *Preliminary Official Statement* or the *Official Statement*, in final form, or verified their accuracy, completeness or fairness. Accordingly, bond counsel expresses no opinion of any kind concerning the *Preliminary Official Statement* or *Official Statement,* in final form, except for the information under the caption "LEGAL MATTERS-Tax Matters". The opinion of Bond Counsel will be limited to matters relating to authorization and validity of the Bonds and to the tax-exemption of interest on the Bonds under present federal income tax laws, both as described above. The legal opinion will be delivered with the Bonds and is included in APPENDIX A, hereto.

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MISCELLANEOUS

RATINGS

S&P Global Ratings ("S&P") and Moody's Investor Services, Inc. ("Moody's") have given the Electric Bonds the ratings of "AA-" and "Aa2", respectively, S&P and Moody's have given the Wastewater Bonds the ratings of "AA+" and "Aa2", respectively.

KUB furnished S&P and Moody's with certain information and materials concerning the Bonds, the City and KUB. Generally, S&P and Moody's base their ratings on such information and materials and also on such investigations, studies and assumptions that they may undertake independently. Such ratings reflect only the views of such organizations and explanations of the significance of such ratings should be obtained from such agencies.

There is no assurance that such ratings will continue for any given period of time or that the ratings may not be suspended, lowered or withdrawn entirely by S&P and Moody's, if circumstances so warrant. Due to the ongoing uncertainty regarding the economy of the United States of America, including, without limitation, matters such as the future political uncertainty regarding the United States debt limit, obligations issued by state and local governments, such as the Bonds, could be subject to a rating downgrade. Additionally, if a significant default or other financial crisis should occur in the affairs of the United States or of any of its agencies or political subdivisions, then such event could also adversely affect the market for and ratings, liquidity, and market value of outstanding debt obligations, including the Bonds. Any such downward change in or withdrawal of the ratings may have an adverse effect on the secondary market price of the Bonds.

Any explanation of the significance of the ratings may be obtained only from S&P and Moody's.

COMPETITIVE PUBLIC SALE

The Bonds will be offered for sale at competitive public bidding on the sale date indicated in the *Official Notice of Sale*. Details concerning the public sale were provided to potential bidders and others in the *Preliminary Official Statement* dated November 17, 2022.

The successful bidder for the Electric Bonds was an account led by _____, _____, _____ (the "Electric Underwriters") who contracted with the City, acting by and through KUB, subject to the conditions set forth in the Official Notice of Sale and Bid Form, to purchase the Electric Bonds at a purchase price of $_____ (consisting of the par amount of the Electric Bonds, less an underwriter's discount of $_____) or _____% of par.

The successful bidder for the Wastewater Bonds was an account led by _____, _____, _____ (the "Wastewater Underwriters") who contracted with the City, acting by and through KUB, subject to the conditions set forth in the Official Notice of Sale and Bid Form, to purchase the Wastewater Bonds at a purchase price of $_____ (consisting of the par amount of the Wastewater Bonds, plus a reoffering premium of $_____ and less an underwriter's discount of $_____) or _____% of par.

After the Bonds have been awarded, KUB will prepare an *Official Statement* in final form to be dated as of the sale date. The *Official Statement* in final form will include, among other matters, the identity of the winning bidders, the expected selling compensation to such underwriters and other information on the interest rates and offering prices or yields of the Bonds, all as supplied by the successful bidders. For additional information, see the section entitled LEGAL MATTERS - Closing Certificates contained herein.

MUNICIPAL ADVISOR; RELATED PARTIES; OTHER

Municipal Advisor. Cumberland Securities Company, Inc. has served as Municipal Advisor (the "Municipal Advisor") to KUB for purposes of assisting with the development and implementation of a bond structure in connection with the issuance of the Bonds. The Municipal Advisor has not been engaged by KUB

to compile, create, or interpret any information in the *Preliminary Official Statement* and *Official Statement* relating to KUB, including without limitation any of KUB's financial and operating data, whether historical or projected. Any information contained in the *Preliminary Official Statement* and *Official Statement* concerning KUB, any of its affiliates or contractors and any outside parties has not been independently verified by the Municipal Advisor, and inclusion of such information is not, and should not be construed as, a representation by the Municipal Advisor as to its accuracy or completeness or otherwise. The Municipal Advisor is not a public accounting firm and has not been engaged by KUB to review or audit any information in the *Preliminary Official Statement* and *Official Statement* in accordance with accounting standards.

Regions Bank. Regions Bank (the "Bank") is a wholly-owned subsidiary of Regions Financial Corporation. The Bank provides, among other services, commercial banking, investments and corporate trust services to private parties and to State and local jurisdictions, including serving as registration, paying agent, filing agent or escrow agent related to debt offerings. The Bank will receive compensation for its role in serving as Registration and Paying Agent for the Bonds. In instances where the Bank serves KUB in other normal commercial banking capacities, it will be compensated separately for such services.

Official Statements. Certain information relative to the location, economy and finances of the Issuer is found in the *Preliminary Official Statement,* in final form and the *Official Statement*, in final form. Except where otherwise indicated, all information contained in this *Preliminary Official Statement* has been provided by KUB. The information set forth herein has been obtained by KUB from sources which are believed to be reliable but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of, the Municipal Advisor or the Underwriter. The information contained herein is subject to change without notice, and neither the delivery of this *Preliminary Official Statement* nor any sale made hereunder shall under any circumstances create an implication that there has been no change in the affairs of KUB, or the other matters described herein since the date hereof or the earlier dates set forth herein as of which certain information contained herein is given.

Cumberland Securities Company, Inc. distributed the *Preliminary Official Statement*, in final form, and the *Official Statement*, in final form on behalf of KUB and will be compensated and/or reimbursed for such distribution and other such services.

Bond Counsel. From time to time, Bass, Berry & Sims PLC has represented the Bank on legal matters unrelated to KUB and may do so again in the future.

Other. Among other services, Cumberland Securities Company, Inc. and the Bank may also assist local jurisdictions in the investment of idle funds and may serve in various other capacities, including Cumberland Securities Company's role as serving as KUB's Dissemination Agent. If KUB chooses to use one or more of these other services provided by Cumberland Securities Company, Inc. and/or the Bank, then Cumberland Securities Company, Inc. and/or the Bank may be entitled to separate compensation for the performance of such services.

INDEPENDENT ACCOUNTANTS

The financial statements of the Electric Division and the Wastewater Division of KUB, as of June 30, 2022 for the year then ended, included in this *Preliminary Official Statement,* have been audited by Coulter & Justus, P.C., independent accountants, as stated in their report appearing herein.

FUTURE BONDS

KUB has authorized the refinancing of outstanding debt for savings in the Electric System and the Wastewater System. Additionally, KUB does expect to occasionally sell, from time to time, additional bonds to finance normal and customary extensions and improvements to such Systems, and to refinance certain outstanding bonds at lower interest rates.

CONTINUING DISCLOSURE

KUB will at the time the Bonds are delivered execute a Continuing Disclosure Certificate as to each System under which it will covenant for the benefit of holders and Beneficial Owners of the Bonds to provide certain financial information and operating data relating to KUB by not later than twelve months after the end of each fiscal year commencing with the fiscal year ending June 30, 2023 (the "Annual Report"), and to provide notice of the occurrence of certain significant events not later than ten business days after the occurrence of the events and notice of failure to provide any required financial information of KUB. The issuer will provide notice in a timely manner to the MSRB of a failure by KUB to provide the annual financial information on or before the date specified in the continuing disclosure agreement. The Annual Report (and audited financial statements if filed separately) and notices described above will be filed by KUB with the Municipal Securities Rulemaking Board ("MSRB") at www.emma.msrb.org and with any State Information Depository which may be established in Tennessee (the "SID"). The specific nature of the information to be contained in the Annual Report or the notices of events is summarized below. These covenants have been made in order to assist the Underwriters in complying with Securities Exchange Act Rule 15c2-12(b), as it may be amended from time to time (the "Rule 15c2-12").

Five-Year History of Filing. For the past five years, KUB is unaware of any instances in which it has not complied in all material respects with its existing continuing disclosure agreements in accordance with Rule 15c2-12.

Content of Annual Reports. KUB's Annual Report shall contain or incorporate by reference the audited financial statements of each System for the prior fiscal year, prepared in accordance with accounting principles generally accepted in the United States of America, and audited in accordance with auditing standards generally accepted in the United States of America; provided, however, if KUB's audited financial statements are not available by the time the Annual Report is required to be filed, the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained herein, and the audited financial statements shall be filed when available. The Annual Report shall also include in a similar format the following information included in APPENDIX B entitled "SUPPLEMENTAL INFORMATION STATEMENT."

Electric System.

1. Electric Rates of the Electric Division;

2. Condensed Statements of Revenues, Expenses and Changes in Net Position - Knoxville Utilities Board Electric Division for the fiscal year;

3. Operating and Financial History for such year;

4. The Ten Largest Electric Customers of the Electric Division;

5. Summary of Outstanding Bonded Indebtedness;

6. Summary of Bonded Debt Service Requirements; and

7. Historical Debt Service Coverages.

Wastewater System.

1. Wastewater Rates of the Wastewater Division;

2. Operating Statistics and Number of Customers - Wastewater for such year;

3. Condensed Statements of Revenues, Expenses and Changes in Net Position - Knoxville Utilities Board Wastewater Division for the fiscal year;

4. The Ten Largest Wastewater System Customers;

5. Bonds Outstanding;

6. Debt Service Requirements; and

7. Historical Debt Service Coverages.

Any or all of the items listed above may be incorporated by reference from other documents, including *Official Statements* in final form for debt issues of KUB or the City or related public entities, which have been submitted to the MSRB's EMMA site. If the document incorporated by reference is a final *Official Statement*, in final form, it will be available from the Municipal Securities Rulemaking Board. KUB or the City shall clearly identify each such other document so incorporated by reference.

Reporting of Significant Events. KUB will file notice regarding material events with the MSRB and the SID, if any, as follows:

1. Upon the occurrence of a Listed Event (as defined in (3) below), KUB shall in a timely manner, but in no event more than ten (10) business days after the occurrence of such event, file a notice of such occurrence with the MSRB and SID, if any.

2. For Listed Events where notice is only required upon a determination that such event would be material under applicable Federal securities laws, KUB shall determine the materiality of such event as soon as possible after learning of its occurrence.

3. The following are the Listed Events:

    a. Principal and interest payment delinquencies;

    b. Non-payment related defaults, if material;

    c. Unscheduled draws on debt service reserves reflecting financial difficulties;

    d. Unscheduled draws on credit enhancements reflecting financial difficulties;

    e. Substitution of credit or liquidity providers, or their failure to perform;

    f. 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;

    g. Modifications to rights of Bondholders, if material;

    h. Bond calls, if material, and tender offers;

    i. Defeasances;

    j. Release, substitution, or sale of property securing repayment of the securities, if material;

    k. Rating changes;

    l. Bankruptcy, insolvency, receivership or similar event of the obligated person;

m. The consummation of a merger, consolidation or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;

n. Appointment of a successor or additional trustee or the change of name of a trustee, if material;

o. Incurrence of a financial obligation (which includes a debt obligation, a derivative instrument entered into connection with, or pledged as security or as a source of payment for, an existing or planned debt obligation, or a guarantee of debt obligation or derivative instrument) of KUB, if material, or agreement as to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation of KUB, any of which affect security holders, if material; and

p. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation (as described above) of KUB, any of which reflect financial difficulties.

Termination of Reporting Obligation. KUB's obligations under the Disclosure Certificate shall terminate upon the legal defeasance, prior redemption or payment in full of all of the Bonds.

Amendment; Waiver. Notwithstanding any other provision of a Disclosure Certificate, KUB may amend any Disclosure Certificate, and any provision of a Disclosure Certificate may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions concerning the Annual Report and reporting of material significant events it 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 an obligated person with respect to the Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance 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 or waiver either (i) is approved by the holders of the applicable Bonds, or (ii) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the holders or Beneficial Owners of the Bonds.

In the event of any amendment or waiver of a provision of a Disclosure Certificate, KUB shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or, in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by KUB. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (i) notice of such change shall be given, and (ii) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

Default. In the event of a failure of KUB to comply with any provision of a Disclosure Certificate, any holder or any beneficial owner may take such actions as may be necessary and appropriate, including seeking

mandate or specific performance by court order, to cause KUB to comply with its obligations under the Disclosure Certificate. A default under a Disclosure Certificate shall not be deemed an event of default, if any, under any Resolution and the sole remedy under each Disclosure Certificate in the event of any failure of KUB to comply with the Disclosure Certificate shall be an action to compel performance.

BONDHOLDER RISK

COVID-19. The worldwide spread of COVID-19, a respiratory illness caused by a novel strain of coronavirus, is a pandemic that has affected the entire world and is considered by the World Health Organization to be a Public Health Emergency of International Concern. The Governor of the State issued a state of emergency for the State in mid-March 2020 in response to the COVID-19 pandemic. The spread of COVID-19 has led to quarantine and other "social distancing" measures throughout the United States, including the State of Tennessee. These measures have included, from to time, (i) the closure of nonessential businesses, (ii) recommendations and warnings to limit nonessential travel and promote telecommuting, (iii) the postponement or cancellation of or reduction of capacity at large-scale gatherings such as conventions, concerts and sporting events, (iv) limits on operations and customer capacity at commercial and retail establishments, and (v) the closure of school buildings. The Governor of the State lifted the state of emergency on April 27, 2021. However, the State and/or other local jurisdictions may issue future restrictions in response to the pandemic.

Multiple vaccines for the virus that causes COVID-19 were developed in late 2020. To date, four vaccines have been approved for distribution in the United States. Multiple variants of the virus that causes COVID-19 have been documented in the United States and globally, but studies so far suggest that antibodies generated through vaccination with approved vaccines recognize these variants to varying extents. COVID-19 vaccines are currently available to all residents within the State, including the Issuer, who are the age of 6 months or older.

The City and KUB are unable to predict: (i) the extent or duration of the COVID-19 outbreak or any other epidemic or pandemic; (ii) the extent or duration of existing and additional quarantines, travel restrictions or other measures relating to COVID-19 or any other epidemic or pandemic; or (iii) whether and to what extent the COVID-19 outbreak or any other epidemic or pandemic may disrupt the local or global economy, manufacturing or the supply chain or whether any such disruption may adversely affect the operations of the Issuer. Given the evolving nature of the spread of the virus and the behavior of governments, businesses and individuals in response thereto, the City and KUB cannot accurately predict the magnitude of the impact of COVID-19 on the City and KUB and its financial condition. The City and KUB are proactively taking steps to mitigate the spread of COVID-19 and to preserve effective staffing for all essential Issuer operations.

Although KUB cannot accurately predict the magnitude of the ultimate impact of COVID-19 outbreak on KUB's finances, KUB is carefully monitoring the immediate effect of the COVID-19 outbreak on KUB's finances and is attempting to make projections as to the effect of the COVID-19 outbreak for the upcoming fiscal year. KUB's only source of revenues is each respective system revenues. KUB's electric system revenues for fiscal year ending June 30, 2022 was comparable to prior years. KUB's gas system revenues for fiscal year ending June 30, 2022 was comparable to prior years. KUB's water system revenues for fiscal year ending June 30, 2022 was comparable to prior years. KUB's wastewater system revenues for fiscal year ending June 30, 2022 was comparable to prior years.

The administration for KUB has adopted a budget for the 2023 fiscal year commencing July 1, 2022 which does not anticipate a decrease in revenues. However, KUB has deferred some projects in the 2023 fiscal year to accommodate for any financial impacts of the COVID-19 outbreak and the inability to receive materials and other items needed for construction.

The Electric System liquidity position remains strong. As of June 30, 2022, KUB had in excess of $42 million in reserves for the Electric System, which is approximately 7% of KUB's Electric System budget. KUB's current liquidity position is expected to be adequate to fund essential services and make timely debt service payments on debt of the Electric System.

The Wastewater System liquidity position remains strong. As of June 30, 2022, KUB had in excess of $33 million in reserves for the Wastewater System, which is approximately 26% of KUB's Wastewater System budget. KUB's current liquidity position is expected to be adequate to fund essential services and make timely debt service payments on debt of the Wastewater system.

Various types of information regarding employment and income trends within the Issuer and Knox County are detailed in APPENDIX D. This information was assembled prior to the COVID-19 outbreak and may not be reflective of current financial conditions. For example, unemployment rates throughout the United States, including the City and the County, have increased significantly since the COVID-19 outbreak. Furthermore, APPENDIX D lists the largest employers in the County. The COVID-19 outbreak has affected businesses throughout the United States, including businesses in the County, and many of the employers listed in APPENDIX D have been forced to reduce their employment levels from the levels described in APPENDIX D. Given the fluidity of the current economic environment, the City and KUB are not able to provide sufficiently accurate updates to this information.

CLIMATE CHANGE. Planning for climate change in the State and its impact on the City's and KUB's operation is an unknown challenge. The State of Tennessee's climate is exceedingly variable and projections of future conditions range significantly. While projections in the State of Tennessee indicate rising average temperatures, precipitation projections are much less clear and often contradictory. Other potential impacts include changes in the length, intensity, and frequency of droughts and floods. The financial impact of the climate change is not yet known and therefore its future impact on the City and KUB cannot be quantified reliably at this time.

CYBER-SECURITY. Computer networks and data transmission and collection are vital to the efficient operations of the City and KUB. Despite security measures, information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise networks and the information stored there could be disrupted, accessed, publicly disclosed, lost or stolen. Any such disruption, access, disclosure or other loss of information could result in disruptions in operations and the services provided by the City and KUB, legal claims or proceedings, liability under laws that protect the privacy of personal information, regulatory penalties and the services provided, and cause a loss of confidence in the City's and KUB's operations, which could materially affect the City and KUB and its operations. The City and KUB maintain insurance to mitigate any potential financial losses from cyber-security threats.

ADDITIONAL INFORMATION

Use of the words "shall," "must," or "will" in the *Preliminary Official Statement* and *Official Statement* in summaries of documents or laws to describe future events or continuing obligations is not intended as a representation that such event will occur or obligation will be fulfilled but only that the document or law contemplates or requires such event to occur or obligation to be fulfilled.

Any statements made in the *Preliminary Official Statement* and *Official Statement* involving estimates or matters of opinion, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is made that any of the estimates or matters of opinion will be realized. Neither the *Preliminary Official Statement* and *Official Statement* nor any statement which may have been made orally or in writing is to be construed as a contract with the owners of the Bonds.

The references, excerpts and summaries contained herein of certain provisions of the laws of the State of Tennessee, and any documents referred to herein, do not purport to be complete statements of the provisions of such laws or documents, and reference should be made to the complete provisions thereof for a full and complete statement of all matters of fact relating to the Bonds, the security for the payment of the Bonds, and the rights of the holders thereof.

The *Preliminary Official Statement* and *Official Statement*, in final form, and any advertisement of the Bonds, is not to be construed as a contract or agreement between the City and the purchasers of any of the Bonds. Any statements or information printed in this *Preliminary Official Statement* or the *Official Statement,* in final form, involving matters of opinions or of estimates, whether or not expressly so identified, is intended merely as such and not as representation of fact.

KUB, on behalf of the City, has deemed this *Preliminary Official Statement* as "final" as of its date within the meaning of Rule 15c2-12 except for the omission of certain pricing information allowed to be omitted pursuant to Rule 15c2-12.

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CERTIFICATION OF ISSUER

On behalf of the City and KUB, we hereby certify that to the best of our knowledge and belief, the information contained herein as of this date is true and correct in all material respects, and does not contain an untrue statement of material fact or omit to state a material fact required to be stated where necessary to make the statement made, in light of the circumstance under which they were made, not misleading.

KNOXVILLE UTILITIES BOARD

/s/_____
President and CEO

/s/_____
Senior Vice President and CFO

APPENDIX A

LEGAL OPINIONS

LAW OFFICES OF
BASS, BERRY & SIMS PLC
900 SOUTH GAY STREET, SUITE 1700
KNOXVILLE, TENNESSEE 37902

Ladies and Gentlemen:

We have acted as bond counsel in connection with the issuance by the City of Knoxville, Tennessee (the "Issuer") of $_____ Electric System Revenue Bonds, Series OO-2022, dated _____, 2022 (the "Bonds"). In such capacity, we have examined the law and such certified proceedings and other papers as we deemed necessary to render this opinion.

As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify such facts by independent investigation.

Based on the foregoing, we are of the opinion, as of the date hereof, as follows:

1. The Bonds have been duly authorized, executed and issued in accordance with the constitution and laws of the State of Tennessee and are valid and binding obligations of the Issuer.

2. Resolution No. R-221-2022 of the City Council of the Issuer authorizing the Bonds has been duly and lawfully adopted, is in full force and effect and is a valid and binding agreement of the Issuer enforceable in accordance with its terms.

3. The principal of, premium, if any, and interest on the Bonds are payable solely from and secured by a pledge of the income and revenues to be derived from the operation of the electric system of the Issuer, subject only to the payment of the reasonable and necessary costs of operating, maintaining, repairing, and insuring said system and on a parity and equality of lien with the Issuer's outstanding Electric System Revenue Refunding Bonds, Series EE-2015, dated May 1, 2015, maturing July 1, 2023 and thereafter, its outstanding Electric System Revenue Bonds, Series FF-2015, dated May 20, 2015, maturing July 1, 2023 and thereafter, its outstanding Electric System Revenue Bonds, Series GG-2016, dated August 5, 2016, maturing July 1, 2023 and thereafter, its outstanding Electric System Revenue Refunding Bonds, Series HH-2017, dated April 7, 2017, maturing July 1, 2023 and thereafter, its outstanding Electric System Revenue Bonds, Series II-2017, dated September 15, 2017, maturing July 1, 2023 and thereafter, its Electric System Revenue Bonds, Series JJ-2018, dated September 14, 2018, maturing July 1, 2023 and thereafter, its outstanding Electric System Revenue Refunding Bonds, Series KK-2020, dated May 22, 2020, maturing July 1, 2023 and thereafter, its outstanding Electric System Revenue Refunding Bonds, Series LL-2021, dated April 19, 2021, maturing July 1, 2023 and thereafter, its outstanding Electric System Revenue Bonds, Series MM-2022, dated April 29, 2022, maturing July 1, 2023 and thereafter, and its outstanding Electric System

Revenue Refunding Bonds, Series NN-2022, dated May 13, 2022, maturing July 1, 2024 and thereafter. We express no opinion as to the sufficiency of such revenues for the payment of principal of, premium, if any, or interest on the Bonds. The owners of the Bonds shall have no recourse to the power of taxation of the Issuer.

4. Interest on the Bonds (including any original issue discount properly allocable to an owner thereof) is excluded from gross income for federal income tax purposes. Interest on the Bonds is not an item of tax preference for purposes of the federal alternative minimum tax; however, such interest is taken into account in determining the annual adjusted financial statement income of applicable corporations (as defined in Section 59(k) of the Code) for the purpose of computing the alternative minimum tax imposed on corporations for tax years beginning after December 31, 2022. The opinion set forth in the first sentence of this Paragraph 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, excluded 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 interest on the Bonds to be so included in gross income retroactive to the date of issuance of the Bonds. Except as set forth in this Paragraph 4, we express no opinion regarding other federal tax consequences arising with respect to the Bonds.

5. Under existing law, the Bonds and the income therefrom are exempt from all present state, county and municipal taxation in Tennessee except (a) Tennessee excise taxes on all or a portion of the interest on any of the Bonds during the period such Bonds are held or beneficially owned by any organization or entity, other than a sole proprietorship or general partnership, doing business in the State of Tennessee, and (b) Tennessee franchise taxes by reason of the inclusion of the book value of the Bonds in the Tennessee franchise tax base or any organization or entity, other than a sole proprietorship or general partnership, doing business in the State of Tennessee.

It is to be understood that the rights of the owners of the Bonds and the enforceability of the Bonds and the resolution authorizing the Bonds may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights generally and by equitable principles, whether considered at law or in equity.

We express no opinion herein as to the accuracy, adequacy or completeness of the Official Statement relating to the Bonds.

This opinion is given as of the date hereof and we assume no obligation to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or changes in law that may hereafter occur.

Very truly yours,

34208874.1

LAW OFFICES OF
BASS, BERRY & SIMS PLC
900 SOUTH GAY STREET, SUITE 1700
KNOXVILLE, TENNESSEE 37902

Ladies and Gentlemen:

We have acted as bond counsel in connection with the issuance by the City of Knoxville, Tennessee (the "Issuer"), acting by and through the Knoxville Utilities Board, of $_____ Wastewater System Revenue Bonds, Series 2022C, dated _____, 2022 (the "Bonds"). In such capacity, we have examined the law and such certified proceedings and other papers as we deemed necessary to render this opinion.

As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify such facts by independent investigation.

Based on the foregoing, we are of the opinion, as of the date hereof, as follows:

1. The Bonds have been duly authorized, executed and issued in accordance with the constitution and laws of the State of Tennessee and are valid and binding obligations of the Issuer.

2. Resolution No. R-223-2022 of the City Council of the Issuer authorizing the Bonds has been duly and lawfully adopted, is in full force and effect and is a valid and binding agreement of the Issuer enforceable in accordance with its terms.

3. The principal of, premium, if any, and interest on the Bonds are payable solely from and secured by a pledge of the income and revenues to be derived from the operation of the wastewater treatment and collection system of the Issuer, subject only to the payment of the reasonable and necessary costs of operating, maintaining, repairing, and insuring said system and on a parity and equality of lien with the Issuer's outstanding Wastewater System Revenue Bonds, Series 2010C (Federally Taxable Build America Bonds), dated December 8, 2010, maturing April 1, 2040, its outstanding Wastewater System Revenue Refunding Bonds, Series 2015A, dated May 1, 2015, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Bonds, Series 2015B, dated May 20, 2015, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Bonds, Series 2016, dated August 5, 2016, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Refunding Bonds, Series 2017A, dated April 7, 2017, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Bonds, Series 2017B, dated September 15, 2017, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Bonds, Series 2018, dated September 14, 2018, maturing April 1, 2023, thereafter and its outstanding Wastewater System Revenue Bonds, Series 2019, dated August 20, 2019, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Refunding Bonds, Series 2020A, dated May 22, 2020, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Bonds,

Series 2020B, dated October 30, 2020, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Refunding Bonds, Series 2021A, dated April 19, 2021, maturing April 1, 2023 and thereafter, its outstanding Wastewater System Revenue Refunding Bonds, Series 2022A, dated April 29, 2022, maturing April 1, 2023 and thereafter, and its outstanding Wastewater System Revenue Refunding Bonds, Series 2022B, dated May 13, 2022, maturing April 1, 2023 and thereafter. We express no opinion as to the sufficiency of such revenues for the payment of principal of, premium, if any, or interest on the Bonds. The owners of the Bonds shall have no recourse to the power of taxation of the Issuer.

4. Interest on the Bonds (including any original issue discount properly allocable to an owner thereof) is excluded from gross income for federal income tax purposes. Interest on the Bonds is not an item of tax preference for purposes of the federal alternative minimum tax; however, such interest is taken into account in determining the annual adjusted financial statement income of applicable corporations (as defined in Section 59(k) of the Code) for the purpose of computing the alternative minimum tax imposed on corporations for tax years beginning after December 31, 2022. The opinion set forth in the first sentence of this Paragraph 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, excluded 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 interest on the Bonds to be so included in gross income retroactive to the date of issuance of the Bonds. Except as set forth in this Paragraph 4, we express no opinion regarding other federal tax consequences arising with respect to the Bonds.

5. Under existing law, the Bonds and the income therefrom are exempt from all present state, county and municipal taxation in Tennessee except (a) Tennessee excise taxes on all or a portion of the interest on any of the Bonds during the period such Bonds are held or beneficially owned by any organization or entity, other than a sole proprietorship or general partnership, doing business in the State of Tennessee, and (b) Tennessee franchise taxes by reason of the inclusion of the book value of the Bonds in the Tennessee franchise tax base or any organization or entity, other than a sole proprietorship or general partnership, doing business in the State of Tennessee.

It is to be understood that the rights of the owners of the Bonds and the enforceability of the Bonds and the resolution authorizing the Bonds may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights generally and by equitable principles, whether considered at law or in equity.

We express no opinion herein as to the accuracy, adequacy or completeness of the Official Statement relating to the Bonds.

This opinion is given as of the date hereof and we assume no obligation to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or changes in law that may hereafter occur.

Very truly yours,

APPENDIX B-1

THE ELECTRIC DIVISION

THE ELECTRIC DIVISION

INTRODUCTION

Knoxville Utilities Board ("KUB") was established in 1939 and, under terms of the current City Charter, is vested with the authority to purchase, produce, sell and distribute utility services both inside and outside the city limits. All of the facilities used to provide these services are under the jurisdiction, control and management of the Board of Commissioners of KUB.

SOURCE OF ELECTRIC POWER

KUB does not generate any electric power. KUB purchases its entire power supply requirements from the Tennessee Valley Authority ("TVA") pursuant to a power contract dated May 11, 1988 as supplemented and amended (the "Power Contract"). The Power Contract is the fourth to be entered into between KUB and TVA. Under the Power Contract, TVA agrees to supply the amount of electric power required for service to KUB's electric customers and KUB agrees to purchase all of its electric power from TVA, about 6 billion kilowatt hours annually.

The Power Contract provides that TVA shall make every reasonable effort to increase the generating capacity of its system and to provide transmission facilities required to deliver the output thereof so as to be in a position to supply additional power when and to the extent needed by KUB. Neither TVA nor KUB is liable for breach of contract if the availability or use of power is interrupted or curtailed or if either party is prevented from performing under the Power Contract by circumstances reasonably beyond its control. The amount of power supplied by TVA and the contractual obligation to supply such power are limited by the capacity of TVA's generating and transmission facilities and the customary purchases from other companies on the power grid.

The Power Contract provides that KUB may sell power to all customers in its service area, except certain federal installations and large customers, which TVA may serve directly. At the present time, TVA does not directly serve any customers located within KUB's electric service territory.

The initial term of the contract was for twenty years, with an automatic one-year extension beginning on the tenth anniversary of the contract. In May 2002, KUB and TVA amended the contract in several ways to provide more flexibility to both parties. First, KUB's contract termination notification requirement was reduced from ten years to five years. Also, TVA relinquished its regulatory authority over KUB's electric retail rates (prior to May 2002, the Power Contract specified the retail rates to be charged by KUB, and KUB was obligated to adjust these rates in response to any adjustment in TVA wholesale rates. The adjustment of retail rates to cover changes in KUB cost also had to be approved by TVA).

In March 2020, KUB executed a new Long-Term Partnership Agreement with TVA, extending the term of its five-year evergreen power supply contract with TVA to a 20-year evergreen contract. In return for signing the longer-term agreement with TVA, KUB will receive

an annual partnership credit of 3.1% on TVA's wholesale base rates, estimated to be around $9.3 million per year. Among other things, the new partnership agreement also provides KUB with the flexibility to self-generate up to five percent of its annual power supply through renewable sources.

During the period of October 2021 to September 2022, TVA is providing a Pandemic Recovery Credit to local power companies. KUB has excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to provide $6.3 million of emergency utility bill assistance for residential and small business customers and $1 million for home weatherization programs.

In April 1996, the Federal Energy Regulatory Commission (FERC) issued Order 888 which effectively ordered public interstate transmission companies to provide open access to their transmission systems. TVA, which is not presently subject to FERC jurisdiction, cannot be ordered by FERC to transmit (wheel) power on behalf of others for use inside its legislatively defined service territory (the "Fence"). Consequently, this "Anti-Cherry Picking" provision of federal law combined with KUB's long-term power contract with TVA has essentially precluded KUB from having the opportunity to purchase power from alternative sources.

THE TENNESSEE VALLEY AUTHORITY

TVA was established as a wholly-owned corporate agency and instrumentality of the United States of America by the Tennessee Valley Authority Act of 1933, as amended. The Act's objective is the development of the resources of the Tennessee Valley and adjacent areas in order to strengthen the regional and national economy and the national defense. Its specific purposes include: (1) flood control on the Tennessee River and its tributaries, and assistance to flood control on the lower Ohio and the Mississippi Rivers; (2) a modern navigable channel for the Tennessee River; (3) an ample supply of power within an area of 80,000 square miles; (4) development and introduction of more efficient soil fertilizers; and (5) greater agricultural and industrial development and improved forestry in the region.

In 2005, Congress passed legislation that impacted TVA in two significant ways. First, it changed the structure of TVA's Board from a three-person, full-time Board to a nine-person, part-time Board, which meets at least four times per year. The new Board members, whose appointment terms are five years, were appointed by the President and confirmed by the Senate. All powers of TVA are vested in its Board. Second, the new law requires TVA to file periodic financial updates with the Securities and Exchange Commission (the "SEC"), and be subject to certain reporting requirements of the SEC.

THE ELECTRIC SYSTEM

As KUB returned to normal operations this fiscal year, supply chain issues and workforce shortages continued to impact capital projects. While some projects were delayed, others were held until supplies were more readily available. However, KUB's ability to serve its electric customers has remained strong throughout.

KUB serves 215,264 electric customers over a 688 square mile service area and maintains 5,480 miles of service lines and 63 electric substations to provide 6 million megawatt hours to its customers annually. The peak capacity of the system is 3,029,500 kVa. KUB's electric system record peak in demand remains 1,328 megawatt hours, set in February 2015.

Century II is KUB's proactive long-range program to improve and maintain its electric, natural gas, water and wastewater systems for its customers. It includes maintenance and asset replacement strategies for each utility system and establishes sustainable replacement cycles. Century II moves KUB into its second century of service by improving each system through sound planning, resource allocation, and continued, but accelerated, investment.

In May 2017, a new Century II funding resolution was adopted by the KUB Board to express the continued commitment to funding Century II programs for the next ten years. The funding will be achieved through a combination of rate increases and debt issues supplemented by cost savings and new revenue from net customer additions.

In June 2017, the Board approved three electric rate increases to support the Century II program. The approved electric rate increases went into effect in October 2017, October 2018, and October 2019 generating $10.9 million, $11.2 million, and $5.7 million in additional annual Electric Division revenue, respectively.

In September 2021, the Board approved the next phase of electric rate increases to support both the Century II program and expanded fiber network. The first of three approved 3 percent electric rate increases went into effect April 2022 and will generate $16.7 million in additional annual Electric Division revenue. The remaining two approved rate increases are effective April 2023, and April 2024, which will generate $17.4 million, and $18 million in additional annual Electric Division revenue, respectively.

During the fiscal year, KUB replaced 1,360 poles and replaced 6.6 miles of transmission lines while staying on track with Century II goals and within the Electric Division's total capital budget.

During fiscal year 2022, KUB adopted GASB Statement No. 87, Leases (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

FIBER NETWORK

During fiscal year 2021, KUB developed a Fiber to the Home Business Plan for the provision of broadband services to customers within its electric system service territory. In accordance with state law and KUB's wholesale power supply contract with TVA, the Business Plan was submitted to the Office of the Comptroller of the Treasury for Tennessee and TVA for review. The Office of the Comptroller found KUB's Business Plan to be financially feasible and

TVA approved the Business Plan, finding no cross-subsidization exists between the proposed Fiber Division and the Electric Division.

After gaining the required approvals from TVA, the State of Tennessee, KUB's Board and City Council, KUB launched its new Fiber Division. Broadband services will be provided by a high-speed fiber optic network that will be owned and maintained by the Electric Division. The Fiber Division will share in the cost to build and operate the Fiber network by paying the Electric Division an annual access fee based on the year end value of those assets and the related expenses. The Fiber Division will also pay the Electric Division an annual utilization fee based on attachments to the network. In addition to providing broadband services, the fiber network will allow KUB to implement new advanced technologies to improve the reliability of its electric system. In August 2021, the Board authorized the first $10 million loan of a proposed $35 million loan from the Electric Division to the Fiber Division. The interdivisional loan was approved by TVA and was initiated in October 2021. In fiscal year 2022, KUB began the seven-year buildout on extending fiber infrastructure to make broadband service available to electric customers. The first broadband customers will begin receiving service in fiscal year 2023.

The fiber network is an integral component of a $702 million ten-year Enhanced Grid Modernization effort for the Electric Division. The $702 million ten-year program will be funded by a combination of electric rate increases, new bonds, and projected payments from the new Fiber Division.

PENSION PLAN

Description of Plan

The Knoxville Utilities Board Pension Plan (the Plan) is a governmental plan as defined by the Employee Retirement Income Security Act of 1974 (ERISA or the Act), is not subject to any of the provisions of the Act, and was revised January 1, 2020, to include all prior approved amendments. The Plan is a single-employer contributory, defined benefit pension plan established by Knoxville Utilities Board Resolution No. 980 dated February 18, 1999, effective July 1, 1999, as authorized by the Charter of the City of Knoxville §1107(J). KUB Board Resolution No. 979, effective July 1, 1999, as amended by Resolution No. 1037, establishing the KUB Retirement System, was amended effective June 18, 2020, to amend the term "Trustee" to include both custodians and/or trustees, in order to provide flexibility should KUB choose to change from its current Pension trustee. The Plan is designed to provide retirement, disability, and death benefits to KUB employees. KUB administers the Plan through an Administrative Committee consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Plan involving costs not approved in the operating budget must be adopted by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Plan may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The Plan issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2011, KUB closed the Plan such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and to accrue benefits under the Plan.

Participants in the Plan consisted of the following as of December 31:

	2021	2020
Inactive plan members:		
Terminated vested participants	12	11
Retirees and beneficiaries	600	593
Active plan members	478	518
Total	1,090	1,122

Retirement Benefits

The Plan provides three benefit arrangements for KUB participants, retirees, and beneficiaries.

The Plan provides pension benefits through the Career Equity Program ("CEP") for eligible employees hired on or after January 1, 1999, and for eligible former "City System Plan A" participants who elected CEP coverage as of July 1, 1999. The guaranteed pension benefit payable to a participant who has completed five or more years of service (or reached the normal retirement date, if earlier) upon termination of KUB employment shall be a lump sum equal to the participant's average compensation times their benefit percentage, as defined in the Plan document, or an annuity may be chosen by the participant.

In addition, the Plan provided retirement benefits through "Plan A" for former City System Plan A participants who elected not to participate in the CEP. Plan A is a closed plan and is not available to KUB employees hired after July 1, 1999. Plan A provides for early retirement benefits with 25 years of service and normal retirement benefits at age 62 or later. Benefits provided to Plan A participants include several different forms of monthly annuity payments.

The Plan also provides retirement benefits through "Plan B" for former "City System Plan B" participants. Plan B is a closed plan providing benefits to participants not covered by Social Security. Benefits provided to Plan B participants include several different forms of monthly annuity payments available to participants.

Effective January 1, 2012, KUB began to provide for additional monthly supplements, which are not subject to cost of living adjustments, to certain former employees and surviving dependents of former employees who are eligible for and have elected coverage under the KUB retiree medical plan and are eligible for Medicare. This was done to compensate for the elimination of drug coverage under the KUB retiree medical plan and to assist such individuals in obtaining prescription drug coverage under Medicare Part D.

Contributions

Participation in Plan A requires employee contributions of 3% of the first $4,800 of annual earnings and 5% of annual earnings in excess of $4,800. KUB contributions are

determined by the enrolled actuary of the Plan and equal the amount necessary to provide the benefits under the Plan determined by the application of accepted actuarial methods and assumptions. The method of funding shall be consistent with Plan objectives.

Plan Funding

KUB maintains a Funding Policy for the Plan in accordance with Tennessee State Law. The primary goal of the Policy is to document the method KUB has adopted to provide assurance that future KUB and employee contributions and current Plan assets will be sufficient to fund all benefits expected to be paid to current active, inactive and retired Plan participants and their beneficiaries. Per the Funding Policy, KUB fully funds its annual Actuarially Determined Contribution.

Investments

The Plan's investments are held by State Street Bank and Trust Company (the "Trustee"). The Plan's policy in regard to the allocation of invested assets is established by the Retirement System Investment Committee and approved by the KUB Board of Commissioners and may only be amended by the KUB Board of Commissioners. It is the policy of the Retirement System Investment Committee 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 Plan's adopted asset allocation policy as of December 31, 2021:

Asset Class	Target Allocation
Domestic equity – large cap	20% - 50%
Domestic equity – mid cap	0% - 15%
Domestic equity – small cap	0% - 15%
Domestic equity – convertible securities	0% - 10%
Non-U.S. equity	0% - 20%
Real estate equity	0% - 10%
Fixed income – aggregate bonds	5% - 25%
Fixed income – long-term bonds	10% - 25%
Cash and deposits	0% - 5%

Contributions of $3,665,168 and $3,167,680 for 2020 and 2019, respectively, were made during the Plan sponsor's fiscal years ended June 30, 2022, and 2021, respectively. Of these amounts, $1,712,192 and $1,520,486 are attributable to the Electric Division. The fiscal year 2022 contribution was determined as part of the January 1, 2020, valuation using the Individual Entry Age Normal funding method. The objective under this method is to fund each participant's benefits under the Plan as payments which are level as a percentage of salary, starting on the original participation date (employment date) and continuing until the assumed retirement, termination, disability, or death.

The Pension Plan actuarial valuation resulted in an actuarially determined contribution of $2,624,373 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2022, measurement date. Subsequent to June 30, 2022, an

actuarial valuation was completed and resulted in an actuarially determined contribution of $1,108,147 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2023, measurement date. For the Plan year beginning January 1, 2022, the Plan's actuarial funded ratio is 112.01 percent, and the market value funded ratio is 128.08 percent.

See Appendix B-2 for additional pension plan information.

QUALIFIED EXCESS BENEFIT ARRANGEMENT (QEBA)

Description

In fiscal year 2017, KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single-employer defined benefit pension plan administered by KUB. The number of participants in any given year for the QEBA is determined by the number of KUB Pension Plan participants who exceed the current year's section 415(b) limitations, as calculated by the KUB Pension Plan actuary. The amount of QEBA benefit will be the amount specified by the terms of the KUB Pension Plan without regard to Section 415(b) limitations minus the amount payable from the KUB Pension Plan as limited by Section 415(b). QEBA benefits are subject to cost of living adjustments.

As of June 30, 2022, there are 446 active employees eligible for the KUB Pension Plan who are potentially eligible to receive QEBA benefits. The KUB Pension Plan was closed effective January 1, 2011, such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and accrue benefits under the KUB Pension Plan. The KUB Pension Plan was amended to include the provision of QEBA benefits; therefore, amendments to the QEBA require the same authority as amendments to the KUB Pension Plan. As required by federal tax law, the QEBA is unfunded within the meaning of the federal tax laws. KUB may not pre-fund the QEBA to cover future liabilities beyond the current year. KUB has established procedures to pay for these benefits on a pay-as-you-go basis. There are no assets accumulated in a trust that meets the GASB's criteria. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022.

Total Pension Liability of the QEBA

The below summarizes the disclosures of GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68* ("GASB 73"). GASB 73 extends a similar approach of financial reporting to plans meeting specific criteria that are not administered through trusts that GASB 68 established for pension plans. GASB 73 requires measurement of the total pension liability of the QEBA. The amounts

reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. There is no Total Pension Liability as of June 30, 2022. The Division's share of the total pension liability was $8,983 as of June 30, 2021.

GASB 73 requires certain disclosures related to the total pension liability of the QEBA, as disclosed below:

	2021	2020
Total pension liability	$0	$18,714
Deferred outflows	(11,505)	(33,660)
Deferred inflows	16,927	23,630
Net impact on Statement of Net Position	$5,422	$8,684
Covered payroll	$38,074,863	$41,524,273
Total pension liability as a % of covered payroll	0.00%	0.05%

Changes in total pension liability of the QEBA are as follows:

	Increase (Decrease)
	Total Pension Liability
Balances at December 31, 2020	$ 18,714
Changes for the year:	
Service cost	-
Interest	268
Changes of Benefits	-
Differences between Expected and Actual Experience	(6,816)
Changes of Assumptions	-
Benefit payments	(12,166)
Net changes	(18,714)
Balances at December 31, 2021	$ -

Actuarial Assumptions

The total pension liability of the QEBA was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2022, and January 1, 2021
Actuarial cost method	Individual entry age
Salary increase	From 2.50% to 5.65%, based on years of service as of January 1, 2022, and 2021
Mortality	115% and 110% of the Public Sector General Healthy Annuitant Mortality Table (PubG-2010), for males and

	females, respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the 2010 base rates using scale MP2018, fully generational as of January 1, 2022, and 2021
Inflation	2.5% as of January 1, 2022, and 2021

The actuarial assumptions used in the January 1, 2022, and 2021, valuations were based on the results of an actuarial experience study for the period January 1, 2014, through December 31, 2018.

Discount rate

The QEBA is not funded. In accordance with paragraph 31 of GASB 73, the discount rate is based on the Bond Buyer 20-Bond GO index. This rate was 2.06% as of January 1, 2022, and 2.12% as of January 1, 2021.

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of $16,613 (Division's share $7,974) for the QEBA. This amount is not expected to be the same as KUB's contribution to the QEBA ($19,875), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$5,422 - $8,684 + $19,875].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4 years. During the measurement year, there was an experience gain of $6,816, with $1,704 recognized in the current year and each of the next three years, resulting in a deferred inflow of $5,112 (Division's share $2,454). There was a deferred inflow at the end of the measurement year of $7,225 (Division's share $3,468) from experience gains in prior years and a deferred outflow of $6,112 (Division's share $2,933) from experience losses in prior years.

During the measurement year, there were no assumption changes. There was a deferred inflow at the end of the measurement year of $4,590 (Division's share $2,203) and a deferred outflow of $5,393 (Division's share $2,589) from assumption changes in prior years.

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The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 6,112	$ 12,337
Changes in assumptions	5,393	4,590
Total	$ 11,505	$ 16,927
Division's share	$ 5,522	$ 8,125

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

Year ended June 30:	
2023	$ (8,793)
2024	3,023
2025	348
2026	-
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of $21,436 for the QEBA (Division's share $10,289). This amount is not expected to be the same as KUB's contribution to the QEBA ($22,874), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$8,684 - $10,122 + $22,874].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5 years. During the measurement year, there was an experience loss of $10,165, with $2,033 recognized in the current year and each of the next four years, resulting in a deferred outflow of $8,132 (Division's share $3,903). There was a deferred inflow at the end of the measurement year of $14,450 (Division's share $6,936) from experience gains in prior years and a deferred outflow of $2,756 (Division's share $1,323) from experience losses in prior years.

During the measurement year, there was an assumption change loss of $91, with $18 recognized in the current year and each of the next four years, resulting in a deferred outflow of $73 (Division's share $35). There was a deferred inflow at the end of the measurement year of $9,180 (Division's share $4,406) and a deferred outflow of $22,699 (Division's share $10,896) from assumption changes in prior years. In addition, KUB recorded a deferred outflow of

resources of $6,084 as of June 30, 2021 for contributions between December 31, 2020, and June 30, 2021 (Division's share $2,920).

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 10,888	$ 14,450
Changes in assumptions	22,772	9,180
Contributions subsequent to measurement date	6,084	-
Total	$ 39,744	$ 23,630
Division's share	$ 19,077	$ 11,342

OTHER POST-EMPLOYMENT BENEFITS (OPEB)

Description of Trust

The Knoxville Utilities Board Other Post-Employment Benefits Trust (the Trust) is a single-employer trust established by the KUB Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The Trust along with the KUB Health Plan make up a Voluntary Employee Beneficiary Association ("VEBA") and are intended to be tax-exempt pursuant to Code §501(c)(9). The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. The applicable documentation was submitted to the State Funding Board and, in December 2007, the State Funding Board approved the Trust. The Trust was also approved by the Internal Revenue Service in June 2008. KUB administers the Trust through a Board of Trustees consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Trust involving costs not approved in the operating budget must be approved by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Trust may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The investment of all deposits to the Trust is governed by an Investment Policy, which was adopted by the KUB Board and approved by the State Funding Board. The Trust issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2022, the Plan was expanded to two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement (HRA), given that each eligible employee meets the "Rule

of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

Participants in the Plan consisted of the following as of June 30:

	HRA		Retiree Medical Benefit	
	2022	2021	2022	2021
Retirees	4	0	549	538
Dependents of retirees	2	0	612	579
Eligible active employees	15	0	145	160
Total	21	0	1,306	1,277

Benefits

Benefits for pre-July 1, 1999, eligible participants may include, but shall not be limited to, medical, prescription drugs, dental, vision, hearing, Medicare Part B or Part D premiums, life insurance, long-term care, and long-term disability. Post-July 1, 1999, eligible participants are eligible for HRA benefits which include up to $50,000 to be used exclusively for reimbursement of qualified medical expenses of the retiree and his or her spouse and dependents. Any unused HRA amounts will remain assets of the OPEB Trust.

Contributions and Funding

The primary goal of the Funding Policy for the Trust is to document the method KUB has adopted to provide assurance that future KUB and retiree contributions and current Trust assets will be sufficient to fund all benefits expected to be paid to Trust beneficiaries. Per the Funding Policy, KUB's current practice is to fully fund its annual Actuarially Determined Contribution, which is determined by actuarial valuation.

Contributions are authorized by the terms of the Trust as established by KUB Resolution No. 1168, as amended, as approved by the Tennessee State Funding Board. KUB shall have the right at any time to amend, in whole or in part, the provisions of this Trust; however, no such amendment shall authorize or permit the assets of the Trust to be used for or diverted to purposes other than those expressed in the Declaration of Trust.

It shall be the sole and exclusive responsibility of KUB to determine the level of contributions KUB will make to the Trust for the purpose of financing other post-employment benefits accrued by its respective participants. Neither the Trust, nor the Trust's Board, shall be responsible for collecting or otherwise determining the level of contributions needed by KUB to finance any other post-employment benefits offered by KUB. The assets of the Trust shall be expended solely to make payments for other post-employment benefits pursuant to, and in accordance with, the terms of the Trust and to pay the cost of administration.

Based on the date of retirement, certain retired members are required to contribute specified amounts monthly to maintain health insurance. Those who retired prior to July 1983 have no required monthly premiums for themselves or dependents. The retirees, or their surviving dependents, who retired between August 1983 and January 1998 are required to pay $262.50 per month for pre-Medicare family health insurance. For individuals who retired after January 1998, the required monthly premium for pre-Medicare health insurance is $262.50 for

single coverage and $525 for family coverage. There is currently no premium for Medicare eligible retirees or dependents. KUB is responsible for determining the level of retired plan member contributions on an annual basis as part of its review of healthcare cost sharing.

Participants in the Health Reimbursement Arrangement are not eligible for health insurance and are not required to make contributions.

Investments

The Trust holds investments in a balanced fund, which invests in passively managed common trust index funds, managed and sponsored by State Street Global Advisors (SSgA), with an asset allocation mirroring the asset allocation of the Trust and rebalanced monthly. The Trust's Investment Policy was established and may only be amended by the KUB Board of Commissioners. The Trust's Investment Policy is to invest in a manner that will provide sufficient investment return to meet current and future retiree health benefits, while conforming to all governing State and Federal statutes. It allows investment of Trust assets in any type of security instrument allowed for in T.C.A 8-50-1203. The following was the Trust's adopted investment target allocations as set forth in the Trust's Investment Policy as of June 30, 2022:

Asset Class	Target Allocation
Domestic Equity:	
Large Cap	30%
Small Cap	8%
International Equity:	
Developed	16%
Emerging	8%
Real Estate Equity	8%
Debt Securities	30%
Total	100%

For the fiscal year ended June 30, 2022, an actuarially determined contribution for the Electric Division of $923,921 was made to the OPEB Trust along with the division's share ($720,000) of an additional $1,500,000 contribution to help fund the HRA. Actuarially determined contributions for the Electric Division for the fiscal year ended June 30, 2021, were $363,468. These were based on the OPEB actuarial valuations as of January 1, 2020, and 2019.

The OPEB Plan actuarial valuation resulted in an actuarially determined contribution of $1,413,392 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2023, measurement date. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,187,768 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2024, measurement date. The Plan's actuarial funded ratio is 94.75 percent, and the market value funded ratio is 103.07 percent.

See Appendix B-2 for additional OPEB information.

FISCAL YEAR 2023 FINANCIAL UPDATE

For the three months ending September 30, 2022, KUB's Electric Division recorded earnings of $12.5 million, representing an increase of $2.1 million over the same period last fiscal year. This increase is the net result of the April 2022 rate increase, a 4.5 percent increase in billed sales volumes offset by higher operating expenses compared to the same period last fiscal year.

As of September 30, 2022, the Electric Division had $290.8 million in outstanding debt, representing a debt to capitalization ratio of 38 percent. The Electric Division's current maximum debt service coverage ratio is projected to be 3.58.

Capital investment in the electric system infrastructure is projected to be $141.1 million for fiscal year 2023, with $72.8 million going to the construction of the fiber network and services for KUB's new broadband rollout. KUB's capital plan represents its continued commitment to the timely replacement of critical electric system assets, including poles, underground cable, and substation transformers, in addition to key overhead line and substation improvement projects.

As a component of the 2023 fiscal year budget, a $7 million loan was initiated from the Electric Division to the Fiber Division as the second installment of the proposed $35 million total loan. The interdivisional loan was approved by TVA and was recorded in August 2022.

The Tennessee Emergency Broadband Fund selected KUB for a grant of $15.3 million to assist in the provision of broadband access to Grainger, Jefferson, Sevier, and Union Counties.

ELECTRIC RATES

The rate schedules of the Electric Division are subject to the approval of the KUB Board of Commissioners. In October 2002, the Board established a Purchased Power Adjustment (the "PPA") mechanism, which provides for the adjustment of applicable electric rates to changes in TVA's wholesale power costs. In October 2006, TVA incorporated a Fuel Cost Adjustment that is evaluated on a quarterly basis to reflect change in the TVA's fuel costs. These fuel cost adjustments are flowed through the KUB's electric customers via the PPA mechanism. In October of 2009, TVA's Fuel Cost Adjustments were changed to a monthly evaluation.

In April 2011, TVA modified its wholesale rate structure to demand and energy billing for its distributors. In response, KUB revised its Purchased Power Adjustment to include a deferred accounting component to ensure appropriate matching of revenue and expenses and power cost recovery. KUB will adjust its retail rates on an annual basis to flow any over or under recovery of wholesale power costs through to its customers via the Purchased Power Adjustment.

In March 2020, KUB executed a new Long-Term Partnership Agreement with TVA, extending the term of its five-year evergreen power supply contract with TVA to a 20-year evergreen contract. In return for signing the longer-term agreement with TVA, KUB will receive an annual partnership credit of 3.1% on TVA's wholesale base rates, estimated to be around $9.3

million per year. Among other things, the new partnership agreement also provides KUB with the flexibility to self-generate up to five percent of its annual power supply through renewable sources.

During the period of October 2021 to September 2022, TVA is providing a Pandemic Recovery Credit to local power companies. KUB has excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to provide $6.3 million of emergency utility bill assistance for residential and small business customers and $1 million for home weatherization programs.

The current rate schedules of the Electric Division are as follows:

RESIDENTIAL RATE - SCHEDULE RS

Availability

This rate shall be available only for electric service to a single-family dwelling and its appurtenances, where the major use of electricity is for domestic purposes such as lighting, household appliances, and the personal comfort and convenience of those residing therein.

Character of Service

Alternating current, single-phase, 60 hertz. Power shall be delivered at a service voltage available in the vicinity or agreed to by KUB. Multi-phase service shall be supplied in accordance with KUB's standard policy.

Base Charges

Basic Service Charge:	$20.50 per month
Energy Charge:	
Summer Period -	$0.10828 per kWh per month
Winter Period -	$0.10787 per kWh per month
Transition Period -	$0.10787 per kWh per month

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months.

Minimum Monthly Bill

The basic service charge constitutes the minimum monthly bill for all customers served under this rate schedule except those customers for which a higher minimum monthly bill is required under KUB's standard policy because of special circumstances affecting the cost of rendering service.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery and metering point, and at a single voltage.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

PILOT PROGRAM
RESIDENTIAL TIME-OF-USE RATE
SCHEDULE RS-TOU

Residential Time-Of-Use Rate Pilot Program Description

The purpose of the Residential Time-Of-Use Rate pilot program (RS-TOU pilot) is to enable a phased implementation of Time-Of-Use rates for all KUB Residential customers. The RS-TOU pilot will provide participating customers experience with Time-Of-Use billing processes and the bill impacts of varying usage in response to Time-Of-Use rates. The duration of the RS-TOU pilot shall be determined by KUB at its sole discretion.

Residential Time-Of-Use Rate Pilot Program Availability

This rate shall be available only for electric service through a single meter, or served through a multiple meter configuration designed as a single billing point for the Generation Partner program, or similar TVA program, to a single-family dwelling, where the major use of electricity is for domestic purposes such as lighting, household appliances, and the personal comfort and convenience of those residing therein. This rate shall be available to customers which have an advanced meter and have elected to participate in the RS-TOU pilot. KUB reserves the right to limit participation.

Character of Service

Alternating current, single-phase, 60 hertz. Power shall be delivered at a service voltage available in the vicinity or agreed to by KUB. Multi-phase service shall be supplied in accordance with KUB's standard policy.

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Base Charges

Basic Service Charge:	$20.50 per month
Energy Charge:	
Onpeak	$0.21507 per kWh per month for all metered onpeak kWh
Offpeak	$0.08391 per kWh per month for all metered offpeak kWh

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Onpeak and Offpeak Hours

All hours stated in Eastern Prevailing time

Weekdays (Monday - Friday)

Onpeak	2 p.m. to 8 p.m. calendar months April through October
	5 a.m. to 11 a.m. calendar months November through March
Offpeak	All other hours

Weekends and Holidays*

All hours Offpeak

*Holidays include:

New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day

Minimum Monthly Bill

The basic service charge constitutes the minimum monthly bill for all customers served under this rate schedule except those customers for which a higher minimum monthly bill is required under KUB's standard policy because of special circumstances affecting the cost of rendering service.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery and metering point, and at a single voltage.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

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GENERAL POWER RATE - SCHEDULE GSA

Availability

This rate shall be available for the firm power requirements (where a customer's contract demand is 5,000 kW or less) for electric service to non-residential customers. This rate shall also apply to customers to whom service is not available under any other resale rate schedule.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a service voltage available in the vicinity or agreed to by KUB.

Base Charges

1. If (a) the higher of (i) the customer's currently effective contract demand, if any, or (ii) its highest billing demand during the latest 12-month period is not more than 50 kW and (b) the customer's monthly energy takings for any month during such period do not exceed 15,000 kWh:

Customer Charge:	$30.00 per delivery point per month
Energy Charge:	
Summer Period -	$0.12836 per kWh per month
Winter Period -	$0.12795 per kWh per month
Transition Period -	$0.12795 per kWh per month

2. If (a) the higher of (i) the customer's currently effective contract demand or (ii) its highest billing demand during the latest 12-month period is greater than 50 kW but not more than 1,000 kW or (b) the customer's billing demand is less than 50 kW and its energy takings for any month during such period exceed 15,000 kWh:

Customer Charge:	$98.00 per delivery point per month
Demand Charge:	
Summer Period -	First 50 kW of billing demand per month, no demand charge
	Excess over 50 kW of billing demand per month, at $15.42 per kW
Winter Period -	First 50 kW of billing demand per month, no demand charge
	Excess over 50 kW of billing demand per month, at $14.63 per kW
Transition Period -	First 50 kW of billing demand per month, no demand charge
	Excess over 50 kW of billing demand per month, at $14.63 per kW

Energy Charge:

Summer Period -	First 15,000 kWh per month at $0.15682 per kWh
	Additional kWh per month at $0.07732 per kWh
Winter Period -	First 15,000 kWh per month at $0.15641 per kWh
	Additional kWh per month at $0.07732 per kWh
Transition Period -	First 15,000 kWh per month at $0.15641 per kWh
	Additional kWh per month at $0.07732 per kWh

3. If the higher of (a) the customer's currently effective contract demand or (b) its highest billing demand during the latest 12-month period is greater than 1,000 kW:

Customer Charge: $269.00 per delivery point per month

Demand Charge:

Summer Period -	First 1,000 kW of billing demand per month, at $16.19 per kW
	Excess over 1,000 kW of billing demand per month, at $16.86 per kW, plus an additional
	$16.86 per kW per month for each kW, if any, of the amount by which the customer's billing demand exceeds the higher of 2,500 kW or its contract demand
Winter Period -	First 1,000 kW of billing demand per month, at $15.43 per kW
	Excess over 1,000 kW of billing demand per month, at $16.10 per kW, plus an additional
	$16.10 per kW per month for each kW, if any, of the amount by which the customer's billing demand exceeds the higher of 2,500 kW or its contract demand
Transition Period -	First 1,000 kW of billing demand per month, at $15.43 per kW
	Excess over 1,000 kW of billing demand per month, at $16.10 per kW, plus an additional
	$16.10 per kW per month for each kW, if any, of the amount by which the customer's billing demand exceeds the higher of 2,500 kW or its contract demand

Energy Charge:

Summer Period -	$0.08753 per kWh per month
Winter Period -	$0.08753 per kWh per month
Transition Period -	$0.08753 per kWh per month

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months.

Determination of Demand

KUB shall meter the demands in kW of all customers having loads in excess of 50 kW. The metered demand for any month shall be the highest average during any 30-consecutive-minute period of the month of the load metered in kW. The measured demand for any month shall be the higher of the highest average during any 30-consecutive-minute period of the month of (a) the load metered in kW or (b) 85 percent of the load in kVA plus an additional 10 percent for that part of the load over 5,000 kVA, and such measured demand shall be used as the billing demand, except that the billing demand for any month shall in no case be less than 30 percent of the higher of the currently effective contract demand or the highest billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule shall not be less than the sum of (a) the base customer charge, (b) the base demand charge, as adjusted, applied to the customer's billing demand, and (c) the base energy charge, as adjusted, applied to the customer's energy takings; provided, however, that, under (2.) of the Base Charges, the monthly bill shall in no event be less than the sum (a) the base customer charge and (b) 20 percent of the portion of the base demand charge, as adjusted, applicable to the second block (excess over 50kW) of billing demand, multiplied by the higher of the customer's currently effective contract demand or its highest billing demand established during the preceding 12 months.

KUB may require minimum bills higher than those stated above.

Contract Requirements

KUB shall require contracts for service provided under this rate schedule to customers whose demand requirements exceed 1,000 kW and such contracts shall be for an initial term of at least one year. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

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Single – Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery and metering point, and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery and metering point at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

PILOT PROGRAM
GENERAL POWER TIME-OF-USE RATE
SCHEDULE GSA-TOU

General Power Time-Of-Use Rate Pilot Program Description

The purpose of the General Power Time-Of-Use Rate pilot program (GSA-TOU pilot) is to enable a phased implementation of Time-Of-Use rates for all KUB General Power customers with demand of 1,000 kW or less. The GSA -TOU pilot will provide participating customers experience with Time-Of-Use billing processes and the bill impacts of varying usage in response to Time-Of-Use rates. The duration of the GSA-TOU pilot shall be determined by KUB at its sole discretion.

General Power Time-Of-Use Pilot Program Availability

This rate shall be available for the firm power requirements (where a customer's contract demand is 1,000 kW or less) for electric service to non-residential customers. This rate shall be available to customers which have an advanced meter and have elected to participate in the GSA-TOU pilot. KUB reserves the right to limit participation.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a service voltage available in the vicinity or agreed to by KUB.

Base Charges

1. If (a) the higher of (i) the customer's currently effective contract demand, if any, or (ii) its highest billing demand during the latest 12-month period is not more than 50 kW*:*

Customer Charge:	$30.00 per delivery point per month
Demand Charge:	$2.06 per kW of maximum billing demand per month

Energy Charge:

Onpeak	$0.22251 per kWh per month for all metered onpeak kWh
Offpeak	$0.09135 per kWh per month for all metered offpeak kWh

2A. If the higher of (i) the customer's currently effective contract demand or (ii) its highest billing demand during the latest 12-month period is greater than 50 kW but not more than 100 kW*:*

Customer Charge:	$98.00 per delivery point per month
Demand Charge:	$4.61 per kW of maximum billing demand per month
Energy Charge:	
Onpeak	$0.23526 per kWh per month for all metered onpeak kWh
Offpeak	$0.10410 per kWh per month for all metered offpeak kWh

2B. If the higher of (a) the customer's currently effective contract demand or (b) its highest billing demand during the latest 12-month period is greater than 100 kW but not more than 1,000 kW:

Customer Charge:	$114.00 per delivery point per month
Demand Charge:	$6.79 per kW of maximum billing demand per month
Energy Charge:	
Onpeak	$0.21152 per kWh per month for all metered onpeak kWh
Offpeak	$0.08036 per kWh per month for all metered offpeak kWh

3. If the higher of (a) the customer's currently effective contract demand or (b) its highest billing demand during the latest 12-month period is greater than 1,000 kW:

Customers meeting these requirements are not eligible to enter the GSA-TOU pilot program. The TDGSA and TDMSA (if qualified) rates are available as Time-Of-Use alternatives at this level of demand.

If customer's demand rises above 1,000 kW while participating in the GSA-TOU pilot program, the customer will be removed from the pilot and billed under General Power Rate - Schedule GSA.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

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Determination of Onpeak and Offpeak Hours

All hours stated in Eastern Prevailing time

Weekdays (Monday - Friday)

Onpeak	2 p.m. to 8 p.m. calendar months April through October
	5 a.m. to 11 a.m. calendar months November through March
Offpeak	All other hours

Weekends and Holidays*

All hours Offpeak

*Holidays include:

New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day

Determination of Demand

KUB shall meter the demands in kW of all customers served under the GSA-TOU rate schedule. The Metered Demand for any month shall be the highest average during any 30-minute-consecutive period of the month of the load metered in kW. The Measured Demand for any month shall be the higher of (a) or (b) below:

The Billing Demand for any month shall be the higher of the following:

(a) Metered Demand
(b) 85 percent of the load in kVA
(c) 30 percent of the higher of the currently effective contract demand or the highest billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule shall not be less than the sum of (a) the customer charge, (b) the demand charge, as adjusted, applied to the customer's billing demand, and (c) the energy charges, as adjusted, applied to the customer's energy takings.

KUB may require minimum bills higher than those stated above.

Contract Requirements

At its sole discretion, KUB may require contracts for service provided under this rate schedule and such contracts shall be for an initial term of at least one year. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other

special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single – Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery and metering point, and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery and metering point at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

OUTDOOR LIGHTING RATE - SCHEDULE LS

Availability

Available for service to street and park lighting systems, traffic signal systems, athletic field lighting installations, and outdoor lighting for individual customers.

Service under this schedule is for a term of not less than one year.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months.

PART A – CHARGES FOR STREET AND PARK LIGHTING SYSTEMS, TRAFFIC SIGNAL SYSTEMS, AND ATHLETIC FIELD LIGHTING INSTALLATIONS

I. Energy Charge:

Summer Period -	$0.09930 per kWh per month
Winter Period -	$0.09930 per kWh per month
Transition Period -	$0.09930 per kWh per month

II. Facility Charge

The annual facility charge shall be 16.45 percent of the installed cost to KUB's electric system of the facilities devoted to street and park lighting service specified in this Part A. Such installed cost shall be recomputed on July 1 of each year, or more often if substantial changes in the facilities are made. Each month, one-twelfth of the then total annual facility charge shall be billed to the customer. If any part of the facilities has not

been provided at the electric system's expense or if the installed cost of any portion thereof is reflected on the books of another municipality or agency or department, the annual facility charge shall be adjusted to reflect properly the remaining cost to be borne by the electric system.

Traffic signal systems and athletic field lighting installations shall be provided, owned, and maintained by and at the expense of the customer, except as KUB may agree otherwise in accordance with the provisions of the paragraph next following in this Section II. The facilities necessary to provide service to such systems and installations shall be provided by and at the expense of KUB's electric system, and the annual facility charge provided for first above in this Section II shall apply to the installed cost of such facilities.

When so authorized by policy duly adopted by the Board, traffic signal systems and athletic field lighting installations may be provided, owned, and maintained by KUB's electric system for the customer's benefit. In such cases KUB may require reimbursement from the customer for a portion of the initial installed cost of any such system or installation and shall require payment by the customer of a facility charge sufficient to cover all of KUB's costs (except reimbursed costs), including appropriate overheads, of providing, owning, and maintaining such system or installation; provided that, for athletic field lighting installations, such facility charge shall be 15.26 percent per year of such costs. Said facility charge shall be in addition to the annual facility charge on the facilities necessary to provide service to such system or installation as provided for in the preceding paragraph. Replacement of lamps and related glassware for traffic signal systems and athletic field lighting installations provided under this paragraph shall be paid for under the provisions of paragraph A in section IV.

III. Customer Charge – Traffic Signal Systems and Athletic Field Lighting Installations.

IV. KUB shall apply a uniform monthly customer charge of $2.50 for service to each traffic signal system or athletic field lighting installation.

V. Replacement of Lamps and Related Glassware – Street and Park Lighting
Customer shall be billed and shall pay for replacements as provided in paragraph A below, which shall be applied to all service for street and park lighting.

(a) KUB shall bill the customer monthly for such replacements during each month at KUB's cost of materials, including appropriate storeroom expense.

(b) KUB shall bill the customer monthly for one-twelfth of the amount by which KUB's cost of materials, including appropriate storeroom expenses, exceeds the products of 3 mills multiplied by the number of kilowatt-hours used for street and park lighting during the fiscal year immediately preceding the fiscal year in which such month occurs.

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Metering

For any billing month or part of such month in which the energy is not metered or for which a meter reading is found to be in error or a meter is found to have failed, the energy for billing purposes for that billing month or part of such month shall be computed from the rated capacity of the lamps (including ballast) plus 5 percent of such capacity to reflect secondary circuit losses, multiplied by the number of hours of use.

Revenue and Cost Review

KUB's costs of providing service under Part A of this rate schedule are subject to review at any time to determine if KUB's revenues from the charges being applied are sufficient to cover its costs. (Such costs, including applicable overheads, include, but are not limited to, those incurred in the operation and maintenance of the systems provided and those resulting from depreciation and payments for taxes, tax equivalents and interest). If any such review discloses that revenues are either less or more than sufficient to cover said costs, the Board shall revise the above facility charges so that revenues will be sufficient to cover said costs.

PART B—CHARGES FOR OUTDOOR LIGHTING FOR INDIVIDUAL CUSTOMERS

Charges Per Fixture Per Month

(a) Type of Fixture	Lamp Size (Watts)	Lamp Size (Lumens)	Rated kWh	Facility Charge	Total Lamp Charge
Mercury Vapor or	175	7,650	70	$5.14	$12.09
Incandescent*	400	19,100	155	7.18	22.57
	1,000**	47,500	378	11.49	49.03
High Pressure	100	8,550	42	$5.14	$ 9.31
Sodium	250	23,000	105	6.10	16.53
	400	45,000	165	7.18	23.56
	1,000**	126,000	385	11.49	49.72
Decorative	100	8,550	42	$5.86	$10.03

* Mercury Vapor and Incandescent fixtures not offered for new service.
** 1,000 watt fixtures not offered for new service.

Light-Emitting Diode (LED) options provided through Schedule LED

(b) Energy Charge: For each lamp size under (a) above,
Summer Period - $0.09930 per kWh per month
Winter Period - $0.09930 per kWh per month
Transition Period - $0.09930 per kWh per month

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Additional Facilities

The above charges in this Part B are limited to service from a photoelectrically controlled standard lighting fixture installed on a pole already in place. If the customer wishes to have the fixture installed at a location other than on a pole already in place, the customer shall pay an additional monthly charge of $5.18 per pole for additional poles required to serve the fixture from KUB's nearest available source. (This section does not apply to Decorative Lighting Fixtures).

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Lamp Replacements

Replacements of lamps and related glassware will be made in accordance with replacement policies of KUB.

Special Outdoor Lighting Installations

When so authorized by policy duly adopted by the Board, special outdoor lighting installations (other than as provided for under Parts A and B above) may be provided, owned, and maintained by KUB's electric system. In such cases, KUB may require reimbursement from the customer for a portion of the initial installed cost of any such installation and shall require payment by the customer of monthly charges sufficient to cover all of KUB's costs (except reimbursed costs), including appropriate overheads of providing, owning, and maintaining such installations, and making lamp replacements.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

GENERAL POWER RATE SCHEDULE TDGSA

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where the higher of a customer's currently effective onpeak or offpeak contract demand is greater than 1,000 kW but not more than 5,000 kW for electric service to commercial, industrial, and governmental customers, and to institutional customers, including, without limitation, churches, clubs, fraternities, orphanages, nursing homes, rooming or boarding houses, and like customers, provided that the other conditions of this section are met.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item (3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	
Summer Period -	Onpeak Demand is $10.98 per kW per month of the customer's onpeak billing demand, plus Maximum Demand is $7.20 per kW per month of the customer's maximum billing demand plus Excess Demand is $18.18 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Winter Period -	Onpeak Demand is $10.02 per kW per month of the customer's onpeak billing demand, plus Maximum Demand is $7.20 per kW per month of the customer's maximum billing demand plus Excess Demand is $17.22 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Transition Period -	Onpeak Demand is $10.02 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $7.20 per kW per month of the customer's maximum billing demand plus

Excess Demand is $17.22 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.12406 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.09048 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.04789 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.04486 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.10873 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.09345 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.04789 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.04486 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.09465 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.09465 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.04789 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.04486 per kWh per month for the hours use of onpeak metered demand in excess of 400

hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.03064 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and

administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial contract shall be for a term of at least one year; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than four months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

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GENERAL POWER RATE SCHEDULE GSB

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where the higher of a customer's currently effective onpeak or offpeak contract demand is greater than 5,000 kW but not more than 15,000 kW; provided that the other conditions of this section are met.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item (3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	
Summer Period -	Onpeak Demand is $10.77 per kW per month of the customer's onpeak billing demand, plus
	Maximum Demand is $6.25 per kW per month of the customer's maximum billing demand plus
	Excess Demand is $17.02 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Winter Period -	Onpeak Demand is $9.81 per kW per month of the customer's onpeak billing demand, plus
	Maximum Demand is $6.25 per kW per month of the customer's maximum billing demand plus

Excess Demand is $16.06 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Transition Period - Onpeak Demand is $9.81 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $6.25 per kW per month of the customer's maximum billing demand plus

Excess Demand is $16.06 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.09684 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07215 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03788 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03450 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.08558 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07434 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03788 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03450 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.07183 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07183 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03788 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03450 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02800 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12

months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial contract shall be for a term of at least one year; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than four months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

GENERAL POWER RATE SCHEDULE GSC

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where the higher of a customer's currently effective onpeak or offpeak contract demand is greater than 15,000 kW but not more than 25,000 kW; provided that the other conditions of this section are met.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item (3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	
Summer Period -	Onpeak Demand is $10.77 per kW per month of the customer's onpeak billing demand, plus
	Maximum Demand is $6.12 per kW per month of the customer's maximum billing demand plus
	Excess Demand is $16.89 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's

offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Winter Period - Onpeak Demand is $9.81 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $6.12 per kW per month of the customer's maximum billing demand plus

Excess Demand is $15.93 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Transition Period - Onpeak Demand is $9.81 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $6.12 per kW per month of the customer's maximum billing demand plus

Excess Demand is $15.93 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.09675 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07206 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03779 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03441 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.08549 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07425 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03779 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03441 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.07174 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07174 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03779 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03441 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02800 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW, (2) 40 percent of the next 20,000 kW, and (3) 50 percent of any kW in excess of 25,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW, (2) 40 percent of the next 20,000 kW, and (3) 50 percent of any kW in excess of 25,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial contract shall be for a term of at least one year; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than four months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

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Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

GENERAL POWER RATE SCHEDULE GSD

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where the higher of a customer's currently effective onpeak or offpeak contract demand is greater than 25,000 kW; provided that the other conditions of this section are met.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item (3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	
Summer Period -	Onpeak Demand is $10.77 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $5.99 per kW per month of the customer's maximum billing demand plus

Excess Demand is $16.76 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Winter Period - Onpeak Demand is $9.81 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $5.99 per kW per month of the customer's maximum billing demand plus

Excess Demand is $15.80 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Transition Period - Onpeak Demand is $9.81 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $5.99 per kW per month of the customer's maximum billing demand plus

Excess Demand is $15.80 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.0.09669 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07200 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03659 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03435 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.08543 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07419 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 2 $0.03659 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 3 $0.03435 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.07168 per kWh per month for all metered onpeak kWh, plus
Offpeak
Block 1 $0.07168 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 2 $0.03659 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 3 $0.03435 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02800 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered

demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands,
Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW, (2) 40 percent of the next 20,000 kW; (3) 50 percent of the next 25,000 kW, (4) 60 percent of the next 50,000 kW, (5) 70 percent of the next 100,000 kW, (6) 80 percent of the next 150,000 kW, and (7) 85 percent of all kW in excess of 350,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW, (2) 40 percent of the next 20,000 kW, (3) 50 percent of the next 25,000 kW, (4) 60 percent of the next 50,000 kW, (5) 70 percent of the next 100,000 kW, (6) 80 percent of the next 150,000 kW, and (7) 85 percent of all kW in excess of 350,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial

contract shall be for a term of at least five years; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than sixteen months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

MANUFACTURING SERVICE RATE SCHEDULE TDMSA

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where (a) a customer's currently effective onpeak or offpeak contract demand, whichever is higher, is greater than 1,000 kW but not more than 5,000 kW, and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.

Prior to initially taking any service under this schedule, and from time to time thereafter as may be required by KUB, a customer shall certify to KUB that it meets the requirements set forth in condition (b) above. The certification form to be used shall be furnished by KUB to the customer, and signed and promptly returned by the customer to KUB. Further, such customer shall promptly certify any change in the status of any of the information contained in the certification form.

Service during any period for which a customer does not meet the eligibility requirements set forth in condition (b) above will be made available by KUB under, and billed in accordance with, the applicable General Power schedule.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item (3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	
Summer Period -	Onpeak Demand is $10.26 per kW per month of the customer's onpeak billing demand, plus Maximum Demand is $5.48 per kW per month of the customer's maximum billing demand plus Excess Demand is $15.74 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Winter Period -	Onpeak Demand is $9.29 per kW per month of the customer's onpeak billing demand, plus Maximum Demand is $5.48 per kW per month of the customer's maximum billing demand plus Excess Demand is $14.77 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Transition Period -	Onpeak Demandis $9.29 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $5.48 per kW per month of the customer's maximum billing demand plus

Excess Demand is $14.77 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.09868 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07362 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.04612 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.04357 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.08724 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07585 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.04612 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.04357 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.07673 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.07673 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.04612 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.04357 per kWh per month for the hours use of onpeak metered demand in excess of 400

hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.03064 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and

administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial contract shall be for a term of at least one year; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than four months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

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MANUFACTURING SERVICE RATE SCHEDULE MSB

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where (a) a customer's currently effective onpeak or offpeak contract demand, whichever is higher, is greater than 5,000 kW but not more than 15,000 kW, and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.

Prior to initially taking any service under this schedule, and from time to time thereafter as may be required by KUB, a customer shall certify to KUB that it meets the requirements set forth in condition (b) above. The certification form to be used shall be furnished by KUB to the customer, and signed and promptly returned by the customer to KUB. Further, such customer shall promptly certify any change in the status of any of the information contained in the certification form.

Service during any period for which a customer does not meet the eligibility requirements set forth in condition (b) above will be made available by KUB under, and billed in accordance with, the applicable General Power schedule.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item (3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	

Summer Period - Onpeak Demand is $10.15 per kW per month of the customer's onpeak billing demand, plus
Maximum Demand is $3.27 per kW per month of the customer's maximum billing demand plus
Excess Demand is $13.42 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Winter Period - Onpeak Demand is $9.19 per kW per month of the customer's onpeak billing demand, plus
Maximum Demand is $3.27 per kW per month of the customer's maximum billing demand plus
Excess Demand is $12.46 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Transition Period - Onpeak Demand is $9.19 per kW per month of the customer's onpeak billing demand, plus
Maximum Demand is $3.27 per kW per month of the customer's maximum billing demand plus
Excess Demand is $12.46 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.08896 per kWh per month for all metered onpeak kWh, plus
Offpeak
Block 1 $0.06419 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 2 $0.03476 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 3 $0.03224 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.07766 per kWh per month for all metered onpeak kWh, plus

Offpeak
Block 1 $0.06640 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 2 $0.03476 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 3 $0.03224 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.06726 per kWh per month for all metered onpeak kWh, plus
Offpeak
Block 1 $0.06726 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 2 $0.03476 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus
Block 3 $0.03224 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02760 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR

of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands,
Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial contract shall be for a term of at least one year; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than four months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply

power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

MANUFACTURING SERVICE RATE SCHEDULE MSC

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where (a) a customer's currently effective onpeak or offpeak contract demand, whichever is higher, is greater than 15,000 kW but not more than 25,000 kW, and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.

Prior to initially taking any service under this schedule, and from time to time thereafter as may be required by KUB, a customer shall certify to KUB that it meets the requirements set forth in condition (b) above. The certification form to be used shall be furnished by KUB to the customer, and signed and promptly returned by the customer to KUB. Further, such customer shall promptly certify any change in the status of any of the information contained in the certification form.

Service during any period for which a customer does not meet the eligibility requirements set forth in condition (b) above will be made available by KUB under, and billed in accordance with, the applicable General Power schedule.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item

(3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	
Summer Period -	Onpeak Demand is $10.15 per kW per month of the customer's onpeak billing demand, plus Maximum Demand is $3.15 per kW per month of the customer's maximum billing demand plus Excess Demand is $13.30 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Winter Period -	Onpeak Demand is $9.19 per kW per month of the customer's onpeak billing demand, plus Maximum Demand is $3.15 per kW per month of the customer's maximum billing demand plus Excess Demand is $12.34 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Transition Period -	Onpeak Demand is $9.19 per kW per month of the customer's onpeak billing demand, plus Maximum Demand is $3.15 per kW per month of the customer's maximum billing demand plus Excess Demand is $12.34 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's

offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.08790 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.06311 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03621 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03621 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.07659 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.06532 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03621 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03621 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.06619 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.06619 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03621 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03621 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02760 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November,

and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW, (2) 40 percent of the next 20,000 kW, and (3) 50 percent of any kW in excess of 25,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW, (2) 40 percent of the next 20,000 kW, and (3) 50 percent of any kW in excess of 25,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge,

as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial contract shall be for a term of at least one year; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than four months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

MANUFACTURING SERVICE RATE SCHEDULE MSD

Availability

This rate, subject to availability from TVA, shall be available for firm electric power requirements where (a) a customer's currently effective onpeak or offpeak contract demand, whichever is higher, is greater than 25,000 kW, and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.

Prior to initially taking any service under this schedule, and from time to time thereafter as may be required by KUB, a customer shall certify to KUB that it meets the requirements set forth in condition (b) above. The certification form to be used shall be furnished by KUB to the customer, and signed and promptly returned by the customer to KUB. Further, such customer shall promptly certify any change in the status of any of the information contained in the certification form.

Service during any period for which a customer does not meet the eligibility requirements set forth in condition (b) above will be made available by KUB under, and billed in accordance with, the applicable General Power schedule.

For a customer requesting that its onpeak contract demand be different from its offpeak contract demand, this rate schedule shall be available only for (1) a new contract, (2) a replacement or renewal contract following expiration of the existing contract, or (3) a replacement or renewal contract or an amended existing contract in which the customer is increasing its demand requirements above the existing contract demand level, but under this item (3) neither the new onpeak nor the new offpeak contract demand shall be lower than the customer's existing contract demand.

Prior to participation in this rate, contract amendments may be required for continued participation in certain other programs and rate overlays as determined at KUB's sole discretion.

Character of Service

Alternating current, single or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$1,500 per delivery point per month.
Administrative Charge:	$700 per delivery point per month.
Demand Charge:	
Summer Period -	Onpeak Demand is $10.15 per kW per month of the customer's onpeak billing demand, plus
	Maximum Demand is $2.72 per kW per month of the customer's maximum billing demand plus
	Excess Demand is $12.87 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher
Winter Period -	Onpeak Demand is $9.19 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $2.72 per kW per month of the customer's maximum billing demand plus

Excess Demand is $11.91 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Transition Period - Onpeak Demand is $9.19 per kW per month of the customer's onpeak billing demand, plus

Maximum Demand is $2.72 per kW per month of the customer's maximum billing demand plus

Excess Demand is $11.91 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher

Energy Charge:

Summer Period - Onpeak is $0.08446 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.05969 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03335 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03277 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Winter Period - Onpeak is $0.07315 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.06188 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03335 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03277 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

Transition Period - Onpeak is $0.06275 per kWh per month for all metered onpeak kWh, plus

Offpeak

Block 1 $0.06275 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 2 $0.03335 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to total energy, plus

Block 3 $0.03277 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02760 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Facilities Rental Charge

There shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161kV or higher. For delivery at less than 161kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37 cents per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97 cents per kW per month for the first 10,000 kW and 76 cents per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the higher of the customer's currently effective onpeak or offpeak contract demand and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charge

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

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Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. All other hours of each day that are not otherwise defined as onpeak hours and all hours of such excepted days shall be offpeak hours. Such times shall be Central Standard Time or Central Daylight Time, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the offpeak energy for any month shall in no case be less than the product of (1) the offpeak billing demand as calculated in the last sentence of the paragraph below and (2) 110 hours (reflecting a 15 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and in each case shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour of the month of the load metered in kW, and, except as provided below in this section, such amounts shall be used as the onpeak and offpeak billing demands.

The maximum billing demand for any month shall be the higher of (1) the highest onpeak billing demand in the month or (2) the highest offpeak billing demand in the month. The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of the next 20,000 kW (3) 50 percent of the next 25,000 kW, (4) 60 percent of the next 50,000 kW, (5) 70 percent of the next 100,000 kW, (6) 80 percent of the next 150,000 kW, and (7) 85 percent of all kW in excess of 350,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months. The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW, (2) 40 percent of the next 20,000 kW, (3) 50 percent of the next 25,000 kW, (4) 60 percent of the next 50,000 kW, and (5) 70 percent of the next 100,000 kW, (6) 80 percent of the next 150,000 kW, and (7) 85 percent of all kW in excess of 350,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge and administrative charge, (2) the portion of the base demand charge, as adjusted (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to onpeak billing demand applied to the customer's onpeak billing demand, (3) the portion of the base demand charge, as adjusted, (but excluding the additional portion thereof applicable to excess of billing demand over contract demand) applicable to maximum billing demand applied to the customer's maximum billing demand, (4) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, and (5) the base offpeak energy charge, as adjusted, applied to the higher of customer's actual offpeak energy takings or the minimum offpeak energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts". Notwithstanding the foregoing, any fuel cost that is included in *any purchased power adjustment adopted by the Board* shall not be applied to any billed offpeak energy that exceeds the metered offpeak energy.

KUB may require minimum bills higher than those stated above.

Contract Requirement

KUB shall require contracts for all service provided under this rate schedule. The contract shall be for an initial term of at least five years and any renewals or extensions of the initial contract shall be for a term of at least five years; after ten years of service, any such contract for the renewal or extension of service may provide for termination upon not less than sixteen months notice. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective onpeak or offpeak contract demand. If the customer uses any power other than that supplied by KUB under this rate schedule, the contract may include other special provisions. The rate schedule in any

power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

Single Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery point and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

LIGHT-EMITTING DIODE (LED) OUTDOOR LIGHTING RATE – SCHEDULE LED

Availability

Available for LED outdoor lighting service to individual customers. Service under this schedule is for a term of not less than one year.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months.

Charges per Fixture Per Month

Lamp Size	Rated kWh	Facility Charge	Total Lamp Charge
100 WE	21	$5.91	$ 8.00
250 WE	58	7.32	13.08
400 WE	79	10.05	17.90

Energy Charge: For each lamp size under (a) above,
Summer Period - $0.09930 per kWh per month
Winter Period - $0.09930 per kWh per month
Transition Period - $0.09930 per kWh per month

Additional Facilities

The above charges are limited to service installed on a pole already in place. If the customer wishes to have the fixture installed at a location other than on a pole already in place,

the customer shall pay an additional monthly charge of $5.18 per pole for additional poles required to serve the fixture from KUB's nearest available source.

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Lamp Replacements

Replacements of lamps and related glassware will be made in accordance with replacement policies of KUB.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

TWO-PART REAL TIME PRICING (RTP)

Availability

KUB provides Two-Part Real Time Pricing (Two-Part RTP) to qualified general power users through its wholesale power supplier, the Tennessee Valley Authority (TVA), in accordance with the power supply contract between KUB and TVA.

Two-Part RTP shall be made available to qualified general power users pursuant to specific contractual arrangements between KUB and the customer (such contractual arrangements may be contained in one or more written instruments and are hereinafter sometimes referred to as the "Contract").

Charges for Two-Part RTP

KUB Administrative Charge: $350.00 per month

All other Two-Part RTP charges including TVA Administrative Charges shall be established in accordance with the Contract.

Interruptibility

Two-Part RTP furnished to a customer under the Contract may be subject to interruption and to suspension of availability as provided for in the Contract.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

INTERRUPTIBLE POWER 5 (IP5)

Availability

KUB provides Interruptible Power 5 (IP5) to qualified power users through its wholesale power supplier, the Tennessee Valley Authority (TVA), in accordance with the power supply contract between KUB and TVA.

IP5 shall be made available to qualified power users pursuant to specific contractual arrangements between KUB and the customer (such contractual arrangements may be contained in one or more written instruments and are hereinafter sometimes referred to as the "Contract").

Charges for IP5

KUB Administrative Charge: $350.00 per month

All other IP5-related charges including TVA Administrative Cost Charges shall be established in accordance with the Contract.

Interruptibility

IP5 furnished to a customer under the Contract shall be subject to interruption and to suspension of availability as provided for in the Contract.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

INTERRUPTIBLE POWER 30 (IP30)

Availability

KUB provides Interruptible Power 30 (IP30) to qualified power users through its wholesale power supplier, the Tennessee Valley Authority (TVA), in accordance with the power supply contract between KUB and TVA.

IP30 shall be made available to qualified power users pursuant to specific contractual arrangements between KUB and the customer (such contractual arrangements may be contained in one or more written instruments and are hereinafter sometimes referred to as the "Contract").

Charges for IP30

KUB Administrative Charge: $350.00 per month

All other IP30-related charges including TVA Administrative Cost Charges shall be established in accordance with the Contract.

Interruptibility

IP30 furnished to a customer under the Contract shall be subject to interruption and to suspension of availability as provided for in the Contract.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

START-UP AND TESTING POWER (STP)

Availability

KUB provides Start-up and Testing Power (STP) to qualified power users through its wholesale power supplier, the Tennessee Valley Authority (TVA), in accordance with the power supply contract between KUB and TVA.

STP shall be made available to qualified power users pursuant to specific contractual arrangements between KUB and the customer (such contractual arrangements may be contained in one or more written instruments and are hereinafter sometimes referred to as the "Contract").

Charges for STP

KUB Administrative Charge:	$350.00 per month

All other STP-related charges including TVA Administrative Cost Charges shall be established in accordance with the Contract.

Interruptibility

STP furnished to a customer under the Contract shall be subject to interruption and to suspension of availability as provided for in the Contract.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

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ELECTRIC VEHICLE CHARGING POWER RATE – SCHEDULE EVC

Availability

This rate shall exclusively apply to separately metered charging stations for electric vehicles where the charging station's demand is greater than 50 kW but not more than 5,000 kW.

All customers participating under this rate schedule shall agree to a full requirements service from KUB. In addition, customers must agree that the sole use of the electric service is for the purpose of charging electric vehicles used for transportation purposes only.

Unless otherwise provided for in a written agreement between TVA and KUB, the customer's "meter-reading time" shall be 0000 hours Central Standard Time (CST) or Central Daylight Time (CDT), whichever is currently effective, on the first day of the calendar month following the month for which a bill under this rate schedule is being calculated.

Character of Service

Alternating current, single- or three-phase, 60 hertz. Power shall be delivered at a transmission voltage of 161 kV or, if such transmission voltage is not available, at the highest voltage available in the vicinity, unless at the customer's request a lower standard voltage is agreed upon.

Base Charges

Customer Charge:	$100 per delivery point per month
Energy Charge:	
All Seasons -	Onpeak is $0.15499 per kWh per month for all metered onpeak kWh, plus
	Offpeak is $0.15499 per kWh per month for all metered offpeak kWh, plus
Distribution Delivery Charge -	$0.08219 per total metered kWh per month

Adjustment

Charges under this rate schedule may be increased or decreased to reflect changes in purchased power costs as determined by any purchased power adjustment adopted by the Board.

Facilities Rental Charge

Where the charging station's demand is greater than 50 kW, but not more than 1,000 kW, there shall be no facilities rental charge under this rate schedule.

Where the charging station's demand is greater than 1,000 kW there shall be no facilities rental charge under this rate schedule for delivery at bulk transmission voltage levels of 161 kV

or higher. For delivery at less than 161 kV, there shall be added to the customer's bill a facilities rental charge. This charge shall be 37¢ per kW per month except for delivery at voltages below 46 kV, in which case the charge shall be 97¢ per kW per month for the first 10,000 kW and 76¢ per kW per month for the excess over 10,000 kW. Such charge shall be applied to the higher of (1) the highest billing demand established during the latest 12-consecutive-month period or (2) the customer's currently effective onpeak or offpeak contract demand, whichever is higher, and shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Reactive Demand Charges

If the reactive demand (in kVAR) is lagging during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's highest metered demand occurs, there shall be added to the customer's bill a reactive charge of $1.46 per kVAR of the amount, if any, by which the reactive demand exceeds 33 percent of such metered demand. If the reactive demand (in kVAR) is leading during the 30-consecutive-minute period beginning or ending on a clock hour of the month in which the customer's lowest metered demand (excluding any metered demands which are less than 25 percent of the highest metered demand) occurs, there shall be added to the customer's bill a reactive charge of $1.14 per kVAR of the amount of reactive demand. Such charges shall be in addition to all other charges under this rate schedule, including minimum bill charges.

Determination of Seasonal Periods

Summer Period shall mean the June, July, August, and September billing months. Winter Period shall mean the December, January, February, and March billing months. Transition Period shall mean the April, May, October, and November billing months. The Seasonal Periods under this rate schedule are subject to change by KUB. In the event KUB determines that changed Seasonal Periods are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed periods, and KUB shall promptly notify customer.

Determination of Onpeak and Offpeak Hours

Except for Saturdays, Sundays, November 1, and the weekdays that are observed as Federal holidays for New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day, onpeak hours for each day shall for purposes of this rate schedule be from 1 p.m. to 7 p.m. during the months of April, May, June, July, August, September and October and from 4 a.m. to 10 a.m. during the months of January, February, March, November, and December. For all other hours of each day and all hours of such excepted days shall be offpeak hours. Such times shall be CST or CDT, whichever is then in effect. Said onpeak and offpeak hours are subject to change by KUB. In the event KUB determines that such changed onpeak and offpeak hours are appropriate, such decision shall be made at least 11 months prior to the effective date of such changed hours, and KUB shall promptly notify customer.

**Determination of Onpeak and Offpeak Demands,
Maximum Metered Demand, and Energy Amounts**

The onpeak and offpeak kWh for any month shall be the energy amounts taken during the respective hours of the month designated under this rate schedule as onpeak and offpeak hours; provided, however, that notwithstanding the metered energy amount, the Distribution Delivery energy for any month shall in no case be less than the product of (1) the maximum billing demand as calculated in the paragraph below and (2) 37 hours (reflecting a 5 percent load factor applied to the average number of hours in a month).

KUB shall meter the onpeak and offpeak demands in kW of all customers taking service under this rate schedule. The onpeak metered demand and offpeak metered demand for any month shall be determined separately for the respective hours of the month designated under this rate schedule as onpeak and offpeak hours and, in each case, shall be the highest average during any 30-consecutive-minute period beginning or ending on a clock hour.

Except as provided below, (1) the onpeak billing demand shall be the highest onpeak metered demand in the month, (2) the offpeak billing demand shall be the highest offpeak metered demand in the month, and (3) the maximum billing demand shall be the higher of the onpeak billing demand or offpeak billing demand in the month.

The onpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective onpeak contract demand or the highest onpeak billing demand established during the preceding 12 months.

The offpeak billing demand shall in no case be less than the sum of (1) 30 percent of the first 5,000 kW and (2) 40 percent of any kW in excess of 5,000 kW of the higher of the currently effective offpeak contract demand or the highest offpeak billing demand established during the preceding 12 months.

Minimum Bill

The monthly bill under this rate schedule, excluding any facilities rental charges and any reactive charges, shall not be less than the sum of (1) the base customer charge, (2) the base onpeak energy charge, as adjusted, applied to the customer's onpeak energy takings, (3) the base offpeak energy charge, as adjusted, applied to the customer's offpeak energy takings, and (4) the base distribution delivery charge applied to the higher of the customer's total energy takings or the minimum energy takings amount provided for in the first paragraph of the section of this rate schedule entitled "Determination of Onpeak and Offpeak Demands, Maximum Metered Demand, and Energy Amounts."

KUB may require minimum bills higher than those stated above.

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Contract Requirement

All customers shall be required to execute contracts and such contracts shall be for an initial term of at least 1 year. The customer shall contract for its maximum requirements, which shall not exceed the amount of power capable of being used by customer, and KUB shall not be obligated to supply power in greater amount at any time than the customer's currently effective contract demand. The customer is prohibited from using any power other than that supplied by KUB under this rate schedule. The contract may include other special provisions. The rate schedule in any power contract shall be subject to adjustment, modification, change, or replacement from time to time as approved by the Board.

After having received service for at least 1 year under this rate schedule, the customer, subject to 90 days prior written notice and appropriate amendments in its power contract with KUB, may receive service under the General Power Rate - Schedule GSA. In such case the term of the power contract shall remain the same and the contract demand for service under the General Power Rate - Schedule GSA shall not be less than the contract demand in effect when service was taken under this rate schedule.

Single-Point Delivery

The charges under this rate schedule are based upon the supply of service through a single delivery and metering point, and at a single voltage. If service is supplied to the same customer through more than one point of delivery or at different voltages, the supply of service at each delivery and metering point and at each different voltage shall be separately metered and billed.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

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HISTORIC CAPITALIZATION AND CUSTOMERS

Electric Division Capitalization - Historic

	Fiscal Year	(Net Assets) Accumulated Earnings	Revenue Bonds	Revenue Notes	Total Capitalization	Debt as % of Capitalization
Historical	2018	$ 365,015,374	$ 294,450,000	$ -	$ 659,465,374	44.65%
	2019	$ 385,047,671	$ 322,170,000	$ -	$ 707,217,671	45.55%
	2020	$ 411,744,518	$ 305,835,000	$ -	$ 717,579,518	42.62%
	2021 as restated*	$ 443,334,288	$ 275,415,000	$ -	$ 718,749,288	38.32%
	2022	$ 472,525,429	$ 304,835,000	$ -	$ 777,360,429	39.21%

Electric Division Customers - Historic

(Measured by Bills Rendered)

Historical Number of Customers	2018	2019	2020	2021	2022
Residential	182,415	184,819	186,052	188,374	190,304
Small Commercial and Industrial	19,662	19,843	20,029	20,376	20,689
Large Commercial and Industrial	2,832	2,766	2,716	2,653	2,630
Outdoor Lighting	1,524	1,554	1,596	1,605	1,641
Total	**206,433**	**208,982**	**210,393**	**213,008**	**215,264**

Historic Electric Division Use

The following table shows historical figures for Knox County's population, the Electric Division's number of customers, and electric sales.

Fiscal Year	Knox Co. Population	Number of Customers	Total Sales MWh
1995	357,447	160,893	4,703,769
2000	382,032	177,201	5,210,716
2010	432,226	197,299	5,587,374
2018	465,289	206,433	5,446,959
2019	470,313	208,982	5,394,429
2020	478,971	210,393	5,271,869
2021	486,677	213,008	5,640,161
2022	486,677	215,264	5,812,108

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

KNOXVILLE UTILITIES BOARD
ELECTRIC DIVISION
CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
for the years ending on June 30

	2018	2019	2020	2021 as restated*	2022
Operating Revenues:	$ 560,110,507	$ 558,369,583	$ 547,686,983	$ 553,897,585	$ 606,335,419
Operating Expenses:					
Purchased power	$ 425,841,567	$ 417,674,655	$ 398,229,905	$ 394,541,982	$ 439,114,687
Distribution	35,019,674	35,539,679	39,928,275	37,118,162	43,441,366
Customer service	6,123,651	7,160,178	6,186,221	6,204,319	6,650,825
Administrative and general	13,172,673	18,843,502	18,764,049	13,284,502	16,050,054
Provision for depreciation	35,430,800	31,991,227	29,994,212	40,385,025	38,481,239
Taxes and tax equivalents	17,699,792	18,710,928	18,332,928	19,147,427	19,293,655
Total Operating Expenses	$ 533,288,157	$ 529,920,169	$ 511,435,590	$ 510,681,417	$ 563,031,826
Operating Income	$ 26,822,350	$ 28,449,414	$ 36,251,393	$ 43,216,168	$ 43,303,593
Non-Operating Revenues / Expenses:					
Contribution in aid of Construction	$ 2,100,439	$ 3,175,023	$ 2,063,288	$ 2,563,006	3,019,363
Interest and dividend income	1,635,170	2,666,532	1,579,182	236,934	716,419
Interest Expense	(10,692,299)	(11,704,490)	(11,647,959)	(11,218,425)	(10,639,504)
Plant Costs Recovered	(2,100,439)	(3,175,023)	(2,063,288)	(2,563,006)	(3,019,363)
Other	(294,508)	500,124	345,222	(644,907)	(4,189,367)
Total Non-Operating	$ (9,351,637)	$ (8,537,834)	$ (9,723,555)	$ (11,626,398)	$ (14,112,452)
Change in Net Position before Capital Contributions	$ 17,470,713	$ 19,911,580	$ 26,527,838	$ 31,589,770	$ 29,191,141
Capital Contributions	119,992	120,717	169,009	-	-
Change in Net Position	$ 17,590,705	$ 20,032,297	$ 26,696,847	$ 31,589,770	$ 29,191,141
Beginning of Period	$ 345,253,775	$ 365,015,374	$ 385,047,671	$ 411,744,518	$ 443,334,288
Adjustment	2,170,894	-	-	-	-
Net Position End of period	**$ 365,015,374**	**$ 385,047,671**	**$ 411,744,518**	**$ 443,334,288**	**$ 472,525,429**

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

Source: The above amounts have been derived from the Annual Audited Financial Statements of the Knoxville Utilities Board - Electric Division and the Board's internal financial records should be read in conjunction therewith.

KNOXVILLE UTILITIES BOARD
ELECTRIC DIVISION
OPERATING STATISTICS
for the Fiscal Years ended on June 30

Revenues:	**2018**	**2019**	**2020**	**2021 as restated***	**2022**
Residential	$ 259,179,059	$ 262,794,531	$ 259,850,828	$ 265,036,915	$ 282,413,730
Commercial	49,106,584	51,063,329	50,563,343	50,925,829	55,616,386
Industrial	227,302,729	229,155,656	217,185,900	220,669,452	244,582,768
Outdoor Lighting	8,981,113	6,890,780	5,834,487	5,718,036	5,824,823
Total Sales Revenues	$ 544,569,485	$ 549,904,296	$ 533,434,558	$ 542,350,232	$ 588,437,707
Other Revenues	15,541,022	8,465,287	14,252,425	11,547,353	17,897,712
Total Revenues	$ 560,110,507	$ 558,369,583	$ 547,686,983	$ 553,897,585	$ 606,335,419
Electric Usage - MWh:					
Residential	2,476,886	2,476,757	2,443,183	2,510,197	2,511,736
Commercial	402,426	405,893	396,722	401,691	418,914
Industrial	2,509,166	2,458,808	2,394,484	2,693,580	2,849,248
Outdoor Lighting	58,481	52,971	37,480	34,693	32,210
Total Electric Usage	5,446,959	5,394,429	5,271,869	5,640,161	5,812,108
Number of Customers:					
Residential	182,415	184,819	186,052	188,374	190,304
Commercial	19,662	19,843	20,029	20,376	20,689
Industrial	2,832	2,766	2,716	2,653	2,630
Outdoor Lighting	1,524	1,554	1,596	1,605	1,641
Total Customers	206,433	208,982	210,393	213,008	215,264
Purchased Power:					
MWh	5,654,388	5,545,119	5,439,712	5,828,430	6,000,965
Total Cost	$ 425,841,567	$ 417,674,655	$ 398,229,905	$ 394,541,982	$ 439,114,687
Wholesale Power Cost as % of Sales	78.20%	75.95%	74.65%	72.75%	74.62%
Electric System Peak (kW)	1,328,313	1,328,313	1,328,313	1,328,313	1,328,313

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

OPERATING AND FINANCIAL HISTORY OF THE ELECTRIC DIVISION

Sales in MWh

Fiscal Year	Residential	Commercial	Industrial	Outdoor Lighting	Total
2013	2,436,697	395,642	2,566,669	57,976	5,456,984
2014	2,499,987	408,581	2,569,046	57,616	5,535,230
2015	2,505,079	402,268	2,571,186	57,775	5,536,308
2016	2,341,289	385,756	2,564,889	58,723	5,350,657
2017	2,396,248	393,907	2,515,987	59,252	5,365,394
2018	2,476,886	402,426	2,509,166	58,481	5,446,959
2019	2,476,757	405,893	2,458,808	52,971	5,394,429
2020	2,443,183	396,722	2,394,484	37,480	5,271,869
2021	2,510,197	401,691	2,693,580	34,693	5,640,161
2022	2,511,736	418,914	2,849,248	32,210	5,812,108

Total Operating Revenue

Fiscal Year	Residential	Commercial	Industrial	Outdoor Lighting	Other	Total
2013	$ 244,493,773	$ 45,486,773	$ 227,250,089	$ 8,231,980	$ 9,425,591	$ 534,888,206
2014	$ 242,439,020	$ 45,892,309	$ 220,298,930	$ 8,153,718	$ 11,048,814	$ 527,832,790
2015	$ 247,635,642	$ 45,928,833	$ 222,500,328	$ 8,371,010	$ 8,770,032	$ 533,205,845
2016	$ 234,748,373	$ 44,633,880	$ 221,132,641	$ 8,585,438	$ 12,268,870	$ 521,369,202
2017	$ 251,523,417	$ 47,499,537	$ 228,728,437	$ 9,082,469	$ 9,530,152	$ 546,364,012
2018	$ 259,179,059	$ 49,106,584	$ 227,302,729	$ 8,981,113	$ 15,541,022	$ 560,110,507
2019	$ 262,794,531	$ 51,063,329	$ 229,155,656	$ 6,890,780	$ 8,465,287	$ 558,369,583
2020	$ 259,850,828	$ 50,563,343	$ 217,185,900	$ 5,834,487	$ 14,252,425	$ 547,686,983
2021 as restated*	$ 265,036,915	$ 50,925,829	$ 220,669,452	$ 5,718,036	$ 11,547,353	$ 553,897,585
2022	$ 282,413,730	$ 55,616,386	$ 244,582,768	$ 5,824,823	$ 17,897,712	$ 606,335,419

Growth Rates for Key Operating Data

	2017-2018	2018-2019	2019-2020	2020-2021 as restated*	2021-2022
Number of Customers	0.66%	1.23%	0.68%	1.24%	1.06%
Total Sales (MWh)	1.52%	-0.96%	-2.27%	6.99%	3.05%
Total Operating Revenues	2.52%	-0.31%	-1.91%	1.13%	9.47%

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

TEN LARGEST ELECTRIC SYSTEM CUSTOMERS - 2022

The ten largest Electric System customers, as of June 30, 2022, in order of total sales generated are listed below. Those ten electric customers represent 15.38% of the total electric sales based on revenue and 24.25% of the total electric sales based on sales volume.

	Customer	Consumption MWh	Electric Sales Revenue	Percent of Sales Revenue
1.	Carpenter Creek LLC	485,514	$ 20,226,754	3.44%
2.	University of Tennessee	235,807	20,106,925	3.42%
3.	CMC Steel US LLC	293,168	13,750,916	2.34%
4.	Knox County Schools	49,923	7,440,857	1.26%
5.	KUB	65,705	6,948,070	1.18%
6.	University Health Systems Inc	79,171	6,161,232	1.05%
7.	Cemex Inc	92,950	5,745,949	0.98%
8.	K-VA-T Food Stores Inc	34,514	3,521,942	0.60%
9.	Fort Sanders Regional Medical Center	40,483	3,310,717	0.56%
10.	Parkwest Medical	32,360	3,309,539	0.56%
	TOTAL	**1,409,595**	**$ 90,522,901**	**15.38%**

Total Electric Sales Revenue	$ 588,437,707	
Top 10 as Percent of Total Electric Sales Revenue	15.38%	
Total Electric Sales Volume (MWh)	5,812,108	
Top 10 as Percent of Total Electric Sales Volume	24.25%	

KNOXVILLE UTILITIES BOARD
ELECTRIC DIVISION
BONDS OUTSTANDING

The following table shows the outstanding bond indebtedness of the Electric Division.

Amount Issued	Series	Due Date	Interest Rates	Outstanding Debt (1) and (2) As of June 30, 2022
$ 28,550,000	Electric System Revenue Refunding Bonds, Series EE-2015	07-01-29	Fixed	$ 21,530,000
35,000,000	Electric System Revenue Bonds, Series FF-2015	07-01-23	Fixed	1,675,000
40,000,000	Electric System Revenue Bonds, Series GG-2016	07-01-46	Fixed	35,700,000
23,445,000	Electric System Revenue Refunding Bonds, Series HH-2017	07-01-27	Fixed	15,225,000
40,000,000	Electric System Revenue Bonds, Series II-2017	07-01-47	Fixed	36,885,000
39,995,000	Electric System Revenue Bonds, Series JJ-2018	07-01-47	Fixed	37,550,000
14,380,000	Electric System Revenue Refunding Bonds, Series KK-2020	07-01-30	Fixed	13,225,000
70,180,000	Electric System Revenue Refunding Bonds, Series LL-2021	07-01-44	Fixed	70,180,000
45,650,000	Electric System Revenue Bonds, Series MM-2022	07-01-51	Fixed	45,650,000
27,215,000	Electric System Revenue Refunding Bonds, Series NN-2022	07-01-45	Fixed	27,215,000
$ 364,415,000	**TOTAL DEBT**			$ 304,835,000
$ 79,000,000	Electric System Revenue Bonds, Series OO-2022	07-01-52	Fixed	$ 79,000,000
$ 443,415,000	**TOTAL INDEBTEDNESS**			$ 383,835,000

NOTES:

(1) The above figures do not include short-term notes outstanding, if any. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

(2) The Electric System paid $14,040,000 of principal and $4,927,919.93 of interest on July 1, 2022, for the Fiscal Year Ending June 30, 2023.

KNOXVILLE UTILITIES BOARD
ELECTRIC DIVISION
DEBT SERVICE REQUIREMENTS

Fiscal Year	Outstanding Fiscal Year Debt Service on Bonds as of June 30, 2022 Principal	Interest	Total	Electric System Revenue Bonds, Series OO-2022 Principal	Interest (3)	Total	% Principal Repaid on Series OO-2022 Bonds	TOTAL DEBT SERVICE (1) & (2) Principal	Interest	Total	% Principal Repaid on All Debt
2023	$ 14,040,000	$ 10,578,607	$ 24,618,607	$ -	$ 790,000	$ 790,000	0.00%	$ 14,040,000	$ 11,368,607	$ 25,408,607	3.66%
2024	15,470,000	10,946,274	26,416,274	-	3,160,000	3,160,000		15,470,000	14,106,274	29,576,274	
2025	16,045,000	10,254,224	26,299,224	1,470,000	3,130,600	4,600,600		17,515,000	13,384,824	30,899,824	
2026	14,235,000	9,604,974	23,839,974	1,530,000	3,070,600	4,600,600		15,765,000	12,675,574	28,440,574	
2027	14,820,000	8,977,524	23,797,524	1,595,000	3,008,100	4,603,100	5.82%	16,415,000	11,985,624	28,400,624	20.64%
2028	15,385,000	8,372,621	23,757,621	1,660,000	2,943,000	4,603,000		17,045,000	11,315,621	28,360,621	
2029	13,260,000	7,821,619	21,081,619	1,730,000	2,875,200	4,605,200		14,990,000	10,696,819	25,686,819	
2030	13,735,000	7,288,144	21,023,144	1,800,000	2,804,600	4,604,600		15,535,000	10,092,744	25,627,744	
2031	10,055,000	6,800,444	16,855,444	1,870,000	2,731,200	4,601,200		11,925,000	9,531,644	21,456,644	
2032	9,460,000	6,384,569	15,844,569	1,950,000	2,654,800	4,604,800	17.22%	11,410,000	9,039,369	20,449,369	39.11%
2033	9,060,000	5,994,209	15,054,209	2,030,000	2,575,200	4,605,200		11,090,000	8,569,409	19,659,409	
2034	9,290,000	5,614,575	14,904,575	2,110,000	2,492,400	4,602,400		11,400,000	8,106,975	19,506,975	
2035	9,510,000	5,231,063	14,741,063	2,195,000	2,406,300	4,601,300		11,705,000	7,637,363	19,342,363	
2036	9,760,000	4,867,088	14,627,088	2,285,000	2,316,700	4,601,700		12,045,000	7,183,788	19,228,788	
2037	9,975,000	4,521,275	14,496,275	2,380,000	2,223,400	4,603,400	31.15%	12,355,000	6,744,675	19,099,675	54.37%
2038	10,230,000	4,160,850	14,390,850	2,475,000	2,126,300	4,601,300		12,705,000	6,287,150	18,992,150	
2039	10,460,000	3,791,131	14,251,131	2,580,000	2,025,200	4,605,200		13,040,000	5,816,331	18,856,331	
2040	10,725,000	3,415,675	14,140,675	2,685,000	1,919,900	4,604,900		13,410,000	5,335,575	18,745,575	
2041	10,995,000	3,027,988	14,022,988	2,790,000	1,810,400	4,600,400		13,785,000	4,838,388	18,623,388	
2042	11,245,000	2,629,144	13,874,144	2,905,000	1,696,500	4,601,500	48.15%	14,150,000	4,325,644	18,475,644	71.85%
2043	11,550,000	2,220,494	13,770,494	3,025,000	1,577,900	4,602,900		14,575,000	3,798,394	18,373,394	
2044	10,480,000	1,827,488	12,307,488	3,150,000	1,454,400	4,604,400		13,630,000	3,281,888	16,911,888	
2045	10,805,000	1,447,444	12,252,444	3,275,000	1,325,900	4,600,900		14,080,000	2,773,344	16,853,344	
2046	9,645,000	1,083,369	10,728,369	3,410,000	1,192,200	4,602,200		13,055,000	2,275,569	15,330,569	
2047	8,160,000	772,463	8,932,463	3,550,000	1,053,000	4,603,000	68.92%	11,710,000	1,825,463	13,535,463	89.32%
2048	6,440,000	515,794	6,955,794	3,695,000	908,100	4,603,100		10,135,000	1,423,894	11,558,894	
2049	2,350,000	353,000	2,703,000	3,845,000	757,300	4,602,300		6,195,000	1,110,300	7,305,300	
2050	2,450,000	257,000	2,707,000	4,000,000	600,400	4,600,400		6,450,000	857,400	7,307,400	
2051	2,550,000	157,000	2,707,000	4,165,000	437,100	4,602,100		6,715,000	594,100	7,309,100	
2052	2,650,000	53,000	2,703,000	4,335,000	267,100	4,602,100	94.29%	6,985,000	320,100	7,305,100	98.83%
2053	-	-	-	4,510,000	90,200	4,600,200	100.00%	4,510,000	90,200	4,600,200	100.00%
	$ 304,835,000	$ 138,969,045	$ 443,804,045	$ 79,000,000	$ 58,424,000	$ 137,424,000		$ 383,835,000	$ 197,393,045	$ 581,228,045	

NOTES:

(1) The above figures do not include short-term notes outstanding, if any. Amounts represent audited June 30, 2021. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

(2) The Electric System paid $14,040,000 of principal and $4,771,433.27 of interest on July 1, 2022, for the Fiscal Year Ending June 30, 2023.

(3) Estimated Interest Rates. Estimated Average Coupon 4.00%.

KNOXVILLE UTILITIES BOARD
ELECTRIC DIVISION
HISTORICAL DEBT COVERAGE ON OUTSTANDING ELECTRIC SYSTEM BONDS
For the Fiscal Years Ended June 30

The historical coverage for the actual debt service requirements and the projected maximum annual debt service requirements (FY 2025) of the Outstanding Bonds and the Series OO-2022 Bonds for June 30, 2018 through June 30, 2022 is set forth below.

	2018	2019	2020	2021 as restated***	2022
Operating revenues	$ 560,110,507	$ 558,369,583	$ 547,686,983	$ 553,897,585	$ 606,335,419
Operating expenses *	(480,157,565)	(479,218,014)	(463,108,450)	(451,148,965)	(505,256,932)
Net income before depreciation & taxes	$ 79,952,942	$ 79,151,569	$ 84,578,533	$ 102,748,620	$ 101,078,487
Other revenue (Net)	1,635,170	2,666,532	1,579,182	236,934	716,419
FICA & Medicare Tax Expense	(2,156,841)	(2,251,026)	(2,265,718)	(2,256,238)	(2,502,307)
Income available for debt service	$ 79,431,271	$ 79,567,075	$ 83,891,997	$ 100,729,316	$ 99,292,599
Actual annual debt service requirements on outstanding bonds	$ 21,318,583	$ 23,535,838	$ 25,456,523	$ 26,715,582	$ 24,632,436
Coverage (Times)	3.73 x	3.38 x	3.30 x	3.77 x	4.03 x
Maximum annual debt service requirements (FY 2025) on Outstanding Bonds and the Series OO-2022**	$ 30,899,824	$ 30,899,824	$ 30,899,824	$ 30,899,824	$ 30,899,824
Coverage (Times)	2.57 x	2.58 x	2.71 x	3.26 x	3.21 x

* Excluding Provision for Depreciation and Taxes

** From Debt Service Requirements Chart.

***Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

APPENDIX B-2

ELECTRIC DIVISION
REPORT OF INDEPENDENT AUDITORS AND FINANCIAL STATEMENTS



Electric Division

Financial Statements and Supplemental Information
June 30, 2022 and 2021

KUB Board of Commissioners

Dr. Jerry W. Askew, Chair
Adrienne Simpson-Brown, Vice Chair
Claudia Caballero
Ron Feinbaum
Kathy Hamilton
Celeste Herbert
Tyvi Small

Management

Gabriel Bolas II
President and Chief Executive Officer

Mark Walker
Senior Vice President and Chief Financial Officer

Susan Edwards
Senior Vice President and Chief Administrative Officer

Derwin Hagood
Senior Vice President of Operations

John Williams
Senior Vice President of Engineering & Construction

Julie Childers
Vice President and Century II Administrator

Tiffany Martin
Vice President and Chief Customer Officer

Mike Bolin
Vice President of Utility Advancement

John Gresham
Vice President of Operations

Jamie Davis
Vice President Fiber and Chief Technology Officer

Knoxville Utilities Board Electric Division
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June 30, 2022 and 2021

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Independent Auditor's Report

Board of Commissioners
Electric Division of the Knoxville Utilities Board
Knoxville, Tennessee

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Electric Division (the Division) of the Knoxville Utilities Board, a component unit of the City of Knoxville, Tennessee, as of and for the years ended June 30, 2022 and 2021, and the related notes to the financial statements, which collectively comprise the Division's basic financial statements as listed in the index.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Division as of June 30, 2022 and 2021, and the changes in its financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Division and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Change in Accounting Principle

As discussed in Note 2 to the financial statements, effective July 1, 2020, the Division adopted new accounting guidance Governmental Accounting Standards Board Statement No. 87, *Leases*. Our opinion is not modified with respect to this matter.

Responsibilities of Management for the Financial Statements

The Division's management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Division's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Board of Commissioners
Electric Division of the Knoxville Utilities Board
Knoxville, Tennessee

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Division's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Division's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 4 through 26 and the required supplementary information on pages 65 through 69 be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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.

Board of Commissioners
Electric Division of the Knoxville Utilities Board
Knoxville, Tennessee

Supplemental Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Division's basic financial statements. The supplemental information, as required by the State of Tennessee, is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The supplemental 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. Such 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 supplemental information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information

Management is responsible for the other information. The other information comprises the statistical information but does not include the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon. In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Emphasis of Matter

As discussed in Note 1, the financial statements present only the Electric Division and do not purport to, and do not, present fairly the financial position of the Knoxville Utilities Board, as of June 30, 2022 and 2021, and the changes in its financial position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 25, 2022, on our consideration of the Division's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Division's internal control over financial reporting and compliance.

Coulter & Justus, P.C.

Knoxville, Tennessee
October 25, 2022

Knoxville Utilities Board (KUB), comprised of the Electric Division, Fiber Division, Gas Division, Water Division, and Wastewater Division (Divisions), is reported as a component unit enterprise fund in the financial statements of the City of Knoxville. KUB's responsibility is to oversee the purchase, production, distribution, and processing of electricity, broadband, natural gas, water, and wastewater services. A seven-member Board of Commissioners (Board) governs KUB. The Board has all powers to construct, acquire, expand, and operate the Divisions. It has full control and complete jurisdiction over the management and operation of the Divisions. The Electric Division (Division) provides services to certain customers in Knox County and in seven surrounding counties in East Tennessee. The Division's accounts are maintained in conformity with the Uniform System of Accounts of the Federal Energy Regulatory Commission (FERC) and the Governmental Accounting Standards Board (GASB), as applicable. The financial statements present only the Electric Division and do not purport to, and do not, present fairly the consolidated financial position of Knoxville Utilities Board as of June 30, 2022, and 2021, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America.

The Division's discussion and analysis is designed to (a) assist the reader in focusing on significant financial issues, (b) provide an overview of the Division's financial activity, (c) identify major changes in the Division's financial position, and (d) identify any financial concerns.

The Division's Management Discussion and Analysis (MD&A) focuses on the fiscal year ended June 30, 2022, activities, resulting changes and current known facts, and should be read in conjunction with the Division's financial statements.

Electric Division Highlights

System Highlights

As KUB returned to normal operations this fiscal year, supply chain issues and workforce shortages continued to impact capital projects. While some projects were delayed, others were held until supplies were more readily available. However, KUB's ability to serve its electric customers has remained strong throughout.

KUB serves 215,264 electric customers over a 688 square mile service area and maintains 5,480 miles of service lines and 63 electric substations to provide 6 million megawatt hours to its customers annually.

KUB's electric system had a strong year for reliability with only 1.89 hours of service interruption for the average customer in fiscal year 2022, compared to 1.83 hours in fiscal year 2021. Favorable weather conditions and the deployment of automated technologies, including Fault Location, Isolation, and Service Restoration (FLISR) devices, were both integral to the year's performance.

KUB's electric system record peak in demand remains 1,328 megawatt hours, set in February 2015.

KUB has added 6,282 electric system customers over the past three years, representing annual growth of one percent. In fiscal year 2022, 2,256 customers were added.

The typical residential customer's average monthly electric bill was $114.73 as of June 30, 2022, representing an increase of $6.49 compared to June 30, 2021. Bill levels are based on 1,000 kwh of monthly power use. The increase in the monthly bill during fiscal year 2022 was the net result of the flow through of TVA wholesale rate adjustments, the April 2022 rate increase, and prior year over recovered wholesale power costs.

KUB's electric system maintains a Diamond level designation by the American Public Power Association's (APPA) Reliable Public Power Provider (RP3) program, the highest level of recognition of the program.

Century II Infrastructure Program

Century II is KUB's proactive long-range program to improve and maintain its electric, natural gas, water and wastewater systems for its customers. It includes maintenance and asset replacement strategies for each utility system and establishes sustainable replacement cycles. Century II moves KUB into its second century of service by improving each system through sound planning, resource allocation, and continued, but accelerated, investment.

In May 2017, a new Century II funding resolution was adopted by the KUB Board to express the continued commitment to funding Century II programs for the next ten years. The funding will be achieved through a combination of rate increases and debt issues supplemented by cost savings and new revenue from net customer additions.

In June 2017, the Board approved three electric rate increases to support the Century II program. The approved electric rate increases went into effect in October 2017, October 2018, and October 2019 generating $10.9 million, $11.2 million, and $5.7 million in additional annual Electric Division revenue, respectively.

In September 2021, the Board approved the next phase of electric rate increases to support both the Century II program and expanded fiber network. The first of three approved 3 percent electric rate increases went into effect April 2022 and will generate $16.7 million in additional annual Electric Division revenue. The remaining two approved rate increases are effective April 2023, and April 2024, which will generate $17.4 million, and $18 million in additional annual Electric Division revenue, respectively.

During the fiscal year, KUB replaced 1,360 poles and replaced 6.6 miles of transmission lines while staying on track with Century II goals and within the Electric Division's total capital budget.

Fiber Network

During fiscal year 2021, KUB developed a Fiber to the Home Business Plan for the provision of broadband services to customers within its electric system service territory. In accordance with state law and KUB's wholesale power supply contract with TVA, the Business Plan was submitted to the Office of the Comptroller of the Treasury for Tennessee and TVA for review. The Office of the Comptroller found KUB's Business Plan to be financially feasible and TVA approved the Business Plan, finding no cross-subsidization exists between the proposed Fiber Division and the Electric Division.

After gaining the required approvals from TVA, the State of Tennessee, KUB's Board and City Council, KUB launched its new Fiber Division. Broadband services will be provided by a high-speed fiber optic network that will be owned and maintained by the Electric Division. The Fiber Division will share in the cost to build and operate the Fiber network by paying the Electric Division an annual access fee based on the year end value of those assets and the related expenses. The Fiber Division will also pay the Electric Division an annual utilization fee based on attachments to the network. In addition to providing broadband services, the fiber network will allow KUB to implement new advanced technologies to improve the reliability of its electric system. In August 2021, the Board authorized the first $10 million loan of a proposed $35 million loan from the Electric Division to the Fiber Division. The interdivisional loan was approved by TVA and was initiated in October 2021. In fiscal year 2022, KUB began the seven-year buildout on extending fiber infrastructure to make broadband service available to electric customers. The first broadband customers will begin receiving service in fiscal year 2023.

The fiber network is an integral component of a $702 million ten-year Enhanced Grid Modernization effort for the Electric Division. The $702 million ten-year program will be funded by a combination of electric rate increases, new bonds, and projected payments from the new Fiber Division.

Financial Highlights

During fiscal year 2022, KUB adopted GASB Statement No. 87, *Leases* (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

Fiscal Year 2022 Compared to Fiscal Year 2021

The Division's Change in Net Position increased $29.2 million in fiscal year 2022. Comparatively, net position increased by $31.6 million in fiscal year 2021.

Operating revenue increased $52.4 million or 9.5 percent over the prior fiscal year. The increase in operating revenue was the net result of additional revenue from a 3 percent increase in billed sales, additional revenue from the April 2022 rate increase, and the flow through of $0.4 million of over recovered purchased power from the prior year. KUB flows changes to wholesale power rates directly through to its retail electric rates via its Purchased Power Adjustment.

Seventy-four percent of Electric Division sales revenue was used to purchase electric power from TVA for the fiscal year ended June 30, 2022. Purchased power expense increased $44.6 million compared to last fiscal year due to higher wholesale power costs.

Margin on electric sales (operating revenue less purchased power expense) increased $7.9 million or 4.9 percent.

Operating expenses (excluding purchased power expense) increased $7.8 million. Operating and maintenance (O&M) expenditures increased $9.5 million. Depreciation and amortization expense decreased $1.9 million or 4.7 percent. Taxes and tax equivalents were $0.1 million higher than the prior fiscal year.

Interest income was $0.5 million higher than the prior fiscal year, due to additional interest earnings on more cash on hand combined with rising short-term interest rates throughout the year. Interest expense decreased $0.6 million or 5.2 percent.

Total capital assets (net) increased $21.6 million or 3.1 percent over the end of the last fiscal year, reflecting electric grid modernization and other distribution system improvements as part of KUB's Century II electric program.

During fiscal year 2022, KUB sold $45.7 million in electric system revenue bonds in April 2022 for the purpose of funding electric system capital improvements. KUB also refinanced outstanding debt, selling $27.2 million in electric system revenue refunding bonds in April 2022. KUB will realize a total debt service savings of $2 million over the life of the bonds ($1.3 million on a net present value basis).

Long-term debt represented 39.2 percent of the Division's capital structure as of June 30, 2022, compared to 38.3 percent last year. Capital structure equals long-term debt (including the current and long-term portion of any revenue bonds) plus net position.

The Division's bond covenants require a debt service coverage ratio of at least 1.2 times the maximum principal and interest payments over the life of the Division's outstanding bonds. Current year debt coverage for the fiscal year was 4.14. Maximum debt service coverage was 3.76.

Fiscal Year 2021 Compared to Fiscal Year 2020

The Division's Change in Net Position increased $31.6 million in fiscal year 2021. Comparatively, net position increased by $26.7 million in fiscal year 2020.

Operating revenue increased $6.2 million or 1.1 percent over the prior fiscal year. The increase in operating revenue was the net result of additional revenue from a 6.8 percent increase in billed sales and the flow through of $1.8 million of over recovered purchased power from the prior year. KUB flows changes to wholesale power rates directly through to its retail electric rates via its Purchased Power Adjustment.

Seventy-three percent of Electric Division sales revenue was used to purchase electric power from TVA for the fiscal year ended June 30, 2021. Purchased power expense decreased $3.7 million compared to last fiscal year due to lower wholesale power costs. Billed power sales were up 6.8 percent compared to the prior fiscal year, reflecting colder winter temperatures.

Margin on electric sales (operating revenue less purchased power expense) increased $9.9 million or 6.6 percent.

Operating expenses (excluding purchased power expense) increased $2.9 million. Operating and maintenance (O&M) expenditures decreased $8.3 million. Depreciation and amortization expense increased $10.4 million or 34.6 percent, as $14.8 million of multi-year projects were capitalized this fiscal year. Taxes and tax equivalents were $0.8 million or 4.4 percent higher than the prior fiscal year.

Interest income was $1.3 million less than the prior fiscal year due to lower short-term interest rates. Interest expense decreased $0.4 million or 3.7 percent.

Capital contributions were $0.2 million lower than the prior fiscal year, reflecting a decrease in electric system assets provided to KUB during the fiscal year.

Total capital assets (net) increased $14.2 million or 2.1 percent over the end of the last fiscal year, reflecting electric grid moderation and other distribution system improvements as part of KUB's Century II electric program.

During fiscal year 2021, KUB refinanced outstanding debt, selling $70.2 million in electric system revenue refunding bonds in March 2021. KUB will realize a total debt service savings of $14.3 million over the life of the bonds ($11.9 million on a net present value basis).

Long-term debt represented 38.3 percent of the Division's capital structure as of June 30, 2021, compared to 42.6 percent last year. Capital structure equals long-term debt (including the current and long-term portion of any revenue bonds) plus net position.

The Division's bond covenants require a debt service coverage ratio of at least 1.2 times the maximum principal and interest payments over the life of the Division's outstanding bonds. Current year debt coverage for the fiscal year was 3.80. Maximum debt service coverage was 4.20.

Knoxville Utilities Board Electric Division - Financial Statements

The Division's financial performance is reported under three basic financial statements: the Statement of Net Position; the Statement of Revenues, Expenses and Changes in Net Position; and the Statement of Cash Flows.

Statement of Net Position

The Division reports its assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position in the Statement of Net Position. Assets are classified as current, restricted, electric plant in service, intangible, or other assets.

Liabilities are classified as current, other, or long-term debt. Net position is classified as net investment in capital assets, restricted, or unrestricted. Net position tells the user what the Division has done with its accumulated earnings, not just the balance.

Net investment in capital assets reflects the book value of all capital assets and intangible assets, less lease liability and the outstanding balances of debt used to acquire, construct, or improve those assets.

Restricted net position includes assets that have been limited to specific uses by the Division's bond covenants or through resolutions passed by the KUB Board.

Unrestricted net position is a residual classification; the amount remaining after reporting net position as either invested in capital or restricted is reported there.

Statement of Revenues, Expenses and Changes in Net Position

The Division reports its revenues and expenses (both operating and non-operating) on the Statement of Revenues, Expenses and Changes in Net Position. In addition, any capital contributions or assets donated by developers are reported on this statement.

Total revenue less total expense equals the change in net position for the reporting period. Net position at the beginning of the period is increased or decreased, as applicable, by the change in net position for the reporting period.

The change in net position for the reporting period is added to the net position segment of the Statement of Net Position.

Statement of Cash Flows

The Division reports its cash flows from operating activities, capital and related financing activities, noncapital and related financing activities, and investing activities on its Statement of Cash Flows. This statement tells the user the Division's sources and uses of cash during the reporting period.

The statement indicates the Division's beginning cash balance and ending cash balance and how it was either increased or decreased during the reporting period.

The statement also reconciles cash flow back to operating income as it appears on the Statement of Revenues, Expenses and Changes in Net Position.

Condensed Financial Statements

Statement of Net Position

The following table reflects the condensed Statement of Net Position for the Electric Division compared to the prior two fiscal years.

Statements of Net Position
As of June 30

(in thousands of dollars)	2022	2021 as restated	2020
Current, restricted, intangible, and other assets	$ 265,280	$ 196,624	$ 181,494
Capital assets, net	712,994	691,361	677,193
Deferred outflows of resources	6,234	3,971	8,535
Total assets and deferred outflows of resources	984,508	891,956	867,222
Current and other liabilities	169,944	138,958	140,286
Long-term debt outstanding	319,888	286,588	305,318
Deferred inflows of resources	22,151	23,076	9,873
Total liabilities and deferred inflows of resources	511,983	448,622	455,477
Net position			
Net investment in capital assets	373,317	384,826	356,245
Restricted	14,041	14,546	14,186
Unrestricted	85,167	43,962	41,314
Total net position	$ 472,525	$ 443,334	$ 411,745

Normal Impacts on Statement of Net Position

The following is a description of activities which will normally impact the comparability of the Statement of Net Position presentation:

- Change in net position (from Statement of Revenues, Expenses and Changes in Net Position): impacts (increase/decrease) current and other assets and/or capital and intangible assets, and unrestricted net position.
- Issuing debt for capital: increases deferred outflows of resources and long-term debt.
- Spending debt proceeds on new capital: reduces current assets and increases capital assets.
- Spending of non-debt related current assets on new capital: (a) reduces current assets and increases capital assets, and (b) reduces unrestricted net position and increases net investment in capital assets.
- Principal payment on debt: (a) reduces current and other assets and reduces long-term debt, and (b) reduces unrestricted net position and increases net investment in capital assets.
- Reduction of capital assets through depreciation: reduces capital assets and net investment in capital assets.

Impacts and Analysis

Current, Restricted, Intangible, and Other Assets

Fiscal Year 2022 Compared to Fiscal Year 2021

Current, restricted, intangible, and other assets increased $68.7 million or 34.9 percent. The change reflects an increase in general fund cash (consisting of cash and cash equivalents, short-term investments, and long-term investments) of $33.4 million, an increase in notes receivable of $10 million, an increase in the actuarially determined net pension asset of $8.3 million, an increase in accounts receivable of $6.9 million, an increase in contingency fund investments of $4.3 million, an increase in inventories of $3.2 million, an increase in net intangible right of use assets of $1.6 million, and an increase in unused bond proceeds of $1.3 million. These increases were offset by a decrease in the actuarially determined net OPEB asset of $2.8 million.

KUB under recovered $2.4 million in wholesale power costs from its customers in fiscal year 2022, as compared to a $0.4 million over recovery in fiscal year 2021. This under recovery of costs will be recovered from KUB's electric customers during the next fiscal year through adjustments to rates via the Purchased Power Adjustment.

Fiscal Year 2021 Compared to Fiscal Year 2020

Current, restricted, intangible, and other assets increased $15.1 million or 8.3 percent. The change reflects an increase in the actuarially determined net pension asset of $12.5 million, an increase in accounts receivable of $3.8 million, and an increase in the actuarially determined net OPEB asset of $2.8 million. These increases were offset by a decrease in general fund cash (consisting of cash and cash equivalents, short-term investments, and long-term investments) of $3.4 million.

Capital Assets

Fiscal Year 2022 Compared to Fiscal Year 2021

Capital assets, net of depreciation, increased $21.6 million or 3.1 percent. Major capital expenditures included $25.4 million for distribution system improvements, $17.2 million for Grid Modernization including Supervisory Control and Data Acquisition (SCADA) system upgrades, $6.9 million for pole replacements, $5.7 million for installation or replacement of electric services, and $2.1 million for building improvements. Electric system assets of $19.3 million were retired in fiscal year 2022.

Fiscal Year 2021 Compared to Fiscal Year 2020

Capital assets, net of depreciation, increased $14.2 million or 2.1 percent. Spending was slowed this year to allow for better financial liquidity in response to the pandemic. Major capital expenditures included $23.9 million for distribution system improvements, $6.1 million for Grid Modernization including Supervisory Control and Data Acquisition (SCADA) system upgrades, $5.8 million for building improvements, $5.6 million for pole replacements, and $5.4 million for installation or replacement of electric services. Electric system assets of $19.7 million were retired in fiscal year 2021.

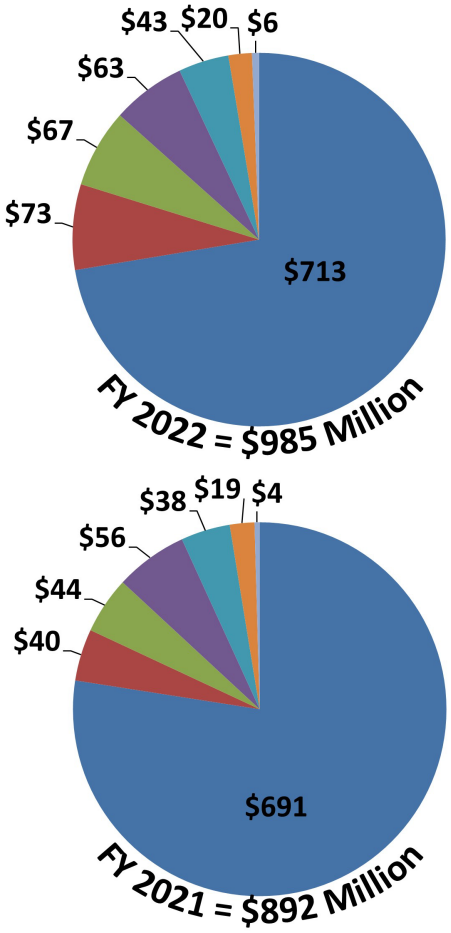
Deferred Outflows of Resources

Fiscal Year 2022 Compared to Fiscal Year 2021

Deferred outflows of resources increased $2.3 million compared to the prior fiscal year due to an increase in OPEB outflow of $2.4 million offset by a decrease in pension outflow of $0.1 million.

Fiscal Year 2021 Compared to Fiscal Year 2020

Deferred outflows of resources decreased $4.6 million compared to the prior fiscal year due to a decrease in unamortized bond refunding costs of $2.6 million and a decrease in OPEB outflow of $2 million.



Electric Division Total Assets and Deferred Outflows of Resources (in Millions)

	FY22	FY21
Plant	72%	78%
General Fund	8%	5%
Other Assets	7%	5%
Accounts Receivable	6%	6%
Contingency Fund	4%	4%
Restricted Assets	2%	2%
Deferred Outflows of Resources	1%	<1%

Current and Other Liabilities

Fiscal Year 2022 Compared to Fiscal Year 2021

Current and other liabilities increased $31 million. Accounts payable increased $16 million, accrued expenses increased $6.9 million, and net OPEB liability increased $5.2 million. The outstanding balance on TVA conservation loans declined by $0.5 million, as KUB ceased issuance of any new loans in fiscal year 2016.

Fiscal Year 2021 Compared to Fiscal Year 2020

Current and other liabilities decreased $1.3 million. Net OPEB liability decreased $3.6 million, over recovered purchased power cost decreased $1.4 million, and accrued interest on revenue bonds decreased $1.3 million. These decreases were offset by a $3.1 million increase in accounts payable and a $2.2 million increase in accrued expenses. The outstanding balance on TVA conservation loans declined by $0.9 million, as KUB ceased issuance of any new loans in fiscal year 2016.

KUB over recovered $0.4 million in wholesale power costs from its customers in fiscal year 2021, as compared to a $1.8 million over recovery in fiscal year 2020. This over recovery of costs will be flowed back to KUB's electric customers during the next fiscal year through adjustments to rates via the Purchased Power Adjustment.

Long-Term Debt

Fiscal Year 2022 Compared to Fiscal Year 2021

Long-term debt increased $33.3 million or 11.6 percent. The increase is due in part to the net impact of the issuance of $45.7 million of electric system revenue bonds in April 2022 offset by the scheduled repayment of debt. KUB also sold $27.2 million in electric system revenue refunding bonds in April 2022 with a premium of $2 million to refund $28.9 million in outstanding debt, resulting in a reduction of principal of $1.7 million.

Fiscal Year 2021 Compared to Fiscal Year 2020

Long-term debt decreased $18.7 million or 6.1 percent. The decrease is due in part to the scheduled repayment of debt. KUB also sold $70.2 million of electric system revenue refunding bonds in March 2021 with a premium of $16.7 million to refund $86.4 million in outstanding debt, resulting in a reduction of principal of $16.2 million.

Deferred Inflows of Resources

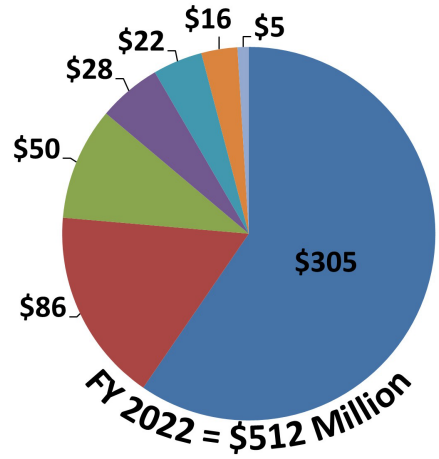
Fiscal Year 2022 Compared to Fiscal Year 2021

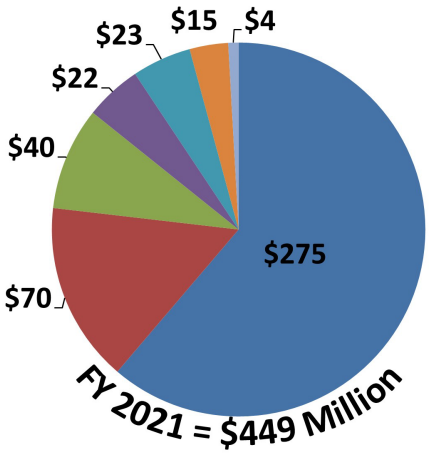
Deferred inflows decreased $0.9 million compared to the prior fiscal year due to a decrease to OPEB inflow of $3.8 million offset by a $1.4 million increase in unamortized bond refunding costs, a $1.1 million increase in pension inflow, and a $0.4 million increase in lease inflow.

Fiscal Year 2021 Compared to Fiscal Year 2020

Deferred inflows increased $13.2 million compared to the prior fiscal year due to a $7.5 million increase in pension inflow, a $3.8 million increase in OPEB inflow, and a $1.8 million increase in lease inflow.

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Electric Division Total Liabilities and Deferred Inflows of Resources (in Millions)

	FY22	FY21
Bond Debt	60%	61%
Payables	17%	16%
Other Liabilities	10%	9%
Misc Current	5%	5%
Deferred Inflows of Resources	4%	5%
Customer Deposits	3%	3%
Interest Accrued	1%	1%

Net Position

Fiscal Year 2022 Compared to Fiscal Year 2021

Total net position increased $29.2 million or 6.6 percent. Unrestricted net position increased $41.2 million, primarily due to an increase in general fund cash of $33.4 million. Net investment in capital assets decreased by $11.5 million or 3 percent. The change was primarily the result of an increase of $21.6 million in net electric plant additions offset by an increase in the electric revenue bonds outstanding of $29.4 million. Restricted net position decreased $0.5 million due to the net decrease of the electric bond fund and the associated interest payable.

Fiscal Year 2021 Compared to Fiscal Year 2020

Total net position increased $31.6 million or 7.7 percent. Unrestricted net position increased $2.6 million, primarily due to changes in the pension and OPEB accruals for the fiscal year. Net investment in capital assets increased by $28.6 million or 8 percent. The change was primarily the result of an increase of $14.2 million in net electric plant additions and a decrease in the current portion of revenue bonds and total long-term debt of $18.4 million. Restricted net position increased $0.4 million due to the net increase of the electric bond fund and the associated interest payable.

Statement of Revenues, Expenses and Changes in Net Position

The following table reflects the condensed Statement of Revenues, Expenses and Changes in Net Position for the Electric Division compared to the prior two fiscal years.

Statements of Revenues, Expenses and Changes in Net Position
For the Years Ended June 30

(in thousands of dollars)	2022	2021 as restated	2020
Operating revenues	$ 606,335	$ 553,898	$ 547,687
Less: Purchased power expense	439,115	394,542	398,230
Margin from sales	167,220	159,356	149,457
Operating expenses			
Distribution	43,441	37,118	39,929
Customer service	6,651	6,204	6,186
Administrative and general	16,050	13,285	18,764
Depreciation and amortization	38,481	40,385	29,994
Taxes and tax equivalents	19,294	19,147	18,333
Total operating expenses	123,917	116,139	113,206
Operating income	43,303	43,217	36,251
Interest income	716	237	1,579
Interest expense	(10,640)	(11,218)	(11,648)
Other income/(expense)	(4,188)	(646)	346
Change in net position before capital contributions	29,191	31,590	26,528
Capital contributions	-	-	169
Change in net position	$ 29,191	$ 31,590	$ 26,697

Normal Impacts on Statement of Revenues, Expenses and Changes in Net Position

The following is a description of activities which will normally impact the comparability of the Statement of Revenues, Expenses and Changes in Net Position presentation:

- Operating revenue is largely determined by the volume of electric power sales for the fiscal year. Any change (increase/decrease) in retail electric rates would also be a cause of change in operating revenue.

- Purchased power expense is determined by volume of power purchases from TVA for the fiscal year. Also, any change (increase/decrease) in TVA wholesale power rates would result in a change in purchased power expense.

- Operating expenses (distribution, customer service, administrative and general) are normally impacted by changes in areas including, but not limited to, labor costs (staffing, wage rates), active employee and retiree medical costs, and overhead line maintenance (tree trimming, pole inspection, etc.).

- Depreciation and amortization expense is impacted by intangible assets, plant additions and retirements during the fiscal year.

- Taxes and tax equivalents are impacted by plant additions/retirements, changes in property tax rates, and margin (operating revenue less purchased power expense) levels.

- Interest income is impacted by the level of interest rates and investments.

- Interest expense on debt is impacted by the level of outstanding debt and the interest rates on the outstanding debt.

- Other income/(expense) is impacted by miscellaneous non-operating revenues and expenses.

- Capital contributions are impacted by a donation of facilities/infrastructure to KUB by developers and governmental agencies. The contributions are recognized as revenue and recorded as plant in service based on the fair market value of the asset(s).

Impacts and Analysis

Change in Net Position

Fiscal Year 2022 Compared to Fiscal Year 2021

The Division's Change in Net Position increased $29.2 million in fiscal year 2022. Comparatively, net position increased $31.6 million in fiscal year 2021.

The lower earnings were attributable to the net effect of a $7.9 million increase in margin on sales offset by a $7.8 million increase in operating expenses and a $2.5 million increase in nonoperating expenses.

Fiscal Year 2021 Compared to Fiscal Year 2020

The Division's Change in Net Position increased $31.6 million in fiscal year 2021. Comparatively, net position increased $26.7 million in fiscal year 2020.

The higher earnings were attributable to the net effect of a $9.9 million increase in margin on sales offset by a $2.9 million increase in operating expenses, a $1 million increase in other expenses, and a $1.3 million decrease in interest income.

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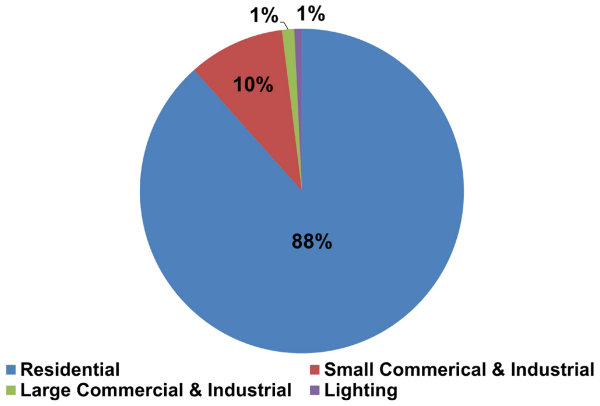
Margin from Sales

Fiscal Year 2022 Compared to Fiscal Year 2021

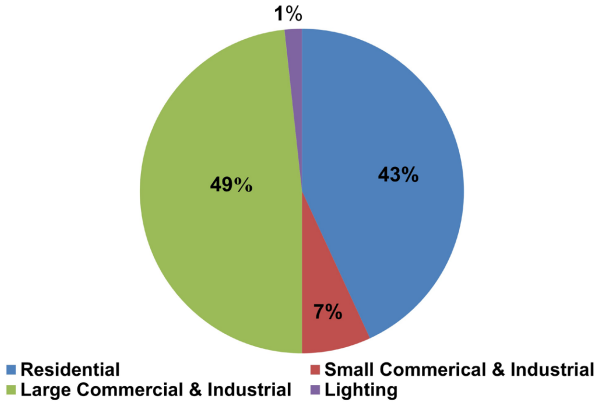
Margin on electric sales grew $7.9 million, reflecting increased sales volumes, as well as additional revenue from the April 2022 rate increase.

Operating revenue increased $52.4 million or 9.5 percent. Billed power sales increased 3 percent compared to fiscal year 2021. Purchased power expense increased $44.6 million from last year due to higher wholesale power costs. KUB received $9.3 million as a result of TVA's Long-Term Partnership Credit, which decreased power expenses in the current fiscal year.

FY 2022 Total Electric Customers = 215,264



FY 2022 Electric Sales = 5.8 million MWh



Residential customers represented 88 percent of total electric system customers and accounted for 43 percent of electric sales volumes for the year. Large commercial and industrial customers accounted for 49 percent of electric sales volumes.

KUB's ten largest electric customers accounted for 24 percent of KUB's billed volumes. Those ten customers represent three industrial and seven commercial customers, including three governmental customers. Sales to Carpenter Creek LLC, KUB's largest industrial customer, accounted for 8.4 percent of total electric system sales.

KUB has added 6,282 electric system customers over the past three years, representing annual growth of one percent. Electric billed sales volumes have increased 2.5 percent over the past three years. Fiscal year 2022 customer growth was 2,256.

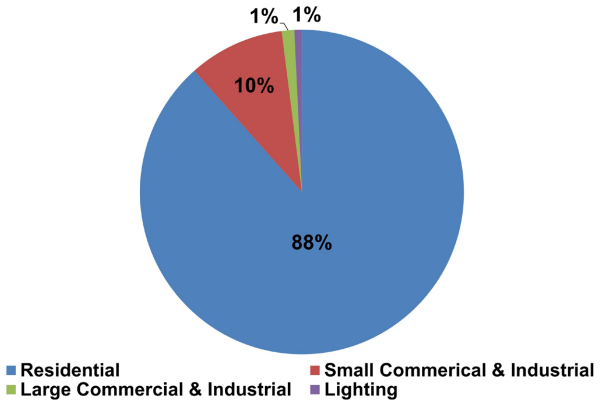
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Fiscal Year 2021 Compared to Fiscal Year 2020

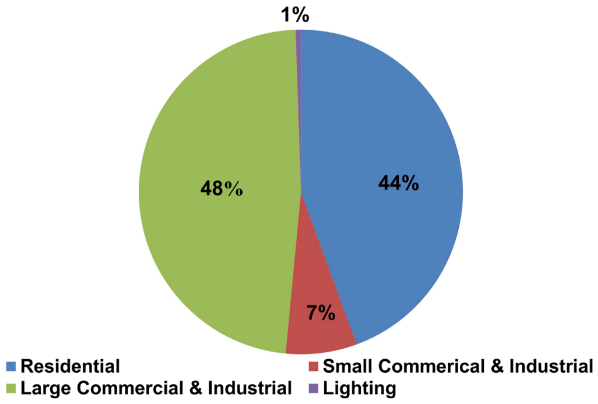
Margin on electric sales grew $9.9 million, reflecting increased sales volumes and a full year of wholesale power rate credits associated with the long-term Partnership Agreement with TVA.

Operating revenue increased $6.2 million or 1.1 percent. Billed power sales increased 6.8 percent compared to fiscal year 2020. Purchased power expense decreased $3.7 million from last year. KUB received $9.2 million as a result of TVA's Long-Term Partnership Credit, which decreased power expenses in the current fiscal year.

FY 2021 Total Electric Customers = 213,008



FY 2021 Electric Sales = 5.6 million MWh



Residential customers represented 88 percent of total electric system customers and accounted for 44 percent of electric sales volumes for the year. Large commercial and industrial customers accounted for 48 percent of electric sales volumes.

KUB's ten largest electric customers accounted for 22 percent of KUB's billed volumes. Those ten customers represent four industrial and six commercial customers, including three governmental customers. Sales to Carpenter Creek LLC, KUB's largest industrial customer, accounted for 6.5 percent of total electric system sales.

KUB has added 6,575 electric system customers over the past three years, representing annual growth of one percent. Electric billed sales volumes have increased 1.2 percent over the past three years. Fiscal year 2021 customer growth was 2,615.

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Operating Expenses

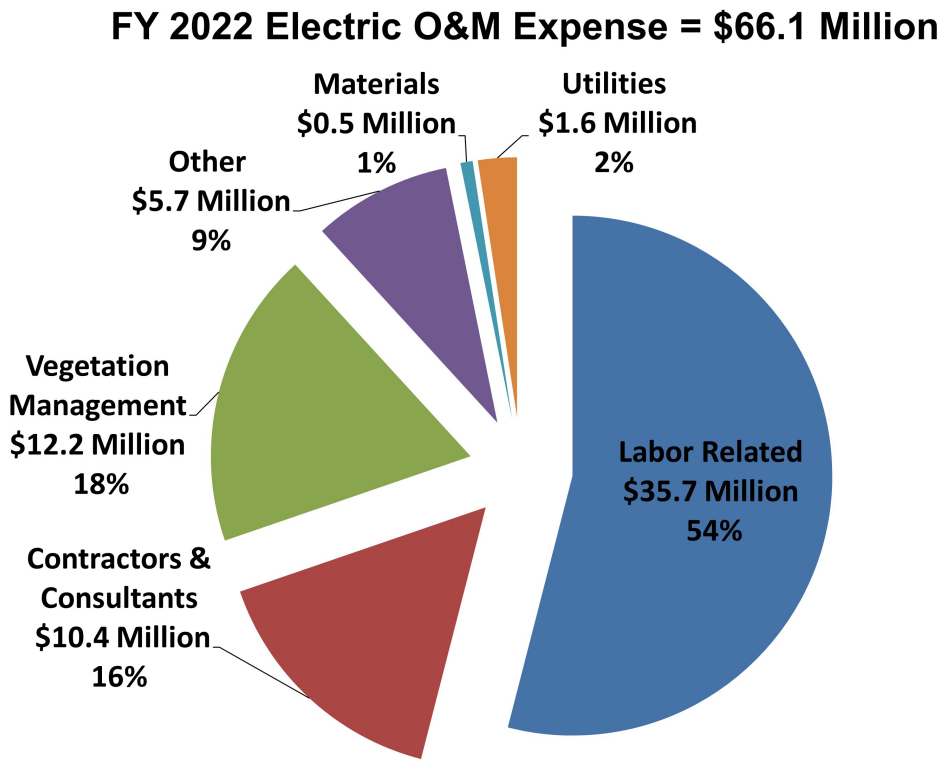
Fiscal Year 2022 Compared to Fiscal Year 2021

Operating expenses (excluding purchased power expense) increased $7.8 million compared to fiscal year 2021. Operating expenses include operations and maintenance (O&M) expense, depreciation/amortization, and taxes/tax equivalents. O&M expenses can be further classified as distribution, customer service, and administrative and general.

- Distribution expenses increased $6.3 million or 17 percent, primarily due to the catch up from the pandemic related timing delay on vegetation management circuit work and increased labor related expenses.

- Customer service expenses were $0.4 million higher, primarily due to increased payment processing fees.

- Administrative and general expenses increased $2.8 million, primarily due to an increase in labor related expenses, including higher OPEB costs related to the introduction of the Health Reimbursement Arrangement.



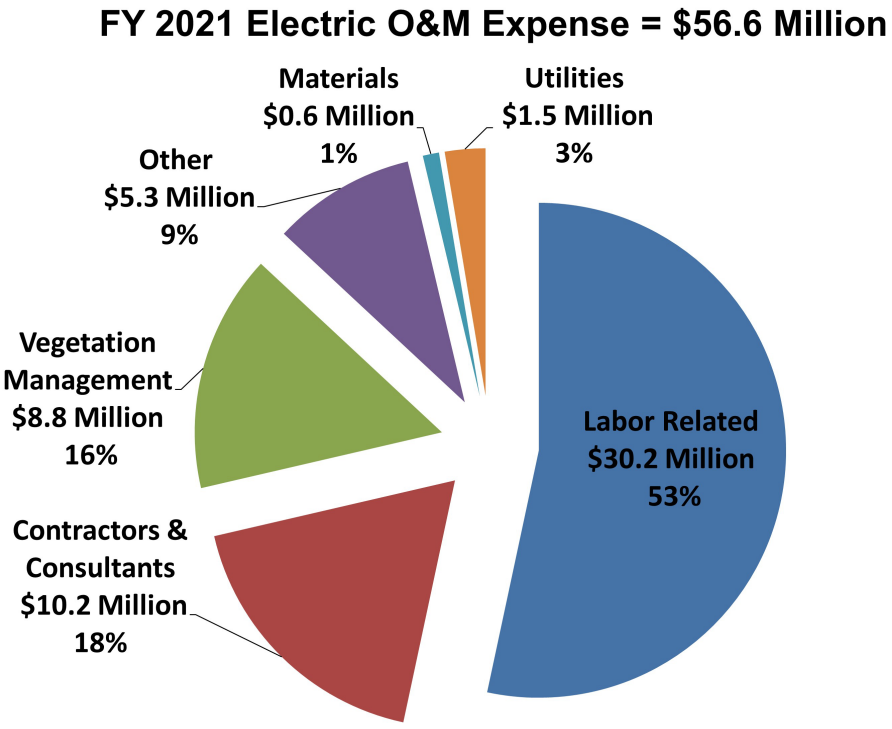
- Depreciation and amortization expense decreased $1.9 million or 4.7 percent. KUB added $55.8 million in assets during fiscal year 2022. A partial year of depreciation expense was recorded on these capital investments and a full year of depreciation expense was incurred on $96.4 million in assets placed in service during fiscal year 2021. In addition, $19.3 million of assets were retired in fiscal year 2022.

- Taxes and tax equivalents were $0.1 million higher than the prior fiscal year.

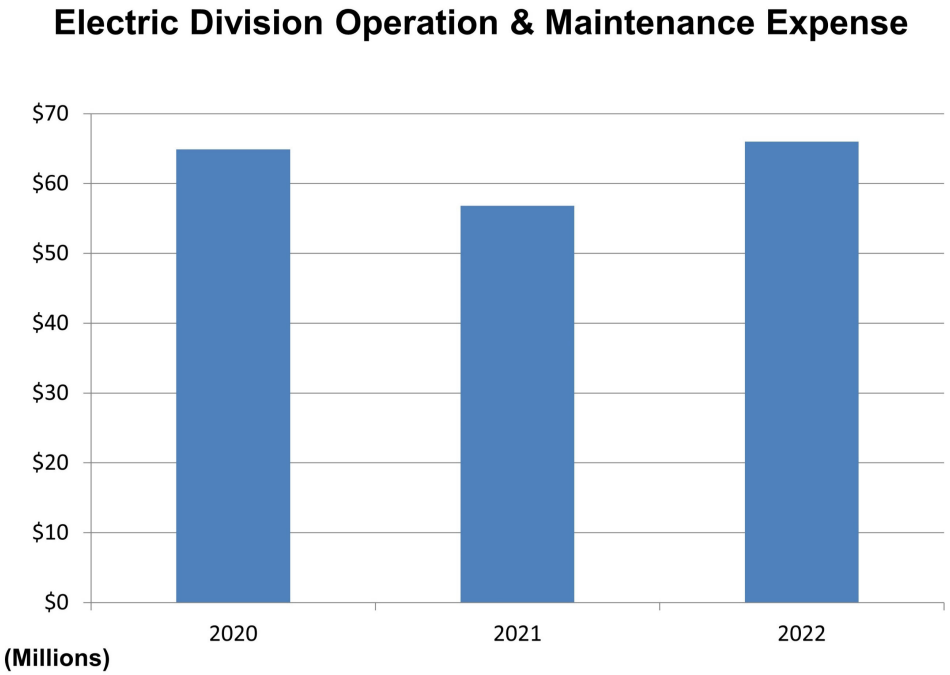
Fiscal Year 2021 Compared to Fiscal Year 2020

Operating expenses (excluding purchased power expense) increased $2.9 million compared to fiscal year 2020. Operating expenses include operations and maintenance (O&M) expense, depreciation/amortization, and taxes/tax equivalents. O&M expenses can be further classified as distribution, customer service, and administrative and general.

- Distribution expenses decreased $2.8 million or 7 percent, primarily due to a timing delay in vegetation management circuit work costs due to the pandemic.
- Customer service expenses were consistent with the prior fiscal year.
- Administrative and general expenses decreased $5.5 million, primarily due to a decrease in labor related expenses, including lower pension and OPEB costs.



- Depreciation and amortization expense increased $10.4 million or 34.6 percent. KUB added $96.4 million in assets during fiscal year 2021, including $14.8 million of multi-year projects being held in Construction Work in Progress. A partial year of depreciation expense was recorded on these capital investments and a full year of depreciation expense was incurred on $73.6 million in assets placed in service during fiscal year 2020. In addition, $19.7 million of assets were retired in fiscal year 2021.
- Taxes and tax equivalents were $0.8 million higher than the prior fiscal year.



Other Income and Expense

Fiscal Year 2022 Compared to Fiscal Year 2021

Interest income increased $0.5 million compared to the prior fiscal year, primarily due to more cash on hand combined with rising short-term interest rates throughout the year.

Interest expense decreased $0.6 million or 5.2 percent.

Other expense (net) increased $3.5 million, primarily due to losses on disposal of property.

Fiscal Year 2021 Compared to Fiscal Year 2020

Interest income decreased $1.3 million compared to the prior fiscal year, primarily due to decreased short-term interest rates over the prior fiscal year.

Interest expense decreased $0.4 million or 3.7 percent.

Other expense (net) increased $1 million, primarily due to losses on disposal of property.

The Division's capital contributions decreased $0.2 million, reflecting a decline in developer donated utility assets compared to the prior fiscal year.

Capital Assets

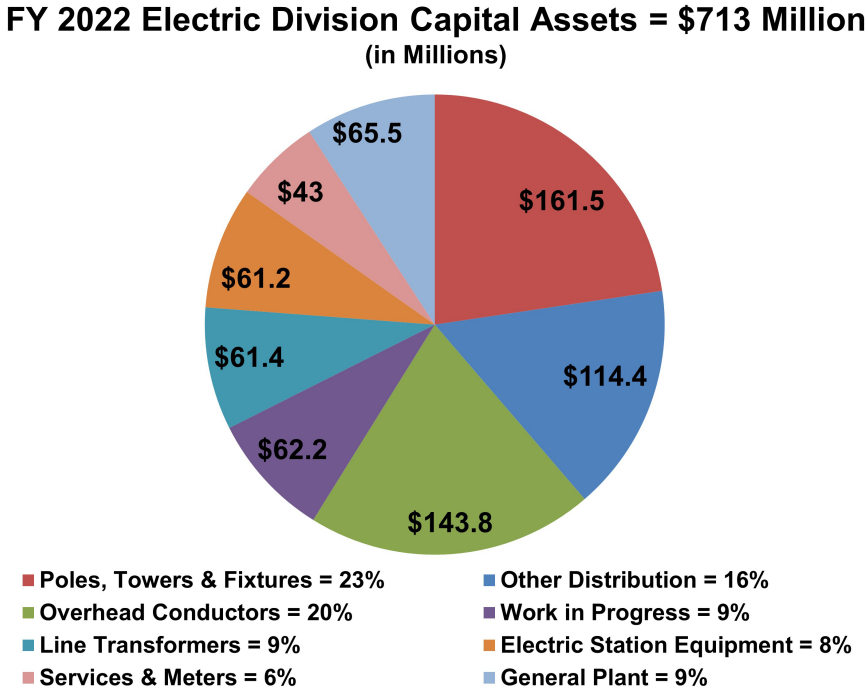
Capital Assets
As of June 30
(Net of Depreciation)

(in thousands of dollars)	2022	2021	2020
Distribution Plant			
Services and Meters	$ 43,038	$ 46,748	$ 50,485
Electric Station Equipment	61,180	62,704	57,564
Poles, Towers and Fixtures	161,519	157,575	140,424
Overhead Conductors	143,776	133,419	110,865
Line Transformers	61,351	61,575	61,725
Other Accounts	114,399	117,350	112,004
Total Distribution Plant	$ 585,263	$ 579,371	$ 533,067
General Plant	65,544	57,524	48,484
Total Plant Assets	$ 650,807	$ 636,895	$ 581,551
Work In Progress	62,187	54,466	95,642
Total Net Plant	$ 712,994	$ 691,361	$ 677,193

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Fiscal Year 2022 Compared to Fiscal Year 2021

As of June 30, 2022, the Division had $713 million invested in a variety of capital assets, as reflected in the schedule of capital assets, which represents a net increase (including additions, retirements, and depreciation) of $21.6 million or 3.1 percent over the end of the last fiscal year.



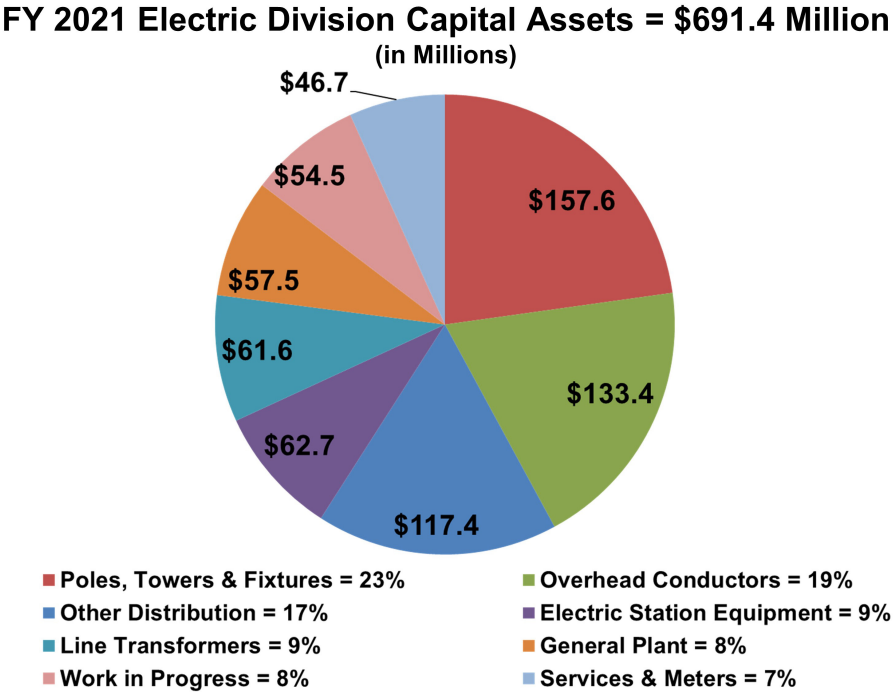
Major capital asset expenditures during the year were as follows:

- $25.4 million for electric distribution system improvements
- $17.2 million for Grid Modernization, including SCADA system upgrades
- $6.9 million for pole replacements
- $5.7 million for installation of new electric services and the upgrade or replacement of existing services
- $2.1 million for building improvements

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Fiscal Year 2021 Compared to Fiscal Year 2020

As of June 30, 2021, the Division had $691.4 million invested in a variety of capital assets, as reflected in the schedule of capital assets, which represents a net increase (including additions, retirements, and depreciation) of $14.2 million or 2.1 percent over the end of the last fiscal year. Spending on capital assets was slowed this year to allow for better financial liquidity in response to the pandemic.



Major capital asset expenditures during the year were as follows:

- $23.9 million for electric distribution system improvements
- $6.1 million for Grid Modernization, including SCADA system upgrades
- $5.8 million for building improvements, including a new Engineering Building
- $5.6 million for pole replacements
- $5.4 million for installation of new electric services and the upgrade or replacement of existing services

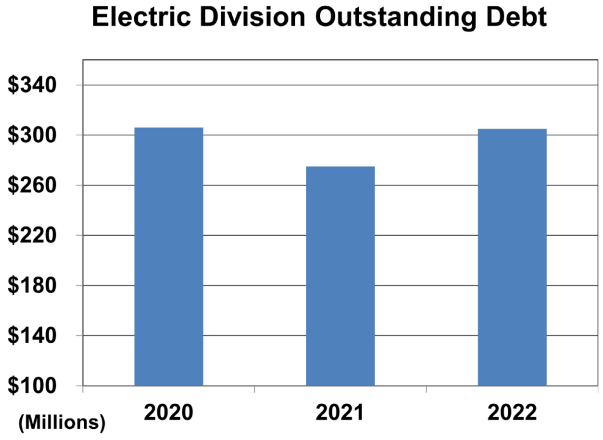
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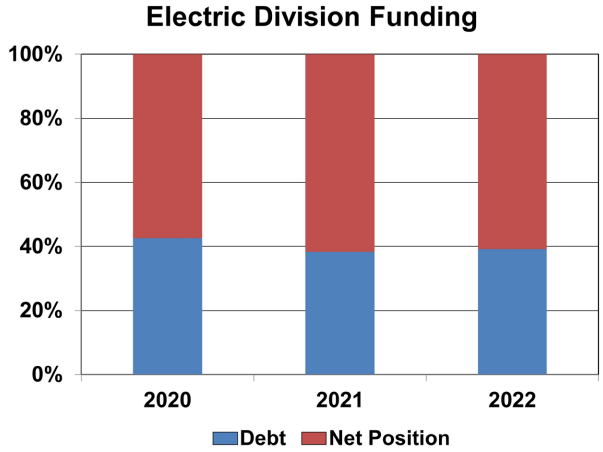
Debt Administration

The Division's outstanding debt was $304.8 million as of June 30, 2022. The bonds are secured solely by revenues of the Electric Division. Debt as a percentage of the Division's capital structure was 39.2 percent in 2022, 38.3 percent in 2021, and 42.6 percent at the end of fiscal year 2020. KUB's Debt Management Policy limits the Division's debt ratio to 60 percent or less.

Outstanding Debt
As of June 30

(in thousands of dollars)	2022	2021	2020
Revenue bonds	$ 304,835	$ 275,415	$ 305,835
Total outstanding debt	$ 304,835	$ 275,415	$ 305,835





The Division will pay $136.5 million in principal payments over the next ten years, representing 44.8 percent of the outstanding bonds. KUB's Debt Management Policy requires that a minimum of 30 percent of electric debt principal be repaid over the next ten years.

Fiscal Year 2022 Compared to Fiscal Year 2021

As of June 30, 2022, the Division had $304.8 million in outstanding debt (including the current portion of revenue bonds) compared to $275.4 million last year, an increase of $29.4 million or 10.7 percent. As of June 30, 2022, the Division's weighted average cost of debt was 3.93 percent.

KUB sold $45.7 million in electric system revenue bonds in April 2022 for the purpose of funding electric system capital improvements. The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.36 percent. The bonds mature over a period of 30 years with a final maturity in fiscal year 2052.

KUB sold $27.2 million in electric system revenue refunding bonds in April 2022 for the purpose of refinancing existing electric system revenue bonds. KUB will realize a total debt service savings of $2 million over the life of the bonds ($1.3 million on a net present value basis). The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.55 percent. The bonds have a final maturity in fiscal year 2046.

The Division's outstanding debt is rated by Standard & Poor's and Moody's Investors Service. As of June 30, 2022, the Division's revenue bonds were rated AA- by Standard & Poor's and Aa2 by Moody's Investors Service. Standard & Poor's dropped its rating from AA, as a result of KUB's planned expansion of its fiber network to allow for the sale of broadband services within its electric service territory.

Fiscal Year 2021 Compared to Fiscal Year 2020

As of June 30, 2021, the Division had $275.4 million in outstanding debt (including the current portion of revenue bonds) compared to $305.8 million last year, a decrease of $30.4 million or 9.9 percent. As of June 30, 2021, the Division's weighted average cost of debt was 3.89 percent.

KUB sold $70.2 million in electric system revenue refunding bonds in March 2021 for the purpose of refinancing existing electric system revenue bonds. KUB will realize a total debt service savings of $14.3 million over the life of the bonds ($11.9 million on a net present value basis), with $16.2 million of savings as a reduction of outstanding principal. The true interest cost of the bonds, which were sold through a competitive bidding process, was 1.91 percent. The bonds have a final maturity in fiscal year 2045.

The Division's outstanding debt is rated by Standard & Poor's and Moody's Investors Service. As of June 30, 2021, the Division's revenue bonds were rated AA by Standard & Poor's and Aa2 by Moody's Investors Service.

Impacts on Future Financial Position

KUB anticipates adding 1,750 additional electric customers in fiscal year 2023.

In May 2022, the Board approved the issuance of electric system revenue bonds not to exceed $79 million for the purpose of funding electric system capital improvements. The bonds will be sold through a competitive bidding process during fiscal year 2023.

In March 2020, KUB executed a new Long-Term Partnership Agreement with TVA, extending the term of its five-year evergreen power supply contract with TVA to a 20-year evergreen contract. In return for signing the longer-term agreement with TVA, KUB will receive an annual partnership credit of 3.1% on TVA's wholesale base rates, estimated to be around $9.3 million per year. Among other things, the new partnership agreement also provides KUB with the flexibility to self-generate up to five percent of its annual power supply through renewable sources.

During the period of October 2021 to September 2022, TVA is providing a Pandemic Recovery Credit to local power companies. KUB has excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to provide $6.3 million of emergency utility bill assistance for residential and small business customers and $1 million for home weatherization programs.

As a component of the Fiber Division's start up financing plan, the Electric Division will provide $35 million of interdivisional loans. The first $10 million was provided in October 2021.

The Tennessee Emergency Broadband Fund selected KUB for a grant of $15.3 million to assist in the provision of broadband access to Grainger, Jefferson, Sevier, and Union Counties.

The Pension Plan actuarial valuation resulted in an actuarially determined contribution of $2,624,373 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2022, measurement date. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,108,147 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2023, measurement date. For the Plan year beginning

January 1, 2022, the Plan's actuarial funded ratio is 112.01 percent, and the market value funded ratio is 128.08 percent.

The OPEB Plan actuarial valuation resulted in an actuarially determined contribution of $1,413,392 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2023, measurement date. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,187,768 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Electric Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2024, measurement date. The Plan's actuarial funded ratio is 94.75 percent, and the market value funded ratio is 103.07 percent.

GASB Statement No. 91, *Conduit Debt Obligations*, is effective for fiscal years beginning after December 15, 2021. GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 99, *Omnibus 2022*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 100, *Accounting Changes and Error Corrections – An Amendment of GASB No. 62,* is effective for fiscal years beginning after June 15, 2023. GASB Statement No. 101, *Compensated Absences,* is effective for fiscal years beginning after December 15, 2023. KUB has not elected early implementation of these standards and has not completed the process of evaluating the impact of these statements on its financial statements.

No other facts, decisions, or conditions are currently known which would have a significant impact on the Division's financial position or results of operations during fiscal year 2022.

Financial Contact

The Division's financial statements are designed to present users (citizens, customers, investors, and creditors) with a general overview of the Division's financial position and results of operations for the fiscal years ended June 30, 2022, and 2021. If you have questions about the statements or need additional financial information, contact KUB's Chief Financial Officer at 445 South Gay Street, Knoxville, Tennessee 37902.

Knoxville Utilities Board Electric Division
Statements of Net Position
June 30, 2022 and 2021

	2022	2021 as restated
Assets and Deferred Outflows of Resources		
Current assets:		
Cash and cash equivalents	$ 73,338,766	$ 39,974,435
Short-term contingency fund investments	5,593,407	28,323,053
Accrued interest receivable	48,330	1,426
Accounts receivable, less allowance of uncollectible accounts of $569,961 in 2022 and $491,743 in 2021	63,145,224	56,269,230
Current portion of lease receivable	266,032	180,788
Current portion of notes receivable	375,000	-
Inventories	15,238,237	12,079,500
Prepaid expenses	815,923	755,502
Total current assets	158,820,919	137,583,934
Restricted assets:		
Electric bond fund	18,968,044	18,920,977
Other funds	727	727
Unused bond proceeds	1,298,143	-
Total restricted assets	20,266,914	18,921,704
Electric plant in service	1,136,436,118	1,099,995,066
Less accumulated depreciation	(485,629,439)	(463,099,778)
	650,806,679	636,895,288
Retirement in progress	1,805,146	2,471,610
Construction in progress	60,382,473	51,993,957
Net plant in service	712,994,298	691,360,855
Intangible assets:		
Intangible right of use asset	2,161,609	428,114
Less accumulated amortization	(325,312)	(202,103)
Net intangible assets	1,836,297	226,011
Other assets:		
Net pension asset	29,962,099	21,647,658
Net OPEB asset	-	2,847,277
Long-term contingency fund investments	36,977,855	9,993,813
Long-term lease receivable	2,007,968	1,647,136
Notes receivable	9,625,000	-
TVA conservation program receivable	575,535	1,103,185
Under recovered purchased power cost	2,382,423	-
Other	2,824,666	2,653,186
Total other assets	84,355,546	39,892,255
Total assets	978,273,974	887,984,759
Deferred outflows of resources:		
Pension outflow	3,813,999	3,960,777
OPEB outflow	2,419,903	10,272
Total deferred outflows of resources	6,233,902	3,971,049
Total assets and deferred outflows of resources	$ 984,507,876	$ 891,955,808

The accompanying notes are an integral part of these financial statements.

Knoxville Utilities Board Electric Division
Statements of Net Position
June 30, 2022 and 2021

	2022	2021 as restated
Liabilities, Deferred Inflows, and Net Position		
Current liabilities:		
Current portion of revenue bonds	$ 14,040,000	$ 14,545,000
Current portion of lease liability	403,643	181,052
Sales tax collections payable	1,037,881	921,214
Accounts payable	85,126,362	69,175,449
Accrued expenses	27,424,262	20,538,897
Customer deposits plus accrued interest	16,400,877	14,997,148
Accrued interest on revenue bonds	4,927,920	4,375,852
Total current liabilities	149,360,945	124,734,612
Other liabilities:		
TVA conservation program	613,757	1,158,556
Accrued compensated absences	5,029,077	4,654,095
Customer advances for construction	8,170,574	7,866,759
Lease liability	1,514,058	44,960
Net pension liability	-	8,983
Net OPEB liability	5,203,565	-
Over recovered purchased power cost	-	427,351
Other	51,925	61,347
Total other liabilities	20,582,956	14,222,051
Long-term debt:		
Electric revenue bonds	290,795,000	260,870,000
Unamortized premiums/discounts	29,092,437	25,718,420
Total long-term debt	319,887,437	286,588,420
Total liabilities	489,831,338	425,545,083
Deferred inflows of resources:		
Pension inflow	18,466,274	17,367,447
Unamortized bond refunding costs	1,433,692	60,935
OPEB inflow	15,541	3,820,131
Lease inflow	2,235,602	1,827,924
Total deferred inflows of resources	22,151,109	23,076,437
Total liabilities and deferred inflows of resources	511,982,447	448,621,520
Net position		
Net investment in capital assets	373,317,161	384,825,723
Restricted for:		
Debt service	14,040,124	14,545,125
Other	727	727
Unrestricted	85,167,417	43,962,713
Total net position	472,525,429	443,334,288
Total liabilities, deferred inflows, and net position	$ 984,507,876	$ 891,955,808

The accompanying notes are an integral part of these financial statements.

Knoxville Utilities Board Electric Division
Statements of Revenues, Expenses and Changes in Net Position
Years Ended June 30, 2022 and 2021

	2022	2021 as restated
Operating revenues	$ 606,335,419	$ 553,897,585
Operating expenses		
Purchased power	439,114,687	394,541,982
Distribution	43,441,366	37,118,162
Customer service	6,650,825	6,204,319
Administrative and general	16,050,054	13,284,502
Depreciation and amortization	38,481,239	40,385,025
Taxes and tax equivalents	19,293,655	19,147,427
Total operating expenses	563,031,826	510,681,417
Operating income	43,303,593	43,216,168
Non-operating revenues (expenses)		
Contributions in aid of construction	3,019,363	2,563,006
Interest income	716,419	236,934
Interest expense	(10,639,504)	(11,218,425)
Amortization of debt costs	1,416,669	810,435
Write-down of plant for costs recovered through contributions	(3,019,363)	(2,563,006)
Other	(5,606,036)	(1,455,342)
Total non-operating revenues (expenses)	(14,112,452)	(11,626,398)
Change in net position	29,191,141	31,589,770
Net position, beginning of year	443,334,288	411,744,518
Net position, end of year	$ 472,525,429	$ 443,334,288

The accompanying notes are an integral part of these financial statements.

Knoxville Utilities Board Electric Division
Statements of Cash Flows
Years Ended June 30, 2022 and 2021

	2022	2021 as restated
Cash flows from operating activities:		
Cash receipts from customers	$ 589,479,000	$ 540,683,390
Cash receipts from other operations	9,028,574	10,079,239
Cash payments to suppliers of goods or services	(464,184,472)	(425,530,701)
Cash payments to employees for services	(27,692,446)	(29,337,790)
Payment in lieu of taxes	(16,791,348)	(16,891,189)
Cash receipts from collections of TVA conservation loan program participants	581,728	917,979
Cash payments for TVA conservation loan program	(598,877)	(952,757)
Net cash provided by operating activities	89,822,159	78,968,171
Cash flows from capital and related financing activities:		
Net proceeds from bond issuance	50,016,599	-
Principal paid on revenue bonds	(14,545,000)	(14,185,000)
(Increase) decrease in unused bond proceeds	(1,298,143)	-
Interest paid on revenue bonds and lease liabilities	(10,087,436)	(12,530,582)
Acquisition and construction of electric plant	(69,377,420)	(60,816,728)
Changes in electric bond fund, restricted	(47,067)	952,157
Customer advances for construction	649,006	715,286
Proceeds received on disposal of plant	378,922	449,423
Principal paid on lease liabilities	(282,522)	(202,102)
Cash received from developers and individuals for capital purposes	3,019,363	2,563,006
Net cash used in capital and related financing activities	(41,573,698)	(83,054,540)
Cash flows from investing activities:		
Purchase of investment securities	(33,780,832)	(15,204,772)
Maturities of investment securities	28,235,589	15,205,382
Issuance of notes receivable from Fiber	(10,000,000)	-
Interest received	659,942	313,496
Other property and investments	1,171	419,527
Net cash (used in) provided by investing activities	(14,884,130)	733,633
Net increase (decrease) in cash and cash equivalents	33,364,331	(3,352,736)
Cash and cash equivalents, beginning of year	39,974,435	43,327,171
Cash and cash equivalents, end of year	73,338,766	$ 39,974,435
Reconciliation of operating income to net cash provided by operating activities		
Operating income	$ 43,303,593	$ 43,216,168
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization expense	40,057,639	41,981,538
Changes in operating assets and liabilities:		
Accounts receivable	(6,875,994)	(3,774,439)
Lease receivable	(446,075)	(1,827,925)
Inventories	(3,158,737)	(91,811)
Prepaid expenses	(60,421)	(51,891)
TVA conservation program receivable	527,650	830,613
Other assets	(59,637)	111,187
Sales tax collections payable	116,667	1,420
Accounts payable and accrued expenses	18,377,740	1,355,070
Unrecovered purchased power cost	(2,809,774)	(1,421,279)
TVA conservation program payable	(544,799)	(865,392)
Customer deposits plus accrued interest	1,403,729	(452,791)
Other liabilities	(9,422)	(42,297)
Net cash provided by operating activities	$ 89,822,159	$ 78,968,171
Noncash capital activities:		
Record intangible right of use asset and lease liability	$ 1,974,211	$ 428,114

The accompanying notes are an integral part of these financial statements.

1. Description of Business

Knoxville Utilities Board (KUB), comprised of the Electric Division, Fiber Division, Gas Division, Water Division, and Wastewater Division (Divisions), is reported as a component unit enterprise fund in the financial statements of the City of Knoxville. KUB's responsibility is to oversee the purchase, production, distribution, and processing of electricity, broadband, natural gas, water, and wastewater services. A seven-member Board of Commissioners (Board) governs KUB. The Board has all powers to construct, acquire, expand, and operate the Divisions. It has full control and complete jurisdiction over the management and operation of the Divisions, including setting rates. The Electric Division (Division) provides services to certain customers in Knox County and in seven surrounding counties in East Tennessee. The Division's accounts are maintained in conformity with the Uniform Division of Accounts of the Federal Energy Regulatory Commission (FERC) and the Governmental Accounting Standards Board (GASB), as applicable. The financial statements present only the Electric Division and do not purport to, and do not, present fairly the consolidated financial position of Knoxville Utilities Board as of June 30, 2022, and 2021, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America.

2. Summary of Significant Accounting Policies

Basis of Accounting

In conformity with Generally Accepted Accounting Principles (GAAP), KUB follows the provisions of GASB Statement No. 34 (Statement No. 34), *Financial Statements – and Management's Discussion and Analysis – for State and Local Governments,* as amended by GASB Statement No. 63 (Statement No. 63), *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position.* Statement No. 34 established standards for external financial reporting for all state and local governmental entities. Under Statement No. 63, financial statements include deferred outflows of resources and deferred inflows of resources, in addition to assets and liabilities, and report *net position* instead of net assets. In addition, KUB follows GASB Statement No. 62 (Statement No. 62), *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements,* as it relates to certain items for regulatory accounting. Regulatory accounting allows a regulated utility to defer a cost (a regulatory asset) or recognize an obligation (a regulatory liability) if it is probable that through the rate making process there will be a corresponding increase or decrease in future revenues. Accordingly, KUB has recognized certain regulatory assets and regulatory liabilities in the accompanying Statements of Net Position.

The financial statements are prepared on the accrual basis of accounting, whereby revenues are recognized when earned and expenses are recognized when incurred. The accounting and financial reporting treatment applied to the Division is determined by measurement focus. The transactions of the Division are accounted for on a flow of economic resources measurement focus. With this measurement focus, all assets and all liabilities associated with the operations are included on the Statement of Net Position. Net position (i.e., total assets and deferred outflows of resources net of total liabilities and deferred inflows of resources) is segregated into net investment in capital assets, restricted for capital activity and debt service, and unrestricted components.

Recently Adopted New Accounting Pronouncements

In June 2017, the GASB issued GASB Statement No. 87 (Statement No. 87), *Leases*. This Statement requires recognition of certain assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. Under this Statement, a lessee is required to recognize an intangible right of use asset and a lease liability. Statement No. 87 is effective for fiscal years

beginning after June 15, 2021. Adoption of this Statement is reflected on the Division's financial statements.

In June 2018, the GASB issued GASB Statement No. 89 (Statement No. 89), *Accounting for Interest Cost Incurred Before the End of a Construction Period.* The objectives of this Statement are to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period, and to simplify accounting for interest cost incurred before the end of a construction period. Statement No. 89 is effective for fiscal years beginning after December 15, 2020. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In January 2020, the GASB issued GASB Statement No. 92 (Statement No. 92), *Omnibus 2020.* The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. Certain provisions of Statement No. 92 were effective immediately. Paragraphs 6, 7, 8, 9, and 12 are effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In March 2020, the GASB issued GASB Statement No. 93 (Statement No. 93), *Replacement of Interbank Offered Rates.* This Statement establishes accounting and financial reporting requirements related to the replacement of IBORs in hedging derivative instruments and leases. It also identifies appropriate benchmark interest rates for hedging derivative instruments. Statement No. 93 is effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In June 2020, the GASB issued GASB Statement No. 97 (Statement No. 97), *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans.* The objectives of this Statement are to (a) increase consistency and comparability related to the reporting of fiduciary component units in circumstances in which a potential component unit does not have a governing board and the primary government performs the duties that a governing board typically would perform; (b) mitigate costs associated with the reporting of certain defined contribution pension plans, defined contribution other post-employment benefit (OPEB) plans, and employee benefit plans other than pension plans or OPEB plans (other employee benefit plans) as fiduciary component units in fiduciary fund financial statements; and (c) enhance the relevance, consistency, and comparability of the accounting and financial reporting for Internal Revenue Code (IRC) Section 457 deferred compensation plans (Section 457 plans) that meet the definition of a pension plan and for benefits provided through those plans. Statement No. 97 is effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In October 2021, the GASB issued GASB Statement No. 98 (Statement No.98), *The Annual Comprehensive Financial Report.* This Statement replaces the term *comprehensive annual financial report* with *annual comprehensive financial report.* Statement No. 98 is effective for fiscal years ending after December 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

Electric Plant

Electric plant and other property are stated on the basis of original cost. The cost of current repairs and minor replacements is charged to operating expense. The cost of renewals and improvements is capitalized. The original cost of utility plant assets retired or otherwise disposed of and the cost of removal less salvage value is charged to accumulated depreciation. When other property is retired, the related asset and accumulated depreciation are removed from the accounts, and the gain or loss is included in the results of operations.

The provision for depreciation of electric plant in service is based on the estimated useful lives of the assets, which range from three to forty years, and is computed using the straight-line method. Pursuant to FERC, the caption "Depreciation and amortization" in the Statements of Revenues, Expenses and Changes in Net Position does not include depreciation for transportation equipment of $1,576,400 in fiscal year 2022 and $1,596,513 in fiscal year 2021.

Operating Revenue

Operating revenue consists primarily of charges for services provided by the principal operations of the KUB Electric Division. Operating revenue is recorded when the service is rendered, on a cycle basis, and includes an estimate of unbilled revenue. Revenues are reported net of bad debt expense of $1,981,625 in fiscal year 2022 and $1,969,448 in fiscal year 2021.

Non-operating Revenue

Non-operating revenue consists of revenues that are related to financing and investing types of activities and result from non-exchange transactions or ancillary activities.

Expense

When an expense is incurred for purposes for which there are both restricted and unrestricted net assets available, it is KUB's policy to apply those expenses to restricted net assets to the extent such are available and then to unrestricted net assets.

Net Position

GASB Statement No. 63 requires the classification of net position into three components – net investment in capital assets, net position-restricted, and net position-unrestricted.

These classifications are defined as follows:

- Net investment in capital assets – This component of net position consists of capital assets and intangible assets, including restricted capital assets, net of accumulated depreciation and amortization and reduced by the outstanding balances of any bonds, mortgages, notes, lease liabilities, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt also should be included in this component of net position. If there are significant unspent related debt proceeds at year end, the portion of the debt attributable to the unspent proceeds are not included in the calculation of net investment in capital assets. Rather, that portion of the debt is included in the same net position component as the unspent proceeds.

- Net position-restricted – This component of net position consists of restricted assets reduced by liabilities and deferred inflows of resources related to those assets. Generally, a liability relates to restricted assets if the asset results from a resource flow that also results in the recognition of a liability or if the liability will be liquidated with the restricted assets reported.

- Net position-unrestricted – This component of net position consists of assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

Contributions in Aid of Construction and Capital Contributions

Contributions in aid of construction are cash collections from customers or others for a particular purpose, generally the construction of new facilities to serve new customers in excess of the investment KUB is willing to make for a particular incremental revenue source. KUB reduces the plant account balances to which contributions relate by the actual amount of the contribution and recognizes the contributions as non-operating revenue in accordance with Statement No. 62.

Capital contributions represent contributions of utility plant infrastructure constructed by developers and others in industrial parks and other developments and transferred to KUB upon completion of construction and the initiation of utility service. In accordance with GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions*, such contributions are recognized as revenues and capital assets upon receipt.

Inventories

Inventories, consisting of plant materials and operating supplies, are valued at the lower of average cost or replacement value.

OPEB Trust

KUB's OPEB Trust was established by KUB's Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. Effective January 1, 2022, the Plan was expanded to include two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement, given that each eligible employee meets the "Rule of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

KUB's policy is to fully fund the annual actuarially determined contributions, which are determined by actuarial valuation. As required by GASB Statement No. 75, KUB measures net OPEB liability as total OPEB liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a June 30, 2022, and 2021, measurement date, respectively. The net OPEB liability is $11,202,507 (Division's share $5,203,565) as of June 30, 2022, and the net OPEB asset was $5,931,828 (Division's share $2,847,277) as of June 30, 2021.

Pension Plan and Qualified Excess Benefit Arrangement

KUB's employees are participants in the Knoxville Utilities Board Pension Plan as authorized by the Charter of the City of Knoxville §1107(J) (Note 10). KUB's policy is to fully fund the annual actuarially determined contributions. As required by GASB Statement No. 68, KUB measures net pension liability as total pension liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. The net pension asset is $64,137,714 (Division's share $29,962,099) as of June 30, 2022, and $45,099,288 (Division's share $21,647,658) as of June 30, 2021.

KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single-employer defined benefit pension plan, administered by KUB (Note 11). As required by GASB Statement No. 73, KUB measures the total pension liability of the QEBA. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022. The total pension liability of the QEBA was $18,714 (Division's share $8,983) as of June 30, 2021.

Investments
Investments are carried at fair value as determined by quoted market prices at the reporting date.

Self-Insurance
KUB has established self-insurance programs covering portions of workers' compensation, employee health, environmental liability, general liability, property and casualty liability, and automobile liability claims. A liability is accrued for claims as they are incurred. When applicable, claims in excess of the self-insured risk are covered by KUB's insurance carrier. Additionally, KUB provides certain lifetime health benefits to eligible retired employees under a self-insurance plan administered by a third party.

Estimates
The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates are based on historical experience and various other assumptions that KUB believes are reasonable under the circumstances. However, future events are subject to change and the best estimates and judgments routinely require adjustment. Estimates are used for, but are not limited to, inventory valuation, allowance for uncollectible accounts, depreciable lives of plant assets, unbilled revenue volumes, pension trust valuations, OPEB trust valuations, insurance liability reserves, and potential losses from contingencies and litigation. Actual results could differ from those estimates.

Restricted and Designated Assets
Certain assets are restricted by bond resolutions for the construction of utility plant and debt repayment. Certain additional assets are designated by management for contingency purposes and economic development.

Cash Equivalents
For purposes of the Statements of Cash Flows, KUB considers all unrestricted and undesignated highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

Leases
KUB determines if an arrangement is or contains a lease at contract inception and recognizes an intangible right of use asset and a lease liability at the lease commencement date. Subsequently, the intangible right of use asset is amortized on a straight-line basis over its useful life. KUB also enters into agreements, as lessor, to lease office space or property, recognizing a lease receivable and a deferred inflow of resources. The lease term includes the noncancelable period of the lease plus an additional period covered by either an option to extend or not to terminate the lease that the lessee is reasonably certain to exercise, or an option to extend or not to terminate the lease controlled by the lessor. KUB uses its estimated incremental borrowing rate as the discount rate for leases.

KUB monitors for events or changes in circumstances that require a reassessment of its leases. When a reassessment results in the remeasurement of a lease liability, a corresponding adjustment is made to the carrying amount of the intangible right of use asset.

Deferred Outflows and Inflows of Resources
Deferred outflows of resources are items related to the acquisition of assets or related debt which are amortized over the life of the asset or debt. Deferred inflows of resources are items related to the acquisition of assets or related debt which are amortized over the life of the asset or debt. KUB records costs associated with the gain or loss on refunding of debt as either a deferred outflow or inflow based on the parameters of Statement No. 65. Deferred outflows of resources also include employer pension contributions made subsequent to the measurement date of the net pension

liability and before the end of the employer's reporting period in accordance with Statement No. 71. Deferred inflows and deferred outflows also include the net difference between projected and actual earnings on pension plan investments and OPEB plan investments, differences between expected and actual experience, and changes in assumptions in accordance with Statements No. 68, 73, and 75. Deferred inflows are also recorded at the commencement of the lease term and recognized as revenue over the course of the lease in accordance with Statement No. 87.

Debt Premium/Discount

KUB records unamortized premium and discount on debt as a separate line item in the Long-Term Debt section of the Financial Statements. Amortization of these amounts is recorded over the life of the applicable debt and is recorded as amortization expense.

Debt Issuance Costs

In accordance with regulatory accounting, KUB records debt issuance costs as an Other Asset. Amortization of these amounts is recorded over the life of the applicable debt and is recorded as amortization expense.

Deferred Gain/Loss on Refunding of Debt

KUB records costs associated with the gain or loss on refunding of debt as either a deferred outflow or inflow based on the parameters of Statement No. 65. In accordance with FERC presentation, amortization of these amounts is recorded over the life of the applicable debt and is recorded as amortization expense.

Compensated Absences

KUB accrues a liability for earned but unpaid paid time off (PTO) days.

TVA Conservation Program

KUB previously served as a fiscal intermediary for the Tennessee Valley Authority (TVA), whereby loans were made to KUB customers by TVA to be used in connection with TVA's Energy Right Residential Program. While KUB still holds existing loans on behalf of TVA, no loans were made through this program after October 31, 2015.

Restatement for GASB 87

During fiscal year 2022, KUB adopted GASB Statement No. 87, *Leases* (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

As lessee and as a result of adopting GASB 87, as of June 30, 2021, KUB's Electric Division recorded total intangible right of use assets of $428,114 with accumulated amortization of $202,103 and recognized total lease liabilities of $226,012 ($181,052 current). KUB's Electric Division also reclassified $31,153 from rent expense shown in customer service expense and $176,110 from rent expense shown in administrative and general expense to $202,103 as amortization expense and $5,160 as interest expense.

Related to lease agreements where KUB is the lessor, as a result of adopting GASB 87, as of June 30, 2021, KUB's Electric Division recognized lease receivables of $1,827,924 ($180,788 current), with a corresponding deferred inflow of resources of $1,827,924. KUB's Electric Division also reclassified $4,176 from rent revenue shown in other operating revenues to interest income.

Additional disclosures, as well as other reclassifications in the statement of cash flows, also resulted from the adoption of GASB 87.

Subsequent Events

As a component of the 2023 fiscal year budget, a $7 million loan was initiated from the Electric Division to the Fiber Division as the second installment of the proposed $35 million total loan. The interdivisional loan was approved by TVA and was recorded in August 2022.

Purchased Power Adjustment

In October 2002, the Board adopted a Purchased Power Adjustment (PPA) to address changes in wholesale power costs. The PPA was established in response to an amendment to KUB's power supply contract under which, among other things, TVA relinquished its regulatory authority over KUB's retail electric rates. The PPA allows KUB to promptly adjust retail electric rates in response to wholesale rate changes or adjustments, thus ensuring that KUB will recover the costs incurred for purchased power. These changes in electric costs are reflected as adjustments to the base electric rates established by the Board. The rate-setting authority vested in the Board by the City Charter meets the "self-regulated" provisions of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, and KUB meets the remaining criteria of Statement No. 62.

TVA implemented a fuel cost adjustment in October 2006 applied on a quarterly basis to wholesale power rates. TVA's quarterly fuel cost adjustment became a monthly fuel cost adjustment effective October 2009. KUB flows changes to wholesale power rates from TVA's fuel cost adjustment mechanism directly through to its retail electric rates via the PPA.

In April 2011, TVA modified its wholesale rate structure to demand and energy billing for its distributors. In response, KUB revised its PPA to include a deferred accounting component to ensure appropriate matching of revenue and expense and cost recovery. KUB will adjust its retail rates on an annual basis to flow any over or under recovery of wholesale power costs through to its customers via the PPA.

During the period of October 2020 to September 2021, TVA provided a Pandemic Relief Credit to local power companies. KUB excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to assist customers in need of financial assistance due to the pandemic. $6,550,000 was made available to residential and small business customers through the COVID Utility Relief Effort (CURE) fund.

During the period of October 2021 to September 2022, TVA is providing a Pandemic Recovery Credit to local power companies. KUB has excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to assist customers in need of financial assistance due to the pandemic, making $7,300,000 available to residential and small business customers.

Under the PPA mechanism, KUB tracks the actual over/(under) recovered amount in the Over/(Under) Recovered Purchased Power Cost accounts. These accounts are rolled into the PPA rate adjustments thereby assuring that any over/(under) recovered amounts are promptly passed on to KUB's electric customers. The amount of over/(under) recovered cost was ($2,382,423) as of June 30, 2022, and $427,351 as of June 30, 2021.

Recently Issued Accounting Pronouncements

In May 2019, the GASB issued GASB Statement No. 91 (Statement No. 91), *Conduit Debt Obligations.* The objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. Statement No. 91 is effective for fiscal years beginning after December 15, 2021.

In March 2020, the GASB issued GASB Statement No. 94 (Statement No. 94), *Public-Private and Public-Public Partnerships and Availability Payment Arrangements.* The objective of this Statement

is to better meet the information needs of financial statement users by improving the comparability of financial statements among governments that enter in PPPs and APAs. Statement No. 94 is effective for fiscal years beginning after June 15, 2022.

In May 2020, the GASB issued GASB Statement No. 96 (Statement No. 96), *Subscription-Based Information Technology Arrangements.* The objective of this Statement is to better meet the information needs of financial statement users by (a) establishing uniform accounting and financial reporting requirements for SBITAs; (b) improving the comparability of financial statements among governments that have entered into SBITAs; and (c) enhancing the understandability, reliability, relevance, and consistency of information about SBITAs. Statement No. 96 is effective for fiscal years beginning after June 15, 2022.

In April 2022, the GASB issued GASB Statement No. 99 (Statement No. 99), *Omnibus 2022.* The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements and accounting and financial reporting for financial guarantees. Paragraphs 26-32 were effective immediately. Paragraphs 11-25 are effective for fiscal years beginning after June 15, 2022. Paragraphs 4-10 are effective for fiscal years beginning after June 15, 2023.

In June 2022, the GASB issued GASB Statement No. 100 (Statement No. 100), *Accounting Changes and Error Corrections – An Amendment of GASB Statement No. 62.* The objective of this Statement is to enhance accounting and financial reporting requirements for accounting changes and error corrections to provide more understandable, reliable, relevant, consistent, and comparable information for making decisions or assessing accountability. Statement No. 100 is effective for fiscal years beginning after June 15, 2023.

In June 2022, the GASB issued GASB Statement No. 101 (Statement No. 101), *Compensated Absences.* The objective of this Statement is to better meet the information needs of financial statement users by updating the recognition and measurement guidance for compensated absences. Statement No. 101 is effective for fiscal years beginning after December 15, 2023.

KUB has not elected early implementation of these standards and has not completed the process of evaluating the impact of these statements on its financial statements.

3. Deposits and Investments

KUB follows the provisions of Statement No. 40 of the Governmental Accounting Standards Board, *Deposit and Investment Risk Disclosures—an amendment of GASB Statement No. 3*. This Statement establishes and modifies disclosure requirements for state and local governments related to deposit and investment risks. KUB classifies its fair value measurements within the fair value hierarchy established by Statement No. 72 of the Governmental Accounting Standards Board, *Fair Value Measurement and Application*.

KUB's investment policy provides the framework for the administration and investment of cash deposits. The investment policy follows Tennessee State law and defines the parameters under which KUB funds should be invested. State law authorizes KUB to invest in obligations of the United States Treasury, its agencies and instrumentalities; certificates of deposit; repurchase agreements; money market funds; and the State Treasurer's Investment Pool.

Interest Rate Risk. KUB's primary investment objectives are to place investments in a manner to ensure the preservation of capital, remain sufficiently liquid to meet all operating requirements, and maximize yield of return. KUB minimizes its exposure to interest rate risk by adhering to Tennessee State law requirements for the investment of public funds. This includes limiting investments to those

types described above and limiting maturity horizons. The maximum maturity is four years from the date of investment. KUB also limits its exposure by holding investments to maturity unless cash flow requirements dictate otherwise.

Credit Risk. KUB's investment policy, as required by state law, is to apply the prudent-person rule: Investments are made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable income to be derived, as well as the probable safety of their capital.

Custodial Credit Risk. KUB's investment policy limits exposure to custodial credit risk by restricting investments to a standard set forth by state law. All deposits in excess of federal depository insurance limits are collateralized with government securities held in KUB's name by a third-party custodian bank(s) acting as KUB's agent(s), or through the State of Tennessee's collateral pool. Financial institutions that participate in the collateral pool are subject to special assessment; therefore, the deposits are considered insured. A portion of KUB's investments is generally held in the State of Tennessee Local Government Investment Pool (LGIP). The LGIP is a part of the State Pooled Investment Fund and is sponsored by the State of Tennessee Treasury Department. Tennessee Code Annotated ¶9-4-701 *et seq*. authorizes local governments to invest in the LGIP. None of KUB's investments are exposed to custodial credit risk.

Classification of deposits and investments per Statement of Net Position:

	2022	2021
Current assets		
Cash and cash equivalents	$ 73,338,766	$ 39,974,435
Short-term contingency fund investments	5,593,368	28,322,859
Other assets		
Long-term contingency fund investments	36,931,070	9,956,600
Restricted assets		
Unused bond proceeds	1,298,143	-
Electric bond fund	18,968,044	18,920,977
Other funds	727	727
	$ 136,130,118	$ 97,175,598

The above amounts do not include accrued interest of $46,824 in fiscal year 2022 and $37,407 in fiscal year 2021. Interest income is recorded on an accrual basis.

Investments and maturities of KUB's deposits and investments as held by financial institutions as of June 30, 2022:

	Deposit and Investment Maturities (in Years)		
	Fair Value	Less Than 1	1-5
Supersweep NOW and Other Deposits	$ 95,697,684	$ 95,697,684	$ -
State Treasurer's Investment Pool	1,346,223	1,346,223	-
Agency Bonds	42,476,358	5,545,288	36,931,070
	$ 139,520,265	$ 102,589,195	$ 36,931,070

KUB categorizes its fair value measurements within the fair value hierarchy established by Statement No. 72 of the Governmental Accounting Standards Board, *Fair Value Measurement and Application*. The hierarchy is based on the valuation inputs used to measure the fair value of an asset with a maturity at purchase of greater than one year. 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.

KUB has the following recurring fair value measurements as of June 30, 2022:

- U.S. Agency bonds of $36,931,070, which have a maturity at purchase of greater than one year, are valued using quoted market prices (Level 1 inputs)

KUB measures investments with a maturity at purchase of one year or less at amortized cost, which is considered a fair value equivalent due to their nature. Investments in the State Treasurer's Investment Pool are measured at net asset value (NAV) per share.

4. Accounts Receivable

Accounts receivable consists of the following:

	2022	2021
Wholesale and retail customers		
Billed services	$ 36,073,890	$ 33,532,252
Unbilled services	26,407,180	21,168,714
Other	1,234,115	2,060,007
Allowance for uncollectible accounts	(569,961)	(491,743)
	$ 63,145,224	$ 56,269,230

5. Accounts Payable and Accruals

Accounts payable and accruals were composed of the following:

	2022	2021
Trade accounts	$ 85,126,362	$ 69,175,449
Salaries and wages	723,454	2,016,607
Advances on pole rental	1,393,933	1,379,998
Self-insurance liabilities	1,067,781	929,396
Other current liabilities	24,239,094	16,212,896
	$ 112,550,624	$ 89,714,346

6. Long-Term Obligations

Long-term debt consists of the following:

	Balance June 30, 2021	Additions	Payments	Defeased	Balance June 30, 2022	Amounts Due Within One Year
Electric						
AA-2012 - 3.0 - 5.0%	$ 3,270,000	$ -	$ 3,270,000	-	$ -	$ -
BB-2012 - 3.0 - 4.0%	825,000	-	825,000	-	-	-
CC-2013 - 3.0 - 4.0%	540,000	-	540,000	-	-	-
DD-2014 - 2.0 - 4.0%	875,000	-	875,000	-	-	-
EE-2015 - 2.0 - 5.0%	23,765,000	-	2,235,000	-	21,530,000	2,300,000
FF-2015 - 2.0 - 5.0%	31,375,000	-	800,000	28,900,000	1,675,000	825,000
GG-2016 - 2.0 - 5.0%	36,650,000	-	950,000	-	35,700,000	1,000,000
HH-2017 - 2.5 - 5.0%	17,420,000	-	2,195,000	-	15,225,000	2,305,000
II-2017 - 3.0 - 5.0%	37,730,000	-	845,000	-	36,885,000	890,000
JJ-2018 - 3.0 - 5.0%	38,405,000	-	855,000	-	37,550,000	895,000
KK-2020 - 5.0%	14,380,000	-	1,155,000	-	13,225,000	1,215,000
LL-2021 - 4.0 - 5.0%	70,180,000	-	-	-	70,180,000	4,610,000
MM-2022 - 4.0 - 5.0%	-	45,650,000	-	-	45,650,000	-
NN-2022 - 4.0 - 5.0%	-	27,215,000	-	-	27,215,000	-
Total bonds	$ 275,415,000	$ 72,865,000	$ 14,545,000	$ 28,900,000	$ 304,835,000	$ 14,040,000
Unamortized Premium	25,718,420	6,718,375	1,731,604	1,612,754	29,092,437	-
Total long term debt	$ 301,133,420	$ 79,583,375	$ 16,276,604	$ 30,512,754	$ 333,927,437	$ 14,040,000

	Balance June 30, 2020	Additions	Payments	Defeased	Balance June 30, 2021	Amounts Due Within One Year
Electric						
Z-2010 - 1.45 - 6.35%	$ 1,425,000	$ -	$ 1,425,000	$ -	$ -	$ -
AA-2012 - 3.0 - 5.0%	22,880,000	-	3,100,000	16,510,000	3,270,000	3,270,000
BB-2012 - 3.0 - 4.0%	30,375,000	-	800,000	28,750,000	825,000	825,000
CC-2013 - 3.0 - 4.0%	7,585,000	-	515,000	6,530,000	540,000	540,000
DD-2014 - 2.0 - 4.0%	36,325,000	-	825,000	34,625,000	875,000	875,000
EE-2015 - 2.0 - 5.0%	25,900,000	-	2,135,000	-	23,765,000	2,235,000
FF-2015 - 2.0 - 5.0%	32,150,000	-	775,000	-	31,375,000	800,000
GG-2016 - 2.0 - 5.0%	37,550,000	-	900,000	-	36,650,000	950,000
HH-2017 - 2.5 - 5.0%	19,510,000	-	2,090,000	-	17,420,000	2,195,000
II-2017 - 3.0 - 5.0%	38,535,000	-	805,000	-	37,730,000	845,000
JJ-2018 - 3.0 - 5.0%	39,220,000	-	815,000	-	38,405,000	855,000
KK-2020 - 5.0%	14,380,000	-	-	-	14,380,000	1,155,000
LL-2021 - 4.0 - 5.0%	-	70,180,000	-	-	70,180,000	-
Total bonds	$ 305,835,000	$ 70,180,000	$ 14,185,000	$ 86,415,000	$ 275,415,000	$ 14,545,000
Unamortized Premium	13,668,174	16,772,021	1,301,355	3,420,420	25,718,420	-
Total long term debt	$ 319,503,174	$ 86,952,021	$ 15,486,355	$ 89,835,420	$ 301,133,420	$ 14,545,000

Debt service over remaining term of the debt is as follows:

Fiscal Year	Total Principal	Total Interest	Grand Total
2023	$ 14,040,000	$ 10,578,607	$ 24,618,607
2024	15,470,000	10,946,274	26,416,274
2025	16,045,000	10,254,224	26,299,224
2026	14,235,000	9,604,974	23,839,974
2027	14,820,000	8,977,524	23,797,524
2028-2032	61,895,000	36,667,394	98,562,394
2033-2037	47,595,000	26,228,209	73,823,209
2038-2042	53,655,000	17,024,790	70,679,790
2043-2047	50,640,000	7,351,258	57,991,258
2048-2052	16,440,000	1,335,794	17,775,794
Total	$ 304,835,000	$ 138,969,048	$ 443,804,048

The Division has pledged sufficient revenue, after deduction of all current operating expenses (exclusive of tax equivalents), to meet the revenue bonds principal and interest payments when due. Such bond requirements are being met through monthly deposits to the Electric Bond Fund as required by the bond covenants. As of June 30, 2022, these requirements had been satisfied.

During fiscal year 2021, KUB's Electric Division issued Series LL 2021 bonds to retire a portion of outstanding Series AA 2012, BB 2012, CC 2013, and DD 2014 bonds. On April 19, 2021, $70.2 million in revenue refunding bonds with an average interest rate of 4.4 percent were issued to advance refund $86.4 million of outstanding bonds with an average interest rate of 3.5 percent. The net proceeds of $87.8 million (after payment of $0.5 million in issuance costs plus premium of $16.7 million and an additional issuer equity contribution of $1.4 million) were used to purchase U.S. government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for future debt service payments on the bonds, with the exception of the July 1, 2021, debt service payment. As a result, the remaining bonds are considered to be refunded and the liability of $86.4 million for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the bonds by $14.3 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $11.9 million.

During fiscal year 2022, KUB's Electric Division issued Series MM 2022 bonds to fund electric system capital improvements. KUB's Electric Division also issued Series NN 2022 bonds to retire a portion of outstanding Series FF 2015 bonds. On May 13, 2022, $27.2 million in revenue refunding bonds with an average interest rate of 4.1 percent were issued to advance refund $28.9 million of outstanding bonds with an average interest rate of 4.1 percent. The net proceeds of $29.5 million (after payment of $0.4 million in issuance costs plus premium of $2 million and an additional issuer equity contribution of $0.6 million) were used to purchase U.S. government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for future debt service payments on the bonds, with the exception of the July 1, 2022, and the July 1, 2023, debt service payments. As a result, the remaining bonds are considered to be refunded and the liability of $28.9 million for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the bonds by $2 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $1.3 million.

Other liabilities consist of the following:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
TVA conservation program	$ 1,158,556	$ 64,619	$ (609,418)	$ 613,757
Accrued compensated absences	4,654,095	10,402,464	(10,027,482)	5,029,077
Customer advances for construction	7,866,759	3,533,447	(3,229,632)	8,170,574
Other	61,347	70,613	(80,035)	51,925
	$ 13,740,757	$ 14,071,143	$ (13,946,567)	$ 13,865,333

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
TVA conservation program	$ 2,023,948	$ 113,417	$ (978,809)	$ 1,158,556
Accrued compensated absences	4,724,274	7,785,630	(7,855,809)	4,654,095
Customer advances for construction	7,285,510	2,442,397	(1,861,148)	7,866,759
Other	103,644	44,152	(86,449)	61,347
	$ 14,137,376	$ 10,385,596	$ (10,782,215)	$ 13,740,757

7. Lease Receivables

KUB, as lessor, leases office space, land, and fiber optic cables under non-cancelable lease arrangements. Terms of the leases range from two to fifteen years and contain fixed payment terms. Certain leases contain an option to renew that has been considered in the lease receivable when the lessee is reasonably certain to exercise the renewal option. KUB recognized lease revenue, which is included in other operating revenues, of $235,576 in 2022 and $209,747 in 2021. KUB also recognized interest income from leases, which is included in non-operating revenues, totaling $66,221 in 2022 and $4,176 in 2021. Total lease receivables were $2,274,000 ($266,032 current) and $1,827,924 ($180,788 current) as of June 30, 2022, and 2021, respectively, and are included in other assets on the Statement of Net Position.

8. Lease Liabilities

Changes in lease liabilities are summarized as follows:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
Total lease liabilities	$ 226,012	$ 2,029,005	$ (337,316)	$ 1,917,701
Less current portion	(181,052)			(403,643)
Long-term portion	$ 44,960			$ 1,514,058

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
Total lease liabilities	$ -	$ 428,114	$ (202,102)	$ 226,012
Less current portion	-			(181,052)
Long-term portion	$ -			$ 44,960

KUB leases certain office space, equipment, and other assets under non-cancelable lease arrangements. Terms of the leases range from one to fourteen years and contain fixed payment terms. Certain office space leases contain the option for renewal, which has been considered in the lease liability when KUB is reasonably certain to exercise the renewal option.

Maturities and future interest requirements related to the balances of lease liabilities outstanding as of June 30, 2022, are summarized as follows:

	Lease Maturities	Interest Requirements
2023	$ 403,643	$ 63,808
2024	370,260	49,534
2025	391,871	36,003
2026	411,697	21,244
2027	331,489	5,492
2028-2032	4,825	110
2033-2037	3,916	32
	$ 1,917,701	$ 176,223

9. Capital and Intangible Right of Use Assets

Capital and intangible right of use asset activity was as follows:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
Distribution Plant				
Services and Meters	$ 74,579,437	$ 507,367	$ (96,199)	$ 74,990,605
Electric Station Equipment	182,343,725	6,005,229	(378,781)	187,970,173
Poles, Towers and Fixtures	219,670,116	10,399,090	(750,586)	229,318,620
Overhead Conductors	180,227,318	14,958,176	(5,294,990)	189,890,504
Line Transformers	106,735,123	2,395,193	(667,606)	108,462,710
Other Accounts	200,200,670	5,364,515	(9,929,881)	195,635,304
Total Distribution Plant	$ 963,756,389	$ 39,629,570	$ (17,118,043)	$ 986,267,916
General Plant	136,238,677	16,140,890	(2,211,365)	150,168,202
Total Plant Assets	$ 1,099,995,066	$ 55,770,460	$ (19,329,408)	$ 1,136,436,118
Less Accumulated Depreciation	(463,099,778)	(39,790,345)	17,260,684	(485,629,439)
Net Plant Assets	$ 636,895,288	$ 15,980,115	$ (2,068,724)	$ 650,806,679
Work In Progress	54,465,567	65,383,303	(57,661,251)	62,187,619
Total Net Plant	$ 691,360,855	$ 81,363,418	$ (59,729,975)	$ 712,994,298
Intangible Right of Use Assets				
Office space	$ 309,638	$ 1,995,795	$ (265,213)	$ 2,040,220
Equipment	44,488	27,415	(18,092)	53,811
Other	73,988	24,101	(30,511)	67,578
Total Intangible Right of Use Assets	$ 428,114	$ 2,047,311	$ (313,816)	$ 2,161,609
Less Accumulated Amortization	(202,103)	(363,925)	240,716	(325,312)
Net Intangible Right of Use Assets	$ 226,011	$ 1,683,387	$ (73,099)	$ 1,836,298

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
Distribution Plant				
Services and Meters	$ 76,480,353	$ 1,844,232	$ (3,745,148)	$ 74,579,437
Electric Station Equipment	172,157,527	11,953,246	(1,767,048)	182,343,725
Poles, Towers and Fixtures	197,063,098	23,383,197	(776,179)	219,670,116
Overhead Conductors	161,568,836	26,461,659	(7,803,177)	180,227,318
Line Transformers	105,096,527	2,378,696	(740,100)	106,735,123
Other Accounts	193,364,408	10,887,516	(4,051,254)	200,200,670
Total Distribution Plant	$ 905,730,749	$ 76,908,546	$ (18,882,906)	$ 963,756,389
General Plant	117,537,151	19,506,760	(805,234)	136,238,677
Total Plant Assets	$ 1,023,267,900	$ 96,415,306	$ (19,688,140)	$ 1,099,995,066
Less Accumulated Depreciation	(441,716,884)	(43,337,591)	21,954,697	(463,099,778)
Net Plant Assets	$ 581,551,016	$ 53,077,715	$ 2,266,557	$ 636,895,288
Work In Progress	95,642,310	57,561,401	(98,738,144)	54,465,567
Total Net Plant	$ 677,193,326	$ 110,639,116	$ (96,471,587)	$ 691,360,855
Intangible Right of Use Assets				
Office space	$ -	$ 309,638	$ -	$ 309,638
Equipment	-	71,903	(27,415)	44,488
Other	-	73,988	-	73,988
Total Intangible Right of Use Assets	$ -	$ 455,529	$ (27,415)	$ 428,114
Less Accumulated Amortization	-	(202,103)	-	(202,103)
Net Intangible Right of Use Assets	$ -	$ 253,428	$ (27,415)	$ 226,011

10. Risk Management

KUB is exposed to various risks of loss related to active and retiree medical claims; injuries to workers; theft of, damage to, and destruction of assets; environmental damages; and natural disasters. Claims expenditures and liabilities are reported when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported.

These liabilities are included in accrued expenses in the Statement of Net Position. The liability is KUB's best estimate based on available information. As of June 30, 2022, and June 30, 2021, the amount of these liabilities was $1,067,781 and $929,396, respectively, resulting from the following changes:

	2022	2021
Balance, beginning of year	$ 929,396	$ 825,898
Current year claims and changes in estimates	8,769,088	7,469,778
Claims payments	(8,630,703)	(7,366,280)
Balance, end of year	$ 1,067,781	$ 929,396

11. Pension Plan

Description of Plan

The Knoxville Utilities Board Pension Plan (the Plan) is a governmental plan as defined by the Employee Retirement Income Security Act of 1974 (ERISA or the Act), is not subject to any of the provisions of the Act, and was revised January 1, 2020, to include all prior approved amendments. The Plan is a single-employer contributory, defined benefit pension plan established by Knoxville Utilities Board Resolution No. 980 dated February 18, 1999, effective July 1, 1999, as authorized by the Charter of the City of Knoxville §1107(J). KUB Board Resolution No. 979, effective July 1, 1999, as amended by Resolution No. 1037, establishing the KUB Retirement System, was amended effective June 18, 2020, to amend the term "Trustee" to include both custodians and/or trustees, in order to provide flexibility should KUB choose to change from its current Pension trustee. The Plan is designed to provide retirement, disability, and death benefits to KUB employees. KUB administers the Plan through an Administrative Committee consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Plan involving costs not approved in the operating budget must be adopted by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Plan may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The Plan issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2011, KUB closed the Plan such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and to accrue benefits under the Plan.

Participants in the Plan consisted of the following as of December 31:

	2021	2020
Inactive plan members:		
Terminated vested participants	12	11
Retirees and beneficiaries	600	593
Active plan members	478	518
Total	1,090	1,122

Retirement Benefits

The Plan provides three benefit arrangements for KUB participants, retirees, and beneficiaries.

The Plan provides pension benefits through the Career Equity Program ("CEP") for eligible employees hired on or after January 1, 1999, and for eligible former "City System Plan A" participants who elected CEP coverage as of July 1, 1999. The guaranteed pension benefit payable to a participant who has completed five or more years of service (or reached the normal retirement date, if earlier) upon termination of KUB employment shall be a lump sum equal to the participant's average compensation times their benefit percentage, as defined in the Plan document, or an annuity may be chosen by the participant.

In addition, the Plan provided retirement benefits through "Plan A" for former City System Plan A participants who elected not to participate in the CEP. Plan A is a closed plan and is not available to KUB employees hired after July 1, 1999. Plan A provides for early retirement benefits with 25 years of service and normal retirement benefits at age 62 or later. Benefits provided to Plan A participants include several different forms of monthly annuity payments.

The Plan also provides retirement benefits through "Plan B" for former "City System Plan B" participants. Plan B is a closed plan providing benefits to participants not covered by Social Security. Benefits provided to Plan B participants include several different forms of monthly annuity payments available to participants.

Effective January 1, 2012, KUB began to provide for additional monthly supplements, which are not subject to cost of living adjustments, to certain former employees and surviving dependents of former employees who are eligible for and have elected coverage under the KUB retiree medical plan and are eligible for Medicare. This was done to compensate for the elimination of drug coverage under the KUB retiree medical plan and to assist such individuals in obtaining prescription drug coverage under Medicare Part D.

Contributions

Participation in Plan A requires employee contributions of 3% of the first $4,800 of annual earnings and 5% of annual earnings in excess of $4,800. KUB contributions are determined by the enrolled actuary of the Plan and equal the amount necessary to provide the benefits under the Plan determined by the application of accepted actuarial methods and assumptions. The method of funding shall be consistent with Plan objectives.

Plan Funding

KUB maintains a Funding Policy for the Plan in accordance with Tennessee State Law. The primary goal of the Policy is to document the method KUB has adopted to provide assurance that future KUB and employee contributions and current Plan assets will be sufficient to fund all benefits expected to be paid to current active, inactive and retired Plan participants and their beneficiaries. Per the Funding Policy, KUB fully funds its annual Actuarially Determined Contribution.

Investments

The Plan's investments are held by State Street Bank and Trust Company (the "Trustee"). The

Plan's policy in regard to the allocation of invested assets is established by the Retirement System Investment Committee and approved by the KUB Board of Commissioners and may only be amended by the KUB Board of Commissioners. It is the policy of the Retirement System Investment Committee 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 Plan's adopted asset allocation policy as of December 31, 2021:

Asset Class	Target Allocation
Domestic equity – large cap	20% - 50%
Domestic equity – mid cap	0% - 15%
Domestic equity – small cap	0% - 15%
Domestic equity – convertible securities	0% - 10%
Non-U.S. equity	0% - 20%
Real estate equity	0% - 10%
Fixed income – aggregate bonds	5% - 25%
Fixed income – long-term bonds	10% - 25%
Cash and deposits	0% - 5%

Contributions of $3,665,168 and $3,167,680 for 2020 and 2019, respectively, were made during the Plan sponsor's fiscal years ended June 30, 2022, and 2021, respectively. Of these amounts, $1,712,192 and $1,520,486 are attributable to the Electric Division. The fiscal year 2022 contribution was determined as part of the January 1, 2020, valuation using the Individual Entry Age Normal funding method. The objective under this method is to fund each participant's benefits under the Plan as payments which are level as a percentage of salary, starting on the original participation date (employment date) and continuing until the assumed retirement, termination, disability, or death.

Net Pension Liability (Asset)

The below summarizes the disclosures of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27* ("GASB 68"), which requires measurement of the net pension liability as total pension liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, will be based on the December 31, 2021, and 2020, measurement date, respectively. The Division's share of the net pension asset as of June 30, 2022, is $29,962,099 and as of June 30, 2021, is $21,647,658.

GASB 68 requires certain disclosures related to the net pension liability (asset) of the Plan as disclosed below:

	2021	2020
Total pension liability	$ 242,201,780	$ 234,363,021
Plan fiduciary net position	(306,339,494)	(279,462,309)
Plan's net pension liability (asset)	$ (64,137,714)	$ (45,099,288)
Plan fiduciary net position as a percentage of the total pension liability	126.48%	119.24%

Changes in Net Pension Liability (Asset) are as follows:

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (Asset) (a) - (b)
Balances at December 31, 2020	$ 234,363,021	$ 279,462,309	$ (45,099,288)
Changes for the year:			
Service cost	6,647,220	-	6,647,220
Interest	16,982,226	-	16,982,226
Differences between Expected and Actual Experience	1,935,276	-	1,935,276
Changes of Assumptions	-	-	-
Contributions - employer	-	3,416,428	(3,416,428)
Contributions - rollovers	-	3,936,711	(3,936,711)
Contributions - member	-	2,976	(2,976)
Net investment income	-	37,688,050	(37,688,050)
Benefit payments	(17,725,963)	(17,725,963)	-
Administrative expense	-	(441,017)	441,017
Net changes	7,838,759	26,877,185	(19,038,426)
Balances at December 31, 2021	$ 242,201,780	$ 306,339,494	$ (64,137,714)

Actuarial Assumptions
The total pension liability was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2021, rolled forward to December 31, 2021; January 1, 2020, rolled forward to December 31, 2020
Discount rate	7.25% as of December 31, 2021, and 2020
Salary increases	From 2.50% to 5.65%, based on years of service as of December 31, 2021, and 2020
Mortality	115% and 110% of the PubG-2010 table, for males and females respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the 2010 base rates using scale MP2018, fully generational as of December 31, 2021, and 2020
Inflation	2.5% as of December 31, 2021, and 2020

The actuarial assumptions used in the January 1, 2021, and 2020, valuations were based on an actuarial experience study covering the period January 1, 2014, through December 31, 2018.

The long-term expected rate of return on 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 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 for each major asset class included in the Plan's target asset allocation as of December 31, 2021, and 2020, are summarized in the following table. The real rate of return reported for fixed income is for aggregate fixed income. The Plan has both aggregate and long duration fixed income.

Asset Class	Long Term Expected Real Rate of Return 2021	2020
Domestic equity	5.1%	5.1%
Non-U.S. equity	6.0%	6.4%
Real estate equity	5.4%	5.6%
Debt securities	0.2%	0.9%
Cash and deposits	(0.3)%	0.2%

Discount rate
The discount rate used to measure the total pension liability was 7.25 percent as of December 31, 2021, and 2020. The projection of cash flows used to determine the discount rate assumed that participant contributions will be made at the current contribution rate and that KUB contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability (asset) to changes in the discount rate
The following presents the net pension liability (asset) of the Plan for the Electric Division as of December 31, 2021, calculated using the discount rate of 7.25 percent, as well as what the Plan's net pension liability (asset) would be if it were calculated using a discount rate that is one percent lower (6.25 percent) or one percent higher (8.25 percent) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Plan's net pension liability (asset)	$ (19,837,982)	$ (29,962,099)	$ (38,695,590)

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Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of ($11,639,307) and the Electric Division's share was ($5,387,327).

The impact of experience gains or losses and assumptions changes on the Total Pension Liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4.00 years. During the measurement year, there was a liability experience loss of $1,935,276, with approximately $483,819 of that recognized in the current year and each of the next three years, resulting in a deferred outflow of $1,451,457. Unrecognized liability experience losses from prior periods were $1,544,136, of which $386,034 was recognized as an increase in Pension Expense in the current year and resulted in a deferred outflow of $1,158,102. The combination of unrecognized liability experience losses this year along with unrecognized liability experience losses from prior periods results in a deferred outflow of $2,609,559 (Division's share $1,219,063). Unrecognized liability gains from prior periods were $1,092,163, of which $549,386 was recognized as a decrease in Pension Expense in the current year and resulted in a deferred inflow of $542,777 (Division's share $253,560).

During the measurement year, there were no benefit changes or assumption changes. Net unrecognized assumption change losses from prior periods were $5,083,896, of which $1,694,632 was recognized as an increase in Pension Expense in the current year and resulted in a net deferred outflow of $3,389,264 (Division's share $1,583,303). Net unrecognized assumption change gains from prior periods were $71,525, of which the remaining $71,525 was recognized as a decrease in Pension Expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $17,812,070, of which $3,562,414 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment gains from prior periods were $34,994,864, of which $10,275,263 was recognized as a decrease in Pension Expense in the current year. The combination of unrecognized investment gains this year along with unrecognized investment gains from prior periods results in a deferred inflow of $38,969,257 (Division's share $18,204,589).

The impact of the change in proportionate share for the Electric Division during the measurement period is recognized over the average future working life of the Plan's active and inactive members, which is four years. This change resulted in a deferred outflow of $200,018, with $50,005 of that recognized in the current year and the remaining amount recognized over the next three years, resulting in a deferred outflow of resources of $150,014. In addition, KUB's Electric Division recorded a deferred outflow of resources of $856,097 for employer contributions made between December 31, 2021 ,and June 30, 2022.

The following table summarizes the current balances of deferred outflows and deferred inflows of resources of the Electric Division.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 1,219,063	$ 253,560
Changes in assumptions	1,583,303	-
Net difference between projected and actual earnings on pension plan investments	-	18,204,589
Change in proportionate share	150,014	-
Contributions subsequent to measurement date	856,097	-
Total	$ 3,808,477	$ 18,458,149

$856,097 reported as deferred outflows of resources resulting from contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2023. Other amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:

Year ended June 30:	
2023	$ (3,740,389)
2024	(6,333,877)
2025	(3,767,313)
2026	(1,664,191)
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of ($7,325,254) and the Electric Division's share was ($3,516,122).

The impact of experience gains or losses and assumptions changes on the Total Pension Liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5.00 years. During the measurement year, there was a liability experience loss of $1,930,170, with $386,034 of that recognized in the current year and in each of the next four years, resulting in a deferred outflow of $1,544,136 (Division's share $741,185). Unrecognized liability experience gains from prior periods were $2,088,302, of which $996,139 was recognized as a reduction in pension expense in the current year and resulted in a deferred inflow of $1,092,163 (Division's share $524,238).

During the measurement year, there were no benefit changes or assumption changes. Unrecognized assumption change losses from prior periods were $6,778,528, of which $1,694,632 was recognized as an increase in pension expense in the current year and resulted in a deferred outflow of $5,083,896 (Division's share $2,440,270). Unrecognized assumption change decreases from prior periods were $729,629, of which $658,104 was recognized as a reduction in pension expense in the current year and resulted in a deferred inflow of $71,525 (Division's share $34,332).

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $27,394,477, of which $5,478,895 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment gains from prior periods were $17,715,210, of which $4,635,928 was recognized as a decrease in pension expense in the current year. The combination of unrecognized investment gains this year along with the net unrecognized investment gains from prior periods

results in a net difference between projected and actual earnings on pension plan investments as of December 31, 2020, of $34,994,864 (Division's share $16,797,535). The following table summarizes the current balances of deferred outflows and deferred inflows of resources along with the net recognition over future years. In addition, KUB recorded a deferred outflow of resources of $1,583,842 as of June 30, 2021, for employer contributions made between December 31, 2020, and June 30, 2021 (Division's share $760,245).

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 1,544,136	$ 1,092,163
Changes in assumptions	5,083,896	71,525
Net difference between projected and actual earnings on pension plan investments	-	34,994,864
Contributions subsequent to measurement date	1,583,842	-
Total	$ 8,211,874	$ 36,158,552
Division's share	$ 3,941,700	$ 17,356,105

12. Qualified Excess Benefit Arrangement

Description

In fiscal year 2017, KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single-employer defined benefit pension plan administered by KUB. The number of participants in any given year for the QEBA is determined by the number of KUB Pension Plan participants who exceed the current year's section 415(b) limitations, as calculated by the KUB Pension Plan actuary. The amount of QEBA benefit will be the amount specified by the terms of the KUB Pension Plan without regard to Section 415(b) limitations minus the amount payable from the KUB Pension Plan as limited by Section 415(b). QEBA benefits are subject to cost of living adjustments.

As of June 30, 2022, there are 446 active employees eligible for the KUB Pension Plan who are potentially eligible to receive QEBA benefits. The KUB Pension Plan was closed effective January 1, 2011, such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and accrue benefits under the KUB Pension Plan. The KUB Pension Plan was amended to include the provision of QEBA benefits; therefore, amendments to the QEBA require the same authority as amendments to the KUB Pension Plan. As required by federal tax law, the QEBA is unfunded within the meaning of the federal tax laws. KUB may not pre-fund the QEBA to cover future liabilities beyond the current year. KUB has established procedures to pay for these benefits on a pay-as-you-go basis. There are no assets accumulated in a trust that meets the GASB's criteria. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022.

Total Pension Liability of the QEBA

The below summarizes the disclosures of GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68* ("GASB 73"). GASB 73

extends a similar approach of financial reporting to plans meeting specific criteria that are not administered through trusts that GASB 68 established for pension plans. GASB 73 requires measurement of the total pension liability of the QEBA. The amounts reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. There is no Total Pension Liability as of June 30, 2022. The Division's share of the total pension liability was $8,983 as of June 30, 2021.

GASB 73 requires certain disclosures related to the total pension liability of the QEBA, as disclosed below:

	2021	2020
Total pension liability	$0	$18,714
Deferred outflows	(11,505)	(33,660)
Deferred inflows	16,927	23,630
Net impact on Statement of Net Position	$5,422	$8,684
Covered payroll	$38,074,863	$41,524,273
Total pension liability as a % of covered payroll	0.00%	0.05%

Changes in total pension liability of the QEBA are as follows:

	Increase (Decrease)
	Total Pension Liability
Balances at December 31, 2020	$ 18,714
Changes for the year:	
Service cost	-
Interest	268
Changes of Benefits	-
Differences between Expected and Actual Experience	(6,816)
Changes of Assumptions	-
Benefit payments	(12,166)
Net changes	(18,714)
Balances at December 31, 2021	$ -

Actuarial Assumptions
The total pension liability of the QEBA was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2022, and January 1, 2021
Actuarial cost method	Individual entry age
Salary increase	From 2.50% to 5.65%, based on years of service as of January 1, 2022, and 2021
Mortality	115% and 110% of the Public Sector General Healthy Annuitant Mortality Table (PubG-2010), for males and females, respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the

	2010 base rates using scale MP2018, fully generational as of January 1, 2022, and 2021
Inflation	2.5% as of January 1, 2022, and 2021

The actuarial assumptions used in the January 1, 2022, and 2021, valuations were based on the results of an actuarial experience study for the period January 1, 2014, through December 31, 2018.

Discount rate
The QEBA is not funded. In accordance with paragraph 31 of GASB 73, the discount rate is based on the Bond Buyer 20-Bond GO index. This rate was 2.06% as of January 1, 2022, and 2.12% as of January 1, 2021.

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of $16,613 (Division's share $7,974) for the QEBA. This amount is not expected to be the same as KUB's contribution to the QEBA ($19,875), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$5,422 - $8,684 + $19,875].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4 years. During the measurement year, there was an experience gain of $6,816, with $1,704 recognized in the current year and each of the next three years, resulting in a deferred inflow of $5,112 (Division's share $2,454). There was a deferred inflow at the end of the measurement year of $7,225 (Division's share $3,468) from experience gains in prior years and a deferred outflow of $6,112 (Division's share $2,933) from experience losses in prior years.

During the measurement year, there were no assumption changes. There was a deferred inflow at the end of the measurement year of $4,590 (Division's share $2,203) and a deferred outflow of $5,393 (Division's share $2,589) from assumption changes in prior years.

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 6,112	$ 12,337
Changes in assumptions	5,393	4,590
Total	$ 11,505	$ 16,927
Division's share	$ 5,522	$ 8,125

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

Year ended June 30:	
2023	$ (8,793)
2024	3,023
2025	348
2026	-
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of $21,436 for the QEBA (Division's share $10,289). This amount is not expected to be the same as KUB's contribution to the QEBA ($22,874), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$8,684 - $10,122 + $22,874].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5 years. During the measurement year, there was an experience loss of $10,165, with $2,033 recognized in the current year and each of the next four years, resulting in a deferred outflow of $8,132 (Division's share $3,903). There was a deferred inflow at the end of the measurement year of $14,450 (Division's share $6,936) from experience gains in prior years and a deferred outflow of $2,756 (Division's share $1,323) from experience losses in prior years.

During the measurement year, there was an assumption change loss of $91, with $18 recognized in the current year and each of the next four years, resulting in a deferred outflow of $73 (Division's share $35). There was a deferred inflow at the end of the measurement year of $9,180 (Division's share $4,406) and a deferred outflow of $22,699 (Division's share $10,896) from assumption changes in prior years. In addition, KUB recorded a deferred outflow of resources of $6,084 as of June 30, 2021 for contributions between December 31, 2020, and June 30, 2021 (Division's share $2,920).

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 10,888	$ 14,450
Changes in assumptions	22,772	9,180
Contributions subsequent to measurement date	6,084	-
Total	$ 39,744	$ 23,630
Division's share	$ 19,077	$ 11,342

13. Defined Contribution Plan

The KUB Asset Accumulation 401(k) Plan (the "401(k) Plan") is a defined contribution 401(k) employee retirement savings plan covering eligible KUB employees established by the KUB Board of Commissioners in accordance with the Charter of the City of Knoxville, Tennessee. The 401(k) Plan's assets are held in trust under an agreement between KUB and Fidelity Management Trust Company. Employees hired prior to January 1, 2011, may participate and receive a matching contribution of 50 percent of their own contribution up to a maximum match of 3 percent. Employees hired on or after January 1, 2011, have an enhanced 401(k) due to the closure of the Defined Benefit Pension Plan. They may participate and receive a matching contribution of 50 percent of their own contribution up to a maximum match of 3 percent. They also receive a nonelective KUB contribution of 3 percent to 6 percent, depending on years of service, whether they contribute or not.

KUB funded 401(k) matching contributions and nonelective contributions of $3,125,903 (Division's share $1,500,433) and $2,984,314 (Division's share $1,432,471), respectively, for the years ended June 30, 2022, and 2021.

14. Other Post-Employment Benefits (OPEB)

Description of Trust

The Knoxville Utilities Board Other Post-Employment Benefits Trust (the Trust) is a single-employer trust established by the KUB Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The Trust along with the KUB Health Plan make up a Voluntary Employee Beneficiary Association ("VEBA") and are intended to be tax-exempt pursuant to Code §501(c)(9). The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. The applicable documentation was submitted to the State Funding Board and, in December 2007, the State Funding Board approved the Trust. The Trust was also approved by the Internal Revenue Service in June 2008. KUB administers the Trust through a Board of Trustees consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Trust involving costs not approved in the operating budget must be approved by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Trust may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The investment of all deposits to the Trust is governed by an Investment Policy, which was adopted by the KUB Board and approved by the State Funding Board. The Trust issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2022, the Plan was expanded to two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement (HRA), given that each eligible employee meets the "Rule of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

Participants in the Plan consisted of the following as of June 30:

	HRA		Retiree Medical Benefit	
	2022	2021	2022	2021
Retirees	4	0	549	538
Dependents of retirees	2	0	612	579
Eligible active employees	15	0	145	160
Total	21	0	1,306	1,277

Benefits

Benefits for pre-July 1, 1999, eligible participants may include, but shall not be limited to, medical, prescription drugs, dental, vision, hearing, Medicare Part B or Part D premiums, life insurance, long-term care, and long-term disability. Post-July 1, 1999, eligible participants are eligible for HRA benefits which include up to $50,000 to be used exclusively for reimbursement of qualified medical expenses of the retiree and his or her spouse and dependents. Any unused HRA amounts will remain assets of the OPEB Trust.

Contributions and Funding

The primary goal of the Funding Policy for the Trust is to document the method KUB has adopted to provide assurance that future KUB and retiree contributions and current Trust assets will be sufficient to fund all benefits expected to be paid to Trust beneficiaries. Per the Funding Policy, KUB's current practice is to fully fund its annual Actuarially Determined Contribution, which is determined by actuarial valuation.

Contributions are authorized by the terms of the Trust as established by KUB Resolution No. 1168, as amended, as approved by the Tennessee State Funding Board. KUB shall have the right at any time to amend, in whole or in part, the provisions of this Trust; however, no such amendment shall authorize or permit the assets of the Trust to be used for or diverted to purposes other than those expressed in the Declaration of Trust.

It shall be the sole and exclusive responsibility of KUB to determine the level of contributions KUB will make to the Trust for the purpose of financing other post-employment benefits accrued by its respective participants. Neither the Trust, nor the Trust's Board, shall be responsible for collecting or otherwise determining the level of contributions needed by KUB to finance any other post-employment benefits offered by KUB. The assets of the Trust shall be expended solely to make payments for other post-employment benefits pursuant to, and in accordance with, the terms of the Trust and to pay the cost of administration.

Based on the date of retirement, certain retired members are required to contribute specified amounts monthly to maintain health insurance. Those who retired prior to July 1983 have no required monthly premiums for themselves or dependents. The retirees, or their surviving dependents, who retired between August 1983 and January 1998 are required to pay $262.50 per month for pre-Medicare family health insurance. For individuals who retired after January 1998, the required monthly premium for pre-Medicare health insurance is $262.50 for single coverage and $525 for family coverage. There is currently no premium for Medicare eligible retirees or dependents. KUB is responsible for determining the level of retired plan member contributions on an annual basis as part of its review of healthcare cost sharing.

Participants in the Health Reimbursement Arrangement are not eligible for health insurance and are not required to make contributions.

Investments

The Trust holds investments in a balanced fund, which invests in passively managed common trust index funds, managed and sponsored by State Street Global Advisors (SSgA), with an asset allocation mirroring the asset allocation of the Trust and rebalanced monthly. The Trust's Investment Policy was established and may only be amended by the KUB Board of Commissioners. The Trust's Investment Policy is to invest in a manner that will provide sufficient investment return to meet current and future retiree health benefits, while conforming to all governing State and Federal statutes. It allows investment of Trust assets in any type of security instrument allowed for in T.C.A 8-50-1203. The following was the Trust's adopted investment target allocations as set forth in the Trust's Investment Policy as of June 30, 2022:

Asset Class	Target Allocation
Domestic Equity:	
Large Cap	30%
Small Cap	8%
International Equity:	
Developed	16%
Emerging	8%
Real Estate Equity	8%
Debt Securities	30%
Total	100%

For the fiscal year ended June 30, 2022, an actuarially determined contribution for the Electric Division of $923,921 was made to the OPEB Trust along with the division's share ($720,000) of an additional $1,500,000 contribution to help fund the HRA. Actuarially determined contributions for the Electric Division for the fiscal year ended June 30, 2021, were $363,468. These were based on the OPEB actuarial valuations as of January 1, 2020, and 2019.

Net OPEB Liability (Asset)

The below summarizes the disclosures of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75"), which requires measurement of the net OPEB liability as total OPEB liability less the amount of the Trust's fiduciary net position. The amounts reported as of June 30 are based on the reporting date for the KUB Other Post-Employment Benefits Plan which is June 30. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2022, and 2021, and the Total OPEB Liability as of the valuation date, January 1, 2021, updated to June 30, 2022, and January 1, 2020, updated to June 30, 2021, respectively. The Division's share of the total net OPEB liability (asset) was $5,203,565 as of June 30, 2022, and ($2,847,277) as of June 30, 2021.

The components of the net OPEB liability (asset) of the Trust are as follows as of June 30:

	2022	2021
Total OPEB liability	$ 58,536,280	$ 51,515,118
Plan fiduciary net position	47,333,773	57,446,946
Net OPEB liability (asset)	$ 11,202,507	$ (5,931,828)
Plan fiduciary net position as a percentage of the total OPEB liability	80.86%	111.51%

Changes in Net OPEB Liability (Asset) are as follows:

	Total OPEB Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (a) - (b)
Balances at June 30, 2021	$ 51,515,118	$ 57,446,946	$ (5,931,828)
Changes for the year:			
Service cost	416,277	-	416,277
Interest	3,858,276	-	3,858,276
Changes of Benefits	6,594,293	-	6,594,293
Differences between Expected and Actual Experience	60,951	-	60,951
Changes of Assumptions	-	-	-
Contributions - employer	-	1,989,066	(1,989,066)
Contributions - member	-	-	-
Net investment income	-	(8,122,417)	8,122,417
Benefit payments	(3,908,635)	(3,908,635)	-
Administrative expense	-	(71,187)	71,187
Net changes	7,021,162	(10,113,173)	17,134,335
Balances at June 30, 2022	$ 58,536,280	$ 47,333,773	$ 11,202,507

Actuarial assumptions
The total OPEB liability was determined by actuarial valuations, using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation dates:	January 1, 2021, rolled forward to June 30, 2022; January 1, 2020, rolled forward to June 30, 2021
Discount rate:	7.25% as of January 1, 2021, and 2020
Healthcare cost trend rates:	Pre-Medicare: 6.75% grading down to 4.04% over 20 years as of January 1, 2021, and 2020 Medicare: 6.30% grading down to 4.04% over 20 years as of January 1, 2021, and 2020 Administrative expenses: 3.0% per year
Salary increases:	From 2.50% to 5.65%, based on years of service as of January 1, 2021, and 2020
Mortality:	115% and 110% of the Public Sector Healthy Annuitant Mortality Table (PubG-2010), respectively for males and females, using the Public Sector General Employee Table (PubG-2010) for ages prior to the start of the Healthy Annuitant Mortality Table, both projected using scale MP2018 fully generational as of January 1, 2021, and 2020
Inflation:	2.50% as of January 1, 2021, and 2020

The actuarial assumptions used in the January 1, 2021, and January 1, 2020, valuations were based on the results of actuarial experience studies for the periods January 1, 2014, through December 31, 2018.

The long-term expected rate of return on Trust investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Trust 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 long-term expected rate of return may be lower in periods of current strong performance due to future valuations that mean revert to the long-term average. Best estimates of arithmetic real rates of return for each major asset class included in the Trust's target asset allocation (see the discussion of the Trust's Investment Policy) are summarized in the chart below.

	Long Term Expected Real Rate of Return	
Asset Class	**2022**	**2021**
Domestic equity	5.5%	4.9%
International equity	6.5%	5.9%
Emerging Market equity	8.6%	8.4%
Real estate equity	5.7%	5.4%
Debt securities	1.2%	0.5%
Cash and deposits	0.2%	(0.1%)

Discount rate
The discount rate used to measure the total OPEB liability was 7.25 percent as of June 30, 2022, and 2021. The projection of cash flows used to determine the discount rate assumed that participant contributions will be made at the current contribution rate and that KUB contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the Trust's fiduciary net position was projected to be available to make all projected future benefit payments. Therefore, the long-term expected rate of return on Trust investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity of the net OPEB liability (asset) to changes in the discount rate.
The following presents the net OPEB liability (asset) of the Division's share of the Trust as of June 30, 2022, calculated using the discount rate of 7.25 percent, as well as what the Trust's net OPEB liability (asset) would be if it were calculated using a discount rate that is one percent lower (6.25 percent) or one percent higher (8.25 percent) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net OPEB liability (asset)	$7,886,410	$5,203,565	$2,942,000

Sensitivity of the net OPEB liability (asset) to changes in the healthcare cost trend rates.
The following presents the net OPEB liability (asset) of the Division's share of the Trust as of June 30, 2022, as well as what the Trust's net OPEB liability (asset) would be if it were calculated using a healthcare cost trend rate that is one percent lower or one percent higher than the current rate:

	1% Decrease	Baseline Trends	1% Increase
Net OPEB liability (asset)	$2,944,279	$5,203,565	$7,825,091

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended June 30, 2022, KUB's Electric Division recognized OPEB expense of $2,760,543.

The impact of liability experience gains or losses and assumption changes on the Electric Division's Share of the Total OPEB Liability are recognized in the OPEB expense over the average expected remaining service life of all active and inactive members of the OPEB Plan. As of the beginning of the measurement period, this average was 2.0 years. During the measurement year, there was an experience loss of $60,951, with $30,476 of that recognized in the current year and the remaining amount will be recognized in the next year, resulting in a deferred outflow of resources of $30,475 (Division's share $14,156). Unrecognized experience losses from prior periods were $21,401, of which the entire amount is recognized as an increase in OPEB expense in the current year.

During the measurement year, there were benefit changes that increased the Total OPEB Liability by $6,594,293. This increase is recognized immediately in the June 30, 2022, OPEB expense.

Unrecognized gains due to assumption changes from prior periods were $2,052,917, of which the entire amount is recognized as a decrease in OPEB expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment loss of $12,216,418, of which $2,443,284 was recognized in the current year and will be recognized in each of the next four years, resulting in a deferred outflow of resources of $9,773,134. Net unrecognized investment gains from prior periods were $5,905,689, of which $1,311,774 was recognized as a decrease in OPEB expense in the current year, resulting in a net deferred inflow of $4,593,915. The combination of unrecognized losses this year, along with the net unrecognized investment gains from prior periods results in a deferred outflow of resources of $5,179,219 (Division's share $2,405,747). The impact of the change in proportionate share for the Electric Division during the measurement period is recognized over the average future working life of the Plan's active and inactive members, which is two years. This change resulted in a deferred inflow of $31,083, with $15,542 of that recognized in the current year and the remaining amount recognized in the next year, resulting in a deferred inflow of resources of $15,541. The table below summarizes the current balances of deferred outflows and deferred inflows of resources of the Electric Division.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 14,156	$ -
Changes in assumptions	-	-
Net difference between projected and actual earnings on OPEB plan investments	2,405,747	-
Change in proportionate share	-	15,541
Total	$ 2,419,903	$ 15,541

Amounts reported as deferred outflows and deferred inflows of resources will be recognized in OPEB expense as follows:

Year ended June 30:	
2023	$ 538,489
2024	485,284
2025	245,684
2026	1,134,905
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized OPEB expense of ($648,134) (Division's share ($311,104)).

The impact of liability experience gains or losses and assumption changes on the Total OPEB Liability are recognized in the OPEB expense over the average expected remaining service life of all active and inactive members of the OPEB Plan. As of the beginning of the measurement period, this average was 2.0 years. During the measurement year, there was an experience loss of $42,802, with $21,401 of that recognized in the current year and the remaining amount will be recognized in the next year, resulting in a deferred outflow of resources of $21,401 (Division's share $10,272). Unrecognized experience losses from prior periods were $21,951, of which the entire amount is recognized as an increase in OPEB expense in the current year.

During the measurement year, there was a decrease in the Total OPEB Liability due to assumption changes of $4,105,835, with $2,052,918 of that recognized in the current year and in the next year, resulting in a deferred inflow of $2,052,917 (Division's share $985,400). Unrecognized assumption changes from prior periods were $1,802,421, of which the entire amount is recognized as an increase in OPEB expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $9,571,802, of which $1,914,360 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment losses from prior periods were $2,354,338, of which $602,585 was recognized as an increase in OPEB expense in the current year. The combination of unrecognized gains this year along with the net unrecognized investment losses from prior periods results in a net difference between projected and actual earnings on OPEB plan investments as of June 30, 2021, of $5,905,689 (Division's share $2,834,731). The table below summarizes the current balances of deferred outflows and deferred inflows of resources.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 21,401	$ -
Changes in assumptions	-	2,052,917
Net difference between projected and actual earnings on OPEB plan investments	-	5,905,689
Total	$ 21,401	$ 7,958,606
Division's share	$ 10,272	$ 3,820,131

15. Related Party Transactions

The Division, in the normal course of operations, is involved in transactions with the City of Knoxville and with other divisions of KUB. Such transactions for the years ended June 30, 2022, and 2021, are summarized as follows:

	2022	2021
City of Knoxville		
Amounts billed by the Division for utilities and related services	$ 6,078,236	$ 5,503,848
Payments by the Division in lieu of property tax	8,702,736	8,594,084
Payments by the Division for services provided	85,061	427,606
Other divisions of KUB		
Amounts billed to other divisions for utilities and related services provided	6,419,319	5,985,971
Interdivisional rental expense	151,362	69,970
Interdivisional rental income	1,793,661	1,707,928
Amounts billed to the Division by other divisions for utilities services provided	235,944	193,109
Interdivisional utilization income	55,503	-

With respect to these transactions, accounts receivable from the City of Knoxville included in the balance sheet at year end were as follows:

	2022	2021
Accounts receivable	$ 371,553	$ 413,157

In October 2021, the Division issued an interdivisional loan of $10 million to the Fiber Division at an interest rate of 3.69%. The Division recognized interest income of $291,750 for the year ended June 30, 2022. Principal payments from the Fiber Division begin in October 2022 through June 2030. KUB's Board and TVA have approved proposed loans of up to $35 million from the Electric Division to the Fiber Division.

16. Other Commitments and Contingencies

In the normal course of business, there are various lawsuits pending against KUB. Management has reviewed these lawsuits with counsel, who is vigorously defending KUB's position and is of the opinion that the ultimate disposition of these matters will not have a material adverse effect on KUB's financial position, results of operations, or cash flows.

Knoxville Utilities Board Electric Division
Required Supplementary Information – Schedule of Changes in Net Pension Liability and Related Ratios
June 30, 2022

	*Year ended December 31							
	2021	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Total pension liability								
Service cost	$ 6,647,220	$ 5,227,657	$ 6,142,213	$ 5,095,488	$ 4,607,486	$ 4,226,985	$ 4,157,062	$ 4,092,808
Interest	16,982,226	16,393,202	16,030,626	15,344,193	15,015,282	14,966,559	14,812,784	14,698,657
Changes of benefit terms	-	-	163,199	-	-	-	-	-
Differences between expected and actual experience	1,935,276	1,930,170	(1,054,117)	(605,649)	(1,087,161)	(2,233,762)	(1,890,334)	-
Changes of assumptions	-	-	8,473,160	-	(357,633)	(2,932,883)	-	-
Benefit payments, including refunds of member contributions	(17,725,963)	(16,006,565)	(15,094,475)	(15,274,814)	(14,969,979)	(14,138,511)	(15,350,926)	(15,533,167)
Net change in total pension liability	7,838,759	7,544,464	14,660,606	4,559,218	3,207,995	(111,612)	1,728,586	3,258,298
Total pension liability - beginning	234,363,021	226,818,557	212,157,951	207,598,733	204,390,738	204,502,350	202,773,764	199,515,466
Total pension liability - ending (a)	$ 242,201,780	$ 234,363,021	$ 226,818,557	$ 212,157,951	$ 207,598,733	$ 204,390,738	$ 204,502,350	$ 202,773,764
Plan fiduciary net position								
Contributions - employer	$ 3,416,428	$ 2,876,752	$ 2,871,241	$ 3,456,475	$ 4,286,597	$ 5,243,146	$ 5,991,887	$ 5,908,541
Contributions - participants	3,939,687	2,284,727	3,170,825	2,081,125	1,488,632	555,075	487,546	475,854
Net investment income	37,575,566	44,814,914	49,938,315	(11,748,396)	32,360,219	13,788,263	(95,430)	22,292,369
Other additions	112,484	7,740	13,579	62,616	82,239	45,848	30,879	29,733
Benefit payments, including refunds of member contributions	(17,653,963)	(15,962,565)	(15,030,475)	(15,174,814)	(14,895,979)	(14,044,511)	(15,274,926)	(15,405,167)
Administrative expense	(441,017)	(455,191)	(467,748)	(445,916)	(385,282)	(441,332)	(397,160)	(378,085)
Death benefits	(72,000)	(44,000)	(64,000)	(100,000)	(74,000)	(94,000)	(76,000)	(128,000)
Net change in plan fiduciary net position**	26,877,185	33,522,377	40,431,737	(21,868,910)	22,862,426	5,052,489	(9,333,204)	12,795,245
Plan fiduciary net position - beginning**	279,462,309	245,939,932	205,508,195	227,377,105	204,514,679	199,462,190	208,795,394	196,000,149
Plan fiduciary net position - ending (b)**	$ 306,339,494	$ 279,462,309	$ 245,939,932	$ 205,508,195	$ 227,377,105	$ 204,514,679	$ 199,462,190	$ 208,795,394
Plan's net pension liability - ending (a) - (b)	$ (64,137,714)	$ (45,099,288)	$ (19,121,375)	$ 6,649,756	$ (19,778,372)	$ (123,941)	$ 5,040,160	$ (6,021,630)
Plan fiduciary net position as a percentage of the total pension liability	126.48%	119.24%	108.43%	96.87%	109.53%	100.06%	97.54%	102.97%
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747	$ 44,446,743	$ 44,076,351
Plan's net pension liability as a percentage of covered payroll	(168.45%)	(108.61%)	(47.48%)	15.78%	(45.67%)	(0.28%)	11.34%	(13.66%)

Notes to Schedule:

* Information not reflected prior to 2014 due to changes in actuary methodologies required under GASB 67, which was implemented in 2014.

** Excludes amounts related to 401(k) matching contributions.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Required Supplementary Information – Schedule of Employer Pension Contributions
June 30, 2022

	*Year ended December 31							
	2021	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Actuarially determined contribution	$ 3,416,428	$ 2,876,752	$ 2,871,241	$ 3,456,475	$ 4,286,597	$ 5,243,146	$ 5,991,887	$ 5,908,541
Contribution in relation to the actuarially determined contribution	3,416,428	2,876,752	2,871,241	3,456,475	4,286,597	5,243,146	5,991,887	5,908,541
Contribution deficiency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747	$ 44,446,743	$ 44,076,351
Contributions as a percentage of covered payroll	8.97%	6.93%	7.13%	8.20%	9.90%	11.80%	13.48%	13.41%

Notes to Schedule:

Timing:	Actuarially determined contributions for a Plan year are based upon 50% of the amounts determined at the actuarial valuations for each of the two prior Plan years.
Valuation Dates:	January 1, 2020 and January 1, 2019

Key methods and assumptions used to determine contribution rates:

Actuarial cost method:	Individual entry age
Asset valuation method:	5-year smoothed market
Amortization method:	Level dollar, 30-year closed period with 21 years remaining (22 years as of January 1, 2019), or a level dollar, 30-year open period for a negative unfunded liability; As of January 1, 2020 and 2019, the unfunded liability was negative.
Discount rate:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Salary increases:	2.50% to 5.65%, based on years of service
Mortality:	115% and 110% of the benefits-weighted Public Sector General Healthy Annuitant Mortality Table (PubG-2010), respectively, for males and females, using the Public Sector General Employee Table while in active employment and for annuitant ages prior to the start of the Healthy Annuitant Mortality Table, both projected from the 2010 base rates using scale MP2018 fully generational
Inflation:	2.5%

* Schedule of Employer Contribution information is not reflected prior to 2014 due to changes in actuary methodologies required under GASB 67, which was implemented 2014. Please refer to prior year's audited financial statements for prior methods and assumptions.

Knoxville Utilities Board Electric Division
Required Supplementary Information – Schedule of Changes in Net OPEB Liability and Related Ratios
June 30, 2022

	*Year ended June 30				
	2022	**2021**	**2020**	**2019**	**2018**
Total OPEB liability					
Service cost	$ 416,277	$ 283,786	$ 256,270	$ 270,515	$ 202,603
Interest	3,858,276	3,861,304	3,672,291	3,624,737	3,295,240
Change of benefit terms	6,594,293	-	(202,408)	-	-
Differences between expected and actual experience	60,951	42,802	43,902	999,098	1,324,769
Changes of assumptions	-	(4,105,835)	3,604,843	3,231,601	(397,180)
Benefit payments	(3,908,635)	(3,111,179)	(3,028,596)	(3,532,444)	(3,298,739)
Net change in total OPEB liability	7,021,162	(3,029,122)	4,346,302	4,593,507	1,126,693
Total OPEB liability - beginning	51,515,118	54,544,240	50,197,938	45,604,431	44,477,738
Total OPEB liability - ending (a)	$ 58,536,280	$ 51,515,118	$ 54,544,240	$ 50,197,938	$ 45,604,431
Plan fiduciary net position					
Contributions - employer	$ 1,989,066	$ 757,226	$ 311,324	$ -	$ -
Net investment income	(8,122,417)	12,890,602	975,155	2,981,928	3,705,473
Benefit payments	(3,908,635)	(3,111,179)	(3,028,596)	(3,532,444)	(3,298,739)
Administrative expense	(71,187)	(44,496)	(53,286)	(54,787)	(51,668)
Net change in plan fiduciary net position	(10,113,173)	10,492,153	(1,795,403)	(605,303)	355,066
Plan fiduciary net position - beginning	57,446,946	46,954,793	48,750,196	49,355,499	49,000,433
Plan fiduciary net position - ending (b)	$ 47,333,773	$ 57,446,946	$ 46,954,793	$ 48,750,196	$ 49,355,499
Net OPEB liability (asset) - ending (a) - (b)	$ 11,202,507	$ (5,931,828)	$ 7,589,447	$ 1,447,742	$ (3,751,068)
Plan fiduciary net position as a percentage of the total OPEB liability	80.86%	111.51%	86.09%	97.12%	108.23%
Covered employee payroll**	$ 73,927,857	$ 21,578,366	$ 23,363,536	$ 24,346,735	$ 23,677,080
Net OPEB liability (asset) as a percentage of covered employee payroll	15.15%	(27.49%)	32.48%	5.95%	(15.84%)

Notes to Schedule:

* Information not reflected prior to 2018 due to changes in actuary methodologies required under GASB 75, which was implemented in 2018.

** The covered-employee payroll increased in FY 2022 due to the inclusion of plan participants eligible for the HRA benefits.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Required Supplementary Information – Schedule of Employer OPEB Contributions
June 30, 2022

	*Year ended June 30				
	2022	**2021**	**2020**	**2019**	**2018**
Actuarially determined contribution	$ 489,066	$ 757,226	$ 311,324	$ -	$ -
Contribution in relation to the annual required contribution	1,989,066	757,226	311,324	-	-
Contribution deficiency/(excess)	$ (1,500,000)	$ -	$ -	$ -	$ -
Covered employee payroll*	$ 73,927,857	$ 21,578,366	$ 23,363,536	$ 24,346,735	$ 23,677,080
Contributions as a percentage of covered employee payroll	2.69%	3.51%	1.33%	0.00%	0.00%

* The covered-employee payroll increased in FY 2022 due to the inclusion of plan participants eligible for the HRA benefits.

KUB elected to make a $1,500,000 voluntary contribution to the Trust to initially fund the HRA benefit which was effective January 1, 2022. This contribution was not required.

Notes to Schedule:

Valuation Date:	January 1, 2020 and January 1, 2019
Timing:	Actuarially determined contribution rates are calculated based on the actuarial valuation completed 18 months before the beginning of the fiscal year.

Key methods and assumptions used to determine contribution rates:

Actuarial cost method:	Entry age normal
Asset valuation method:	5-year smoothed market
Amortization method:	Level dollar, 30-year closed period with 16 years remaining as of January 1, 2020 (17 years as of January 1, 2019), or a level dollar, 30-year open period for a negative unfunded liability; As of January 1, 2019 and 2020, the unfunded liability was positive
Discount rate:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Healthcare cost trend rate:	Pre-Medicare: 6.75% grading down to 4.04% over 20 years as of January 1, 2020; 7.83% grading down to 4.50% over 19 years as of January 1, 2019 Medicare: 6.30% grading down to 4.04% over 20 years as of January 1, 2020; 6.88% grading down to 4.50% over 19 years as of January 1, 2019 Administrative expenses: 3.0% per year
Salary increases:	From 2.50% to 5.65%, based on years of service
Mortality:	115% and 110% of the Public Sector Healthy Annuitant Mortality Table (PubG-2010), respectively for males and females, using the Public Sector General Employee Table (PubG-2010) for ages prior to the start of the Health Annuitant Mortality Table, both projected using scale MP2018 fully generational
Inflation:	2.5%
Investment rate of return:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Retirement age:	2% at ages 50-57, grading up to 100% at age 70

* Schedule of Employer Contribution information is not reflected prior to 2018 due to changes in actuary methodologies required under GASB 75, which was implemented in 2018.
Please refer to prior year's audited financial statement for prior methods and assumptions.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Required Supplementary Information – Qualified Governmental Excess Benefit Arrangement
Schedule of Changes in Total Pension Liability and Related Ratios
June 30, 2022

	*Year ended December 31					
	2021	**2020**	**2019**	**2018**	**2017**	**2016**
Total pension liability						
Service cost	$ -	$ -	$ -	$ 941	$ 584	$ -
Interest (includes interest on service cost)	268	388	9,181	9,676	7,535	-
Changes of benefit terms	-	-	(218,272)	-	-	185,077
Differences between expected and actual experience	(6,816)	10,165	34	(36,125)	13,684	-
Changes of assumptions	-	91	13,342	(22,950)	73,461	-
Benefit payments, including refunds of member contributions	(12,166)	(12,166)	(15,932)	-	-	-
Net change in total pension liability	(18,714)	(1,522)	(211,647)	(48,458)	95,264	185,077
Total pension liability - beginning	18,714	20,236	231,883	280,341	185,077	-
Total pension liability - ending	$ -	$ 18,714	$ 20,236	$ 231,883	$ 280,341	$ 185,077
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747
Total pension liability as a percentage of covered payroll	0.00%	0.05%	0.05%	0.55%	0.65%	0.42%

Notes to Schedule:

* There are no assets accumulated in a trust that meet the criteria in paragraph 4 of GASB 73 to pay related benefits.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Supplemental Information - Schedule of Debt Maturities by Fiscal Year
June 30, 2022

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	EE-2015		FF-2015		GG-2016		HH-2017		II-2017		JJ-2018	
FY	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
22-23	2,300,000	708,250	825,000	63,125	1,000,000	978,938	2,305,000	534,830	890,000	1,178,150	895,000	1,294,281
23-24	2,415,000	590,375	850,000	21,250	1,050,000	927,688	2,400,000	444,205	935,000	1,132,525	930,000	1,257,781
24-25	2,555,000	478,900			1,100,000	884,938	2,460,000	380,455	985,000	1,084,525	965,000	1,224,706
25-26	2,670,000	387,750			1,125,000	857,188	2,560,000	285,705	1,035,000	1,034,025	1,005,000	1,185,106
26-27	2,735,000	306,675			1,150,000	834,438	2,695,000	154,330	1,075,000	992,025	1,055,000	1,133,606
27-28	2,850,000	222,900			1,175,000	811,188	2,805,000	43,478	1,110,000	959,250	1,100,000	1,090,731
28-29	2,955,000	135,825			1,200,000	787,437			1,140,000	925,500	1,130,000	1,057,281
29-30	3,050,000	45,750			1,200,000	762,687			1,175,000	890,775	1,165,000	1,022,856
30-31					1,250,000	731,187			1,215,000	854,925	1,200,000	986,631
31-32					1,275,000	693,312			1,250,000	817,950	1,240,000	947,731
32-33					1,325,000	654,312			1,285,000	779,925	1,285,000	905,897
33-34					1,350,000	614,187			1,325,000	740,775	1,330,000	860,938
34-35					1,400,000	572,937			1,365,000	700,425	1,375,000	813,600
35-36					1,450,000	535,625			1,410,000	658,800	1,420,000	766,463
36-37					1,475,000	500,875			1,450,000	615,900	1,470,000	719,500
37-38					1,525,000	459,563			1,495,000	571,725	1,520,000	669,963
38-39					1,550,000	417,313			1,540,000	526,200	1,570,000	617,819
39-40					1,600,000	377,937			1,590,000	479,250	1,625,000	562,888
40-41					1,650,000	335,250			1,635,000	430,875	1,685,000	504,963
41-42					1,675,000	289,531			1,685,000	381,075	1,745,000	444,938
42-43					1,725,000	242,781			1,740,000	329,700	1,805,000	382,813
43-44					1,775,000	194,656			1,790,000	275,631	1,870,000	318,500
44-45					1,825,000	142,875			1,850,000	218,756	1,935,000	251,913
45-46					1,900,000	87,000			1,910,000	160,006	2,005,000	182,963
46-47					1,950,000	29,250			1,970,000	98,151	2,075,000	111,563
47-48									2,035,000	33,069	2,150,000	37,625
48-49												
49-50												
50-51												
51-52												
Total	$ 21,530,000	$ 2,876,425	$ 1,675,000	$ 84,375	$ 35,700,000	$ 13,723,093	$ 15,225,000	$ 1,843,003	$ 36,885,000	$ 16,869,913	$ 37,550,000	$ 19,353,056

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Supplemental Information - Schedule of Debt Maturities by Fiscal Year
June 30, 2022

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	KK-2020		LL-2021		MM-2022		NN-2022		Total		Grand Total (P + I)
FY	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	
22-23	1,215,000	630,875	4,610,000	3,136,450	-	1,310,396	-	743,312	14,040,000	10,578,607	24,618,607
23-24	1,270,000	568,750	4,855,000	2,899,825	765,000	1,930,225	-	1,173,650	15,470,000	10,946,274	26,416,274
24-25	1,335,000	503,625	5,015,000	2,653,075	805,000	1,890,975	825,000	1,153,025	16,045,000	10,254,224	26,299,224
25-26	1,400,000	435,250	2,745,000	2,459,075	850,000	1,849,600	845,000	1,111,275	14,235,000	9,604,974	23,839,974
26-27	1,460,000	363,750	2,890,000	2,318,200	895,000	1,805,975	865,000	1,068,525	14,820,000	8,977,524	23,797,524
27-28	1,525,000	289,125	2,995,000	2,171,075	940,000	1,760,100	885,000	1,024,775	15,385,000	8,372,622	23,757,622
28-29	1,595,000	211,125	3,315,000	2,013,325	990,000	1,711,850	935,000	979,275	13,260,000	7,821,618	21,081,618
29-30	1,675,000	129,375	3,465,000	1,843,825	1,040,000	1,661,100	965,000	931,775	13,735,000	7,288,143	21,023,143
30-31	1,750,000	43,750	2,525,000	1,694,075	1,090,000	1,607,850	1,025,000	882,025	10,055,000	6,800,443	16,855,443
31-32			3,495,000	1,543,575	1,150,000	1,551,850	1,050,000	830,150	9,460,000	6,384,568	15,844,568
32-33			2,850,000	1,384,950	1,205,000	1,492,975	1,110,000	776,150	9,060,000	5,994,209	15,054,209
33-34			2,845,000	1,242,575	1,270,000	1,431,100	1,170,000	725,000	9,290,000	5,614,575	14,904,575
34-35			2,845,000	1,100,325	1,335,000	1,365,975	1,190,000	677,800	9,510,000	5,231,062	14,741,062
35-36			2,845,000	972,300	1,395,000	1,304,700	1,240,000	629,200	9,760,000	4,867,088	14,627,088
36-37			2,845,000	858,500	1,450,000	1,247,800	1,285,000	578,700	9,975,000	4,521,275	14,496,275
37-38			2,845,000	744,700	1,510,000	1,188,600	1,335,000	526,300	10,230,000	4,160,851	14,390,851
38-39			2,845,000	630,900	1,575,000	1,126,900	1,380,000	472,000	10,460,000	3,791,132	14,251,132
39-40			2,845,000	517,100	1,640,000	1,062,600	1,425,000	415,900	10,725,000	3,415,675	14,140,675
40-41			2,845,000	403,300	1,705,000	995,700	1,475,000	357,900	10,995,000	3,027,988	14,022,988
41-42			2,845,000	289,500	1,775,000	926,100	1,520,000	298,000	11,245,000	2,629,144	13,874,144
42-43			2,845,000	175,700	1,845,000	853,700	1,590,000	235,800	11,550,000	2,220,494	13,770,494
43-44			1,485,000	89,100	1,920,000	778,400	1,640,000	171,200	10,480,000	1,827,487	12,307,487
44-45			1,485,000	29,700	2,000,000	700,000	1,710,000	104,200	10,805,000	1,447,444	12,252,444
45-46					2,080,000	618,400	1,750,000	35,000	9,645,000	1,083,369	10,728,369
46-47					2,165,000	533,500			8,160,000	772,464	8,932,464
47-48					2,255,000	445,100			6,440,000	515,794	6,955,794
48-49					2,350,000	353,000			2,350,000	353,000	2,703,000
49-50					2,450,000	257,000			2,450,000	257,000	2,707,000
50-51					2,550,000	157,000			2,550,000	157,000	2,707,000
51-52					2,650,000	53,000			2,650,000	53,000	2,703,000
Total	$ 13,225,000	$ 3,175,625	$ 70,180,000	$ 31,171,150	$ 45,650,000	$ 33,971,471	$ 27,215,000	$ 15,900,937	$ 304,835,000	$ 138,969,048	$ 443,804,048

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Supplemental Information - Schedule of Changes in Long-term Debt by Individual Issue
June 30, 2022

Description of Indebtedness	Original Amount of Issue	Interest Rate	Date of Issue	Last Maturity Date	Outstanding Balance 7/1/2021	Issued During Period	Paid/Matured During Period	Refunded During Period	Outstanding Balance 6/30/2022
Business-Type Activities									
BONDS PAYABLE									
Payable through Electric Fund									
Revenue Bond Refunding, Series AA-2012	36,815,000	3.0-5.0	04/20/12	07/01/29	$ 3,270,000	$	$ 3,270,000	$	$ -
Revenue Bond, Series BB-2012	35,000,000	3.0-4.0	12/18/12	07/01/42	825,000		825,000		-
Revenue Bond Refunding, Series CC-2013	9,660,000	3.0-4.0	03/15/13	07/01/31	540,000		540,000		-
Revenue Bond, Series DD-2014	40,000,000	2.0-4.0	09/18/14	07/01/44	875,000		875,000		-
Revenue Bond Refunding, Series EE-2015	28,550,000	2.0-5.0	05/01/15	07/01/29	23,765,000		2,235,000		21,530,000
Revenue Bond, Series FF-2015	35,000,000	2.0-5.0	05/20/15	07/01/45	31,375,000		800,000	28,900,000	1,675,000
Revenue Bond, Series GG-2016	40,000,000	2.0-5.0	08/05/16	07/01/46	36,650,000		950,000		35,700,000
Revenue Bond Refunding, Series HH-2017	23,445,000	2.5-5.0	04/07/17	07/01/27	17,420,000		2,195,000		15,225,000
Revenue Bond, Series II-2017	40,000,000	3.0-5.0	09/15/17	07/01/47	37,730,000		845,000		36,885,000
Revenue Bond, Series JJ-2018	39,995,000	3.0-5.0	09/14/18	07/01/47	38,405,000		855,000		37,550,000
Revenue Bond Refunding, Series KK-2020	14,380,000	5.0	05/22/20	07/01/30	14,380,000		1,155,000		13,225,000
Revenue Bond Refunding, Series LL-2021	70,180,000	4.0-5.0	04/19/21	07/01/44	70,180,000		-		70,180,000
Revenue Bond, Series MM-2022	45,650,000	4.0-5.0	04/29/22	07/01/51	-	45,650,000	-		45,650,000
Revenue Bond Refunding, Series NN-2022	27,215,000	4.0-5.0	05/13/22	07/01/45	-	27,215,000	-		27,215,000
					$ 275,415,000	$ 72,865,000	$ 14,545,000	$ 28,900,000	$ 304,835,000

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Supplemental Information - Schedule of Changes in Lease Liabilities
June 30, 2022

Description of Indebtedness	Original Amount of Issue	Interest Rate	Date of Issue	Maturity Date	Outstanding 7/1/2021	Issued During Period	Paid and/or Matured During Period	Remeasure-ments	Outstanding 6/30/2022
Lease Liabilities									
Payable through Electric Division									
Centriworks	$ 21,582	3.88%	11/1/2020	10/31/2023	$ 21,582	$ -	$ (9,011)	$ -	$ 12,571
Coal Creek Ventures	14,736	3.88%	7/1/2020	9/30/2035	14,736	-	(817)	-	13,919
James H. Benson/Manki 1 Investments	145,079	3.88%	7/1/2020	5/31/2027	28,743	145,079	(30,938)	-	142,884
Pinnacle Towers	23,781	3.88%	7/1/2020	6/30/2027	23,781	23,175	(23,286)	-	23,670
R&S Logistics (Sublease)	1,835,035	3.88%	7/1/2020	3/31/2027	83,373	1,835,035	(238,700)	-	1,679,708
Ricoh Americas	7,877	3.88%	7/1/2020	7/31/2022	7,877	-	(7,259)	-	618
RJ Young Company	24,353	3.88%	7/1/2020	6/30/2026	24,353	-	(5,739)	-	18,614
Spectrasite	5,886	3.88%	7/1/2020	1/31/2022	5,886	-	(5,886)	-	-
Volunteer Christian Television	10,036	3.88%	7/1/2020	8/31/2022	-	10,036	-	-	10,036
White Realty	15,681	3.88%	7/1/2020	6/30/2041	15,681	15,681	(15,681)	-	15,681
Total Lease Liabilities					$ 226,012	$ 2,029,006	$ (337,316)	$ -	$ 1,917,701

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Insurance in Force
June 30, 2022
(Unaudited)

Insurance coverage is for KUB as a consolidated entity.

Crime
Covers losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $5,000,000; $250,000 retention.

Directors' and Officers' Liability Insurance
Covers KUB personnel appropriately authorized to make decisions on behalf of KUB (including but not limited to Commissioners, President and CEO, Senior Vice Presidents, Vice Presidents, and Directors) for wrongful acts. Limits of coverage - $20,000,000; $500,000 corporate deductible, $0 individual deductible.

Employment Practices Liability
Coverage for costs related to actual or alleged employment practices violations for amounts exceeding specified amount ($500,000). Limits of coverage - $10,000,000.

Fiduciary
Covers losses resulting from wrongful acts related to KUB's Pension, 401(k), OPEB Trust funds, and Medical Plan. Limits of coverage - $10,000,000; $150,000 deductible.

Pollution Legal Liability
New conditions coverage for losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - $15,000,000.

Property Insurance
This coverage provides protection of KUB's property for fire, extended coverage, vandalism and malicious mischief, and coverage on boilers and machinery. Also included are flood and earthquake damage and mechanical failure. Limits of coverage - $250,000,000 per occurrence (subject to certain sublimits); $2,500,000 deductible per occurrence.

Travel Accident
Covers losses related to employees' business travel. Limits of coverage - $3,000,000 aggregate.

Excess Insurance for General Liability
As a governmental entity, KUB's liability is limited under the Tennessee Governmental Tort Liability Act (TCA §29-20-403). KUB is self-insured for the first $700,000 of any accident and has insurance of $4,300,000 above this retention.

Excess Insurance for Workers' Compensation
Covers all losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - Statutory; stop loss coverage applies for aggregate losses over $5,000,000.

Employee Health Plan Stop Loss Coverage
KUB's employee health plan is self-funded. KUB has purchased stop loss insurance, which covers KUB's exposure to annual expenses in excess of $600,000 per individual participant.

Cyber Security Liability
Covers losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $3,000,000; $500,000 retention.

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class		Base Charge			Number of Customers
Residential		Customer Charge:	$22.10 per month, less Hydro Allocation Credit: $1.60 per month.		190,269
		Energy Charge:	Summer Period	$0.10392 per kWh per month.	
			Winter Period	$0.10351 per kWh per month.	
			Transition Period	$0.10351 per kWh per month.	
Residential Time of Use Pilot Program		Customer Charge:	$22.10 per month, less Hydro Allocation Credit: $1.60 per month.		35
		Energy Charge:	Onpeak	$0.21071 per kWh per month for all metered onpeak kWh	
			Offpeak	$0.07927 per kWh per month for all metered offpeak kWh	
Commercial/ Industrial	**A. 1.**	If (a) the higher of (i) the customer's currently effective contract demand, if any, or (ii) its highest billing demand during the latest 12-month period is not more than 50 kWh, and (b) customer's monthly energy takings for any month during such period do not exceed 15,000 kWh:			20,487
		Customer Charge:	$30.00 per delivery point per month.		
		Energy Charge:	Summer Period	$0.12400 per kWh per month.	
			Winter Period	$0.12359 per kWh per month.	
			Transition Period	$0.12359 per kWh per month.	
	2.	If (a) the higher of (i) the customer's currently effective contract demand or (ii) its highest billing demand during the latest 12-month period is greater than 50 kW but not more than 1,000 kW, or (b) if the customer's billing demand is less than 50 kW and its energy takings for any month during such period exceed 15,000 kWh:			2,514
		Customer Charge:	$98.00 per delivery point per month.		
		Demand Charge:	First 50 kW of billing demand per month, no demand charge.		
			Excess over 50 kW of billing demand per month, at		
			Summer Period	$15.55 per kW.	
			Winter Period	$14.76 per kW.	
			Transition Period	$14.76 per kW.	
		Energy Charge:	Summer Period	First 15,000 kWh per month at $0.15246 per kWh	
				Additional kWh per month at $.07268 per kWh.	
			Winter Period	First 15,000 kWh per month at $0.15205 per kWh	
				Additional kWh per month at $.07268 per kWh.	
			Transition Period	First 15,000 kWh per month at $0.15205 per kWh	
				Additional kWh per month at $.07268 per kWh.	

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class				Number of Customers
3.	If (a) the higher of the customer's currently effective contract demand or (b) its highest billing demand during the latest 12-month period is greater than 1,000 kW:			38
	Customer Charge:	$269.00 per delivery point per month.		
	Demand Charge:	Summer Period	First 1,000 kW of billing demand per month, at $16.32 per kW. Excess over 1,000 kW of billing demand per month, at $16.99 per kW, plus an additional $16.99 per kW per month for each kW, if any, of the amount by which the customer's billing demand exceeds the higher of 2,500 kW or its contract demand.	
		Winter Period	First 1,000 kW of billing demand per month, at $15.56 per kW. Excess over 1,000 kW of billing demand per month, at $16.23 per kW, plus an additional $16.23 per kW per month for each kW, if any, of the amount by which the customer's billing demand exceeds the higher of 2,500 kW or its contract demand.	
		Transition Period	First 1,000 kW of billing demand per month, at $15.56 per kW. Excess over 1,000 kW of billing demand per month, at $16.23 per kW, plus an additional $16.23 per kW per month for each kW, if any, of the amount by which the customer's billing demand exceeds the higher of 2,500 kW or its contract demand.	
	Energy Charge:	Summer Period	$0.08289 per kWh per month.	
		Winter Period	$0.08289 per kWh per month.	
		Transition Period	$0.08289 per kWh per month.	

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class					Number of Customers
Commercial/ Industrial Time of Use Pilot Program	**A. 1.**	If the higher of (i) the customer's currently effective contract demand, if any, or (ii) its highest billing demand during the latest 12-month period is not more than 50 kWh:			202
		Customer Charge:	$30.00 per delivery point per month.		
		Demand Charge:	$2.06 per kW of maximum billing demand per month.		
		Energy Charge:	Onpeak	$0.21815 per kWh per month for all metered onpeak kWh	
			Offpeak	$0.08671 per kWh per month for all metered offpeak kWh	
	2A.	If the higher of (i) the customer's currently effective contract demand or (ii) its highest billing demand during the latest 12-month period is greater than 50 kW but not more than 100 kW:			26
		Customer Charge:	$98.00 per delivery point per month.		
		Demand Charge:	$4.61 per kW of maximum billing demand per month.		
		Energy Charge:	Onpeak	$0.23090 per kWh per month for all metered onpeak kWh	
			Offpeak	$0.09946 per kWh per month for all metered offpeak kWh	
	2B.	If the higher of (i) the customer's currently effective contract demand or (ii) its highest billing demand during the latest 12-month period is greater than 100 kW but not more than 1,000 kW:			28
		Customer Charge:	$114.00 per delivery point per month.		
		Demand Charge:	$6.79 per kW of maximum billing demand per month.		
		Energy Charge:	Onpeak	$0.20716 per kWh per month for all metered onpeak kWh	
			Offpeak	$0.07572 per kWh per month for all metered offpeak kWh	

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class		Base Charge			Number of Customers
Commercial/ Industrial	**B.**	This rate shall apply to the firm electric power requirements where a customer's currently effective contract demand is greater than 5,000 kW but not more than 15,000 kW:			3
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.76 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$6.24 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$17.00 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$9.80 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$6.24 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$16.04 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$9.80 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$6.24 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$16.04 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.09508 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07040 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03615 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03278 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.08383 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07259 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03615 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03278 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.07009 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07009 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03615 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03278 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02633 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class		Base Charge			Number of Customers
Commercial/ Industrial	**C.**	This rate shall apply to the firm electric power requirements where a customer's currently effective contract demand is greater than 15,000 kW but not more than 25,000 kW:			1
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.76 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$6.11 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$16.87 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$9.80 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$6.11 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$15.91 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$9.80 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$6.11 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$15.91 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.09499 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07031 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03606 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03269 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.08374 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07250 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03606 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03269 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.07000 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07000 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03606 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03269 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02633 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class		Base Charge			Number of Customers
Commercial/ Industrial	**D.**	This rate shall apply to the firm electric power requirements where a customer's currently effective contract demand is greater than 25,000 kW:			1
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.76 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$5.98 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$16.74 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$9.80 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$5.98 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$15.78 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$9.80 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$5.98 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$15.78 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.09493 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07025 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03487 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03263 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.08368 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07244 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03487 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03263 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.06994 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06994 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03487 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03263 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02633 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
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(Unaudited)

Rate Class		Base Charge			Number of Customers
Commercial/ Industrial Time of Use	**A.**	This rate shall apply to the firm electric power requirements where a customer's currently effective contract demand is greater than 1,000 kW but not more than 5,000 kW:			8
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.96 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$7.20 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$18.16 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$10.00 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$7.20 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$17.20 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$10.00 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$7.20 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$17.20 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.12029 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.08676 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.04424 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.04121 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.10499 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.08973 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.04424 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.04121 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.09092 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.09092 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.04424 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.04121 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02715 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
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Rate Class		Base Charge			Number of Customers
Manufacturing	**B.**	This rate shall apply to the firm electric power requirements where (a) a customer's currently effective contract demand is greater than 5,000 kW but not more than 15,000 kW and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.			2
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.14 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$3.26 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$13.40 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$9.18 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$3.26 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$12.44 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$9.18 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$3.26 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$12.44 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.08753 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06277 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03336 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03084 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.07624 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06499 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03336 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03084 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.06584 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06584 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03336 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03084 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02625 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class		Base Charge			Number of Customers
Manufacturing	**C.**	This rate shall apply to the firm electric power requirements where (a) a customer's currently effective contract demand is greater than 15,000 kW but not more than 25,000 kW and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.			1
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.14 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$3.14 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$13.28 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$9.18 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$3.14 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$12.32 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$9.18 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$3.14 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$12.32 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.08647 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06170 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03481 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03481 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.07517 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06391 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03481 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03481 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.06477 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06477 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03481 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03481 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02625 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
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(Unaudited)

Rate Class		Base Charge			Number of Customers
Manufacturing	**D.**	This rate shall apply to the firm electric power requirements where (a) a customer's currently effective contract demand is greater than 25,000 kW and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.			2
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.14 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$2.71 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$12.85 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$9.18 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$2.71 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$11.89 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$9.18 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$2.71 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$11.89 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.08304 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.05828 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03196 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03137 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.07173 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06047 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03196 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03137 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.06134 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06134 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.03196 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03137 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02625 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
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(Unaudited)

Rate Class		Base Charge			Number of Customers
Manufacturing Time of Use	**A.**	This rate shall apply to the firm electric power requirements where (a) a customer's currently effective contract demand is greater than 1,000 kW but not more than 5,000 kW and (b) the major use of electricity is for activities conducted at the delivery point serving that customer which are classified with a 2-digit Standard Industrial Classification Code between 20 and 39, inclusive, or classified with 2002 North American Industry Classification System (NAICS) code 5181, or 2007 NAICS codes 5182, 522320, and 541214.			5
		Customer Charge:	$1,500 per delivery point per month.		
		Administrative Charge:	$700 per delivery point per month.		
		Demand Charge:			
		Summer Period	Onpeak Demand	$10.25 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$5.48 per kW per month of the customer's maximum billing demand, plus	
			Excess Demand	$15.73 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Winter Period	Onpeak Demand	$9.28 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$5.48 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$14.76 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	
		Transition Period	Onpeak Demand	$9.28 per kW per month of the customer's onpeak billing demand, plus	
			Maximum Demand	$5.48 per kW per month of the customer's maximum billing demand plus	
			Excess Demand	$14.76 per kW per month for each kW of the amount, if any, by which (1) the customer's onpeak billing demand exceeds its onpeak contract demand or (2) the customer's offpeak billing demand exceeds its offpeak contract demand, whichever is higher.	

Energy Charge:		
Summer Period	Onpeak	$0.09494 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.06992 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.04247 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03992 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Winter Period	Onpeak	$0.08352 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07215 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.04247 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03992 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.
Transition Period	Onpeak	$0.07304 per kWh per month for all metered onpeak kWh, plus
	Offpeak: Block 1	$0.07304 per kWh per month for the first 200 hours use of onpeak metered demand multiplied by the ratio of offpeak energy to toal energy, plus
	Block 2	$0.04247 per kWh per month for the next 200 hours use of onpeak metered demand multiplied by the ratio of offpeak enegy to total energy, plus
	Block 3	$0.03992 per kWh per month for the hours use of onpeak metered demand in excess of 400 hours multiplied by the ratio of offpeak energy to total energy.

For the Summer Period, Winter Period, and Transition Period, Offpeak Block 1 energy rates less fuel rate of $0.02715 per kWh per month shall be applied to the portion, if any, of the minimum offpeak energy takings amount that is greater than the metered energy.

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
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(Unaudited)

Rate Class	Base Charge	Number of Customers
Outdoor Lighting		
	Part A - Charges for Street and Park Lighting Systems, Traffic Signal Systems, and Athletic Field Lighting Installations	70
	Energy Charge: Summer Period $0.09494 per kWh per month.	
	Winter Period $0.09494 per kWh per month.	
	Transition Period $0.09494 per kWh per month.	
	Facility Charge: The annual facility charge shall be 16.45 percent of the installed cost to KUB's electric system of the facilities devoted to street and park lighting service specified in this Part A. Such installed cost shall be recomputed on July 1 of each year, or more often if substantial changes in the facilities are made. Each month, one-twelfth of the then total annual facility charge shall be billed to the customer. If any part of the facilities has not been provided at the electric system's expense, or if the installed cost of any portion thereof is reflected on the books of another municipality or agency or department, the annual facility charge shall be adjusted to reflect properly the remaining cost to be borne by the electric system.	
	Customer Charge: $2.50.	
	Part B - Charges for Outdoor Lighting for Individual Customers	7,892

Charges Per Fixture Per Month

a.	**Type of Fixture**	**(Watts)**	**(Lumens)**	**Rated kWh**	**Facility Charge**	**Total Lamp Charge**
	Mercury Vapor or Incandescent*	175	7,650	70	$ 5.14	$ 11.79
		400	19,100	155	7.18	21.90
		1000**	47,500	378	11.49	47.38
	High Pressure Sodium	100	8,550	42	5.14	9.13
		250	23,000	105	6.10	16.07
		400	45,000	165	7.18	22.85
		1000**	126,000	385	11.49	48.04
	Decorative	100	8,550	42	5.86	9.85

* Mercury Vapor and Incandescent fixtures not offered for new service.

** 1,000 watt fixtures not offered for new service.

b. Energy Charge: For each lamp size under **a.** above, $0.09494 per rated kWh per month.

Additional pole charge: $5.18 per pole.

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
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(Unaudited)

Rate Class	Base Charge	Number of Customers
LED Outdoor Lighting		17,063

Charges Per Fixture Per Month

a.	Lamp Size	Rated kWh	Facility Charge	Total Lamp Charge
	100 WE	21	$ 5.91	$ 7.90
	250 WE	58	7.32	12.83
	400 WE	79	10.05	17.55

b. Energy Charge: For each lamp size under **a.** above, $0.09494 per rated kWh per month.
Additional pole charge: $5.00 per pole.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Electric Division
Statistical Information - Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class	Base Charge			Number of Customers
Electric Vehicle Charging	This rate shall exclusively apply to separately metered charging stations for electric vehicles where the charging station's demand is greater than 50 kW but not more than 5,000 kW.			1
	Customer Charge:	$100.00 per delivery point per month.		
	Energy Charge:	Onpeak	$0.15115 per kWh per month for all metered onpeak kWh, plus	
		Offpeak	$0.15115 per kWh per month for all metered offpeak kWh, plus	
	Distribution Delivery Charge:	$0.08219 per total metered kWh per month.		

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Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

Board of Commissioners
Electric Division of the Knoxville Utilities Board
Knoxville, Tennessee

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*), the financial statements of the Electric Division (the Division) of the Knoxville Utilities Board, a component unit of the City of Knoxville, Tennessee, as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise the Division's basic financial statements, and have issued our report thereon dated October 25, 2022.

Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Division's internal control over financial reporting (internal control) as a basis for designing procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Division's internal control. Accordingly, we do not express an opinion on the effectiveness of the Division's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Division's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

Board of Commissioners
Electric Division of the Knoxville Utilities Board
Knoxville, Tennessee

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Division's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Division's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Division's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Coulter & Justus, P.C.

Knoxville, Tennessee
October 25, 2022

Knoxville Utilities Board Electric Division
Schedule of Findings and Questioned Costs
June 30, 2022

Section I -- Summary of Auditor's Results

Financial Statements

Type of auditors' report issued:	Unmodified
Internal control over financial reporting:	
Material weakness(es) identified?	No
Significant deficiency(s) identified not considered to be material weaknesses?	None reported
Noncompliance material to financial statements:	No

Section II -- Financial Statement Findings
None reported.

Section III – Findings Required by the State of Tennessee Audit Manual
None reported.

Section IV -- Summary Schedule of Prior Year Audit Findings
Not applicable as there were no prior year findings reported.

APPENDIX C-1

THE WASTEWATER DIVISION

THE WASTEWATER DIVISION

INTRODUCTION

The Wastewater Division was established June 16, 1953 as a separate department of the City of Knoxville. On November 4, 1986, voters in the City elected to transfer operation of the City's Wastewater Division to KUB, effective July 1, 1987. While the Wastewater Division is a self-sustained financial entity, the operations of both the water distribution and wastewater collection and treatment systems have been merged to achieve operating efficiencies.

The wastewater system provides collection and treatment throughout the City and portions of East Knox County.

WASTEWATER SYSTEM

When established, the wastewater system had two treatment plants. The two treatment plants and the lines were adequate to serve the needs of the original City. However, the annexation of additional land and the needs of the population created a demand beyond the capacity of the system.

The system embarked upon a significant expansion program throughout the 1960s and 1970s. This included the acquisition of the sewage facilities of the Fountain City Sanitary District. In 1982, the City completed construction of its 40 million gallons per day (MGD) treatment facility at the mouth of Third Creek. In 1985 the capacity of the Fourth Creek Treatment Plant was expanded.

In July 1987, as a result of an earlier public referendum, the operation of the wastewater system was transferred from the City to KUB. In June of 1988, the East Knox Utility District was acquired by KUB. KUB acquired the Northeast Knoxville Utility District wastewater facilities in 2002. The present KUB wastewater system consists of four treatment plants, 79 pump stations, and approximately 1,330 miles of service mains. The Kuwahee Treatment Plant is located at the mouth of Third Creek and serves the First Creek, Second Creek, Williams Creek, South Knox, and Knob Creek drainage areas and that portion of the Third Creek area within the original City boundaries. Secondly, the Loves Creek Treatment Plant is located at the mouth of Loves Creek and serves this entire drainage area. The Fourth Creek Treatment Plant is located at the mouth of Fourth Creek and serves the Fourth Creek drainage area, and that portion of the Third Creek area outside the original city limits. The Eastbridge Treatment Plant, located on the Holston River, serves the Lyons Creek Drainage Basin and the Eastbridge Industrial Park.

In addition to the service areas outlined above, service is provided to other drainage basins through an agreement with West Knox Utility District. At the present time, the quantities of flow received from this utility district are small in comparison to total system flows.

As KUB returned to normal operations this fiscal year, supply chain issues and workforce shortages continued to impact capital projects. While some projects were delayed, others were held until supplies were more readily available. However, KUB's ability to serve its wastewater

customers has remained strong throughout.

KUB has completed all work associated with the 2005 Federal Consent Decree. A request for Consent Decree termination was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

Total flows through the wastewater system for the twelve months ended June 30, 2022 were 13.4 billion gallons. Average daily flow through the system was 36.8 MGD. The wastewater system presently provides service to approximately 73,377 customers.

Century II is KUB's proactive long-range program to improve and maintain the electric, natural gas, water, and wastewater systems for its customers. It includes maintenance and asset replacement strategies for each system and establishes sustainable replacement cycles. Century II moves KUB into its second century of service by improving each system through sound planning, resource allocation, and continued, but accelerated, investment.

In May 2017, a new Century II funding resolution was adopted by the KUB Board to express the continued commitment to funding Century II programs for the next ten years. The funding will be achieved through a combination of rate increases and debt issues supplemented by cost savings and new revenue from net customer additions.

In June 2017, the Board approved three wastewater rate increases to support the Century II program. The three approved wastewater rate increases went into effect July 2017, July 2018, and July 2019, generating $4.3 million, $4.2 million, and $4.5 million in additional annual Wastewater Division revenue, respectively.

In June 2022, the Board approved the next phase of wastewater rate increases to support the Century II program. The three approved 4 percent wastewater rate increases are effective July 2022, July 2023, and July 2024, and will generate $3.9 million, $4 million, and $4.2 million in additional annual Wastewater Division revenue, respectively.

In fiscal year 2022, KUB rehabilitated or replaced 8.9 miles of wastewater system mains, while staying on track with Century II goals and within the Wastewater Division's total capital budget.

During fiscal year 2022, KUB adopted GASB Statement No. 87, Leases (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

FEDERAL CONSENT DECREE

In February 2005, a Consent Decree was entered into federal court regarding the operation of KUB's wastewater system. Under the terms of the Consent Decree, the remediation of identified sanitary sewer overflows (SSOs) on KUB's wastewater system had to be completed by June 30,

2016. KUB completed all the requirements of the Consent Decree for the collection system two years in advance of the deadline.

The Consent Decree also required KUB to perform an evaluation of the wet weather performance and capacity of its wastewater treatment plants. In July 2007, KUB submitted a Composite Correction Plan (CCP) for its wastewater treatment plants to EPA for review. The development and filing of the CCP was a requirement of the federal order of February 2005. The CCP includes recommended improvements to KUB's Kuwahee and Fourth Creek treatment plants to address wet weather capacity issues noted in prior assessments. The EPA approved the CCP in January 2009 including a recommended schedule of plant improvements that extends beyond the expiration date of the original Consent Decree. An amendment to the Consent Decree incorporating and establishing this schedule was agreed to by all parties and was entered on June 23, 2009. The purpose of the Amendment is to allow KUB to complete a portion of work outlined in the CCP after the Consent Decree deadline of June 30, 2016. The CCP provided for a biologically enhanced high-rate clarification (the BEHRC) secondary treatment system to be installed at the Fourth Creek treatment plant and at the Kuwahee treatment plant. KUB successfully completed the installation of the BEHRC system at the Fourth Creek treatment plant in the 2018 fiscal year. The project at the Kuwahee treatment plant was completed this fiscal year. The total cost of the CCP improvements at the Fourth Creek treatment plant and Kuwahee treatment plant was approximately $120 million.

KUB's funding plan for the Consent Decree included long-term bonds and a series of rate increases phased in over the term of the order. Bond proceeds fund all types of wastewater capital projects, the majority of which are related to the Consent Decree. As of June 30, 2022, the Wastewater Division had issued $594.8 million in bonds to fund wastewater system capital improvements since the inception of the Consent Decree. The Board approved two 50 percent rate increases, which went into effect in April 2005 and January 2007. The Board also approved an 8 percent rate increase, which was effective in September 2008, two 12 percent rate increases, which were effective in April 2011 and October 2012, three 6 percent rate increases, which were effective October 2014, October 2015, and October 2016, three 5 percent rate increases, which were effective July 2017, July 2018, and July 2019, and three 4 percent rate increases, which are effective July 2022, July 2023, and July 2024. KUB anticipates additional bond issues and rate increases over the next decade to help fund wastewater capital improvements.

KUB successfully completed the first cycle of Maintenance Operation Management (MOM) requirements one year before the deadline by inspecting manholes and gravity mains, smoke testing gravity mains, performing required inspections of pump stations and the related force mains, and completing all Corrective Action Plan/Engineering Report (CAP/ER) projects. KUB initiated the second MOM cycle that continues to focus on the prevention of SSOs. As part of the Century II initiative, formally known as the PACE10 program, KUB has installed storage tanks providing 34 million gallons of wastewater storage to control wet weather overflows and rehabilitated or replaced 432 miles of collection system pipe. KUB also continues to maintain a proactive operations and maintenance plan for the wastewater collection system including inspection, grease control, and private lateral enforcement. The result of the PACE10/Century II initiative has been an 80 percent reduction in SSOs.

As of June 30, 2022, the Wastewater Division had completed its 18th full year under the

Consent Decree, spending $579.8 million on capital investments to meet Consent Decree requirements.

KUB's request for termination of the Consent Decree was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities**.**

PENSION PLAN

Description of Plan

The Knoxville Utilities Board Pension Plan (the Plan) is a governmental plan as defined by the Employee Retirement Income Security Act of 1974 (ERISA or the Act), is not subject to any of the provisions of the Act, and was revised January 1, 2020, to include all prior approved amendments. The Plan is a single-employer contributory, defined benefit pension plan established by Knoxville Utilities Board Resolution No. 980 dated February 18, 1999, effective July 1, 1999, as authorized by the Charter of the City of Knoxville §1107(J). KUB Board Resolution No. 979, effective July 1, 1999, as amended by Resolution No. 1037, establishing the KUB Retirement System, was amended effective June 18, 2020, to amend the term "Trustee" to include both custodians and/or trustees, in order to provide flexibility should KUB choose to change from its current Pension trustee. The Plan is designed to provide retirement, disability, and death benefits to KUB employees. KUB administers the Plan through an Administrative Committee consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Plan involving costs not approved in the operating budget must be adopted by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Plan may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The Plan issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2011, KUB closed the Plan such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and to accrue benefits under the Plan.

Participants in the Plan consisted of the following as of December 31:

	2021	2020
Inactive plan members:		
Terminated vested participants	12	11
Retirees and beneficiaries	600	593
Active plan members	478	518
Total	1,090	1,122

Retirement Benefits

The Plan provides three benefit arrangements for KUB participants, retirees, and beneficiaries.

The Plan provides pension benefits through the Career Equity Program ("CEP") for eligible employees hired on or after January 1, 1999, and for eligible former "City System Plan A" participants who elected CEP coverage as of July 1, 1999. The guaranteed pension benefit payable to a participant who has completed five or more years of service (or reached the normal retirement date, if earlier) upon termination of KUB employment shall be a lump sum equal to the participant's average compensation times their benefit percentage, as defined in the Plan document, or an annuity may be chosen by the participant.

In addition, the Plan provided retirement benefits through "Plan A" for former City System Plan A participants who elected not to participate in the CEP. Plan A is a closed plan and is not available to KUB employees hired after July 1, 1999. Plan A provides for early retirement benefits with 25 years of service and normal retirement benefits at age 62 or later. Benefits provided to Plan A participants include several different forms of monthly annuity payments.

The Plan also provides retirement benefits through "Plan B" for former "City System Plan B" participants. Plan B is a closed plan providing benefits to participants not covered by Social Security. Benefits provided to Plan B participants include several different forms of monthly annuity payments available to participants.

Effective January 1, 2012, KUB began to provide for additional monthly supplements, which are not subject to cost of living adjustments, to certain former employees and surviving dependents of former employees who are eligible for and have elected coverage under the KUB retiree medical plan and are eligible for Medicare. This was done to compensate for the elimination of drug coverage under the KUB retiree medical plan and to assist such individuals in obtaining prescription drug coverage under Medicare Part D.

Contributions

Participation in Plan A requires employee contributions of 3% of the first $4,800 of annual earnings and 5% of annual earnings in excess of $4,800. KUB contributions are determined by the enrolled actuary of the Plan and equal the amount necessary to provide the benefits under the Plan determined by the application of accepted actuarial methods and assumptions. The method of funding shall be consistent with Plan objectives.

Plan Funding

KUB maintains a Funding Policy for the Plan in accordance with Tennessee State Law. The primary goal of the Policy is to document the method KUB has adopted to provide assurance that future KUB and employee contributions and current Plan assets will be sufficient to fund all benefits expected to be paid to current active, inactive and retired Plan participants and their beneficiaries. Per the Funding Policy, KUB fully funds its annual Actuarially Determined Contribution.

Investments

The Plan's investments are held by State Street Bank and Trust Company (the "Trustee"). The Plan's policy in regard to the allocation of invested assets is established by the Retirement System Investment Committee and approved by the KUB Board of Commissioners and may only be amended by the KUB Board of Commissioners. It is the policy of the Retirement System Investment Committee 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 Plan's adopted asset allocation policy as of December 31, 2021:

Asset Class	Target Allocation
Domestic equity – large cap	20% - 50%
Domestic equity – mid cap	0% - 15%
Domestic equity – small cap	0% - 15%
Domestic equity – convertible securities	0% - 10%
Non-U.S. equity	0% - 20%
Real estate equity	0% - 10%
Fixed income – aggregate bonds	5% - 25%
Fixed income – long-term bonds	10% - 25%
Cash and deposits	0% - 5%

Contributions of $3,665,168 and $3,167,680 for 2020 and 2019, respectively, were made during the Plan sponsor's fiscal years ended June 30, 2022, and 2021, respectively. Of these amounts, $638,776 and $696,890 are attributable to the Wastewater Division. The fiscal year 2022 contribution was determined as part of the January 1, 2020, valuation using the Individual Entry Age Normal funding method. The objective under this method is to fund each participant's benefits under the Plan as payments which are level as a percentage of salary, starting on the original participation date (employment date) and continuing until the assumed retirement, termination, disability, or death.

The Pension Plan actuarial valuation resulted in an actuarially determined contribution of $2,624,373 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2022, measurement date. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,108,147 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2023, measurement date. For the Plan year beginning January 1, 2022, the Plan's actuarial funded ratio is 112.01 percent, and the market value funded ratio is 128.08 percent.

See Appendix C-2 for additional pension plan information.

QUALIFIED EXCESS BENEFIT ARRANGEMENT (QEBA)

Description

In fiscal year 2017, KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single-employer defined benefit pension plan administered by KUB. The number of participants in any given year for the QEBA is determined by the number of KUB Pension Plan participants who exceed the current year's section 415(b) limitations, as calculated by the KUB Pension Plan actuary. The amount of QEBA benefit will be the amount specified by the terms of the KUB Pension Plan without regard to Section

415(b) limitations minus the amount payable from the KUB Pension Plan as limited by Section 415(b). QEBA benefits are subject to cost of living adjustments.

As of June 30, 2022, there are 446 active employees eligible for the KUB Pension Plan who are potentially eligible to receive QEBA benefits. The KUB Pension Plan was closed effective January 1, 2011, such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and accrue benefits under the KUB Pension Plan. The KUB Pension Plan was amended to include the provision of QEBA benefits; therefore, amendments to the QEBA require the same authority as amendments to the KUB Pension Plan. As required by federal tax law, the QEBA is unfunded within the meaning of the federal tax laws. KUB may not pre-fund the QEBA to cover future liabilities beyond the current year. KUB has established procedures to pay for these benefits on a pay-as-you-go basis. There are no assets accumulated in a trust that meets the GASB's criteria. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022.

Total Pension Liability of the QEBA

The below summarizes the disclosures of GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68* ("GASB 73"). GASB 73 extends a similar approach of financial reporting to plans meeting specific criteria that are not administered through trusts that GASB 68 established for pension plans. GASB 73 requires measurement of the total pension liability of the QEBA. The amounts reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. There is no Total Pension Liability as of June 30, 2022. The Division's share of the total pension liability was $4,117 as of June 30, 2021.

GASB 73 requires certain disclosures related to the total pension liability of the QEBA, as disclosed below:

	2021	2020
Total pension liability	$0	$18,714
Deferred outflows	(11,505)	(33,660)
Deferred inflows	16,927	23,630
Net impact on Statement of Net Position	$5,422	$8,684
Covered payroll	$38,074,863	$41,524,273
Total pension liability as a % of covered payroll	0.00%	0.05%

Changes in total pension liability of the QEBA are as follows:

	Increase (Decrease)
	Total Pension Liability
Balances at December 31, 2020	$ 18,714
Changes for the year:	
Service cost	-
Interest	268
Changes of Benefits	-
Differences between Expected and Actual Experience	(6,816)
Changes of Assumptions	-
Benefit payments	(12,166)
Net changes	(18,714)
Balances at December 31, 2021	$ -

Actuarial Assumptions

The total pension liability of the QEBA was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2022, and January 1, 2021
Actuarial cost method	Individual entry age
Salary increase	From 2.50% to 5.65%, based on years of service as of January 1, 2022, and 2021
Mortality	115% and 110% of the Public Sector General Healthy Annuitant Mortality Table (PubG-2010), for males and females, respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the 2010 base rates using scale MP2018, fully generational as of January 1, 2022, and 2021
Inflation	2.5% as of January 1, 2022, and 2021

The actuarial assumptions used in the January 1, 2022, and 2021, valuations were based on the results of an actuarial experience study for the period January 1, 2014, through December 31, 2018.

Discount rate

The QEBA is not funded. In accordance with paragraph 31 of GASB 73, the discount rate is based on the Bond Buyer 20-Bond GO index. This rate was 2.06% as of January 1, 2022, and 2.12% as of January 1, 2021.

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of $16,613 (Division's share $3,655) for the QEBA. This amount is not expected to be the same as KUB's

contribution to the QEBA ($19,875), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$5,422 - $8,684 + $19,875].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4 years. During the measurement year, there was an experience gain of $6,816, with $1,704 recognized in the current year and each of the next three years, resulting in a deferred inflow of $5,112 (Division's share $1,124). There was a deferred inflow at the end of the measurement year of $7,225 (Division's share $1,590) from experience gains in prior years and a deferred outflow of $6,112 (Division's share $1,345) from experience losses in prior years.

During the measurement year, there were no assumption changes. There was a deferred inflow at the end of the measurement year of $4,590 (Division's share $1,010) and a deferred outflow of $5,393 (Division's share $1,187) from assumption changes in prior years.

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 6,112	$ 12,337
Changes in assumptions	5,393	4,590
Total	$ 11,505	$ 16,927
Division's share	$ 2,532	$ 3,724

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

Year ended June 30:	
2023	$ (8,793)
2024	3,023
2025	348
2026	-
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of $21,436 for the QEBA (Division's share $4,717). This amount is not expected to be the same as KUB's contribution to the QEBA ($22,874), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$8,684 - $10,122 + $22,874].

The impact of experience gains or losses and assumption changes on the total pension

liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5 years. During the measurement year, there was an experience loss of $10,165, with $2,033 recognized in the current year and each of the next four years, resulting in a deferred outflow of $8,132 (Division's share $1,790). There was a deferred inflow at the end of the measurement year of $14,450 (Division's share $3,179) from experience gains in prior years and a deferred outflow of $2,756 (Division's share $606) from experience losses in prior years.

During the measurement year, there was an assumption change loss of $91, with $18 recognized in the current year and each of the next four years, resulting in a deferred outflow of $73 (Division's share $17). There was a deferred inflow at the end of the measurement year of $9,180 (Division's share $2,020) and a deferred outflow of $22,699 (Division's share $4,994) from assumption changes in prior years. In addition, KUB recorded a deferred outflow of resources of $6,084 as of June 30, 2021, for contributions between December 31, 2020, and June 30, 2021 (Division's share $1,338).

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 10,888	$ 14,450
Changes in assumptions	22,772	9,180
Contributions subsequent to measurement date	6,084	-
Total	$ 39,744	$ 23,630
Division's share	$ 8,745	$ 5,199

OTHER POST-EMPLOYMENT BENEFITS (OPEB)

Description of Trust

The Knoxville Utilities Board Other Post-Employment Benefits Trust (the Trust) is a single-employer trust established by the KUB Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The Trust along with the KUB Health Plan make up a Voluntary Employee Beneficiary Association ("VEBA") and are intended to be tax-exempt pursuant to Code §501(c)(9). The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. The applicable documentation was submitted to the State Funding Board and, in December 2007, the State Funding Board approved the Trust. The Trust was also approved by the Internal Revenue Service in June 2008. KUB administers the Trust through a Board of Trustees consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Trust involving costs not approved in the operating budget must be approved by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Trust may be approved by KUB's President and CEO upon 60 days

notification to the Board's Audit and Finance Committee. The investment of all deposits to the Trust is governed by an Investment Policy, which was adopted by the KUB Board and approved by the State Funding Board. The Trust issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2022, the Plan was expanded to two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement (HRA), given that each eligible employee meets the "Rule of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

Participants in the Plan consisted of the following as of June 30:

	HRA		Retiree Medical Benefit	
	2022	2021	2022	2021
Retirees	4	0	549	538
Dependents of retirees	2	0	612	579
Eligible active employees	15	0	145	160
Total	21	0	1,306	1,277

Benefits

Benefits for pre-July 1, 1999, eligible participants may include, but shall not be limited to, medical, prescription drugs, dental, vision, hearing, Medicare Part B or Part D premiums, life insurance, long-term care, and long-term disability. Post-July 1, 1999, eligible participants are eligible for HRA benefits which include up to $50,000 to be used exclusively for reimbursement of qualified medical expenses of the retiree and his or her spouse and dependents. Any unused HRA amounts will remain assets of the OPEB Trust.

Contributions and Plan Funding

The primary goal of the Funding Policy for the Trust is to document the method KUB has adopted to provide assurance that future KUB and retiree contributions and current Trust assets will be sufficient to fund all benefits expected to be paid to Trust beneficiaries. Per the Funding Policy, KUB's current practice is to fully fund its annual Actuarially Determined Contribution, which is determined by actuarial valuation.

Contributions are authorized by the terms of the Trust as established by KUB Resolution No. 1168, as amended, as approved by the Tennessee State Funding Board. KUB shall have the right at any time to amend, in whole or in part, the provisions of this Trust; however, no such amendment shall authorize or permit the assets of the Trust to be used for or diverted to purposes other than those expressed in the Declaration of Trust.

It shall be the sole and exclusive responsibility of KUB to determine the level of contributions KUB will make to the Trust for the purpose of financing other post-employment benefits accrued by its respective participants. Neither the Trust, nor the Trust's Board, shall be

responsible for collecting or otherwise determining the level of contributions needed by KUB to finance any other post-employment benefits offered by KUB. The assets of the Trust shall be expended solely to make payments for other post-employment benefits pursuant to, and in accordance with, the terms of the Trust and to pay the cost of administration.

Based on the date of retirement, certain retired members are required to contribute specified amounts monthly to maintain health insurance. Those who retired prior to July 1983 have no required monthly premiums for themselves or dependents. The retirees, or their surviving dependents, who retired between August 1983 and January 1998 are required to pay $262.50 per month for pre-Medicare family health insurance. For individuals who retired after January 1998, the required monthly premium for pre-Medicare health insurance is $262.50 for single coverage and $525 for family coverage. There is currently no premium for Medicare eligible retirees or dependents. KUB is responsible for determining the level of retired plan member contributions on an annual basis as part of its review of healthcare cost sharing.

Participants in the Health Reimbursement Arrangement are not eligible for health insurance and are not required to make contributions.

Investments

The Trust holds investments in a balanced fund, which invests in passively managed common trust index funds, managed and sponsored by State Street Global Advisors (SSgA), with an asset allocation mirroring the asset allocation of the Trust and rebalanced monthly. The Trust's Investment Policy was established and may only be amended by the KUB Board of Commissioners. The Trust's Investment Policy is to invest in a manner that will provide sufficient investment return to meet current and future retiree health benefits, while conforming to all governing State and Federal statutes. It allows investment of Trust assets in any type of security instrument allowed for in T.C.A 8-50-1203. The following was the Trust's adopted investment target allocations as set forth in the Trust's Investment Policy as of June 30, 2022:

Asset Class	Target Allocation
Domestic Equity:	
Large Cap	30%
Small Cap	8%
International Equity:	
Developed	16%
Emerging	8%
Real Estate Equity	8%
Debt Securities	30%
Total	100%

For the fiscal year ended June 30, 2022, an actuarially determined contribution for the Wastewater Division of $360,618 was made to the OPEB Trust along with the division's share ($330,000) of an additional $1,500,000 contribution to help fund the HRA. Actuarially determined contributions for the Wastewater Division for the fiscal year ended June 30, 2021, were $166,591. These were based on the OPEB actuarial valuations as of January 1, 2020, and 2019.

The OPEB Plan actuarial valuation resulted in an actuarially determined contribution of $1,413,392 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2023, measurement date. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,187,768 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2024, measurement date. The Plan's actuarial funded ratio is 94.75 percent, and the market value funded ratio is 103.07 percent.

See Appendix C-2 for additional OPEB information.

FISCAL YEAR 2023 FINANCIAL UPDATE

For the three months ending September 30, 2022, KUB's Wastewater Division recorded earnings of $7 million, representing an increase of $1 million compared to the same period last fiscal year. This increase is the net result of the July 2022 rate increase, a 1.2 percent increase in wastewater billed volumes offset by slightly higher operating expenses compared to the same period last fiscal year.

As of September 30, 2022, the Wastewater Division had $472.1 million in outstanding debt, representing a debt to capitalization ratio of 55 percent. The Wastewater Division's maximum debt service coverage ratio is 1.84.

Capital investment in wastewater system infrastructure is approximately $41.1 million for fiscal year 2023, reflecting KUB's continued commitment to collection system replacement and treatment plant upgrades.

WASTEWATER RATES

The current rate schedules of the Wastewater Division are as follows:

WASTEWATER GENERAL SERVICE – RESIDENTIAL RATE SCHEDULE

Availability

Service under this rate schedule shall be available only to residential customers served individually through a separate meter.

An existing customer or applicant for service under this schedule may be required to execute a contract specifying, among other things, a minimum bill and minimum term for service under this schedule.

Rate

The Wastewater Service Charge shall be calculated using the applicable rate tables provided below, based on the customer's water usage and water meter size with the following exceptions:

For customers whose wastewater discharge volumes are metered separately from their water usage, the metered wastewater discharge volumes will be used to calculate Service Charges under this schedule. The meter size used to calculate the Additional Monthly Charge under this schedule will be the largest equivalent water meter size as determined by KUB.

If neither the customer's water usage nor wastewater discharge volumes are metered, the average water usage and water meter size of comparable metered customers as determined by KUB will be used to calculate the charges under this schedule.

In the event more than one meter is utilized to determine billed consumption, multiple basic service charges may apply. Charges will apply without regard to ownership of the meter(s).

KUB may, at its sole discretion, bill wastewater using the same rates converted to a rate per gallon for usage measured in gallons: 1 Ccf equals 748 gallons.

I. Inside City Rate

For wastewater service provided to premises entirely within the corporate limits of the City of Knoxville:

Basic Service Charge	
5/8" meter	$ 35.90

For meters greater than 5/8" the Customer Charges listed in the Wastewater Nonresidential schedule shall be utilized.

Commodity Charge	
First	2 Ccf at $ 2.00 per Ccf
Over	2 Ccf at $ 9.40 per Ccf

II. Outside City Rate

For wastewater service provided to premises entirely or partly outside the corporate limits of the City of Knoxville:

Basic Service Charge	
5/8" meter	$ 39.90

For meters greater than 5/8" the Customer Charges listed in the Wastewater Nonresidential schedule shall be utilized.

	Commodity Charge
First	2 Ccf at $ 2.15 per Ccf
Over	2 Ccf at $10.15 per Ccf

Additional Charges

In addition to the wastewater service charge, users whose wastewater has strength characteristics in excess of normal domestic wastewater shall pay an Extra Strength Surcharge as set forth in Schedule B. A Sewer Improvement Charge may also be payable as set forth in Schedule D.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

WASTEWATER GENERAL SERVICE – NONRESIDENTIAL RATE SCHEDULE

Availability

Service under this rate schedule shall be available to any commercial or industrial customer.

An existing customer or applicant for service under this schedule may be required to execute a contract specifying, among other things, a minimum bill and minimum term for service under this schedule.

Rate

The Wastewater Service Charge shall be calculated using the applicable rate tables provided below, based on the customer's water usage and water meter size with the following exceptions:

For customers whose wastewater discharge volumes are metered separately from their water usage, the metered wastewater discharge volumes will be used to calculate Service Charges under this schedule. The meter size used to calculate the Additional Monthly Charge under this schedule will be the largest equivalent water meter size as determined by KUB.

If neither the customer's water usage nor wastewater discharge volumes are metered, the average water usage and water meter size of comparable metered customers as determined by KUB will be used to calculate the charges under this schedule.

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In the event more than one meter is utilized to determine billed consumption, multiple customer charges may apply. Charges will apply without regard to ownership of the meter(s).

KUB may, at its sole discretion, bill wastewater using the same rates converted to a rate per gallon for usage measured in gallons: 1 Ccf equals 748 gallons.

I. Inside City

For wastewater service provided to premises entirely within the corporate limits of the City of Knoxville:

	Customer Charge
5/8" meter	$ 35.90
1" meter	$ 51.90
1 ½" meter	$ 65.50
2" meter	$ 89.00
3" meter	$ 170.00
4" meter	$ 279.00
6" meter	$ 590.00
8" meter	$1,025.00
10" meter	$1,560.00
12" meter	$2,340.00

	Commodity Charge
First	2 Ccf at $ 2.00 per Ccf
Next	8 Ccf at $12.95 per Ccf
Next	90 Ccf at $11.90 per Ccf
Next	300 Ccf at $10.30 per Ccf
Next	4,600 Ccf at $ 8.40 per Ccf
Over	5,000 Ccf at $ 4.95 per Ccf

II. Outside City Rate

For wastewater service provided to premises entirely or partly outside the corporate limits of the City of Knoxville:

	Customer Charge
5/8" meter	$ 39.90
1" meter	$ 56.00
1 1/2" meter	$ 73.50
2" meter	$ 97.00
3" meter	$ 191.00
4" meter	$ 307.00
6" meter	$ 649.00
8" meter	$1,130.00
10" meter	$1,710.00
12" meter	$2,560.00

	Commodity Charge
First	2 Ccf at $ 2.25 per Ccf
Next	8 Ccf at $14.25 per Ccf
Next	90 Ccf at $13.10 per Ccf
Next	300 Ccf at $11.25 per Ccf
Next	4,600 Ccf at $ 9.35 per Ccf
Over	5,000 Ccf at $ 5.50 per Ccf

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

SCHEDULE B – EXTRA STRENGTH SURCHARGES

Applicability

For user whose discharge of wastewater contains a quantity of BOD in excess of 2,000 pounds per million gallons (240 mg/l), and a quantity of suspended solids in excess of 2,500 pounds per million gallons (300 mg/l), an additional charge, based on the following schedule, shall be applied to the excess contribution, as determined by laboratory analysis of the user's discharge. This Extra Strength Surcharge is in addition to all other charges that may be applicable under KUB's rate schedules.

Rate

BOD	$15.70 per hundred pounds of excess
Suspended Solids	$14.90 per hundred pounds of excess

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

SCHEDULE C – HOLDING TANK AND SPECIAL WASTE CHARGES

Domestic Waste (Commercial Waste Disposal)

For users engaged in the business of cleaning wastewater and wastewater residues from septic tanks and other private disposal systems, a domestic waste discharge permit is required and certain fees and charges are assessed against those users.

(1) Annual Access Fee:

The annual access fee for the use of KUB's disposal facilities shall be $100.00 per fiscal year, per permitted vehicle. The full fee shall be payable for any fraction of the fiscal year. Bills under this section will be rendered annually at the beginning of KUB's

fiscal year or such later time during the fiscal year that service is commenced.

(2) Domestic Waste Discharge Rate:

Each load of Domestic Waste discharged to KUB's facilities shall be subject to a Discharge Rate of $106.90 per 1,000 gallons. Bills under this section will be rendered monthly.

Special Waste

For users who dispose of any other waste from any tank, pond, pit or other source into the KUB system, a special waste discharge permit is required and the following fees and charges will be assessed against those users.

(1) Special Waste Discharge Permit Application Fee:

A special Wastewater Discharge Permit must be obtained before any Special Waste may be discharged into KUB's facilities. The application fee for such permit is $75.00. The application fee is non-refundable and is applicable whether or not the application is approved or the permit issued. The fee must be paid prior to discharge.

(2) Special Waste Discharge Fee:

Due to the widely differing character of Special Wastes, the Discharge Fee shall vary, but, at a minimum, the Fee will be the sum of the Wastewater Service Charge as set forth by the Nonresidential Rate Schedule of the Wastewater Division of KUB plus the Extra Strength Surcharges as set forth in Schedule B to the Rate Schedules of the Wastewater Division of KUB. In addition to those charges set forth in the aforementioned Schedules, the Customer will be required to pay the cost to KUB of analyzing, or providing special handling for, the Customer's Special Waste, plus a reasonable charge for the impact that the Special Waste is expected to have on the KUB treatment facilities as determined by KUB. Bills under this section will be rendered upon completion of the discharge.

Operating Procedures

KUB shall establish operating procedures including such items as permit issuance, acceptable wastes, disposal locations, reporting and billing methods for the implementation of this Rate Schedule C, which may be changed from time to time by KUB.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

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SCHEDULE D – SEWER IMPROVEMENT CHARGE

Applicable Charges

All properties connected or having access to the wastewater system shall be subject to a Sewer Improvement Charge which shall be determined as follows:

For all users not described in paragraph A (2), or A (3), the Sewer Improvement Charge shall be an amount equal to the Contribution in Aid of Construction determined in accordance with the provisions of Section 33-19 of the Rules and Regulations for the Wastewater Division that may from time to time be in effect. Any contribution in Aid of Construction that is assessed under Section 33-19 (b) of the Rules and Regulations on or after December 1, 1992 may, at the customer's option, be paid as a part of the customer's utility bill in monthly installments for a period not to exceed ten (10) years at an annual interest rate of nine percent (9%).

For all users that: (i) on December 1, 1992 are being assessed, or which properly should be assessed, a Sewer Improvement Charge under the terms of this Schedule D as it existed immediately prior to December 1, 1992 or, (ii) which are located in areas annexed into the corporate limits of the City of Knoxville pursuant to Ordinance No. 0-31-87, the Sewer Improvement Charge shall be calculated on multiples of a basic charge (the "Basic Charge"), which shall be Six Hundred Seventy -Five Dollars ($675.00). At the customer's option, the Sewer Improvement Charge may be paid as a part of the customer's utility bill in monthly installments of Three and 25/100 dollars ($3.25) for the three hundred sixty (360) months. Sewer Improvement Charges assessed under the terms of this paragraph A (2) shall be calculated as follows:

(a) Each user consisting of a single-family dwelling shall pay a Sewer Improvement Charge equal to the Basic Charge, regardless of area.

(b) Each multifamily, commercial or industrial user shall pay a Sewer Improvement Charge based on the greater of the following two calculations:

(i) Area/meter basis: The lesser of (a) the Basic charge times the square footage of the area of the property divided by 15,000 or (b) the Basic Charge times the following multiples based on meter size:

Meter Size	Multiple
5/8"	1
¾"	1.5
1"	2.5
1 ½"	5
2"	8
3"	15
4"	25
6"	50
8"	80
10"	120
12"	155

* If a user is served by more than one meter, the multiple used shall be the sum of the multiple computed on each meter.

(ii) Frontage Basis – the Basic Charge times the total frontage of the property measured in feet at the building line parallel to the street along which the property lies for the greater distance divided by 100.

(c) For service to users located entirely or partly outside the corporate limits of the City of Knoxville, the Sewer Improvement Charge imposed under this paragraph A (2) shall be one and one-half (1-1/2) times the above schedule of charges.

(d) Any user charged a Sewer Improvement Charge under this paragraph A (2) that reconnects to the Wastewater system on or after December 1, 1992 because of a change in the level or character of the user's wastewater service shall upon such reconnection be subject to the Sewer Improvement Charge calculated under paragraph A (1) hereof.

For all property located in a Transfer Area, that is subject to a Fee Agreement, the user shall be subject to a Sewer Improvement Charge equal in amount to the payments that would have been owed under the Fee Agreement for the affected property, assuming the Fee Agreement remained in effect for its duration, adjusted in accordance with KUB's policies for any additional property users as permitted under the Fee Agreement, less a credit for any payments actually paid to KUB under the Fee Agreement. Except as otherwise provided herein, Sewer Improvement Charges assessed under this paragraph A (3) shall be paid on the same terms provided in the Fee Agreement for the affected property. As used herein" (i) the term "Transfer Area" shall mean an area: (a) that was previously provided wastewater service by a municipal utility (other than KUB) or a utility district, and (b) with respect to which KUB acquired or otherwise succeeded to the right to provide wastewater service; and (ii) the term "Fee Agreement" shall mean a contract or other agreement entered into between the owner or other user of a tract of property and a municipal utility (other than KUB) or a utility district, by the terms of which the owner or other user of the property agrees to pay all or any part of the cost of extending wastewater lines and facilities to such property or otherwise making wastewater service available to such property.

Deferral of Payment

A Sewer Improvement Charge shall not be billed or collectible for any monthly billing for any period for which a wastewater service charge is not payable.

Prepayment

A customer who has elected to pay the Sewer Improvement Charge in monthly installments may thereafter prepay the balance of such charge in whole (but not in part) in an amount equal to the unamortized balance of the Sewer Improvement charge as of the date of such prepayment.

Installment Terms

A customer who has elected to pay the Sewer Improvement Charge in monthly installments pursuant to paragraph A (1) shall be obligated to make such payments at the rate of interest and

length of payment period specified in this Schedule D as of the date of the customer's election, notwithstanding customer's right of prepayment.

Definitions

The defined terms in this Schedule D shall have the meanings given to them from time to time in the Rules and Regulations for Wastewater Division.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

SCHEDULE E – WHOLESALE WASTEWATER TREATMENT

Service under this Schedule shall be available only to governmental entities, including Utility Districts, that deliver through their wastewater collection system all or portions of their wastewater flow to KUB facilities for treatment. Applicants under this schedule may be required to execute a contract specifying, among other things, a minimum bill and minimum term for service under this schedule.

Rate

Metered Flows	$5.30 per Thousand Gallons
Unmetered Flows	$6.05 per Thousand Gallons

For the purpose of determining billing volumes, metered flows are those flows metered at the point of delivery to KUB's collection system, pumping station or treatment facility; unmetered flows are those flows based upon the actual water use of the customers served by the collection system discharging to KUB's facilities, said water use being determined by the water meter readings furnished by the water service provider.

KUB may, at its sole discretion, bill wastewater using the same rates converted to a rate per Ccf for usage measured in Ccf: 1 Ccf equals 748 gallons.

Rules and Regulations

Service is subject to Rules and Regulations of KUB.

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KNOXVILLE UTILITIES BOARD
WASTEWATER DIVISION
CAPITALIZATION HISTORY

Historical	Fiscal Year	Accumulated Earnings	Contributed Capital	Revenue Bonds	Revenue Notes	Total Capitalization	Debt as % of Capitalization
	2013	$ 248,325,320	$ -	$ 458,595,000	$ -	$ 706,920,320	64.87%
	2014	$ 253,999,330	$ -	$ 450,050,000	$ -	$ 704,049,330	63.92%
	2015	$ 261,594,704	$ -	$ 503,260,000	$ -	$ 764,854,704	65.80%
	2016	$ 271,115,564	$ -	$ 492,330,000	$ -	$ 763,445,564	64.49%
	2017	$ 284,390,014	$ -	$ 499,850,000	$ -	$ 784,240,014	63.74%
	2018	$ 305,219,517	$ -	$ 512,890,000	$ -	$ 818,109,517	62.69%
	2019	$ 324,696,658	$ -	$ 511,995,000	$ -	$ 836,691,658	61.19%
	2020	$ 345,897,621	$ -	$ 512,560,000	$ -	$ 858,457,621	59.71%
	2021 as restated*	$ 363,714,041	$ -	$ 476,660,000	$ -	$ 840,374,041	56.72%
	2022	$ 383,315,881	$ -	$ 472,110,000	$ -	$ 855,425,881	55.19%

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

KNOXVILLE UTILITIES BOARD
WASTEWATER DIVISION
OPERATING STATISTICS
for the Fiscal Years ending on June 30

Revenues:	2018	2019	2020	2021 as restated*	2022
Service Charge	$ 90,215,876	$ 94,511,486	$ 97,229,200	$ 97,969,474	$ 99,785,089
Industrial Surcharge	388,511	405,581	324,153	425,968	375,889
Other Charges	625,826	538,772	371,249	394,100	826,042
Utility Districts	375,143	346,496	352,309	319,800	284,890
Total Sales Revenues	$ 91,605,356	$ 95,802,335	$ 98,276,911	$ 99,109,342	$ 101,271,910
Other Revenues	$ 3,110,408	$ 2,679,818	$ 3,058,613	$ 1,251,591	$ 1,664,664
Total Revenues	**$ 94,715,764**	**$ 98,482,153**	**$ 101,335,524**	**$ 100,360,933**	**$ 102,936,574**

NUMBER OF CUSTOMERS - WASTEWATER

Fiscal Year	Total	New Customers
12 / 13	69,528	345
13 / 14	69,613	85
14 / 15	69,847	234
15 / 16	70,265	418
16 / 17	70,751	486
17 / 18	71,242	491
18 / 19	71,807	565
19 / 20	72,246	439
20 / 21	72,830	584
21 / 22	73,377	547

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

KNOXVILLE UTILITIES BOARD
WASTEWATER DIVISION

CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
For The Fiscal Years Ended June 30

	2018	2019	2020	2021 as restated*	2022
Operating Revenues:	$ 94,715,764	$ 98,482,153	$ 101,335,524	$ 100,360,933	$ 102,936,574
Operating Expenses:					
Treatment	$ 11,674,833	$ 12,444,333	$ 12,735,896	$ 12,734,681	$ 14,514,989
Collection	7,410,791	8,130,072	8,228,482	8,560,687	8,540,457
Customer services	3,106,304	3,775,848	3,693,419	3,739,787	3,966,357
Administrative and general	8,747,272	11,302,892	11,464,254	9,088,837	10,413,179
Provision for deprec. & amortization	19,137,860	19,545,435	19,881,198	23,034,519	21,815,257
Taxes and tax equivalents	5,038,630	5,317,546	5,573,710	5,844,210	6,178,208
Total Operating Expenses	$ 55,115,690	$ 60,516,126	$ 61,576,959	$ 63,002,721	$ 65,428,447
Operating Income	$ 39,600,074	$ 37,966,027	$ 39,758,565	$ 37,358,212	$ 37,508,127
Non-Operating Revenues / Expenses:					
Contributions in aid of construction	$ 2,237,910	$ 395,167	$ 854,230	$ 733,992	$ 607,239
Interest and dividend income	1,205,290	1,906,274	1,484,440	312,553	297,132
Interest expense	(20,508,567)	(20,521,206)	(20,169,760)	(19,611,311)	(18,888,252)
Loss on write down of plant assets	(2,237,910)	(395,167)	(854,230)	(733,992)	(607,239)
Other	(740,509)	(263,056)	(63,956)	(886,034)	177,224
Total Non-Operating	$ (20,043,786)	$ (18,877,988)	$ (18,749,276)	$ (20,184,792)	$ (18,413,896)
Changes in Net Position before Capital Contributions	$ 19,556,288	$ 19,088,039	$ 21,009,289	$ 17,173,420	$ 19,094,231
Capital Contributions	278,222	389,102	191,674	643,000	507,609
Change in Net Position	$ 19,834,510	$ 19,477,141	$ 21,200,963	$ 17,816,420	$ 19,601,840
Net Position, beginning of year	$ 284,390,014	$ 305,219,517	$ 324,696,658	$ 345,897,621	$ 363,714,041
Adjustment	994,993	-	-	-	-
Net Position, end of year	**$ 305,219,517**	**$ 324,696,658**	**$ 345,897,621**	**$ 363,714,041**	**$ 383,315,881**

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

Source: The above amounts have been derived from the Annual Audited Financial Statements for the Knoxville Utilities Board, Wastewater Division and the Board's internal financial records and should be read in conjunction therewith.

TEN LARGEST WASTEWATER SYSTEM CUSTOMERS - 2022

The ten largest Wastewater System customers, as of June 30, 2022, in order of total sales generated are listed below. Those ten wastewater customers represent 14.55% of the total wastewater sales based on revenue and 19.23% of the total wastewater based on sales volume.

	Customer	Usage CCF	Sales Revenue	Percent of Sales Revenue
1.	University of Tennessee	748,488	$ 6,816,054	6.73%
2.	KCDC	171,157	1,731,280	1.71%
3.	University Health Systems Inc	149,074	1,075,774	1.06%
4.	Rohm & Haas Tennessee Inc	171,591	1,040,361	1.03%
5.	Fresenius USA Manufacturing, Inc	98,791	777,083	0.77%
6.	Knox County Schools	56,010	770,141	0.76%
7.	Custom Foods of America Inc	78,009	685,707	0.68%
8.	Tamko Building Products Inc	65,035	660,979	0.65%
9.	Pepsi	62,734	595,615	0.59%
10.	City of Knoxville	49,618	584,250	0.58%
	TOTAL	**1,650,507**	**$ 14,737,244**	**14.55%**

Total Wastewater Sales Revenue		$ 101,271,910
Top 10 as Percent of Total Wastewater Sales Revenue		14.55%
Total Wastewater Sales Volume (CCF)	8,581,224	
Top 10 as Percent of Total Wastewater Sales Volume	19.23%	

KNOXVILLE UTILITIES BOARD
WASTEWATER DIVISION
BONDS OUTSTANDING

The following table shows the outstanding bond indebtedness of the Wastewater Division.

Amount Issued		Series	Due Date	Interest Rates	Outstanding as of June 30, 2022 (1)
$ 70,000,000	(2)	Wastewater System Revenue Bonds, Series 2010C	04-01-40	Fixed	$ 20,250,000
129,825,000		Wastewater System Revenue Refunding Bonds, Series 2015A	04-01-42	Fixed	104,950,000
30,000,000		Wastewater System Revenue Bonds, Series 2015B	04-01-25	Fixed	1,800,000
20,000,000		Wastewater System Revenue Bonds, Series 2016	04-01-46	Fixed	17,300,000
11,965,000		Wastewater System Revenue Refunding Bonds, Series 2017A	04-01-27	Fixed	4,285,000
25,000,000		Wastewater System Revenue Bonds, Series 2017B	04-01-47	Fixed	22,635,000
12,000,000		Wastewater System Revenue Bonds, Series 2018	04-01-48	Fixed	10,985,000
16,000,000		Wastewater System Revenue Bonds, Series 2019	04-01-49	Fixed	15,135,000
28,230,000		Wastewater System Revenue Refunding Bonds, Series 2020A	04-01-45	Fixed	26,765,000
27,460,000		Wastewater System Revenue Bonds, Series 2020B	04-01-50	Fixed	26,355,000
190,815,000		Wastewater System Revenue Refunding Bonds, Series 2021A	04-01-49	Fixed	187,325,000
11,125,000		Wastewater System Revenue Bonds, Series 2022A	04-01-51	Fixed	11,125,000
23,200,000		Wastewater System Revenue Refunding Bonds, Series 2022B	04-01-50	Fixed	23,200,000
$ 595,620,000		**TOTAL DEBT**			$ 472,110,000
$ 9,995,000		Wastewater System Revenue Bonds, Series 2022C	04-01-52	Fixed	$ 9,995,000
$ 605,615,000		**TOTAL INDEBTEDNESS**			$ 482,105,000

NOTES:

(1) The above figures do not include short-term notes outstanding, if any. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

(2) The original federal subsidy of 35.0% on the Wastewater System Revenue Bonds, Series 2010C (Federally Taxable Build America Bonds) has been reduced by 5.7% for the federal fiscal year ending September 30, 2022 as a result of the sequestration by the Budget Control Act of 2011. This percentage will apply to all subsidy payments scheduled to be made on or after October 1, 2021 through and including September 30, 2032.

KNOXVILLE UTILITIES BOARD
WASTEWATER DIVISION
DEBT SERVICE REQUIREMENTS

Fiscal Year	Outstanding Fiscal Year Debt Service on Bonds as of June 30, 2022				Wastewater System Revenue Bonds, Series 2022C			% Principal Repaid on Series 2022C Bonds	NET TOTAL DEBT SERVICE (1)				% Principal Repaid on All Debt
	Principal	Interest	Est. Rebate (2)	Total	Principal	Interest (3)	Total		Principal	Interest	Est. Rebate (2)	Total	
2023	$ 14,760,000	$ 18,693,585	$ (407,694)	$ 33,045,891	$ -	$ 133,267	$ 133,267	0.00%	$ 14,760,000	$ 18,826,852	$ (407,694)	$ 33,179,158	3.06%
2024	14,355,000	18,154,813	(407,694)	32,102,118	190,000	399,800	589,800		14,545,000	18,554,613	(407,694)	32,691,918	
2025	14,680,000	17,610,013	(407,694)	31,882,318	195,000	392,200	587,200		14,875,000	18,002,213	(407,694)	32,469,518	
2026	14,615,000	17,064,413	(407,694)	31,271,718	205,000	384,400	589,400		14,820,000	17,448,813	(407,694)	31,861,118	
2027	15,060,000	16,489,200	(407,694)	31,141,506	210,000	376,200	586,200	8.00%	15,270,000	16,865,400	(407,694)	31,727,706	15.41%
2028	15,705,000	15,817,650	(407,694)	31,114,956	220,000	367,800	587,800		15,925,000	16,185,450	(407,694)	31,702,756	
2029	16,425,000	15,105,869	(407,694)	31,123,175	230,000	359,000	589,000		16,655,000	15,464,869	(407,694)	31,712,175	
2030	17,165,000	14,365,925	(407,694)	31,123,231	240,000	349,800	589,800		17,405,000	14,715,725	(407,694)	31,713,031	
2031	17,930,000	13,596,594	(407,694)	31,118,900	250,000	340,200	590,200		18,180,000	13,936,794	(407,694)	31,709,100	
2032	18,735,000	12,802,069	(407,694)	31,129,375	260,000	330,200	590,200	20.01%	18,995,000	13,132,269	(407,694)	31,719,575	33.48%
2033	19,580,000	11,967,781	(407,694)	31,140,087	270,000	319,800	589,800		19,850,000	12,287,581	(407,694)	31,729,887	
2034	20,315,000	11,234,956	(407,694)	31,142,262	280,000	309,000	589,000		20,595,000	11,543,956	(407,694)	31,731,262	
2035	21,065,000	10,473,844	(407,694)	31,131,150	290,000	297,800	587,800		21,355,000	10,771,644	(407,694)	31,718,950	
2036	22,385,000	9,683,869	(407,694)	31,661,175	300,000	286,200	586,200		22,685,000	9,970,069	(407,694)	32,247,375	
2037	23,375,000	8,764,731	(333,202)	31,806,529	315,000	274,200	589,200	34.57%	23,690,000	9,038,931	(333,202)	32,395,729	55.92%
2038	25,840,000	7,812,363	(255,186)	33,397,176	325,000	261,600	586,600		26,165,000	8,073,963	(255,186)	33,983,776	
2039	26,765,000	6,811,463	(173,648)	33,402,815	340,000	248,600	588,600		27,105,000	7,060,063	(173,648)	33,991,415	
2040	27,795,000	5,700,519	(88,585)	33,406,933	355,000	235,000	590,000		28,150,000	5,935,519	(88,585)	33,996,933	
2041	25,635,000	4,618,413	-	30,253,413	365,000	220,800	585,800		26,000,000	4,839,213	-	30,839,213	
2042	26,660,000	3,644,244	-	30,304,244	380,000	206,200	586,200	52.23%	27,040,000	3,850,444	-	30,890,444	83.81%
2043	11,385,000	2,630,706	-	14,015,706	395,000	191,000	586,000		11,780,000	2,821,706	-	14,601,706	
2044	11,830,000	2,229,725	-	14,059,725	415,000	175,200	590,200		12,245,000	2,404,925	-	14,649,925	
2045	12,330,000	1,812,675	-	14,142,675	430,000	158,600	588,600		12,760,000	1,971,275	-	14,731,275	
2046	11,175,000	1,377,531	-	12,552,531	445,000	141,400	586,400		11,620,000	1,518,931	-	13,138,931	
2047	10,615,000	971,531	-	11,586,531	465,000	123,600	588,600	73.74%	11,080,000	1,095,131	-	12,175,131	96.15%
2048	6,090,000	578,906	-	6,668,906	485,000	105,000	590,000		6,575,000	683,906	-	7,258,906	
2049	5,705,000	358,450	-	6,063,450	505,000	85,600	590,600		6,210,000	444,050	-	6,654,050	
2050	3,495,000	151,700	-	3,646,700	525,000	65,400	590,400		4,020,000	217,100	-	4,237,100	
2051	640,000	25,600	-	665,600	545,000	44,400	589,400		1,185,000	70,000	-	1,255,000	
2052	-	-	-	-	565,000	22,600	587,600	100.00%	565,000	22,600	-	587,600	100.00%
	$ 472,110,000	**$ 250,549,136**	**$ (6,558,341)**	**$ 716,100,795**	**$ 9,995,000**	**$ 7,204,867**	**$ 17,199,867**		**$ 482,105,000**	**$ 257,754,002**	**$ (6,558,341)**	**$ 732,713,061**	

NOTES:

(1) The above figures do not include short-term notes outstanding, if any. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

(2) The original federal subsidy of 35.0% on the Wastewater System Revenue Bonds, Series 2010C (Federally Taxable Build America Bonds) has been reduced by 5.7% for the federal fiscal year ending September 30, 2022 as a result of the sequestration by the Budget Control Act of 2011. This percentage will apply to all subsidy payments scheduled to be made on or after October 1, 2021 through and including September 30, 2032.

(3) Estimated Interest Rates. Estimated Average Coupon of 4.00%.

KNOXVILLE UTILITIES BOARD
WASTEWATER DIVISION
HISTORICAL DEBT SERVICE COVERAGES

The historical coverage for the actual debt service requirements and the projected maximum annual debt service requirements (FY 2038) of the Outstanding Bonds and the Series 2022C Bonds for fiscal years ended June 30, 2018 through June 30, 2022 is set forth below.

	2018	2019	2020	2021 as restated***	2022
Operating revenues	$ 94,715,764	$ 98,482,153	$ 101,335,524	$ 100,360,933	$ 102,936,574
Operating expenses*	(30,939,200)	(35,653,145)	(36,122,051)	(34,123,992)	(37,434,982)
Net income before Depreciation & taxes	$ 63,776,564	$ 62,829,008	$ 65,213,473	$ 66,236,941	$ 65,501,592
Other revenue (Net)	1,205,290	1,906,274	1,484,440	312,553	297,132
FICA & Medicare Tax Expense	(820,374)	(888,376)	(923,081)	(961,050)	(1,050,890)
Income available for debt service	$ 64,161,480	$ 63,846,906	$ 65,774,832	$ 65,588,444	$ 64,747,834
Actual annual debt service requirements on outstanding bonds	$ 32,372,447	$ 33,447,001	$ 34,204,172	$ 35,995,573	$ 32,940,268
Coverage (Times)	1.98 x	1.91 x	1.92 x	1.82 x	1.97 x
Maximum annual debt service requirements** (FY 2038) on Outstanding Bonds and the Series 2022C Bonds**	$ 34,238,963	$ 34,238,963	$ 34,238,963	$ 34,238,963	$ 34,238,963
Coverage (Times)	1.87 x	1.86 x	1.92 x	1.92 x	1.89 x

* Excluding Provision for Depreciation and Taxes

** From Debt Service Requirements Chart. Maximum debt excludes estimated BABS rebate.

***Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

KNOXVILLE UTILITIES BOARD
WASTEWATER DIVISION
OPERATING REVENUE FROM WASTEWATER SALES

Fiscal Year Ended June 30	Revenue
2013	$ 74,579,313
2014	$ 75,041,645
2015	$ 79,206,028
2016	$ 83,645,509
2017	$ 88,517,210
2018	$ 94,715,764
2019	$ 98,482,153
2020	$ 101,335,524
2021 as restated*	$ 100,360,933
2022	$ 102,936,574

*Restated per GASB 87. For more information, see the notes to the Financial Statements in the FINANCIAL STATEMENTS included herein.

APPENDIX C-2

WASTEWATER DIVISION
REPORT OF INDEPENDENT AUDITORS AND FINANCIAL STATEMENTS



Wastewater Division

Financial Statements and Supplemental Information
June 30, 2022 and 2021

KUB Board of Commissioners

Dr. Jerry W. Askew, Chair
Adrienne Simpson-Brown, Vice Chair
Claudia Caballero
Ron Feinbaum
Kathy Hamilton
Celeste Herbert
Tyvi Small

Management

Gabriel Bolas II
President and Chief Executive Officer

Mark Walker
Senior Vice President and Chief Financial Officer

Susan Edwards
Senior Vice President and Chief Administrative Officer

Derwin Hagood
Senior Vice President of Operations

John Williams
Senior Vice President of Engineering & Construction

Julie Childers
Vice President and Century II Administrator

Tiffany Martin
Vice President and Chief Customer Officer

Mike Bolin
Vice President of Utility Advancement

John Gresham
Vice President of Operations

Jamie Davis
Vice President Fiber and Chief Technology Officer

Knoxville Utilities Board Wastewater Division
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June 30, 2022 and 2021

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Independent Auditor's Report

Board of Commissioners
Wastewater Division of the Knoxville Utilities Board
Knoxville, Tennessee

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Wastewater Division (the Division) of the Knoxville Utilities Board, a component unit of the City of Knoxville, Tennessee, as of and for the years ended June 30, 2022 and 2021, and the related notes to the financial statements, which collectively comprise the Division's basic financial statements as listed in the index.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Division as of June 30, 2022 and 2021, and the changes in its financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Division and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Change in Accounting Principle

As discussed in Note 2 to the financial statements, effective July 1, 2020, the Division adopted new accounting guidance Governmental Accounting Standards Board Statement No. 87, *Leases*. Our opinion is not modified with respect to this matter.

Responsibilities of Management for the Financial Statements

The Division's management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Division's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Board of Commissioners
Wastewater Division of the Knoxville Utilities Board
Knoxville, Tennessee

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Division's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Division's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 4 through 27 and the required supplementary information on pages 66 through 70 be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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.

Board of Commissioners
Wastewater Division of the Knoxville Utilities Board
Knoxville, Tennessee

Supplemental Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Division's basic financial statements. The supplemental information, as required by the State of Tennessee, is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The supplemental 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. Such 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 supplemental information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information

Management is responsible for the other information. The other information comprises the statistical information but does not include the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon. In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Emphasis of Matter

As discussed in Note 1, the financial statements present only the Wastewater Division and do not purport to, and do not, present fairly the financial position of the Knoxville Utilities Board, as of June 30, 2022 and 2021, and the changes in its financial position and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 25, 2022, on our consideration of the Division's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Division's internal control over financial reporting and compliance.

Coulter & Justus, P.C.

Knoxville, Tennessee
October 25, 2022

Knoxville Utilities Board (KUB), comprised of the Electric Division, Fiber Division, Gas Division, Water Division, and Wastewater Division (Divisions), is reported as a component unit enterprise fund in the financial statements of the City of Knoxville. KUB's responsibility is to oversee the purchase, production, distribution, and processing of electricity, broadband, natural gas, water, and wastewater services. A seven-member Board of Commissioners (Board) governs KUB. The Board has all powers to construct, acquire, expand, and operate the Divisions. It has full control and complete jurisdiction over the management and operation of the Divisions. The Wastewater Division (Division) provides services to certain customers in Knox County and in two surrounding counties in East Tennessee. The Division's accounts are maintained in conformity with the Uniform System of Accounts of the National Association of Regulatory Utility Commissioners (NARUC) and the Governmental Accounting Standards Board (GASB), as applicable. The financial statements present only the Wastewater Division and do not purport to, and do not, present fairly the consolidated financial position of Knoxville Utilities Board as of June 30, 2022, and 2021, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America.

The Division's discussion and analysis is designed to (a) assist the reader in focusing on significant financial issues, (b) provide an overview of the Division's financial activity, (c) identify major changes in the Division's financial position, and (d) identify any financial concerns.

The Division's Management Discussion and Analysis (MD&A) focuses on the fiscal year ended June 30, 2022, activities, resulting changes, and current known facts, and should be read in conjunction with the Division's financial statements.

Wastewater Division Highlights

System Highlights

As KUB returned to normal operations this fiscal year, supply chain issues and workforce shortages continued to impact capital projects. While some projects were delayed, others were held until supplies were more readily available. However, KUB's ability to serve its wastewater customers has remained strong throughout.

KUB has completed all work associated with the 2005 Federal Consent Decree. A request for Consent Decree termination was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

The wastewater service area covers 249 square miles and includes 73,377 wastewater customers. KUB maintains 1,330 miles of services mains, 79 pump stations, and 4 treatment plants to treat 13.4 billion gallons of wastewater on an annual basis. The average daily flow is 36.8 million gallons.

KUB has added 1,570 wastewater system customers over the past three years, representing annual growth of less than one percent. In fiscal year 2022, 547 customers were added.

The typical residential wastewater customer's average monthly wastewater bill was $65.50 as of June 30, 2022, which is unchanged from the prior two fiscal years.

Previously planned wastewater rate increases scheduled for July 2020 and July 2021 were eliminated due to operating cost savings, capital project deferrals, and savings from refinancing outstanding bonds.

KUB's treatment plants continue to meet high standards of operation. KUB was awarded the National Association of Clean Water Agencies (NACWA) Peak Performance recognition for all Wastewater

Treatment Plants in calendar year 2021. Fourth Creek, Loves Creek, and Eastbridge Wastewater Treatment Plants won silver awards while Kuwahee won gold.

KUB continued to maintain Platinum certification with the National Biosolids Partnership following a rigorous review process and independent audit that was conducted in December 2021. Biosolids are nutrient-rich organic matter produced by wastewater treatment and is a registered fertilizer with the Tennessee Department of Agriculture.

Century II Infrastructure Program

Century II is KUB's proactive long-range program to improve and maintain the electric, natural gas, water, and wastewater systems for its customers. It includes maintenance and asset replacement strategies for each system and establishes sustainable replacement cycles. Century II moves KUB into its second century of service by improving each system through sound planning, resource allocation, and continued, but accelerated, investment.

In May 2017, a new Century II funding resolution was adopted by the KUB Board to express the continued commitment to funding Century II programs for the next ten years. The funding will be achieved through a combination of rate increases and debt issues supplemented by cost savings and new revenue from net customer additions.

In June 2017, the Board approved three wastewater rate increases to support the Century II program. The three approved wastewater rate increases went into effect July 2017, July 2018, and July 2019, generating $4.3 million, $4.2 million, and $4.5 million in additional annual Wastewater Division revenue, respectively.

In June 2022, the Board approved the next phase of wastewater rate increases to support the Century II program. The three approved 4 percent wastewater rate increases are effective July 2022, July 2023, and July 2024, and will generate $3.9 million, $4 million, and $4.2 million in additional annual Wastewater Division revenue, respectively.

In fiscal year 2022, KUB rehabilitated or replaced 8.9 miles of wastewater system mains, while staying on track with Century II goals and within the Wastewater Division's total capital budget.

Consent Decree

In February 2005, a Consent Decree was entered into federal court regarding the operation of KUB's wastewater system. Under the terms of the Consent Decree, the remediation of identified sanitary sewer overflows (SSOs) on KUB's wastewater system had to be completed by June 30, 2016. KUB completed all the requirements of the Consent Decree for the collection system two years in advance of the deadline.

The Consent Decree also required KUB to perform an evaluation of the wet weather performance and capacity of its wastewater treatment plants. In July 2007, KUB submitted a Composite Correction Plan (CCP) for its wastewater treatment plants to EPA for review. The development and filing of the CCP was a requirement of the federal order of February 2005. The CCP includes recommended improvements to KUB's Kuwahee and Fourth Creek treatment plants to address wet weather capacity issues noted in prior assessments. The EPA approved the CCP in January 2009 including a recommended schedule of plant improvements that extends beyond the expiration date of the original Consent Decree. An amendment to the Consent Decree incorporating and establishing this schedule was agreed to by all parties and was entered on June 23, 2009. The purpose of the Amendment is to allow KUB to complete a portion of work outlined in the CCP after the Consent Decree deadline of June 30, 2016. The CCP provided for a biologically enhanced high-rate clarification (the BEHRC) secondary treatment system to be installed at the Fourth Creek treatment plant and at the Kuwahee treatment plant. KUB successfully completed the installation of the BEHRC system at the Fourth Creek treatment plant in the 2018 fiscal year. The project

at the Kuwahee treatment plant was completed this fiscal year. The total cost of the CCP improvements at the Fourth Creek treatment plant and Kuwahee treatment plant is approximately $120 million.

KUB's funding plan for the Consent Decree included long-term bonds and a series of rate increases phased in over the term of the order. Bond proceeds fund all types of wastewater capital projects, the majority of which are related to the Consent Decree. As of June 30, 2022, the Wastewater Division had issued $594.8 million in bonds to fund wastewater system capital improvements since the inception of the Consent Decree. The Board approved two 50 percent rate increases, which went into effect in April 2005 and January 2007. The Board also approved an 8 percent rate increase, which was effective in September 2008, two 12 percent rate increases, which were effective in April 2011 and October 2012, three 6 percent rate increases, which were effective October 2014, October 2015, and October 2016, three 5 percent rate increases, which were effective July 2017, July 2018, and July 2019, and three 4 percent rate increases, which are effective July 2022, July 2023, and July 2024. KUB anticipates additional bond issues and rate increases over the next decade to help fund wastewater capital improvements.

KUB successfully completed the first cycle of Maintenance Operation Management (MOM) requirements one year before the deadline by inspecting manholes and gravity mains, smoke testing gravity mains, performing required inspections of pump stations and the related force mains, and completing all Corrective Action Plan/Engineering Report (CAP/ER) projects. KUB initiated the second MOM cycle that continues to focus on the prevention of SSOs. As part of the Century II initiative, formally known as the PACE10 program, KUB has installed storage tanks providing 34 million gallons of wastewater storage to control wet weather overflows and rehabilitated or replaced 432 miles of collection system pipe. KUB also continues to maintain a proactive operations and maintenance plan for the wastewater collection system including inspection, grease control, and private lateral enforcement. The result of the PACE10/Century II initiative has been an 80 percent reduction in SSOs.

As of June 30, 2022, the Wastewater Division had completed its 18th full year under the Consent Decree, spending $579.8 million on capital investments to meet Consent Decree requirements.

KUB's request for termination of the Consent Decree was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

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Financial Highlights

During fiscal year 2022, KUB adopted GASB Statement No. 87, *Leases* (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

Fiscal Year 2022 Compared to Fiscal Year 2021

The Division's net position during the year increased $19.6 million compared to a $17.8 million increase last fiscal year.

Operating revenue increased $2.6 million or 2.6 percent for the fiscal year ended June 30, 2022. Billed sales increased $2.2 million, due to an increase in billable customer flows of 2.2 percent.

Operating expenses increased $2.4 million. Operating and maintenance (O&M) expenditures increased $3.3 million. Depreciation and amortization expense decreased $1.2 million or 5.3 percent. Taxes and tax equivalents increased $0.3 million or 5.7 percent.

Interest income was consistent with the prior fiscal year. Interest expense decreased $0.7 million compared to the prior fiscal year. Other income (net) was $1.1 million higher.

Capital contributions decreased $0.1 million, the result of decreased donated utility assets from developers compared to the previous fiscal year.

Total plant assets (net) increased $21.6 million or 2.7 percent since the end of last fiscal year.

During fiscal year 2022, KUB sold $11.1 million in wastewater system revenue bonds for the purpose of funding wastewater system capital improvements. KUB also refinanced outstanding debt, selling $23.2 million in wastewater system revenue refunding bonds in April 2022. KUB will realize a total debt service savings of $1.3 million over the life of the bonds ($0.7 million on a net present value basis).

Long-term debt represented 55.2 percent of the Division's capital structure as of June 30, 2022, as compared to 56.7 percent last year. Capital structure equals long-term debt (which includes the current and long-term portion of revenue bonds) plus net position.

The Division's bond covenants require a debt service coverage ratio of at least 1.2 times the maximum principal and interest payments over the life of the Division's outstanding bonds. Current year debt coverage for the fiscal year was 1.97. Maximum debt service coverage was 1.92.

Fiscal Year 2021 Compared to Fiscal Year 2020

The Division's net position during the year increased $17.8 million compared to a $21.2 million increase last fiscal year.

Operating revenue decreased $1 million or 1 percent for the fiscal year ended June 30, 2021. This reflects an increase in billed sales of $0.8 million and a decrease in other operating revenue of $1.2 million. Billable customer flows increased 1.2 percent.

Operating expenses increased $1.4 million. Operating and maintenance (O&M) expenditures decreased $2.1 million. Depreciation and amortization expense rose $3.2 million or 15.9 percent. Taxes and tax equivalents increased $0.3 million or 4.8 percent.

Interest income was $1.2 million lower than the prior fiscal year. Interest expense decreased $0.6 million compared to the prior fiscal year. Other income (net) was $0.8 million lower.

Capital contributions increased $0.5 million, the result of increased donated utility assets from developers compared to the previous fiscal year.

Total plant assets (net) increased $23.3 million or 3 percent since the end of last fiscal year.

During fiscal year 2021, KUB sold $27.5 million in wastewater system revenue bonds for the purpose of funding wastewater system capital improvements. KUB also took advantage of a lower interest environment to refinance outstanding debt, selling $190.8 million in wastewater system revenue refunding bonds in March 2021. KUB will realize a total debt service savings of $47.2 million over the life of the bonds ($41.8 million on a net present value basis).

Long-term debt represented 56.7 percent of the Division's capital structure as of June 30, 2021, as compared to 59.7 percent last year. The decrease is the net result of the issuance of new revenue and refunding bonds offset by refunded bonds and the scheduled repayment of debt during the fiscal year. Capital structure equals long-term debt (which includes the current and long-term portion of revenue bonds) plus net position.

The Division's bond covenants require a debt service coverage ratio of at least 1.2 times the maximum principal and interest payments over the life of the Division's outstanding bonds. Current year debt coverage for the fiscal year was 1.84. Maximum debt service coverage was 1.98.

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Knoxville Utilities Board Wastewater Division - Financial Statements

The Division's financial performance is reported under three basic financial statements: the Statement of Net Position; the Statement of Revenues, Expenses and Changes in Net Position; and the Statement of Cash Flows.

Statement of Net Position

The Division reports its assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position in the Statement of Net Position. Assets are classified as current, restricted, wastewater plant in service, intangible, or other assets.

Liabilities are classified as current, other, or long-term debt. Net position is classified as net investment in capital assets, restricted, or unrestricted. Net position tells the user what the Division has done with its accumulated earnings, not just the balance.

Net investment in capital assets reflects the book value of all capital assets and intangible assets, less lease liability and the outstanding balances of debt used to acquire, construct, or improve those assets.

Restricted net position are assets that have been limited to specific uses by the Division's bond covenants or through resolutions passed by the KUB Board.

Unrestricted net position is a residual classification; the amount remaining after reporting net position is either invested in capital or restricted is reported there.

Statement of Revenues, Expenses and Changes in Net Position

The Division reports its revenues and expenses (both operating and non-operating) on the Statement of Revenues, Expenses and Changes in Net Position. In addition, any capital contributions or assets donated by developers are reported on this statement.

Total revenue less total expense equals the change in net position for the reporting period. Net position at the beginning of the period is increased or decreased, as applicable, by the change in net position for the reporting period.

The change in net position for the reporting period is added to the net position segment of the Statement of Net Position.

Statement of Cash Flows

The Division reports cash flows from operating activities, capital and related financing activities, noncapital and related financing activities, and investing activities on the Statement of Cash Flows. This statement tells the user the Division's sources and uses of cash during the reporting period.

The statement indicates the Division's beginning cash balance and ending cash balance and how it was either increased or decreased during the reporting period.

The statement also reconciles cash flow to operating income as it appears on the Statement of Revenues, Expenses and Changes in Net Position.

Condensed Financial Statements

Statement of Net Position

The following table reflects the condensed Statement of Net Position for the Wastewater Division compared to the prior two fiscal years.

Statements of Net Position
As of June 30

(in thousands of dollars)	2022	2021 as restated	2020
Current, restricted, intangible, and other assets	$ 90,063	$ 99,378	$ 85,942
Capital assets, net	831,607	809,975	786,640
Deferred outflows of resources	15,166	15,027	17,107
Total assets and deferred outflows of resources	936,836	924,380	889,689
Current and other liabilities	27,152	26,572	27,813
Long-term debt outstanding	518,518	523,665	511,453
Deferred inflows of resources	7,850	10,429	4,525
Total liabilities and deferred inflows of resources	553,520	560,666	543,791
Net position			
Net investment in capital assets	314,337	289,032	279,477
Restricted	3,660	3,331	3,647
Unrestricted	65,319	71,351	62,774
Total net position	$ 383,316	$ 363,714	$ 345,898

Normal Impacts on Statement of Net Position

The following is a description of activities which will normally impact the comparability of the Statement of Net Position presentation:

- Change in net position (from Statement of Revenues, Expenses and Change in Net Position): impacts (increase/decrease) current and other assets and/or capital and intangible assets, and unrestricted net position.
- Issuing debt for capital: increases deferred outflows of resources and long-term debt.
- Spending debt proceeds on new capital: reduces current assets and increases capital assets.
- Spending of non-debt related current assets on new capital: (a) reduces current assets and increases capital assets, and (b) reduces unrestricted net position and increases net investment in capital assets.
- Principal payment on debt: (a) reduces current and other assets and reduces long-term debt, and (b) reduces unrestricted net position and increases net investment in capital assets.
- Reduction of capital assets through depreciation: reduces capital assets and net investment in capital assets.

Impacts and Analysis

Current, Restricted, Intangible, and Other Assets

Fiscal Year 2022 Compared to Fiscal Year 2021

Current, restricted, intangible, and other assets decreased $9.3 million or 9.4 percent, primarily due to an $8.8 million decrease in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments).

Fiscal Year 2021 Compared to Fiscal Year 2020

Current, restricted, intangible, and other assets increased $13.4 million or 15.6 percent, primarily due to an $8.6 million increase in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments) and a $5.7 million increase in the actuarially determined net pension asset.

Capital Assets

Fiscal Year 2022 Compared to Fiscal Year 2021

Capital assets increased $21.6 million or 2.7 percent, the result of capital expenditures, net of depreciation. Major capital expenditures during the year included $37.7 million for major system improvements related to Century II. Wastewater system assets of $7.3 million were retired during the fiscal year.

Fiscal Year 2021 Compared to Fiscal Year 2020

Capital assets increased $23.3 million or 3 percent, the result of capital expenditures, net of depreciation. Major capital expenditures during the year included $35.2 million for major system improvements related to Century II. Spending was slowed this year to allow for greater financial liquidity in response to the pandemic. Wastewater system assets of $11.4 million were retired during the fiscal year.

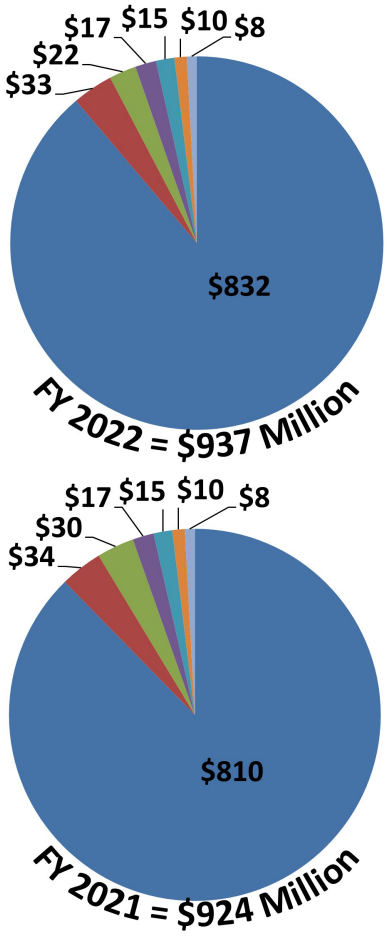
Deferred Outflows of Resources

Fiscal Year 2022 Compared to Fiscal Year 2021

Deferred outflows increased $0.1 million compared to the prior year, due to a $0.9 million increase in OPEB outflow and a $0.1 million increase in pension outflow offset by a $0.9 million decrease in unamortized bond refunding costs.

Fiscal Year 2021 Compared to Fiscal Year 2020

Deferred outflows decreased $2.1 million compared to the prior year, due to a $1.2 million decrease in unamortized bond refunding costs and a $0.9 million decrease in OPEB outflow.



Wastewater Division Total Assets and Deferred Outflows of Resources (in Millions)

	FY22	FY21
Plant	89%	88%
Contingency Fund	3%	4%
General Fund	2%	3%
Other Assets	2%	2%
Deferred Outflows of Resources	2%	1%
Accounts Receivable	1%	1%
Restricted Assets	1%	1%

Current and Other Liabilities

Fiscal Year 2022 Compared to Fiscal Year 2021

Current and other liabilities were $0.6 million higher than the prior fiscal year, due to increases of $2 million in net OPEB liability and $0.5 million in the current portion of revenue bonds offset by a $2 million decrease in accounts payable.

Fiscal Year 2021 Compared to Fiscal Year 2020

Current and other liabilities were $1.2 million lower than the prior fiscal year, due to decreases of $1.7 in net OPEB liability and $0.8 million in the current portion of revenue bonds offset by a $1.2 million increase in accounts payable.

Long-Term Debt

Fiscal Year 2022 Compared to Fiscal Year 2021

The Division's outstanding long-term debt decreased $5.1 million or 1 percent. This decrease is due in part to the net impact of the scheduled repayment of debt and $11.1 million in wastewater system revenue bonds sold in April 2022. KUB also sold $23.2 million of wastewater system revenue refunding bonds in April 2022 with a premium of $1.7 million to refund $24.6 million in outstanding debt, resulting in a reduction of principal of $1.4 million.

Fiscal Year 2021 Compared to Fiscal Year 2020

The Division's outstanding long-term debt increased $12.2 million or 2.4 percent. This increase is due in part to the net impact of the scheduled repayment of debt and $27.5 million in wastewater system revenue bonds sold in October 2020. KUB also sold $190.8 million of wastewater system revenue refunding bonds in March 2021 with a premium of $48.1 million to refund $238.6 million in outstanding debt, resulting in a reduction of principal of $47.8 million.

Deferred Inflows of Resources

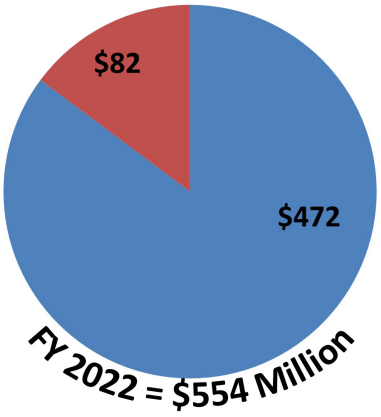
Fiscal Year 2022 Compared to Fiscal Year 2021

Deferred inflows of resources were $2.6 million lower than the prior fiscal year, due to a $1.7 million decrease in OPEB inflow and a $1.1 million decrease in pension inflow offset by a $0.2 million increase in lease inflow.

Fiscal Year 2021 Compared to Fiscal Year 2020

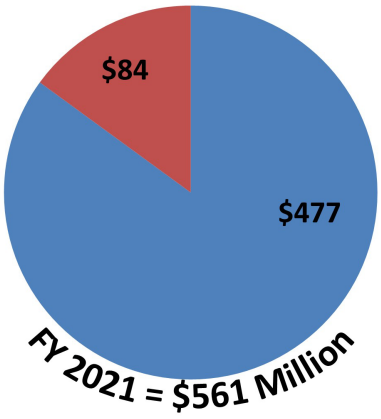
Deferred inflows of resources were $5.9 million higher than the prior fiscal year, due to a $3.4 million increase in pension inflow, a $1.8 million increase in OPEB inflow, and a $0.7 million increase in lease inflow.

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Wastewater Division Total Liabilities and Deferred Inflows of Resources (in Millions)

	FY22	FY21
Bond Debt	85%	85%
All Other	15%	15%



Net Position

Fiscal Year 2022 Compared to Fiscal Year 2021

Net position increased $19.6 million in fiscal year 2022. Unrestricted net position decreased $6 million, primarily due to an $8.8 million decrease in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments). Net investment in capital assets increased $25.3 million, the result of $21.6 million in net plant additions and a decrease in current portion of revenue bonds and total long-term debt of $4.6 million. Restricted net position was $0.3 million higher than the previous fiscal year, due to an increase in required bond fund reserves.

Fiscal Year 2021 Compared to Fiscal Year 2020

Net position increased $17.8 million in fiscal year 2021. Unrestricted net position increased $8.6 million, primarily due to an $8.6 million increase in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments). Net investment in capital assets increased $9.6 million, the result of $23.3 million in net plant additions offset by an increase in current portion of revenue bonds and total long-term debt of $11.4 million. Restricted net position was $0.3 million lower than the previous fiscal year, due to a decrease in required bond fund reserves.

Statement of Revenues, Expenses and Changes in Net Position

The following table reflects the condensed Statement of Revenues, Expenses and Changes in Net Position for the Wastewater Division compared to the prior two fiscal years.

Statements of Revenues, Expenses and Changes in Net Position
For the Years Ended June 30

(in thousands of dollars)	2022	2021 as restated	2020
Operating revenues	$ 102,937	$ 100,361	$ 101,336
Operating expenses			
Treatment	14,515	12,735	12,736
Collection	8,541	8,561	8,229
Customer service	3,967	3,740	3,693
Administrative and general	10,413	9,089	11,464
Depreciation and amortization	21,815	23,034	19,881
Taxes and tax equivalents	6,178	5,844	5,574
Total operating expenses	65,429	63,003	61,577
Operating income	37,508	37,358	39,759
Interest income	297	313	1,484
Interest expense	(18,888)	(19,611)	(20,170)
Other income/(expense)	177	(887)	(64)
Change in net position before capital contributions	19,094	17,173	21,009
Capital contributions	508	643	192
Change in net position	$ 19,602	$ 17,816	$ 21,201

Normal Impacts on Statement of Revenues, Expenses and Changes in Net Position

The following is a description of activities which will normally impact the comparability of the Statement of Revenues, Expenses and Changes in Net Position presentation:

- Operating revenue is primarily determined by the amount of water usage billed during the fiscal year. KUB has certain commercial and industrial customers whose wastewater usage is metered separately from their water usage. Any change (increase/decrease) in wastewater rates would also cause a change in operating revenue.

- Operating expenses (treatment, collection system expense, customer service, administrative and general) are normally impacted by changes in areas including, but not limited to, labor cost (staffing, wage rates), active employee and retiree health insurance costs, chemicals, and wastewater system maintenance.

- Depreciation and amortization expense is impacted by intangible assets, plant additions, and retirements during the fiscal year.

- Taxes and tax equivalents are impacted by plant additions/retirements and changes in property tax rates.

- Interest income is impacted by the level of interest rates and investments.

- Interest expense is impacted by the level of outstanding debt and interest rates on the outstanding debt.

- Other income/(expense) is impacted by miscellaneous non-operating revenues and expenses.

- Capital contributions are impacted by a donation of facilities/infrastructure to KUB by developers and governmental agencies. The contributions are recognized as revenue and recorded as plant in service based on the fair market value of the asset(s).

Impacts and Analysis

Change in Net Position

Fiscal Year 2022 Compared to Fiscal Year 2021

The Division's Change in Net Position increased $19.6 million in fiscal year 2022. Comparatively, net position increased by $17.8 million in fiscal year 2021.

Fiscal Year 2021 Compared to Fiscal Year 2020

The Division's Change in Net Position increased $17.8 million in fiscal year 2021. Comparatively, net position increased by $21.2 million in fiscal year 2020.

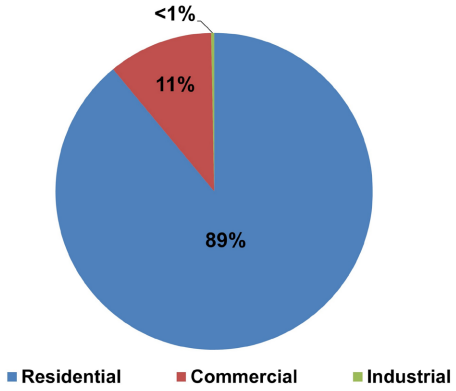
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Margin from Sales

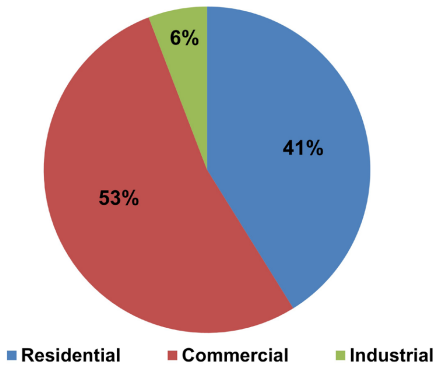
Fiscal Year 2022 Compared to Fiscal Year 2021

Operating revenue increased $2.6 million or 2.6 percent for the fiscal year ended June 30, 2022. Billed sales increased $2.2 million, due to an increase in billable customer flows of 2.2 percent. Rebates on bond interest payments from the federal government for federally taxable Build America Bonds (BABs) are reported as revenue in accordance with GASB. KUB recognized $0.4 million in revenue for BABs rebates in fiscal year 2022.

FY 2022 Total Wastewater Customers = 73,377



FY 2022 Wastewater Sales = 6.4 Billion Gallons



Residential customers accounted for 89 percent of wastewater customers and 41 percent of total billed sales volumes for the year. Commercial customers accounted for the largest portion of total sales volumes for the year with 53 percent.

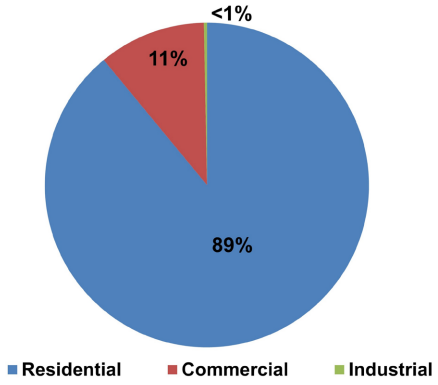
KUB's ten largest wastewater customers accounted for 19 percent of KUB's billed wastewater volumes. Those ten customers represent five industrial and five commercial customers, including four governmental customers.

KUB has added 1,570 wastewater customers over the past three years, representing annual growth of less than one percent.

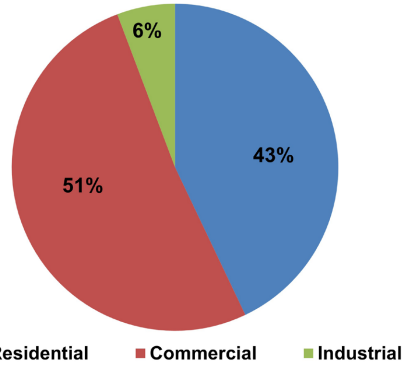
Fiscal Year 2021 Compared to Fiscal Year 2020

Operating revenue decreased $1 million or 1 percent for the fiscal year ended June 30, 2021. This reflects an increase in billed sales of $0.8 million and a decrease in other operating revenue of $1.2 million. Billable customer flows increased 1.2 percent. Rebates on bond interest payments from the federal government for federally taxable Build America Bonds (BABs) are reported as revenue in accordance with GASB. KUB recognized $1 million in revenue for BABs rebates in fiscal year 2021.

FY 2021 Total Wastewater Customers = 72,830



FY 2021 Wastewater Sales = 6.3 Billion Gallons



Residential customers accounted for 89 percent of wastewater customers and 43 percent of total billed sales volumes for the year. Commercial customers accounted for the largest portion of total sales volumes for the year with 51 percent.

KUB's ten largest wastewater customers accounted for 18 percent of KUB's billed wastewater volumes. Those ten customers represent five industrial and five commercial customers, including four governmental customers.

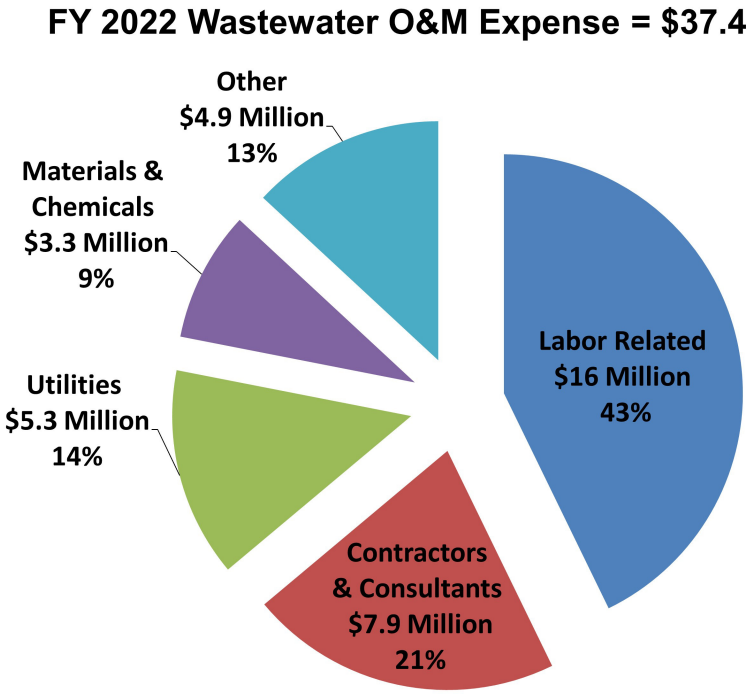
KUB has added 1,588 wastewater customers over the past three years, representing annual growth of less than one percent.

Operating Expenses

Fiscal Year 2022 Compared to Fiscal Year 2021

Operating expenses increased $2.4 million compared to fiscal year 2021. Operating expenses include operations and maintenance (O&M) expense, depreciation/amortization, and taxes/tax equivalents. O&M expenses can be further classified as treatment, collection, customer service, and administrative and general.

- Treatment expenses increased $1.8 million, primarily due to an increase in chemicals and labor related expenses.
- Collection system expenses were consistent with the prior fiscal year.
- Customer service expenses increased $0.2 million, primarily due to an increase in payment processing fees.
- Administrative and general expenses increased $1.3 million, primarily due to an increase in labor related expenses, including higher OPEB expenses related to the introduction of the Health Reimbursement Arrangement.

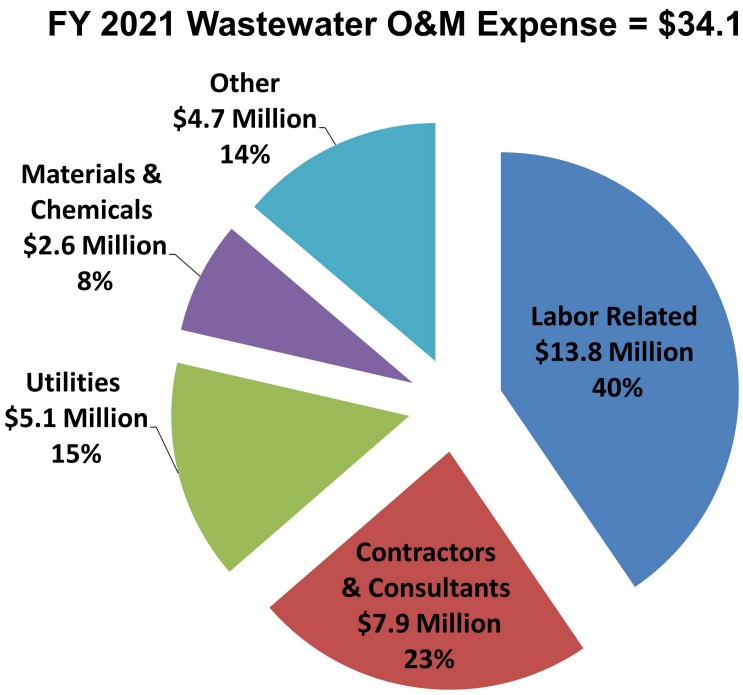


- Depreciation and amortization expense decreased $1.2 million or 5.3 percent. KUB added $69 million in assets during fiscal year 2022. A partial year of depreciation expense was recorded for these capital investments and a full year of depreciation expense was incurred on $55.2 million of wastewater system assets placed in service during fiscal year 2021. Wastewater system assets of $7.3 million were retired during the fiscal year.
- Taxes and tax equivalents increased $0.3 million compared to the prior fiscal year, due to increased plant in service levels.

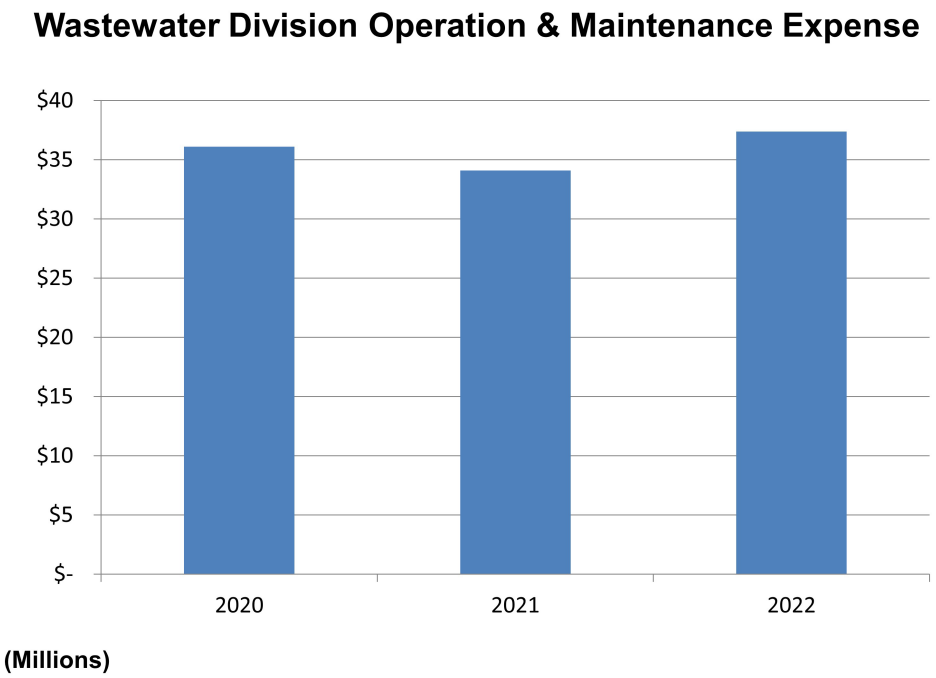
Fiscal Year 2021 Compared to Fiscal Year 2020

Operating expenses increased $1.4 million compared to fiscal year 2020. Operating expenses include operations and maintenance (O&M) expense, depreciation/amortization, and taxes/tax equivalents. O&M expenses can be further classified as treatment, collection, customer service, and administrative and general.

- Treatment expenses were consistent with the prior fiscal year.
- Collection system expenses increased $0.3 million, primarily due to an increase in outside contractor and consultant costs.
- Customer service expenses were up slightly from the prior fiscal year.
- Administrative and general expenses decreased $2.4 million, primarily due to a decrease in labor related expenses, including lower pension and OPEB expenses.



- Depreciation and amortization expense increased $3.2 million or 15.9 percent. KUB added $55.2 million in assets during fiscal year 2021, including $5.2 million of multi-year projects being held in Construction Work in Progress. A partial year of depreciation expense was recorded for these capital investments and a full year of depreciation expense was incurred on $37.8 million of wastewater system assets placed in service during fiscal year 2020. Wastewater system assets of $11.4 million were retired during the fiscal year.
- Taxes and tax equivalents increased $0.3 million compared to the prior fiscal year, due to increased plant in service levels.



Other Income and Expense

Fiscal Year 2022 Compared to Fiscal Year 2021

Interest income was consistent with the prior fiscal year.

Interest expense was $0.7 million lower than the prior fiscal year, reflecting the net impact of interest expense from new revenue bonds sold during the fiscal year and interest savings from the refunding of outstanding bonds.

Other income (net) was $1.1 million higher than the prior fiscal year, primarily due to an increase in amortization of premiums.

Capital contributions decreased $0.1 million compared to last fiscal year as a result of a decrease in assets received from developers and other governmental entities.

Fiscal Year 2021 Compared to Fiscal Year 2020

Interest income was $1.2 million lower than the prior fiscal year, primarily due to lower short-term interest rates.

Interest expense was $0.6 million lower than the prior fiscal year, reflecting the net impact of interest expense from new revenue bonds sold during the fiscal year and interest savings from the reduction in principal from the refunding of outstanding bonds.

Other expense (net) was $0.8 million higher than the prior fiscal year, primarily due to losses on disposition of property.

Capital contributions increased $0.5 million compared to last fiscal year as a result of an increase in assets received from developers and other governmental entities.

Capital Assets

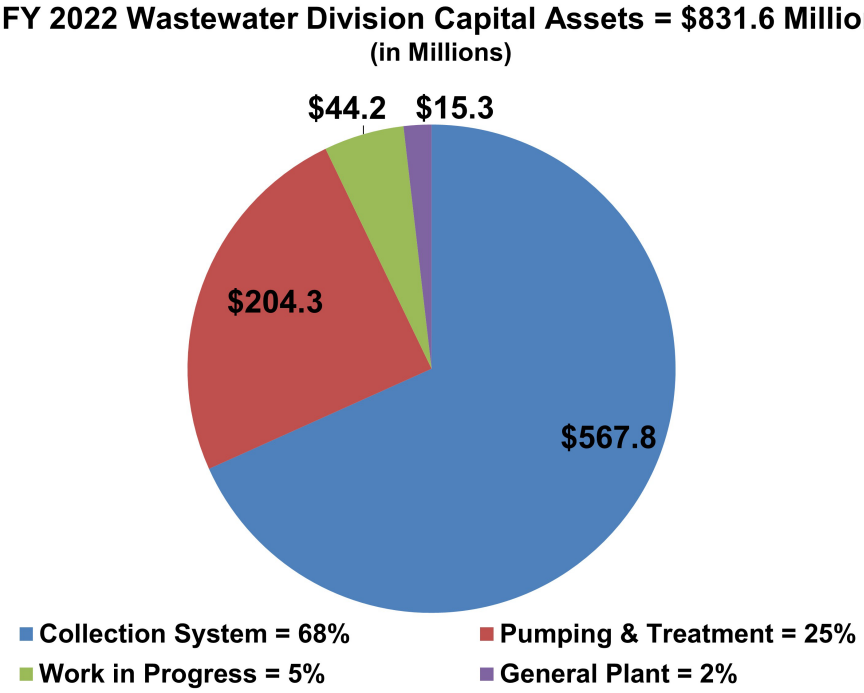
Capital Assets
As of June 30
(Net of Depreciation)

(in thousands of dollars)	2022	2021	2020
Pumping & Treatment Plant	$ 204,307	$ 167,117	$ 162,645
Collection Plant			
Mains and Metering	506,844	495,404	473,913
Other Accounts	61,013	62,399	64,355
Total Collection Plant	567,857	557,803	538,268
Total General Plant	15,252	15,590	7,898
Total Wastewater Plant	$ 787,416	$ 740,510	$ 708,811
Work In Progress	44,191	69,465	77,829
Total Net Plant	$ 831,607	$ 809,975	$ 786,640

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Fiscal Year 2022 Compared to Fiscal Year 2021

As of June 30, 2022, the Division had $831.6 million invested in a variety of capital assets, as reflected in the schedule of capital assets, which represents a net increase (including additions, retirements, and depreciation) of $21.6 million or 2.7 percent over the end of the last fiscal year.



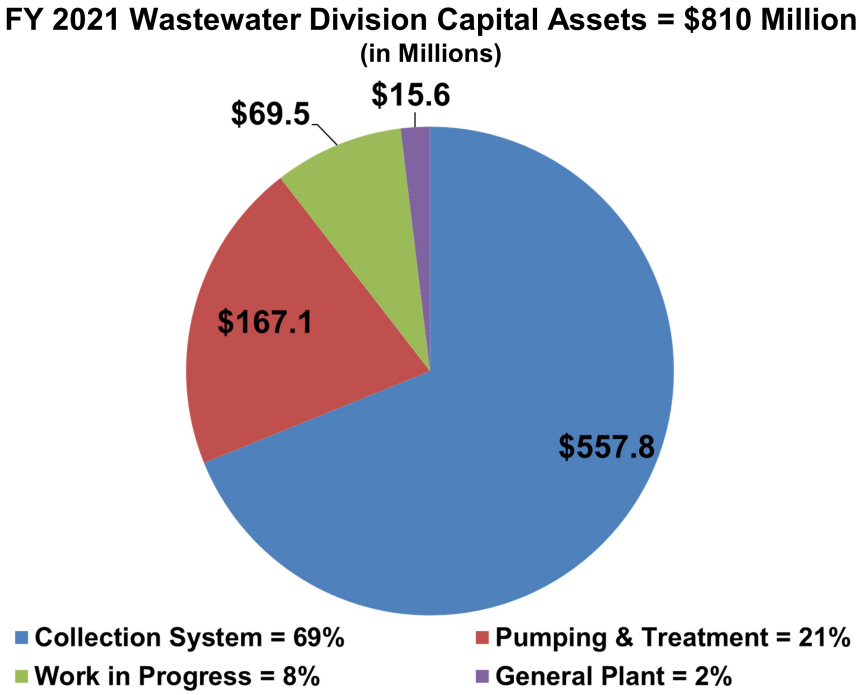
Major capital asset expenditures during the year were as follows:

- $37.7 million related to Century II projects
  - $19.7 million for wastewater treatment plant upgrades
  - $8.1 million for pump station construction and improvements
  - $4.1 million for sewer mini-basin rehabilitation and replacement
  - $3.8 million for short line projects
  - $2 million for sewer trunk line rehabilitation and replacement

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Fiscal Year 2021 Compared to Fiscal Year 2020

As of June 30, 2021, the Division had $810 million invested in a variety of capital assets, as reflected in the schedule of capital assets, which represents a net increase (including additions, retirements, and depreciation) of $23.3 million or 3 percent over the end of the last fiscal year. Spending on capital assets was slowed this year to allow for greater financial liquidity in response to the pandemic.



Major capital asset expenditures during the year were as follows:

- $35.2 million related to Century II projects
  - $18.7 million for wastewater treatment plant upgrades
  - $8.6 million for sewer mini-basin rehabilitation and replacement
  - $5.1 million for pump station construction and improvements
  - $1.5 million for short line projects
  - $1.3 million for sewer trunk line rehabilitation and replacement

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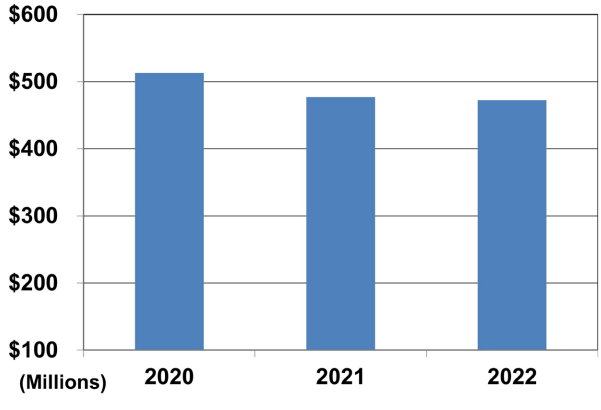
Debt Administration

As of June 30, 2022, the Wastewater Division had $472.1 million in outstanding wastewater system bonds. The bonds are secured solely by revenues of the Wastewater Division. Debt as a percentage of the Division's capital structure was 55.2 percent in 2022, 56.7 percent in 2021, and 59.7 percent at the end of fiscal year 2020. KUB's Debt Management Policy limits the Division's debt ratio to 70 percent or less.

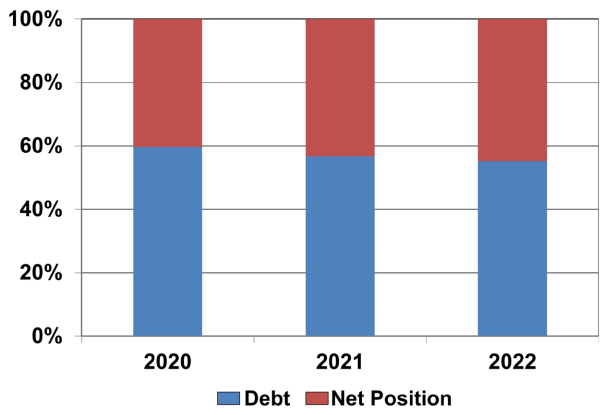
Outstanding Debt
As of June 30

(in thousands of dollars)	2022	2021	2020
Revenue bonds	$ 472,110	$ 476,660	$ 512,560
Total outstanding debt	$ 472,110	$ 476,660	$ 512,560

Wastewater Division Outstanding Debt



Wastewater Division Funding



The Division will pay $159.4 million in principal payments over the next ten years, representing 33.8 percent of the outstanding bonds. KUB's Debt Management Policy requires a minimum of 20 percent of wastewater debt principal be repaid over the next ten years.

Fiscal Year 2022 Compared to Fiscal Year 2021

As of June 30, 2022, the Division had $472.1 million in outstanding debt (including the current portion of revenue bonds), representing a decrease of $4.6 million. As of June 30, 2022, the Division's weighted average cost of debt was 3.99 percent (3.91 percent including the impact of Build America Bonds rebates).

KUB sold $11.1 million in wastewater system revenue bonds in April 2022 for the purpose of funding wastewater system capital improvements. The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.4 percent. The bonds mature over a period of 30 years with a final maturity in fiscal year 2051.

KUB sold $23.2 million in wastewater system revenue refunding bonds in April 2022 for the purpose of refinancing existing wastewater system revenue bonds. KUB will realize a total debt service savings of $1.3 million over the life of the bonds ($0.7 million on a net present value basis). The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.69 percent. The bonds have a final maturity in fiscal year 2050.

The Division's outstanding debt is rated by Standard & Poor's and Moody's Investors Service. As of June 30, 2022, the Division's revenue bonds were rated AA+ by Standard & Poor's and Aa2 by Moody's Investors Service.

Fiscal Year 2021 Compared to Fiscal Year 2020

As of June 30, 2021, the Division had $476.7 million in outstanding debt (including the current portion of revenue bonds), representing a decrease of $35.9 million. As of June 30, 2021, the Division's weighted average cost of debt was 3.98 percent (3.90 percent including the impact of Build America Bonds rebates).

KUB sold $27.5 million in wastewater system revenue bonds in October 2020 for the purpose of funding wastewater system capital improvements. The true interest cost of the bonds, which were sold through a competitive bidding process, was 2.41 percent. The bonds mature over a period of 30 years with a final maturity in fiscal year 2050.

KUB sold $190.8 million in wastewater system revenue refunding bonds in March 2021 for the purpose of refinancing existing wastewater system revenue bonds. KUB will realize a total debt service savings of $47.2 million over the life of the bonds ($41.8 million on a net present value basis), with $47.8 million of the savings as a reduction of outstanding principal. The true interest cost of the bonds, which were sold through a competitive bidding process, was 1.91 percent. The bonds have a final maturity in fiscal year 2049.

The Division's outstanding debt is rated by Standard & Poor's and Moody's Investors Service. As of June 30, 2021, the Division's revenue bonds were rated AA+ by Standard & Poor's and Aa2 by Moody's Investors Service.

Impacts on Future Financial Position

KUB anticipates adding 400 wastewater customers in fiscal year 2023.

In May 2022, the Board approved the issuance of wastewater system revenue bonds not to exceed $13 million for the purpose of funding wastewater system capital improvements. The bonds will be sold through a competitive bidding process during fiscal year 2023.

KUB long-term debt includes $20.3 million of Wastewater Division 2010 Build America Bonds (BABs). The BABs were sold on a taxable basis with the United States Treasury providing a rebate to KUB for a percentage of the interest cost. The interest rebates were subject to federal sequestration during the fiscal year and were reduced by 5.7 percent. Any future actions by Congress may also affect the anticipated rebates for future fiscal years.

The Pension Plan actuarial valuation resulted in an actuarially determined contribution of $2,624,373 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2022, measurement date. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,108,147 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the December 31, 2023, measurement date. For the Plan year beginning January 1, 2022, the Plan's actuarial funded ratio is 112.01 percent, and the market value funded ratio is 128.08 percent.

The OPEB Plan actuarial valuation resulted in an actuarially determined contribution of $1,413,392 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2023, measurement date. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an

actuarially determined contribution of $1,187,768 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Wastewater Division's portion of this contribution will be determined as part of the actuarial analysis for the June 30, 2024, measurement date. The Plan's actuarial funded ratio is 94.75 percent, and the market value funded ratio is 103.07 percent.

GASB Statement No. 91, *Conduit Debt Obligations*, is effective for fiscal years beginning after December 15, 2021. GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 99, *Omnibus 2022*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 100, *Accounting Changes and Error Corrections – An Amendment of GASB No. 62,* is effective for fiscal years beginning after June 15, 2023. GASB Statement No. 101, *Compensated Absences,* is effective for fiscal years beginning after December 15, 2023. KUB has not elected early implementation of these standards and has not completed the process of evaluating the impact of these statements on its financial statements.

No other facts, decisions, or conditions are currently known which would have a significant impact on the Division's financial position or results of operations during fiscal year 2022.

Financial Contact

The Division's financial statements are designed to present users (citizens, customers, investors, and creditors) with a general overview of the Division's financial position and results of operations for the fiscal years ended June 30, 2022, and 2021. If you have questions about the statements or need additional financial information, contact KUB's Chief Financial Officer at 445 South Gay Street, Knoxville, Tennessee 37902.

Knoxville Utilities Board Wastewater Division
Statements of Net Position
June 30, 2022 and 2021

	2022	2021 as restated
Assets and Deferred Outflows of Resources		
Current assets:		
Cash and cash equivalents	$ 21,570,632	$ 30,379,799
Short-term contingency fund investments	4,767,510	29,190,159
Other current assets	3,302	3,295
Accrued interest receivable	9,970	3,481
Accounts receivable, less allowance of uncollectible accounts of $94,507 in 2022 and $93,477 in 2021	10,318,162	10,278,112
Current portion of lease receivable	106,030	67,938
Inventories	461,030	496,539
Prepaid expenses	97,217	69,264
Total current assets	37,333,853	70,488,587
Restricted assets:		
Wastewater bond fund	8,217,373	7,665,526
Other funds	333	333
Total restricted assets	8,217,706	7,665,859
Wastewater plant in service	1,037,255,256	975,561,186
Less accumulated depreciation	(249,838,970)	(235,051,108)
	787,416,286	740,510,078
Retirement in progress	89,834	75,484
Construction in progress	44,100,572	69,389,448
Net plant in service	831,606,692	809,975,010
Intangible assets:		
Intangible right of use asset	150,339	196,219
Less accumulated amortization	(45,879)	(92,630)
Net intangible assets	104,460	103,589
Other assets:		
Net pension asset	11,178,104	9,921,843
Net OPEB asset	-	1,305,002
Long-term contingency fund investments	28,238,588	5,028,619
Long-term lease receivable	831,212	649,930
Other	4,159,080	4,214,649
Total other assets	44,406,984	21,120,043
Total assets	921,669,695	909,353,088
Deferred outflows of resources:		
Pension outflow	1,901,225	1,815,356
OPEB outflow	944,518	4,708
Unamortized bond refunding costs	12,320,391	13,207,033
Total deferred outflows of resources	15,166,134	15,027,097
Total assets and deferred outflows of resources	$ 936,835,829	$ 924,380,185

The accompanying notes are an integral part of these financial statements.

Knoxville Utilities Board Wastewater Division
Statements of Net Position
June 30, 2022 and 2021

	2022	2021 as restated
Liabilities, Deferred Inflows, and Net Position		
Current liabilities:		
Current portion of revenue bonds	$ 14,760,000	$ 14,275,000
Current portion of lease liability	38,549	82,982
Accounts payable	1,595,166	3,569,385
Accrued expenses	657,303	1,049,186
Customer deposits plus accrued interest	1,005,945	880,799
Accrued interest on revenue bonds	4,557,614	4,334,630
Total current liabilities	22,614,577	24,191,982
Other liabilities:		
Accrued compensated absences	1,980,907	1,965,640
Customer advances for construction	391,566	330,927
Lease liability	66,297	20,607
Net pension liability	-	4,117
Net OPEB liability	2,031,015	-
Other	66,773	58,677
Total other liabilities	4,536,558	2,379,968
Long-term debt:		
Wastewater revenue bonds	457,350,000	462,385,000
Unamortized premiums/discounts	61,168,494	61,280,353
Total long-term debt	518,518,494	523,665,353
Total liabilities	545,669,629	550,237,303
Deferred inflows of resources:		
Pension inflow	6,889,994	7,960,080
OPEB inflow	38,804	1,750,893
Lease inflow	921,521	717,868
Total deferred inflows of resources	7,850,319	10,428,841
Total liabilities and deferred inflows of resources	553,519,948	560,666,144
Net position		
Net investment in capital assets	314,336,681	289,031,630
Restricted for:		
Debt service	3,659,759	3,330,896
Other	333	333
Unrestricted	65,319,108	71,351,182
Total net position	383,315,881	363,714,041
Total liabilities, deferred inflows, and net position	$ 936,835,829	$ 924,380,185

The accompanying notes are an integral part of these financial statements.

Knoxville Utilities Board Wastewater Division
Statements of Revenues, Expenses and Changes in Net Position
Years Ended June 30, 2022 and 2021

	2022	2021 as restated
Operating revenues	$ 102,936,574	$ 100,360,933
Operating expenses		
Treatment	14,514,989	12,734,681
Collection	8,540,457	8,560,687
Customer service	3,966,357	3,739,787
Administrative and general	10,413,179	9,088,837
Depreciation and amortization	21,815,257	23,034,519
Taxes and tax equivalents	6,178,208	5,844,210
Total operating expenses	65,428,447	63,002,721
Operating income	37,508,127	37,358,212
Non-operating revenues (expenses)		
Contributions in aid of construction	607,239	733,992
Interest income	297,132	312,553
Interest expense	(18,888,252)	(19,611,311)
Amortization of debt costs	1,466,762	10,070
Write-down of plant for costs recovered through contributions	(607,239)	(733,992)
Other	(1,289,538)	(896,104)
Total non-operating revenues (expenses)	(18,413,896)	(20,184,792)
Change in net position before capital contributions	19,094,231	17,173,420
Capital contributions	507,609	643,000
Change in net position	19,601,840	17,816,420
Net position, beginning of year	363,714,041	345,897,621
Net position, end of year	$ 383,315,881	$ 363,714,041

The accompanying notes are an integral part of these financial statements.

Knoxville Utilities Board Wastewater Division
Statements of Cash Flows
Years Ended June 30, 2022 and 2021

	2022	2021 as restated
Cash flows from operating activities:		
Cash receipts from customers	$ 101,923,756	$ 99,517,289
Cash receipts from other operations	192,202	957,830
Cash payments to suppliers of goods or services	(28,405,252)	(22,354,050)
Cash payments to employees for services	(12,853,387)	(12,654,917)
Payment in lieu of taxes	(5,127,318)	(4,883,160)
Net cash provided by operating activities	55,730,001	60,582,992
Cash flows from capital and related financing activities:		
Net proceeds from bond issuance	12,007,368	29,761,846
Principal paid on revenue bonds	(14,275,000)	(15,605,000)
Interest paid on revenue bonds and lease liabilities	(18,665,268)	(20,390,573)
Acquisition and construction of wastewater plant	(43,928,518)	(47,635,687)
Changes in wastewater bond fund, restricted	(551,847)	658,727
Customer advances for construction	60,639	69,653
Proceeds received on disposal of plant	-	105
Principal paid on lease liabilities	(96,589)	(92,630)
Cash received from developers and individuals for capital purposes	607,239	733,992
Net cash used in capital and related financing activities	(64,841,976)	(52,499,567)
Cash flows from investing activities:		
Purchase of investment securities	(29,080,503)	(13,984,737)
Maturities of investment securities	29,117,814	23,987,202
Interest received	264,863	417,243
Other property and investments	634	148,283
Net cash provided by investing activities	302,808	10,567,991
Net (decrease) increase in cash and cash equivalents	(8,809,167)	18,651,416
Cash and cash equivalents, beginning of year	30,379,799	11,728,383
Cash and cash equivalents, end of year	$ 21,570,632	$ 30,379,799
Reconciliation of operating income to net cash provided by operating activities		
Operating income	$ 37,508,127	$ 37,358,212
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization expense	22,205,155	23,460,419
Changes in operating assets and liabilities:		
Accounts receivable	(40,050)	949,844
Lease receivable	(219,374)	(717,868)
Inventories	35,509	98,850
Prepaid expenses	(27,953)	14
Other assets	14,743	(45,733)
Accounts payable and accrued expenses	(3,879,398)	(458,550)
Customer deposits plus accrued interest	125,146	(40,432)
Other liabilities	8,096	(21,764)
Net cash provided by operating activities	$ 55,730,001	$ 60,582,992
Noncash capital activities:		
Acquisition of plant assets through developer contributions	$ 507,609	$ 643,000
Record intangible right of use asset and lease liability	$ 97,846	$ 196,219

The accompanying notes are an integral part of these financial statements.

1. Description of Business

Knoxville Utilities Board (KUB), comprised of the Electric Division, Fiber Division, Gas Division, Water Division, and Wastewater Division (Divisions), is reported as a component unit enterprise fund in the financial statements of the City of Knoxville. KUB's responsibility is to oversee the purchase, production, distribution, and processing of electricity, broadband, natural gas, water, and wastewater services. A seven-member Board of Commissioners (Board) governs KUB. The Board has all powers to construct, acquire, expand, and operate the Divisions. It has full control and complete jurisdiction over the management and operation of the Divisions, including setting rates. The Wastewater Division (Division) provides services to certain customers in Knox County and in two surrounding counties in East Tennessee. The Division's accounts are maintained in conformity with the Uniform System of Accounts of the National Association of Regulatory Utility Commissioners (NARUC) and the Governmental Accounting Standards Board (GASB), as applicable. The financial statements present only the Wastewater Division and do not purport to, and do not, present fairly the consolidated financial position of Knoxville Utilities Board as of June 30, 2022, and 2021, and the changes in its financial position for the years then ended in conformity with accounting principles generally accepted in the United States of America.

2. Significant Accounting Policies

Basis of Accounting

In conformity with Generally Accepted Accounting Principles (GAAP), KUB follows the provisions of GASB Statement No. 34 (Statement No. 34), *Financial Statements – and Management's Discussion and Analysis – for State and Local Governments,* as amended by GASB Statement No. 63 (Statement No. 63), *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position.* Statement No. 34 established standards for external financial reporting for all state and local governmental entities. Under Statement No. 63, financial statements include deferred outflows of resources and deferred inflows of resources, in addition to assets and liabilities, and report *net position* instead of net assets. In addition, KUB follows GASB Statement No. 62 (Statement No. 62), *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements,* as it relates to certain items for regulatory accounting. Regulatory accounting allows a regulated utility to defer a cost (a regulatory asset) or recognize an obligation (a regulatory liability) if it is probable that through the rate making process, there will be a corresponding increase or decrease in future revenues. Accordingly, KUB has recognized certain regulatory assets and regulatory liabilities in the accompanying Statements of Net Position.

The financial statements are prepared on the accrual basis of accounting, whereby revenues are recognized when earned and expenses are recognized when incurred. The accounting and financial reporting treatment applied to the Division is determined by measurement focus. The transactions of the Division are accounted for on a flow of economic resources measurement focus. With this measurement focus, all assets and all liabilities associated with the operations are included on the Statement of Net Position. Net position (i.e., total assets and deferred outflows of resources net of total liabilities and deferred inflows of resources) is segregated into net investment in capital assets, restricted for capital activity and debt service, and unrestricted components.

Recently Adopted New Accounting Pronouncements

In June 2017, the GASB issued GASB Statement No. 87 (Statement No. 87), *Leases*. This Statement requires recognition of certain assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. Under this Statement, a lessee is required to recognize an intangible right of use asset and a lease liability. Statement No. 87 is effective for

fiscal years beginning after June 15, 2021. Adoption of this Statement is reflected on the Division's financial statements.

In June 2018, the GASB issued GASB Statement No. 89 (Statement No. 89), *Accounting for Interest Cost Incurred Before the End of a Construction Period.* The objectives of this Statement are to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period, and to simplify accounting for interest cost incurred before the end of a construction period. Statement No. 89 is effective for fiscal years beginning after December 15, 2020. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In January 2020, the GASB issued GASB Statement No. 92 (Statement No. 92), *Omnibus 2020.* The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. Certain provisions of Statement No. 92 were effective immediately. Paragraphs 6, 7, 8, 9, and 12 are effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In March 2020, the GASB issued GASB Statement No. 93 (Statement No. 93), *Replacement of Interbank Offered Rates.* This Statement establishes accounting and financial reporting requirements related to the replacement of IBORs in hedging derivative instruments and leases. It also identifies appropriate benchmark interest rates for hedging derivative instruments. Statement No. 93 is effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In June 2020, the GASB issued GASB Statement No. 97 (Statement No. 97), *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans.* The objectives of this Statement are to (a) increase consistency and comparability related to the reporting of fiduciary component units in circumstances in which a potential component unit does not have a governing board and the primary government performs the duties that a governing board typically would perform; (b) mitigate costs associated with the reporting of certain defined contribution pension plans, defined contribution other post-employment benefit (OPEB) plans, and employee benefit plans other than pension plans or OPEB plans (other employee benefit plans) as fiduciary component units in fiduciary fund financial statements; and (c) enhance the relevance, consistency, and comparability of the accounting and financial reporting for Internal Revenue Code (IRC) Section 457 deferred compensation plans (Section 457 plans) that meet the definition of a pension plan and for benefits provided through those plans. Statement No. 97 is effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

In October 2021, the GASB issued GASB Statement No. 98 (Statement No.98), *The Annual Comprehensive Financial Report.* This Statement replaces the term *comprehensive annual financial report* with *annual comprehensive financial report.* Statement No. 98 is effective for fiscal years ending after December 15, 2021. Adoption of this Statement did not have a significant impact on the Division's financial statements.

Wastewater Plant

Wastewater plant and other property are stated on the basis of original cost. The cost of current repairs and minor replacements is charged to operating expense. The cost of renewals and improvements is capitalized. The original cost of utility plant assets retired or otherwise disposed of and the cost of removal less salvage value is charged to accumulated depreciation. When other

property is retired, the related asset and accumulated depreciation are removed from the accounts, and the gain or loss is included in the results of operations.

The provision for depreciation of wastewater plant in service is based on the estimated useful lives of the assets, which range from three to fifty years, and is computed using the straight-line method. Pursuant to NARUC, the caption "Depreciation and amortization" in the Statements of Revenue, Expenses and Change in Net Position does not include depreciation for transportation equipment of $389,897 in fiscal year 2022 and $425,900 in fiscal year 2021.

Operating Revenue

Operating revenue consists primarily of charges for services provided by the principal operations of the KUB Wastewater Division. Operating revenue is recorded when the service is rendered, on a cycle basis, and includes an estimate of unbilled revenue. Revenues are reported net of bad debt expense of $231,361 in fiscal year 2022 and $403,292 in fiscal year 2021.

Non-operating Revenue

Non-operating revenue consists of revenues that are related to financing and investing types of activities and result from non-exchange transactions or ancillary activities.

Expense

When an expense is incurred for purposes for which there are both restricted and unrestricted net assets available, it is KUB's policy to apply those expenses to restricted net assets to the extent such are available and then to unrestricted net assets.

Net Position

GASB Statement No. 63 requires the classification of net position into three components – net investment in capital assets, net position-restricted, and net position-unrestricted.

These classifications are defined as follows:

- Net investment in capital assets – This component of net position consists of capital assets and intangible assets, including restricted capital assets, net of accumulated depreciation and amortization and reduced by the outstanding balances of any bonds, mortgages, notes, lease liabilities, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt also should be included in this component of net position. If there are significant unspent related debt proceeds at year end, the portion of the debt attributable to the unspent proceeds are not included in the calculation of net investment in capital assets. Rather, that portion of the debt is included in the same net position component as the unspent proceeds.

- Net position-restricted – This component of net position consists of restricted assets reduced by liabilities and deferred inflows of resources related to those assets. Generally, a liability relates to restricted assets if the asset results from a resource flow that also results in the recognition of a liability or if the liability will be liquidated with the restricted assets reported.

- Net position-unrestricted – This component of net position consists of assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

Contributions in Aid of Construction and Capital Contributions

Contributions in aid of construction are cash collections from customers or others for a particular purpose, generally the construction of new facilities to serve new customers in excess of the investment KUB is willing to make for a particular incremental revenue source. KUB reduces the plant account balances to which contributions relate by the actual amount of the contribution and recognizes the contributions as non-operating revenue in accordance with Statement No. 62.

Capital contributions represent contributions of utility plant infrastructure constructed by developers and others in industrial parks and other developments and transferred to KUB upon completion of construction and the initiation of utility service. In accordance with GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions*, such contributions are recognized as revenues and capital assets upon receipt.

Inventories

Inventories, consisting of plant materials and operating supplies, are valued at the lower of average cost or replacement value.

OPEB Trust

KUB's OPEB Trust was established by KUB's Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. Effective January 1, 2022, the Plan was expanded to include two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement, given that each eligible employee meets the "Rule of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

KUB's policy is to fully fund the annual actuarially determined contributions, which are determined by actuarial valuation. As required by GASB Statement No. 75, KUB measures net OPEB liability as total OPEB liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a June 30, 2022, and 2021, measurement date, respectively. The net OPEB liability is $11,202,507 (Division's share $2,031,015) as of June 30, 2022, and the net OPEB asset was $5,931,828 (Division's share $1,305,002) as of June 30, 2021.

Pension Plan and Qualified Excess Benefit Arrangement

KUB's employees are participants in the Knoxville Utilities Board Pension Plan as authorized by the Charter of the City of Knoxville §1107(J) (Note 10). KUB's policy is to fully fund the annual actuarially determined contributions. As required by GASB Statement No. 68, KUB measures net pension liability as total pension liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. The net pension asset is $64,137,714 (Division's share $11,178,104) as of June 30, 2022, and $45,099,288 (Division's share $9,921,843) as of June 30, 2021.

KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single-employer defined benefit pension plan administered by KUB (Note 11). As required by GASB Statement No. 73, KUB measures the total pension liability of the QEBA. The amounts

reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022. The total pension liability of the QEBA was $18,714 (Division's share $4,117) as of June 30, 2021.

Investments
Investments are carried at fair value as determined by quoted market prices at the reporting date.

Self-Insurance
KUB has established self-insurance programs covering portions of workers' compensation, employee health, environmental liability, general liability, property and casualty liability, and automobile liability claims. A liability is accrued for claims as they are incurred. When applicable, claims in excess of the self-insured risk are covered by KUB's insurance carrier. Additionally, KUB provides certain lifetime health benefits to eligible retired employees under a self-insurance plan administered by a third party.

Estimates
The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates are based on historical experience and various other assumptions that KUB believes are reasonable under the circumstances. However, future events are subject to change and the best estimates and judgments routinely require adjustment. Estimates are used for, but not limited to, inventory valuation, allowance for uncollectible accounts, depreciable lives of plant assets, unbilled revenue volumes, pension trust valuations, OPEB trust valuations, insurance liability reserves, and potential losses from contingencies and litigation. Actual results could differ from those estimates.

Restricted and Designated Assets
Certain assets are restricted by bond resolutions for utility plant construction and debt repayment. Certain additional assets are designated by management for contingency purposes and economic development.

Cash Equivalents
For purposes of the Statements of Cash Flows, KUB considers all unrestricted and undesignated highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

Leases
KUB determines if an arrangement is or contains a lease at contract inception and recognizes an intangible right of use asset and a lease liability at the lease commencement date. Subsequently, the intangible right of use asset is amortized on a straight-line basis over its useful life. KUB also enters into agreements, as lessor, to lease office space or property, recognizing a lease receivable and a deferred inflow of resources. The lease term includes the noncancelable period of the lease plus an additional period covered by either an option to extend or not to terminate the lease that the lessee is reasonably certain to exercise, or an option to extend or not to terminate the lease controlled by the lessor. KUB uses its estimated incremental borrowing rate as the discount rate for leases.

KUB monitors for events or changes in circumstances that require a reassessment of its leases. When a reassessment results in the remeasurement of a lease liability, a corresponding adjustment is made to the carrying amount of the intangible right of use asset.

Deferred Outflows and Inflows of Resources

Deferred outflows of resources are items related to the acquisition of assets or related debt which are amortized over the life of the asset or debt. Deferred inflows of resources are items related to the acquisition of assets or related debt which are amortized over the life of the asset or debt. KUB records costs associated with the gain or loss on refunding of debt as either a deferred outflow or inflow based on the parameters of Statement No. 65. Deferred outflows of resources also include employer pension contributions made subsequent to the measurement date of the net pension liability and before the end of the employer's reporting period in accordance with Statement No. 71. Deferred inflows and deferred outflows also include the net difference between projected and actual earnings on pension plan investments and OPEB plan investments, differences between expected and actual experience, and changes in assumptions in accordance with Statements No. 68, 73, and 75. Deferred inflows are also recorded at the commencement of the lease term and recognized as revenue over the course of the lease in accordance with Statement No. 87.

Debt Premium/Discount

KUB records unamortized premium and discount on debt as a separate line item in the Long-Term Debt section of the Financial Statements. Amortization of these amounts is recorded over the life of the applicable debt as amortization expense.

Debt Issuance Costs

In accordance with regulatory accounting, KUB records debt issuance costs as an Other Asset. Amortization of these amounts is recorded over the life of the applicable debt as amortization expense.

Deferred Gain/Loss on Refunding of Debt

KUB records costs associated with the gain or loss on refunding of debt as either a deferred outflow or inflow based on the parameters of Statement No. 65. Amortization of these amounts is recorded over the life of the applicable debt as amortization expense.

Compensated Absences

KUB accrues a liability for earned but unpaid paid time off (PTO) days.

Restatement for GASB 87

During fiscal year 2022, KUB adopted GASB Statement No. 87, *Leases* (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

As lessee and as a result of adopting GASB 87, as of June 30, 2021, KUB recorded total intangible right of use assets of $196,219 with accumulated amortization of $92,630 and recognized total lease liabilities of $103,589 ($82,982 current). KUB's Wastewater Division also reclassified $14,278 from rent expense shown in customer service expense and $80,717 from rent expense shown in administrative and general expense to $92,630 as amortization expense and $2,365 as interest expense.

Related to lease agreements where KUB is the lessor, as a result of adopting GASB 87, as of June 30, 2021, KUB recognized lease receivables of $717,868 ($67,938 current) with a corresponding

deferred inflow of resources of $717,868. KUB also reclassified $1,786 from rent revenue shown in other operating revenues to interest income.

Additional disclosures, as well as other reclassifications in the statement of cash flows, also resulted from the adoption of GASB 87.

Subsequent Events

KUB has evaluated events and transactions through October 25, 2022, the date these financial statements were available to be issued, for items that should potentially be recognized or disclosed.

Recently Issued Accounting Pronouncements

In May 2019, the GASB issued GASB Statement No. 91 (Statement No. 91), *Conduit Debt Obligations.* The objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. Statement No. 91 is effective for fiscal years beginning after December 15, 2021.

In March 2020, the GASB issued GASB Statement No. 94 (Statement No. 94), *Public-Private and Public-Public Partnerships and Availability Payment Arrangements.* The objective of this Statement is to better meet the information needs of financial statement users by improving the comparability of financial statements among governments that enter in PPPs and APAs. Statement No. 94 is effective for fiscal years beginning after June 15, 2022.

In May 2020, the GASB issued GASB Statement No. 96 (Statement No. 96), *Subscription-Based Information Technology Arrangements.* The objective of this Statement is to better meet the information needs of financial statement users by (a) establishing uniform accounting and financial reporting requirements for SBITAs; (b) improving the comparability of financial statements among governments that have entered into SBITAs; and (c) enhancing the understandability, reliability, relevance, and consistency of information about SBITAs. Statement No. 96 is effective for fiscal years beginning after June 15, 2022.

In April 2022, the GASB issued GASB Statement No. 99 (Statement No. 99), *Omnibus 2022.* The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements and accounting and financial reporting for financial guarantees. Paragraphs 26-32 were effective immediately. Paragraphs 11-25 are effective for fiscal years beginning after June 15, 2022. Paragraphs 4-10 are effective for fiscal years beginning after June 15, 2023.

In June 2022, the GASB issued GASB Statement No. 100 (Statement No. 100), *Accounting Changes and Error Corrections – An Amendment of GASB Statement No. 62.* The objective of this Statement is to enhance accounting and financial reporting requirements for accounting changes and error corrections to provide more understandable, reliable, relevant, consistent, and comparable information for making decisions or assessing accountability. Statement No. 100 is effective for fiscal years beginning after June 15, 2023.

In June 2022, the GASB issued GASB Statement No. 101 (Statement No. 101), *Compensated Absences.* The objective of this Statement is to better meet the information needs of financial statement users by updating the recognition and measurement guidance for compensated absences. Statement No. 101 is effective for fiscal years beginning after December 15, 2023.

KUB has not elected early implementation of these standards and has not completed the process of evaluating the impact of these statements on its financial statements.

3. Deposits and Investments

KUB follows the provisions of Statement No. 40 of the Governmental Accounting Standards Board, *Deposit and Investment Risk Disclosures—an amendment of GASB Statement No. 3*. This Statement establishes and modifies disclosure requirements for state and local governments related to deposit and investment risks. KUB classifies its fair value measurements within the fair value hierarchy established by Statement No. 72 of the Governmental Accounting Standards Board, *Fair Value Measurement and Application*.

KUB's investment policy provides the framework for the administration and investment of cash deposits. The investment policy follows Tennessee State law and defines the parameters under which KUB funds should be invested. State law authorizes KUB to invest in obligations of the United States Treasury, its agencies and instrumentalities; certificates of deposit; repurchase agreements; money market funds; and the State Treasurer's Investment Pool.

Interest Rate Risk. KUB's primary investment objectives are to place investments in a manner to ensure the preservation of capital, remain sufficiently liquid to meet all operating requirements, and maximize yield of return. KUB minimizes its exposure to interest rate risk by adhering to Tennessee State law requirements for the investment of public funds. This includes limiting investments to those types described above and limiting maturity horizons. The maximum maturity is four years from the date of investment. KUB also limits its exposure by holding investments to maturity unless cash flow requirements dictate otherwise.

Credit Risk. KUB's investment policy, as required by state law, is to apply the prudent-person rule: Investments are made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable income to be derived, as well as the probable safety of their capital.

Custodial Credit Risk. KUB's investment policy limits exposure to custodial credit risk by restricting investments to a standard set forth by state law. All deposits in excess of federal depository insurance limits are collateralized with government securities held in KUB's name by a third-party custodian bank(s) acting as KUB's agent(s), or through the State of Tennessee's collateral pool. Financial institutions that participate in the collateral pool are subject to special assessment; therefore, the deposits are considered insured. A portion of KUB's investments are generally held in the State of Tennessee Local Government Investment Pool (LGIP). The LGIP is a part of the State Pooled Investment Fund and is sponsored by the State of Tennessee Treasury Department. Tennessee Code Annotated ¶9-4-701 *et seq*. authorizes local governments to invest in the LGIP. None of KUB's investments are exposed to custodial credit risk.

Classification of deposits and investments per Statement of Net Position:

	2022	2021
Current assets		
Cash and cash equivalents	$ 21,570,632	$ 30,379,799
Short-term contingency fund investments	4,767,497	29,189,975
Other assets		
Long-term contingency fund investments	28,165,339	4,981,150
Restricted assets		
Wastewater bond fund	8,217,373	7,665,526
Other funds	333	333
	$ 62,721,174	$ 72,216,783

The above amounts do not include accrued interest of $73,262 in fiscal year 2022 and $47,653 in fiscal year 2021. Interest income is recorded on an accrual basis.

Investments and maturities of KUB's deposits and investments as held by financial institutions as of June 30, 2022:

	Deposit and Investment Maturities (in Years)		
	Fair Value	Less Than 1	1-5
Supersweep NOW and Other Deposits	$ 22,630,285	$ 22,630,285	$ -
State Treasurer's Investment Pool	8,233,347	8,233,347	-
Agency Bonds	32,916,763	4,751,424	28,165,339
	$ 63,780,395	$ 35,615,056	$ 28,165,339

KUB categorizes its fair value measurements within the fair value hierarchy established by Statement No. 72 of the Governmental Accounting Standards Board, *Fair Value Measurement and Application*. The hierarchy is based on the valuation inputs used to measure the fair value of an asset with a maturity at purchase of greater than one year. 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.

KUB has the following recurring fair value measurements as of June 30, 2022:

- U.S. Agency bonds of $28,165,339, which have a maturity at purchase of greater than one year, are valued using quoted market prices (Level 1 inputs)

KUB measures investments with a maturity at purchase of one year or less at amortized cost, which is considered a fair value equivalent due to their nature. Investments in the State Treasurer's Investment Pool are measured at net asset value (NAV) per share.

4. Accounts Receivable

Accounts receivable consists of the following:

	2022	2021
Wholesale and retail customers		
Billed services	$ 5,527,989	$ 5,704,016
Unbilled services	4,486,545	4,258,303
Other	398,135	409,270
Allowance for uncollectible accounts	(94,507)	(93,477)
	$ 10,318,162	$ 10,278,112

5. Accounts Payable and Accruals

Accounts payable and accruals were composed of the following:

	2022	2021
Trade accounts	$ 1,595,166	$ 3,569,385
Salaries and wages	161,815	623,211
Self-insurance liabilities	495,488	425,975
	$ 2,252,469	$ 4,618,571

6. Long-Term Obligations

Long-term debt consists of the following:

	Balance June 30, 2021	Additions	Payments	Defeased	Balance June 30, 2022	Amounts Due Within One Year
Wastewater						
2010C - 1.18 - 6.1%	$ 20,250,000	$ -	$ -	$ -	$ 20,250,000	$ -
2015A - 3.0 - 5.0%	110,625,000	-	5,675,000	-	104,950,000	6,005,000
2015B - 3.0 - 5.0%	26,950,000	-	550,000	24,600,000	1,800,000	575,000
2016 - 2.0 - 5.0%	17,800,000	-	500,000	-	17,300,000	525,000
2017A - 3.0 - 5.0%	5,970,000	-	1,685,000	-	4,285,000	1,775,000
2017B - 2.0 - 5.0%	23,205,000	-	570,000	-	22,635,000	600,000
2018 - 3.0 - 5.0%	11,240,000	-	255,000	-	10,985,000	270,000
2019 - 3.0 - 5.0%	15,450,000	-	315,000	-	15,135,000	330,000
2020A - 3.0 - 5.0%	27,445,000	-	680,000	-	26,765,000	715,000
2020B - 3.0 - 4.0%	26,910,000	-	555,000	-	26,355,000	580,000
2021A - 4.0 - 5.0%	190,815,000	-	3,490,000	-	187,325,000	3,060,000
2022A - 4.0 - 5.0%	-	11,125,000	-	-	11,125,000	225,000
2022B - 4.0 - 5.0%	-	23,200,000	-	-	23,200,000	100,000
Total bonds	$ 476,660,000	$ 34,325,000	$ 14,275,000	$ 24,600,000	$ 472,110,000	$ 14,760,000
Unamortized Premium	61,280,352	2,748,402	2,410,559	449,701	61,168,494	-
Total long term debt	$ 537,940,352	$ 37,073,402	$ 16,685,559	$ 25,049,701	$ 533,278,494	$ 14,760,000

	Balance June 30, 2020	Additions	Payments	Defeased	Balance June 30, 2021	Amounts Due Within One Year
2010C - 1.18 - 6.1%	$ 58,450,000	$ -	$ 1,650,000	$ 36,550,000	$ 20,250,000	$ -
2012A - 2.0 - 4.0%	10,850,000	-	1,085,000	9,765,000	-	-
2012B - 1.25 - 5.0%	58,225,000	-	1,150,000	57,075,000	-	-
2013A - 2.0 - 4.0%	109,115,000	-	710,000	108,405,000	-	-
2014A - 2.0 - 4.0%	27,300,000	-	525,000	26,775,000	-	-
2015A - 3.0 - 5.0%	116,085,000	-	5,460,000	-	110,625,000	5,675,000
2015B - 3.0 - 5.0%	27,475,000	-	525,000	-	26,950,000	550,000
2016 - 2.0 - 5.0%	18,275,000	-	475,000	-	17,800,000	500,000
2017A - 3.0 - 5.0%	7,575,000	-	1,605,000	-	5,970,000	1,685,000
2017B - 2.0 - 5.0%	23,745,000	-	540,000	-	23,205,000	570,000
2018 - 3.0 - 5.0%	11,485,000	-	245,000	-	11,240,000	255,000
2019 - 3.0 - 5.0%	15,750,000	-	300,000	-	15,450,000	315,000
2020A - 3.0 - 5.0%	28,230,000	-	785,000	-	27,445,000	680,000
2020B - 3.0 - 4.0%	-	27,460,000	550,000	-	26,910,000	555,000
2021A - 4.0 - 5.0%	-	190,815,000	-	-	190,815,000	3,490,000
Total bonds	$ 512,560,000	$ 218,275,000	$ 15,605,000	$ 238,570,000	$ 476,660,000	$ 14,275,000
Unamortized Premium	13,948,164	50,727,997	1,051,517	2,344,292	61,280,352	-
Total long term debt	$ 526,508,164	$ 269,002,997	$ 16,656,517	$ 240,914,292	$ 537,940,352	$ 14,275,000

Debt service over remaining term of the debt is as follows:

Fiscal Year	Total Principal	Interest	Grand Total
2023	$ 14,760,000	$ 18,693,584	$ 33,453,584
2024	14,355,000	18,154,812	32,509,812
2025	14,680,000	17,610,011	32,290,011
2026	14,615,000	17,064,414	31,679,414
2027	15,060,000	16,489,199	31,549,199
2028-2032	85,960,000	71,688,111	157,648,111
2033-2037	106,720,000	52,125,182	158,845,182
2038-2042	132,695,000	28,587,003	161,282,003
2043-2047	57,335,000	9,022,171	66,357,171
2048-2051	15,930,000	1,114,656	17,044,656
Total	$ 472,110,000	$ 250,549,143	$ 722,659,143

The Division has pledged sufficient revenue, after deduction of all current operating expenses (exclusive of tax equivalents), to meet bond principal and interest payments when due. The bond covenants relating to the Wastewater Revenue Bonds require the establishment of a Wastewater Bond Fund for the payment of principal and interest requirements. As of June 30, 2022, those bond covenants had been satisfied.

During fiscal year 2011, KUB's Wastewater Division issued Series 2010C bonds to fund wastewater system capital improvements. These bonds were issued as federally taxable Build America Bonds with a 35 percent interest payment rebate to be received from the United States Government for each interest payment. These bonds are subject to a reduction in rebate payment amounts which is subject to change based on Congressional action. As of October 1, 2021, the effective reduction in rebate is 5.7 percent.

During fiscal year 2021, KUB's Wastewater Division issued Series 2020B bonds to fund wastewater system capital improvements. KUB's Wastewater Division also issued Series 2021A bonds to retire Series 2012A, 2012B, 2013A, and 2014A and $36.6 million of outstanding Series 2010C bonds. On April 19, 2021, $190.8 million in revenue refunding bonds with an average interest rate of 4.2

percent were issued to currently refund $238.6 million of outstanding bonds with an average interest rate of 3.6 percent. The net proceeds of $239 million (after payment of $0.8 million in issuance costs plus premium of $48.1 million and an additional issuer equity contribution of $0.9 million) were used to refund the bonds. As a result, the bonds are considered to be refunded and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the bonds by $47.2 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $41.8 million.

During fiscal year 2022, KUB's Wastewater Division issued Series 2022A bonds to fund wastewater system capital improvements. KUB's Wastewater Division also issued Series 2022B bonds to retire a portion of outstanding Series 2015B bonds. On May 13, 2022, $23.2 million in revenue refunding bonds with an average interest rate of 4.2 percent were issued to currently refund $24.6 million of outstanding bonds with an average interest rate of 4 percent. The net proceeds of $24.7 million (after payment of $0.3 million in issuance costs plus premium of $1.7 million and an additional issuer equity contribution of $0.1 million) were used to refund the bonds. As a result, the bonds are considered to be refunded and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the bonds by $1.3 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $0.7 million.

Other liabilities consist of the following:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
Accrued compensated absences	$ 1,965,640	$ 4,374,798	$ (4,359,531)	$ 1,980,907
Customer advances for construction	330,927	62,639	(2,000)	391,566
Other	58,677	111,878	(103,782)	66,773
	$ 2,355,244	$ 4,549,315	$ (4,465,313)	$ 2,439,246

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
Accrued compensated absences	$ 1,878,956	$ 2,916,881	$ (2,830,197)	$ 1,965,640
Customer advances for construction	261,274	69,653	-	330,927
Other	80,441	357,794	(379,558)	58,677
	$ 2,220,671	$ 3,344,328	$ (3,209,755)	$ 2,355,244

7. Lease Receivables

KUB, as lessor, leases office space under non-cancelable lease arrangements. Terms of the leases range from two to fifteen years and contain fixed payment terms. Certain leases contain an option to renew that has been considered in the lease receivable when the lessee is reasonably certain to exercise the renewal option. KUB recognized lease revenue, which is included in other operating revenues, of $91,172 in 2022 and $92,825 in 2021. KUB also recognized interest income from leases, which is included in non-operating revenues, totaling $25,965 in 2022 and $1,786 in 2021. Total lease receivables were $937,242 ($106,030 current) and $717,868 ($67,938 current) as of June 30, 2022, and 2021, respectively, and are included in other assets on the Statement of Net Position.

8. Lease Liabilities

Changes in lease liabilities are summarized as follows:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
Total lease liabilities	$ 103,589	$ 84,963	$ (83,706)	$ 104,846
Less current portion	(82,982)			(38,549)
Long-term portion	$ 20,607			$ 66,297

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
Total lease liabilities	$ -	$ 196,219	$ (92,630)	$ 103,589
Less current portion	-			(82,982)
Long-term portion	$ -			$ 20,607

KUB leases certain office space, equipment, and other assets under non-cancelable lease arrangements. Terms of the leases range from one to fourteen years and contain fixed payment terms. Certain office space leases contain the option for renewal, which has been considered in the lease liability when KUB is reasonably certain to exercise the renewal option.

Maturities and future interest requirements related to the balances of lease liabilities outstanding as of June 30, 2022, are summarized as follows:

	Lease Maturities	Interest Requirements
2023	$ 38,549	$ 3,588
2024	17,569	2,042
2025	16,721	1,411
2026	14,295	820
2027	13,621	272
2028-2032	2,258	51
2033-2037	1,833	15
	$ 104,846	$ 8,199

9. Capital and Intangible Right of Use Assets

Capital and intangible right of use asset activity was as follows:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
Pumping & Treatment Plant	$ 263,238,741	$ 43,381,853	$ (1,761,648)	$ 304,858,946
Collection Plant				
Mains and Metering	589,476,423	23,421,073	(4,674,168)	608,223,328
Mains and Metering - Meters	1,205,284	(24,886)	-	1,180,398
Other Accounts	79,662,163	143,000	-	79,805,163
Total Collection Plant	$ 670,343,870	$ 23,539,187	$ (4,674,168)	$ 689,208,889
Total General Plant	41,978,575	2,074,970	(866,124)	43,187,421
Total Wastewater Plant	$ 975,561,186	$ 68,996,010	$ (7,301,940)	$ 1,037,255,256
Less accumulated depreciation	(235,051,108)	(22,111,143)	7,323,281	(249,838,970)
Net Plant Assets	$ 740,510,078	$ 46,884,867	$ 21,341	$ 787,416,286
Work In Progress	69,464,932	43,340,055	(68,614,581)	44,190,406
Total Net Plant	$ 809,975,010	$ 90,224,922	$ (68,593,240)	$ 831,606,692
Intangible Right of Use Assets				
Office space	$ 141,917	$ 73,682	$ (108,991)	$ 106,608
Equipment	20,390	-	(8,292)	12,098
Other	33,912	11,281	(13,560)	31,633
Total Intangible Right of Use Assets	$ 196,219	$ 84,963	$ (130,843)	$ 150,339
Less Accumulated Amortization	(92,630)	(45,879)	92,630	(45,879)
Net Intangible Right of Use Assets	$ 103,589	$ 39,084	$ (38,213)	$ 104,460

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
Pumping & Treatment Plant	$ 254,356,634	$ 10,995,833	$ (2,113,726)	$ 263,238,741
Collection Plant				
Mains and Metering	565,143,725	32,819,349	(8,486,651)	589,476,423
Mains and Metering - Meters	975,041	230,243	-	1,205,284
Other Accounts	80,348,716	-	(686,553)	79,662,163
Total Collection Plant	$ 646,467,482	$ 33,049,592	$ (9,173,204)	$ 670,343,870
Total General Plant	30,949,025	11,116,880	(87,330)	41,978,575
Total Wastewater Plant	$ 931,773,141	$ 55,162,305	$ (11,374,260)	$ 975,561,186
Less accumulated depreciation	(222,962,546)	(23,375,249)	11,286,687	(235,051,108)
Net Plant Assets	$ 708,810,595	$ 31,787,056	$ (87,573)	$ 740,510,078
Work In Progress	77,829,360	46,758,276	(55,122,704)	69,464,932
Total Net Plant	$ 786,639,955	$ 78,545,332	$ (55,210,277)	$ 809,975,010
Intangible Right of Use Assets				
Office space	$ -	$ 141,917	$ -	$ 141,917
Equipment	-	32,955	(12,565)	20,390
Other	-	33,912	-	33,912
Total Intangible Right of Use Assets	$ -	$ 208,784	$ (12,565)	$ 196,219
Less Accumulated Amortization	-	(92,630)	-	(92,630)
Net Intangible Right of Use Assets	$ -	$ 116,154	$ (12,565)	$ 103,589

10. Risk Management

KUB is exposed to various risks of loss related to active and retiree medical claims; injuries to workers; theft of, damage to, and destruction of assets; environmental damages; and natural disasters. Claims expenditures and liabilities are reported when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported.

These liabilities are included in accrued expenses in the Statement of Net Position. The liability is KUB's best estimate based on available information. As of June 30, 2022, and June 30, 2021, the amount of these liabilities was $495,488 and $425,975 respectively, resulting from the following changes:

	2022	2021
Balance, beginning of year	$ 425,975	$ 378,536
Current year claims and changes in estimates	4,050,584	3,405,736
Claims payments	(3,981,071)	(3,358,297)
Balance, end of year	$ 495,488	$ 425,975

11. Pension Plan

Description of Plan

The Knoxville Utilities Board Pension Plan (the Plan) is a governmental plan as defined by the Employee Retirement Income Security Act of 1974 (ERISA or the Act), is not subject to any of the provisions of the Act, and was revised January 1, 2020, to include all prior approved amendments. The Plan is a single-employer contributory, defined benefit pension plan established by Knoxville Utilities Board Resolution No. 980 dated February 18, 1999, effective July 1, 1999, as authorized by the Charter of the City of Knoxville §1107(J). KUB Board Resolution No. 979, effective July 1, 1999, as amended by Resolution No. 1037, establishing the KUB Retirement System, was amended effective June 18, 2020, to amend the term "Trustee" to include both custodians and/or trustees, in order to provide flexibility should KUB choose to change from its current Pension trustee. The Plan is designed to provide retirement, disability, and death benefits to KUB employees. KUB administers the Plan through an Administrative Committee consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Plan involving costs not approved in the operating budget must be adopted by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Plan may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The Plan issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2011, KUB closed the Plan such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and to accrue benefits under the Plan.

Participants in the Plan consisted of the following as of December 31:

	2021	2020
Inactive plan members:		
Terminated vested participants	12	11
Retirees and beneficiaries	600	593
Active plan members	478	518
Total	1,090	1,122

Retirement Benefits

The Plan provides three benefit arrangements for KUB participants, retirees, and beneficiaries.

The Plan provides pension benefits through the Career Equity Program ("CEP") for eligible employees hired on or after January 1, 1999, and for eligible former "City System Plan A" participants who elected CEP coverage as of July 1, 1999. The guaranteed pension benefit payable to a participant who has completed five or more years of service (or reached the normal retirement date, if earlier) upon termination of KUB employment shall be a lump sum equal to the participant's average compensation times their benefit percentage, as defined in the Plan document, or an annuity may be chosen by the participant.

In addition, the Plan provided retirement benefits through "Plan A" for former City System Plan A participants who elected not to participate in the CEP. Plan A is a closed plan and is not available to KUB employees hired after July 1, 1999. Plan A provides for early retirement benefits with 25 years of service and normal retirement benefits at age 62 or later. Benefits provided to Plan A participants include several different forms of monthly annuity payments.

The Plan also provides retirement benefits through "Plan B" for former "City System Plan B" participants. Plan B is a closed plan providing benefits to participants not covered by Social Security. Benefits provided to Plan B participants include several different forms of monthly annuity payments available to participants.

Effective January 1, 2012, KUB began to provide for additional monthly supplements, which are not subject to cost of living adjustments, to certain former employees and surviving dependents of former employees who are eligible for and have elected coverage under the KUB retiree medical plan and are eligible for Medicare. This was done to compensate for the elimination of drug coverage under the KUB retiree medical plan and to assist such individuals in obtaining prescription drug coverage under Medicare Part D.

Contributions

Participation in Plan A requires employee contributions of 3% of the first $4,800 of annual earnings and 5% of annual earnings in excess of $4,800. KUB contributions are determined by the enrolled actuary of the Plan and equal the amount necessary to provide the benefits under the Plan determined by the application of accepted actuarial methods and assumptions. The method of funding shall be consistent with Plan objectives.

Plan Funding

KUB maintains a Funding Policy for the Plan in accordance with Tennessee State Law. The primary goal of the Policy is to document the method KUB has adopted to provide assurance that future KUB and employee contributions and current Plan assets will be sufficient to fund all benefits expected to be paid to current active, inactive and retired Plan participants and their beneficiaries. Per the Funding Policy, KUB fully funds its annual Actuarially Determined Contribution.

Investments

The Plan's investments are held by State Street Bank and Trust Company (the "Trustee"). The Plan's policy in regard to the allocation of invested assets is established by the Retirement System Investment Committee and approved by the KUB Board of Commissioners and may only be amended by the KUB Board of Commissioners. It is the policy of the Retirement System Investment Committee 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 Plan's adopted asset allocation policy as of December 31, 2021:

Asset Class	Target Allocation
Domestic equity – large cap	20% - 50%
Domestic equity – mid cap	0% - 15%
Domestic equity – small cap	0% - 15%
Domestic equity – convertible securities	0% - 10%
Non-U.S. equity	0% - 20%
Real estate equity	0% - 10%
Fixed income – aggregate bonds	5% - 25%
Fixed income – long-term bonds	10% - 25%
Cash and deposits	0% - 5%

Contributions of $3,665,168 and $3,167,680 for 2020 and 2019, respectively, were made during the Plan sponsor's fiscal years ended June 30, 2022, and 2021, respectively. Of these amounts, $638,776 and $696,890 are attributable to the Wastewater Division. The fiscal year 2022 contribution was determined as part of the January 1, 2020, valuation using the Individual Entry Age Normal funding method. The objective under this method is to fund each participant's benefits under the Plan as payments which are level as a percentage of salary, starting on the original participation date (employment date) and continuing until the assumed retirement, termination, disability, or death.

Net Pension Liability (Asset)

The below summarizes the disclosures of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27* ("GASB 68"), which requires measurement of the net pension liability as total pension liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, will be based on the December 31, 2021, and 2020, measurement dates, respectively. The Division's share of the net pension asset as of June 30, 2022, is $11,178,104 and the net pension asset as of June 30, 2021, is $9,921,843.

GASB 68 requires certain disclosures related to the net pension liability (asset) of the Plan as disclosed below:

	2021	2020
Total pension liability	$ 242,201,780	$ 234,363,021
Plan fiduciary net position	(306,339,494)	(279,462,309)
Plan's net pension liability (asset)	$ (64,137,714)	$ (45,099,288)
Plan fiduciary net position as a percentage of the total pension liability	126.48%	119.24%

Changes in Net Pension Liability (Asset) are as follows:

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (Asset) (a) - (b)
Balances at December 31, 2020	$ 234,363,021	$ 279,462,309	$ (45,099,288)
Changes for the year:			
Service cost	6,647,220	-	6,647,220
Interest	16,982,226	-	16,982,226
Differences between Expected and Actual Experience	1,935,276	-	1,935,276
Changes of Assumptions	-	-	-
Contributions - employer	-	3,416,428	(3,416,428)
Contributions - rollovers	-	3,936,711	(3,936,711)
Contributions - member	-	2,976	(2,976)
Net investment income	-	37,688,050	(37,688,050)
Benefit payments	(17,725,963)	(17,725,963)	-
Administrative expense	-	(441,017)	441,017
Net changes	7,838,759	26,877,185	(19,038,426)
Balances at December 31, 2021	$ 242,201,780	$ 306,339,494	$ (64,137,714)

Actuarial Assumptions
The total pension liability was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2021, rolled forward to December 31, 2021; January 1, 2020, rolled forward to December 31, 2020
Discount rate	7.25% as of December 31, 2021, and 2020
Salary increases	From 2.50% to 5.65%, based on years of service as of December 31, 2021, and 2020
Mortality	115% and 110% of the PubG-2010 table, for males and females respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the 2010 base rates using scale MP2018, fully generational as of December 31, 2021, and 2020
Inflation	2.5% as of December 31, 2021, and 2020

The actuarial assumptions used in the January 1, 2021, and 2020, valuations were based on an actuarial experience study covering the period January 1, 2014, through December 31, 2018.

The long-term expected rate of return on 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 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 for each major asset class included in the Plan's target asset allocation as of December 31, 2021, and 2020, are

summarized in the following table. The real rate of return reported for fixed income is for aggregate fixed income. The Plan has both aggregate and long duration fixed income.

	Long Term Expected Real Rate of Return	
Asset Class	**2021**	**2020**
Domestic equity	5.1%	5.1%
Non-U.S. equity	6.0%	6.4%
Real estate equity	5.4%	5.6%
Debt securities	0.2%	0.9%
Cash and deposits	(0.3)%	0.2%

Discount rate
The discount rate used to measure the total pension liability was 7.25 percent as of December 31, 2021, and 2020. The projection of cash flows used to determine the discount rate assumed that participant contributions will be made at the current contribution rate and that KUB contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability (asset) to changes in the discount rate
The following presents the net pension liability (asset) of the Plan for the Wastewater Division as of December 31, 2021, calculated using the discount rate of 7.25 percent, as well as what the Plan's net pension liability (asset) would be if it were calculated using a discount rate that is one percent lower (6.25 percent) or one percent higher (8.25 percent) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Plan's net pension liability (asset)	$ (7,401,051)	$ (11,178,104)	$ (14,436,349)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of ($11,639,307), and the Wastewater Division's share was ($1,850,592).

The impact of experience gains or losses and assumptions changes on the Total Pension Liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4.00 years. During the measurement year, there was a liability experience loss of $1,935,276, with $483,819 of that recognized in the current year and each of the next three years, resulting in a deferred outflow of $1,451,457. Unrecognized liability experience losses from prior periods were $1,544,136, of which $386,034 was recognized as an increase in Pension Expense in the current year and resulted in a deferred outflow of $1,158,102. The combination of unrecognized liability experience losses this year along with unrecognized

liability experience losses from prior periods results in a deferred outflow of $2,609,559 (Division's share $454,801). Unrecognized liability gains from prior periods were $1,092,163, of which $549,386 was recognized as a decrease in Pension Expense in the current year and resulted in a deferred inflow of $542,777 (Division's share $94,596).

During the measurement year, there were no benefit changes or assumption changes. Net unrecognized assumption change losses from prior periods were $5,083,896, of which $1,694,632 was recognized as an increase in Pension Expense in the current year and resulted in a net deferred outflow of $3,389,264 (Division's share $590,691). Net unrecognized assumption change gains from prior periods were $71,525, of which the remaining $71,525 was recognized as a decrease in Pension Expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $17,812,070, of which $3,562,414 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment gains from prior periods were $34,994,864, of which $10,275,263 was recognized as a decrease in Pension Expense in the current year. The combination of unrecognized investment gains this year along with unrecognized investment gains from prior periods results in a deferred inflow of $38,969,257 (Division's share $6,791,674).

The impact of the change in proportionate share for the Wastewater Division during the measurement period is recognized over the average future working life of the Plan's active and inactive members, which is four years. This change resulted in a deferred outflow of $711,760, with $177,940 of that recognized in the current year and the remaining amount recognized over the next three years, resulting in a deferred outflow of resources of $533,820. In addition, KUB's Wastewater Division recorded a deferred outflow of resources of $319,381 for employer contributions made between December 31, 2021, and June 30, 2022.

The following table summarizes the current balances of deferred outflows and deferred inflows of resources of the Wastewater Division.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 454,801	$ 94,596
Changes in assumptions	590,691	-
Net difference between projected and actual earnings on pension plan investments	-	6,791,674
Change in proportionate share	533,820	-
Contributions subsequent to measurement date	319,381	-
Total	$ 1,898,693	$ 6,886,270

$319,381 reported as deferred outflows of resources resulting from contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2023. Other amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:

Year ended June 30:	
2023	$ (1,236,160)
2024	(2,203,725)
2025	(1,246,205)
2026	(620,868)
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of ($7,325,254), Division's share ($1,611,556).

The impact of experience gains or losses and assumptions changes on the Total Pension Liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5.00 years. During the measurement year, there was a liability experience loss of $1,930,170, with $386,034 of that recognized in the current year and in each of the next four years, resulting in a deferred outflow of $1,544,136 (Division's share $339,710). Unrecognized liability experience gains from prior periods were $2,088,302, of which $996,139 was recognized as a reduction in pension expense in the current year and resulted in a deferred inflow of $1,092,163 (Division's share $240,275).

During the measurement year, there were no benefit changes or assumption changes. Unrecognized assumption change losses from prior periods were $6,778,528, of which $1,694,632 was recognized as an increase in pension expense in the current year and resulted in a deferred outflow of $5,083,896 (Division's share $1,118,458). Unrecognized assumption change decreases from prior periods were $729,629, of which $658,104 was recognized as a reduction in pension expense in the current year and resulted in a deferred inflow of $71,525 (Division's share $15,736).

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $27,394,477, of which $5,478,895 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment gains from prior periods were $17,715,210, of which $4,635,928 was recognized as a decrease in pension expense in the current year. The combination of unrecognized investment gains this year along with the net unrecognized investment gains from prior periods results in a net difference between projected and actual earnings on pension plan investments as of December 31, 2020, of $34,994,864 (Division's share $7,698,870). The following table summarizes the current balances of deferred outflows and deferred inflows of resources along with the net recognition over future years. In addition, KUB recorded a deferred outflow of resources of $1,583,842 as of June 30, 2021, for employer contributions made between December 31, 2020, and June 30, 2021 (Division's share $348,443).

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 1,544,136	$ 1,092,163
Changes in assumptions	5,083,896	71,525
Net difference between projected and actual earnings on pension plan investments	-	34,994,864
Contributions subsequent to measurement date	1,583,842	-
Total	$ 8,211,874	$ 36,158,552
Division's share	$ 1,806,611	$ 7,954,881

12. Qualified Excess Benefit Arrangement

Description

In fiscal year 2017, KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single-employer defined benefit pension plan administered by KUB. The number of participants in any given year for the QEBA is determined by the number of KUB Pension Plan participants who exceed the current year's section 415(b) limitations, as calculated by the KUB Pension Plan actuary. The amount of QEBA benefit will be the amount specified by the terms of the KUB Pension Plan without regard to Section 415(b) limitations minus the amount payable from the KUB Pension Plan as limited by Section 415(b). QEBA benefits are subject to cost of living adjustments.

As of June 30, 2022, there are 446 active employees eligible for the KUB Pension Plan who are potentially eligible to receive QEBA benefits. The KUB Pension Plan was closed effective January 1, 2011, such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and accrue benefits under the KUB Pension Plan. The KUB Pension Plan was amended to include the provision of QEBA benefits; therefore, amendments to the QEBA require the same authority as amendments to the KUB Pension Plan. As required by federal tax law, the QEBA is unfunded within the meaning of the federal tax laws. KUB may not pre-fund the QEBA to cover future liabilities beyond the current year. KUB has established procedures to pay for these benefits on a pay-as-you-go basis. There are no assets accumulated in a trust that meets the GASB's criteria. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022.

Total Pension Liability of the QEBA

The below summarizes the disclosures of GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68* ("GASB 73"). GASB 73 extends a similar approach of financial reporting to plans meeting specific criteria that are not administered through trusts that GASB 68 established for pension plans. GASB 73 requires measurement of the total pension liability of the QEBA. The amounts reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020,

measurement date, respectively. There is no Total Pension Liability as of June 30, 2022. The Division's share of the total pension liability was $4,117 as of June 30, 2021.

GASB 73 requires certain disclosures related to the total pension liability of the QEBA, as disclosed below:

	2021	2020
Total pension liability	$0	$18,714
Deferred outflows	(11,505)	(33,660)
Deferred inflows	16,927	23,630
Net impact on Statement of Net Position	$5,422	$8,684
Covered payroll	$38,074,863	$41,524,273
Total pension liability as a % of covered payroll	0.00%	0.05%

Changes in total pension liability of the QEBA are as follows:

	Increase (Decrease) Total Pension Liability
Balances at December 31, 2020	$ 18,714
Changes for the year:	
Service cost	-
Interest	268
Changes of Benefits	-
Differences between Expected and Actual Experience	(6,816)
Changes of Assumptions	-
Benefit payments	(12,166)
Net changes	(18,714)
Balances at December 31, 2021	$ -

Actuarial Assumptions
The total pension liability of the QEBA was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2022, and January 1, 2021
Actuarial cost method	Individual entry age
Salary increase	From 2.50% to 5.65%, based on years of service as of January 1, 2022, and 2021
Mortality	115% and 110% of the Public Sector General Healthy Annuitant Mortality Table (PubG-2010), for males and females, respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the 2010 base rates using scale MP2018, fully generational as of January 1, 2022, and 2021
Inflation	2.5% as of January 1, 2022, and 2021

The actuarial assumptions used in the January 1, 2022, and 2021, valuations were based on the results of an actuarial experience study for the period January 1, 2014, through December 31, 2018.

Discount rate
The QEBA is not funded. In accordance with paragraph 31 of GASB 73, the discount rate is based on the Bond Buyer 20-Bond GO index. This rate was 2.06% as of January 1, 2022, and 2.12% as of January 1, 2021.

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of $16,613 (Division's share $3,655) for the QEBA. This amount is not expected to be the same as KUB's contribution to the QEBA ($19,875), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$5,422 - $8,684 + $19,875].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4 years. During the measurement year, there was an experience gain of $6,816, with $1,704 recognized in the current year and each of the next three years, resulting in a deferred inflow of $5,112 (Division's share $1,124). There was a deferred inflow at the end of the measurement year of $7,225 (Division's share $1,590) from experience gains in prior years and a deferred outflow of $6,112 (Division's share $1,345) from experience losses in prior years.

During the measurement year, there were no assumption changes. There was a deferred inflow at the end of the measurement year of $4,590 (Division's share $1,010) and a deferred outflow of $5,393 (Division's share $1,187) from assumption changes in prior years.

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 6,112	$ 12,337
Changes in assumptions	5,393	4,590
Total	$ 11,505	$ 16,927
Division's share	$ 2,532	$ 3,724

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

Year ended June 30:	
2023	$ (8,793)
2024	3,023
2025	348
2026	-
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of $21,436 for the QEBA (Division's share $4,717). This amount is not expected to be the same as KUB's contribution to the QEBA ($22,874), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$8,684 - $10,122 + $22,874].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5 years. During the measurement year, there was an experience loss of $10,165, with $2,033 recognized in the current year and each of the next four years, resulting in a deferred outflow of $8,132 (Division's share $1,790). There was a deferred inflow at the end of the measurement year of $14,450 (Division's share $3,179) from experience gains in prior years and a deferred outflow of $2,756 (Division's share $606) from experience losses in prior years.

During the measurement year, there was an assumption change loss of $91, with $18 recognized in the current year and each of the next four years, resulting in a deferred outflow of $73 (Division's share $17). There was a deferred inflow at the end of the measurement year of $9,180 (Division's share $2,020) and a deferred outflow of $22,699 (Division's share $4,994) from assumption changes in prior years. In addition, KUB recorded a deferred outflow of resources of $6,084 as of June 30, 2021, for contributions between December 31, 2020, and June 30, 2021 (Division's share $1,338).

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 10,888	$ 14,450
Changes in assumptions	22,772	9,180
Contributions subsequent to measurement date	6,084	-
Total	$ 39,744	$ 23,630
Division's share	$ 8,745	$ 5,199

13. Defined Contribution Plan

The KUB Asset Accumulation 401(k) Plan (the "401(k) Plan") is a defined contribution 401(k) employee retirement savings plan covering eligible KUB employees established by the KUB Board of Commissioners in accordance with the Charter of the City of Knoxville, Tennessee. The 401(k) Plan's assets are held in trust under an agreement between KUB and Fidelity Management Trust Company. Employees hired prior to January 1, 2011, may participate and receive a matching contribution of 50 percent of their own contribution up to a maximum match of 3 percent. Employees hired on or after January 1, 2011, have an enhanced 401(k) due to the closure of the Defined Benefit Pension Plan. They may participate and receive a matching contribution of 50 percent of their own contribution up to a maximum match of 3 percent. They also receive a nonelective KUB contribution of 3 percent to 6 percent, depending on years of service, whether they contribute or not.

KUB funded 401(k) matching contributions and nonelective contributions of $3,125,903 (Division's share $687,699) and $2,984,314 (Division's share $656,549), respectively, for the years ended June 30, 2022, and 2021.

14. Other Post-Employment Benefits (OPEB)

Description of Trust

The Knoxville Utilities Board Other Post-Employment Benefits Trust (the Trust) is a single-employer trust established by the KUB Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The Trust along with the KUB Health Plan make up a Voluntary Employee Beneficiary Association ("VEBA") and are intended to be tax-exempt pursuant to Code §501(c)(9). The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. The applicable documentation was submitted to the State Funding Board and, in December 2007, the State Funding Board approved the Trust. The Trust was also approved by the Internal Revenue Service in June 2008. KUB administers the Trust through a Board of Trustees consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Trust involving costs not approved in the operating budget must be approved by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Trust may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The investment of all deposits to the Trust is governed by an Investment Policy, which was adopted by the KUB Board and approved by the State Funding Board. The Trust issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017. For purposes of this disclosure, presentation is on a consolidated basis unless division's share is specified.

Effective January 1, 2022, the Plan was expanded to two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement (HRA), given that each eligible employee meets the "Rule of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

Participants in the Plan consisted of the following as of June 30:

	HRA		Retiree Medical Benefit	
	2022	2021	2022	2021
Retirees	4	0	549	538
Dependents of retirees	2	0	612	579
Eligible active employees	15	0	145	160
Total	21	0	1,306	1,277

Benefits

Benefits for pre-July 1, 1999, eligible participants may include, but shall not be limited to, medical, prescription drugs, dental, vision, hearing, Medicare Part B or Part D premiums, life insurance, long-term care, and long-term disability. Post-July 1, 1999, eligible participants are eligible for HRA benefits which include up to $50,000 to be used exclusively for reimbursement of qualified medical expenses of the retiree and his or her spouse and dependents. Any unused HRA amounts will remain assets of the OPEB Trust.

Contributions and Funding

The primary goal of the Funding Policy for the Trust is to document the method KUB has adopted to provide assurance that future KUB and retiree contributions and current Trust assets will be sufficient to fund all benefits expected to be paid to Trust beneficiaries. Per the Funding Policy, KUB's current practice is to fully fund its annual Actuarially Determined Contribution, which is determined by actuarial valuation.

Contributions are authorized by the terms of the Trust as established by KUB Resolution No. 1168, as amended, as approved by the Tennessee State Funding Board. KUB shall have the right at any time to amend, in whole or in part, the provisions of this Trust; however, no such amendment shall authorize or permit the assets of the Trust to be used for or diverted to purposes other than those expressed in the Declaration of Trust.

It shall be the sole and exclusive responsibility of KUB to determine the level of contributions KUB will make to the Trust for the purpose of financing other post-employment benefits accrued by its respective participants. Neither the Trust, nor the Trust's Board, shall be responsible for collecting or otherwise determining the level of contributions needed by KUB to finance any other post-employment benefits offered by KUB. The assets of the Trust shall be expended solely to make payments for other post-employment benefits pursuant to, and in accordance with, the terms of the Trust and to pay the cost of administration.

Based on the date of retirement, certain retired members are required to contribute specified amounts monthly to maintain health insurance. Those who retired prior to July 1983 have no required monthly premiums for themselves or dependents. The retirees, or their surviving dependents, who retired between August 1983 and January 1998 are required to pay $262.50 per month for pre-Medicare family health insurance. For individuals who retired after January 1998, the required monthly premium for pre-Medicare health insurance is $262.50 for single coverage and $525 for family coverage. There is currently no premium for Medicare eligible retirees or dependents. KUB is responsible for determining the level of retired plan member contributions on an annual basis as part of its review of healthcare cost sharing.

Participants in the Health Reimbursement Arrangement are not eligible for health insurance and are not required to make contributions.

Investments

The Trust holds investments in a balanced fund, which invests in passively managed common trust index funds, managed and sponsored by State Street Global Advisors (SSgA), with an asset allocation mirroring the asset allocation of the Trust and rebalanced monthly. The Trust's Investment Policy was established and may only be amended by the KUB Board of Commissioners. The Trust's Investment Policy is to invest in a manner that will provide sufficient investment return to meet current and future retiree health benefits, while conforming to all governing State and Federal statutes. It allows investment of Trust assets in any type of security instrument allowed for in T.C.A 8-50-1203. The following was the Trust's adopted investment target allocations as set forth in the Trust's Investment Policy as of June 30, 2022:

Asset Class	Target Allocation
Domestic Equity:	
Large Cap	30%
Small Cap	8%
International Equity:	
Developed	16%
Emerging	8%
Real Estate Equity	8%
Debt Securities	30%
Total	100%

For the fiscal year ended June 30, 2022, an actuarially determined contribution for the Wastewater Division of $360,618 was made to the OPEB Trust along with the division's share ($330,000) of an additional $1,500,000 contribution to help fund the HRA. Actuarially determined contributions for the Wastewater Division for the fiscal year ended June 30, 2021, were $166,591. These were based on the OPEB actuarial valuations as of January 1, 2020, and 2019.

Net OPEB Liability (Asset)

The below summarizes the disclosures of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75"), which requires measurement of the net OPEB liability as total OPEB liability less the amount of the Trust's fiduciary net position. The amounts reported as of June 30 are based on the reporting date for the KUB Other Post-Employment Benefits Plan, which is June 30. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2022, and 2021, and the Total OPEB Liability as of the valuation date, January 1, 2021, updated to June 30, 2022, and January 1, 2020, updated to June 30, 2021, respectively. The Division's share of the total net OPEB liability (asset) was $2,031,015 as of June 30, 2022, and ($1,305,002) as of June 30, 2021.

The components of the net OPEB (asset) liability of the Trust are as follows as of June 30:

	2022	2021
Total OPEB liability	$ 58,536,280	$ 51,515,118
Plan fiduciary net position	47,333,773	57,446,946
Net OPEB liability (asset)	$ 11,202,507	$ (5,931,828)
Plan fiduciary net position as a percentage of the total OPEB liability	80.86%	111.51%

Changes in Net OPEB Liability (Asset) are as follows:

	Total OPEB Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (a) - (b)
Balances at June 30, 2021	$ 51,515,118	$ 57,446,946	$ (5,931,828)
Changes for the year:			
Service cost	416,277	-	416,277
Interest	3,858,276	-	3,858,276
Changes of Benefits	6,594,293	-	6,594,293
Differences between Expected and Actual Experience	60,951	-	60,951
Changes of Assumptions	-	-	-
Contributions - employer	-	1,989,066	(1,989,066)
Contributions - member	-	-	-
Net investment income	-	(8,122,417)	8,122,417
Benefit payments	(3,908,635)	(3,908,635)	-
Administrative expense	-	(71,187)	71,187
Net changes	7,021,162	(10,113,173)	17,134,335
Balances at June 30, 2022	$ 58,536,280	$ 47,333,773	$ 11,202,507

Actuarial assumptions
The total OPEB liability was determined by actuarial valuations, using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation dates:	January 1, 2021, rolled forward to June 30, 2022; January 1, 2020, rolled forward to June 30, 2021
Discount rate:	7.25% as of January 1, 2021, and 2020
Healthcare cost trend rates:	Pre-Medicare: 6.75% grading down to 4.04% over 20 years as of January 1, 2021, and 2020 Medicare: 6.30% grading down to 4.04% over 20 years as of January 1, 2021, and 2020 Administrative expenses: 3.0% per year
Salary increases:	From 2.50% to 5.65%, based on years of service as of January 1, 2021, and 2020
Mortality:	115% and 110% of the Public Sector Healthy Annuitant Mortality Table (PubG-2010), respectively for males and females, using the Public Sector General Employee Table (PubG-2010) for ages prior to the start of the Healthy Annuitant Mortality Table, both projected using scale MP2018 fully generational as of January 1, 2021, and 2020
Inflation:	2.50% as of January 1, 2021, and 2020

The actuarial assumptions used in the January 1, 2021, and January 1, 2020, valuations were based on the results of actuarial experience studies for the periods January 1, 2014, through December 31, 2018.

The long-term expected rate of return on Trust investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Trust 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 long-term expected rate of return may be lower in periods of current strong performance due to future valuations that mean revert to the long-term average. Best estimates of arithmetic real rates of return for each major asset class included in the Trust's target asset allocation (see the discussion of the Trust's Investment Policy) are summarized in the chart below.

	Long Term Expected Real Rate of Return	
Asset Class	**2022**	**2021**
Domestic equity	5.5%	4.9%
International equity	6.5%	5.9%
Emerging Market equity	8.6%	8.4%
Real estate equity	5.7%	5.4%
Debt securities	1.2%	0.5%
Cash and deposits	0.2%	(0.1%)

Discount rate
The discount rate used to measure the total OPEB liability was 7.25 percent as of June 30, 2022 and 2021. The projection of cash flows used to determine the discount rate assumed that participant contributions will be made at the current contribution rate and that KUB contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the Trust's fiduciary net position was projected to be available to make all projected future benefit payments. Therefore, the long-term expected rate of return on Trust investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity of the net OPEB liability (asset) to changes in the discount rate.
The following presents the net OPEB liability (asset) of the Division's share of the Trust as of June 30, 2022, calculated using the discount rate of 7.25 percent, as well as what the Trust's net OPEB liability (asset) would be if it were calculated using a discount rate that is one percent lower (6.25 percent) or one percent higher (8.25 percent) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net OPEB liability (asset)	$3,078,162	$2,031,015	$1,148,299

Sensitivity of the net OPEB liability (asset) to changes in the healthcare cost trend rates.
The following presents the net OPEB liability (asset) of the Division's share of the Trust as of June 30, 2022, as well as what the Trust's net OPEB liability (asset) would be if it were calculated using a healthcare cost trend rate that is one percent lower or one percent higher than the current rate:

	1% Decrease	Baseline Trends	1% Increase
Net OPEB liability (asset)	$1,149,188	$2,031,015	$3,054,228

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended June 30, 2022, KUB's Wastewater Division recognized OPEB expense of $1,044,736.

The impact of liability experience gains or losses and assumption changes on the Wastewater Division's Share of the Total OPEB Liability are recognized in the OPEB expense over the average expected remaining service life of all active and inactive members of the OPEB Plan. As of the beginning of the measurement period, this average was 2.0 years. During the measurement year, there was an experience loss of $60,951, with $30,476 of that recognized in the current year and the remaining amount will be recognized in the next year, resulting in a deferred outflow of resources of $30,475 (Division's share $5,525). Unrecognized experience losses from prior periods were $21,401, of which the entire amount is recognized as an increase in OPEB expense in the current year.

During the measurement year, there were benefit changes that increased the Total OPEB Liability by $6,594,293. This increase is recognized immediately in the June 30, 2022, OPEB expense.

Unrecognized gains due to assumption changes from prior periods were $2,052,917, of which the entire amount is recognized as a decrease in OPEB expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment loss of $12,216,418, of which $2,443,284 was recognized in the current year and will be recognized in each of the next four years, resulting in a deferred outflow of resources of $9,773,134. Net unrecognized investment gains from prior periods were $5,905,689, of which $1,311,774 was recognized as a decrease in OPEB expense in the current year, resulting in a net deferred inflow of $4,593,915. The combination of unrecognized losses this year along with the net unrecognized investment gains from prior periods results in a deferred outflow of resources of $5,179,219 (Division's share $938,993). The impact of the change in proportionate share for the Wastewater Division during the measurement period is recognized over the average future working life of the Plan's active and inactive members, which is two years. This change resulted in a deferred inflow of $77,608, with $38,804 of that recognized in the current year and the remaining amount recognized in the next year, resulting in a deferred inflow of resources of $38,804. The table below summarizes the current balances of deferred outflows and deferred inflows of resources of the Wastewater Division.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 5,525	$ -
Changes in assumptions	-	-
Net difference between projected and actual earnings on OPEB plan investments	938,993	-
Change in proportionate share	-	38,804
Total	$ 944,518	$ 38,804

Amounts reported as deferred outflows and deferred inflows of resources will be recognized in OPEB expense as follows:

Year ended June 30:	
2023	$ 177,441
2024	189,412
2025	95,894
2026	442,967
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized OPEB expense of ($648,134) (Division's share ($142,590)).

The impact of liability experience gains or losses and assumption changes on the Total OPEB Liability are recognized in the OPEB expense over the average expected remaining service life of all active and inactive members of the OPEB Plan. As of the beginning of the measurement period, this average was 2.0 years. During the measurement year, there was an experience loss of $42,802, with $21,401 of that recognized in the current year and the remaining amount will be recognized in the next year, resulting in a deferred outflow of resources of $21,401 (Division's share $4,708). Unrecognized experience losses from prior periods were $21,951, of which the entire amount is recognized as an increase in OPEB expense in the current year.

During the measurement year, there was a decrease in the Total OPEB Liability due to assumption changes of $4,105,835, with $2,052,918 of that recognized in the current year and in the next year, resulting in a deferred inflow of $2,052,917 (Division's share $451,642). Unrecognized assumption changes from prior periods were $1,802,421, of which the entire amount is recognized as an increase in OPEB expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $9,571,802, of which $1,914,360 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment losses from prior periods were $2,354,338, of which $602,585 was recognized as an increase in OPEB expense in the current year. The combination of unrecognized gains this year along with the net unrecognized investment losses from prior periods results in a net difference between projected and actual earnings on OPEB plan investments as of June 30, 2021, of $5,905,689 (Division's share $1,299,251). The table below summarizes the current balances of deferred outflows and deferred inflows of resources.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 21,401	$ -
Changes in assumptions	-	2,052,917
Net difference between projected and actual earnings on OPEB plan investments	-	5,905,689
Total	$ 21,401	$ 7,958,606
Division's share	$ 4,708	$ 1,750,893

15. Related Party Transactions

The Division, in the normal course of operations, is involved in transactions with the City of Knoxville and with other divisions of KUB. Such transactions for the years ended June 30, 2022, and 2021, are summarized as follows:

	2022	2021
City of Knoxville		
Amounts billed by the Division for utilities and related services	$ 932,183	$ 1,058,321
Payments by the Division in lieu of property tax	5,127,318	4,883,160
Payments by the Division for services provided	1,638,569	1,453,601
Other divisions of KUB		
Amounts billed to other divisions for utilities and related services provided	339,440	344,030
Interdivisional rental expense	601,595	560,935
Interdivisional rental income	294,743	158,382
Amounts billed to the Division by other divisions for utilities services provided	3,798,349	3,589,283

With respect to these transactions, accounts receivable from the City of Knoxville included in the balance sheet at year end were as follows:

	2022	2021
Accounts receivable	$ 35,057	$ 59,856

16. Other Commitments and Contingencies

In the normal course of business, there are various lawsuits pending against KUB. Management has reviewed these lawsuits with counsel, who is vigorously defending KUB's position and is of the opinion that the ultimate disposition of these matters will not have a material adverse effect on KUB's financial position, results of operations, or cash flows.

In February 2005, a Consent Decree was entered into federal court regarding the operation of KUB’s wastewater system. Under the terms of the Consent Decree, the remediation of identified sanitary sewer overflows (SSOs) on KUB’s wastewater system had to be completed by June 30,

2016. KUB completed all the requirements of the Consent Decree for the collection system two years in advance of the deadline.

The Consent Decree also required KUB to perform an evaluation of the wet weather performance and capacity of its wastewater treatment plants. In July 2007, KUB submitted a Composite Correction Plan (CCP) for its wastewater treatment plants to EPA for review. The development and filing of the CCP was a requirement of the federal order of February 2005. The CCP includes recommended improvements to KUB's Kuwahee and Fourth Creek treatment plants to address wet weather capacity issues noted in prior assessments. The EPA approved the CCP in January 2009 including a recommended schedule of plant improvements that extends beyond the expiration date of the original Consent Decree. An amendment to the Consent Decree incorporating and establishing this schedule was agreed to by all parties and was entered on June 23, 2009. The purpose of the Amendment is to allow KUB to complete a portion of work outlined in the CCP after the Consent Decree deadline of June 30, 2016. The CCP provided for a biologically enhanced high-rate clarification (the BEHRC) secondary treatment system to be installed at the Fourth Creek treatment plant and at the Kuwahee treatment plant. KUB successfully completed the installation of the BEHRC system at the Fourth Creek treatment plant in the 2018 fiscal year. The project at the Kuwahee treatment plant was completed this fiscal year. The total cost of the CCP improvements at the Fourth Creek treatment plant and Kuwahee treatment plant is approximately $120 million.

KUB's funding plan for the Consent Decree included long-term bonds and a series of rate increases phased in over the term of the order. Bond proceeds fund all types of wastewater capital projects, the majority of which are related to the Consent Decree. As of June 30, 2022, the Wastewater Division had issued $594.8 million in bonds to fund wastewater system capital improvements since the inception of the Consent Decree. The Board approved two 50 percent rate increases, which went into effect in April 2005 and January 2007. The Board also approved an 8 percent rate increase, which was effective in September 2008, two 12 percent rate increases, which were effective in April 2011 and October 2012, three 6 percent rate increases, which were effective October 2014, October 2015, and October 2016, three 5 percent rate increases, which were effective July 2017, July 2018, and July 2019, and three 4 percent rate increases, which are effective July 2022, July 2023, and July 2024. KUB anticipates additional bond issues and rate increases over the next decade to help fund wastewater capital improvements.

KUB successfully completed the first cycle of Maintenance Operation Management (MOM) requirements one year before the deadline by inspecting manholes and gravity mains, smoke testing gravity mains, performing required inspections of pump stations and the related force mains, and completing all Corrective Action Plan/Engineering Report (CAP/ER) projects. KUB initiated the second MOM cycle that continues to focus on the prevention of SSOs. As part of the Century II initiative, formally known as the PACE10 program, KUB has installed storage tanks providing 34 million gallons of wastewater storage to control wet weather overflows and rehabilitated or replaced 432 miles of collection system pipe. KUB also continues to maintain a proactive operations and maintenance plan for the wastewater collection system including inspection, grease control, and private lateral enforcement. The result of the PACE10/Century II initiative has been an 80 percent reduction in SSOs.

As of June 30, 2022, the Wastewater Division had completed its 18th full year under the Consent Decree, spending $579.8 million on capital investments to meet Consent Decree requirements.

KUB's request for Consent Decree termination was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

Knoxville Utilities Board Wastewater Division
Required Supplementary Information – Schedule of Changes in Net Pension Liability and Related Ratios
June 30, 2022

	*Year ended December 31							
	2021	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Total pension liability								
Service cost	$ 6,647,220	$ 5,227,657	$ 6,142,213	$ 5,095,488	$ 4,607,486	$ 4,226,985	$ 4,157,062	$ 4,092,808
Interest	16,982,226	16,393,202	16,030,626	15,344,193	15,015,282	14,966,559	14,812,784	14,698,657
Changes of benefit terms	-	-	163,199	-	-	-	-	-
Differences between expected and actual experience	1,935,276	1,930,170	(1,054,117)	(605,649)	(1,087,161)	(2,233,762)	(1,890,334)	-
Changes of assumptions	-	-	8,473,160	-	(357,633)	(2,932,883)	-	-
Benefit payments, including refunds of member contributions	(17,725,963)	(16,006,565)	(15,094,475)	(15,274,814)	(14,969,979)	(14,138,511)	(15,350,926)	(15,533,167)
Net change in total pension liability	7,838,759	7,544,464	14,660,606	4,559,218	3,207,995	(111,612)	1,728,586	3,258,298
Total pension liability - beginning	234,363,021	226,818,557	212,157,951	207,598,733	204,390,738	204,502,350	202,773,764	199,515,466
Total pension liability - ending (a)	$ 242,201,780	$ 234,363,021	$ 226,818,557	$ 212,157,951	$ 207,598,733	$ 204,390,738	$ 204,502,350	$ 202,773,764
Plan fiduciary net position								
Contributions - employer	$ 3,416,428	$ 2,876,752	$ 2,871,241	$ 3,456,475	$ 4,286,597	$ 5,243,146	$ 5,991,887	$ 5,908,541
Contributions - participants	3,939,687	2,284,727	3,170,825	2,081,125	1,488,632	555,075	487,546	475,854
Net investment income	37,575,566	44,814,914	49,938,315	(11,748,396)	32,360,219	13,788,263	(95,430)	22,292,369
Other additions	112,484	7,740	13,579	62,616	82,239	45,848	30,879	29,733
Benefit payments, including refunds of member contributions	(17,653,963)	(15,962,565)	(15,030,475)	(15,174,814)	(14,895,979)	(14,044,511)	(15,274,926)	(15,405,167)
Administrative expense	(441,017)	(455,191)	(467,748)	(445,916)	(385,282)	(441,332)	(397,160)	(378,085)
Death benefits	(72,000)	(44,000)	(64,000)	(100,000)	(74,000)	(94,000)	(76,000)	(128,000)
Net change in plan fiduciary net position**	26,877,185	33,522,377	40,431,737	(21,868,910)	22,862,426	5,052,489	(9,333,204)	12,795,245
Plan fiduciary net position - beginning**	279,462,309	245,939,932	205,508,195	227,377,105	204,514,679	199,462,190	208,795,394	196,000,149
Plan fiduciary net position - ending (b)**	$ 306,339,494	$ 279,462,309	$ 245,939,932	$ 205,508,195	$ 227,377,105	$ 204,514,679	$ 199,462,190	$ 208,795,394
Plan's net pension liability - ending (a) - (b)	$ (64,137,714)	$ (45,099,288)	$ (19,121,375)	$ 6,649,756	$ (19,778,372)	$ (123,941)	$ 5,040,160	$ (6,021,630)
Plan fiduciary net position as a percentage of the total pension liability	126.48%	119.24%	108.43%	96.87%	109.53%	100.06%	97.54%	102.97%
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747	$ 44,446,743	$ 44,076,351
Plan's net pension liability as a percentage of covered payroll	(168.45%)	(108.61%)	(47.48%)	15.78%	(45.67%)	(0.28%)	11.34%	(13.66%)

Notes to Schedule:

* Information not reflected prior to 2014 due to changes in actuary methodologies required under GASB 67, which was implemented in 2014.

** Excludes amounts related to 401(k) matching contributions.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Required Supplementary Information – Schedule of Employer Pension Contributions
June 30, 2022

	*Year ended December 31							
	2021	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Actuarially determined contribution	$ 3,416,428	$ 2,876,752	$ 2,871,241	$ 3,456,475	$ 4,286,597	$ 5,243,146	$ 5,991,887	$ 5,908,541
Contribution in relation to the actuarially determined contribution	3,416,428	2,876,752	2,871,241	3,456,475	4,286,597	5,243,146	5,991,887	5,908,541
Contribution deficiency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747	$ 44,446,743	$ 44,076,351
Contributions as a percentage of covered payroll	8.97%	6.93%	7.13%	8.20%	9.90%	11.80%	13.48%	13.41%

Notes to Schedule:

Timing:	Actuarially determined contributions for a Plan year are based upon 50% of the amounts determined at the actuarial valuations for each of the two prior Plan years.
Valuation Dates:	January 1, 2020 and January 1, 2019

Key methods and assumptions used to determine contribution rates:

Actuarial cost method:	Individual entry age
Asset valuation method:	5-year smoothed market
Amortization method:	Level dollar, 30-year closed period with 21 years remaining (22 years as of January 1, 2019), or a level dollar, 30-year open period for a negative unfunded liability; As of January 1, 2020 and 2019, the unfunded liability was negative.
Discount rate:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Salary increases:	2.50% to 5.65%, based on years of service
Mortality:	115% and 110% of the benefits-weighted Public Sector General Healthy Annuitant Mortality Table (PubG-2010), respectively, for males and females, using the Public Sector General Employee Table while in active employment and for annuitant ages prior to the start of the Healthy Annuitant Mortality Table, both projected from the 2010 base rates using scale MP2018 fully generational
Inflation:	2.5%

* Schedule of Employer Contribution information is not reflected prior to 2014 due to changes in actuary methodologies required under GASB 67, which was implemented 2014. Please refer to prior year's audited financial statements for prior methods and assumptions.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Required Supplementary Information – Schedule of Changes in Net OPEB Liability and Related Ratios
June 30, 2022

	*Year ended June 30				
	2022	**2021**	**2020**	**2019**	**2018**
Total OPEB liability					
Service cost	$ 416,277	$ 283,786	$ 256,270	$ 270,515	$ 202,603
Interest	3,858,276	3,861,304	3,672,291	3,624,737	3,295,240
Change of benefit terms	6,594,293	-	(202,408)	-	-
Differences between expected and actual experience	60,951	42,802	43,902	999,098	1,324,769
Changes of assumptions	-	(4,105,835)	3,604,843	3,231,601	(397,180)
Benefit payments	(3,908,635)	(3,111,179)	(3,028,596)	(3,532,444)	(3,298,739)
Net change in total OPEB liability	7,021,162	(3,029,122)	4,346,302	4,593,507	1,126,693
Total OPEB liability - beginning	51,515,118	54,544,240	50,197,938	45,604,431	44,477,738
Total OPEB liability - ending (a)	$ 58,536,280	$ 51,515,118	$ 54,544,240	$ 50,197,938	$ 45,604,431
Plan fiduciary net position					
Contributions - employer	$ 1,989,066	$ 757,226	$ 311,324	$ -	$ -
Net investment income	(8,122,417)	12,890,602	975,155	2,981,928	3,705,473
Benefit payments	(3,908,635)	(3,111,179)	(3,028,596)	(3,532,444)	(3,298,739)
Administrative expense	(71,187)	(44,496)	(53,286)	(54,787)	(51,668)
Net change in plan fiduciary net position	(10,113,173)	10,492,153	(1,795,403)	(605,303)	355,066
Plan fiduciary net position - beginning	57,446,946	46,954,793	48,750,196	49,355,499	49,000,433
Plan fiduciary net position - ending (b)	$ 47,333,773	$ 57,446,946	$ 46,954,793	$ 48,750,196	$ 49,355,499
Net OPEB liability (asset) - ending (a) - (b)	$ 11,202,507	$ (5,931,828)	$ 7,589,447	$ 1,447,742	$ (3,751,068)
Plan fiduciary net position as a percentage of the total OPEB liability	80.86%	111.51%	86.09%	97.12%	108.23%
Covered employee payroll**	$ 73,927,857	$ 21,578,366	$ 23,363,536	$ 24,346,735	$ 23,677,080
Net OPEB liability (asset) as a percentage of covered employee payroll	15.15%	(27.49%)	32.48%	5.95%	(15.84%)

Notes to Schedule:

* Information not reflected prior to 2018 due to changes in actuary methodologies required under GASB 75, which was implemented in 2018.

** The covered-employee payroll increased in FY 2022 due to the inclusion of plan participants eligible for the HRA benefits.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Required Supplementary Information – Schedule of Employer OPEB Contributions
June 30, 2022

	*Year ended June 30				
	2022	**2021**	**2020**	**2019**	**2018**
Actuarially determined contribution	$ 489,066	$ 757,226	$ 311,324	$ -	$ -
Contribution in relation to the annual required contribution	1,989,066	757,226	311,324	-	-
Contribution deficiency/(excess)	$ (1,500,000)	$ -	$ -	$ -	$ -
Covered employee payroll*	$ 73,927,857	$ 21,578,366	$ 23,363,536	$ 24,346,735	$ 23,677,080
Contributions as a percentage of covered employee payroll	2.69%	3.51%	1.33%	0.00%	0.00%

* The covered-employee payroll increased in FY 2022 due to the inclusion of plan participants eligible for the HRA benefits.

KUB elected to make a $1,500,000 voluntary contribution to the Trust to initially fund the HRA benefit which was effective January 1, 2022. This contribution was not required.

Notes to Schedule:

Valuation Date:	January 1, 2020 and January 1, 2019
Timing:	Actuarially determined contribution rates are calculated based on the actuarial valuation completed 18 months before the beginning of the fiscal year.

Key methods and assumptions used to determine contribution rates:

Actuarial cost method:	Entry age normal
Asset valuation method:	5-year smoothed market
Amortization method:	Level dollar, 30-year closed period with 16 years remaining as of January 1, 2020 (17 years as of January 1, 2019), or a level dollar, 30-year open period for a negative unfunded liability; As of January 1, 2019 and 2020, the unfunded liability was positive
Discount rate:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Healthcare cost trend rate:	Pre-Medicare: 6.75% grading down to 4.04% over 20 years as of January 1, 2020; 7.83% grading down to 4.50% over 19 years as of January 1, 2019 Medicare: 6.30% grading down to 4.04% over 20 years as of January 1, 2020; 6.88% grading down to 4.50% over 19 years as of January 1, 2019 Administrative expenses: 3.0% per year
Salary increases:	From 2.50% to 5.65%, based on years of service
Mortality:	115% and 110% of the Public Sector Healthy Annuitant Mortality Table (PubG-2010), respectively for males and females, using the Public Sector General Employee Table (PubG-2010) for ages prior to the start of the Health Annuitant Mortality Table, both projected using scale MP2018 fully generational
Inflation:	2.5%
Investment rate of return:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Retirement age:	2% at ages 50-57, grading up to 100% at age 70

* Schedule of Employer Contribution information is not reflected prior to 2018 due to changes in actuary methodologies required under GASB 75, which was implemented in 2018.
Please refer to prior year's audited financial statement for prior methods and assumptions.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Required Supplementary Information – Qualified Governmental Excess Benefit Arrangement
Schedule of Changes in Total Pension Liability and Related Ratios
June 30, 2022

	*Year ended December 31					
	2021	**2020**	**2019**	**2018**	**2017**	**2016**
Total pension liability						
Service cost	$ -	$ -	$ -	$ 941	$ 584	$ -
Interest (includes interest on service cost)	268	388	9,181	9,676	7,535	-
Changes of benefit terms	-	-	(218,272)	-	-	185,077
Differences between expected and actual experience	(6,816)	10,165	34	(36,125)	13,684	-
Changes of assumptions	-	91	13,342	(22,950)	73,461	-
Benefit payments, including refunds of member contributions	(12,166)	(12,166)	(15,932)	-	-	-
Net change in total pension liability	(18,714)	(1,522)	(211,647)	(48,458)	95,264	185,077
Total pension liability - beginning	18,714	20,236	231,883	280,341	185,077	-
Total pension liability - ending	$ -	$ 18,714	$ 20,236	$ 231,883	$ 280,341	$ 185,077
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747
Total pension liability as a percentage of covered payroll	0.00%	0.05%	0.05%	0.55%	0.65%	0.42%

Notes to Schedule:

* There are no assets accumulated in a trust that meet the criteria in paragraph 4 of GASB 73 to pay related benefits.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Supplemental Information – Schedule of Debt Maturities by Fiscal Year
June 30, 2022

Continued on Next Page

	2010C			2015A		2015B		2016		2017A		2017B	
FY	Principal	Interest	Rebate*	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
22-23		1,235,250	432,338	6,005,000	3,895,262	575,000	65,750	525,000	463,781	1,775,000	177,050	600,000	715,712
23-24		1,235,250	432,338	3,720,000	3,595,012	600,000	42,750	550,000	437,531	595,000	88,300	630,000	685,713
24-25		1,235,250	432,338	3,785,000	3,483,412	625,000	18,750	575,000	421,031	615,000	70,450	660,000	654,212
25-26		1,235,250	432,338	1,425,000	3,369,864			575,000	409,531	640,000	52,000	690,000	621,213
26-27		1,235,250	432,338	1,490,000	3,323,550			600,000	398,031	660,000	26,400	715,000	600,512
27-28		1,235,250	432,338	1,405,000	3,271,400			600,000	386,032			725,000	586,213
28-29		1,235,250	432,338	1,450,000	3,222,226			625,000	374,032			745,000	570,806
29-30		1,235,250	432,338	1,455,000	3,178,726			625,000	361,532			760,000	553,112
30-31		1,235,250	432,338	1,515,000	3,135,076			650,000	348,250			785,000	530,313
31-32		1,235,250	432,338	1,520,000	3,089,626			675,000	333,625			805,000	506,762
32-33		1,235,250	432,338	1,580,000	3,042,125			675,000	318,438			830,000	482,613
33-34		1,235,250	432,338	1,635,000	2,992,750			700,000	302,406			855,000	457,712
34-35		1,235,250	432,338	1,690,000	2,939,612			700,000	284,906			880,000	432,063
35-36	3,700,000	1,235,250	432,338	1,750,000	2,884,688			725,000	267,406			910,000	405,662
36-37	3,875,000	1,009,550	353,343	1,825,000	2,827,812			750,000	249,282			935,000	378,363
37-38	4,050,000	773,175	270,611	13,420,000	2,768,500			775,000	229,594			965,000	350,312
38-39	4,225,000	526,125	184,144	13,895,000	2,298,800			775,000	209,250			995,000	320,156
39-40	4,400,000	268,400	93,940	14,480,000	1,743,000			800,000	186,000			1,025,000	289,063
40-41				15,130,000	1,236,200			825,000	162,000			1,055,000	257,032
41-42				15,775,000	631,000			850,000	137,250			1,090,000	224,062
42-43								875,000	111,750			1,125,000	190,000
43-44								900,000	85,500			1,160,000	154,844
44-45								950,000	58,500			1,195,000	118,594
45-46								1,000,000	30,000			1,230,000	81,250
46-47												1,270,000	41,275
47-48													
48-49													
49-50													
50-51													
Total	$ 20,250,000	$ 19,870,750	$ 6,954,770	$ 104,950,000	$ 56,928,641	$ 1,800,000	$ 127,250	$ 17,300,000	$ 6,565,658	$ 4,285,000	$ 414,200	$ 22,635,000	$ 10,207,569

*Series 2010c bonds were issued as federally taxable Build America Bonds. KUB will receive a 35 percent interest rebate payment from the United States Government for each interest payment. Effective October 1, 2021 these bonds became subject to a 5.7% reduction in rebate payment amounts due to the United States Government sequestration. The sequestration is effective until intervening Congressional action, at which time the sequestration rate is subject to change.

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Supplemental Information – Schedule of Debt Maturities by Fiscal Year
June 30, 2022

Continued on Next Page

	2018		2019		2020A		2020B		2021A	
FY	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
22-23	270,000	376,756	330,000	521,700	715,000	960,650	580,000	836,300	3,060,000	8,119,050
23-24	280,000	365,956	345,000	505,200	750,000	924,900	600,000	813,100	6,085,000	7,996,650
24-25	290,000	354,756	360,000	487,950	785,000	887,400	625,000	789,100	6,150,000	7,753,250
25-26	305,000	343,156	380,000	469,950	825,000	848,150	650,000	764,100	8,360,000	7,507,250
26-27	315,000	330,956	400,000	450,950	865,000	806,900	675,000	738,100	8,535,000	7,172,850
27-28	325,000	321,506	420,000	430,950	910,000	763,650	705,000	711,100	9,760,000	6,746,100
28-29	335,000	311,756	435,000	409,950	955,000	718,150	730,000	682,900	10,260,000	6,258,100
29-30	345,000	301,706	455,000	388,200	1,005,000	670,400	760,000	653,700	10,800,000	5,745,100
30-31	355,000	291,356	475,000	370,000	1,055,000	620,150	785,000	630,900	11,315,000	5,205,100
31-32	365,000	280,706	495,000	351,000	1,095,000	577,950	805,000	607,350	11,935,000	4,639,350
32-33	375,000	269,756	515,000	331,200	1,140,000	534,150	830,000	583,200	12,550,000	4,042,600
33-34	390,000	258,038	530,000	315,750	1,175,000	499,950	855,000	558,300	13,015,000	3,540,600
34-35	400,000	245,362	545,000	299,850	1,210,000	464,700	880,000	532,650	13,550,000	3,020,000
35-36	415,000	232,364	560,000	283,500	1,245,000	428,400	905,000	506,250	10,885,000	2,478,000
36-37	425,000	218,874	580,000	266,700	1,285,000	391,050	935,000	479,100	11,430,000	2,042,600
37-38	440,000	204,532	595,000	249,300	1,320,000	352,500	965,000	451,050	2,465,000	1,585,400
38-39	455,000	189,682	615,000	231,450	1,360,000	312,900	990,000	422,100	2,595,000	1,486,800
39-40	475,000	173,756	615,000	213,000	1,400,000	272,100	1,020,000	392,400	2,705,000	1,383,000
40-41	490,000	157,132	635,000	194,550	1,445,000	230,100	1,050,000	361,800	3,515,000	1,274,800
41-42	505,000	139,982	655,000	175,500	1,490,000	186,750	1,085,000	330,300	3,655,000	1,134,200
42-43	525,000	122,306	675,000	155,850	1,530,000	142,050	1,115,000	297,750	3,920,000	988,000
43-44	540,000	103,932	700,000	135,600	1,580,000	96,150	1,150,000	264,300	4,110,000	831,200
44-45	560,000	85,032	720,000	114,600	1,625,000	48,750	1,185,000	229,800	4,335,000	666,800
45-46	580,000	65,432	740,000	93,000			1,220,000	194,250	4,580,000	493,400
46-47	600,000	44,406	765,000	70,800			1,255,000	157,650	4,830,000	310,200
47-48	625,000	22,656	785,000	47,850			1,295,000	120,000	1,425,000	117,000
48-49			810,000	24,300			1,335,000	81,150	1,500,000	60,000
49-50							1,370,000	41,100		
50-51										
Total	$ 10,985,000	$ 5,811,852	$ 15,135,000	$ 7,588,650	$ 26,765,000	$ 11,737,850	$ 26,355,000	$ 13,229,800	$ 187,325,000	$ 92,597,400

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Supplemental Information – Schedule of Debt Maturities by Fiscal Year
June 30, 2022

Continued from Previous Page

	2022A		2022B		Totals		Grand Total (P + I)	Grand Total (Less Rebates)
FY	Principal	Interest	Principal	Interest	Principal	Interest		
22-23	225,000	435,658	100,000	890,665	14,760,000	18,693,584	33,453,584	33,021,246
23-24	200,000	461,150	0	1,003,300	14,355,000	18,154,812	32,509,812	32,077,474
24-25	210,000	451,150	0	1,003,300	14,680,000	17,610,011	32,290,011	31,857,673
25-26	220,000	440,650	545,000	1,003,300	14,615,000	17,064,414	31,679,414	31,247,076
26-27	230,000	429,650	575,000	976,050	15,060,000	16,489,199	31,549,199	31,116,861
27-28	245,000	418,150	610,000	947,300	15,705,000	15,817,651	31,522,651	31,090,313
28-29	255,000	405,900	635,000	916,800	16,425,000	15,105,870	31,530,870	31,098,532
29-30	270,000	393,150	690,000	885,050	17,165,000	14,365,926	31,530,926	31,098,588
30-31	280,000	379,650	715,000	850,550	17,930,000	13,596,595	31,526,595	31,094,257
31-32	295,000	365,650	745,000	814,800	18,735,000	12,802,069	31,537,069	31,104,731
32-33	310,000	350,900	775,000	777,550	19,580,000	11,967,782	31,547,782	31,115,444
33-34	325,000	335,400	835,000	738,800	20,315,000	11,234,956	31,549,956	31,117,618
34-35	340,000	322,400	870,000	697,050	21,065,000	10,473,843	31,538,843	31,106,505
35-36	355,000	308,800	935,000	653,550	22,385,000	9,683,870	32,068,870	31,636,532
36-37	370,000	294,600	965,000	606,800	23,375,000	8,764,731	32,139,731	31,786,388
37-38	380,000	279,800	465,000	568,200	25,840,000	7,812,363	33,652,363	33,381,752
38-39	395,000	264,600	465,000	549,600	26,765,000	6,811,463	33,576,463	33,392,319
39-40	415,000	248,800	460,000	531,000	27,795,000	5,700,519	33,495,519	33,401,579
40-41	430,000	232,200	1,060,000	512,600	25,635,000	4,618,414	30,253,414	30,253,414
41-42	445,000	215,000	1,110,000	470,200	26,660,000	3,644,244	30,304,244	30,304,244
42-43	465,000	197,200	1,155,000	425,800	11,385,000	2,630,706	14,015,706	14,015,706
43-44	485,000	178,600	1,205,000	379,600	11,830,000	2,229,726	14,059,726	14,059,726
44-45	505,000	159,200	1,255,000	331,400	12,330,000	1,812,676	14,142,676	14,142,676
45-46	525,000	139,000	1,300,000	281,200	11,175,000	1,377,532	12,552,532	12,552,532
46-47	545,000	118,000	1,350,000	229,200	10,615,000	971,531	11,586,531	11,586,531
47-48	565,000	96,200	1,395,000	175,200	6,090,000	578,906	6,668,906	6,668,906
48-49	590,000	73,600	1,470,000	119,400	5,705,000	358,450	6,063,450	6,063,450
49-50	610,000	50,000	1,515,000	60,600	3,495,000	151,700	3,646,700	3,646,700
50-51	640,000	25,600			640,000	25,600	665,600	665,600
Total	$ 11,125,000	$ 8,070,658	$ 23,200,000	$ 17,398,865	$ 472,110,000	$ 250,549,143	$ 722,659,143	$ 715,704,373

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Supplemental Information – Schedule of Changes in Long-term Debt by Individual Issue
June 30, 2022

Description of Indebtedness	Original Amount of Issue	Interest Rate	Date of Issue	Last Maturity Date	Outstanding Balance 7/1/2021	Issued During Period	Paid/Matured During Period	Refunded During Period	Outstanding Balance 6/30/2022
Business-Type Activities									
BONDS PAYABLE									
Payable through Wastewater Fund									
Revenue Bond, Series 2010C	70,000,000	1.18-6.1	12/08/10	04/01/40	$ 20,250,000	$	$ -	$	$ 20,250,000
Revenue Bond Refunding, Series 2015A	129,825,000	3.0-5.0	05/01/15	04/01/42	110,625,000		5,675,000		104,950,000
Revenue Bond, Series 2015B	30,000,000	3.0-5.0	05/20/15	04/01/25	26,950,000		550,000	24,600,000	1,800,000
Revenue Bond, Series 2016	20,000,000	2.0-5.0	08/05/16	04/01/46	17,800,000		500,000		17,300,000
Revenue Bond Refunding, Series 2017A	11,965,000	3.0-5.0	04/07/17	04/01/27	5,970,000		1,685,000		4,285,000
Revenue Bond, Series 2017B	25,000,000	2.0-5.0	09/15/17	04/01/47	23,205,000		570,000		22,635,000
Revenue Bond, Series 2018	12,000,000	3.0-5.0	09/14/18	04/01/48	11,240,000		255,000		10,985,000
Revenue Bond, Series 2019	16,000,000	3.0-5.0	08/20/19	04/01/49	15,450,000		315,000		15,135,000
Revenue Bond Refunding, Series 2020A	28,230,000	3.0-5.0	05/22/20	04/01/45	27,445,000		680,000		26,765,000
Revenue Bond, Series 2020B	27,460,000	3.0-4.0	10/30/20	04/01/50	26,910,000		555,000		26,355,000
Revenue Bond Refunding, Series 2021A	190,815,000	4.0-5.0	04/19/21	04/01/49	190,815,000		3,490,000		187,325,000
Revenue Bond, Series 2022A	11,125,000	4.0-5.0	04/29/22	04/01/51	-	11,125,000	-		11,125,000
Revenue Bond Refunding, Series 2022B	23,200,000	4.0-5.0	05/13/22	04/01/50	-	23,200,000	-		23,200,000
					$ 476,660,000	$ 34,325,000	$ 14,275,000	$ 24,600,000	$ 472,110,000

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Supplemental Information - Schedule of Changes in Lease Liabilities
June 30, 2022

Description of Indebtedness	Original Amount of Issue	Interest Rate	Date of Issue	Maturity Date	Outstanding 7/1/2021	Issued During Period	Paid and/or Matured During Period	Remeasure-ments	Outstanding 6/30/2022
Lease Liabilities									
Payable through Wastewater Division									
Centriworks	$ 9,892	3.88%	11/1/2020	10/31/2023	$ 9,892	$ -	$ (4,130)	$ -	$ 5,762
Coal Creek Ventures	6,754	3.88%	7/1/2020	9/30/2035	6,754	-	(440)	-	6,314
James H. Benson/Manki 1 Investments	66,495	3.88%	7/1/2020	5/31/2027	13,174	66,495	(14,180)	-	65,489
Pinnacle Towers	10,900	3.88%	7/1/2020	6/30/2027	10,900	11,281	(10,900)	-	11,281
R&S Logistics (Sublease)	38,213	3.88%	7/1/2020	3/31/2027	38,213	-	(38,213)	-	-
Ricoh Americas	3,610	3.88%	7/1/2020	7/31/2022	3,610	-	(3,327)	-	283
RJ Young Company	11,162	3.88%	7/1/2020	6/30/2026	11,162	-	(2,632)	-	8,530
Spectrasite	2,697	3.88%	7/1/2020	1/31/2022	2,697	-	(2,697)	-	-
White Realty	7,187	3.88%	7/1/2020	6/30/2041	7,187	7,187	(7,187)	-	7,187
Total Lease Liabilities					$ 103,589	$ 84,963	$ (83,706)	$ -	$ 104,846

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Statistical Information – Schedule of Insurance in Force
June 30, 2022
(Unaudited)

Insurance coverage is for KUB as a consolidated entity.

Crime
Covers losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $5,000,000; $250,000 retention.

Directors' and Officers' Liability Insurance
Covers KUB personnel appropriately authorized to make decisions on behalf of KUB (including but not limited to Commissioners, President and CEO, Senior Vice Presidents, Vice Presidents, and Directors) for wrongful acts. Limits of coverage - $20,000,000; $500,000 corporate deductible, $0 individual deductible.

Employment Practices Liability
Coverage for costs related to actual or alleged employment practices violations for amounts exceeding specified amount ($500,000). Limits of coverage - $10,000,000.

Fiduciary
Covers losses resulting from wrongful acts related to KUB's Pension, 401(k), OPEB Trust funds, and Medical Plan. Limits of coverage - $10,000,000; $150,000 deductible.

Pollution Legal Liability
New conditions coverage for losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - $15,000,000.

Property Insurance
This coverage provides protection of KUB's property for fire, extended coverage, vandalism and malicious mischief, and coverage on boilers and machinery. Also included are flood and earthquake damage and mechanical failure. Limits of coverage - $250,000,000 per occurrence (subject to certain sublimits); $2,500,000 deductible per occurrence.

Travel Accident
Covers losses related to employees' business travel. Limits of coverage - $3,000,000 aggregate.

Excess Insurance for General Liability
As a governmental entity, KUB's liability is limited under the Tennessee Governmental Tort Liability Act (TCA §29-20-403). KUB is self-insured for the first $700,000 of any accident and has insurance of $4,300,000 above this retention.

Excess Insurance for Workers' Compensation
Covers all losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - Statutory; stop loss coverage applies for aggregate losses over $5,000,000.

Employee Health Plan Stop Loss Coverage
KUB's employee health plan is self-funded. KUB has purchased stop loss insurance, which covers KUB's exposure to annual expenses in excess of $600,000 per individual participant.

Cyber Security Liability
Covers losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $3,000,000; $500,000 retention.

Knoxville Utilities Board Wastewater Division
Statistical Information – Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class	Base Charge	Number of Customers
Residential Inside City rate	For wastewater service furnished to premises entirely within the corporate limits of the City of Knoxville:	56,274

Commodity Charge

First	2	100 Cubic Feet Per Month at $1.75 Per 100 Cubic Feet
Over	2	100 Cubic Feet Per Month at $8.70 Per 100 Cubic Feet

Additional Monthly Customer Charge

5/8" meter	$ 35.90
1" meter	50.90
1 1/2" meter	62.90
2" meter	82.90

Non-Residential Inside City rate	For wastewater service furnished to premises entirely within the corporate limits of the City of Knoxville:		7,772

Commodity Charge

First	2	100 Cubic Feet Per Month at $1.00 Per 100 Cubic Feet
Next	8	100 Cubic Feet Per Month at $12.95 Per 100 Cubic Feet
Next	90	100 Cubic Feet Per Month at $11.55 Per 100 Cubic Feet
Next	300	100 Cubic Feet Per Month at $9.90 Per 100 Cubic Feet
Next	4,600	100 Cubic Feet Per Month at $8.05 Per 100 Cubic Feet
Next	5,000	100 Cubic Feet Per Month at $4.75 Per 100 Cubic Feet

Additional Monthly Customer Charge

5/8" meter	$ 35.90
1" meter	50.90
1 1/2" meter	62.90
2" meter	82.90
3" meter	161.00
4" meter	264.00
6" meter	562.00
8" meter	977.00
10" meter	1,481.00
12" meter	2,182.00

See accompanying Independent Auditor's Report

Knoxville Utilities Board Wastewater Division
Statistical Information – Schedule of Current Rates in Force
June 30, 2022
(Unaudited)

Rate Class

Base Charge

Number of Customers

Residential Outside City rate

For wastewater service furnished to premises entirely or partly outside the corporate limits of the City of Knoxville:

Commodity Charge

First	2	100 Cubic Feet Per Month at $1.90 Per 100 Cubic Feet
Over	2	100 Cubic Feet Per Month at $9.30 Per 100 Cubic Feet

Additional Monthly Customer Charge

5/8" meter	$ 39.90
1" meter	53.90
1 1/2" meter	70.90
2" meter	90.90

9,022

Non-Residential Outside City rate

For wastewater service furnished to premises entirely or partly outside the corporate limits of the City of Knoxville:

Commodity Charge

First	2	100 Cubic Feet Per Month at $1.15 Per 100 Cubic Feet
Next	8	100 Cubic Feet Per Month at $14.25 Per 100 Cubic Feet
Next	90	100 Cubic Feet Per Month at $12.65 Per 100 Cubic Feet
Next	300	100 Cubic Feet Per Month at $10.80 Per 100 Cubic Feet
Next	4,600	100 Cubic Feet Per Month at $9.00 Per 100 Cubic Feet
Next	5,000	100 Cubic Feet Per Month at $5.35 Per 100 Cubic Feet

Additional Monthly Customer Charge

5/8" meter	$ 39.90
1" meter	53.90
1 1/2" meter	70.90
2" meter	90.90
3" meter	183.00
4" meter	291.00
6" meter	618.00
8" meter	1,075.00
10" meter	1,624.00
12" meter	2,396.00

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See accompanying Independent Auditor's Report

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Suite 201
Knoxville, TN 37932

COULTER & JUSTUS, P.C.

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Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

Board of Commissioners
Wastewater Division of the Knoxville Utilities Board
Knoxville, Tennessee

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*), the financial statements of the Wastewater Division (the Division) of the Knoxville Utilities Board, a component unit of the City of Knoxville, Tennessee, as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise the Division's basic financial statements, and have issued our report thereon dated October 25, 2022.

Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Division's internal control over financial reporting (internal control) as a basis for designing procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Division's internal control. Accordingly, we do not express an opinion on the effectiveness of the Division's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Division's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

Board of Commissioners
Wastewater Division of the Knoxville Utilities Board
Knoxville, Tennessee

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Division's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Division's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Division's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Coulter & Justus, P.C.

Knoxville, Tennessee
October 25, 2022

Knoxville Utilities Board Wastewater Division
Schedule of Findings and Questioned Costs
June 30, 2022

Section I -- Summary of Auditor's Results

Financial Statements

Type of auditors' report issued:	Unmodified
Internal control over financial reporting:	
Material weakness(es) identified?	No
Significant deficiency(s) identified not considered to be material weaknesses?	None reported
Noncompliance material to financial statements:	No

Section II -- Financial Statement Findings
None reported.

Section III – Findings Required by the State of Tennessee Audit Manual
None reported.

Section IV -- Summary Schedule of Prior Year Audit Findings
Not applicable as there were no prior year findings reported.

GENERAL INFORMATION

THE CITY OF KNOXVILLE

THE CITY

The City of Knoxville (the "City") was founded in 1791 and incorporated in 1815. It is governed by a Mayor-Council form of government. The Mayor is the chief executive and administrative officer and is elected by direct vote of the people to a four-year term. The Mayor is responsible for the day-to-day operations of the City and appoints and supervises the heads of all major City departments. The City Council is composed of six district and three at-large members, each elected for a four-year overlapping term. As the City's legislative body, the Council is responsible for acting on ordinances and resolutions which govern the City as well as for the confirmation of members to most boards and commissions. A municipal judge is elected by direct vote to a four-year term and is responsible for the enforcement of certain City ordinances and the administration of the City court system.

On a continuing basis, the City provides a full range of municipal services contemplated by its Charter and various state statutes. Governmental functions include police and fire protection, sanitation services, inspections, engineering, street maintenance, parks and recreation, economic development, and general administrative support systems. The City is also engaged in several proprietary activities and owns and operates (under a separate authority) two municipal airports, utility systems (electric, fiber, gas, water and wastewater), an auditorium / coliseum, a convention center, an exhibition center, a public transportation system and several parking facilities.

Knoxville, the county seat, is the largest incorporated municipality in Knox County (the "County"). The City is located on the Tennessee River near the geographic center of East Tennessee and has a land area of approximately 98 square miles within its corporate limits. The 2020 U.S. Census figures show the population of Knox County as being 478,971.

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KNOXVILLE UTILITIES BOARD

HISTORY AND ORGANIZATION

The Knoxville Utilities Board (the "Board" or "KUB") (under its then name of Knoxville Electric Power and Water Board) was organized on March 14, 1939. The present name of Knoxville Utilities Board was adopted in 1947. As originally established, the Board consisted of five members with terms of ten years. A Charter amendment, adopted in compliance with the home rule provisions of the Tennessee Constitution, including approval in a city-wide referendum held November 5, 1974, changed some of the provisions concerning the membership of the Board. The Board was enlarged to seven members. The term for each member was reduced to seven years with the terms being so arranged that the appointment of one member will be made each year. Members of the Board are limited to one seven-year term.

The selection procedure for a member is initiated by the Board submitting to the Mayor a list of at least five nominees from which list the Mayor selects one nominee to present to the City Council for confirmation or rejection. In case the City Council rejects a nominee, the nominating procedure is repeated until an appointment is made.

The Board operates the City's Water Division (purchased in 1909), the City's Electric Division (purchased in 1939), the City's Gas Division (purchased in 1945), the City's Wastewater Division (transferred to the Board by referendum in 1987), the City's Fiber Division (created 2021). The joint operation of these five city-owned utilities provides cost savings to each system by reason of joint billing and other operating economies.

KUB's organizational structure has three major functional areas including an Engineering and Operations Division, Finance Division and Administrative Division.

Except as specifically limited by the provisions of the City Charter relating to the Board, the Board is authorized to exercise all powers of the City to construct, acquire, expand, operate, manage, and control the City's electric, fiber, gas, water, and wastewater systems free from the jurisdiction, direction and control of the Mayor, City Council and its officers.

THE BOARD OF COMMISSIONERS

Members of the Board of Commissioners are:

JERRY W. ASKEW, Ph.D., Chair, Commissioner. Archdeacon, Episcopal Diocese of East Tennessee.

ADRIENNE SIMPSON-BROWN, Vice-Chair, Commissioner. Chief United States Probation Officer of the United States District Court for the Eastern District of Tennessee.

CLAUDIA CABALLERO, Commissioner. President and CEO of Centro Hispano de East Tennessee.

RON FEINBAUM, Commissioner. Consultant, Boldsquare, Inc.

KATHY HAMILTON, CPA (inactive), Commissioner.

CELESTE HERBERT, Commissioner. Attorney, Herbert, Meadows and Wall, PLLC.

TYVI SMALL, Commissioner. Vice Chancellor for Diversity and Engagement, University of Tennessee.

OFFICERS

GABRIEL J. BOLAS II, President and Chief Executive Officer, was appointed to this position in 2018. Mr. Bolas has been with KUB since 1995. He has a B.S. in Electric Engineering, as well as a Master of Science in Engineering/Industrial Management from the University of Tennessee.

MARK A. WALKER, Senior Vice President and Chief Financial Officer, was appointed to this position in 2011 and serves as the fifth CFO since KUB was formed. Mr. Walker currently serves as Secretary of the Board of Commissioners. He has been with KUB since 1993. Mr. Walker received a B.S. in Finance from the University of Tennessee's College of Business and received an M.B.A. in Economics from the University of Tennessee.

SUSAN F. EDWARDS, Senior Vice President and Chief Administrative Officer, was appointed to the position in 2013. She has been with KUB since 1997. She has a B.S. in Business Administration from the University of Tennessee.

DERWIN G. HAGOOD, Senior Vice President of Operations, was appointed to this position in 2017. Mr. Hagood has been with KUB since 1985. He has a B.S. in Civil Engineering from the University of Tennessee.

JOHN W. WILLIAMS III, Senior Vice President of Engineering and Construction, was appointed to this position in 2018. Mr. Williams has been with KUB since 1998. He has a B.S. in Business Administration from the University of Tennessee.

TIFFANY MARTIN, Vice President and Chief Customer Officer, was appointed to this position in 2021. Mrs. Martin has been with KUB since 2001. She has a B.S. in Business Administration/Marketing from the University of Tennessee.

JAMIE DAVIS, Vice President Fiber Deployment and Chief Technology Officer, was appointed to this position in 2021. Mr. Davis has been with KUB since 1996. He has a B.S. in Business Administration from Tennessee Tech, as well as a Master of Accountancy from the University of Tennessee.

INSURANCE

Crime. Coverage for losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $5,000,000; $250,000 retention.

Directors' and Officers' Liability. Covers KUB personnel appropriately authorized to make decisions on behalf of KUB (including but not limited to Commissioners, President and CEO, Senior Vice Presidents, Vice Presidents, and Directors) for wrongful acts. Limits of coverage – $20,000,000; $500,000 corporate deductible, $0 individual deductible.

Employment Practices Liability. Coverage for costs related to actual or alleged employment practices violations for amounts exceeding specified amount ($500,000). Limits of coverage - $10,000,000.

Fiduciary. Covers losses resulting from wrongful acts related to KUB's Pension, 401(k), OPEB Trust funds, and Medical Plan. Limits of coverage - $10,000,000; $150,000 deductible.

Pollution Legal Liability. New conditions coverage for losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - $15,000,000.

Property Insurance. This coverage provides protection of KUB's property for fire, extended coverage, vandalism and malicious mischief, and coverage on boilers and machinery. Also included are flood and earthquake damage and mechanical failure. Limits of coverage - $250,000,000 per occurrence (subject to certain sublimits); $2,500,000 deductible per occurrence.

Travel Accident. Covers losses related to employees' business travel. Limits of coverage - $3,000,000 aggregate.

Excess Insurance for General Liability. As a governmental entity, KUB's liability is limited under the Tennessee Governmental Tort Liability Act (TCA §29-20-403). KUB is self-insured for the first $700,000 of any accident and has insurance of $4,300,000 above this retention.

Excess Insurance for Workers' Compensation. Covers all losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - Statutory; stop loss coverage applies for aggregate losses over $5,000,000.

Employee Health Plan Stop Loss Coverage. KUB's employee health plan is self-funded. KUB has purchased stop loss insurance, which covers KUB's exposure to annual expenses in excess of $600,000 per individual participant.

Cyber Security Liability. Covers losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $3,000,000; $500,000 retention.

RETIREMENT PLAN

For more information concerning KUB's retirement and disability plans, please refer to the "Notes to the Financial Statements" attached hereto.

SERVICE AREA

KUB provides electric, fiber, natural gas, water, and wastewater services for all of Knoxville, and certain utilities in most of Knox County, a substantial area of Union County and a limited area of Grainger, Jefferson, Blount, Anderson, Loudon, and Sevier Counties. Knox County has a land area

of about 508 square miles of which approximately 98 square miles are within the corporate limits of Knoxville. KUB is the distributor of electric power supplied by the Tennessee Valley Authority (the "TVA"), for natural gas energy purchased from various suppliers, and for water which is taken from the Tennessee River.

ELECTRIC DIVISION

The Electric Division, which was established in 1939, is owned by the City and operated by KUB. KUB purchases all its electric power requirements from TVA. During year ended June 30, 2022, sales revenues of the Electric Division totaled $588,437,707, of which $439,114,687 or 74%, was paid to TVA for the purchase of power.

The electric system includes 5,480 miles of service lines, serving a portion of seven different counties. As of June 30, 2022, KUB had 215,264 electric system customers. The Division's outstanding long-term debt as of June 30, 2022, including the current portion, totaled $304,835,000. KUB sold $45.7 million in electric system revenue bonds in April 2022. KUB refinanced outstanding debt, selling $27.2 million in electric system revenue refunding bonds in April 2022.

FIBER DIVISION

After gaining the required approvals from TVA, the State of Tennessee, KUB's Board and City Council, KUB launched its new Fiber Division in 2021. Broadband services will be provided by a high-speed fiber optic network that will be owned and maintained by the Electric Division. In addition to providing broadband services, the fiber network will allow KUB to implement new advanced technologies to improve the reliability of its electric system. In August 2021, the Board authorized the first $10 million loan of a proposed $35 million loan from the Electric Division to the Fiber Division. The interdivisional loan was approved by TVA and was initiated in October 2021. In fiscal year 2022, KUB began the seven-year buildout on extending the fiber infrastructure to make broadband service available to electric customers. The first broadband customers will begin receiving service in fiscal year 2023.

The fiber network is an integral component of a $702 million ten-year Enhanced Grid Modernization effort for the Electric Division. The $702 million ten-year program will be funded by a combination of electric rate increases, new bonds, and projected payments from the new Fiber Division.

GAS DIVISION

The Gas Division has been owned by the City and operated by KUB since 1945 when it was purchased from City Service Company for $450,000. KUB purchases natural gas from multiple suppliers. During the year ended June 30, 2022, sales revenues of the Gas Division totaled $139,396,453 of which $78,194,481 or 56% was paid to natural gas suppliers and pipelines.

KUB's natural gas system has 2,547 miles of services mains and has a peak day capacity of 157,381 dekatherms (dth). As of June 30, 2022, KUB had 107,389 gas system customers. The Division's outstanding long-term debt as of June 30, 2022, including the current portion, totaled $84,795,000.

WATER DIVISION

In 1939, the City's Electric Power and Water Board, now KUB, was established and granted responsibility for the operation of the city-owned Water and Electric Divisions. The Water Division consists of facilities for the treatment, storage and distribution of water obtained from the Tennessee River. The Water Division distributes water throughout the City of Knoxville, a portion of East Knox County, and other small portions of Knox, Jefferson and Sevier Counties.

During year ended June 30, 2022, the operating revenues of the Water Division totaled $64,558,346. As of June 30, 2022, KUB had 82,110 water system customers. The Division's outstanding long-term debt as of June 30, 2022, including the current portion, totaled $191,540,000. In April 2022, KUB sold $14.9 million in water system revenue refunding bonds for the purpose of refinancing existing water system revenue bonds.

WASTEWATER DIVISION

On November 4, 1986, voters in the City elected to transfer operation of the City's Wastewater Division to KUB effective July 1, 1987. While the Wastewater Division is a self-sustained financial entity, the operations of both the Water and Wastewater Divisions have been merged to achieve operating efficiencies. The Wastewater Division provides collection and treatment throughout the City and portions of East Knox County.

For the fiscal year ended June 30, 2022, operating revenues for the Wastewater Division totaled $102,936,574. As of June 30, 2022, KUB served 73,377 wastewater system customers. The Division's outstanding long-term debt as of June 30, 2022, including the current portion, totaled $472,110,000. KUB sold $11.1 million in wastewater system revenue bonds in April 2022 for the purpose of funding wastewater system capital improvements. In April 2022, KUB sold $23.2 million in wastewater system revenue refunding bonds for the purpose of refinancing existing wastewater system revenue bonds.

FEDERAL CONSENT DECREE

In February 2005, a Consent Decree was entered into federal court regarding the operation of KUB's wastewater system. Under the terms of the Consent Decree, the remediation of identified sanitary sewer overflows (SSOs) on KUB's wastewater system had to be completed by June 30, 2016. KUB completed all the requirements of the Consent Decree for the collection system two years in advance of the deadline.

The Consent Decree also required KUB to perform an evaluation of the wet weather performance and capacity of its wastewater treatment plants. In July 2007, KUB submitted a Composite Correction Plan (CCP) for its wastewater treatment plants to EPA for review. The development and filing of the CCP was a requirement of the federal order of February 2005. The CCP includes recommended improvements to KUB's Kuwahee and Fourth Creek treatment plants to address wet weather capacity issues noted in prior assessments. The EPA approved the CCP in January 2009 including a recommended schedule of plant improvements that extends beyond the expiration date of the original Consent Decree. An amendment to the Consent Decree incorporating and establishing this schedule was agreed to by all parties and was entered on June 23, 2009. The purpose of the Amendment is to allow KUB to complete a portion of work outlined

in the CCP after the Consent Decree deadline of June 30, 2016. The CCP provided for a biologically enhanced high-rate clarification (the BEHRC) secondary treatment system to be installed at the Fourth Creek treatment plant and at the Kuwahee treatment plant. KUB successfully completed the installation of the BEHRC system at the Fourth Creek treatment plant in the 2018 fiscal year. The project at the Kuwahee treatment plant was completed this fiscal year. The total cost of the CCP improvements at the Fourth Creek treatment plant and Kuwahee treatment plant was approximately $120 million.

KUB's funding plan for the Consent Decree included long-term bonds and a series of rate increases phased in over the term of the order. Bond proceeds fund all types of wastewater capital projects, the majority of which are related to the Consent Decree. As of June 30, 2022, the Wastewater Division had issued $594.8 million in bonds to fund wastewater system capital improvements since the inception of the Consent Decree. The Board approved two 50 percent rate increases, which went into effect in April 2005 and January 2007. The Board also approved an 8 percent rate increase, which was effective in September 2008, two 12 percent rate increases, which were effective in April 2011 and October 2012, three 6 percent rate increases, which were effective October 2014, October 2015, and October 2016, three 5 percent rate increases, which were effective July 2017, July 2018, and July 2019, and three 4 percent rate increases, which are effective July 2022, July 2023, and July 2024. KUB anticipates additional bond issues and rate increases over the next decade to help fund wastewater capital improvements.

KUB successfully completed the first cycle of Maintenance Operation Management (MOM) requirements one year before the deadline by inspecting manholes and gravity mains, smoke testing gravity mains, performing required inspections of pump stations and the related force mains, and completing all Corrective Action Plan/Engineering Report (CAP/ER) projects. KUB initiated the second MOM cycle that continues to focus on the prevention of SSOs. As part of the Century II initiative, formally known as the PACE10 program, KUB has installed storage tanks providing 34 million gallons of wastewater storage to control wet weather overflows and rehabilitated or replaced 432 miles of collection system pipe. KUB also continues to maintain a proactive operations and maintenance plan for the wastewater collection system including inspection, grease control, and private lateral enforcement. The result of the PACE10/Century II initiative has been an 80 percent reduction in SSOs.

As of June 30, 2022, the Wastewater Division had completed its 18th full year under the Consent Decree, spending $579.8 million on capital investments to meet Consent Decree requirements.

KUB's request for termination of the Consent Decree was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

CENTURY II INFRASTRUCTURE PROGRAM

Century II is KUB's proactive long-range program to improve and maintain the electric, natural gas, water, and wastewater systems for its customers. It includes maintenance and asset replacement strategies for each system and establishes sustainable replacement cycles. Century II moves KUB into its second century of service by improving each system through sound planning, resource allocation, and continued, but accelerated, investment.

In June 2017, the Board adopted three annual rate increases for all KUB Divisions. The three approved electric rate increases went into effect in October 2017, October 2018, and October 2019, generating $10.9 million, $11.2 million, and $5.7 million in additional annual Electric Division revenue, respectively. The three approved gas rate increases went into effect in October 2017, October 2018, and October 2019, generating $2.2 million, $2.3 million, and $2.3 million in additional annual Gas Division revenue, respectively. The three water rate increases went into effect July 2017, July 2018, and July 2019, generating $3.1 million, $3.1 million, and $3.3 million of additional annual Water Division revenue, respectively. The three approved wastewater rate increases went into effect in July 2017, July 2018, and July 2019, generating $4.3 million, $4.2 million, and $4.5 million in additional annual Wastewater Division revenue, respectively.

In June 2021, the Board approved a 2 percent water rate increase effective in July 2021, generating $1.1 million in additional annual Water Division revenue.

In September 2021, the Board approved the next phase of electric rate increases to support both the Century II program and expanded fiber network. The first of three approved 3 percent electric rate increases went into effect April 2022, which will generate $16.7 million in additional annual Electric Division revenue. The remaining two approved electric rate increases are effective April 2023, and April 2024, which will generate $17.4 million, and $18 million in additional annual Electric Division revenue, respectively.

In June 2022, the Board approved the next phase of water and wastewater rate increases to support the Century II program. The three approved 5 percent water rate increases are effective July 2022, July 2023, and July 2024, and will generate $3 million, $3.2 million, and $3.4 million in additional annual Water Division revenue, respectively. The three approved 4 percent wastewater rate increases are effective July 2022, July 2023, and July 2024, and will generate $3.9 million, $4 million, and $4.2 million in additional annual Wastewater Division revenue, respectively.

KUB is currently in the process of implementing a Water Plant Redundancy initiative to ensure that high quality, reliable water service will be provided to customers over the long term. KUB maintains a single water treatment plant for its system. In lieu of building a second treatment facility to ensure capacity will be available to meet the needs of current and future water customers, KUB will invest approximately $158 million in various redundant facilities at the site of its existing Mark B. Whitaker Water Treatment Plant over a 16-year period that began in fiscal year 2017. Construction of a new generator building with three 2,500 kW diesel generators and associated switchgear was completed at the Mark B. Whitaker Water Treatment Plant. Design has been completed on a new filter building at the plant.

For the fiscal year, KUB stayed on track with its overall Century II capital budget and production goals. The electric system replaced 1,360 poles and 6.6 miles of transmission lines. In the natural gas system, 9.1 miles of gas steel main were replaced. In the water system, 4.2 miles of galvanized water main and 5.7 miles of cast iron water main were replaced. In the wastewater system, 8.9 miles of main were rehabilitated or replaced.

FIBER NETWORK

During fiscal year 2021, KUB developed a Fiber to the Home Business Plan for the provision of broadband services to customers within its electric system service territory. In accordance with state law and KUB's wholesale power supply contract with TVA, the Business Plan was submitted to the Office of the Comptroller of the Treasury for Tennessee and TVA for review. The Office of the Comptroller found KUB's Business Plan to be financially feasible and TVA approved the Business Plan, finding no cross-subsidization exists between the proposed Fiber Division and the Electric Division.

After gaining the required approvals from TVA, the State of Tennessee, KUB's Board and City Council, KUB launched its new Fiber Division. Broadband services will be provided by a high-speed fiber optic network that will be owned and maintained by the Electric Division. The Fiber Division will share in the cost to build and operate the Fiber network by paying the Electric Division an annual access fee based on the year end value of those assets and the related expenses. The Fiber Division will also pay the Electric Division an annual utilization fee based on attachments to the network. In addition to providing broadband services, the fiber network will allow KUB to implement new advanced technologies to improve the reliability of its electric system. In August 2021, the Board authorized the first $10 million loan of a proposed $35 million loan from the Electric Division to the Fiber Division. The interdivisional loan was approved by TVA and was initiated in October 2021. In fiscal year 2022, KUB began the seven-year buildout on extending fiber infrastructure to make broadband service available to electric customers. The first broadband customers will begin receiving service in fiscal year 2023.

The fiber network is an integral component of a $702 million ten-year Enhanced Grid Modernization effort for the Electric Division. The $702 million ten-year program will be funded by a combination of electric rate increases, new bonds, and projected payments from the new Fiber Division

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KNOX COUNTY AND CITY OF KNOXVILLE

LOCATION

Knox County (the "County") is located in the eastern portion of the State. Founded in 1791 where the French Broad and Holston Rivers converge to form the Tennessee River, The County is located in a broad valley between the Cumberland Mountains to the northwest and the Great Smoky Mountains to the southeast. The County is the hub of the areas of East Tennessee, Southeast Kentucky, Southwest Virginia and Western North Carolina. This area encompasses over two million people. To the north, Union and Grainger Counties border the County. Jefferson and Sevier Counties make up the County's eastern border, while the County's southern border is provided by Blount and Loudon Counties. To the immediate west of the County lies Anderson County. Total land area of the County is approximately 528 square miles.

The U.S. Census Bureau's 2020 census demographic population data reported that 475,609 citizens reside within the County, which ranks it as the third largest county in Tennessee.

The City of Knoxville (the "City"), the County seat, is the largest city in East Tennessee and within the County. Also, Knoxville is the third largest city in the state and is about 50 miles west of the North Carolina state line. The City has a land area of approximately 104 square miles within its corporate limits and is located on the Tennessee River near the geographic center of East Tennessee, a highly industrialized section of the state.

The City's 2020 population was reported at 190,740. Farragut, the only other municipality in the County, has an estimated population of 23,506.

GENERAL

In 2004, Knoxville was designated a Metropolitan Statistical Area (the "MSA") population increased from 837,571 according to the 2010 U.S. Census to 868,546 according to the 2020 U.S. Census Bureau. The MSA includes Knox (Knoxville and Farragut), Anderson (Oak Ridge and Clinton), Blount (Maryville and Alcoa), Campbell (LaFollette), Grainger (Rutledge), Loudon (Loudon), Morgan (Wartburg), Roane (Harriman) and Union (Maynardville) Counties.

The City is also part of the Knoxville-Sevierville-Harriman Combined Statistical Area (the "CSA"). The CSA's population increased from 1,056,442 according to the 2010 U.S. Census to 1,156,861 according to the 2020 U.S. Census Bureau. The CSA includes Roane, Anderson, Blount, Knox, Loudon, Union, Grainger, Hamblen, Jefferson, Campbell, Cocke and Sevier Counties.

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The following table shows past and current population figures for the City and County:

Population Growth

	1980	1990	2000	2010	2020	2021*
Knoxville	175,045	165,121	173,890	178,874	190,740	192,648
Knox County	319,694	335,749	382,032	432,226	478,971	486,677

* 2020 Estimates from U.S. Census Bureau
Source: U.S. Census Bureau.

The only other municipality within the County, the Town of Farragut, has an estimated 2021 population of approximately 24,422 persons.

SOCIOECONOMIC DATA

The following socioeconomic factors indicate the standard of living in the County, as compared to that of the Nation and State:

Social and Economic Characteristics

	National	Tennessee	Knox County	Knoxville	Farragut
Median Value Owner Occupied Housing	$229,800	$177,600	$194,200	$142,700	$370,900
% High School Graduates or Higher Persons 25 Years Old and Older	88.5%	88.2%	91.9%	89.8%	98.1%
% Persons with Income Below Poverty Level	11.4%	13.6%	10.9%	22.5%	4.4%
Median Household Income	$64,994	$54,833	$59,250	$41,598	$109,156

Source: U.S. Census Bureau State & County QuickFacts - 2020.

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Per Capita Personal Income

	2015	2016	2017	2018	2019
National	$49,019	$50,015	$52,118	$54,606	$56,490
Tennessee	$42,626	$43,626	$45,233	$47,210	$48,684
Knox County	**$45,566**	**$46,376**	**$48,102**	**$50,531**	**$51,758**
Index vs. National	93	93	92	93	92
Index vs. State	107	106	106	107	106
Knoxville MSA	**$36,787**	**$37,064**	**$38,612**	**$40,195**	**$40,918**
Index vs. National	75	74	74	74	72
Index vs. State	86	85	85	85	84
Knoxville-Sevierville-Harriman CSA	**$39,829**	**$40,664**	**$42,124**	**$44,131**	**$45,296**
Index vs. National	81	81	81	81	80
Index vs. State	93	93	93	93	93

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

TRANSPORTATION

The area has transportation facilities by rail, air, river and highway. Both the Norfolk Southern and CSX Railroads have terminals and stops in the County, with 270 miles of lines radiating in nine directions. Pellissippi Parkway (I-140) provides a direct link to Oak Ridge from I-40 and I-75 in Knox County. Major highways serving the County include U.S. Highway 44, 129, 321, 411 and 441 as well as State Routes 33, 75 and 95.

McGhee Tyson Airport. The McGhee Tyson Airport is the principal commercial airport in East Tennessee, serving the commercial airline industry, air cargo, military aviation and general aviation. With parallel 9,000 feet runways, McGhee Tyson Airport can accommodate any size aircraft. The Airport is located within the city limits of Alcoa 12 miles south of downtown Knoxville. The airport occupies more than 2,000 acres of land with space for additional air cargo facilities or economic development. This facility is owned and managed by the Metropolitan Knoxville Airport Authority.

According to a recent study by the University of Tennessee's Center for Transportation Research, the airport contributes over $1 billion to the local economy (including Anderson, Blount, Knox, Loudon and Sevier Counties) every year. The report examined the employment, business and tax impacts of the airport, including the Downtown Island Airport.

The Metropolitan Knoxville Airport Authority (MKAA) was established in 1978 as an independent nonprofit agency to own and operate McGhee Tyson Airport and Downtown Island Airport. The Authority's nine-member Board of Commissioners is appointed by the Mayor of Knoxville and confirmed by City Council. This board determines the policies for the current

Airport Authority staff of 150 employees in six departments. The board appoints a President who serves as the chief administrator and executive officer. All of the revenues are generated by user fees and rental income so no taxpayer dollars are used to support airport operations.

Two air cargo services provide daily service. In addition, six passenger airlines carry air cargo on most flights. More than 40,359 tons of airfreight annually pass through its cargo facilities. Federal Express and United Parcel Service are the main couriers.

McGhee Tyson Airport has several major airlines serving over 20 non-stop destinations including Atlanta, Chicago, Dallas/Ft. Worth, Denver, New York, Orlando and Washington D.C. With more than 120 arrivals and departures each day and more than 4,000 seats available, McGhee Tyson Airport is one of the most convenient and accessible regional airports in the nation.

The airport is served by two low-fare carriers: Allegiant Air and Frontier Airlines. Allegiant Travel Company is focused on linking travelers in small cities to world-class leisure destinations. Through its subsidiary, Allegiant Air, the Company operates a low-cost, high-efficiency, all-jet passenger airline offering air travel both on a stand-alone basis and bundled with hotel rooms, rental cars and other travel related services. Frontier Airlines started flight in the summer of 2011 from Knoxville to its hub in Denver, Colorado.

McGhee Tyson is served by major and regional carriers including:

Major Airlines:		***Regional Carriers:***	
Allegiant Air	Frontier Airlines	American Eagle	United Express
American Airlines	Delta Airlines		
United			

Source: Metropolitan Knoxville Airport Authority.

These airlines connect passengers with service to several hub airports across the nation on more than 120 flights daily.

McGhee Tyson Airport

Year	Total Commercial Passengers	Total Air Cargo in Tons
2012	1,747,145	91,514,071
2013	1,676,374	84,029,942
2014	1,738,133	74,115,672
2015	1,747,472	77,395,631
2016	1,827,989	84,831,987
2017	1,988,626	82,884,887
2018	2,221,137	81,363,507
2019	2,572,822	84,678,684
2020	1,161,447	84,151,936
2021	1,995,197	89,230,552

Source: Metropolitan Knoxville Airport Authority.

McGhee Tyson Airport has undergone many improvements in the past few years. The most recent was in 2017 when the runway and taxiway system was upgraded for $108 million.

Source: Metropolitan Knoxville Airport Authority.

TACAir is McGhee Tyson Airport's general aviation services provider. In addition to providing fuel and services to commercial carriers, they also accommodate the general aviation industry, which includes corporate aviation, charter flights, flight schools and people who fly as a hobby.

The Tennessee Air National Guard's 134th Air Refueling Group operates 10 aircraft at McGhee Tyson Airport. The Guard's KC-135E tankers provide refueling to the country's military aircraft. In addition, the Army Aviation Support Facility, the 110th and 119th Tactical Control Squadrons and the 228th Combat Communications Squadron operate on the base.

Downtown Island Home Airport. Knoxville's Downtown Island Home Airport, located five minutes from downtown, serves as another home base for smaller and privately owned airplanes. The Island Home Airport is a 150-acre general aviation facility with a 3,500-foot runway. It is home to nearly 140 private and corporate aircraft, with 24 hours a day service available.

Waterways. Fifteen miles away is the head of the Tennessee River navigation channel in Knoxville. This river is part of the Interconnected Inland Water System that links Knoxville with 21 states, the Mississippi River and the Great Lakes. Linkages may be made to the entire inland waterway system, allowing shipments to be made by water to Houston, Tampa, Pittsburgh, Minneapolis and Little Rock.

Six active river terminals handle barge shipments throughout the area. The Tennessee-Tombigbee Waterway links East Tennessee with 13 other states and the Gulf of Mexico. This 234-mile canal connects 16,000 miles of waterways throughout Tennessee, Mississippi and Alabama leading to the Port of Mobile and the Gulf of Mexico. This Waterway shortens the shipping between Tennessee and the Gulf of Mexico by 882 miles and enables East Tennessee products to arrive at their Gulf destination from eight to nine days earlier. The development of the Tennessee-Tombigbee Waterway has been a catalyst for the development of industry and agriculture throughout the area. Barge shipping has always been a popular alternative to rail in East Tennessee because of the existence of the Inland Water System.

Knoxville has a Foreign Trade Zone and is an inland Port of Entry with a U.S. Customs Office. In 1988, Knoxville was given its Foreign Trade Zone designation by the U.S. Department of Commerce. This designation allows manufacturers to ship foreign raw materials and components to parts of Knoxville and store them duty free in Knoxville until used. In May 1991, the Foreign Trade Zone was activated.

EDUCATION

Knox County School System. The County operates 91 schools. Included are five magnet schools offering enhanced arts and science curriculum and a Science, Technology, Engineering, and Mathematics (STEM) Academy. In fall 2021, total public school enrollment was 57,991, while the system employed 4,448 teachers. In addition to public education, there are 35 private

and parochial schools offering elementary and secondary instruction in Knox County.

Post-secondary education is available at 10 public and private four-year institutions in Knox County and the surrounding area. The University of Tennessee's main campus is in Knoxville. Pellissippi State Technical Community College and Roane State Community College offer two-year programs for technical and associate degrees along with two other vocational/technical institutions. There are four business colleges located in the area.

Source: Tennessee Department of Education and Knox Metropolitan Planning Commission.

University of Tennessee, Knoxville (the "UT" or "UTK"). UTK is one of the oldest land-grant universities in the nation. There are over 230 buildings on a 600-acre campus. Blount College, UTK's forerunner, was established in Knoxville in 1794, two years before Tennessee became a state. With a fall 2020 enrollment of 29,460 students, UTK is the largest campus in the University of Tennessee System (the "System").

The System is a statewide institution governed by a 26-member Board of Trustees appointed by the governor of Tennessee. Institutions of the System are UTK, UT Health Science Center in Memphis, UT Chattanooga, UT Martin, UT Space Institute in Tullahoma, and UT Institute for Public Service in Knoxville. In addition to the primary campus, the Agricultural Campus houses the UT Institute of Agriculture, a statewide administrative unit that includes the College of Veterinary Medicine, the College of Agricultural Sciences and Natural Resources, the Agricultural Extension Service and the Agricultural Experiment Stations.

UTK is a major research institution, attracting more than $130 million in externally sponsored programs annually. The Division of Aeromedical Services is one of the country's most respected and comprehensive aeromedical programs. UTK is a co-manager with UT-Battelle, LLC of the nearby Oak Ridge National Lab (the "ORNL"). UT-Battelle, LLC was established in 2000 as a private not-for-profit company for the sole purpose of managing and operating the ORNL for the U.S. Department of Energy (the "DOE"). Formed as a 50-50 limited liability partnership between the UTK and Battelle Memorial Institute, UT-Battelle, LLC is the legal entity responsible for delivering the DOE's research mission at ORNL. Faculty and students experience unparalleled research and learning opportunities at the DOE's largest science and energy lab.

UTK conducts externally-funded research totaling more than $300 million annually, including some $17 million annually in research sponsored by ORNL. Areas of joint research with ORNL include the Bioenergy Science Center's work on cellulosic ethanol; the Center for Computational Sciences' partnership with the National Science Foundation; and the Science Alliance, with divisions in biological, chemical, physical, and mathematical/computer science.

A second UT College of Pharmacy building opened on the Knoxville campus in fall 2007 and enrolled an additional 225 students. The three-story building is adjacent to the Health Science Center's Graduate School of Medicine. The UT College of Pharmacy will extend its reach across the state by adding Clinical Education Centers in Chattanooga, Jackson, Kingsport and Nashville.

The System and its statewide campuses bring in over $2 billion in annual income to the State and support more than 50,000 jobs. UTK also generates over $200 million in state and local tax revenue per year. Students and visitors attending athletic events at each campus spent approximately $348 million, accounting for $147.3 million in income and more than 4,800 jobs.

Source: University of Tennessee, UT-Battelle and the News Sentinel.

Knox County Center for Health Sciences. In 2022, Roane State Community College, the Tennessee College of Applied Technology - Knoxville and Covenant Health will build a new healthcare training facility to East Tennessee. It will be a 16,000-square-foot campus with an estimated $75 million investment. Plans are to construct the facility in West Knoxville on land gifted by Covenant Health, the release stated. The parcel is located near Parkwest Medical Center. See "RECENT DEVELOPMENTS".

Source: The Oak Ridger.

Johnson University – Tennessee. Johnson University-Tennessee is a private, coeducational institution of higher learning offering associate, bachelor's and master's degrees about 12 miles from Knoxville. Founded in 1893, Johnson University-Tennessee is the second oldest continuing university in America. The purpose of the University is to educate students for specialized Christian ministries with emphasis on the preaching ministry. In the fall of 2020, total enrollment was 758 for the 350-acre campus.

Source: Johnson University.

Oak Ridge Associated Universities (the "ORAU"). ORAU is a consortium of 121 universities and a contractor for the DOE located in Oak Ridge, Tennessee. Founded in 1946, ORAU works with its member institutions that include UTK and its satellite campuses. The purposes are to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members. Through the Oak Ridge Institute for Science and Education (the "ORISE"), the DOE facility that ORAU operates, undergraduates, graduates, postgraduates, and faculty enjoy access to a multitude of opportunities for study and research. A pioneer in technology transfer with historic contributions in nuclear medicine and health physics, ORAU today conducts specialized training in nuclear related areas of energy, health and the environment.

Source: Oak Ridge Associated Universities.

Pellissippi State Community College (the "PSCC"). Since its founding in 1974 as State Technical Institute at Knoxville, PSCC has expanded the teaching of technology, the use of technology in instruction, and the transfer of technology to local business and industry in support of regional economic development. Enrollment for fall 2020 was listed as 9,334. PSCC continues to support and develop career/technical associate's degrees and institutional certificates, university parallel associate's degree programs, and continuing education opportunities for the citizens of Knox, Blount, and surrounding counties. PSCC has released a 2018 report showing the school has pumped more than $346 million annually into the Knoxville-area economy over the last 5 years.

Five campuses make up PSCC. The main campus is the Hardin Valley Campus in west Knoxville. The Division Street Campus and the Magnolia Avenue Campus, which opened in 2000, are also in Knoxville. A $22 million campus was completed in late 2010 in Blount County. The Strawberry Plains campus began offering coursework in August 2012.

Source: Pellissippi State Community College and TN Higher Education Commission.

Roane State Community College (the "RSCC"). RSCC, which began operation in 1971 in Harriman, Tennessee, is a two-year higher education institution which serves a fifteen county area. Fall 2020 enrollment was 5,172 students. Designed for students who plan to transfer to senior institutions, RSCC academic transfer curricula include two years of instruction in the humanities,

mathematics, natural sciences, and social sciences.

RSCC's 138-acre main campus is centrally located in Roane County where a wide variety of programs are offered. RSCC has nine locations across East Tennessee – the Roane County flagship campus; an Oak Ridge campus; campuses in Campbell, Cumberland, Fentress, Loudon, Morganand Scott Counties; and a center for health science education in west Knoxville.

Source: Roane State Community College.

South College. South College is a private institution that has been a part of Knoxville since 1882. South College has 5 campuses in Tennessee, Georgia and North Carolina. Throughout its history, South College has endeavored to meet the demands of the East Tennessee business community. South College offers a Master's of Health Science in Physician Assistant Studies and baccalaureate degree programs including Pharmaceutical Science (Pre-Pharmacy), Nursing, Health Science (Radiography/Nuclear Medicine), Elementary Education, Business Administration, and Legal Studies. Current associate degree programs include Radiography, Physical Therapist Assistant, Paralegal Studies, Business Administration, Accounting, and Medical Assisting. Nuclear Medicine and Post-Baccalaureate Program (Elementary Education K-6) are the certificate programs offered.

Source: South College.

Tennessee College of Applied Technology-Knoxville (the "TCAT-Knoxville"). TCAT-Knoxville is part of a statewide system of 27 vocational-technical schools. TCAT-Knoxville meets a Tennessee mandate that no resident is more than 50 miles from a vocational-technical shop. TCAT-Knoxville's primary purpose is to meet the occupational and technical training needs of the citizens including employees of existing and prospective businesses and industries in the region. TCAT-Knoxville serves the central east region of the state including Knox and Blount Counties. TCAT-Knoxville began operations in 1966, and the main campus is located in Knox County. Fall 2018 enrollment was 1,559 students.

Source: Tennessee College of Applied Technology-Knoxville.

Tusculum College Graduate and Professional Studies Program (the "Tusculum"). Tusculum maintains offices in Knoxville for its Graduate and Professional Studies Program, in addition to other class sites across East Tennessee. Located in Greeneville, Tusculum is a private college affiliated with the Presbyterian Church. Tusculum was founded in 1794, making it the oldest college in Tennessee and the twenty-eighth oldest college in the nation. Fall 2018 enrollment was 885. The wooded 140-acre Tusculum campus has eight buildings and the Tusculum Arch that are listed on the National Register of Historic Places. Tusculum is one of three colleges in the country to operate on a focused calendar, in which courses are scheduled one at a time.

Source: Tusculum College.

HEALTHCARE

Knoxville serves as a regional medical center for 27 counties in East Tennessee and Kentucky. The available technology, the specialized institutions, and a reputation for quality health care bring people into Knoxville from a 200-mile radius. There are 1,973 beds in six acute care hospitals in the County, including three healthcare systems (Covenant Health Care, Tennova Health System and University of Tennessee).

Source: Knox Metropolitan Planning Commission and the News Sentinel.

Covenant Health

Covenant Health is a comprehensive health system established in 1996 by the consolidation of Fort Sanders Health System, Knoxville, Tennessee, and MMC HealthCare System, parent company of Methodist Medical Center of Oak Ridge, Tennessee. Covenant Health, headquartered in Knoxville, has ten acute-care hospitals plus inpatient and outpatient cancer care, behavioral and rehabilitation centers, home health, outpatient surgery and diagnostic centers, physician offices and more. More than 10,000 people are employed by Covenant Health and its member organizations, with nearly 1,500 affiliated physicians.

Covenant Health includes 30 member organizations, nine of which are acute care hospitals in East Tennessee: Fort Sanders Regional Medical Center and Parkwest Medical Center in Knoxville, Methodist Medical Center in Oak Ridge, Fort Loudon Medical Center in Lenoir City, LeConte Medical Center in Sevierville, Roane Medical Center in Harriman, Morristown-Hamblen Healthcare System in Morristown, Cumberland Medical Center in Crossville and Claiborne Medical Center in Tazewell. It also includes Peninsula Hospital, a psychiatric hospital in East Tennessee's Blount County. Covenant Health also operates numerous other healthcare facilities for outpatient clinics, cancer centers, breast centers, behavioral health, rehabilitation, home health and weight management facilities.

Over the last few years, the largest hospital operator in the area has built new or expanded facilities in Sevier, Loudon, Anderson, Cumberland and Knox counties. It recently finished construction for a $150 million expansion project at Fort Sanders Regional Medical Center in Knoxville as well as for a new $50 million hospital in Roane County.

Fort Sanders Regional Medical Center (the "Fort Sanders"). Part of Covenant Health, Fort Sanders is a 541-bed full-service acute care hospital with more than 350 doctors located in the Fort Sanders community of downtown Knoxville. The hospital was built in 1919 and has about 1,833 employees. In 2013, Fort Sanders received national recognition as a comprehensive stroke center; they are the second Tennessee hospital to receive this award. This certification from the Joint Commission on Accreditation of Healthcare Organizations means that the medical center is recognized as having the infrastructure, staff and training to receive and treat complex cases. Fort Sanders is a regional referral center for neurosurgery, neurological disorders, orthopedics, oncology, cardiology, obstetrics and rehabilitation medicine. Fort Sanders offers a variety of specialized services such as a 24-hour Chest Pain Center, one-day surgery, electrodiagnostics, a Sleep Disorders Center, a Diabetes Center, prenatal education, and sports medicine. A $150 million expansion was completed for the facility in 2010.

Parkwest Medical Center (the "Parkwest"). Part of Covenant Health, Parkwest is the region's only Top 100 Heart Hospital (which the hospital has been named eight times). Parkwest has 462 beds with over 600 doctors on staff. The total employment is about 1,300. The campus includes one of the area's first all-digital catheterization laboratories and a comprehensive breast center with a multidisciplinary approach to women's health. Peninsula Behavioral Health is a division of Parkwest Medical. See "RECENT DEVELOPMENTS" for more information on a three year renovation that began in 2018.

Tennova Healthcare

Tennova Healthcare is a for-profit healthcare system and has several acute care hospitals in Knoxville and the surrounding area. Florida-based Health Management Associates Inc. bought

Mercy Health Partners in 2011 and changed the name to Tennova Healthcare. Tennova Healthcare and Health Management Associates were acquired by Community Health Systems, Inc. (the "CHS"), based in Brentwood, TN. CHS is one of the nation's leading operators of general acute care hospitals based in Brentwood, TN. The organization's affiliates own, operate or lease 106 hospitals in 18 states with approximately 17,000 licensed beds. There are nine CHS hospitals in Tennessee.

Tennova Healthcare facilities include the following: Turkey Creek Medical Center (Knox County), Jefferson Memorial Hospital (Jefferson County), Newport Medical Center (Cocke County), and LaFollette Medical Center (Campbell County). Dyersburg Regional Medical Center (Dyer County), Regional Hospital of Jackson (Madison County) and Volunteer Community Hospital (Weakley County) were sold by Tennova to West Tennessee Healthcare in 2018.

North Knoxville Medical Center. Part of Tennova Healthcare, North Knoxville Medical Center opened in the fall of 2007 in north Knox County. The full-service facility has 108 beds. The North Knoxville Medical Center expanded its cancer care services and underwent renovations to add cardiac catheterization laboratories and operating rooms so it can begin taking cardiac care and orthopedic, general and vascular surgeries originally performed at Physicians Regional. This was completed in 2020.

Turkey Creek Medical Center (the "Turkey Creek"). Part of Tennova Healthcare, Turkey Creek Medical Center has 101 beds in west Knoxville. Turkey Creek has a 24-hour, full-service, all-digital campus, with a completely staffed emergency department that cares for men, women and children of all ages. Every patient room is a private room. An intensive care unit, state-of-the-art surgical suites, imaging services, rehabilitation services and specialized staff and physicians bring groundbreaking, comprehensive treatment. Turkey Creek converted its existing obstetrical beds to general medical/surgical beds and added operating rooms and intensive care unit beds to accommodate more general and cardiovascular surgeries originally performed at Physicians Regional. This was completed in 2020.

East Tennessee Children's Hospital (the "Children's")

Located in Knoxville, Children's is a private, independent, not-for-profit pediatric medical center. There are 152 beds with doctors on staff, representing 32 pediatric subspecialties. A total of 1,200 people are employed at the hospital. Children's Hospital originally opened in 1937 and is the only Comprehensive Regional Pediatric Center in East Tennessee certified by the state. Pediatric services offered include ICUs, emergency services, outpatient clinics for oncology, hematology, diabetes, cystic fibrosis and a rehabilitation center.

University Health System, Inc. (the "UHS")

UHS is a regional health system that is comprised of the UT Medical Center, the UT Heart Hospital, UT Health Network and various partnerships and joint ventures with physicians and healthcare companies. UHS is affiliated with the University of Tennessee Graduate School of Medicine and numerous regional hospitals and physician organizations. UHS supports and collaborates with the UT Graduate School of Medicine and other academic endeavors as part of its commitment to excellence in education and research.

University of Tennessee Medical Center (the "UT Medical Center"). The UT Medical Center in Knoxville is an acute care teaching hospital with 609 beds and more than 400 doctors.

The UT Medical Center employs 5,458 people. Designated as the region's Level I adult and pediatric Trauma Center by the State of Tennessee, UT Medical Center provides the highest level of programs and emergency services. Critically ill patients are transported to UT Medical Center via one of LIFESTAR'S two helicopters.

Special care units such as cardiac care, open heart, medical intensive care, neuro-respiratory, and trauma surgical intensive care are available for patients who require maximum medical attention. A Level IV Intensive Care Nursery, a Pediatric Intensive Care Unit, a newborn nursery and many other programs comprising Children's Health Services enable UT Medical Center to provide the region's most comprehensive medical services for infants and children. UT Medical Center also serves as the Regional Perinatal Center. The UT Heart Hospital was opened in 2010. The Cancer Institute finished construction in 2012.

Source: Covenant Health, Tennova Healthcare, East TN Children's Hospital, University Health System and the News Sentinel.

SCIENCE AND ENERGY

The DOE and Oak Ridge

Oak Ridge History

The City of Oak Ridge has a unique history. This area was selected by the United States government in 1942 as the location for its production plants for uranium 235, a component of the first atomic bomb. The original town site was built during World War II to house and furnish necessary facilities for the employees of the uranium plants. This project (known as the "Manhattan Project") was transferred to the Atomic Energy Commission in 1947, and the community was operated by contractors under the control of the Atomic Energy Commission. In 1955, the Atomic Energy Commission sold the homes and land to the residents. In 1959, the residents voted in favor of incorporation under a modified city manager-council form of government.

Since the 1940's, the nuclear industry has been the largest employer for the City of Oak Ridge and Roane and Anderson Counties when a weapons fabrication division was built by the U.S. Corps of Engineers. As part of the secret World War II "Manhattan Project", the early task of the plant was the separation of fissionable uranium-235 from the more stable uranium-238 by an electro-magnetic process to be utilized in the world's first atomic bomb. Some 80,000 workers were hired for emergency construction of the laboratories and offices on the 56,000-acre site. At the peak of production during the war, 23,000 employees kept the separation units working at a cost of $500 million for the entire project.

Today, the DOE occupies approximately 33,000 acres and almost 1,200 buildings within the Oak Ridge city limits, and employs over 13,000 in engineering, skilled and semi-skilled crafts, technical and administrative support. Since October 1999, DOE has contracted with the University of Tennessee and Battelle to manage the ORNL. UT-Battelle began management of the lab on June 1, 2000. Consolidated Nuclear Security, a Bechtel-led contractor team, took over management of the Y-12 nuclear weapons plant effective July 1, 2014 (BWXT, Inc. was the appointed contractor for the Y-12 Plant). DOE awarded its environmental cleanup contract to Bechtel Jacobs from 1997 to 2011. URS-CH2M Oak Ridge took over the cleanup contract in 2011.

Oak Ridge Research

The extensive energy research and development conducted by private and public agencies make Oak Ridge one of the world's great research centers. The presence of the University of Tennessee, the ORNL, Oak Ridge Associated Universities and the Tennessee Valley Authority (the "TVA") makes Oak Ridge a prime location for research facilities, as well as technology-based and conventional manufacturing industries. Science is a worldwide business, and the facilities at DOE in Oak Ridge have attracted a large number of technical people and their families. ORNL campus also houses visiting scientists and researchers that come to work at the world-class facility in an $8.9 million Guest House (built in 2010) with 47 units.

BioEnergy Sciences Center (the "BESC"). BESC is one of only three sites in the country operated by one of the DOE's new bioenergy research centers. It opened in ORNL in 2007. BESC works to accelerate research in the development of cellulosic ethanol and other biofuels, and make biofuel production cost competitive on a national scale. The new site received $135 million in federal funding. The University of Tennessee serves as one of the academic partners, providing specialized instrumentation, plant breeding technologies and new microbe discovery. Energy crops like switchgrass, which can be grown on marginal crop land, can produce affordable, domestic renewable fuel without raising food or feed costs. The BESC is dedicated to studying how to economically break down the cellulose in those sources to convert it into usable sugars for ethanol production.

Oak Ridge National Lab. ORNL is a multi-program science and technology laboratory managed for the DOE by UT-Battelle, LLC. Scientists and engineers at ORNL conduct basic and applied research and development to create scientific knowledge and technological solutions that strengthen the nation's leadership in key areas of science; increase the availability of clean, abundant energy; restore and protect the environment; and contribute to national security. ORNL also performs other work for DOE, including isotope production, information management, and technical program management, and provides research and technical assistance to other organizations. The laboratory is a program of DOE's Oak Ridge Field Office.

ORNL also boasts having the Spallation Neutron Source accelerator project (described below) and several supercomputers for scientific purposes. These unique projects bring about 3,000 scientists to visit each year for varying periods of time, and numerous small industries to be spun off from the experiments and findings. Each job created is expected to have an impact on housing, retail banking, automobile and transportation, hotels, restaurants, hospitals, and business services.

The world's most powerful neutron science project is the *Spallation Neutron Source* (the "SNS") at ORNL. The giant research complex, spread across 75 acres on Chestnut Ridge a couple of miles from the main ORNL campus, is the world's top source of neutrons for experiments. The SNS is an accelerator-based neutron source built in Roane County by DOE. The SNS provides the most intense pulsed neutron beams in the world for scientific research and industrial development. At a total cost of $1.4 billion, construction began in 1999 and was completed in 2006. In 2009, SNS reached full power when it set the world record in producing beam power three times more powerful than the previous world record. More neutrons are produced with a higher beam power.

Neutron-scattering research has a lot to do with everyday lives. For example, things like jets; credit cards; pocket calculators; compact discs, computer disks, and magnetic recording tapes;

shatter-proof windshields; adjustable seats; and satellite weather information for forecasts have all been improved by neutron-scattering research. Neutron research also helps researchers improve materials used in high-temperature superconductors, powerful lightweight magnets, aluminum bridge decks, and stronger, lighter plastic products. The medical field will also be impacted with new drugs and medicines expected from experiments at the SNS.

ORNL is also completing a series of upgrades at the *High Flux Isotope Reactor*. This ORNL facility is sometimes referred to as the lab's "other" billion-dollar machine. It is the world's most powerful research reactor, and it is used to perform experiments similar to - but different from - those to be done at the Spallation Neutron Source.

The DOE selected ORNL in 2020 to lead a collaboration, the *Quantum Science Center*, charged with developing quantum technologies that will usher in a new era of innovation. The center supports the National Quantum Initiative Act of 2018 by enhancing America's national security and retaining its global leadership in scientific research and development - goals that require broad expertise and capabilities.

The Quantum Science Center will receive $115 million over five years from DOE's Office of Science to realize the potential of topological quantum materials for manipulating, transferring and storing quantum information. Quantum materials exhibit exotic properties under specific conditions, and the center will transition this knowledge to the private sector for use in practical applications such as quantum computers and sensors.

The United States aims to invest $765 million over the next five years in a dozen scientific centers dedicated to the study of artificial intelligence (AI) and quantum information science (QIS), such as quantum computing. Private tech companies such as IBM, Google, and Intel will also contribute to the twin pushes, which call for a total of more than $1 billion in research investment.

ORNL's *Supercomputers* are housed in a 170,000-square-foot facility that includes over 400 staff and 40,000 square feet of space for computer systems and data storage. The facility will house or has housed six supercomputers - the new exascale computer "Frontier" currently undergoing installation as of 2022, the "Summit", the "Kraken", the soon-to-be replaced "Titan", and the dismantled "Jaguar".

"Frontier" is expected to be ranked as the world's fastest supercomputer when it becomes fully operational in 2023. "Summit" was the third computer at Oak Ridge to be ranked as the fastest supercomputer in the world in 2018. The "Titan" was the world's fastest at its November 2012 debut, and the "Jaguar" while in operation held the title twice in November 2009 and June 2010. The machines work on breakthrough discoveries in biology, fusion energy, climate prediction, nanoscience and many other fields that will fundamentally change both science and its impact across society.

The first-of-its-kind system, the "Frontier" exascale supercomputer, is capable of calculating one quintillion operations per second. This will make "Frontier" be 50 times faster than other supercomputers, including ORNL's "Summit". By solving calculations up to 50 times faster than other top supercomputers - 1,018 calculations per second – "Frontier" will enable researchers to deliver breakthroughs in scientific discovery, energy assurance, economic competitiveness, and

national security.

This second-generation artificial intelligence system, “Frontier”, will replace the “Titan” at ORNL. Built by Cray Inc., the “Frontier” system is valued in excess of $600 million and delivery was completed in late 2021. Installation and integration of “Frontier” will be available to researchers for open science later in 2022 and will be in full user operations on Jan. 1, 2023. Due to the system’s advanced nature, the largest, most comprehensive upgrade in the history of ORNL had to be completed to the power and cooling infrastructures of the facility.

The “Summit” supercomputer cost an estimated $200 million to build and is used for a wide range of scientific applications including combustion science, climate change, energy storage and nuclear power. “Summit” also serves as an artificial intelligence and deep learning computer, capable of analyzing massive amounts of data and automating critical steps of the discovery process.

The “Summit” was operational in 2018 and is eight times faster than the “Titan”. “Summit” is able to make over 140 quadrillion calculations per second, measured as 140 petaflops. Due to all the energy and heat produced by the calculations, “Summit” produces more heat per square centimeter than tiles on the bottom of a spaceship re-entering Earth's atmosphere. Therefore, “Summit” is cooled by water pumped through plates that sit on top of the computer's chips. In all, “Summit” uses up to 15 megawatts, equivalent to the power 9,000 to 18,000 homes would consume, depending on the time of day. At peak, “Titan” uses about 9 megawatts.

The supercomputer “Titan” will be replaced by the “Frontier” in 2023. The National Oceanic and Atmospheric Administration (the “NOAA”) sponsored the “Titan”, funded with Recovery Act money. NOAA awarded Cray and ORNL a $47 million contract to provide the “Titan” to work on climate research, energy, efficient engines and materials science. The “Titan” was online in late 2012 after several years of development to replace the “Jaguar” supercomputer at ORNL. When the “Titan” was listed as the world’s fastest computer in late 2012, it marked the fourth time a computer from ORNL has achieved that distinction since 1953. “Titan” was capable of a peak performance of about 27-petaflops. That speed is about 10 times the capability of the first “Jaguar”, which at one time was also the world's fastest computer. The total cost of the “Titan” was estimated to be about $100 million, but about $20 million was saved by reusing much of the “Jaguar” structure.

The DOE and the National Science Foundation (the “NSF”) sponsor the supercomputer “Kraken” which came online in 2009. The NSF awarded the University of Tennessee (the “UT”), ORNL and other institutions a $65 million grant to build “Kraken” to work on a range of scientific challenges, such as climate change and new medicines. UT’s “Kraken” is housed with the ORNL’s “Titan”.

Through interagency agreements, DOE's Oak Ridge facilities have launched a highly successful "work for others" program. Local firms contract with numerous federal agencies to provide services and products. The value of these contracts have grown from approximately $50 million in 1983 to $270 million in recent years.

University of Tennessee (the “UT”). The University of Tennessee's flagship campus in Knoxville is home to a wide array of vigorous programs doing research on issues vital to the

community, the state, the nation, and the world. The university has collaborative relationships with public and private agencies including ORNL, Battelle Memorial Institute (forming UT-Battelle), St. Jude Children's Research Hospital, the Memphis Bioworks Foundation, and the Boston-Baskin Cancer group (forming UT Cancer Institute).

Cherokee Campus at UT. The Cherokee Farm concept came into being in 2001 as a way to further research by UT and ORNL in computational sciences, climate and environment, advanced materials, biomedical sciences, and renewable energy. UT and ORNL started development of the campus with $87 million in capital investments and incentives. This is part of a UT goal to join the ranks of the nation's top 25 public research universities. The former site of UT's 188-acre dairy operation was chosen and development of 77 acres of the property began in 2010. The farm is less than a mile from the Knoxville campus.

The first building, the $47 million, 142,000-square-foot Joint Institute for Advanced Materials facility, opened in early 2016. The rest of the campus will include 16 building sites. These sites, ranging up to 2 acres, should allow a total of 1.6 million square feet of development. Moving research to the Cherokee campus would free up buildings on the main campus, which could be renovated and used for additional administration and instructional space.

The Joint Institute for Advanced Materials building will house seven high-powered microscopes that researchers from UT, ORNL and elsewhere will use in screening and analyzing materials. The work is oriented toward producing strong, lightweight materials for the automotive and aerospace industries. Researchers will also be able to make use of supercomputers at ORNL.

The first private tenant at Cherokee Farm was announced in May 2016. Civil and Environmental Consultants, Inc. (CEC) is recognized for providing innovative design solutions and integrated expertise in the primary practice areas of civil engineering, ecological sciences, environmental engineering and sciences, survey, waste management and water resources.

National Institute for Mathematical and Biological Synthesis (NIMBioS) is a first-of-its-kind institute dedicated to combining mathematics and biology to solve problems in both scientific fields. The center was funded by a 2008 $16 million award from the National Science Foundation and is located at the University of Tennessee. A unique aspect of NIMBioS will be its partnership with the Great Smoky Mountains National Park. The park and its Twin Creeks Science Center play a key role in the institute's work, with the park serving as a testing ground for many of the ideas that come from NIMBioS. Partners in NIMBioS include the US Department of Agriculture and the US Department of Homeland Security, IBM and ESRI, a developer of software and technology related to geographic information systems. It draws over 600 researchers each year to Knoxville.

Knoxville Community Development Corporation. Oak Ridge National Lab and the DOE with work with the Knoxville Community Development Corporation on a $5 million project to combat the climate crisis in helping reduce home energy costs. It's part of the DOE's Advanced Building Construction Initiative. Knoxville's retrofit project was one of seven awardees chosen nationwide. The test will consist of the exteriors of a dozen of single-family housing units that will be retrofitted with a 3D printed shell to fit around the existing buildings. The test will help advance the technology, transform the look of the building's exterior and save residents in energy

costs. If the test is successful, the families living in these homes will see 75% reductions in home energy use and achieving decarbonization goals.

Locally, the project is part of Knoxville Community Development Corporation's Transform Western Plan in the Western Heights neighborhood. Part of the plan involves renovating 8 to 12 buildings in the aging section of Western Heights. The panels are made of fiberglass and foam insulation and have an integrated heat pump system. The pumps are tied into the home HVAC system to maximize energy efficiency. The installation is expected to be finished in four years. Four buildings are expected to be done by the end of 2023. The final piece of the project will involve retrofitting the exterior if the Boys & Girls Clubs building in Western Heights.

Source: City of Oak Ridge, ORNL, Y-12 National Security Complex and the Knoxville News Sentinel.

Oak Ridge Nuclear

Integrated Facilities Disposition Program. The DOE has approved a massive $18 billion Oak Ridge cleanup campaign. The cleanup program would demolish more than 400 contaminated buildings at ORNL and the Y-12 nuclear weapons plant. The program would also focus on mitigating polluted ground water at the sites and other actions to reduce environmental damage. The work began in 2011 and could take up to 45 years to complete. In 2015, $424 million was set aside for the environmental cleanup activities in Oak Ridge.

The 2009 stimulus act passed by Congress gave the DOE Oak Ridge's office $1.9 billion for environmental cleanup projects. The stimulus money sent directly for projects in Oak Ridge, $1.2 billion, saved or created more than 3,800 new jobs through sub-contracting construction-type jobs as well as technical and specialty positions associated with handling radioactive materials and evaluating environmental risks. The clean-up money was divided among four sites: $239 million to ORNL, $292 million to Y-12, $144 million to East Tennessee Technology Park and $80 million to the Transuranic Waste Processing Center. At Y-12 alone, seven cleanup projects created more than 2,000 jobs, demolished about 150,000 square feet of old buildings and got rid of about 74,000 cubic meters of waste.

A former gaseous diffusion building was torn down by the DOE as part of its program to convert the former K-25 site for use by private industry. The K-25 Building was part of a series of mammoth buildings to enrich uranium for weapons and fuel for nuclear power plants. The building went into operation in 1951 and was shut down in 1987. The building in size equated to 6 1/2 football fields under one roof. Demolition was completed at the end of 2007. The gigantic K-25 building, a mile-long U-shaped structure that processed the uranium in WWII, was demolished in 2010.

Y-12 National Security Complex. The Y-12 National Security Complex is another large federal plant in Oak Ridge. The ongoing functions of the Y-12 plant are to support the DOE's weapons design labs, recover U-235 from spent nuclear weapons and provide support to other government agencies.

Y-12 has been undergoing a major modernization program. Y-12 is a key facility in the U.S. Nuclear Weapons Complex and is responsible for ensuring the safety, reliability, and security of the nuclear weapons stockpile and serves as the nation's primary repository of highly enriched uranium. Y-12 houses the country's stockpile of bomb-grade uranium, builds uranium bomb parts

and dismantles nuclear weapon systems as needed to support a much smaller nuclear arsenal. The National Nuclear Security Administration (the "NNSA") is planning to transform the nuclear weapons complex to be smaller, more efficient and more cost effective. The goal is by 2020 to have only two facilities where there used to be 700 buildings.

Contractors have already demolished dozens of World War II era buildings at Y-12, about a million square feet since 2001, to reduce the surveillance and maintenance costs, and to support the new programs. Some new office buildings already have been built, including the Jack Case Center that holds about a third of the workforce, or around 1,500 employees. This $58 million, 420,000-square-foot office building was completed in the summer of 2007. A new 137,000-square-foot visitor's center and auditorium, for about $18 million, was also completed in 2007.

Outfall 200, a water treatment plant designed to capture Y-12 mercury runoff, began site preparation in 2017 and cost $1.4 million. A four-year construction period for the plant began in 2019 with a projected cost of $92 million. Once operational, the treatment facility will have a treatment capacity of 3,000 gallons of water per minute and have a 2-million-gallon storage capacity.

The $549 million *Highly Enriched Uranium Materials Facility* at Y-12, a storage complex for weapons-grade uranium, was completed in late 2008. This storage facility replaced multiple aging facilities and allows for storage of its uranium stocks in one central location that represents maximized physical security with minimal vulnerabilities and operating costs. It is designed to protect the large cache of U-235 against any type of terrorist assault. The facility is currently over 85% storage capacity of bomb-grade uranium.

The *Uranium Processing Facility* (the "UPF") Project, cornerstone of Y-12's new modernization strategy, will replace current enriched uranium and other processing operations. It will replace Y-12's main production center and cost $6.5 billion. In 2018, the last approval from the DOE was given to build the final three buildings that will make up the UPF. The $6.5 billion project will be the largest construction project the state has ever seen, and the project is expected to create more than 2,000 jobs during peak construction. The design phase began in 2006, construction began in 2009, and the facility should be in operation by 2025. Construction of the UPF will accelerate consolidation of aging facilities, bringing production operations currently housed in multiple buildings together, reducing the size of the plant's highest security area by 90 percent, improving the overall security posture, making the plant more secure and saving millions of dollars in annual operating costs. See "RECENT DEVELOPMENTS" for more information.

Source: City of Oak Ridge, ORNL, Y-12 National Security Complex and the Knoxville News Sentinel.

POWER PRODUCTION

Tennessee Valley Authority (the "TVA"). TVA was established as a wholly-owned corporate agency and instrumentality of the United States of America by the Tennessee Valley Authority Act of 1933 (the "TVA Act"), as amended. TVA Act's objective is the development of the resources of the Tennessee Valley and adjacent areas in order to strengthen the regional and national economy and the national defense. Its specific purposes include: (1) flood control on the Tennessee River and its tributaries, and assistance to flood control on the lower Ohio and the Mississippi Rivers; (2) a modern navigable channel for the Tennessee River; (3) ample supply of power within an area of 80,000 square miles in most of Tennessee and parts of Alabama,

Mississippi, Kentucky, Georgia, North Carolina and Virginia; (4) development and introduction of more efficient soil fertilizers; and (5) greater agricultural and industrial development and improved forestry in the region.

TVA is the nation's largest, government-owned energy provider. TVA supplies safe, reliable, clean low-cost public power to 153 local power companies and about 60 large industrial customers and federal facilities, generating over half of all electricity from carbon-free resources. These include coal, gas, nuclear and hydroelectric plants as well as renewable resources. In fiscal year 2019:

- TVA sold more than 158.4 billion kilowatt-hours of electricity for revenue of about $11.2 billion.
- TVA's average retail rate ranked 32nd lowest and 12th lowest in industrial rates among the nation's 100 largest utilities.
- TVA's transmission system achieved 99.999 percent reliability for the 20th year in a row.
- TVA's generation portfolio is 39% nuclear, 19% coal, 26% natural gas, 11% hydro, 3% wind and solar, and 1% energy efficiency programs with a total capacity of 33,727 megawatts.

In 2021, about 80 percent of the nation paid more for energy than customers served by TVA. And TVA's industrial rates are lower than more than 95 percent of the nation.

TVA's generating assets as of 2021 are below:

- 5 fossil plants (25 active units)
- 3 nuclear plants (7 units)
- 29 hydro plants (109 units)
- 1 pumped storage hydroelectric plant (4 units)
- 9 natural gas combustion turbine gas plants (87 units)
- 8 natural gas combined cycle gas plants (14 power blocks, 35 units [21 gas turbines, 14 steam turbines])
- 1 diesel generator site (5 units)
- 14 solar energy sites

In 2021, TVA initiated a decarbonization plan reduce carbon emissions to 70 percent by 2030 and a path to reaching 80 percent by 2035, all while using existing technology and without impacting reliability or costs. TVA also expects to retire the balance of their coal-fired fleet by 2035. TVA will add 10,000 megawatts of solar energy by 2035, representing more than a 15-fold increase from 2021. And by 2050, TVA plans to achieve net-zero carbon emissions by the development of emerging technologies, such as advanced nuclear, long-duration energy storage, carbon-capture technologies and alternative fuels like hydrogen.

TVA will invest nearly $1.5 billion in transmission improvements between 2022-2025, to include a $289 million investment in a new System Operations Center and $90 million in a new Energy Management System.

As of 2018, TVA has contracted or installed around 400 megawatts of solar generating capacity, has more than 1,200 megawatts of wind power, and over 50 megawatts from burning

organic garbage. About 13 percent of TVA's power comes from renewable sources, with 3 percent of that comes from wind and solar (it is projected to increase to 5 percent by 2025).

TVA operates eight solar power facilities in Tennessee, including a 97-kilowatt facility at Finley Stadium in Chattanooga, Tennessee. Tennessee is one of the top three hydroelectric power producers east of the Rocky Mountains due to the many TVA hydroelectric power plants located on the Tennessee and Cumberland River systems. Hydroelectric power, although variable, has been contributing about one-eighth of the state's net generation in recent years. Biomass, primarily from wood and wood waste, also contributes a small amount to the state's net generation. TVA also uses methane gas from the Memphis wastewater treatment plant to boost generating capacity at one coal-fired power plant, increasing the plant's capacity by 8 megawatts.

In April of 2011, TVA announced plans to retire 18 coal-fired units at three of its older fossil plants, effectively closing one of the plants. This action is in an unprecedented agreement with the Environmental Protection Agency, four states and three environmental groups to settle complaints that the federal utility violated the Clean Air Act. TVA's board of directors approved the shutdown of two units at the John Sevier plant near Rogersville, TN, six at Widows Creek in North Alabama and all 10 units at the Johnsonville plant in Middle Tennessee. The permanent shutdowns, called retirements, took place in phases throughout 2017 and affected 300 to 400 workers. The combined idled and retired units will reduce TVA's coal-fired capacity by 2,700 megawatts out of the total 17,000 megawatts generated by the country's largest public utility. The utility also has to invest $3 billion to $5 billion on pollution controls and $350 million on clean energy projects. Penalties include a $1 million to the National Park Service and the National Forest Service and a civil penalty of $10 million to various entities, including the states of Alabama, Kentucky and Tennessee.

In 2007, TVA restarted a nuclear reactor at Browns Ferry in North Alabama. It was the first time the reactor had been at full power in 22 years. TVA spent five years and about $2 billion revamping the reactor. It was the first increase in the United States' nuclear generating capacity since 1996.

The Unit 2 reactor at Watts Bar Nuclear Plant in Rhea County, TN was granted an operating license in October of 2015, nearly 43 years after the original construction permit was awarded. The license allows TVA to load nuclear fuel into the new unit and begin testing of the equipment. Total estimated project cost reached $4.7 billion, and the reactor began producing power for commercial consumption in 2016.

Source: Tennessee Valley Authority and The Knoxville News Sentinel.

Solar and Renewable Energy

Tennessee was an early leader among southeastern states in developing its renewable energy resources. The southeastern region's first major wind farm, located on Buffalo Mountain near Oliver Springs, Tennessee, began operating as a 2-megawatt facility in 2000. Its generating capacity has since been expanded to 29 megawatts. Two utility-scale solar photovoltaic facilities in McNairy County, Tennessee, are the largest in the state and have a combined capacity of 40 megawatts.

In 2015, Knox County installed 5 megawatts of solar photovoltaic systems on the rooftops of several county buildings to provide more than $29 million in energy savings to the county over

the next three decades.

Efficient Energy of Tennessee. Efficient Energy, in partnership with Natural Energy Group, built a solar panel site in East Knoxville in 2010. The site has more than one megawatt worth of solar panels on a five-acre lot. The 4,608 solar panels can produce nearly 1.2 megawatts of electricity, enough to power about 125 homes. The site is also a resource for local research and educational organizations, such as the Oak Ridge National Lab, Cleveland State Community College and Pellissippi State Community College.

Sharp Electronics. In West Tennessee, Sharp Electronics in Shelby County (Memphis) has a large array consisting of nearly 4,160 solar panels for $4.3 million that cover the plant's roof to generate about 200 kilowatts of power. Sharp Electronics also has produced over 2 million solar panels since 2003 and has over 480 employees.

Tennessee Solar Institute. Located in Knoxville, the Tennessee Solar Institute is part of the Volunteer State Solar Initiative with UTK and ORNL. The objective of the initiative will be to find ways of reducing the cost of producing solar energy and ways to store energy until needed. Among other purposes, it brings together scientists, engineers and technical experts with business leaders, policymakers and industry workers to help speed the deployment of solar photovoltaic technology. It is designed to be a home for regional and state initiatives that foster the creation of new businesses.

Solar Manufacturing Plants. East Tennessee has several manufacturing plants. In East Knoxville, Efficient Energy built a 1.2 megawatt solar panel site with Natural Energy Group to be used for local research and education. In Roane County near the ORNL, a smaller array of 200-kilowatts was online in 2012 with plans to expand into the Brightfeld One Project. In Bradley County, the $2.5 billion Wacker Polysilicon plant created approximately 650 jobs to produce silicon used for the solar energy industry. The plant was operational in early 2016. Also in Bradley County, a new $30 million, 9.5-megawatts solar park is providing power to the Volkswagen Plant in Chattanooga.

Volunteer State Solar Initiative (the "VSSI"). In 2009, the Sate of Tennessee and the Department of Economic and Community Development allocated more than $60 million in American Recovery and Reinvestment Act Funds from the DOE to form the VSSI, including the West Tennessee Solar Farm and the Tennessee Solar Institute. The VSSI was a comprehensive solar energy and economic development program focused on job creation, education, renewable power production and technology commercialization.

West Tennessee Solar Farm. The University of Tennessee's West Tennessee Solar Farm, a $31 million, a five-megawatt solar electricity generation facility, will spur future advancements in the multi-million dollar global solar energy market and educate the public about solar energy in the state. The solar farm stores enough to power 500 homes and offset 250 tons of coal per month with approximately 21,000 photovoltaic solar panels on 25 acres in Haywood County.

The West Tennessee Solar Farm is the product of an innovative, multi-sector collaboration between higher education, business and government. Tennessee-based Signal Energy designed and bult the facility in 2011, and connection to TVA's electrical grid came in early 2012 through Chickasaw Rural Electric Cooperative. Visible to 12 million Interstate 40 travelers a year, the TN

Dept of Transportation built an Information and Welcome Center at the West Tennessee Solar Farm to house SPECTRUM, an educational solar exhibit.

Source: U.S. Department of Energy (Energy Information Administration), Memphis Commercial Appeal, the Knoxville News Sentinel and the University of Tennessee.

TRADE AREA

Because of its central location in the eastern United States, the County metropolitan area serves thousands of industrial and commercial customers in a concentrated eight-state area. It is within 500 miles of approximately one-third of the population of the United States, and nearly half of the nation's population is within a day's drive of Knoxville. For many years the County has been known as one of the South's leading wholesale markets. Based on 2020 estimates, there were approximately 1,081 wholesale establishments, 1,705 retail establishments, and 8,775 service industries located in the County.

The area is the trade center for a 42-county region, located in East Tennessee, Kentucky, Virginia and North Carolina, which serves over two million people. It also is the cultural, tourist, and professional center for this region. The MSA includes more than 909 manufacturing firms, which produce a large variety of items including medical devices, electronic components, chemicals, manufactured housing, apparel, and automobile parts.

Source: 2021 Knox County, Tennessee Annual Comprehensive Financial Report.

BUSINESS CLIMATE AND INDUSTRIAL INVESTMENT

The County has a history of being a regional leader in economic activity. The County offers premier location opportunities for high-technology and precision manufacturing firms. The University of Tennessee, Tennessee Valley Authority and the Oak Ridge National Laboratory help to provide a stable, secure employment base. The Knoxville area is home to many medium-sized manufacturing and distribution operations as well as customer service centers. The Knoxville area boasts a strong and reliable workforce, and low union membership rates. These assets, combined with an excellent location at the intersections of Interstates 40, 75 and 81, make Knox County a great location for any business. The County is also well served by 250 trucking companies, three railroads, five airlines, and three local river terminals that provide direct links to the Great Lakes and to the Gulf of Mexico. The Knoxville area continually receives recognition for high quality of life, combining an attractive natural setting with a moderate four-season climate. In addition, the Knoxville area ranks among the nation's top markets for low cost of living. The Knoxville MSA ranks as one of the top southeastern urban areas with an index of 83.7 compared to the average of all participating cities of 100. The County has over 6,418 acres of park and recreation space, with approximately 198 miles of greenways and walking trails. The arts and culture are well served, with the Knoxville Symphony, Knoxville Opera Company, Knoxville Museum of Art, and several performing arts organizations, including the Clarence Brown Theater, providing numerous cultural opportunities. Live entertainment includes touring Broadway productions and many concerts at numerous venues throughout the area, including the historic, beautifully renovated Tennessee and Bijou theaters.

Commerce and industry vary from the media success of Discovery, Inc. formerly Scripps Television Networks (HGTV, DIY, Food, Cooking, GAC, and Travel), to Sysco Corporation's (largest food service marketer and distributor in North America) regional warehouse and distribution center. In addition, many other local companies are recognized as national and global leaders, including Clayton Homes, Brunswick Corporation, Keurig Green Mountain, Bush Brothers, Pilot/Flying J Travel Centers, and Denso Manufacturing.

The area is also gaining a reputation as a prime location for corporate headquarters. High profile companies headquartered here in the MSA include the Tennessee Valley Authority, Jewelry Television, AC Entertainment, DeRoyal Industries, PetSafe/Radio Systems Corporation, and Regal Entertainment. Knox County has 8 business parks and a Technology Corridor to meet a wide range of corporate facility needs.

Four regional shopping malls and over 200 shopping centers and factory outlets meet the retail needs of Knox County citizens and visitors. Knox County has traditionally been the regional hub of the MSA. The 2020 retail sales in the MSA grossed over $16.6 billion, with approximately 65% of that total generated in Knox County.

The Knoxville area continually receives recognition for high quality of life, combining an attractive natural setting with a moderate four-season climate. In 2020, the Knoxville MSA ranked 33 amongst the top MSAs nationally with the Regional Economic Information System (REIS). The Knoxville MSA ranks comparably to the Nashville MSA which ranked number 1 in the country.

In addition, the Knoxville area ranks among the nation's top markets for low cost of living. The Knoxville MSA ranks as one of the top southeastern urban areas with an index of 83.1 compared to the average of all participating cities of 100.

Source: 2021 Knox County, Tennessee Annual Comprehensive Financial Report.

MANUFACTURING AND COMMERCE

The County has seven business parks and a Technology Corridor to meet a wide range of corporate facility needs. The Forks of The River Industrial Park has 1,615 acres. EastBridge Business Park has 800 acres. WestBridge Business Park has 250 acres. Pellissippi Corporate Center has 150 acres. Hardin Business Park is a light industrial park with 95 acres. CenterPoint Business Park is a commercial park with 60 acres. The 44-acre I-275 Business Park was sold to Sysco Corp.

A proposed 345-acre business park off Midway Road was approved in 2016 by the Metropolitan Planning Commission and the Knox County Commission. It is expected to be several years before any development occurs, but when complete, it could add approximately 2,200 new jobs to the area.

The County had about 13,546 businesses and the MSA had 21,006 businesses operating in 2020. The County also had 514 manufacturing facilities in 2020 and the MSA had 909 for the same period.

Knoxville-Oak Ridge Innovation Valley Inc. is an investor-directed program for five counties designed to recruit, retain and expand business growth throughout the Innovation Valley region. The organization is focused on technology-led economic development, as well as education and workforce development. These two areas of focus represent key differentiators in this plan of work.

The Pavilion at Turkey Creek (the "Turkey Creek"). Turkey Creek is the largest single commercial development ever built in the metropolitan area of Knoxville. Designed for mixed use and beautifully landscaped, Turkey Creek boasts more than 300 acres of space zoned for retail shopping outlets, medical facilities, theaters, office space, banks, restaurants and hotels. The developers of Turkey Creek also created a 58-acre nature preserve and designed greenways throughout the site. Being only three miles from the junction of Interstate 75 and 40 to the west and 14 miles from downtown Knoxville makes the site a quick drive from the urban center, suburban Knoxville, and rural counties.

Select Tennessee Certified Sites Program (the "STCSP"). Two lots in the Pellissippi Corporate Center (33 acres) and three lots in the Eastbridge Business Park (121 acres) have both been certified with the STCSP. The STSCP has helped communities prepare industrial sites for private investment and job creation since 2012. The certification process ensures that each certified site meets high quality standards and are primed for development. Certified sites must have documented environmental conditions and geotechnical analysis, existing onsite utilities or a formal plan to extend utilities to the site, and truck-quality road access. The program's goal is to give companies detailed and reliable information during the site selection process and markets the sites to a targeted group of site selection consultants and business leaders in Tennessee's key industry clusters. As of 2022, sixty-seven sites in Tennessee have been certified and 23 companies have invested over $2.01 billion in capital investment to construct facilities on certified sites, accounting for more than 7,494 new job commitments.

Source: Tennessee Department of Economic and Community Development.

The *Technology 2020* project was initiated in 1993 to capitalize on the unique resources of the East Tennessee region: the presence of the ORNL, the University of Tennessee-Knoxville, the headquarters of the Tennessee Valley Authority, and a significant number of both large and small technology companies in the region. A $4.5 million investment has been made by DOE, South Central Bell, the Tennessee Public Service Commission and Lockheed-Martin to set up a regional telecommunications laboratory. This economic development resource center is located in Oak Ridge's Commerce Park. An 18,000 square foot facility has been constructed on the 5.2-acre site. The facility will be used for testing and demonstrating new communications technologies and applications.

The *Tennessee Valley Authority* (the "TVA") provides support, technology, expertise, and financial resources to existing businesses and industries in the Valley to help them grow and be more efficient and profitable. These resources include technical assistance, low-interest loans, and other tools needed by businesses for successful operation.

The *University of Tennessee's* flagship campus in Knoxville is home to a wide array of vigorous programs doing research on issues vital to the community, the state, the nation, and the world. The university has collaborative relationships with public and private agencies including ORNL, Battelle Memorial Institute (forming UT-Battelle), St. Jude Children's Research Hospital,

the Memphis Bioworks Foundation, and the Boston-Baskin Cancer group (forming UT Cancer Institute).

Source: Knox News Sentinel and Knox County Metro Planning Commission.

LARGEST EMPLOYERS

The major areas of employment in Knox County are the services, retail trade and government. Comparatively, both the state and the nation show a heavier concentration in manufacturing than does Knox County.

The following is a list of the major sources of employment in Knox County:

Largest Employers in the County

Name	County	Industry	Employment
Knox County Public Schools	Knox	Education	9,519
The University of TN, Knoxville	Knox	Education	8,959
University Health System	Knox	Health Care	5,137
State of Tennessee	Knox	Government	3,307
City of Knoxville	Knox	Government	2,210
Knox County	Knox	Government	2,677
East TN Children's Hospital	Knox	Health Care	1,819

Source: Knoxville Chamber of Commerce - 2021.

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Major Employers in the Knoxville MSA

Name	County	Industry	Employment
Y-12 National Security Complex[1]	Roane	National Security	11,627
Covenant Health Alliance[2]	Knox	Health Care	11,060
Knox County Public Schools	Knox	Education	9,519
The University of TN, Knoxville	Knox	Education	8,959
Wal-Mart Stores	MSA	Retail	6,863
Oak Ridge National Lab[1]	Roane	National Security	5,452
University Health System	Knox	Health Care	5,137
K-VA-T Food Stores (Food City)	Knox	Retail	4,634
Dollywood Co[3]	Sevier	Amusement Park	4,500
Clayton Homes[4]	Blount	Mobile Homes	4,262
Denso[3]	Blount	Automotive Parts	4,200
Roark Capital Group	MSA	Restaurant	3,530
State of Tennessee	Knox	Regional Government	3,307
Sevier County Schools	Sevier	Education	3,000
Tennova Health System[5]	Knox	Health Care	2,900
McDonald's Corp	MSA	Restaurant	2,874
Blount Memorial Hospital	Blount	Healthcare	2,758
Kroger Co	MSA	Retail	2,687
Knox County	Knox	Government	2,677
Team Health Inc.	Knox	Healthcare	2,260
City of Knoxville	Knox	Government	2,210
Yum! Brands	MSA	Restaurants (KFC, Pizza Hut & Taco Bell)	2,133
Pilot / Flying J	Knox	Fuel and Travel Centers	1,965
JTEKT Automotive	Monroe	Automotive Manufacturing	1,893
UCOR	Roane	Environmental Engineering	1,863
East TN Children's Hospital	Knox	Health Care	1,819
U.S. Bank & Elavon	MSA	Bank	1,711
Cracker Barrel	MSA	Restaurant	1,706
Blount County Schools	Blount	Education	1,701
Arconic (formerly ALCOA)[6]	Blount	Aluminum Ingot, Coiled Steel	1,683
Summit Medical Group	Knox	Health Care Providers	1,636
McGhee Tyson ANG Base	Blount	Air National Guard Unit	1,609
Home Depot	MSA	Retail	1,593
Copper Cellar Corp	Knox	Restaurants (Calhoun's & etc)	1,576
CVS Caremark Inc.	MSA	Retail	1,498
United Parcel Service	Knox	Transportation	1,450
Lowe's Home Improvement	MSA	Retail	1,375
Darden Restaurants	MSA	Restaurants (LongHorn & Olive Garden)	1,340

Name	County	Industry	Employment
Hamblen County Schools	Hamblen	Education	1,284
Wyndham Hotel Group	Sevier	Hotel	1,255
Hilton Worldwide	MSA	Hotel	1,249
Tennessee Valley Authority[7]	Knox	Power	1,232
Jewelry Television	Knox	Home-Shopping Cable Network	1,211
Old Dominion Freight	Hamblen	Transportation	1,121
Roane County Schools	Roane	Public School System	1,100
Knoxville Utilities Board	Knox	Utility	1,088
U.S. Postal Service	MSA	Mail Service	1,060
Anderson County Schools	Anderson	Education	1,050
Target Co.	MSA	Retail	1,045
Pellissippi State Tech. College	Knox	Education	1,043
Discovery, Inc.	Knox	Discovery Channel Networks	1,035
Jefferson County Schools	Jefferson	Education	1,020
MAHLE Engine	Hamblen	Automotive Manufacturing	1,015
Koch Foods, Inc.	MSA	Poultry Production	1,000
Oak Ridge Associated Universities[1]	Roane	National Security	1,000
Walgreens Co.	MSA	Retail	976
Burleson Brands	MSA	Restaurants	972
Quality Home Health	MSA	Healthcare	946
University Physicians Association	Knox	Health Care Providers	924
Restaurant Brands Int'l (Burger King)	MSA	Restaurants	924
Dollar General Corp.	MSA	Retail	916
Dine Brands	MSA	Restaurants	904
Eagle Bend	Anderson	Manufacturing	900
Keurig Dr. Pepper	Knox	Coffee Manufacturing	900

[1] Joint venture of University of Tennessee and Battelle. The total employees for the ORNL, Y-12 facility and contractors is 17,079.
[2] Includes Ft. Sanders Reg Med Center, Parkwest, Methodist Med Center & all other Covenant Hospitals in the area.
[3] Employment figure is based on Operating season; it drops to around 300 during the off-season.
[4] Headquarters based in Blount Co., but employment excludes some employees working in McMinn Co.
[5] Includes all Tennova Health System hospitals in the area.
[6] Includes some employees working in Knox Co.
[7] Includes Corporate headquarters in Knoxville, Bull Run Steam Plant, Norris and Corryton.

Source: Knoxville Chamber of Commerce - 2021.

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EMPLOYMENT INFORMATION

For the month of August 2022, the unemployment rate for Knoxville stood at 3.3% with 96,209 persons employed out of a labor force of 99,491. For the month of August 2022, the unemployment rate for Knox County stood at 2.9% with 244,142 persons employed out of a labor force of 251,344. The Knoxville MSA's unemployment for August 2022 was at 3.0% with 427,356 persons employed out of a labor force of 440,798. As of August 2022, the unemployment rate in the Knoxville-Morristown-Sevierville CSA stood at 3.1%, representing 547,870 persons employed out of a workforce of 565,334.

The following charts show unemployment trends in the area for the last 5 years:

Unemployment

	Annual Average **2017**	Annual Average **2018**	Annual Average **2019**	Annual Average **2020***	Annual Average **2021**
National	4.4%	3.9%	3.7%	8.3%	5.3%
Tennessee	3.7%	3.5%	3.4%	7.5%	4.7%
Knox County	**3.2%**	**2.9%**	**2.9%**	**5.9%**	**3.4%**
Index vs. National	73	74	78	71	64
Index vs. State	86	83	85	79	72
Knoxville MSA	**3.5%**	**3.3%**	**3.2%**	**6.2%**	**3.7%**
Index vs. National	80	85	86	75	70
Index vs. State	95	94	94	83	79
Knoxville-Sevierville-Harriman CSA	**3.5%**	**3.2%**	**3.1%**	**6.8%**	**3.8%**
Index vs. National	80	82	84	82	70
Index vs. State	95	91	91	91	79

* Due to the national rise in unemployment due to COVID-19 in the spring of 2020, the rates for the County for 2020 do not represent the usual unemployment rate.

Source: Tennessee Department of Employment Security, CPS Labor Force Estimates Summary.

RECREATION AND TOURISM

Although industry is frequently considered the core of an economic base, secondary and tertiary activities also make important contributions to economic development. The County has over 6,330 acres of park and recreation space, with approximately 198 miles of greenways and walking trails. The arts and culture are well served, with the Knoxville Symphony, Knoxville Opera Company, Knoxville Museum of Art, and several performing arts organizations, including the Clarence Brown Theater, providing numerous cultural opportunities. Live entertainment includes touring Broadway productions and many concerts at numerous venues throughout the

area, including the historic, beautifully renovated Tennessee and Bijou theaters.

The convention and tourist business contribute to the County's economic base in the sense that income is drawn into the region resulting in employment and investment opportunities in tourist-related facilities.

Sports. Knox County has over 6,317 acres of park and recreation space, including 20 recreation centers, four senior citizen centers, four skateparks, eight dog parks, ten public golf courses, and approximately 184 miles of greenway and walking trails. Just three miles from downtown is 1,000 forested acres and 50 miles of multiuse trails known as Knoxville Urban Wilderness.

The Tennessee Smokies provide AA minor league baseball in neighboring Sevier County. The Knoxville Ice Bears provide professional hockey at the Coliseum October through March. National championship UTK sports teams, including the 2007 and 2008 NCAA National Champion Lady Vols, draw thousands of enthusiasts to games each year. The City is also home to the Women's Basketball Hall of Fame.

State and National Parks. The County is the principal gateway area to the Great Smoky Mountains National Park (the "GSMNP"), located 40 miles to the southeast. The beauty of the Great Smoky Mountains has always attracted visitors to this region. There are over 500,000 acres that make up the nation's most visited National Park, extending over the states of Tennessee and North Carolina. The GSMNP received a record 14.1 million visitors in 2021, more than twice the number of any other national park in the country. Major attractions in the Smokies are Gatlinburg (40 miles southeast of the City), a tourist town in the mountains with overnight accommodations for 60,000 people, and Pigeon Forge (20 miles southeast of the City), a tourist town at the foothills of the mountain with overnight accommodations for 40,000 people. Numerous restaurants, gift and craft shops, along with ski lodge, ski lifts and tramway, make Gatlinburg a year-round resort town. Pigeon Forge is known for being home to hundreds of retail outlets and Dollywood, a theme park named for the country music singer, Dolly Parton.

Other parks and recreational areas in the Greater Knoxville area include: Big South Fork National River and Recreational Area 100,000 acres; Frozen Head State Natural Area 11,562 acres; Norris Dam State Resort Park 4,000 acres; Big Ridge State Park 3,687 acres; Cumberland Mountain State Park 1,720 acres; Panther Creek State Park 1,400 acres; Cove Lake State Recreational Area 667 acres; Roan Mountain State Resort Park 600 acres; Fort Loudon State Historical Area 500 acres; Indian Mountain State Park 213 acres; Warriors' Path State Recreational Park 500 acres; Trail of the Lonesome Pine: State Scenic Trail 35 miles; and Cumberland Trail: Section II: Tennessee Scenic Trails System Act 31 miles.

Lakes and Wildlife. Seven TVA lakes surround Knoxville and provide year-round fishing and boating. There are no closed seasons on TVA waterways. Area lakes provide over 3,425 miles of shoreline and 266 square miles of water surface.

Alpine Skiing. Ober Gatlinburg Ski Resort in Sevier County and Cumberland Gardens Resort in nearby Cumberland County offer convenient facilities for winter skiing.

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Conventions, Events and Festivals. Special seasonal events include the Dogwood Arts Festival in the spring and December's celebration, Christmas in the City. Knoxville supports an active tourism and convention trade with a 500,000-square-foot convention center located downtown at World's Fair Park. Other local facilities are a large civic coliseum/auditorium, two exhibition halls, and UTK's 22,000-seat Thompson Boling Arena.

Cultural Activities. The General James White Memorial Civic Auditorium and Coliseum Complex, the historic Tennessee Theatre and the Bijou Theater host a variety of performances, including the Knoxville Symphony Orchestra, touring Broadway productions, ice shows, circuses, concerts of all types and the professional hockey team, The Knoxville Ice Bears. Local radio station WDVX hosts a live radio broadcast weekdays downtown called "The Blue Plate Special" where nationally known artists and area performers appear free of charge.

The University of Tennessee Theaters continue to provide a wealth of entertainment and culture to Knoxvillians. The Clarence Brown Theater, UTK's premier performance space, seats 600 in a proscenium theater. The Clarence Brown Theater Company is dedicated to the classics of the stage and produces three full scale and one or two touring productions each season. The Carousel Theater is UTK's smaller theater which holds 250-300 people.

The Knoxville Museum of Art and the Emporium Center for Arts and Culture feature changing exhibits throughout the year, while the area's libraries, historic sites, and museums, such as East Tennessee History Center, McClung Museum of Natural History and Culture, Museum of Appalachia, and Beck Cultural Center, celebrate regional heritage.

Other popular events in Knoxville are presented by the Knoxville Symphony Orchestra, Knoxville Opera, the Appalachian Ballet Company, Circle Modern Dance Company, Carpert Bag Theatre, Tennessee Stage Company, Tennessee Valley Players, Knoxville Choral Society, and the Tennessee Children's Dance Ensemble, the only professional dance troupe for children in the country.

Ijams Nature Center. Ijams Nature Center is a nonprofit environmental education and resource center located on 300 acres on the banks of the Tennessee River in South Knoxville. The area encompasses woods, meadows, sinkholes, a spring-fed pond, and informal perennial gardens connected by a series of trails. The park has been developed to display East Tennessee's ecological systems at work and provide a conservation area for wildlife indigenous to the park. A number of high-quality programs, events, and environmental information are available to schools, the media and the general public.

Knoxville Zoological Gardens (the "Zoo Knoxville"). Zoo Knoxville is recognized as one of the top 20 zoos in America. It is located on 80 acres and has more than 1,000 species of animals. Zoo Knoxville has the largest "big cat" collection in the United States and is home to the first African Elephant birth in the United States. Zoo Knoxville is also home to the newly developed Gorilla Valley, where three baby gorillas were born during 2015 and 2016. The gorillas are the first of the endangered species to be born at the park and the first born in Tennessee in 30 years. Zoo Knoxville has a collection of red pandas and is the world leader in captive breeding of this rare breed. In addition, a critically endangered red wolf pup was born at the zoo in April 2016; the male pup is the first red wolf born at the zoo in 23 years.

Source: Knoxville News Sentinel and the Knox County Metro Planning Commission.

Tennessee Whiskey Trail. The Tennessee Whiskey Trail was launched in 2017 and is more than 800 miles to distilleries throughout the state, including the Jack Daniel Distillery in Middle Tennessee. Tennessee has been a leader in spirits distillation throughout the nation's history, including the time before, during and after Prohibition.

According to the Department of Tourist Development's 2018 Economic Impact report, more than 6.3 million visitors crisscrossed the state to experience the distilleries on the Trail. Since Tennessee state law changed in 2009 to allow more distilleries, more than 30 distilleries in Tennessee are now on the Tennessee Whiskey Trail. The distilleries on the Trail house millions of barrels of whiskey valued at billions of dollars and accounting for nearly 100 percent of all distilled spirits produced in Tennessee. More than $260 million has been invested in Trail distilleries over the past 10 years, adding more than 500 jobs throughout the state.

Knoxville has two distilleries on the Trail. Knox Whiskey Works was established in 2015 and produces multiple spirits, including bourbon from made from locally-grown heirloom corn. PostModern Spirits opened in 2017 and produces unaged spirits and single malt whiskey.

RECENT DEVELOPMENTS

Following are some recent developments within the boundaries of the City and County and the Knoxville MSA that have had a direct economic impact on the area. The source for statistical information below is the Knoxville Area Chamber Partnership, the City of Knoxville, the Knoxville-Knox County Metropolitan Planning Commission, the Knoxville News Sentinel and The Daily Times.

EAST KNOX COUNTY

Booz Allen Hamilton Inc. The technology consulting firm Booz Allen Hamilton expects to create approximately 52 new jobs over the next five years (2019-2024) and invest more than $3.6 million in new R&D facility located in Knoxville. Booz Allen is investing in the expansion of its engineering business by locating a research and development facility in Knoxville. Activities at this facility will include engineering, prototyping and testing for a variety of technical systems. Booz Allen provides management and technology consulting, engineering, analytics, digital, mission operations and cyber solutions to governments, corporations and not-for-profit organizations in the United States and internationally. The company has more than 26,000 employees and 80 offices worldwide.

Fraley and Schilling, Inc. The trucking company, Fraley and Schilling, Inc., began expanding its operations in Knoxville in 2020. As part of the expansion, Fraley and Schilling will invest $2.4 million and expects to add approximately 50 office jobs over the next five years. Due to growing demand in transportation and logistics, Fraley and Schilling is expanding by adding a new terminal building, which is currently under construction. The new building will be the largest in the company at approximately 11,600 square feet. Founded in 1955, Fraley and Schilling is a trucking and logistics provider, specializing in lightweight equipment for hauling heavy products. Today, Fraley and Schilling employs 250 people in Tennessee and more than 700 in the U.S., and operates over 500 trucks across the eastern half of the U.S.

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ATC Drivetrain. ATC Drivetrain, a leading global independent remanufacturer of automotive powertrain and drivetrain systems, announced in 2022 that the company will build a new $8.3 million manufacturing facility in Knoxville and expects to create approximately 218 new jobs over the next five years. The site is scheduled to begin production in April 2022 and will support the company's growing remanufacturing and battery life cycle management businesses. Founded in 1938 and headquartered in Farmington Hills, Michigan, ATC Drivetrain supplies remanufacturing products and services to various international blue-chip automakers. In addition to operations in Europe and Asia, the Knoxville facility will be ATC Drivetrain's third manufacturing facility in the U.S. ATC Drivetrain currently operates two manufacturing facilities and a distribution center in Oklahoma City, Oklahoma.

Comcast. Comcast's call center hired 250 additional employees, part of the mass media company's move to enhance nationwide customer care. The jobs were filled before the end of 2017. The move allows Comcast to answer more calls in an efficient and timely manner. The expansion is part of a national Comcast hiring wave, with a projected 5,500 new jobs to be created across America within the next three years. The changes have greatly affected the Knoxville branch, a 96,000-square-foot facility that underwent a $7 million dollar facelift in 2015.

Hardcoat Technologies LLC. Hardcoat Technologies LLC will invest in 2022 $6.6 million to expand manufacturing operations at its Papermill Drive location in Knoxville. Hardcoat Technologies will create approximately 85 new jobs in Knox County as the company locates additional operations adjacent to its headquarters and original injection molding plant. As part of this project, Hardcoat Technologies will acquire an existing building and construct a new 23,500-square-foot facility on Papermill Drive. Both operations will support the company's recent contract with SL Tennessee and, upon completion, will more than double Hardcoat Technologies' injection molding, warehousing and assembly capabilities.

Founded in 2014 and headquartered in Knoxville, Tennessee, Hardcoat Technologies specializes in injection molding and hardcoating for the automotive, ATV and industrial markets. Through this project, Hardcoat Technologies will employ more than 130 people in Tennessee.

Hitachi Zosen Inova USA LLC (the "HZI USA"). HZI USA, which relocated its North American hub from Georgia to Tennessee in 2020, will create approximately 90 new jobs in Knox County in an $6.6 million expansion that began in 2022. The additional jobs will support HZI USA's engineering, procurement and construction projects, as well as its project developments, allowing the company to broaden its footprint and more than triple the number of employees at its Tennessee operations. Hitachi Zosen Inova is the Swiss-based renewable energy arm of Japan's Hitachi Zosen Corporation. HZI's U.S. operations specialize in converting municipal and agriculture waste into clean, renewable electricity, natural gas and hydrogen. Through the expansion, Hitachi Zosen will employ nearly 12,000 worldwide.

IGT Technologies Inc. IGT Technologies Inc. (IGT) in 2021 invested $3.9 million to expand its operations in Knoxville and expects to add approximately 200 new jobs. IGT is a business process management and software development company. Its Knoxville facility will oversee and assist with the operations for IGT's North American customers by working with the latest technologies in chat, email, analytics and robotics process automation. This project will

comprise an inbound call center and a technology development center, catering to the growing demand of travel, retail, eCommerce and hi-tech companies. It also plans to set up a Customer Experience Incubation Lab to support startups.

Founded in 1998 and headquartered in Gurugram, India, IGT has more than 14,000 employees who are customer experience and technology specialists providing services to more than 80 marquee customers worldwide. Having a presence in the United States for over 15 years, IGT's global footprint consists of 20 delivery centers across 10 countries. These delivery centers provide 24/7 support in multiple languages and allow each customer to choose a global sourcing delivery that is best suited to its specific business needs.

Knox County Center for Health Sciences. In 2022, Roane State Community College, the Tennessee College of Applied Technology - Knoxville and Covenant Health formed a partnership that will bring a new healthcare training facility to East Tennessee. The center is meant to replace Roane State's current Knox County Center for Health Sciences, a 16,000-square-foot campus currently located in West Knoxville and will be the new home of TCAT Knoxville's health science programs. As proposed, the Knox Regional Health Science and Simulation Center would have 130,000 square feet in total, with at least 11,000 square feet devoted to the simulation center.

The total estimated dollar amount for the project is $75 million, which includes previous funding of $1 million appropriated in fiscal year 2021-22 for the preliminary design phase. $67.5 million in state funding is expected for the Knox Regional Health Science and Simulation Center. Roane State is expected to provide at least a $6.5 million campus match. The facility will enable instructors to provide comprehensive simulations of the work students will be doing when they graduate, in settings similar to clinics and hospitals. Plans are to construct the facility in West Knoxville on land gifted by Covenant Health, the release stated. The parcel is located near Parkwest Medical Center.

Lending Solutions, Inc. Lending Solutions, Inc. will invest $2 million and expects to add approximately 265 new jobs to open a call center in Knoxville, which will operate primarily as a training center for new employees. Once trained, the new employees will be approved to work from home. Lending Solutions, Inc. was founded in 1994 and is a provider of lending center services and consulting programs for financial institutions across North America.

Parkwest Medical Center. Parkwest Medical Center broke ground in 2018 on a $99 million expansion and renovation that is expected to be completed by 2021. The project includes both adding on to the existing facility and new construction to give the hospital a "campus-like design", with more street-level parking. The two main phases of the project should be completed in June 2019 and January 2020.

Pilot Flying J Travel Centers. In 2017, Berkshire Hathaway purchased a minority share in the Knoxville-based Pilot Flying J, the largest operator of travel centers in North America with 750 locations and more than $20 billion in revenues. Until 2023, Berkshire Hathaway will have 38.6 percent equity stake while the Haslam family will hold a majority interest with 50.1 percent ownership. After 2023, Berkshire Hathaway will become the majority shareholder with 41.1 percent stake with the Haslam family dropping to hold 20 percent ownership.

Scripps Networks. Discovery Communication bought Scripps Networks Interactive for $14.6 billion in early 2018. Part of the sale dictated that its pre-recorded transmission functions were moved from Knoxville to Virginia in 2019. The Travel Channel (part of the Scripps Networks) moved its headquarters from Maryland to Knoxville in 2016. About 100 employees moved with the company. Scripps Network relocated its corporate headquarters in 2010 to the City from Cincinnati. The company's technical center - which includes satellite uplink operations, a control center for all its television networks and a wide range of other administrative, business and creative functions - is also based in the City. Scripps Network is the home of Home and Garden TV network and had revenues totaling $3.6 billion in 2017.

NORTH KNOX COUNTY

Physicians Regional Medical Center (the "Physicians Regional"). The Physicians Regional Medical Center was closed by Tennova Healthcare at the end of 2018. Tennova has announced plans to build a new medical center in West Knoxville.

Lincoln Memorial University (the "LMU"). LMU began offering nursing programs on a portion of the former Physicians Regional Medical Center in 2021.

Public Safety Complex. Expected to open in 2022, the City invested $40 million to reconstruct vacant office buildings on the former Physicians Regional Medical Center site. The complex will be for the police and fire department, E911, pension system officers and city court operations. The historic 1929 original St. Mary's hospital building will be preserved with its parapets and marble accents. An additional $6.5 million was also invested on the former hospital campus for private redevelopment.

SOUTH KNOX COUNTY

Kelvion Inc. The global heat exchanger manufacturer, Kelvion Inc,. expanded its operations in Knoxville in 2021 and expects to add approximately 74 new jobs over the next few years. Kelvion invested $3.8 million and expanded at the Forks of the River Valley Industrial Park in Knoxville, where the company established operations in 2018. This expansion increases Kelvion's production of innovative heat exchangers, which can be offered as configurable or customized, for the Refrigeration and Data Center Industries.

Regal Entertainment Group. In early 2018, Regal Entertainment Group was acquired by Cineworld Group. Cineworld Group is based out of London and is the United Kingdom's largest cinema operator. Regal said it is committed to keeping its HQ in Knoxville and maintaining a strong presence in the city after the merger, saying it would "remain business as usual." Regal is currently headquartered in a nine-story office building on the former Baptist Hospital site on Knoxville's south waterfront.

South Knoxville Waterfront. Demolition of the former Baptist Hospital site was completed in 2015 to make way for the new project. The South Knoxville Waterfront project included: a $60 million Riverwalk at the Bridges apartment complex that will house up to 600 residents, completed in 2020; a $40 million 303 flats student apartments completed in fall 2018, and Regal Entertainment completed a $12 million makeover of the former medical office building in late 2017.

Bassmaster Classic. In March of 2019, the GEICO Bassmaster Classic was held in downtown Knoxville on the Tennessee River. The Economic impact during the competition was $32.2 million with 153,000 people in attendance. This exceeded the economic impact and attendance made in the prior year's Bassmaster Classic held in South Carolina. The event will be returning to Knoxville in March 2023.

The $32.2 million breaks down into a direct economic impact of $17.7 million and an indirect boost of $14.5 million in business sales, according to a report by the Visit Knoxville Sports Commission. Roughly $2.75 million was generated in state and local tax revenue, including taxes on sales, restaurant purchases and lodging, according to the release. Attendees from nearly every state and from countries as far as Australia, Italy and Japan paid for 29,232 nights in local hotels, according to Visit Knoxville. In addition to media that work for B.A.S.S, the event organizer, more than 250 credentialed media members from 28 states and six foreign countries attended the event. Of the 153,000 people who attended the Bassmaster Classic, a record 92,819 people attended the Bassmaster Classic Outdoors Expo at the Knoxville Convention Center and World's Fair Exhibition Hall, according to turnstile counts.

CGI. Global IT and business consulting company CGI located new operations in Knoxville for its eighth U.S. IT delivery center. In 2021, CGI invested $27 million and expects to add approximately 300 jobs over the next five years (2021-2026). CGI offers IT delivery options to its government and commercial industry clients. The Knoxville location was the newest member of CGI's innovative U.S. delivery center network that will help clients gain access to high quality, U.S.-based IT services, support and solutions. CGI is partnering with the University of Tennessee, Knoxville on the launch of the IT delivery center and will be working with the university to engage students across interdisciplinary programs in colleges such as the Haslam College of Business and the Tickle College of Engineering. CGI will partner with the university to build a talent pipeline focusing primarily on advanced analytics, cybersecurity and digital transformation through emerging technologies for the new Knoxville facility. Founded in 1976, CGI Fiscal 2020 reported revenue is $12.16 billion.

East Tennessee Children's Hospital (the" ETCH"). In 2021, the ETCH opened a$14 million renovation to the Emergency Department. The improvements include a renovated lobby, dedicated trauma rooms, exam rooms with increased privacy for patients and sensory-sensitive rooms.

The non-profit Children's Hospital completed a $75 million expansion in November 2016. The expansion offers over 245,000 square feet of new space, including a 44-bed, private room Neonatal Intensive Care Unit, a new perioperative surgery center, two levels of parking and enhanced family areas, such as roof-top gardens. Additional renovations to 71,900 square feet of the original building were completed in Fall 2017.

Farragut Hotel. Dover Development Corporation received an incentive package from the Knoxville Industrial Development Board in 2015 to freeze the property taxes at their current rate before the property is redeveloped. Demolition began in late 2015 and plans call for four storefronts. Hyatt Place opened a hotel in the historic building in 2018.

Fort Sanders Apartments. A Georgia firm bought up property near the Fort Sanders Hospital for $6.3 million to build 240 student apartments. Construction began in 2015 and rentals began in 2017.

Fort Sanders Regional Medical Center. Fort Sanders Regional Medical Center announced in 2018 plans for a $115 million expansion to the hospital that includes new critical care and intermediate care beds and emergency department rooms. Construction was completed in 2020. In addition to new beds, the expansion created easier access to the facility and improved parking.

Local Motors. Local Motors will produce its newest car, the LM3D Swim, at a Knoxville factory that opened in early 2017. The Knoxville site is the company's first digitally enabled microfactory, meaning it can 3-D print finished pieces directly from digital designs with no tooling or casting. The LM3D Swim will be manufactured mostly through 3-D printing with some traditionally made automotive components. The Knoxville factory will launch with four or five 3-D printers and have the capacity to produce about 2,400 vehicles a year. The factory will also serve as a retail showroom. The car is expected to cost about $53,000, depending on customization choices.

Scapa Healthcare. Scapa Healthcare expanded its Knoxville operations in 2018. The global supplier and manufacturer of adhesive-based products invested approximately $40 million and expects to add more than 85 new jobs in Knox County in the next few years. Scapa Healthcare consolidated three buildings into a single, 150,000-square-foot facility in Knox County.

Scapa Healthcare is a global supplier of bonding solutions and a manufacturer of adhesive-based products for the healthcare and industrial markets. The company has a global footprint with production sites in Asia, Europe and the U.S.

UNIVERSITY OF TENNESSEE

The University of Tennessee Knoxville Campus is undergoing a record $1 billion makeover to transform the look and feel of the campus to improve facilities and infrastructure to become a Top 25 public research institution.

Classroom and Science Laboratory Facility. A 22,000-square-foot, $5 million building houses a classroom and science laboratory facility. It was completed in 2018 and houses research laboratories, a vivarium, classrooms, and faculty offices.

Ken and Blaire Mossman Building. Situated on the former site of three historic houses in the Fort Sanders area, the building will house portions of microbiology, biochemistry, cellular and molecular biology, psychology and nutrition. The $96 million project was completed in September 2018.

Science Laboratory Facility. In early 2017, construction was completed on the new Science Laboratory Facility, a $114 million nine-story modern science class and laboratory facility at the Strong Hall dormitory site. It features 500-seat and 250-seat lecture halls, general purpose classrooms and house the Anthropology and Earth and Planetary Sciences departments.

Student Union. The 391,000-square-foot, six-story, $167 million Student Union project was completed in Spring 2019. It replaced the outdated University Center that was originally built in 1952. It holds a 50,000-square-foot bookstore, ten dining establishments, a 10,000-square-foot auditorium and a 12,000-square-foot ballroom.

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APPENDIX D-2

CONSOLIDATED SYSTEMS
REPORT OF INDEPENDENT AUDITORS AND FINANCIAL STATEMENTS



Consolidated

Financial Statements and Supplemental Information
June 30, 2022 and 2021

KUB Board of Commissioners

Dr. Jerry W. Askew, Chair
Adrienne Simpson-Brown, Vice Chair
Claudia Caballero
Ron Feinbaum
Kathy Hamilton
Celeste Herbert
Tyvi Small

Management

Gabriel Bolas II
President and Chief Executive Officer

Mark Walker
Senior Vice President and Chief Financial Officer

Susan Edwards
Senior Vice President and Chief Administrative Officer

Derwin Hagood
Senior Vice President of Operations

John Williams
Senior Vice President of Engineering & Construction

Julie Childers
Vice President and Century II Administrator

Tiffany Martin
Vice President and Chief Customer Officer

Mike Bolin
Vice President of Utility Advancement

John Gresham
Vice President of Operations

Jamie Davis
Vice President Fiber and Chief Technology Officer

Knoxville Utilities Board
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June 30, 2022 and 2021

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Independent Auditor's Report

Board of Commissioners
Knoxville Utilities Board
Knoxville, Tennessee

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Knoxville Utilities Board (KUB), a component unit of the City of Knoxville, Tennessee, as of and for the years ended June 30, 2022 and 2021, and the related notes to the financial statements, which collectively comprise KUB's basic financial statements as listed in the index.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of KUB as of June 30, 2022 and 2021, and the changes in its financial position and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of KUB and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Change in Accounting Principle

As discussed in Note 2 to the financial statements, effective July 1, 2020, KUB adopted new accounting guidance Governmental Accounting Standards Board Statement No. 87, *Leases*. Our opinion is not modified with respect to this matter.

Responsibilities of Management for the Financial Statements

KUB's 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, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about KUB's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Board of Commissioners
Knoxville Utilities Board
Knoxville, Tennessee

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 KUB's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about KUB's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 4 through 28 and the required supplementary information on pages 75 through 79 be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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.

Board of Commissioners
Knoxville Utilities Board
Knoxville, Tennessee

Other Information

Management is responsible for the other information. The other information comprises the statistical information but does not include the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon. In connection with our audit of the financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 25, 2022, on our consideration of KUB's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering KUB's internal control over financial reporting and compliance.

Coulter & Justus, P.C.

Knoxville, Tennessee
October 25, 2022

Knoxville Utilities Board (KUB), comprised of the Electric Division, Fiber Division, Gas Division, Water Division, and Wastewater Division (Divisions), is reported as a component unit enterprise fund in the financial statements of the City of Knoxville. KUB's responsibility is to oversee the purchase, production, distribution, and processing of electricity, broadband, natural gas, water, and wastewater services. A seven-member Board of Commissioners (Board) governs KUB. The Board has all powers to construct, acquire, expand, and operate the Divisions. It has full control and complete jurisdiction over the management and operation of the Divisions, including setting rates. KUB's accounts are maintained in conformity with the Uniform System of Accounts of the Federal Energy Regulatory Commission (FERC), the Uniform System of Accounts of the National Association of Regulatory Utility Commissioners (NARUC), and the Governmental Accounting Standards Board (GASB), as applicable.

This discussion and analysis is designed to (a) assist the reader in focusing on significant financial issues, (b) provide an overview of KUB's financial activity, (c) identify major changes in KUB's financial position, and (d) identify any financial concerns.

The Management Discussion and Analysis (MD&A) focuses on the fiscal year ended June 30, 2022, activities, resulting changes and current known facts, and should be read in conjunction with KUB's consolidated financial statements.

Consolidated Highlights

System Highlights

As KUB returned to normal operations this fiscal year, supply chain issues and workforce shortages continued to impact capital projects. While some projects were delayed, others were held until supplies were more readily available. However, KUB's ability to serve its customers has remained strong throughout.

As of June 30, 2022, KUB served 478,140 customers. KUB added 4,786 new customers in fiscal year 2022, representing growth of one percent.

KUB's electric system had a strong year for reliability with only 1.89 hours of service interruption for the average customer in fiscal year 2022 compared to 1.83 hours in fiscal year 2021. Favorable weather conditions and the deployment of automated technologies, including Fault Location, Isolation, and Service Restoration (FLISR) devices, were both integral to the year's performance.

KUB's electric system's record peak in demand remains 1,328 megawatt hours, set in February 2015. The natural gas system's record peak demand remains 140,204 dekatherms, set in January 2018.

KUB has completed all work associated with the 2005 Federal Consent Decree. A request for Consent Decree termination was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

KUB launched its new Fiber Division in fiscal year 2022, after gaining approval from TVA, state, and local authorities. Fiber infrastructure installation has begun and broadband services will be made available to electric customers in fiscal year 2023.

During fiscal year 2022, KUB sold $56.8 million in revenue bonds for the purpose of funding system expenditures and sold $65.3 million in revenue refunding bonds for the purpose of refinancing existing revenue bonds at lower interest rates. KUB will realize a total debt service savings of $4 million over the life of the bonds ($2.4 million on a net present value basis).

KUB's electric system maintains a Diamond level designation by the American Public Power Association's (APPA) Reliable Public Power Provider (RP3) program, the highest level of recognition of the program.

KUB's natural gas system was named to the American Public Gas Association's (APGA) System Operational Achievement Recognition (SOAR) Program in 2018, reflecting KUB's focus on system integrity, continuous improvement, safety, and employee development. KUB is a Gold level winner and remains a member of the program through 2023. KUB was recognized as a Safety Contest Winner for calendar year 2021 by APGA. The 2022 Excellence in Environmental Stewardship Award by APGA was also awarded to KUB.

KUB's treatment plants continue to meet high standards of operation. KUB was awarded the National Association of Clean Water Agencies (NACWA) Peak Performance recognition for all Wastewater Treatment Plants in calendar year 2021. Fourth Creek, Loves Creek, and Eastbridge Wastewater Treatment Plants won silver awards, while Kuwahee won gold.

KUB continued to maintain Platinum certification with the National Biosolids Partnership following a rigorous review process and independent audit that was conducted in December 2021. Biosolids are nutrient-rich organic matter produced by wastewater treatment and is a registered fertilizer with the Tennessee Department of Agriculture.

Century II Infrastructure Program

Century II is KUB's proactive long-range program to improve and maintain the electric, natural gas, water, and wastewater systems for its customers. It includes maintenance and asset replacement strategies for each system and establishes sustainable replacement cycles. Century II moves KUB into its second century of service by improving each system through sound planning, resource allocation, and continued, but accelerated, investment.

In June 2017, the Board adopted three annual rate increases for all KUB Divisions. The three approved electric rate increases went into effect in October 2017, October 2018, and October 2019, generating $10.9 million, $11.2 million, and $5.7 million in additional annual Electric Division revenue, respectively. The three approved gas rate increases went into effect in October 2017, October 2018, and October 2019, generating $2.2 million, $2.3 million, and $2.3 million in additional annual Gas Division revenue, respectively. The three water rate increases went into effect July 2017, July 2018, and July 2019, generating $3.1 million, $3.1 million, and $3.3 million of additional annual Water Division revenue, respectively. The three approved wastewater rate increases went into effect in July 2017, July 2018, and July 2019, generating $4.3 million, $4.2 million, and $4.5 million in additional annual Wastewater Division revenue, respectively.

In June 2021, the Board approved a 2 percent water rate increase effective in July 2021, generating $1.1 million in additional annual Water Division revenue.

In September 2021, the Board approved the next phase of electric rate increases to support both the Century II program and expanded fiber network. The first of three approved 3 percent electric rate increases went into effect April 2022, which will generate $16.7 million in additional annual Electric Division revenue. The remaining two approved electric rate increases are effective April 2023, and April 2024, which will generate $17.4 million, and $18 million in additional annual Electric Division revenue, respectively.

In June 2022, the Board approved the next phase of water and wastewater rate increases to support the Century II program. The three approved 5 percent water rate increases are effective July 2022, July 2023, and July 2024, and will generate $3 million, $3.2 million, and $3.4 million in additional annual Water Division revenue, respectively. The three approved 4 percent wastewater rate increases are effective July 2022, July 2023, and July 2024, and will generate $3.9 million, $4 million, and $4.2 million in additional annual Wastewater Division revenue, respectively.

KUB is currently in the process of implementing a Water Plant Redundancy initiative to ensure that high quality, reliable water service will be provided to customers over the long term. KUB maintains a single water treatment plant for its system. In lieu of building a second treatment facility to ensure capacity will be available to meet the needs of current and future water customers, KUB will invest approximately $158 million in various redundant facilities at the site of its existing Mark B. Whitaker Water Treatment Plant over a 16-year period that began in fiscal year 2017. Construction of a new generator building with three 2,500 kW diesel generators and associated switchgear was completed at the Mark B. Whitaker Water Treatment Plant. Design has been completed on a new filter building at the plant.

For the fiscal year, KUB stayed on track with its overall Century II capital budget and production goals. The electric system replaced 1,360 poles and 6.6 miles of transmission lines. In the natural gas system, 9.1 miles of gas steel main were replaced. In the water system, 4.2 miles of galvanized water main and 5.7 miles of cast iron water main were replaced. In the wastewater system, 8.9 miles of main were rehabilitated or replaced.

Fiber Network

During fiscal year 2021, KUB developed a Fiber to the Home Business Plan for the provision of broadband services to customers within its electric system service territory. In accordance with state law and KUB's wholesale power supply contract with TVA, the Business Plan was submitted to the Office of the Comptroller of the Treasury for Tennessee and TVA for review. The Office of the Comptroller found KUB's Business Plan to be financially feasible and TVA approved the Business Plan, finding no cross-subsidization exists between the proposed Fiber Division and the Electric Division.

After gaining the required approvals from TVA, the State of Tennessee, KUB's Board and City Council, KUB launched its new Fiber Division. Broadband services will be provided by a high-speed fiber optic network that will be owned and maintained by the Electric Division. The Fiber Division will share in the cost to build and operate the Fiber network by paying the Electric Division an annual access fee based on the year end value of those assets and the related expenses. The Fiber Division will also pay the Electric Division an annual utilization fee based on attachments to the network. In addition to providing broadband services, the fiber network will allow KUB to implement new advanced technologies to improve the reliability of its electric system. In August 2021, the Board authorized the first $10 million loan of a proposed $35 million loan from the Electric Division to the Fiber Division. The interdivisional loan was approved by TVA and was initiated in October 2021. In fiscal year 2022, KUB began the seven-year buildout on extending fiber infrastructure to make broadband service available to electric customers. The first broadband customers will begin receiving service in fiscal year 2023.

The fiber network is an integral component of a $702 million ten-year Enhanced Grid Modernization effort for the Electric Division. The $702 million ten-year program will be funded by a combination of electric rate increases, new bonds, and projected payments from the new Fiber Division.

Consent Decree

In February 2005, a Consent Decree was entered into federal court regarding the operation of KUB's wastewater system. Under the terms of the Consent Decree, the remediation of identified sanitary sewer overflows (SSOs) on KUB's wastewater system had to be completed by June 30, 2016. KUB completed all the requirements of the Consent Decree for the collection system two years in advance of the deadline.

The Consent Decree also required KUB to perform an evaluation of the wet weather performance and capacity of its wastewater treatment plants. In July 2007, KUB submitted a Composite Correction Plan (CCP) for its wastewater treatment plants to EPA for review. The development and filing of the CCP was a requirement of the federal order of February 2005. The CCP includes recommended improvements to KUB's Kuwahee and Fourth Creek treatment plants to address wet weather capacity issues noted in prior

assessments. The EPA approved the CCP in January 2009 including a recommended schedule of plant improvements that extends beyond the expiration date of the original Consent Decree. An amendment to the Consent Decree incorporating and establishing this schedule was agreed to by all parties and was entered on June 23, 2009. The purpose of the Amendment is to allow KUB to complete a portion of work outlined in the CCP after the Consent Decree deadline of June 30, 2016. The CCP provided for a biologically enhanced high-rate clarification (the BEHRC) secondary treatment system to be installed at the Fourth Creek treatment plant and at the Kuwahee treatment plant. KUB successfully completed the installation of the BEHRC system at the Fourth Creek treatment plant in the 2018 fiscal year. The project at the Kuwahee treatment plant was completed this fiscal year. The total cost of the CCP improvements at the Fourth Creek treatment plant and Kuwahee treatment plant was approximately $120 million.

KUB's funding plan for the Consent Decree included long-term bonds and a series of rate increases phased in over the term of the order. Bond proceeds fund all types of wastewater capital projects, the majority of which are related to the Consent Decree. As of June 30, 2022, the Wastewater Division had issued $594.8 million in bonds to fund wastewater system capital improvements since the inception of the Consent Decree. The Board approved two 50 percent rate increases, which went into effect in April 2005 and January 2007. The Board also approved an 8 percent rate increase, which was effective in September 2008, two 12 percent rate increases, which were effective in April 2011 and October 2012, three 6 percent rate increases, which were effective October 2014, October 2015, and October 2016, three 5 percent rate increases, which were effective July 2017, July 2018, and July 2019, and three 4 percent rate increases, which are effective July 2022, July 2023, and July 2024. KUB anticipates additional bond issues and rate increases over the next decade to help fund wastewater capital improvements.

KUB successfully completed the first cycle of Maintenance Operation Management (MOM) requirements one year before the deadline by inspecting manholes and gravity mains, smoke testing gravity mains, performing required inspections of pump stations and the related force mains, and completing all Corrective Action Plan/Engineering Report (CAP/ER) projects. KUB initiated the second MOM cycle that continues to focus on the prevention of SSOs. As part of the Century II initiative, formally known as the PACE10 program, KUB has installed storage tanks providing 34 million gallons of wastewater storage to control wet weather overflows and rehabilitated or replaced 432 miles of collection system pipe. KUB also continues to maintain a proactive operations and maintenance plan for the wastewater collection system including inspection, grease control, and private lateral enforcement. The result of the PACE10/Century II initiative has been an 80 percent reduction in SSOs.

As of June 30, 2022, the Wastewater Division had completed its 18th full year under the Consent Decree, spending $579.8 million on capital investments to meet Consent Decree requirements.

KUB's request for termination of the Consent Decree was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

Financial Highlights

During fiscal year 2022, KUB adopted GASB Statement No. 87, *Leases* (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

Fiscal Year 2022 Compared to Fiscal Year 2021

KUB's consolidated Change in Net Position increased $77.8 million in fiscal year 2022. Comparatively, net position increased by $75.5 million in fiscal year 2021.

Operating revenue increased $83.5 million as a result of the flow through of higher energy costs in KUB's rates and increased sales volumes across all divisions. Purchased energy expense (power and natural gas) increased $70 million or 15.8 percent, the combined effect of a $44.1 million increase in purchased power cost and a $25.9 million increase in purchased gas cost. Margin from sales (operating revenue less purchased energy expense) increased $13.4 million or 3.5 percent compared with the prior fiscal year.

Operating expenses (excluding purchased power and purchased gas expense) increased $14.6 million. Operating and maintenance (O&M) expenses were $17.3 million higher than the previous year due to higher labor related expenses and vegetation management expenses. Depreciation and amortization expense decreased $3.2 million or 3.5 percent. Taxes and tax equivalents increased $0.5 million or 1.4 percent.

Interest income was $0.3 million higher than the prior fiscal year. Interest expense decreased $1.8 million or 4.2 percent, reflecting the net impact of interest expense from new revenue bonds sold during fiscal year 2022 and savings on refunding of outstanding bonds.

Capital contributions increased $0.7 million, the result of a higher level of assets contributed by developers.

Total plant assets (net) increased $64.1 million or 2.9 percent over the last fiscal year.

Long-term debt represented 43.6 percent of KUB's consolidated capital structure, compared to 44.8 percent last fiscal year. Capital structure equals long-term debt (including the current and long-term portion of revenue bonds), plus net position.

Fiscal Year 2021 Compared to Fiscal Year 2020

KUB's consolidated Change in Net Position increased $75.5 million in fiscal year 2021. Comparatively, net position increased by $78 million in fiscal year 2020.

Operating revenue increased $18.5 million as a result of increased sales volumes for electric, gas, and wastewater. Purchased energy expense (power and natural gas) increased $6.1 million or 1.4 percent, the net effect of a $3 million decrease in purchased power cost and a $9.1 million increase in purchased gas cost. Margin from sales (operating revenue less purchased energy expense) increased $12.5 million or 3.4 percent compared with the prior fiscal year.

Operating expenses (excluding purchased power and purchased gas expense) increased $8 million. Operating and maintenance (O&M) expenses were $11.2 million lower than the previous year due to lower pension expenses. Depreciation and amortization expense increased $17.7 million or 24.3 percent, reflecting the completion of several large capital projects. Due to the adoption of GASB No. 87 in fiscal year 2022 and the required prior year restatement, amortization of leased assets increased $0.4 million. Taxes and tax equivalents increased $1.6 million or 4.4 percent.

Interest income was $3.9 million less than the prior fiscal year. Interest expense decreased $1.3 million or 3 percent, reflecting the net impact of interest expense from new revenue bonds sold during fiscal year 2021 and savings on refunding of outstanding bonds.

Capital contributions increased $0.6 million, the result of a higher level of assets contributed by developers.

Total plant assets (net) increased $53.4 million or 2.4 percent over the last fiscal year.

Long-term debt represented 44.8 percent of KUB's consolidated capital structure, compared to 48.3 percent last fiscal year. Capital structure equals long-term debt (including the current and long-term portion of revenue bonds), plus net position.

Knoxville Utilities Board Consolidated Financial Statements

KUB's financial performance is reported under three basic consolidated financial statements: the Statement of Net Position; the Statement of Revenues, Expenses and Changes in Net Position; and the Statement of Cash Flows.

Statement of Net Position

The Division reports its assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position in the Statement of Net Position. Assets are classified as current, restricted, plant in service, intangible, or other assets.

Liabilities are classified as current, other, or long-term debt. Net position is classified as net investment in capital assets, restricted, or unrestricted. Net position tells the user what KUB has done with its accumulated earnings, not just the balance.

Net investment in capital assets reflects the book value of all capital assets and intangible assets, less lease liability and the outstanding balances of debt used to acquire, construct, or improve those assets.

Restricted net position includes assets that have been limited to specific uses by KUB's bond covenants or through resolutions passed by the KUB Board.

Unrestricted net position is a residual classification; the amount remaining after reporting net position as either invested in capital or restricted is reported there.

Statement of Revenues, Expenses and Changes in Net Position

KUB reports its revenues and expenses (both operating and non-operating) on the Statement of Revenues, Expenses and Changes in Net Position. In addition, any capital contributions or assets donated by developers are reported on this statement.

Total revenue less total expense equals the change in net position for the reporting period. Net position at the beginning of the period is increased or decreased, as applicable, by the change in net position for the reporting period.

The change in net position for the reporting period is added to the net position segment of the Statement of Net Position.

Statement of Cash Flows

KUB reports cash flows from operating activities, capital and related financing activities, noncapital and related financing activities, and investing activities on the Statement of Cash Flows. This statement tells the user the sources and uses of cash during the reporting period.

The statement indicates the beginning cash balance and ending cash balance and how it was either increased or decreased during the reporting period.

The statement also reconciles cash flow to operating income as it appears on the Statement of Revenues, Expenses and Changes in Net Position.

Condensed Financial Statements

Statement of Net Position

The following table reflects the condensed consolidated Statement of Net Position for KUB compared to the prior two fiscal years.

Statements of Net Position
As of June 30

(in thousands of dollars)	2022	2021 as restated	2020
Current, restricted, intangible, and other assets	$ 502,268	$ 435,426	$ 395,224
Capital assets, net	2,253,225	2,189,154	2,135,780
Deferred outflows of resources	27,740	24,006	33,237
Total assets and deferred outflows of resources	2,783,233	2,648,586	2,564,241
Current and other liabilities	249,376	202,775	207,464
Long-term debt outstanding	1,124,918	1,112,346	1,126,089
Deferred inflows of resources	45,474	47,820	20,569
Total liabilities and deferred inflows of resources	1,419,768	1,362,941	1,354,122
Net position			
Net investment in capital assets	1,098,927	1,049,324	990,228
Restricted	22,343	21,755	22,186
Unrestricted	242,195	214,566	197,705
Total net position	$ 1,363,465	$ 1,285,645	$ 1,210,119

Normal Impacts on Statement of Net Position

The following is a description of activities which will normally impact the comparability of the Statement of Net Position presentation:

- Change in net position (from Statement of Revenues, Expenses and Changes in Net Position): impacts (increase/decrease) current and other assets and/or capital and intangible assets and unrestricted net position.
- Issuing debt for capital: increases deferred outflows of resources and long-term debt.
- Spending debt proceeds on new capital: reduces current assets and increases capital assets.
- Spending of non-debt related current assets on new capital: (a) reduces current assets and increases capital assets, and (b) reduces unrestricted net position and increases net investment in capital assets.
- Principal payment on debt: (a) reduces current and other assets and reduces long-term debt, and (b) reduces unrestricted net position and increases net investment in capital assets.
- Reduction of capital assets through depreciation: reduces capital assets and net investment in capital assets.

Impacts and Analysis

Current, Restricted, Intangible, and Other Assets

Fiscal Year 2022 Compared to Fiscal Year 2021

Current, restricted, intangible, and other assets increased $66.8 million or 15.4 percent, due to an increase in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments) of $27.4 million, an increase in the actuarially determined net pension asset of $19 million, an increase in accounts receivable of $9.2 million, an increase of $3.8 million in inventories, a $3.4 million increase in net intangible right of use assets, and a $3.4 million increase in gas storage. KUB under recovered $2.4 million in wholesale power costs from its customers in fiscal year 2022. This under recovery of costs will be charged to KUB's electric customers during the next fiscal year through adjustments to rates via the Purchased Power Adjustment.

Fiscal Year 2021 Compared to Fiscal Year 2020

Current, restricted, intangible, and other assets increased $40.2 million or 10.2 percent, due to an increase in the actuarially determined net pension asset of $26 million, an increase in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments) of $7.4 million, an increase in the actuarially determined net OPEB asset of $5.9 million, and an increase in accounts receivable of $3.1 million. KUB under recovered $1.4 million in wholesale gas costs from its customers in fiscal year 2021. This under recovery of costs will be charged to KUB's gas customers during the next fiscal year through adjustments to rates via the Purchased Gas Adjustment.

Capital Assets

Fiscal Year 2022 Compared to Fiscal Year 2021

Capital assets (net) increased $64.1 million or 2.9 percent. Major capital expenditures (reflected in both plant additions and work in progress) in fiscal year 2022 included $37.7 million related to wastewater Century II projects, $25.4 million for various electric distribution system improvements, $17.2 million for Grid Modernization and advanced metering including Supervisory Control and Data Acquisition (SCADA) system upgrades, $8.7 million for the construction of gas mains, $6.9 million for pole replacements for the electric system, $6.8 million for water main replacements, and $6.5 million for building improvements. System assets of $32.6 million were retired during fiscal year 2022.

Fiscal Year 2021 Compared to Fiscal Year 2020

Capital assets (net) increased $53.4 million or 2.4 percent. Spending was slowed this year to allow for better financial liquidity in response to the pandemic. Major capital expenditures (reflected in both plant additions and work in progress) in fiscal year 2021 included $35.2 million related to wastewater Century II projects, $23.9 million for various electric distribution system improvements, $10.3 million for water main replacements, $6.9 million for building improvements, $6.5 million for the construction of gas mains, $6.1 million for Grid Modernization and advanced metering including Supervisory Control and Data Acquisition (SCADA) system upgrades, and $5.6 million for pole replacements for the electric system. System assets of $42.5 million were retired during fiscal year 2021.

Deferred Outflows of Resources

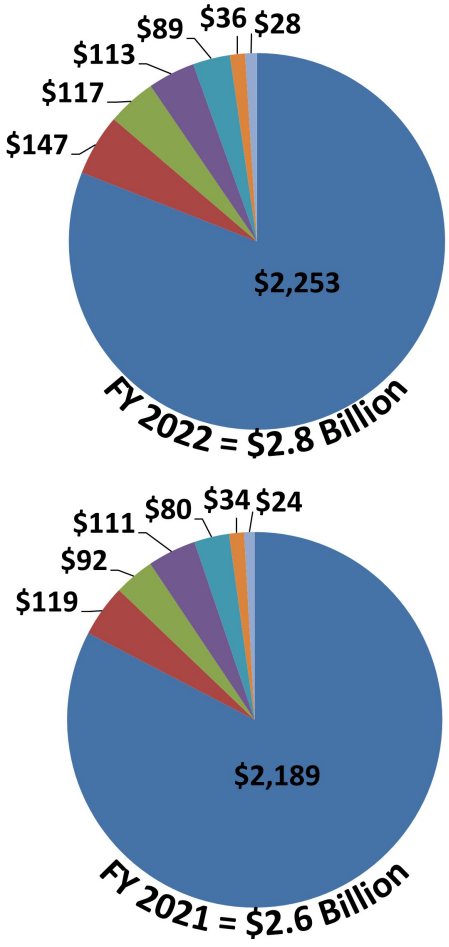
Fiscal Year 2022 Compared to Fiscal Year 2021

Deferred outflows of resources increased $3.7 million compared to the prior year, reflecting a $5.2 million increase in OPEB outflow offset by a decrease in unamortized bond refunding costs of $1 million and a decrease in pension outflow of $0.4 million when compared to the prior fiscal year.

Fiscal Year 2021 Compared to Fiscal Year 2020

Deferred outflows of resources decreased $9.2 million compared to the prior year, reflecting a decrease in unamortized bond refunding costs of $5.2 million and a $4.2 million decrease in OPEB outflow when compared to the prior fiscal year.

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Consolidated Total Assets and Deferred Outflows of Resources (in Millions)

	FY22	FY21
Plant	81%	83%
General Fund	5%	5%
Other Assets	4%	3%
Contingency Fund	4%	4%
Accounts Receivable	3%	3%
Restricted Assets	2%	1%
Deferred Outflows of Resources	1%	1%

Current and Other Liabilities

Fiscal Year 2022 Compared to Fiscal Year 2021

Current and other liabilities increased $46.6 million or 23 percent compared to the prior fiscal year. This reflects an increase of $18.2 million in payables, an increase of $11.2 million in the net OPEB liability, an increase of $6.5 million in accrued expenses, an increase of $3.6 million in current and long-term lease liability, and an increase of $2.1 million in customer deposits. KUB over recovered $4.2 million in wholesale gas costs from its customers in fiscal year 2022, as compared to a $1.4 million under recovery in fiscal year 2021. This over recovery of costs will be flowed back to KUB's gas customers during the next fiscal year through adjustments to rates via the Purchased Gas Adjustment.

Fiscal Year 2021 Compared to Fiscal Year 2020

Current and other liabilities decreased $4.7 million or 2.3 percent compared to the prior fiscal year. This reflects a decrease of $7.6 million in the net OPEB liability, a decrease of $2 million in accrued interest on revenue bonds, and a decrease of $1.4 million in over recovered purchased power cost offset by an increase of $4.3 million in accounts payable. KUB over recovered $0.4 million in wholesale power costs from its customers in fiscal year 2021, as compared to a $1.8 million over recovery in fiscal year 2020. This

over recovery of costs will be flowed back to KUB's electric customers during the next fiscal year through adjustments to rates via the Purchased Power Adjustment.

The outstanding balance on TVA conservation loans declined by $0.9 million, as KUB ceased issuance of any new loans in fiscal year 2016.

Long-term Debt

Fiscal Year 2022 Compared to Fiscal Year 2021

Long-term debt increased $12.6 million or 1.1 percent. The increase is due in part to the net impact of the scheduled repayment of debt and $56.8 million in electric and wastewater system revenue bonds sold in April 2022. KUB also sold $65.3 million in electric, water, and wastewater revenue refunding bonds in April 2022 with a premium of $4.1 million to refund $68.6 million in outstanding debt, resulting in a reduction of principal of $3.3 million.

Fiscal Year 2021 Compared to Fiscal Year 2020

Long-term debt decreased $13.7 million or 1.2 percent. The decrease is due in part to the net impact of the scheduled repayment of debt and $36.5 million in water and wastewater system revenue bonds sold in October 2020. KUB also sold $336.1 million of revenue refunding bonds in March 2021 with a premium of $80.2 million to refund $415.2 million in outstanding debt, resulting in a reduction of principal of $79.1 million.

Deferred Inflows of Resources

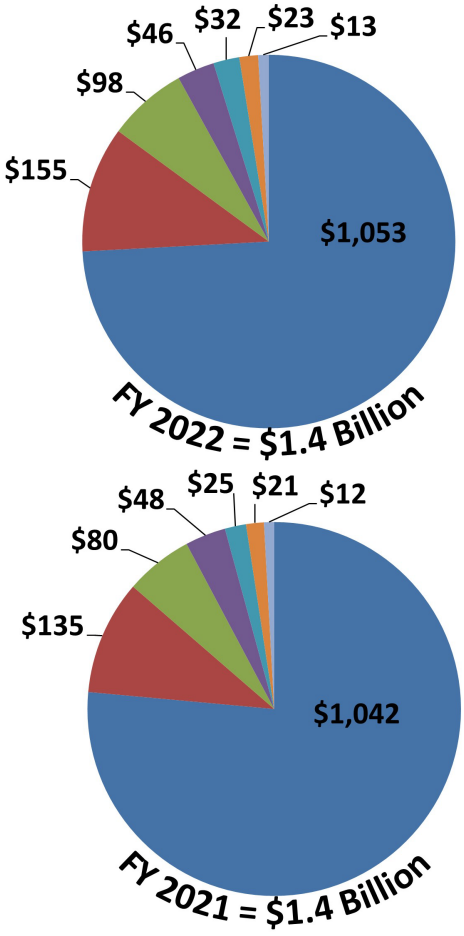
Fiscal Year 2022 Compared to Fiscal Year 2021

Deferred inflows decreased $2.3 million compared to the prior fiscal year due to an $8 million decrease in OPEB inflow offset by a $3.3 million increase in pension inflow, a $1.4 million increase in unamortized bond refunding costs, and a $0.9 million increase in lease inflow.

Fiscal Year 2021 Compared to Fiscal Year 2020

Deferred inflows increased $27.3 million compared to the prior fiscal year due to a $15.6 million increase in pension inflow, an $8 million increase in OPEB inflow, and a $3.5 million increase in lease inflow.

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Consolidated Total Liabilities and Deferred Inflows of Resources (in Millions)

	FY22	FY21
Bond Debt	74%	76%
Other Liabilities	11%	10%
Payables	7%	6%
Deferred Inflows of Resources	3%	4%
Misc Current	2%	2%
Customer Deposits	2%	1%
Interest Accrued	1%	1%

Net Position

Fiscal Year 2022 Compared to Fiscal Year 2021

Total net position increased $77.8 million or 6.1 percent. Unrestricted net position increased $27.6 million or 12.9 percent compared to the previous fiscal year, primarily due to a $27.4 million increase in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments). Net investment in capital assets increased $49.6 million or 4.7 percent, the result of an increase of $64.1 million in net plant additions and an increase of $3.4 million in net intangible right of use assets offset by an $11 million increase in the current portion of revenue bonds and total long-term debt and a $3.6 million increase in lease liabilities. Restricted net position increased $0.6 million compared to the prior year.

Fiscal Year 2021 Compared to Fiscal Year 2020

Total net position increased $75.5 million or 6.2 percent. Unrestricted net position increased $16.9 million or 8.5 percent compared to the previous fiscal year, due to a $7.4 million increase in general fund cash (including cash and cash equivalents, short-term investments, and long-term investments) and changes in pension and OPEB accruals for the fiscal year. Net investment in capital assets increased $59.1 million or 6 percent, primarily the result of net capital assets increasing $53.4 million. Restricted net position decreased $0.4 million compared to the prior year.

Statement of Revenues, Expenses and Changes in Net Position

The following table reflects the condensed consolidated Statement of Revenues, Expenses and Changes in Net Position for KUB compared to the prior two fiscal years.

Statements of Revenues, Expenses and Changes in Net Position
For the Years Ended June 30

(in thousands of dollars)	2022	2021 as restated	2020
Operating revenues	$ 905,770	$ 822,290	$ 803,751
Less: Purchased energy expense	512,342	442,299	436,236
Margin from sales	393,428	379,991	367,515
Operating expenses			
Treatment	18,999	17,098	16,306
Fiber products and promotions	910	-	-
Distribution and collection	77,355	69,388	70,822
Customer service	15,200	14,033	14,007
Administrative and general	36,438	31,086	41,668
Depreciation and amortization	87,288	90,488	72,826
Taxes and tax equivalents	37,964	37,448	35,863
Total operating expenses	274,154	259,541	251,492
Operating income	119,274	120,450	116,023
Interest income	1,107	837	4,740
Interest expense	(40,058)	(41,827)	(43,127)
Other income/(expense)	(4,141)	(4,917)	(52)
Change in net position before capital contributions	76,182	74,543	77,584
Capital contributions	1,638	983	417
Change in net position	$ 77,820	$ 75,526	$ 78,001

Normal Impacts on Statement of Revenues, Expenses and Changes in Net Position

The following is a description of activities which will normally impact the comparability of the Statement of Revenues, Expenses and Changes in Net Position presentation:

- Operating revenue is largely determined by volume of sales for the fiscal year. Any change (increase/decrease) in retail rates would also be a cause of change in operating revenue.

- Purchased energy expense is determined by volume of power purchases from TVA and volume of natural gas purchases for the fiscal year. Also, any change (increase/decrease) in wholesale power and/or gas rates would result in a change in purchased energy expense.

- Operating expenses (distribution, customer service, administrative and general) are normally impacted by changes in areas including, but not limited to, labor cost (staffing, wage rates), active employee and retiree medical expenses, and system maintenance.

- Depreciation and amortization expense is impacted by intangible assets, plant additions and retirements during the fiscal year.

- Taxes and equivalents are impacted by plant additions/retirements, changes in property tax rates, and gross margin levels.

- Interest income is impacted by level of interest rates and investments.

- Interest expense on debt is impacted by level of outstanding debt and the interest rate(s) on the outstanding debt.

- Other income/(expense) is impacted by miscellaneous non-operating revenues and expenses.

- Capital contributions are impacted by a donation of facilities/infrastructure to KUB by developers and governmental agencies. The contributions are recognized as revenue and recorded as plant in service based on the fair market value of the asset(s).

Impacts and Analysis

Change in Net Position

Fiscal Year 2022 Compared to Fiscal Year 2021

KUB's consolidated Change in Net Position increased $77.8 million in fiscal year 2022. Comparatively, net position increased $75.5 million in fiscal year 2021.

Fiscal Year 2021 Compared to Fiscal Year 2020

KUB's consolidated Change in Net Position increased $75.5 million in fiscal year 2021. Comparatively, net position increased $78 million in fiscal year 2020.

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Margin from Sales

Fiscal Year 2022 Compared to Fiscal Year 2021

Operating revenue was $83.5 million higher than the previous fiscal year. Both electric and natural gas experienced significant increases in wholesale energy prices. Electric Division operating revenue increased $51.9 million due to the net result of a 3 percent increase in sales volumes, additional revenue from the April 2022 rate increase, higher wholesale energy costs, and the flow through of prior year over recovered purchased power costs to electric customers. Gas Division revenue increased $26.5 million for the fiscal year, the result of a 2.2 percent increase in billed sales and higher natural gas prices. Water Division revenue increased $2.6 million, reflecting a 2.3 percent increase in billed sales volumes. Wastewater Division revenue was $2.4 million higher than the previous year, reflecting a 2.2 percent increase in billable wastewater flows.

Wholesale energy expense increased $70 million or 15.8 percent. Purchased power expense increased $44.1 million compared to last year, reflecting the combined effect of 3 percent higher customer demand and flow through of higher wholesale power costs. KUB received $9.3 million in wholesale power rate credits during the fiscal year as part of KUB's long-term Partnership Agreement with TVA, which decreased power expenses in the current fiscal year. Purchased gas expense was $25.9 million higher, reflecting significantly higher natural gas prices and slightly higher customer demand for the fiscal year.

Margin from sales (operating revenue less purchased energy expense) increased $13.4 million compared to the previous year.

Fiscal Year 2021 Compared to Fiscal Year 2020

Operating revenue was $18.5 million higher than the previous fiscal year. Both electric and natural gas sales benefited from colder winter temperatures than the previous fiscal year. Electric Division operating revenue increased $6.2 million due to the net result of a 6.8 percent increase in sales volumes and the flow through of prior year over recovered purchased power costs to electric customers. Gas Division revenue increased $12.8 million for the fiscal year, the result of an 8.7 percent increase in billed sales. Water Division revenue decreased $0.7 million, reflecting an increase in billed sales of $0.2 million and a decrease in other operating revenue of $0.4 million. Wastewater Division revenue was $1 million lower than the previous year, reflecting an increase in billed sales of $0.8 million and a decrease in other operating revenue of $1.2 million. Billable wastewater flows increased 1.2 percent.

Wholesale energy expense increased $6.1 million or 1.4 percent. Purchased power expense decreased $3 million compared to last year, reflecting the net effect of higher customer demand and flow through of lower wholesale power costs. KUB received $9.2 million in wholesale power rate credits during the fiscal year as part of KUB's long-term Partnership Agreement with TVA, which decreased power expenses in the current fiscal year. Purchased gas expense was $9.1 million higher, reflecting higher customer demand for the fiscal year and higher natural gas prices.

Margin from sales (operating revenue less purchased energy expense) increased $12.5 million compared to the previous year.

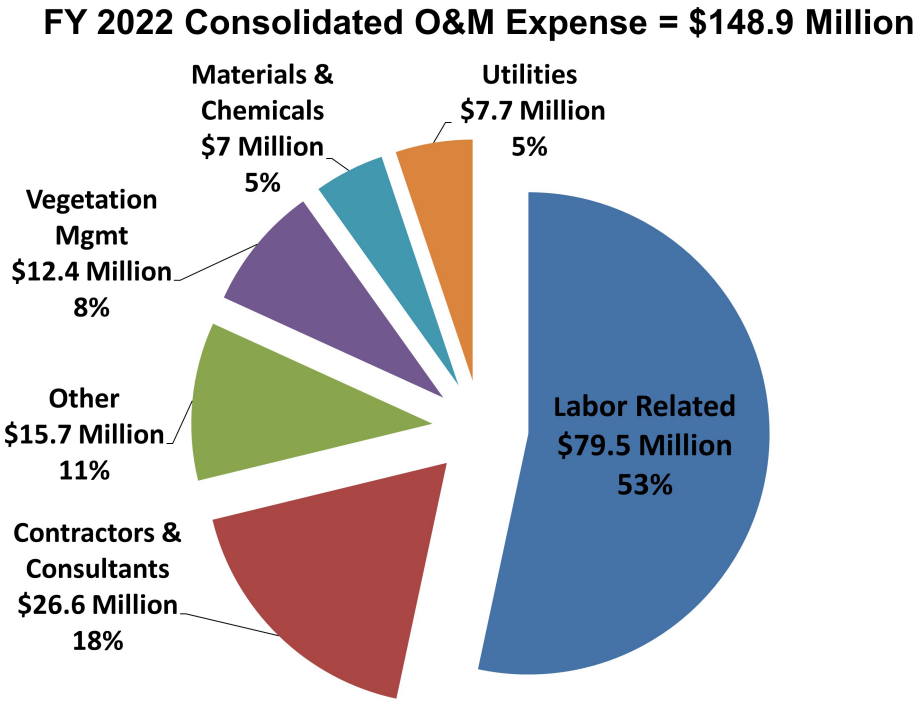
Overall, other operating revenues declined $3.5 million as a result of KUB's waiver and suspension of late fees on customer payments for several months during the Pandemic.

Operating Expenses

Fiscal Year 2022 Compared to Fiscal Year 2021

Operating expenses (excluding wholesale purchased energy expense) increased $14.6 million compared to fiscal year 2021. Operating expenses include operations and maintenance (O&M) expense, depreciation/amortization, and taxes/tax equivalents. O&M expenses can be further classified as treatment, fiber products and promotions, distribution and collection, customer service, and administrative and general.

- Treatment expenses increased $1.9 million, primarily due to higher labor related expenses.
- Fiber products and promotions increased $0.9 million, primarily due to corporate advertising expense as well as telephone and television programming expenses.
- Distribution and collection expenses increased $8 million or 11.5 percent, primarily due to the catch up from the pandemic related timing delay on vegetation management circuit work and labor related expenses.
- Customer service expenses increased $1.2 million, primarily due to payment processing fees and labor related expenses.
- Administrative and general expenses increased $5.4 million, primarily due to an increase in labor related expenses, including higher OPEB expenses related to the introduction of the Health Reimbursement Arrangement.



- Depreciation and amortization expense decreased $3.2 million or 3.5 percent. KUB added $182.8 million in assets during fiscal year 2022. A partial year of depreciation expense was

recorded on these capital investments and a full year of depreciation expense was incurred on $207.1 million in assets placed in service during fiscal year 2021. In addition, $32.6 million of assets were retired during fiscal year 2022.

- Taxes and tax equivalents increased $0.5 million or 1.4 percent, primarily due to increased employer Federal Insurance Contributions Act (FICA) taxes. Tax equivalent payments to taxing jurisdictions in which KUB's utility systems are located were flat this fiscal year.

Fiscal Year 2021 Compared to Fiscal Year 2020

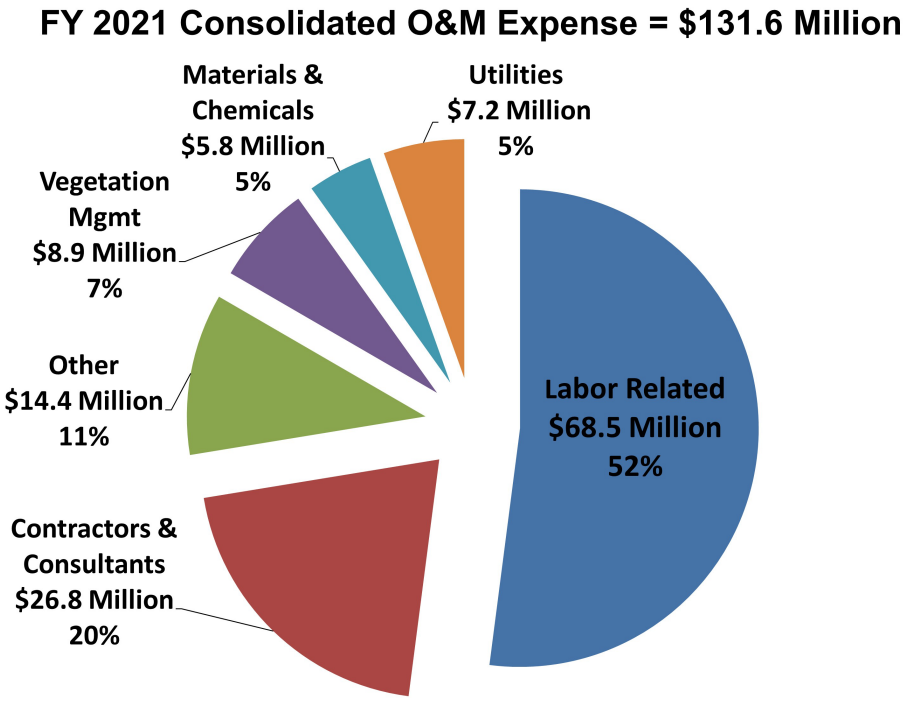
Operating expenses (excluding wholesale purchased energy expense) increased $8 million compared to fiscal year 2020. Operating expenses include operations and maintenance (O&M) expense, depreciation/amortization, and taxes/tax equivalents. O&M expenses can be further classified as treatment, distribution and collection, customer service, and administrative and general.

- Treatment expenses increased $0.8 million, primarily due to higher outside contractor and consultant costs.

- Distribution and collection expenses decreased $1.4 million or 2 percent, primarily due to timing delay in vegetation management circuit work due to the pandemic.

- Customer service expenses were consistent with the prior fiscal year.

- Administrative and general expenses decreased $10.6 million, primarily due to a decrease in labor related expenses, including lower pension and OPEB expenses.

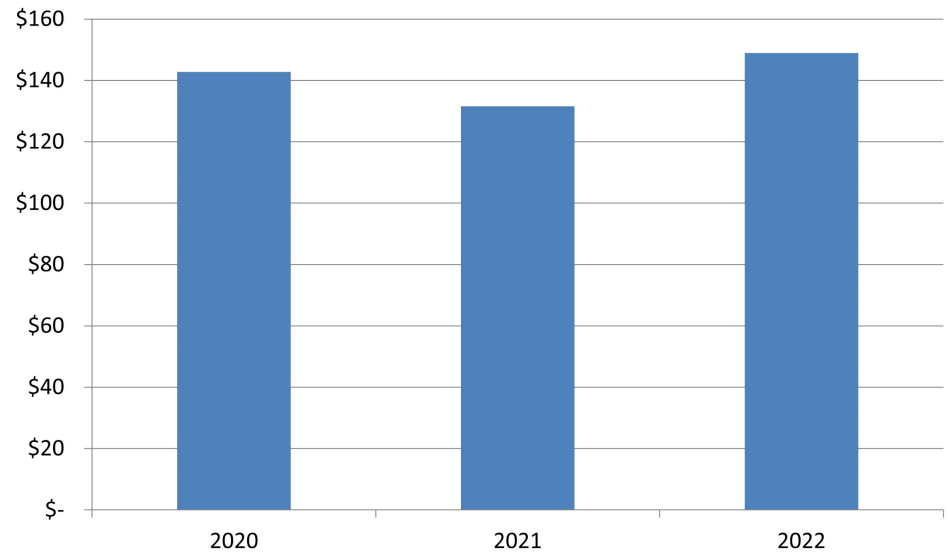


- Depreciation and amortization expense increased $17.7 million or 24.3 percent. KUB added $207.1 million in assets during fiscal year 2021, including $27.4 million of multi-year projects being held in Construction Work in Progress. A partial year of depreciation expense was

recorded on these capital investments and a full year of depreciation expense was incurred on $161.1 million in assets placed in service during fiscal year 2020. In addition, $42.5 million of assets were retired during fiscal year 2021.

- Taxes and tax equivalents increased $1.6 million or 4.4 percent. Tax equivalent payments to taxing jurisdictions in which KUB's utility systems are located are based on a combination of net plant values and margin from energy sales.

Consolidated Operation & Maintenance Expense



(Millions)

Other Income and Expense

Fiscal Year 2022 Compared to Fiscal Year 2021

Interest income increased $0.3 million compared to the prior fiscal year, reflecting additional interest earnings on more cash on hand combined with rising short-term interest rates throughout the year.

Interest expense decreased $1.8 million or 4.2 percent, reflecting the net impact of interest expense from new revenue bonds sold during the fiscal year and savings on refunding of outstanding bonds.

Other expense (net) decreased $0.8 million, primarily due to smaller losses on disposal of property compared to the prior fiscal year.

Capital contributions by developers were $0.7 million higher due to an increase in donated utility assets compared to the prior fiscal year.

Fiscal Year 2021 Compared to Fiscal Year 2020

Interest income decreased $3.9 million compared to the prior fiscal year, reflecting lower short-term interest rates over the prior fiscal year.

Interest expense decreased $1.3 million or 3 percent, reflecting the net impact of interest expense from new revenue bonds sold during the fiscal year and savings on refunding of outstanding bonds.

Other expense (net) increased $4.9 million, primarily due to loss on disposal of property.

Capital contributions by developers were $0.6 million higher due to an increase in donated utility assets compared to the prior fiscal year.

Capital Assets

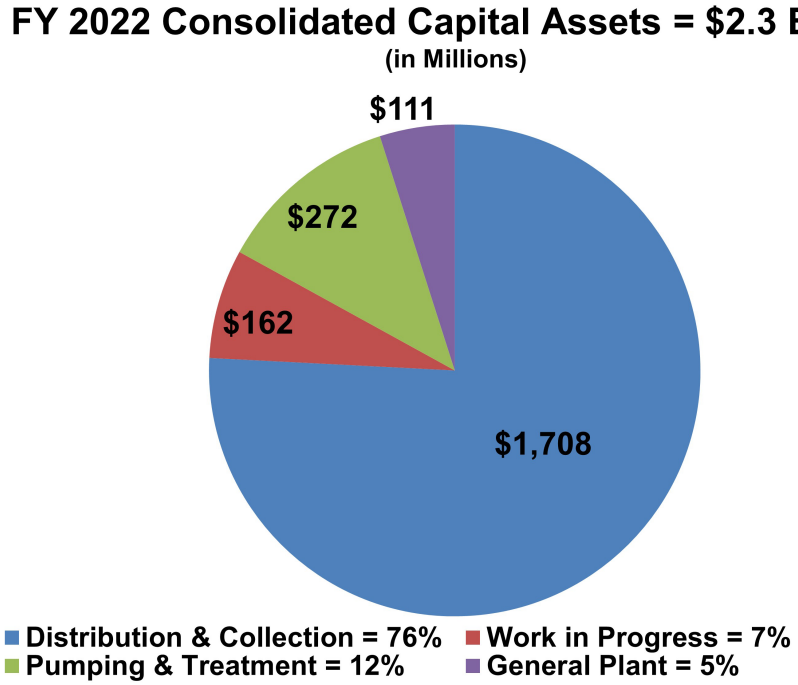
Capital Assets
As of June 30
(Net of Depreciation)

(in thousands of dollars)	**2022**	**2021**	**2020**
Production Plant (Intakes)	$ 6	$ 7	$ 7
Pumping and Treatment Plant	271,764	220,317	216,136
Distribution and Collection Plant			
Mains and metering	$ 926,287	$ 904,584	$ 865,744
Services and meters	163,738	164,537	168,800
Electric station equipment	61,180	62,704	57,564
Poles, towers and fixtures	161,519	157,575	140,424
Overhead conductors	143,776	133,419	110,865
Line transformers	61,351	61,575	61,725
Other accounts	190,393	194,011	191,009
Total Distribution & Collection Plant	$ 1,708,244	$ 1,678,405	$ 1,596,131
General Plant	111,458	100,917	75,934
Total Plant Assets	$ 2,091,472	$ 1,999,646	$ 1,888,208
Work In Progress	161,753	189,508	247,572
Total Net Plant	$ 2,253,225	$ 2,189,154	$ 2,135,780

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Fiscal Year 2022 Compared to Fiscal Year 2021

As of June 30, 2022, KUB had $2.3 billion invested in capital assets, as reflected in the schedule of capital assets, which represents a net increase (including additions, retirements, and depreciation) of $64.1 million or 2.9 percent over the end of the last fiscal year.

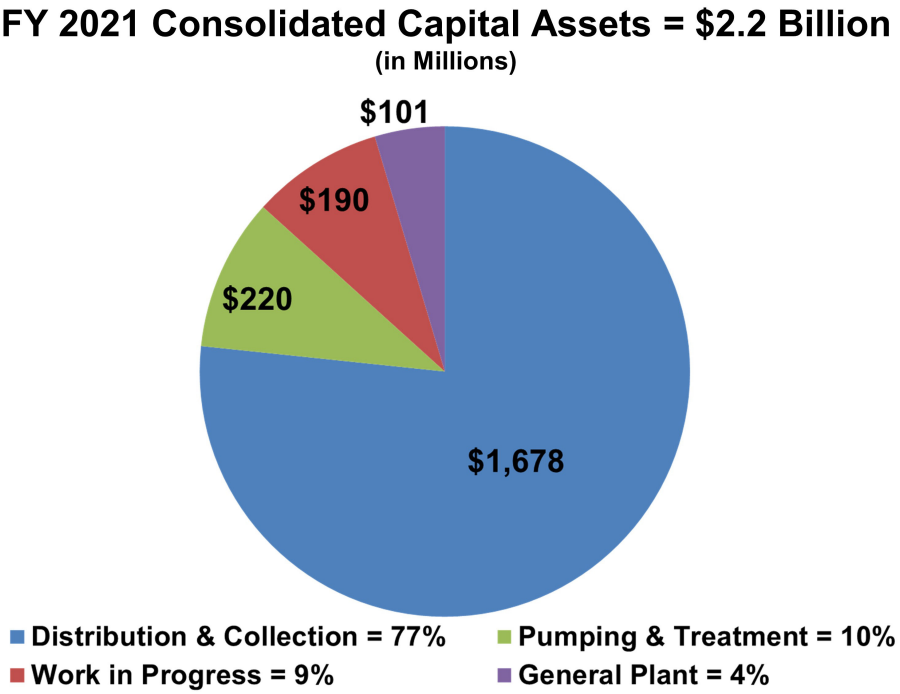


Major capital asset additions during the year were as follows:

- $37.7 million related to wastewater Century II projects
  - $19.7 million for wastewater treatment plant upgrades
  - $8.1 million for pump station construction and improvements
  - $4.1 million for sewer mini-basin rehabilitation and replacement
  - $3.8 million for short line projects
  - $2 million for sewer trunk line rehabilitation and replacement
- $25.4 million for various electric distribution system improvements
- $17.2 million for Grid Modernization and advanced metering, including SCADA system upgrades, for the electric system
- $8.7 million for the construction of gas mains
- $6.9 million for pole replacements for the electric system
- $6.8 million for water main replacements
- $6.5 million for building improvements

Fiscal Year 2021 Compared to Fiscal Year 2020

As of June 30, 2021, KUB had $2.2 billion invested in capital assets, as reflected in the schedule of capital assets, which represents a net increase (including additions, retirements, and depreciation) of $53.4 million or 2.4 percent over the end of the last fiscal year. Spending on capital assets was slowed this year to allow for better financial liquidity in response to the pandemic.



Major capital asset additions during the year were as follows:

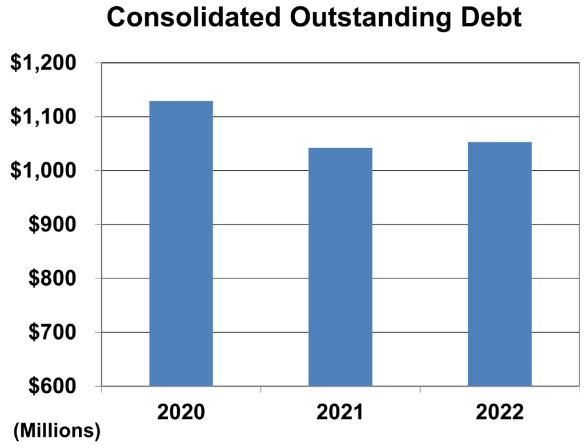
- $35.2 million related to wastewater Century II projects
  - $18.7 million for wastewater treatment plant upgrades
  - $8.6 million for sewer mini-basin rehabilitation and replacement
  - $5.1 million for pump station construction and improvements
  - $1.5 million for short line projects
  - $1.3 million for sewer trunk line rehabilitation and replacement
- $23.9 million for various electric distribution system improvements
- $10.3 million for water main replacements
- $6.9 million for building improvements, including a new Engineering Building
- $6.5 million for the construction of gas mains
- $6.1 million for Grid Modernization and advanced metering, including SCADA system upgrades, for the electric system
- $5.6 million for pole replacements for the electric system

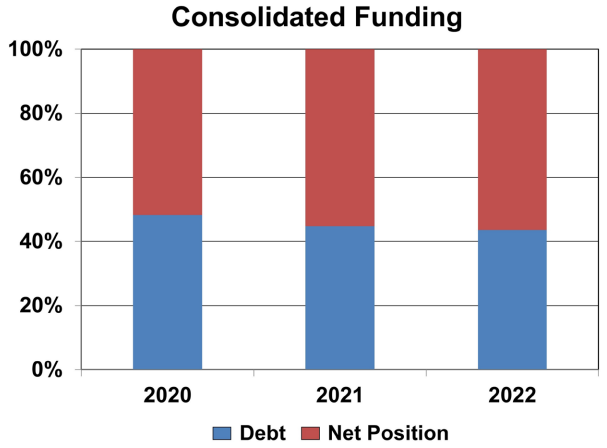
Debt Administration

KUB's outstanding debt was $1.05 billion as of June 30, 2022. Debt as a percentage of capital structure was 43.6 percent in 2022, 44.8 percent in 2021, and 48.3 percent at the end of fiscal year 2020.

Outstanding Debt
As of June 30

(in thousands of dollars)	2022	2021	2020
Revenue bonds	$ 1,053,280	$ 1,042,270	$ 1,128,795
Total outstanding debt	$ 1,053,280	$ 1,042,270	$ 1,128,795





KUB will pay $442.9 million in principal payments over the next ten years, representing 42 percent of outstanding bonds.

Fiscal Year 2022 Compared to Fiscal Year 2021

As of June 30, 2022, KUB had $1.05 billion in outstanding debt (including the current portion of revenue bonds) compared to $1.04 billion last fiscal year, an increase of $11 million. As of June 30, 2022, KUB's weighted average cost of debt was 3.89 percent (3.85 percent including the impact of Build America Bonds rebates).

KUB sold $45.7 million in electric system revenue bonds in April 2022 for the purpose of funding electric system capital improvements. The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.36 percent. The bonds mature over a period of 30 years with a final maturity in fiscal year 2052.

KUB sold $27.2 million in electric system revenue refunding bonds in April 2022 for the purpose of refinancing existing electric system revenue bonds. KUB will realize a total debt service savings of $2 million over the life of the bonds ($1.3 million on a net present value basis).The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.55 percent. The bonds have a final maturity in fiscal year 2046.

KUB sold $14.9 million in water system revenue refunding bonds in April 2022 for the purpose of refinancing existing water system revenue bonds. KUB will realize a total debt service savings of $0.7 million over the

life of the bonds ($0.4 million on a net present value basis). The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.52 percent. The bonds have a final maturity in fiscal year 2045.

KUB sold $11.1 million in wastewater system revenue bonds in April 2022 for the purpose of funding wastewater system capital improvements. The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.4 percent. The bonds mature over a period of 30 years with a final maturity in fiscal year 2051.

KUB sold $23.2 million in wastewater system revenue refunding bonds in April 2022 for the purpose of refinancing existing wastewater system revenue bonds. KUB will realize a total debt service savings of $1.3 million over the life of the bonds ($0.7 million on a net present value basis). The true interest cost of the bonds, which were sold through a competitive bidding process, was 3.69 percent. The bonds have a final maturity in fiscal year 2050.

KUB's outstanding debt is rated by Standard & Poor's and Moody's Investors Service. As of June 30, 2022, Standard & Poor's rated the revenue bonds of the Water Division AAA, the Wastewater Division AA+, the revenue bonds of the Electric Division AA- and the Gas Division AA. Moody's Investors Service rated the bonds of the Water Division Aa1 and the Electric, Gas, and Wastewater Divisions Aa2. Standard & Poor's dropped its Electric Division rating from AA, as a result of KUB's planned expansion of its fiber network to allow for the sale of broadband services within its electric service territory.

Fiscal Year 2021 Compared to Fiscal Year 2020

As of June 30, 2021, KUB had $1.04 billion in outstanding debt (including the current portion of revenue bonds) compared to $1.13 billion last year, a decrease of $86.5 million. As of June 30, 2021, KUB's weighted average cost of debt was 3.88 percent (3.84 percent including the impact of Build America Bonds rebates).

KUB sold $70.2 million in electric system revenue refunding bonds in March 2021 for the purpose of refinancing existing electric system revenue bonds. KUB will realize a total debt service savings of $14.3 million over the life of the bonds ($11.9 million on a net present value basis), with $16.2 million of the savings as a reduction of outstanding principal. The true interest cost of the bonds, which were sold through a competitive bidding process, was 1.91 percent. The bonds have a final maturity in fiscal year 2045.

KUB sold $41.9 million in gas system revenue refunding bonds in March 2021 for the purpose of refinancing existing gas system revenue bonds. KUB will realize a total debt service savings of $7.9 million over the life of the bonds ($7.2 million on a net present value basis), with $7.2 million of the savings as a reduction of outstanding principal. The true interest cost of the bonds, which were sold through a competitive bidding process, was 1.47 percent. The bonds have a final maturity in fiscal year 2033.

KUB sold $9 million in water system revenue bonds in October 2020 for the purpose of funding water system capital improvements. The true interest cost of the bonds, which were sold through a competitive bidding process, was 2.36 percent. The bonds mature over a period of 30 years with a final maturity in fiscal year 2050.

KUB sold $33.2 million in water system revenue refunding bonds in March 2021 for the purpose of refinancing existing water system revenue bonds. KUB will realize a total debt service savings of $10.2 million over the life of the bonds ($9.1 million on a net present value basis), with $8 million of the savings as a reduction of outstanding principal. The true interest cost of the bonds, which were sold through a competitive bidding process, was 1.92 percent. The bonds have a final maturity in fiscal year 2044.

KUB sold $27.5 million in wastewater system revenue bonds in October 2020 for the purpose of funding wastewater system capital improvements. The true interest cost of the bonds, which were sold through a competitive bidding process, was 2.41 percent. The bonds mature over a period of 30 years with a final maturity in fiscal year 2050.

KUB sold $190.8 million in wastewater system revenue refunding bonds in March 2021 for the purpose of refinancing existing wastewater system revenue bonds. KUB will realize a total debt service savings of $47.2 million over the life of the bonds ($41.8 million on a net present value basis), with $47.8 million of the savings as a reduction of outstanding principal. The true interest cost of the bonds, which were sold through a competitive bidding process, was 1.91 percent. The bonds have a final maturity in fiscal year 2049.

KUB's outstanding debt is rated by Standard & Poor's and Moody's Investors Service. As of June 30, 2021, Standard & Poor's rated the revenue bonds of the Water Division AAA, the Wastewater Division AA+, and the revenue bonds of the Electric Division and the Gas Division AA. Moody's Investors Service rated the bonds of the Water Division Aa1 and the Electric, Gas, and Wastewater Divisions Aa2.

Impacts on Future Financial Position

KUB anticipates an increase of 14,325 customers, including 10,500 fiber system customers, during fiscal year 2023.

In May 2022, the Board approved the issuance of electric system revenue bonds to not exceed $79 million, water system revenue bonds to not exceed $11 million, and wastewater system revenue bonds to not exceed $13 million, for the purpose of funding electric, water, and wastewater system capital improvements, respectively. The bonds will be sold through a competitive bidding process during fiscal year 2023.

In March 2020, KUB executed a new Long-Term Partnership Agreement with TVA, extending the term of its five-year evergreen power supply contract with TVA to a 20-year evergreen contract. In return for signing the longer-term agreement with TVA, KUB will receive an annual partnership credit of 3.1% on TVA's wholesale base rates, estimated to be around $9.3 million per year. Among other things, the new partnership agreement also provides KUB with the flexibility to self-generate up to five percent of its annual power supply through renewable sources.

During the period of October 2021 to September 2022, TVA is providing a Pandemic Recovery Credit to local power companies. KUB has excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to provide $6.3 million of emergency utility bill assistance for residential and small business customers and $1 million for home weatherization programs.

As a component of the Fiber Division's start up financing plan, the Electric Division will provide $35 million of interdivisional loans. The first $10 million was provided in October 2021.

The Tennessee Emergency Broadband Fund selected KUB for a grant of $15.3 million to assist in the provision of broadband access to Grainger, Jefferson, Sevier, and Union Counties.

Knox County has committed $2.6 million in a Tennessee Department of Environment and Conservation (TDEC) non-competitive grant and $10 million in direct American Rescue Plan Act (ARPA) funding, and the City of Knoxville has committed $7.5 million in a TDEC non-competitive grant and $5 million in direct ARPA funding each for a total of $25.1 million in grant money. The grants will be used to help fund KUB's new water filter project at its Mark B. Whitaker Water Treatment Plant. The project is scheduled to commence in October 2022 and be completed by June 2025.

KUB long-term debt includes $20.3 million of Wastewater Division 2010 Build America Bond (BABs). The BABs were sold on a taxable basis with the United States Treasury providing a rebate to KUB for a percentage of the interest cost. The interest rebates were subject to federal sequestration during the fiscal year and were reduced by 5.7 percent. Any future actions by Congress may also affect the anticipated rebates for future fiscal years.

The Pension Plan actuarial valuation resulted in an actuarially determined contribution of $2,624,373 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,108,147 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. For the Plan year beginning January 1, 2022, the Plan's actuarial funded ratio is 112.01 percent, and the market value funded ratio is 128.08 percent.

The OPEB Plan actuarial valuation resulted in an actuarially determined contribution of $1,413,392 for the fiscal year ending June 30, 2023, based on the Plan's current funding policy. Subsequent to June 30, 2022, an actuarial valuation was completed and resulted in an actuarially determined contribution of $1,187,768 for the fiscal year ending June 30, 2024, based on the Plan's current funding policy. The Plan's actuarial funded ratio is 94.75 percent, and the market value funded ratio is 103.07 percent.

GASB Statement No. 91, *Conduit Debt Obligations*, is effective for fiscal years beginning after December 15, 2021. GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 99, *Omnibus 2022*, is effective for fiscal years beginning after June 15, 2022. GASB Statement No. 100, *Accounting Changes and Error Corrections – An Amendment of GASB No. 62,* is effective for fiscal years beginning after June 15, 2023. GASB Statement No. 101, *Compensated Absences,* is effective for fiscal years beginning after December 15, 2023. KUB has not elected early implementation of these standards and has not completed the process of evaluating the impact of these statements on its financial statements.

No other facts, decisions, or conditions are currently known which would have a significant impact on KUB's financial position or results of operations during fiscal year 2022.

Financial Contact

KUB's financial statements are designed to present users (citizens, customers, investors, and creditors) with a general overview of KUB's financial position and results of operations for the fiscal years ended June 30, 2022, and 2021. If you have questions about the statements or need additional financial information, contact KUB's Chief Financial Officer at 445 South Gay Street, Knoxville, Tennessee 37902.

Knoxville Utilities Board
Consolidated Statements of Net Position
June 30, 2022 and 2021

	2022	2021 as restated
Assets and Deferred Outflows of Resources		
Current assets:		
Cash and cash equivalents	$ 146,776,546	$ 119,377,875
Short-term contingency fund investments	20,236,852	75,997,614
Other current assets	1,593,637	1,299,611
Accrued interest receivable	33,990	6,782
Accounts receivable, less allowance of uncollectible accounts of $773,791 in 2022 and $684,529 in 2021	89,053,689	79,806,900
Current portion of lease receivable	516,649	341,368
Inventories	19,032,578	15,194,524
Prepaid expenses	1,085,686	919,217
Gas storage	9,867,611	6,459,730
Total current assets	288,197,238	299,403,621
Restricted assets:		
Bond funds	35,073,534	33,585,649
Other funds	1,515	1,515
Unused bond proceeds	1,298,143	-
Total restricted assets	36,373,192	33,587,164
Plant in service	3,149,275,765	2,999,084,673
Less accumulated depreciation	(1,057,804,184)	(999,438,900)
	2,091,471,581	1,999,645,773
Retirement in progress	2,363,210	3,370,207
Construction in progress	159,390,109	186,137,702
Net plant in service	2,253,224,900	2,189,153,682
Intangible assets:		
Intangible right of use asset	4,587,687	891,905
Less accumulated amortization	(689,074)	(421,047)
Net intangible assets	3,898,613	470,858
Other assets:		
Net pension asset	64,137,714	45,099,288
Net OPEB asset	-	5,931,828
Long-term contingency fund investments	92,549,625	35,024,905
Long-term lease receivable	3,972,652	3,183,336
TVA conservation program receivable	575,535	1,103,185
Under recovered purchased power cost	2,382,423	-
Under recovered purchased gas cost	-	1,371,776
Other	10,181,850	10,250,096
Total other assets	173,799,799	101,964,414
Total assets	2,755,493,742	2,624,579,740
Deferred outflows of resources:		
Pension outflow	7,842,910	8,251,618
OPEB outflow	5,209,694	21,401
Unamortized bond refunding costs	14,687,019	15,733,160
Total deferred outflows of resources	27,739,623	24,006,179
Total assets and deferred outflows of resources	$ 2,783,233,365	$ 2,648,585,919

The accompanying notes are an integral part of these consolidated financial statements.

Knoxville Utilities Board
Consolidated Statements of Net Position
June 30, 2022 and 2021

	2022	2021 as restated
Liabilities, Deferred Inflows, and Net Position		
Current liabilities:		
Current portion of revenue bonds	$ 42,765,000	$ 42,545,000
Current portion of lease liability	844,904	377,192
Sales tax collections payable	1,552,467	1,393,779
Accounts payable	96,628,151	78,611,167
Accrued expenses	30,689,445	24,220,522
Customer deposits plus accrued interest	23,259,401	21,157,409
Accrued interest on revenue bonds	12,731,785	11,831,762
Total current liabilities	208,471,153	180,136,831
Other liabilities:		
TVA conservation program	613,757	1,158,556
Accrued compensated absences	10,759,104	10,341,485
Customer advances for construction	10,681,887	10,373,106
Lease liability	3,215,556	93,666
Net pension liability	-	18,714
Net OPEB liability	11,202,507	-
Over recovered purchased power cost	-	427,351
Over recovered purchased gas cost	4,188,264	-
Other	244,656	225,278
Total other liabilities	40,905,731	22,638,156
Long-term debt:		
Revenue bonds	1,010,515,000	999,725,000
Unamortized premiums/discounts	114,402,894	112,620,811
Total long-term debt	1,124,917,894	1,112,345,811
Total liabilities	1,374,294,778	1,315,120,798
Deferred inflows of resources:		
Pension inflow	39,528,961	36,182,182
Unamortized bond refunding costs	1,531,357	154,540
OPEB inflow	-	7,958,606
Lease inflow	4,413,743	3,524,704
Total deferred inflows of resources	45,474,061	47,820,032
Total liabilities and deferred inflows of resources	1,419,768,839	1,362,940,831
Net position		
Net investment in capital assets	1,098,926,697	1,049,323,580
Restricted for:		
Debt service	22,341,750	21,753,887
Other	1,515	1,515
Unrestricted	242,194,564	214,566,106
Total net position	1,363,464,526	1,285,645,088
Total liabilities, deferred inflows, and net position	$ 2,783,233,365	$ 2,648,585,919

The accompanying notes are an integral part of these consolidated financial statements.

Knoxville Utilities Board
Consolidated Statements of Revenues, Expenses and Changes in Net Position
June 30, 2022 and 2021

	2022	2021 as restated
Operating revenues		
Electric	$ 598,122,439	$ 546,203,686
Gas	141,525,161	115,048,002
Water	63,819,881	61,180,163
Wastewater	102,302,391	99,858,521
Total operating revenues	905,769,872	822,290,371
Operating expenses		
Purchased power	434,366,317	390,194,970
Purchased gas	77,975,231	52,104,072
Treatment	18,999,493	17,097,542
Fiber products and promotions	909,955	-
Distribution and collection	77,354,703	69,388,270
Customer service	15,200,264	14,033,361
Administrative and general	36,438,188	31,085,812
Depreciation and amortization	87,288,047	90,487,696
Taxes and tax equivalents	37,964,437	37,447,961
Total operating expenses	786,496,635	701,839,684
Operating income	119,273,237	120,450,687
Non-operating revenues (expenses)		
Contributions in aid of construction	5,753,345	5,092,513
Interest income	1,107,621	837,185
Interest expense	(40,058,015)	(41,826,881)
Amortization of debt costs	4,183,347	1,346,562
Write-down of plant for costs recovered through contributions	(5,753,345)	(5,092,513)
Other	(8,324,453)	(6,264,127)
Total non-operating revenues (expenses)	(43,091,500)	(45,907,262)
Change in net position before capital contributions	76,181,737	74,543,426
Capital contributions	1,637,701	982,990
Change in net position	77,819,438	75,526,416
Net position, beginning of year	1,285,645,088	1,210,118,672
Net position, end of year	$ 1,363,464,526	$ 1,285,645,088

The accompanying notes are an integral part of these consolidated financial statements.

Knoxville Utilities Board
Consolidated Statements of Cash Flows
June 30, 2022 and 2021

	2022	2021 as restated
Cash flows from operating activities:		
Cash receipts from customers	$ 894,545,730	$ 815,275,412
Cash receipts from other operations	11,513,747	14,289,365
Cash payments to suppliers of goods or services	(596,545,327)	(527,450,829)
Cash payments to employees for services	(65,895,305)	(65,242,719)
Payment in lieu of taxes	(32,447,067)	(32,469,103)
Cash receipts from collections of TVA conservation loan program participants	581,728	917,979
Cash payments for TVA Conservation loan program	(598,877)	(952,757)
Net cash provided by operating activities	211,154,629	204,367,348
Cash flows from capital and related financing activities:		
Net proceeds from bond issuance	62,023,967	39,682,480
Principal paid on revenue bonds	(42,545,000)	(43,885,000)
Increase in unused bond proceeds	(1,298,143)	-
Interest paid on revenue bonds and lease liabilities	(39,157,992)	(44,690,800)
Acquisition and construction of plant	(163,237,990)	(157,774,379)
Changes in bond funds, restricted	(1,487,885)	2,405,906
Customer advances for construction	843,152	957,757
Proceeds received on disposal of plant	388,899	519,515
Principal paid on lease liabilities	(604,425)	(421,047)
Cash received from developers and individuals for capital purposes	5,753,345	5,092,513
Net cash used in capital and related financing activities	(179,322,072)	(198,113,055)
Cash flows from investing activities:		
Purchase of investment securities	(81,164,257)	(50,151,769)
Maturities of investment securities	75,680,769	62,155,073
Interest received	1,047,141	1,099,825
Other property and investments	2,461	574,933
Net cash (used in) provided by investing activities	(4,433,886)	13,678,062
Net increase in cash and cash equivalents	27,398,671	19,932,355
Cash and cash equivalents, beginning of year	119,377,875	99,445,520
Cash and cash equivalents, end of year	$ 146,776,546	$ 119,377,875
Reconciliation of operating income to net cash provided by operating activities		
Operating income	$ 119,273,237	$ 120,450,687
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization expense	90,320,015	93,650,430
Changes in operating assets and liabilities:		
Accounts receivable	(9,246,789)	(3,111,967)
Lease receivable	(964,597)	(3,524,705)
Inventories	(3,838,054)	155,432
Prepaid expenses	(3,574,350)	(215,202)
TVA conservation program receivable	527,650	830,613
Other assets	(306,358)	92,796
Sales tax collections payable	158,688	18,455
Accounts payable and accrued expenses	14,478,351	(1,263,020)
TVA conservation program payable	(544,799)	(865,392)
Unrecovered purchased power cost	(2,809,774)	(1,421,279)
Underrecovered gas costs	5,560,040	141,658
Customer deposits plus accrued interest	2,101,992	(533,047)
Other liabilities	19,377	(38,111)
Net cash provided by operating activities	$ 211,154,629	$ 204,367,348
Noncash capital activities:		
Acquisition of plant assets through developer contributions	$ 1,637,701	$ 982,990
Record intangible right of use asset and lease liability	$ 4,194,029	$ 891,905

The accompanying notes are an integral part of these consolidated financial statements.

1. Description of Business

Knoxville Utilities Board (KUB), comprised of the Electric Division, Fiber Division, Gas Division, Water Division, and Wastewater Division (Divisions), is reported as a component unit enterprise fund in the financial statements of the City of Knoxville. KUB's responsibility is to oversee the purchase, production, distribution, and processing of electricity, broadband, natural gas, water, and wastewater services. A seven-member Board of Commissioners (Board) governs KUB. The Board has all powers to construct, acquire, expand, and operate the Divisions. It has full control and complete jurisdiction over the management and operation of the Divisions, including setting rates. KUB's accounts are maintained in conformity with the Uniform System of Accounts of the Federal Energy Regulatory Commission (FERC), the Uniform System of Accounts of the National Association of Regulatory Utility Commissioners (NARUC), and the Governmental Accounting Standards Board (GASB), as applicable.

2. Significant Accounting Policies

Basis of Accounting

In conformity with Generally Accepted Accounting Principles (GAAP), KUB follows the provisions of GASB Statement No. 34 (Statement No. 34), *Financial Statements – and Management's Discussion and Analysis – for State and Local Governments,* as amended by GASB Statement No. 63 (Statement No. 63), *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position.* Statement No. 34 established standards for external financial reporting for all state and local governmental entities. Under Statement No. 63, financial statements include deferred outflows of resources and deferred inflows of resources, in addition to assets and liabilities, and report *net position* instead of net assets. In addition, KUB follows GASB Statement No. 62 (Statement No. 62), *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements,* as it relates to certain items for regulatory accounting. Regulatory accounting allows a regulated utility to defer a cost (a regulatory asset) or recognize an obligation (a regulatory liability) if it is probable that through the rate making process, there will be a corresponding increase or decrease in future revenues. Accordingly, KUB has recognized certain regulatory assets and regulatory liabilities in the accompanying Statements of Net Position.

The consolidated financial statements are prepared on the accrual basis of accounting, whereby revenues are recognized when earned and expenses are recognized when incurred. The accounting and financial reporting treatment applied is determined by measurement focus. The transactions are accounted for on a flow of economic resources measurement focus. With this measurement focus, all assets and all liabilities associated with the operations are included on the Statement of Net Position. Net position (i.e., total assets and deferred outflows of resources net of total liabilities and deferred inflows of resources) is segregated into net investment in capital assets, restricted for capital activity and debt service, and unrestricted components.

Recently Adopted New Accounting Pronouncements

In June 2017, the GASB issued GASB Statement No. 87 (Statement No. 87), *Leases*. This Statement requires recognition of certain assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. Under this Statement, a lessee is required to recognize an intangible right of use asset and a lease liability. Statement No. 87 is effective for fiscal years beginning after June 15, 2021. Adoption of this Statement is reflected on KUB's financial statements.

In June 2018, the GASB issued GASB Statement No. 89 (Statement No. 89), *Accounting for Interest Cost Incurred Before the End of a Construction Period.* The objectives of this Statement are to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period, and to simplify accounting for interest cost incurred before the end of a construction period. Statement No. 89 is effective for fiscal years beginning after December 15, 2020. Adoption of this Statement did not have a significant impact on KUB's financial statements.

In January 2020, the GASB issued GASB Statement No. 92 (Statement No. 92), *Omnibus 2020.* The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. Certain provisions of Statement No. 92 were effective immediately. Paragraphs 6, 7, 8, 9, and 12 are effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on KUB's financial statements.

In March 2020, the GASB issued GASB Statement No. 93 (Statement No. 93), *Replacement of Interbank Offered Rates.* This Statement establishes accounting and financial reporting requirements related to the replacement of IBORs in hedging derivative instruments and leases. It also identifies appropriate benchmark interest rates for hedging derivative instruments. Statement No. 93 is effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on KUB's financial statements.

In June 2020, the GASB issued GASB Statement No. 97 (Statement No. 97), *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans.* The objectives of this Statement are to (a) increase consistency and comparability related to the reporting of fiduciary component units in circumstances in which a potential component unit does not have a governing board and the primary government performs the duties that a governing board typically would perform; (b) mitigate costs associated with the reporting of certain defined contribution pension plans, defined contribution other postemployment benefit (OPEB) plans, and employee benefit plans other than pension plans or OPEB plans (other employee benefit plans) as fiduciary component units in fiduciary fund financial statements; and (c) enhance the relevance, consistency, and comparability of the accounting and financial reporting for Internal Revenue Code (IRC) Section 457 deferred compensation plans (Section 457 plans) that meet the definition of a pension plan and for benefits provided through those plans. Statement No. 97 is effective for fiscal years beginning after June 15, 2021. Adoption of this Statement did not have a significant impact on KUB's financial statements.

In October 2021, the GASB issued GASB Statement No. 98 (Statement No.98), *The Annual Comprehensive Financial Report.* This Statement replaces the term *comprehensive annual financial report* with *annual comprehensive financial report.* Statement No. 98 is effective for fiscal years ending after December 15, 2021. Adoption of this Statement did not have a significant impact on KUB's financial statements.

Principles of Consolidation

The consolidated financial statements include the accounts of the Electric, Fiber, Gas, Water, and Wastewater Divisions. All significant intercompany balances and transactions have been eliminated in consolidation.

KUB issues separate financial reports, which include financial statements and required supplementary information, for the Electric, Fiber, Gas, Water, and Wastewater Divisions. These reports may be obtained by writing Knoxville Utilities Board, P.O. Box 59017, Knoxville, TN 37950-9017.

Plant
Plant and other property are stated on the basis of original cost. The costs of current repairs and minor replacements are charged to operating expense. The costs of renewals and improvements are capitalized. The original cost of utility plant assets retired or otherwise disposed of and the cost of removal less salvage value is charged to accumulated depreciation. When other property is retired, the related asset and accumulated depreciation are removed from the accounts, and the gain or loss is included in the results of operations.

The provision for depreciation of plants in service is based on the estimated useful lives of the assets, which range from three to sixty-seven years, and is computed using the straight-line method. Pursuant to FERC/NARUC, the caption "Depreciation and amortization" in the consolidated Statements of Revenues, Expenses and Changes in Net Position does not include depreciation for transportation equipment of $3,031,968 in fiscal year 2022 and $3,162,734 in fiscal year 2021.

Operating Revenue
Operating revenue consists primarily of charges for services provided by the principal operations of KUB. Operating revenue is recorded when the service is rendered, on a cycle basis, and includes an estimate of unbilled revenue. Revenues are reported net of bad debt expense of $2,529,796 in fiscal year 2022 and $2,814,225 in fiscal year 2021.

Non-operating Revenue
Non-operating revenue consists of revenues that are related to financing and investing types of activities and result from non-exchange transactions or ancillary activities.

Expense
When an expense is incurred for purposes for which there are both restricted and unrestricted assets available, it is KUB's policy to apply those expenses to restricted assets to the extent such are available and then to unrestricted assets.

Net Position
GASB Statement No. 63 requires the classification of net position into three components – net investment in capital assets, net position-restricted, and net position-unrestricted.

These classifications are defined as follows:

- Net investment in capital assets – This component of net position consists of capital assets and intangible assets, including restricted capital assets, net of accumulated depreciation and amortization, and reduced by the outstanding balances of any bonds, mortgages, notes, lease liabilities, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt also should be included in this component of net position. If there are significant unspent related debt proceeds at year end, the portion of the debt attributable to the unspent proceeds are not included in the calculation of net investment in capital assets. Rather, that portion of the debt is included in the same net position component as the unspent proceeds.

- Net position-restricted – This component of net position consists of restricted assets reduced by liabilities and deferred inflows of resources related to those assets. Generally, a liability relates to restricted assets if the asset results from a resource flow that also results in the recognition of a liability or if the liability will be liquidated with the restricted assets reported.

- Net position-unrestricted – This component of net position consists of assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position.

Contributions in Aid of Construction and Capital Contributions

Contributions in aid of construction are cash collections from customers or others for a particular purpose, generally the construction of new facilities to serve new customers in excess of the investment KUB is willing to make for a particular incremental revenue source. KUB reduces the plant account balances to which contributions relate by the actual amount of the contribution and recognizes the contributions as non-operating revenue in accordance with Statement No. 62.

Capital contributions represent contributions of utility plant infrastructure constructed by developers and others in industrial parks and other developments and transferred to KUB upon completion of construction and the initiation of utility service. In accordance with GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions*, such contributions are recognized as revenues and capital assets upon receipt.

Inventories

Inventories, consisting of plant materials and operating supplies, are valued at the lower of average cost or replacement value.

OPEB Trust

KUB's OPEB Trust was established by KUB's Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. Effective January 1, 2022, the Plan was expanded to include two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement, given that each eligible employee meets the "Rule of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

KUB's policy is to fully fund the annual actuarially determined contributions, which are determined by actuarial valuation. As required by GASB Statement No. 75, KUB measures net OPEB liability as total OPEB liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a June 30, 2022, and 2021, measurement date, respectively. The net OPEB liability is $11,202,507 as of June 30, 2022, and the net OPEB asset was $5,931,828 as of June 30, 2021.

Pension Plan and Qualified Excess Benefit Arrangement

KUB's employees are participants in the Knoxville Utilities Board Pension Plan as authorized by the Charter of the City of Knoxville §1107(J) (Note 10). KUB's policy is to fully fund the annual actuarially determined contributions. As required by GASB Statement No. 68, KUB measures net pension liability as total pension liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. The net pension asset is $64,137,714 as of June 30, 2022, and $45,099,288 as of June 30, 2021.

KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single-employer defined benefit pension plan, administered by KUB (Note 11). As required by GASB Statement No. 73, KUB measures the total pension liability of the QEBA. The amounts reported as of June 30, 2022, and 2021, must be based upon a plan measurement date within the prior twelve

months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022. The total pension liability of the QEBA was $18,714 as of June 30, 2021.

Investments
Investments are carried at fair value as determined by quoted market prices at the reporting date.

Self-Insurance
KUB has established self-insurance programs covering portions of workers' compensation, employee health, environmental liability, general liability, property and casualty liability, and automobile liability claims. A liability is accrued for claims as they are incurred. When applicable, claims in excess of the self-insured risk are covered by KUB's insurance carrier. Additionally, KUB provides certain lifetime health benefits to eligible retired employees under a self-insurance plan administered by a third party.

Estimates
The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates are based on historical experience and various other assumptions that KUB believes are reasonable under the circumstances. However, future events are subject to change and the best estimates and judgments routinely require adjustment. Estimates are used for, but not limited to, inventory valuation, allowance for uncollectible accounts, depreciable lives of plant assets, unbilled revenue volumes, pension trust valuations, OPEB trust valuations, insurance liability reserves, and potential losses from contingencies and litigation. Actual results could differ from those estimates.

Restricted and Designated Assets
Certain assets are restricted by bond resolutions for the construction of utility plant and debt repayment. Certain additional assets are designated by management for contingency purposes and economic development.

Cash Equivalents
For purposes of the Statements of Cash Flows, KUB considers all unrestricted and undesignated highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

Leases
KUB determines if an arrangement is or contains a lease at contract inception and recognizes an intangible right of use asset and a lease liability at the lease commencement date. Subsequently, the intangible right of use asset is amortized on a straight-line basis over its useful life. KUB also enters into agreements, as lessor, to lease office space or property, recognizing a lease receivable and a deferred inflow of resources. The lease term includes the noncancelable period of the lease plus an additional period covered by either an option to extend or not to terminate the lease that the lessee is reasonably certain to exercise, or an option to extend or not to terminate the lease controlled by the lessor. KUB uses its estimated incremental borrowing rate as the discount rate for leases.

KUB monitors for events or changes in circumstances that require a reassessment of its leases. When a reassessment results in the remeasurement of a lease liability, a corresponding adjustment is made to the carrying amount of the intangible right of use asset.

Deferred Outflows and Inflows of Resources

Deferred outflows of resources are items related to the acquisition of assets or related debt which are amortized over the life of the asset or debt. Deferred inflows of resources are items related to the acquisition of assets or related debt which are amortized over the life of the asset or debt. KUB records costs associated with the gain or loss on refunding of debt as either a deferred outflow or inflow based on the parameters of Statement No. 65. Deferred outflows of resources also include employer pension contributions made subsequent to the measurement date of the net pension liability and before the end of the employer's reporting period in accordance with Statement No. 71. Deferred inflows and deferred outflows also include the net difference between projected and actual earnings on pension plan investments and OPEB plan investments, differences between expected and actual experience, and changes in assumptions in accordance with Statements No. 68, 73, and 75. Deferred inflows are also recorded at the commencement of the lease term and recognized as revenue over the course of the lease in accordance with Statement No. 87.

Debt Premium/Discount

KUB records unamortized premium and discount on debt as a separate line item in the Long-Term Debt section of the Financial Statements. Amortization of these amounts is recorded over the life of the applicable debt as amortization expense.

Debt Issuance Costs

In accordance with regulatory accounting, KUB records debt issuance costs as an Other Asset. Amortization of these amounts is recorded over the life of the applicable debt as amortization expense.

Deferred Gain/Loss on Refunding of Debt

KUB records costs associated with the gain or loss on refunding of debt as either a deferred outflow or inflow based on the parameters of Statement No. 65. In accordance with FERC presentation, amortization of these amounts is recorded over the life of the applicable debt as amortization expense.

Compensated Absences

KUB accrues a liability for earned but unpaid paid time off (PTO) days.

TVA Conservation Program

KUB previously served as a fiscal intermediary for the Tennessee Valley Authority (TVA), whereby loans were made to KUB customers by TVA to be used in connection with TVA's Energy Right Residential Program. While KUB still holds existing loans on behalf of TVA, no loans were made through this program after October 31, 2015.

Restatement for GASB 87

During fiscal year 2022, KUB adopted GASB Statement No. 87, *Leases* (GASB 87) using a full retrospective approach. GASB 87 requires a lessee to recognize an intangible right of use asset and a lease liability, and a lessor to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information regarding leasing activities. Accordingly, the accompanying financial statements, as of and for the year ended June 30, 2021, have been restated for the change, which did not have an impact on the net position.

As lessee and as a result of adopting GASB 87, as of June 30, 2021, KUB recorded total intangible right of use assets of $891,905 with accumulated amortization of $421,047 and recognized total lease liabilities of $470,858 ($377,192 current). KUB also reclassified $64,902 from rent expense shown in customer service expense and $366,895 from rent expense shown in administrative and general expense to $421,047 as amortization expense and $10,750 as interest expense.

Related to lease agreements where KUB is the lessor, as a result of adopting GASB 87, as of June 30, 2021, KUB recognized lease receivables of $3,524,704 ($341,368 current) with a corresponding

deferred inflow of resources of $3,524,704. KUB also reclassified $8,398 from rent revenue shown in other operating revenues to interest income.

Additional disclosures, as well as other reclassifications in the statement of cash flows, also resulted from the adoption of GASB 87.

Subsequent Events

As a component of the 2023 fiscal year budget, a $7 million loan was initiated from the Electric Division to the Fiber Division as the second installment of the proposed $35 million total loan. The interdivisional loan was approved by TVA and was recorded in August 2022.

Purchased Power Adjustment

In October 2002, the Board adopted a Purchased Power Adjustment (PPA) to address changes in wholesale power costs. The PPA was established in response to an amendment to KUB's power supply contract under which, among other things, TVA relinquished its regulatory authority over KUB retail electric rates. The PPA allows KUB to promptly adjust retail electric rates in response to wholesale rate changes or adjustments, thus ensuring that KUB will recover the costs incurred for purchased power. These changes in electric costs are reflected as adjustments to the base electric rates established by the Board. The rate-setting authority vested in the Board by the City Charter meets the "self-regulated" provisions of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, and KUB meets the remaining criteria of Statement No. 62.

TVA implemented a fuel cost adjustment in October 2006 applied on a quarterly basis to wholesale power rates. TVA's quarterly fuel cost adjustment became a monthly fuel cost adjustment effective October 2009. KUB flows changes to wholesale power rates from TVA's fuel cost adjustment mechanism directly through to its retail electric rates via the PPA.

In April 2011, TVA modified its wholesale rate structure to demand and energy billing for its distributors. In response, KUB revised its PPA to include a deferred accounting component to ensure appropriate matching of revenue and expense and cost recovery. KUB will adjust its retail rates on an annual basis to flow any over or under recovery of wholesale power costs through to its customers via the PPA.

During the period of October 2020 to September 2021, TVA provided a Pandemic Relief Credit to local power companies. KUB excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to assist customers in need of financial assistance due to the pandemic. $6,550,000 was made available to residential and small business customers through the COVID Utility Relief Effort (CURE) fund.

During the period of October 2021 to September 2022, TVA is providing a Pandemic Recovery Credit to local power companies. KUB has excluded the Standard Service portion of this credit from the Purchased Power Adjustment in order to assist customers in need of financial assistance due to the pandemic, making $7,300,000 available to residential and small business customers.

Under the PPA mechanism, KUB tracks the actual over/(under) recovered amount in the Over/(Under) Recovered Purchased Power Cost accounts. These accounts are rolled into the PPA rate adjustments thereby assuring that any over/(under) recovered amounts are promptly passed on to KUB's electric customers. The amount of over/(under) recovered cost was ($2,382,423) as of June 30, 2022, and $427,351 as of June 30, 2021.

Purchased Gas Adjustment

In November 1990, the Board implemented a deferred Purchased Gas (Cost) Adjustment (PGA) mechanism, which allows KUB to flow changes in purchased gas costs through to its customers. These changes in gas costs are reflected as adjustments to the base gas rates established by the

Board. The rate-setting authority vested in the Board by the City Charter meets the "self-regulated" provisions of GASB Statement No. 62 (Statement No. 62), *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*.

The PGA is intended to ensure that KUB recovers the total cost of natural gas purchased, transported and/or reserved for delivery to its sales and transportation customers on an equitable basis. The PGA is also intended to ensure that no excess or deficient cost recovery from KUB's customers occurs.

Under the PGA mechanism, KUB tracks the actual over/(under) recovered amount in the Over/(Under) Recovered Purchased Gas Cost accounts. These accounts are rolled into the PGA rate adjustment on June 30 of each year thereby ensuring that any over/(under) recovered amounts are passed on to KUB's gas system customers. The amount of over/(under) recovered cost was $4,188,264 as of June 30, 2022, and ($1,371,776) as of June 30, 2021.

Recently Issued Accounting Pronouncements

In May 2019, the GASB issued GASB Statement No. 91 (Statement No. 91), *Conduit Debt Obligations.* The objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. Statement No. 91 is effective for fiscal years beginning after December 15, 2021.

In March 2020, the GASB issued GASB Statement No. 94 (Statement No. 94), *Public-Private and Public-Public Partnerships and Availability Payment Arrangements.* The objective of this Statement is to better meet the information needs of financial statement users by improving the comparability of financial statements among governments that enter in PPPs and APAs. Statement No. 94 is effective for fiscal years beginning after June 15, 2022.

In May 2020, the GASB issued GASB Statement No. 96 (Statement No. 96), *Subscription-Based Information Technology Arrangements.* The objective of this Statement is to better meet the information needs of financial statement users by (a) establishing uniform accounting and financial reporting requirements for SBITAs; (b) improving the comparability of financial statements among governments that have entered into SBITAs; and (c) enhancing the understandability, reliability, relevance, and consistency of information about SBITAs. Statement No. 96 is effective for fiscal years beginning after June 15, 2022.

In April 2022, the GASB issued GASB Statement No. 99 (Statement No. 99), *Omnibus 2022.* The objectives of this Statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements and accounting and financial reporting for financial guarantees. Paragraphs 26-32 were effective immediately. Paragraphs 11-25 are effective for fiscal years beginning after June 15, 2022. Paragraphs 4-10 are effective for fiscal years beginning after June 15, 2023.

In June 2022, the GASB issued GASB Statement No. 100 (Statement No. 100), *Accounting Changes and Error Corrections – An Amendment of GASB Statement No. 62.* The objective of this Statement is to enhance accounting and financial reporting requirements for accounting changes and error corrections to provide more understandable, reliable, relevant, consistent, and comparable information for making decisions or assessing accountability. Statement No. 100 is effective for fiscal years beginning after June 15, 2023.

In June 2022, the GASB issued GASB Statement No. 101 (Statement No. 101), *Compensated Absences.* The objective of this Statement is to better meet the information needs of financial statement users by updating the recognition and measurement guidance for compensated absences. Statement No. 101 is effective for fiscal years beginning after December 15, 2023.

KUB has not elected early implementation of these standards and has not completed the process of evaluating the impact of these statements on its financial statements.

3. Deposits and Investments

KUB follows the provisions of Statement No. 40 of the Governmental Accounting Standards Board, *Deposit and Investment Risk Disclosures—an amendment of GASB Statement No. 3*. This Statement establishes and modifies disclosure requirements for state and local governments related to deposit and investment risks. KUB classifies its fair value measurements within the fair value hierarchy established by Statement No. 72 of the Governmental Accounting Standards Board, *Fair Value Measurement and Application*.

KUB's investment policy provides the framework for the administration and investment of cash deposits. The investment policy follows Tennessee State law and defines the parameters under which KUB funds should be invested. State law authorizes KUB to invest in obligations of the United States Treasury, its agencies and instrumentalities; certificates of deposit; repurchase agreements; money market funds; and the State Treasurer's Investment Pool.

Interest Rate Risk. KUB's primary investment objectives are to place investments in a manner to ensure the preservation of capital, remain sufficiently liquid to meet all operating requirements, and maximize yield of return. KUB minimizes its exposure to interest rate risk by adhering to Tennessee State law requirements for the investment of public funds. This includes limiting investments to those types described above and limiting maturity horizons. The maximum maturity is four years from the date of investment. KUB also limits its exposure by holding investments to maturity unless cash flow requirements dictate otherwise.

Credit Risk. KUB's investment policy, as required by state law, is to apply the prudent-person rule: Investments are made with judgment and care, under circumstances then prevailing, which persons of prudence, discretion, and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable income to be derived, as well as the probable safety of their capital.

Custodial Credit Risk. KUB's investment policy limits exposure to custodial credit risk by restricting investments to a standard set forth by state law. All deposits in excess of federal depository insurance limits are collateralized with government securities held in KUB's name by a third-party custodian bank(s) acting as KUB's agent(s), or through the State of Tennessee's collateral pool. Financial institutions that participate in the collateral pool are subject to special assessment; therefore, the deposits are considered insured. A portion of KUB's investments is generally held in the State of Tennessee Local Government Investment Pool (LGIP). The LGIP is a part of the State Pooled Investment Fund and is sponsored by the State of Tennessee Treasury Department. Tennessee Code Annotated ¶9-4-701 *et seq*. authorizes local governments to invest in the LGIP. None of KUB's investments are exposed to custodial credit risk.

Classification of deposits and investments per Statement of Net Position:

	2022	2021
Current assets		
Cash and cash equivalents	$ 146,776,546	$ 119,377,875
Short-term investments	-	-
Short-term contingency fund investments	20,236,708	75,997,124
Other current assets	-	-
Other assets		
Long-term investments	-	-
Long-term contingency fund investments	92,390,868	34,899,420
Restricted assets		
Unused bond proceeds	1,298,143	-
Bond fund	35,073,534	33,585,649
Other funds	1,515	1,515
	$ 295,777,314	$ 263,861,583

The above amounts do not include accrued interest of $158,901 in fiscal year 2022 and $125,975 in fiscal year 2021. Interest income is recorded on an accrual basis.

Investments and maturities of KUB's deposits and investments as held by financial institutions as of June 30, 2022:

	Deposit and Investment Maturities (in Years)		
	Fair Value	Less Than 1	1-5
Supersweep NOW and Other Deposits	$ 172,586,663	$ 172,586,663	$ -
State Treasurer's Investment Pool	17,584,151	17,584,151	-
Agency Bonds	112,446,760	20,055,892	92,390,868
	$ 302,617,574	$ 210,226,706	$ 92,390,868

KUB categorizes its fair value measurements within the fair value hierarchy established by Statement No. 72 of the Governmental Accounting Standards Board, *Fair Value Measurement and Application*. The hierarchy is based on the valuation inputs used to measure the fair value of an asset with a maturity at purchase of greater than one year. 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.

KUB has the following recurring fair value measurements as of June 30, 2022:

- U.S. Agency bonds of $92,390,868, which have a maturity at purchase of greater than one year, are valued using quoted market prices (Level 1 inputs)

KUB measures investments with a maturity at purchase of one year or less at amortized cost, which is considered a fair value equivalent due to their nature. Investments in the State Treasurer's Investment Pool are measured at net asset value (NAV) per share.

4. Accounts Receivable

Accounts receivable consists of the following:

	2022	2021
Wholesale and retail customers		
Billed services	$ 51,992,050	$ 48,400,501
Unbilled services	35,838,200	29,315,698
Other	1,997,230	2,775,230
Allowance for uncollectible accounts	(773,791)	(684,529)
	$ 89,053,689	$ 79,806,900

5. Accounts Payable and Accruals

Accounts payable and accruals consist of the following:

	2022	2021
Trade accounts	$ 96,628,151	$ 78,611,167
Salaries and wages	1,296,808	3,960,533
Advances on pole rental	1,393,933	1,379,998
Self-insurance liabilities	2,252,221	1,936,244
Other current liabilities	25,746,483	16,943,747
	$ 127,317,596	$ 102,831,689

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6. Long-Term Obligations

	Balance June 30, 2021	Additions	Payments	Defeased	Balance June 30, 2022	Amounts Due Within One Year
Electric						
AA-2012 - 3.0 - 5.0%	$ 3,270,000	$ -	$ 3,270,000	-	$ -	$ -
BB-2012 - 3.0 - 4.0%	825,000	-	825,000	-	-	-
CC-2013 - 3.0 - 4.0%	540,000	-	540,000	-	-	-
DD-2014 - 2.0 - 4.0%	875,000	-	875,000	-	-	-
EE-2015 - 2.0 - 5.0%	23,765,000	-	2,235,000	-	21,530,000	2,300,000
FF-2015 - 2.0 - 5.0%	31,375,000	-	800,000	28,900,000	1,675,000	825,000
GG-2016 - 2.0 - 5.0%	36,650,000	-	950,000	-	35,700,000	1,000,000
HH-2017 - 2.5 - 5.0%	17,420,000	-	2,195,000	-	15,225,000	2,305,000
II-2017 - 3.0 - 5.0%	37,730,000	-	845,000	-	36,885,000	890,000
JJ-2018 - 3.0 - 5.0%	38,405,000	-	855,000	-	37,550,000	895,000
KK-2020 - 5.0%	14,380,000	-	1,155,000	-	13,225,000	1,215,000
LL-2021 - 4.0 - 5.0%	70,180,000	-	-	-	70,180,000	4,610,000
MM-2022 - 4.0 - 5.0%	-	45,650,000	-	-	45,650,000	-
NN-2022 - 4.0 - 5.0%	-	27,215,000	-	-	27,215,000	-
Total bonds	$ 275,415,000	$ 72,865,000	$ 14,545,000	$ 28,900,000	$ 304,835,000	$ 14,040,000
Unamortized Premium	25,718,420	6,718,375	1,731,604	1,612,754	29,092,437	-
Total long term debt	$ 301,133,420	$ 79,583,375	$ 16,276,604	$ 30,512,754	$ 333,927,437	$ 14,040,000
Gas						
U-2015 - 2.0 - 5.0%	$ 8,915,000	$ -	$ 740,000	$ -	$ 8,175,000	$ 795,000
V-2016 - 2.125 - 5.0%	10,800,000	-	275,000	-	10,525,000	300,000
W-2017 - 5.0%	5,280,000	-	780,000	-	4,500,000	815,000
X-2017 - 2.0 - 5.0%	11,060,000	-	270,000	-	10,790,000	285,000
Y-2018 - 3.0 - 5.0%	7,475,000	-	170,000	-	7,305,000	180,000
Z-2020 - 4.0 - 5.0%	6,145,000	-	560,000	-	5,585,000	585,000
AA-2021 - 4.0 - 5.0%	41,920,000	-	4,005,000	-	37,915,000	3,730,000
Total bonds	$ 91,595,000	$ -	$ 6,800,000	$ -	$ 84,795,000	$ 6,690,000
Unamortized Premium	9,823,667	-	922,376	-	8,901,291	-
Total long term debt	$ 101,418,667	$ -	$ 7,722,376	$ -	$ 93,696,291	$ 6,690,000
Water						
BB-2015 - 2.0 - 5.0%	$ 19,075,000	$ -	$ 1,000,000	$ -	$ 18,075,000	$ 1,050,000
CC-2015 - 2.0 - 4.0%	17,575,000	-	475,000	15,050,000	2,050,000	475,000
DD-2016 - 3.0 - 5.0%	22,675,000	-	575,000	-	22,100,000	625,000
EE-2016 - 2.0 - 5.0%	18,430,000	-	1,245,000	-	17,185,000	1,315,000
FF-2017 - 3.0 - 5.0%	3,405,000	-	510,000	-	2,895,000	530,000
GG-2017 - 2.125 - 5.0%	18,610,000	-	440,000	-	18,170,000	460,000
HH-2018 - 3.0 - 5.0%	18,695,000	-	410,000	-	18,285,000	430,000
II-2019 - 3.0 - 5.0%	19,230,000	-	380,000	-	18,850,000	400,000
JJ-2020 - 3.0 - 5.0%	18,890,000	-	495,000	-	18,395,000	445,000
KK-2020 - 3.0 - 5.0%	8,835,000	-	170,000	-	8,665,000	180,000
LL-2021 - 4.0 - 5.0%	33,180,000	-	1,225,000	-	31,955,000	1,265,000
MM-2022 - 3.0 - 5.0%	-	14,915,000	-	-	14,915,000	100,000
Total bonds	$ 198,600,000	$ 14,915,000	$ 6,925,000	$ 15,050,000	$ 191,540,000	$ 7,275,000
Unamortized Premium	15,798,371	448,952	788,056	218,595	15,240,672	-
Total long term debt	$ 214,398,371	$ 15,363,952	$ 7,713,056	$ 15,268,595	$ 206,780,672	$ 7,275,000
Wastewater						
2010C - 1.18 - 6.1%	$ 20,250,000	$ -	$ -	$ -	$ 20,250,000	$ -
2015A - 3.0 - 5.0%	110,625,000	-	5,675,000	-	104,950,000	6,005,000
2015B - 3.0 - 5.0%	26,950,000	-	550,000	24,600,000	1,800,000	575,000
2016 - 2.0 - 5.0%	17,800,000	-	500,000	-	17,300,000	525,000
2017A - 3.0 - 5.0%	5,970,000	-	1,685,000	-	4,285,000	1,775,000
2017B - 2.0 - 5.0%	23,205,000	-	570,000	-	22,635,000	600,000
2018 - 3.0 - 5.0%	11,240,000	-	255,000	-	10,985,000	270,000
2019 - 3.0 - 5.0%	15,450,000	-	315,000	-	15,135,000	330,000
2020A - 3.0 - 5.0%	27,445,000	-	680,000	-	26,765,000	715,000
2020B - 3.0 - 4.0%	26,910,000	-	555,000	-	26,355,000	580,000
2021A - 4.0 - 5.0%	190,815,000	-	3,490,000	-	187,325,000	3,060,000
2022A - 4.0 - 5.0%	-	11,125,000	-	-	11,125,000	225,000
2022B - 4.0 - 5.0%	-	23,200,000	-	-	23,200,000	100,000
Total bonds	$ 476,660,000	$ 34,325,000	$ 14,275,000	$ 24,600,000	$ 472,110,000	$ 14,760,000
Unamortized Premium	61,280,352	2,748,402	2,410,559	449,701	61,168,494	-
Total long term debt	$ 537,940,352	$ 37,073,402	$ 16,685,559	$ 25,049,701	$ 533,278,494	$ 14,760,000
Consolidated						
Total Bonds	$ 1,042,270,000	$ 122,105,000	$ 42,545,000	$ 68,550,000	$ 1,053,280,000	$ 42,765,000
Total unamortized premium	112,620,811	9,915,728	5,852,595	2,281,050	114,402,894	-
Total long term debt	$ 1,154,890,811	$ 132,020,728	$ 48,397,595	$ 70,831,050	$ 1,167,682,894	$ 42,765,000

	Balance June 30, 2020	Additions	Payments	Defeased	Balance June 30, 2021	Amounts Due Within One Year
Electric						
Z-2010 - 1.45 - 6.35%	$ 1,425,000	$ -	$ 1,425,000	$ -	$ -	$ -
AA-2012 - 3.0 - 5.0%	22,880,000	-	3,100,000	16,510,000	3,270,000	3,270,000
BB-2012 - 3.0 - 4.0%	30,375,000	-	800,000	28,750,000	825,000	825,000
CC-2013 - 3.0 - 4.0%	7,585,000	-	515,000	6,530,000	540,000	540,000
DD-2014 - 2.0 - 4.0%	36,325,000	-	825,000	34,625,000	875,000	875,000
EE-2015 - 2.0 - 5.0%	25,900,000	-	2,135,000	-	23,765,000	2,235,000
FF-2015 - 2.0 - 5.0%	32,150,000	-	775,000	-	31,375,000	800,000
GG-2016 - 2.0 - 5.0%	37,550,000	-	900,000	-	36,650,000	950,000
HH-2017 - 2.5 - 5.0%	19,510,000	-	2,090,000	-	17,420,000	2,195,000
II-2017 - 3.0 - 5.0%	38,535,000	-	805,000	-	37,730,000	845,000
JJ-2018 - 3.0 - 5.0%	39,220,000	-	815,000	-	38,405,000	855,000
KK-2020 - 5.0%	14,380,000	-	-	-	14,380,000	1,155,000
LL-2021 - 4.0 - 5.0%	-	70,180,000	-	-	70,180,000	-
Total Bonds	$ 305,835,000	$ 70,180,000	$ 14,185,000	$ 86,415,000	$ 275,415,000	$ 14,545,000
Unamortized Premium	13,668,174	16,772,021	1,301,355	3,420,420	25,718,420	-
Total long term debt	$ 319,503,174	$ 86,952,021	$ 15,486,355	$ 89,835,420	$ 301,133,420	$ 14,545,000
Gas						
Q-2012 - 2.0 - 4.0%	$ 14,005,000	$ -	$ 2,350,000	$ 11,655,000	$ -	$ -
R-2012 - 2.0 - 4.0%	7,700,000	-	475,000	7,225,000	-	-
S-2013 - 2.0 - 4.0%	9,005,000	-	695,000	8,310,000	-	-
T-2013 - 2.0 - 4.6%	22,400,000	-	500,000	21,900,000	-	-
U-2015 - 2.0 - 5.0%	9,625,000	-	710,000	-	8,915,000	740,000
V-2016 - 2.125 - 5.0%	11,050,000	-	250,000	-	10,800,000	275,000
W-2017 - 5.0%	6,015,000	-	735,000	-	5,280,000	780,000
X-2017 - 2.0 - 5.0%	11,320,000	-	260,000	-	11,060,000	270,000
Y-2018 - 3.0 - 5.0%	7,635,000	-	160,000	-	7,475,000	170,000
Z-2020 - 4.0 - 5.0%	6,755,000	-	610,000	-	6,145,000	560,000
AA-2021 - 4.0 - 5.0%	-	41,920,000	-		41,920,000	4,005,000
Total Bonds	$ 105,510,000	$ 41,920,000	$ 6,745,000	$ 49,090,000	$ 91,595,000	$ 6,800,000
Unamortized Premium	4,893,568	7,207,533	571,736	1,705,698	9,823,667	-
Total long term debt	$ 110,403,568	$ 49,127,533	$ 7,316,736	$ 50,795,698	$ 101,418,667	$ 6,800,000
Water						
X-2012 - 3.0 - 5.0%	$ 6,460,000	$ -	$ 625,000	$ 5,835,000	$ -	$ -
Y-2013 - 3.0 - 4.0%	7,730,000	-	350,000	7,380,000	-	-
Z-2013 - 2.0 - 5.0%	21,600,000	-	575,000	21,025,000	-	-
AA-2014 - 2.0 - 4.0%	7,100,000	-	175,000	6,925,000	-	-
BB-2015 - 2.0 - 5.0%	20,035,000	-	960,000	-	19,075,000	1,000,000
CC-2015 - 2.0 - 4.0%	18,025,000	-	450,000	-	17,575,000	475,000
DD-2016 - 3.0 - 5.0%	23,225,000	-	550,000	-	22,675,000	575,000
EE-2016 - 2.0 - 5.0%	19,585,000	-	1,155,000	-	18,430,000	1,245,000
FF-2017 - 3.0 - 5.0%	3,900,000	-	495,000	-	3,405,000	510,000
GG-2017 - 2.125 - 5.0%	19,025,000	-	415,000	-	18,610,000	440,000
HH-2018 - 3.0 - 5.0%	19,090,000	-	395,000	-	18,695,000	410,000
II-2019 - 3.0 - 5.0%	19,595,000	-	365,000	-	19,230,000	380,000
JJ-2020 - 3.0 - 5.0%	19,520,000	-	630,000	-	18,890,000	495,000
KK-2020 - 3.0 - 5.0%	-	9,045,000	210,000	-	8,835,000	170,000
LL-2021 - 4.0 - 5.0%	-	33,180,000	-	-	33,180,000	1,225,000
Total Bonds	$ 204,890,000	$ 42,225,000	$ 7,350,000	$ 41,165,000	$ 198,600,000	$ 6,925,000
Unamortized Premium	7,909,293	9,021,325	537,209	595,038	15,798,371	-
Total long term debt	$ 212,799,293	$ 51,246,325	$ 7,887,209	$ 41,760,038	$ 214,398,371	$ 6,925,000
Wastewater						
2010C - 1.18 - 6.1%	$ 58,450,000	$ -	$ 1,650,000	$ 36,550,000	$ 20,250,000	$ -
2012A - 2.0 - 4.0%	10,850,000	-	1,085,000	9,765,000	-	-
2012B - 1.25 - 5.0%	58,225,000	-	1,150,000	57,075,000	-	-
2013A - 2.0 - 4.0%	109,115,000	-	710,000	108,405,000	-	-
2014A - 2.0 - 4.0%	27,300,000	-	525,000	26,775,000	-	-
2015A - 3.0 - 5.0%	116,085,000	-	5,460,000	-	110,625,000	5,675,000
2015B - 3.0 - 5.0%	27,475,000	-	525,000	-	26,950,000	550,000
2016 - 2.0 - 5.0%	18,275,000	-	475,000	-	17,800,000	500,000
2017A - 3.0 - 5.0%	7,575,000	-	1,605,000	-	5,970,000	1,685,000
2017B - 2.0 - 5.0%	23,745,000	-	540,000	-	23,205,000	570,000
2018 - 3.0 - 5.0%	11,485,000	-	245,000	-	11,240,000	255,000
2019 - 3.0 - 5.0%	15,750,000	-	300,000	-	15,450,000	315,000
2020A - 3.0 - 5.0%	28,230,000	-	785,000	-	27,445,000	680,000
2020B - 3.0 - 4.0%	-	27,460,000	550,000	-	26,910,000	555,000
2021A - 4.0 - 5.0%	-	190,815,000	-	-	190,815,000	3,490,000
Total Bonds	$ 512,560,000	$ 218,275,000	$ 15,605,000	$ 238,570,000	$ 476,660,000	$ 14,275,000
Unamortized Premium	13,948,164	50,727,997	1,051,517	2,344,292	61,280,352	-
Total long term debt	$ 526,508,164	$ 269,002,997	$ 16,656,517	$ 240,914,292	$ 537,940,352	$ 14,275,000
Consolidated						
Total Bonds	$ 1,128,795,000	$ 372,600,000	$ 43,885,000	$ 415,240,000	$ 1,042,270,000	$ 42,545,000
Total unamortized premium	40,419,199	83,728,876	3,461,817	8,065,448	112,620,811	-
Total long term debt	$ 1,169,214,199	$ 456,328,876	$ 47,346,817	$ 423,305,448	$ 1,154,890,811	$ 42,545,000

Debt service over remaining term of the debt is as follows:

Fiscal Year	Principal	Interest	Total
2023	$ 42,765,000	$ 39,238,043	$ 82,003,043
2024	43,970,000	38,538,198	82,508,198
2025	45,130,000	36,670,449	81,800,449
2026	43,515,000	34,870,526	78,385,526
2027	44,815,000	33,065,497	77,880,497
2028-2032	222,685,000	137,471,761	360,156,761
2033-2037	202,315,000	96,000,639	298,315,639
2038-2042	228,930,000	56,142,930	285,072,930
2043-2047	141,985,000	20,152,276	162,137,276
2048-2052	37,170,000	2,673,419	39,843,419
Total	$ 1,053,280,000	$ 494,823,738	$ 1,548,103,738

The Divisions have pledged sufficient revenue, after deduction of all current operating expenses (exclusive of tax equivalents), to meet bond principal and interest payments of revenue bonds when due. Such bond requirements are being met through monthly deposits to the bond funds as required by the bond covenants. As of June 30, 2022, these requirements have been satisfied.

During fiscal year 2021, KUB's Electric Division issued Series LL 2021 bonds to retire a portion of outstanding Series AA 2012, BB 2012, CC 2013, and DD 2014 bonds. On April 19, 2021, $70.2 million in revenue refunding bonds with an average interest rate of 4.4 percent were issued to advance refund $86.4 million of outstanding bonds with an average interest rate of 3.5 percent. The net proceeds of $87.8 million (after payment of $0.5 million in issuance costs plus premium of $16.7 million and an additional issuer equity contribution of $1.4 million) were used to purchase U.S. government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for future debt service payments on the bonds, with the exception of the July 1, 2021, debt service payment. As a result, the remaining bonds are considered to be refunded and the liability of $86.4 million for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the debt by $14.3 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $11.9 million.

During fiscal year 2022, KUB's Electric Division issued Series MM 2022 bonds to fund electric system capital improvements. KUB's Electric Division also issued Series NN 2022 bonds to retire a portion of outstanding Series FF 2015 bonds. On May 13, 2022, $27.2 million in revenue refunding bonds with an average interest rate of 4.1 percent were issued to advance refund $28.9 million of outstanding bonds with an average interest rate of 4.1 percent. The net proceeds of $29.5 million (after payment of $0.4 million in issuance costs plus premium of $2 million and an additional issuer equity contribution of $0.6 million) were used to purchase U.S. government securities. Those securities were deposited in an irrevocable trust with an escrow agent to provide for future debt service payments on the bonds, with the exception of the July 1, 2022, and the July 1, 2023, debt service payments. As a result, the remaining bonds are considered to be refunded and the liability of $28.9 million for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the debt by $2 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $1.3 million.

During fiscal year 2021, KUB's Gas Division issued Series AA 2021 bonds to retire outstanding Series Q 2012, R 2012, S 2013, and T 2013 bonds. On April 19, 2021, $41.9 million in revenue refunding bonds with an average interest rate of 4.4 percent were issued to currently refund $49.1 million of outstanding bonds with an average interest rate of 3.9 percent. The net proceeds of $49.3 million

(after payment of $0.3 million in issuance costs plus premium of $7.2 million and an additional issuer equity contribution of $0.5 million) were used to refund the bonds. As a result, the bonds are considered to be refunded and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the debt by $7.9 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $7.2 million.

During fiscal year 2021, KUB's Water Division issued Series KK 2020 bonds to fund water system capital improvements. KUB's Water Division also issued Series LL 2021 bonds to retire outstanding Series X 2012, Y 2013, Z 2013, and AA 2014 bonds. On April 19, 2021, $33.2 million in revenue refunding bonds with an average interest rate of 4.3 percent were issued to currently refund $41.2 million of outstanding bonds with an average interest rate of 4.3 percent. The net proceeds of $41.4 million (after payment of $0.3 million in issuance costs plus premium of $8.1 million and an additional issuer equity contribution of $0.4 million) were used to refund the bonds. As a result, the bonds are considered to be refunded and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the debt by $10.2 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $9.1 million.

During fiscal year 2022, KUB's Water Division issued Series MM 2022 bonds to retire a portion of outstanding Series CC 2015 bonds. On May 13, 2022, $14.9 million in revenue refunding bonds with an average interest rate of 3.6 percent were issued to currently refund $15.1 million of outstanding bonds with an average interest rate of 3.9 percent. The net proceeds of $15.2 million (after payment of $0.3 million in issuance costs plus premium of $0.4 million and an additional issuer equity contribution of $0.1 million) were used to refund the bonds. As a result, the bonds are considered to be refunded and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the debt by $0.7 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $0.4 million.

During fiscal year 2011, KUB's Wastewater Division issued Series 2010C bonds to fund capital improvements. These bonds were issued as federally taxable Build America Bonds with a 35 percent interest payment rebate to be received from the United States Government for each interest payment. These bonds are subject to a reduction in rebate payment amounts which is subject to change based on Congressional action. As of October 1, 2021, the effective reduction in rebate is 5.7 percent.

During fiscal year 2021, KUB's Wastewater Division issued Series 2020B bonds to fund wastewater system capital improvements. KUB's Wastewater Division also issued Series 2021A bonds to retire Series 2012A, 2012B, 2013A, 2014A, and $36.6 million of outstanding Series 2010C bonds. On April 19, 2021, $190.8 million in revenue refunding bonds with an average interest rate of 4.2 percent were issued to currently refund $238.6 million of outstanding bonds with an average interest rate of 3.6 percent. The net proceeds of $239 million (after payment of $0.8 million in issuance costs plus premium of $48.1 million and an additional issuer equity contribution of $0.9 million) were used to refund the bonds. As a result, the bonds are considered to be refunded and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the debt by $47.2 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $41.8 million.

During fiscal year 2022, KUB's Wastewater Division issued Series 2022A bonds to fund wastewater system capital improvements. KUB's Wastewater Division also issued Series 2022B bonds to retire a portion of outstanding Series 2015B bonds. On May 13, 2022, $23.2 million in revenue refunding bonds with an average interest rate of 4.2 percent were issued to currently refund $24.6 million of outstanding bonds with an average interest rate of 4 percent. The net proceeds of $24.7 million (after payment of $0.3 million in issuance costs plus premium of $1.7 million and an additional issuer equity contribution of $0.1 million) were used to refund the bonds. As a result, the bonds are considered to

be refunded and the liability for those bonds has been removed from the financial statements. This refunding decreases total debt service payments over the life of the debt by $1.3 million resulting in an economic gain (difference between the present values of the debt service payments on the old and new debt) of $0.7 million.

Other liabilities consist of the following:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
TVA conservation program	$ 1,158,556	$ 64,619	$ (609,418)	$ 613,757
Accrued compensated absences	10,341,485	22,498,166	(22,080,547)	10,759,104
Customer advances for construction	10,373,106	4,764,867	(4,456,086)	10,681,887
Other	225,278	325,770	(306,392)	244,656
	$ 22,098,425	$ 27,653,422	$ (27,452,443)	$ 22,299,404

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
TVA conservation program	$ 2,023,948	$ 113,417	$ (978,809)	$ 1,158,556
Accrued compensated absences	10,280,214	16,389,835	(16,328,564)	10,341,485
Customer advances for construction	9,658,968	3,444,365	(2,730,227)	10,373,106
Other	263,388	519,256	(557,366)	225,278
	$ 22,226,518	$ 20,466,873	$ (20,594,966)	$ 22,098,425

7. Lease Receivables

KUB, as lessor, leases office space, land, and fiber optic cables under non-cancelable lease arrangements. Terms of the leases range from two to fifteen years and contain fixed payment terms. Certain leases contain an option to renew that has been considered in the lease receivable when the lessee is reasonably certain to exercise the renewal option. KUB recognized lease revenue, which is included in other operating revenues, of $451,074 in 2022 and $429,151 in 2021. KUB also recognized interest income from leases, which is included in non-operating revenues, totaling $127,593 in 2022 and $8,398 in 2021. Total lease receivables were $4,489,301 ($516,649 current) and $3,524,704 ($341,368 current) as of June 30, 2022, and 2021, respectively, and are included in other assets on the Statement of Net Position.

8. Lease Liability

Changes in lease liabilities are summarized as follows:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
Total lease liabilities	$ 470,858	$ 4,300,561	$ (710,959)	$ 4,060,460
Less current portion	(377,192)			(844,904)
Long-term portion	$ 93,666			$ 3,215,556

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
Total lease liabilities	$ -	$ 891,905	$ (421,047)	$ 470,858
Less current portion	-			(377,192)
Long-term portion	$ -			$ 93,666

KUB leases certain office space, equipment, and other assets under non-cancelable lease arrangements. Terms of the leases range from one to fourteen years and contain fixed payment terms. Certain office space leases contain the option for renewal, which has been considered in the lease liability when KUB is reasonably certain to exercise the renewal option.

Maturities and future interest requirements related to the balances of lease liabilities outstanding as of June 30, 2022, are summarized as follows:

	Lease Maturities	Interest Requirements
2023	$ 844,904	$ 135,482
2024	786,131	105,194
2025	832,194	76,468
2026	874,612	45,124
2027	704,021	11,660
2028-2032	10,266	235
2033-2037	8,332	67
	$ 4,060,460	$ 374,230

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9. Capital and Intangible Right of Use Assets

Capital and intangible right of use asset activity was as follows:

	Balance June 30, 2021	Increase	Decrease	Balance June 30, 2022
Production Plant (Intakes)	$ 742,503	$ -	$ -	$ 742,503
Pumping and Treatment Plant	354,812,995	60,466,147	(2,176,972)	413,102,170
Distribution and Collection Plant				
Mains and metering	1,152,024,908	47,031,973	(7,821,651)	1,191,235,230
Services and meters	235,855,917	9,064,223	(1,209,248)	243,710,892
Electric station equipment	182,343,725	6,005,230	(378,781)	187,970,174
Poles, towers and fixtures	219,670,116	10,399,090	(750,586)	229,318,620
Overhead conductors	180,227,318	14,958,175	(5,294,990)	189,890,503
Line transformers	106,735,123	2,395,194	(667,606)	108,462,711
Other accounts	308,765,680	7,007,574	(10,000,392)	305,772,862
Total Distribution & Collection Plant	$ 2,385,622,787	$ 96,861,459	$ (26,123,254)	$ 2,456,360,992
	-	-	-	
General Plant	257,906,388	25,486,584	(4,322,872)	279,070,100
Total Plant Assets	$ 2,999,084,673	$ 182,814,190	$ (32,623,098)	$ 3,149,275,765
Less Accumulated Depreciation	(999,438,900)	(89,664,008)	31,298,724	(1,057,804,184)
Net Plant Assets	$ 1,999,645,773	$ 93,150,182	$ (1,324,374)	$ 2,091,471,581
Work In Progress	189,507,909	156,312,285	(184,066,875)	161,753,319
Total Net Plant	$ 2,189,153,682	$ 249,462,467	$ (185,391,249)	$ 2,253,224,900
Intangible Right of Use Assets				
Office space	$ 645,078	$ 4,239,246	$ (522,827)	$ 4,361,497
Equipment	92,684	27,415	(37,692)	82,407
Other	154,143	52,204	(62,564)	143,783
Total Intangible Right of Use Assets	$ 891,905	$ 4,318,865	$ (623,083)	$ 4,587,687
Less Accumulated Amortization	(421,047)	(689,074)	421,047	(689,074)
Net Intangible Right of Use Assets	$ 470,858	$ 3,629,791	$ (202,036)	$ 3,898,613

	Balance June 30, 2020	Increase	Decrease	Balance June 30, 2021
Production Plant (Intakes)	$ 742,503	$ -	$ -	$ 742,503
Pumping and Treatment Plant	344,536,047	13,417,677	(3,140,729)	354,812,995
Distribution and Collection Plant				
Mains and metering	1,101,692,451	62,950,741	(12,618,284)	1,152,024,908
Services and meters	234,493,396	10,360,509	(8,997,988)	235,855,917
Electric station equipment	172,157,527	11,953,246	(1,767,048)	182,343,725
Poles, towers and fixtures	197,063,098	23,383,197	(776,179)	219,670,116
Overhead conductors	161,568,836	26,461,659	(7,803,177)	180,227,318
Line transformers	105,096,527	2,378,696	(740,100)	106,735,123
Other accounts	302,760,815	11,561,607	(5,556,742)	308,765,680
Total Distribution & Collection Plant	$ 2,274,832,650	$ 149,049,655	$ (38,259,518)	$ 2,385,622,787
General Plant	214,312,804	44,653,415	(1,059,831)	257,906,388
Total Plant Assets	$ 2,834,424,004	$ 207,120,747	$ (42,460,078)	$ 2,999,084,673
Less Accumulated Depreciation	(946,215,640)	(97,786,338)	44,563,078	(999,438,900)
Net Plant Assets	$ 1,888,208,364	$ 109,334,409	$ 2,103,000	$ 1,999,645,773
Work In Progress	247,571,881	151,176,442	(209,240,414)	189,507,909
Total Net Plant	$ 2,135,780,245	$ 260,510,851	$ (207,137,414)	$ 2,189,153,682
Intangible Right of Use Assets				
Office space	$ -	$ 645,078	$ -	$ 645,078
Equipment	-	149,799	(57,115)	92,684
Other	-	154,143	-	154,143
Total Intangible Right of Use Assets	$ -	$ 949,020	$ (57,115)	$ 891,905
Less Accumulated Amortization	-	(421,047)	-	(421,047)
Net Intangible Right of Use Assets	$ -	$ 527,973	$ (57,115)	$ 470,858

10. Risk Management

KUB is exposed to various risks of loss related to active and retiree medical claims; injuries to workers; theft of, damage to, and destruction of assets; environmental damages; and natural disasters. Claims expenditures and liabilities are reported when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. These losses include an estimate of claims that have been incurred but not reported.

These liabilities are included in accrued expenses in the Statement of Net Position. The liability is KUB's best estimate based on available information. On June 30, 2022, and June 30, 2021, the amount of these liabilities was $2,252,221 and $1,936,245, respectively, resulting from the following changes:

	2022	2021
Balance, beginning of year	$ 1,936,245	$ 1,720,620
Current year claims and changes in estimates	18,435,604	15,519,699
Claims payments	(18,119,629)	(15,304,074)
Balance, end of year	$ 2,252,221	$ 1,936,245

11. Pension Plan

Description of Plan

The Knoxville Utilities Board Pension Plan (the Plan) is a governmental plan as defined by the Employee Retirement Income Security Act of 1974 (ERISA or the Act), is not subject to any of the provisions of the Act, and was revised January 1, 2020, to include all prior approved amendments. The Plan is a single-employer contributory, defined benefit pension plan established by Knoxville Utilities Board Resolution No. 980 dated February 18, 1999, effective July 1, 1999, as authorized by the Charter of the City of Knoxville §1107(J). KUB Board Resolution No. 979, effective July 1, 1999, as amended by Resolution No. 1037, establishing the KUB Retirement System, was amended effective June 18, 2020, to amend the term "Trustee" to include both custodians and/or trustees, in order to provide flexibility should KUB choose to change from its current Pension trustee. The Plan is designed to provide retirement, disability, and death benefits to KUB employees. KUB administers the Plan through an Administrative Committee consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Plan involving costs not approved in the operating budget must be adopted by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Plan may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The Plan issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017.

Effective January 1, 2011, KUB closed the Plan such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and to accrue benefits under the Plan.

Participants in the Plan consisted of the following as of December 31:

	2021	2020
Inactive plan members:		
Terminated vested participants	12	11
Retirees and beneficiaries	600	593
Active plan members	478	518
Total	1,090	1,122

Retirement Benefits

The Plan provides three benefit arrangements for KUB participants, retirees, and beneficiaries.

The Plan provides pension benefits through the Career Equity Program ("CEP") for eligible employees hired on or after January 1, 1999, and for eligible former "City System Plan A" participants who elected CEP coverage as of July 1, 1999. The guaranteed pension benefit payable to a participant who has completed five or more years of service (or reached the normal retirement date, if earlier) upon termination of KUB employment shall be a lump sum equal to the participant's average compensation times their benefit percentage, as defined in the Plan document, or an annuity may be chosen by the participant.

In addition, the Plan provided retirement benefits through "Plan A" for former City System Plan A participants who elected not to participate in the CEP. Plan A is a closed plan and is not available to KUB employees hired after July 1, 1999. Plan A provides for early retirement benefits with 25 years of service and normal retirement benefits at age 62 or later. Benefits provided to Plan A participants include several different forms of monthly annuity payments.

The Plan also provides retirement benefits through "Plan B" for former "City System Plan B" participants. Plan B is a closed plan providing benefits to participants not covered by Social Security. Benefits provided to Plan B participants include several different forms of monthly annuity payments available to participants.

Effective January 1, 2012, KUB began to provide for additional monthly supplements, which are not subject to cost of living adjustments, to certain former employees and surviving dependents of former employees who are eligible for and have elected coverage under the KUB retiree medical plan and are eligible for Medicare. This was done to compensate for the elimination of drug coverage under the KUB retiree medical plan and to assist such individuals in obtaining prescription drug coverage under Medicare Part D.

Contributions

Participation in Plan A requires employee contributions of 3% of the first $4,800 of annual earnings and 5% of annual earnings in excess of $4,800. KUB contributions are determined by the enrolled actuary of the Plan and equal to the amount necessary to provide the benefits under the Plan determined by the application of accepted actuarial methods and assumptions. The method of funding shall be consistent with Plan objectives.

Plan Funding

KUB maintains a Funding Policy for the Plan in accordance with Tennessee State Law. The primary goal of the Policy is to document the method KUB has adopted to provide assurance that future KUB and employee contributions and current Plan assets will be sufficient to fund all benefits expected to be paid to current active, inactive and retired Plan participants and their beneficiaries. Per the Funding Policy, KUB fully funds its annual Actuarially Determined Contribution.

Investments

The Plan's investments are held by State Street Bank and Trust Company (the "Trustee"). The Plan's policy in regard to the allocation of invested assets is established by the Retirement System Investment Committee and approved by the KUB Board of Commissioners and may only be amended by the KUB Board of Commissioners. It is the policy of the Retirement System Investment Committee 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 Plan's adopted asset allocation policy as of December 31, 2021:

Asset Class	Target Allocation
Domestic equity – large cap	20% - 50%
Domestic equity – mid cap	0% - 15%
Domestic equity – small cap	0% - 15%
Domestic equity – convertible securities	0% - 10%
Non-U.S. equity	0% - 20%
Real estate equity	0% - 10%
Fixed income – aggregate bonds	5% - 25%
Fixed income – long-term bonds	10% - 25%
Cash and deposits	0% - 5%

Contributions of $3,665,168 and $3,167,680 for 2020 and 2019, respectively, were made during the Plan sponsor's fiscal years ended June 30, 2022, and 2021, respectively. The fiscal year 2022 contribution was determined as part of the January 1, 2020, valuation using the Individual Entry Age Normal funding method. The objective under this method is to fund each participant's benefits under the Plan as payments which are level as a percentage of salary, starting on the original participation date (employment date) and continuing until the assumed retirement, termination, disability, or death.

Net Pension Liability (Asset)

The below summarizes the disclosures of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27* ("GASB 68"), which requires measurement of the net pension liability as total pension liability less the amount of the Plan's fiduciary net position. The amounts reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, will be based on the December 31, 2021, and 2020, measurement date, respectively.

GASB 68 requires certain disclosures related to the net pension liability (asset) of the Plan as disclosed below:

	2021	2020
Total pension liability	$ 242,201,780	$ 234,363,021
Plan fiduciary net position	(306,339,494)	(279,462,309)
Plan's net pension liability (asset)	$ (64,137,714)	$ (45,099,288)
Plan fiduciary net position as a percentage of the total pension liability	126.48%	119.24%

Changes in Net Pension Liability (Asset) are as follows:

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (Asset) (a) - (b)
Balances at December 31, 2020	$ 234,363,021	$ 279,462,309	$ (45,099,288)
Changes for the year:			
Service cost	6,647,220	-	6,647,220
Interest	16,982,226	-	16,982,226
Differences between Expected and Actual Experience	1,935,276	-	1,935,276
Changes of Assumptions	-	-	-
Contributions - employer	-	3,416,428	(3,416,428)
Contributions - rollovers	-	3,936,711	(3,936,711)
Contributions - member	-	2,976	(2,976)
Net investment income	-	37,688,050	(37,688,050)
Benefit payments	(17,725,963)	(17,725,963)	-
Administrative expense	-	(441,017)	441,017
Net changes	7,838,759	26,877,185	(19,038,426)
Balances at December 31, 2021	$ 242,201,780	$ 306,339,494	$ (64,137,714)

Actuarial Assumptions
The total pension liability was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2021, rolled forward to December 31, 2021; January 1, 2020, rolled forward to December 31, 2020
Discount rate	7.25% as of December 31, 2021, and 2020
Salary increases	From 2.50% to 5.65%, based on years of service as of December 31, 2021, and 2020
Mortality	115% and 110% of the PubG-2010 table, for males and females respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the 2010 base rates using scale MP2018, fully generational as of December 31, 2021, and 2020
Inflation	2.5% as of December 31, 2021, and 2020

The actuarial assumptions used in the January 1, 2021, and 2020, valuations were based on an actuarial experience study covering the period January 1, 2014, through December 31, 2018.

The long-term expected rate of return on 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 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 for each major asset class included in the Plan's target asset allocation as of December 31, 2021, and 2020, are summarized in the following table. The real rate of return reported for fixed income is for aggregate fixed income. The Plan has both aggregate and long duration fixed income.

Asset Class	Long Term Expected Real Rate of Return 2021	2020
Domestic equity	5.1%	5.1%
Non-U.S. equity	6.0%	6.4%
Real estate equity	5.4%	5.6%
Debt securities	0.2%	0.9%
Cash and deposits	(0.3)%	0.2%

Discount rate
The discount rate used to measure the total pension liability was 7.25 percent as of December 31, 2021, and 2020. The projection of cash flows used to determine the discount rate assumed that participant contributions will be made at the current contribution rate and that KUB contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability (asset) to changes in the discount rate
The following presents the net pension liability (asset) of the Plan as of December 31, 2021, calculated using the discount rate of 7.25 percent, as well as what the Plan's net pension liability (asset) would be if it were calculated using a discount rate that is one percent lower (6.25 percent) or one percent higher (8.25 percent) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Plan's net pension liability (asset)	$ (42,465,742)	$ (64,137,714)	$ (82,832,869)

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Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of ($11,639,307).

The impact of experience gains or losses and assumptions changes on the Total Pension Liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4.00 years. During the measurement year, there was a liability experience loss of $1,935,276, with approximately $483,819 of that recognized in the current year and each of the next three years, resulting in a deferred outflow of $1,451,457. Unrecognized liability experience losses from prior periods were $1,544,136, of which $386,034 was recognized as an increase in Pension Expense in the current year and resulted in a deferred outflow of $1,158,102. The combination of unrecognized liability experience losses this year along with unrecognized liability experience losses from prior periods results in a deferred outflow of $2,609,559. Unrecognized liability gains from prior periods were $1,092,163, of which $549,386 was recognized as a decrease in Pension Expense in the current year and resulted in a deferred inflow of $542,777.

During the measurement year, there were no benefit changes or assumption changes. Net unrecognized assumption change losses from prior periods were $5,083,896, of which $1,694,632 was recognized as an increase in Pension Expense in the current year and resulted in a net deferred outflow of $3,389,264. Net unrecognized assumption change gains from prior periods were $71,525, of which the remaining $71,525 was recognized as a decrease in Pension Expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $17,812,070, of which $3,562,414 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment gains from prior periods were $34,994,864, of which $10,275,263 was recognized as a decrease in Pension Expense in the current year. The combination of unrecognized investment gains this year along with unrecognized investment gains from prior periods results in a deferred inflow of $38,969,257.

In addition, KUB recorded a deferred outflow of resources of $1,832,582 for employer contributions made between December 31, 2021, and June 30, 2022.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 2,609,559	$ 542,777
Changes in assumptions	3,389,264	-
Net difference between projected and actual earnings on pension plan investments	-	38,969,257
Contributions subsequent to measurement date	1,832,582	-
Total	$ 7,831,405	$ 39,512,034

$1,832,582 reported as deferred outflows of resources resulting from contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2023. Other amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:

Year ended June 30:	
2023	$ (8,113,823)
2024	(13,665,516)
2025	(8,171,458)
2026	(3,562,414)
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of ($7,325,254).

The impact of experience gains or losses and assumptions changes on the Total Pension Liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5.00 years. During the measurement year, there was a liability experience loss of $1,930,170, with $386,034 of that recognized in the current year and in each of the next four years, resulting in a deferred outflow of $1,544,136. Unrecognized liability experience gains from prior periods were $2,088,302, of which $996,139 was recognized as a reduction in pension expense in the current year and resulted in a deferred inflow of $1,092,163.

During the measurement year, there were no benefit changes or assumption changes. Unrecognized assumption change losses from prior periods were $6,778,528, of which $1,694,632 was recognized as an increase in pension expense in the current year and resulted in a deferred outflow of $5,083,896. Unrecognized assumption change decreases from prior periods were $729,629, of which $658,104 was recognized as a reduction in pension expense in the current year and resulted in a deferred inflow of $71,525.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $27,394,477, of which $5,478,895 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment gains from prior periods were $17,715,210, of which $4,635,928 was recognized as a decrease in pension expense in the current year. The combination of unrecognized investment gains this year along with the net unrecognized investment gains from prior periods results in a net difference between projected and actual earnings on pension plan investments as of December 31, 2020, of $34,994,864. The following table summarizes the current balances of deferred outflows and deferred inflows of resources along with the net recognition over future years. In addition, KUB recorded a deferred outflow of resources of $1,583,842 as of June 30, 2021, for employer contributions made between December 31, 2020, and June 30, 2021.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 1,544,136	$ 1,092,163
Changes in assumptions	5,083,896	71,525
Net difference between projected and actual earnings on pension plan investments	-	34,994,864
Contributions subsequent to measurement date	1,583,842	-
Total	$ 8,211,874	$ 36,158,552

12. Qualified Excess Benefit Arrangement

Description

In fiscal year 2017, KUB implemented a qualified governmental excess benefit arrangement (QEBA) under IRC section 415(m), which was created by Congress to allow the payment of pension benefits that exceed the IRC section 415(b) limits (and therefore cannot be paid from a qualified retirement plan). The QEBA is a single employer defined benefit pension plan administered by KUB. The number of participants in any given year for the QEBA is determined by the number of KUB Pension Plan participants who exceed the current year's section 415(b) limitations, as calculated by the KUB Pension Plan actuary. The amount of QEBA benefit will be the amount specified by the terms of the KUB Pension Plan without regard to Section 415(b) limitations minus the amount payable from the KUB Pension Plan as limited by Section 415(b). QEBA benefits are subject to cost of living adjustments.

As of June 30, 2022, there are 446 active employees eligible for the KUB Pension Plan who are potentially eligible to receive QEBA benefits. The KUB Pension Plan was closed effective January 1, 2011, such that persons employed or re-employed by KUB on or after January 1, 2011, are not eligible to participate, but that eligible employees hired prior to January 1, 2011, who have not separated from service, shall continue as Participants and accrue benefits under the KUB Pension Plan. The KUB Pension Plan was amended to include the provision of QEBA benefits; therefore, amendments to the QEBA require the same authority as amendments to the KUB Pension Plan. As required by federal tax law, the QEBA is unfunded within the meaning of the federal tax laws. KUB may not pre-fund the QEBA to cover future liabilities beyond the current year. KUB has established procedures to pay for these benefits on a pay-as-you-go basis. There are no assets accumulated in a trust that meets the GASB's criteria. Due to the increase in the section 415(d) annual benefit limitation from 2021 to 2022, the pension benefit for the sole participant in the Excess Benefit Arrangement is now fully payable under the KUB Pension Plan and, as such, there is no benefit payable under the Excess Benefit Arrangement as of June 30, 2022.

Total Pension Liability of the QEBA

The below summarizes the disclosures of GASB Statement No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68* ("GASB 73"). GASB 73 extends a similar approach of financial reporting to plans meeting specific criteria that are not administered through trusts that GASB 68 established for pension plans. GASB 73 requires measurement of the total pension liability of the QEBA. The amounts reported as of June 30 must be based upon a plan measurement date within the prior twelve months. Therefore, KUB's measurements as of June 30, 2022, and 2021, are based on a December 31, 2021, and 2020, measurement date, respectively. There is no Total Pension Liability as of June 30, 2022. The total pension liability was $18,714 as of June 30, 2021.

GASB 73 requires certain disclosures related to the total pension liability of the QEBA, as disclosed below:

	2021	2020
Total pension liability	$0	$18,714
Deferred outflows	(11,505)	(33,660)
Deferred inflows	16,927	23,630
Net impact on Statement of Net Position	$5,422	$8,684
Covered payroll	$38,074,863	$41,524,273
Total pension liability as a % of covered payroll	0.00%	0.05%

Changes in total pension liability of the QEBA are as follows:

	Increase (Decrease)
	Total Pension Liability
Balances at December 31, 2020	$ 18,714
Changes for the year:	
Service cost	-
Interest	268
Changes of Benefits	-
Differences between Expected and Actual Experience	(6,816)
Changes of Assumptions	-
Benefit payments	(12,166)
Net changes	(18,714)
Balances at December 31, 2021	$ -

Actuarial Assumptions
The total pension liability of the QEBA was determined by an actuarial valuation, using the following actuarial assumptions applied to all periods included in the measurement:

Valuation dates	January 1, 2022 and January 1, 2021
Actuarial cost method	Individual entry age
Salary increase	From 2.50% to 5.65%, based on years of service as of January 1, 2022, and 2021
Mortality	115% and 110% of the Public Sector General Healthy Annuitant Mortality Table (PubG-2010), for males and females, respectively, using the Public Sector General Employee Table for ages prior to the start of the Healthy Annuitant Table, both projected from the 2010 base rates using scale MP2018, fully generational as of January 1, 2022, and 2021
Inflation	2.5% as of January 1, 2022, and 2021

The actuarial assumptions used in the January 1, 2022, and 2021, valuations were based on the results of an actuarial experience study for the period January 1, 2014, through December 31, 2018.

Discount rate
The QEBA is not funded. In accordance with paragraph 31 of GASB 73, the discount rate is based on the Bond Buyer 20-Bond GO index. This rate was 2.06% on January 1, 2022, and 2.12% on January 1, 2021.

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2022, KUB recognized pension expense of $16,613 for the QEBA. This amount is not expected to be the same as KUB's contribution to the QEBA ($19,875), but instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$5,422 - $8,684 + $19,875].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2020, this average was 4 years. During the measurement year, there was an experience gain of $6,816, with $1,704 recognized in the current year and each of the next three years, resulting in a deferred inflow of $5,112. There was a deferred inflow at the end of the measurement year of $7,225 from experience gains in prior years and a deferred outflow of $6,112 from experience losses in prior years.

During the measurement year, there were no assumption changes. There was a deferred inflow at the end of the measurement year of $4,590 and a deferred outflow of $5,393 from assumption changes in prior years.

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 6,112	$ 12,337
Changes in assumptions	5,393	4,590
Total	$ 11,505	$ 16,927

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

Year ended June 30:	
2023	$ (8,793)
2024	3,023
2025	348
2026	-
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized pension expense of $21,436 for the QEBA. This amount is not expected to be the same as KUB's contribution to the QEBA ($22,874), but

instead represents the change in the net impact on KUB's Statement of Net Position plus employer contributions [$8,684 - $10,122 + $22,874].

The impact of experience gains or losses and assumption changes on the total pension liability are recognized in the pension expense over the average expected remaining service life of all active and inactive members, determined as of the beginning of the measurement period. As of December 31, 2019, this average was 5 years. During the measurement year, there was an experience loss of $10,165, with $2,033 recognized in the current year and each of the next four years, resulting in a deferred outflow of $8,132. There was a deferred inflow at the end of the measurement year of $14,450 from experience gains in prior years and a deferred outflow of $2,756 from experience losses in prior years.

During the measurement year, there was an assumption change loss of $91, with $18 recognized in the current year and each of the next four years, resulting in a deferred outflow of $73. There was a deferred inflow at the end of the measurement year of $9,180 and a deferred outflow of $22,699 from assumption changes in prior years. In addition, KUB recorded a deferred outflow of resources of $6,084 as of June 30, 2021, for contributions between December 31, 2020, and June 30, 2021.

The table below summarizes the current balances of deferred outflows and deferred inflows of resources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 10,888	$ 14,450
Changes in assumptions	22,772	9,180
Contributions subsequent to measurement date	6,084	-
Total	$ 39,744	$ 23,630

13. Defined Contribution Plan

The KUB Asset Accumulation 401(k) Plan (the "401(k) Plan") is a defined contribution 401(k) employee retirement savings plan covering eligible KUB employees established by the KUB Board of Commissioners in accordance with the Charter of the City of Knoxville, Tennessee. The 401(k) Plan's assets are held in trust under an agreement between KUB and Fidelity Management Trust Company. Employees hired prior to January 1, 2011, may participate and receive a matching contribution of 50 percent of their own contribution up to a maximum match of 3 percent. Employees hired on or after January 1, 2011, have an enhanced 401(k) due to the closure of the Defined Benefit Pension Plan. They may participate and receive a matching contribution of 50 percent of their own contribution up to a maximum match of 3 percent. They also receive a nonelective KUB contribution of 3 percent to 6 percent, depending on years of service, whether they contribute or not.

KUB funded 401(k) matching contributions and nonelective contributions of $3,125,903 and $2,984,314, respectively, for the years ended June 30, 2022, and 2021.

14. Other Post-Employment Benefits (OPEB)

Description of Trust

The Knoxville Utilities Board Other Post-Employment Benefits Trust (the Trust) is a single-employer trust established by the KUB Board of Commissioners through Resolution No. 1168, as amended, dated October 18, 2007. The Trust, along with the KUB Health Plan, make up a Voluntary Employee Beneficiary Association ("VEBA") and are intended to be tax-exempt pursuant to Code §501(c)(9). The purpose of the Trust is to fund KUB's post-employment health care plan (the "Plan"), which provides certain medical benefits for qualifying KUB retirees and beneficiaries. The applicable documentation was submitted to the State Funding Board and, in December 2007, the State Funding Board approved the Trust. The Trust was also approved by the Internal Revenue Service in June 2008. KUB administers the Trust through a Board of Trustees consisting of seven KUB employees that are appointed by KUB's President and CEO. Any amendments to the Trust involving costs not approved in the operating budget must be approved by KUB's Board of Commissioners, upon recommendation by KUB's President and CEO. All other amendments to the Trust may be approved by KUB's President and CEO upon 60 days notification to the Board's Audit and Finance Committee. The investment of all deposits to the Trust is governed by an Investment Policy, which was adopted by the KUB Board and approved by the State Funding Board. The Trust issues a financial report, which includes financial statements and required supplementary information. The report may be obtained by writing the Knoxville Utilities Board Retirement System, P.O. Box 59017, Knoxville, TN 37950-9017.

Effective January 1, 2022, the Plan was expanded to two benefit offerings. Employees with a benefit service date prior to July 1, 1999, will continue to be eligible for the Retiree Medical Benefit, while those with a later benefit service date will participate in a new Retiree Health Reimbursement Arrangement, given that each eligible employee meets the "Rule of 80", the sum of age and at least 20 years of qualified service equal to or exceeding 80, at retirement.

Participants in the Plan consisted of the following as of June 30:

	HRA		Retiree Medical Benefit	
	2022	**2021**	**2022**	**2021**
Retirees	4	0	549	538
Dependents of retirees	2	0	612	579
Eligible active employees	15	0	145	160
Total	21	0	1,306	1,277

Benefits

Benefits for pre-July 1, 1999, eligible participants may include, but shall not be limited to, medical, prescription drugs, dental, vision, hearing, Medicare Part B or Part D premiums, life insurance, long-term care, and long-term disability. Post-July 1, 1999, eligible participants are eligible for HRA benefits which include up to $50,000 to be used exclusively for reimbursement of qualified medical expenses of the retiree and his or her spouse and dependents. Any unused HRA amounts will remain assets of the OPEB Trust.

Contributions and Funding

The primary goal of the Funding Policy for the Trust is to document the method KUB has adopted to provide assurance that future KUB and retiree contributions and current Trust assets will be sufficient to fund all benefits expected to be paid to Trust beneficiaries. Per the Funding Policy, KUB's current practice is to fully fund its annual Actuarially Determined Contribution, which is determined by actuarial valuation.

Contributions are authorized by the terms of the Trust as established by KUB Resolution No. 1168, as amended, as approved by the Tennessee State Funding Board. KUB shall have the right at any time to amend, in whole or in part, the provisions of this Trust; however, no such amendment shall authorize or permit the assets of the Trust to be used for or diverted to purposes other than those expressed in the Declaration of Trust.

It shall be the sole and exclusive responsibility of KUB to determine the level of contributions KUB will make to the Trust for the purpose of financing other post-employment benefits accrued by its respective participants. Neither the Trust, nor the Trust's Board, shall be responsible for collecting or otherwise determining the level of contributions needed by KUB to finance any other post-employment benefits offered by KUB. The assets of the Trust shall be expended solely to make payments for other post-employment benefits pursuant to, and in accordance with, the terms of the Trust and to pay the cost of administration.

Based on the date of retirement, certain retired members are required to contribute specified amounts monthly to maintain health insurance. Those who retired prior to July 1983 have no required monthly premiums for themselves or dependents. The retirees, or their surviving dependents, who retired between August 1983 and January 1998 are required to pay $262.50 per month for pre-Medicare family health insurance. For individuals who retired after January 1998, the required monthly premium for pre-Medicare health insurance is $262.50 for single coverage and $525 for family coverage. There is currently no premium for Medicare eligible retirees or dependents. KUB is responsible for determining the level of retired plan member contributions on an annual basis as part of its review of healthcare cost sharing.

Participants in the Health Reimbursement Arrangement are not eligible for health insurance and are not required to make contributions.

Investments

The Trust holds investments in a balanced fund, which invests in passively managed common trust index funds, managed and sponsored by State Street Global Advisors (SSgA), with an asset allocation mirroring the asset allocation of the Trust and rebalanced monthly. The Trust's Investment Policy was established and may only be amended by the KUB Board of Commissioners. The Trust's Investment Policy is to invest in a manner that will provide sufficient investment return to meet current and future retiree health benefits, while conforming to all governing State and Federal statutes. It allows investment of Trust assets in any type of security instrument allowed for in T.C.A 8-50-1203. The following was the Trust's adopted investment target allocations as set forth in the Trust's Investment Policy as of June 30, 2022:

Asset Class	Target Allocation
Domestic Equity:	
Large Cap	30%
Small Cap	8%
International Equity:	
Developed	16%
Emerging	8%
Real Estate Equity	8%
Debt Securities	30%
Total	100%

For the fiscal year ended June 30, 2022, an actuarially determined contribution of $1,989,066 was made to the OPEB Trust along with an additional $1,500,000 contribution to help fund the HRA.

Actuarially determined contributions for the fiscal year ended June 30, 2021, were $757,226. These were based on the OPEB actuarial valuations as of January 1, 2020, and 2019.

Net OPEB Liability (Asset)

The below summarizes the disclosures of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75"), which requires measurement of the net OPEB liability as total OPEB liability less the amount of the Trust's fiduciary net position. The amounts reported as of June 30 are based on the reporting date for the KUB Other Post-Employment Benefits Plan which is June 30. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2022, and 2021, and the Total OPEB Liability as of the valuation date January 1, 2021, updated to June 30, 2022, and January 1, 2020, updated to June 30, 2021, respectively. KUB's total net OPEB liability (asset) was $11,202,507 as of June 30, 2022, and ($5,931,828) as of June 30, 2021.

The components of the total net OPEB liability (asset) of the Trust are as follows as of June 30:

	2022	2021
Total OPEB liability	$ 58,536,280	$ 51,515,118
Plan fiduciary net position	47,333,773	57,446,946
Net OPEB (asset) liability	$ 11,202,507	$ (5,931,828)
Plan fiduciary net position as a percentage of the total OPEB liability	80.86%	111.51%

Changes in Net OPEB Liability (Asset) are as follows:

	Total OPEB Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (a) - (b)
Balances at June 30, 2021	$ 51,515,118	$ 57,446,946	$ (5,931,828)
Changes for the year:			
Service cost	416,277	-	416,277
Interest	3,858,276	-	3,858,276
Changes of Benefits	6,594,293	-	6,594,293
Differences between Expected and Actual Experience	60,951	-	60,951
Changes of Assumptions	-	-	-
Contributions - employer	-	1,989,066	(1,989,066)
Contributions - member	-	-	-
Net investment income	-	(8,122,417)	8,122,417
Benefit payments	(3,908,635)	(3,908,635)	-
Administrative expense	-	(71,187)	71,187
Net changes	7,021,162	(10,113,173)	17,134,335
Balances at June 30, 2022	$ 58,536,280	$ 47,333,773	$ 11,202,507

Actuarial assumptions

The total OPEB liability was determined by actuarial valuations, using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation dates:	January 1, 2021, rolled forward to June 30, 2022; January 1, 2020, rolled forward to June 30, 2021
Discount rate:	7.25% as of January 1, 2021, and 2020
Healthcare cost trend rates:	Pre-Medicare: 6.75% grading down to 4.04% over 20 years as of January 1, 2021, and 2020 Medicare: 6.30% grading down to 4.04% over 20 years as of January 1, 2021, and 2020 Administrative expenses: 3.0% per year
Salary increases:	From 2.50% to 5.65%, based on years of service as of January 1, 2021, and 2020
Mortality:	115% and 110% of the Public Sector Healthy Annuitant Mortality Table (PubG-2010), respectively for males and females, using the Public Sector General Employee Table (PubG-2010) for ages prior to the start of the Healthy Annuitant Mortality Table, both projected using scale MP2018 fully generational as of January 1, 2021, and 2020
Inflation:	2.50% as of January 1, 2021, and 2020

The actuarial assumptions used in the January 1, 2021, and January 1, 2020, valuations were based on the results of actuarial experience studies for the periods January 1, 2014, through December 31, 2018.

The long-term expected rate of return on Trust investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Trust 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 long-term expected rate of return may be lower in periods of current strong performance due to future valuations that mean revert to the long-term average. Best estimates of arithmetic real rates of return for each major asset class included in the Trust's target asset allocation (see the discussion of the Trust's Investment Policy) are summarized in the chart below.

	Long Term Expected Real Rate of Return	
Asset Class	**2022**	**2021**
Domestic equity	5.5%	4.9%
International equity	6.5%	5.9%
Emerging Market equity	8.6%	8.4%
Real estate equity	5.7%	5.4%
Debt securities	1.2%	0.5%
Cash and deposits	0.2%	(0.1%)

Discount rate

The discount rate used to measure the total OPEB liability was 7.25 percent as of June 30, 2022, and 2021. The projection of cash flows used to determine the discount rate assumed that participant contributions will be made at the current contribution rate and that KUB contributions

will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the Trust's fiduciary net position was projected to be available to make all projected future benefit payments. Therefore, the long-term expected rate of return on Trust investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity of the net OPEB liability (asset) to changes in the discount rate.
The following presents the net OPEB liability (asset) of the Trust as of June 30, 2022, calculated using the discount rate of 7.25 percent, as well as what the Trust's net OPEB liability (asset) would be if it were calculated using a discount rate that is one percent lower (6.25 percent) or one percent higher (8.25 percent) than the current rate:

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net OPEB liability (asset)	$16,978,277	$11,202,507	$6,333,693

Sensitivity of the net OPEB liability (asset) to changes in the healthcare cost trend rates.
The following presents the net OPEB liability (asset) of the Trust as of June 30, 2022, as well as what the Trust's net OPEB liability (asset) would be if it were calculated using a healthcare cost trend rate that is one percent lower or one percent higher than the current rate:

	1% Decrease	Baseline Trends	1% Increase
Net OPEB liability (asset)	$6,338,599	$11,202,507	$16,846,266

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended June 30, 2022, KUB recognized OPEB expense of $5,976,502.

The impact of liability experience gains or losses and assumption changes on the Total OPEB Liability are recognized in the OPEB expense over the average expected remaining service life of all active and inactive members of the OPEB Plan. As of the beginning of the measurement period, this average was 2.0 years. During the measurement year, there was an experience loss of $60,951, with $30,476 of that recognized in the current year and the remaining amount will be recognized in the next year, resulting in a deferred outflow of resources of $30,475. Unrecognized experience losses from prior periods were $21,401, of which the entire amount is recognized as an increase in OPEB expense in the current year.

During the measurement year, there were benefit changes that increased the Total OPEB Liability by $6,594,293. Unrecognized assumption changes from prior periods were $2,052,917, of which the entire amount is recognized as a decrease in OPEB expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment loss of $12,216,418, of which $2,443,284 was recognized in the current year and will be recognized in each of the next four years, resulting in a deferred outflow of resources of $9,773,134. Net unrecognized investment gains from prior periods were $5,905,689, of which $1,311,774 was recognized as a decrease in OPEB expense in the current year, resulting in a net deferred inflow of $4,593,915. The combination of unrecognized losses this year along with the net unrecognized investment gains from prior periods results in a deferred outflow of resources of $5,179,219. The following table summarizes the current balances of deferred outflows and deferred inflows of resources.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 30,475	$ -
Changes in assumptions	-	-
Net difference between projected and actual earnings on OPEB plan investments	5,179,219	-
Total	$ 5,209,694	$ -

Amounts reported as deferred outflows and deferred inflows of resources will be recognized in OPEB expense as follows:

Year ended June 30:	
2023	$ 1,192,746
2024	1,044,744
2025	528,922
2026	2,443,282
2027	-
Thereafter	-

For the year ended June 30, 2021, KUB recognized OPEB expense of ($648,134).

The impact of liability experience gains or losses and assumption changes on the Total OPEB Liability are recognized in the OPEB expense over the average expected remaining service life of all active and inactive members of the OPEB Plan. As of the beginning of the measurement period, this average was 2.0 years. During the measurement year, there was an experience loss of $42,802, with $21,401 of that recognized in the current year and the remaining amount will be recognized in the next year, resulting in a deferred outflow of resources of $21,401. Unrecognized experience losses from prior periods were $21,951, of which the entire amount is recognized as an increase in OPEB expense in the current year.

During the measurement year, there was a decrease in the Total OPEB Liability due to assumption changes of $4,105,835, with $2,052,918 of that recognized in the current year and in the next year, resulting in a deferred inflow of $2,052,917. Unrecognized assumption changes from prior periods were $1,802,421, of which the entire amount is recognized as an increase in OPEB expense in the current year.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment gain of $9,571,802, of which $1,914,360 was recognized in the current year and will be recognized in each of the next four years. Net unrecognized investment losses from prior periods were $2,354,338, of which $602,585 was recognized as an increase in OPEB expense in the current year. The combination of unrecognized gains this year, along with the net unrecognized investment losses from prior periods, results in a net difference between projected and actual earnings on OPEB plan investments as of June 30, 2021, of $5,905,689. The table below summarizes the current balances of deferred outflows and deferred inflows of resources.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 21,401	$ -
Changes in assumptions	-	2,052,917
Net difference between projected and actual earnings on OPEB plan investments	-	5,905,689
Total	$ 21,401	$ 7,958,606

15. Related Party Transactions

KUB, in the normal course of operations, is involved in transactions with the City of Knoxville. Such transactions for the years ended June 30, 2022, and 2021, are summarized as follows:

	2022	2021
City of Knoxville		
Amounts billed by KUB for utilities and related services	$ 13,087,853	$ 12,420,849
Payments by KUB in lieu of property tax	21,305,955	21,003,825
Payments by KUB for services provided	2,209,682	3,354,318

With respect to these transactions, accounts receivable from the City of Knoxville included in the balance sheet at year end were as follows:

	2022	2021
Accounts receivable	$ 838,238	$ 914,091

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16. Natural Gas Supply Contract Commitments

For fiscal year 2022, the Gas Division hedged 27 percent of its total gas purchases via gas supply contracts. As of June 30, 2022, the Gas Division had hedged the price on approximately 5 percent of its anticipated gas purchases for fiscal year 2023.

KUB contracts separately for the purchase, transportation, and storage of natural gas. Purchase commitments for the next five years and thereafter are as follows:

Firm obligations related to purchased gas – demand

	2023	2024	2025	2026	2027	2028
Transportation						
Tennessee Gas Pipeline	$ 3,406,776	$ 3,406,776	$ 3,406,776	$ 1,135,592	$ -	$ -
East Tennessee Natural Gas	12,582,997	12,582,997	12,582,997	3,435,624	-	-
Texas Eastern	328,500	328,500	328,500	109,500	-	-
Storage						
Tennessee Gas Pipeline	1,530,684	1,530,684	1,530,684	510,228	-	-
East Tennessee Natural Gas	1,081,500	1,081,500	1,081,500	-	-	-
Saltville Natural Gas	2,000,160	2,000,160	1,845,150	1,380,120	1,380,120	1,035,090
Bobcat	54,000	-	-	-	-	-
Demand Total	$ 20,984,617	$ 20,930,617	$ 20,775,607	$ 6,571,064	$ 1,380,120	$ 1,035,090

Firm obligations related to purchased gas – commodity

	2023	2024	2025	2026	2027	2028-2052
Baseload						
Shell Energy	$ 2,153,180	$ -	$ -	$ -	$ -	$ -
Conoco	$ 2,200,920	$ 23,985	$ -	$ -	$ -	$ -
BP	$ 276,520	$ -	$ -	$ -	$ -	$ -
CNX	$ 7,536,936	$ 4,738,107	$ -	$ -	$ -	$ -
Enervest	$ 5,134,304	$ 4,043,490	$ 3,001,698	$ -	$ -	$ -
PrePay Gas	$ 5,873,688	$ 4,514,946	$ 4,313,608	$ 4,433,183	$ 4,345,174	$ 112,935,089
Commodity Total	$ 23,175,548	$ 13,320,528	$ 7,315,306	$ 4,433,183	$ 4,345,174	$ 112,935,089

The total commodity values presented here are based upon firm supply obligations with each individual natural gas supplier. The firm obligations value for BP Energy Company, ConocoPhillips, and Shell Energy North America are based upon firm supply obligations and locked prices with those suppliers. The firm obligations value for CNX and Enervest Operating LLC are based upon firm supply obligations and the applicable NYMEX strip prices on June 30, 2022. The firm obligations value for Tennergy Corporation is based upon a 30 year prepay gas contract valued at the applicable Tennessee Zone 0 strip prices on June 30, 2022.

17. Other Commitments and Contingencies

In the normal course of business, there are various lawsuits pending against KUB. Management has reviewed these lawsuits with counsel, who is vigorously defending KUB's position and is of the opinion that the ultimate disposition of these matters will not have a material adverse effect on KUB's financial position, results of operations, or cash flows.

In February 2005, a Consent Decree was entered into federal court regarding the operation of KUB's wastewater system. Under the terms of the Consent Decree, the remediation of identified sanitary sewer overflows (SSOs) on KUB's wastewater system had to be completed by June 30, 2016. KUB

completed all the requirements of the Consent Decree for the collection system two years in advance of the deadline.

The Consent Decree also required KUB to perform an evaluation of the wet weather performance and capacity of its wastewater treatment plants. In July 2007, KUB submitted a Composite Correction Plan (CCP) for its wastewater treatment plants to EPA for review. The development and filing of the CCP was a requirement of the federal order of February 2005. The CCP includes recommended improvements to KUB's Kuwahee and Fourth Creek treatment plants to address wet weather capacity issues noted in prior assessments. The EPA approved the CCP in January 2009 including a recommended schedule of plant improvements that extends beyond the expiration date of the original Consent Decree. An amendment to the Consent Decree incorporating and establishing this schedule was agreed to by all parties and was entered on June 23, 2009. The purpose of the Amendment is to allow KUB to complete a portion of work outlined in the CCP after the Consent Decree deadline of June 30, 2016. The CCP provided for a biologically enhanced high-rate clarification (the BEHRC) secondary treatment system to be installed at the Fourth Creek treatment plant and at the Kuwahee treatment plant. KUB successfully completed the installation of the BEHRC system at the Fourth Creek treatment plant in the 2018 fiscal year. The project at the Kuwahee treatment plant was completed this fiscal year. The total cost of the CCP improvements at the Fourth Creek treatment plant and Kuwahee treatment plant is approximately $120 million.

KUB's funding plan for the Consent Decree included long-term bonds and a series of rate increases phased in over the term of the order. Bond proceeds fund all types of wastewater capital projects, the majority of which are related to the Consent Decree. As of June 30, 2022, the Wastewater Division had issued $594.8 million in bonds to fund wastewater system capital improvements since the inception of the Consent Decree. The Board approved two 50 percent rate increases, which went into effect in April 2005 and January 2007. The Board also approved an 8 percent rate increase, which was effective in September 2008, two 12 percent rate increases, which were effective in April 2011 and October 2012, three 6 percent rate increases, which were effective October 2014, October 2015, and October 2016, three 5 percent rate increases, which were effective July 2017, July 2018, and July 2019, and three 4 percent rate increases, which are effective July 2022, July 2023, and July 2024. KUB anticipates additional bond issues and rate increases over the next decade to help fund wastewater capital improvements.

KUB successfully completed the first cycle of Maintenance Operation Management (MOM) requirements one year before the deadline by inspecting manholes and gravity mains, smoke testing gravity mains, performing required inspections of pump stations and the related force mains, and completing all Corrective Action Plan/Engineering Report (CAP/ER) projects. KUB initiated the second MOM cycle that continues to focus on the prevention of SSOs. As part of the Century II initiative, formally known as the PACE10 program, KUB has installed storage tanks providing 34 million gallons of wastewater storage to control wet weather overflows and rehabilitated or replaced 432 miles of collection system pipe. KUB also continues to maintain a proactive operations and maintenance plan for the wastewater collection system including inspection, grease control, and private lateral enforcement. The result of the PACE10/Century II initiative has been an 80 percent reduction in SSOs.

As of June 30, 2022, the Wastewater Division had completed its 18th full year under the Consent Decree, spending $579.8 million on capital investments to meet Consent Decree requirements.

KUB's request for termination of the Consent Decree was submitted in January 2022 and was granted on June 16, 2022, by the applicable regulatory authorities.

18. Segment Information

The following financial information represents identifiable activities for which the revenue bonds and other revenue backed debt are outstanding for the respective Divisions:

Condensed Statement of Net Position

	2022				
	Electric	Fiber	Gas	Water	Wastewater
Assets and Deferred Outflows of Resources					
Current assets	$ 158,820,919	$ 3,508,355	$ 48,281,211	$ 40,660,318	$ 37,333,853
Restricted assets	20,266,914	-	3,354,168	4,534,404	8,217,706
Net capital assets	712,994,298	4,342,483	329,129,124	375,152,303	831,606,692
Net intangible assets	1,836,297	1,609,984	286,147	61,727	104,460
Other assets	84,355,546	2,761	30,073,394	24,586,111	44,406,984
Total assets	$ 978,273,974	$ 9,463,583	$ 411,124,044	$ 444,994,863	$ 921,669,695
Deferred outflows of resources	6,233,902	-	2,518,890	4,558,876	15,166,134
Total assets and deferred outflows of resources	$ 984,507,876	$ 9,463,583	$ 413,642,934	$ 449,553,739	$ 936,835,829
Liabilities and Deferred Inflows of Resources					
Current liabilities	$ 149,360,945	$ 783,314	$ 22,885,222	$ 13,234,512	$ 22,614,577
Other liabilities	20,582,956	1,483,695	10,609,689	3,692,833	4,536,558
Long-term debt	319,887,437	9,625,000	87,006,291	199,505,672	518,518,494
Total liabilities	$ 489,831,338	$ 11,892,009	$ 120,501,202	$ 216,433,017	$ 545,669,629
Deferred inflows of resources	22,151,109	-	8,674,041	7,536,771	7,850,319
Total liabilities and deferred inflows of resources	$ 511,982,447	$ 11,892,009	$ 129,175,243	$ 223,969,788	$ 553,519,948
Net position					
Net investment in capital assets	$ 373,317,161	$ (70,525)	$ 234,171,043	$ 172,829,853	$ 314,336,681
Restricted	14,040,851	-	2,230,358	2,411,963	3,660,092
Unrestricted	85,167,417	(2,357,901)	48,066,290	50,342,135	65,319,108
Total net position	$ 472,525,429	$ (2,428,426)	$ 284,467,691	$ 225,583,951	$ 383,315,881

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Condensed Statement of Net Position

	Electric	Fiber	2021 as restated Gas	Water	Wastewater
Assets and Deferred Outflows of Resources					
Current assets	$ 137,583,934	$ -	$ 51,027,309	$ 40,303,791	$ 70,488,587
Restricted assets	18,921,704	-	2,711,802	4,287,800	7,665,859
Net capital assets	691,360,855	-	316,892,582	370,925,234	809,975,010
Net intangible assets	226,011	-	80,046	61,212	103,589
Other assets	39,892,255	-	20,658,213	20,293,906	21,120,043
Total assets	$ 887,984,759	$ -	$ 391,369,951	$ 435,871,943	$ 909,353,088
Deferred outflows of resources	3,971,049	-	1,406,413	3,601,619	15,027,097
Total assets and deferred outflows of resources	$ 891,955,808	$ -	$ 392,776,364	$ 439,473,562	$ 924,380,185
Liabilities and Deferred Inflows of Resources					
Current liabilities	$ 124,734,612	$ -	$ 18,412,603	$ 12,797,633	$ 24,191,982
Other liabilities	14,222,051	-	4,220,744	1,815,393	2,379,968
Long-term debt	286,588,420	-	94,618,667	207,473,371	523,665,353
Total liabilities	$ 425,545,083	$ -	$ 117,252,014	$ 222,086,397	$ 550,237,303
Deferred inflows of resources	23,076,437	-	8,152,256	6,162,498	10,428,841
Total liabilities and deferred inflows of resources	$ 448,621,520	$ -	$ 125,404,270	$ 228,248,895	$ 560,666,144
Net position					
Net investment in capital assets	$ 384,825,723	$ -	$ 214,218,766	$ 161,247,461	$ 289,031,630
Restricted	14,545,852	-	1,733,025	2,145,297	3,331,229
Unrestricted	43,962,713	-	51,420,303	47,831,909	71,351,182
Total net position	$ 443,334,288	$ -	$ 267,372,094	$ 211,224,667	$ 363,714,041

Restated per GASB 87, see Footnote 2 for further disclosure.

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Condensed Statement of Revenues, Expenses and Changes in Net Position

	2022				
	Electric	**Fiber**	**Gas**	**Water**	**Wastewater**
Operating revenues	$ 606,335,419	$ -	$ 141,949,970	$ 64,558,346	$ 102,936,574
Operating expenses	524,550,587	1,968,636	106,481,701	32,604,913	43,613,190
Depreciation and amortization	38,481,239	153,604	15,166,029	11,671,918	21,815,257
Total operating expenses	563,031,826	2,122,240	121,647,730	44,276,831	65,428,447
Operating income (loss)	43,303,593	(2,122,240)	20,302,240	20,281,515	37,508,127
Non-operating expense	(14,112,452)	(306,186)	(3,293,078)	(6,965,888)	(18,413,896)
Change in net position before capital contributions	29,191,141	(2,428,426)	17,009,162	13,315,627	19,094,231
Capital contributions	-	-	86,435	1,043,657	507,609
Change in net position	29,191,141	(2,428,426)	17,095,597	14,359,284	19,601,840
Net position					
Beginning of year	443,334,288	-	267,372,094	211,224,667	363,714,041
End of year	$ 472,525,429	$ (2,428,426)	$ 284,467,691	$ 225,583,951	$ 383,315,881

Condensed Statement of Revenues, Expenses and Changes in Net Position

	2021 as restated				
	Electric	**Fiber**	**Gas**	**Water**	**Wastewater**
Operating revenues	$ 553,897,585	$ -	$ 115,414,180	$ 61,799,439	$ 100,360,933
Operating expenses	470,296,392	-	79,299,883	30,969,276	39,968,202
Depreciation and amortization	40,385,025	-	15,465,869	11,602,283	23,034,519
Total operating expenses	510,681,417	-	94,765,752	42,571,559	63,002,721
Operating income (loss)	43,216,168	-	20,648,428	19,227,880	37,358,212
Non-operating expense	(11,626,398)	-	(3,434,296)	(10,661,774)	(20,184,792)
Change in net position before capital contributions	31,589,770	-	17,214,132	8,566,106	17,173,420
Capital contributions	-	-	18,582	321,408	643,000
Change in net position	31,589,770	-	17,232,714	8,887,514	17,816,420
Net position					
Beginning of year	411,744,518	-	250,139,380	202,337,153	345,897,621
End of year	$ 443,334,288	$ -	$ 267,372,094	$ 211,224,667	$ 363,714,041

Restated per GASB 87, see Footnote 2 for further disclosure.

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Condensed Statement of Cash Flows

	2022				
	Electric	**Fiber**	**Gas**	**Water**	**Wastewater**
Net cash provided by (used in) operating activities	$ 89,822,159	$ (2,026,526)	$ 37,376,663	$ 30,252,330	$ 55,730,001
Net cash used in capital and related financing activities	(41,573,698)	(4,425,562)	(38,871,206)	(29,584,468)	(64,841,976)
Net cash provided by noncapital and related financing activities	-	9,715,502	-	-	-
Net cash provided by (used in) investing activities	(14,884,130)	10,729	220,510	175,533	302,808
Net increase (decrease) in cash and cash equivalents	33,364,331	3,274,143	(1,274,033)	843,395	(8,809,167)
Cash and cash equivalents, beginning of year	39,974,435	-	23,998,681	25,024,961	30,379,799
Cash and cash equivalents, end of year	$ 73,338,766	$ 3,274,143	$ 22,724,648	$ 25,868,356	$ 21,570,632

Condensed Statement of Cash Flows

	2021 as restated				
	Electric	**Fiber**	**Gas**	**Water**	**Wastewater**
Net cash provided by operating activities	$ 78,968,171	$ -	$ 34,698,690	$ 30,117,495	$ 60,582,992
Net cash used in capital and related financing activities	(83,054,540)	-	(34,498,578)	(28,060,369)	(52,499,567)
Net cash provided by (used in) investing activities	733,633	-	(356,229)	2,732,667	10,567,991
Net increase (decrease) in cash and cash equivalents	(3,352,736)	-	(156,117)	4,789,793	18,651,416
Cash and cash equivalents, beginning of year	43,327,171	-	24,154,798	20,235,168	11,728,383
Cash and cash equivalents, end of year	$ 39,974,435	$ -	$ 23,998,681	$ 25,024,961	$ 30,379,799

Restated per GASB 87, see Footnote 2 for further disclosure.

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Knoxville Utilities Board
Required Supplementary Information - Schedule of Changes in Net Pension Liability and Related Ratios
June 30, 2022

	*Year ended December 31							
	2021	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Total pension liability								
Service cost	$ 6,647,220	$ 5,227,657	$ 6,142,213	$ 5,095,488	$ 4,607,486	$ 4,226,985	$ 4,157,062	$ 4,092,808
Interest	16,982,226	16,393,202	16,030,626	15,344,193	15,015,282	14,966,559	14,812,784	14,698,657
Changes of benefit terms	-	-	163,199	-	-	-	-	-
Differences between expected and actual experience	1,935,276	1,930,170	(1,054,117)	(605,649)	(1,087,161)	(2,233,762)	(1,890,334)	-
Changes of assumptions	-	-	8,473,160	-	(357,633)	(2,932,883)	-	-
Benefit payments, including refunds of member contributions	(17,725,963)	(16,006,565)	(15,094,475)	(15,274,814)	(14,969,979)	(14,138,511)	(15,350,926)	(15,533,167)
Net change in total pension liability	7,838,759	7,544,464	14,660,606	4,559,218	3,207,995	(111,612)	1,728,586	3,258,298
Total pension liability - beginning	234,363,021	226,818,557	212,157,951	207,598,733	204,390,738	204,502,350	202,773,764	199,515,466
Total pension liability - ending (a)	$ 242,201,780	$ 234,363,021	$ 226,818,557	$ 212,157,951	$ 207,598,733	$ 204,390,738	$ 204,502,350	$ 202,773,764
Plan fiduciary net position								
Contributions - employer	$ 3,416,428	$ 2,876,752	$ 2,871,241	$ 3,456,475	$ 4,286,597	$ 5,243,146	$ 5,991,887	$ 5,908,541
Contributions - participants	3,939,687	2,284,727	3,170,825	2,081,125	1,488,632	555,075	487,546	475,854
Net investment income	37,575,566	44,814,914	49,938,315	(11,748,396)	32,360,219	13,788,263	(95,430)	22,292,369
Other additions	112,484	7,740	13,579	62,616	82,239	45,848	30,879	29,733
Benefit payments, including refunds of member contributions	(17,653,963)	(15,962,565)	(15,030,475)	(15,174,814)	(14,895,979)	(14,044,511)	(15,274,926)	(15,405,167)
Administrative expense	(441,017)	(455,191)	(467,748)	(445,916)	(385,282)	(441,332)	(397,160)	(378,085)
Death benefits	(72,000)	(44,000)	(64,000)	(100,000)	(74,000)	(94,000)	(76,000)	(128,000)
Net change in plan fiduciary net position**	26,877,185	33,522,377	40,431,737	(21,868,910)	22,862,426	5,052,489	(9,333,204)	12,795,245
Plan fiduciary net position - beginning**	279,462,309	245,939,932	205,508,195	227,377,105	204,514,679	199,462,190	208,795,394	196,000,149
Plan fiduciary net position - ending (b)**	$ 306,339,494	$ 279,462,309	$ 245,939,932	$ 205,508,195	$ 227,377,105	$ 204,514,679	$ 199,462,190	$ 208,795,394
Plan's net pension liability - ending (a) - (b)	$ (64,137,714)	$ (45,099,288)	$ (19,121,375)	$ 6,649,756	$ (19,778,372)	$ (123,941)	$ 5,040,160	$ (6,021,630)
Plan fiduciary net position as a percentage of the total pension liability	126.48%	119.24%	108.43%	96.87%	109.53%	100.06%	97.54%	102.97%
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747	$ 44,446,743	$ 44,076,351
Plan's net pension liability as a percentage of covered payroll	(168.45%)	(108.61%)	(47.48%)	15.78%	(45.67%)	(0.28%)	11.34%	(13.66%)

Notes to Schedule:

* Information not reflected prior to 2014 due to changes in actuary methodologies required under GASB 67, which was implemented in 2014.

** Excludes amounts related to 401(k) matching contributions.

See accompanying Independent Auditor's Report

Knoxville Utilities Board
Required Supplementary Information - Schedule of Employer Pension Contributions
June 30, 2022

	*Year ended December 31							
	2021	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**
Actuarially determined contribution	$ 3,416,428	$ 2,876,752	$ 2,871,241	$ 3,456,475	$ 4,286,597	$ 5,243,146	$ 5,991,887	$ 5,908,541
Contribution in relation to the actuarially determined contribution	3,416,428	2,876,752	2,871,241	3,456,475	4,286,597	5,243,146	5,991,887	5,908,541
Contribution deficiency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747	$ 44,446,743	$ 44,076,351
Contributions as a percentage of covered payroll	8.97%	6.93%	7.13%	8.20%	9.90%	11.80%	13.48%	13.41%

Notes to Schedule:

Timing:	Actuarially determined contributions for a Plan year are based upon 50% of the amounts determined at the actuarial valuations for each of the two prior Plan years.
Valuation Dates:	January 1, 2020 and January 1, 2019

Key methods and assumptions used to determine contribution rates:

Actuarial cost method:	Individual entry age
Asset valuation method:	5-year smoothed market
Amortization method:	Level dollar, 30-year closed period with 21 years remaining (22 years as of January 1, 2019), or a level dollar, 30-year open period for a negative unfunded liability; As of January 1, 2020 and 2019, the unfunded liability was negative.
Discount rate:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Salary increases:	2.50% to 5.65%, based on years of service
Mortality:	115% and 110% of the benefits-weighted Public Sector General Healthy Annuitant Mortality Table (PubG-2010), respectively, for males and females, using the Public Sector General Employee Table while in active employment and for annuitant ages prior to the start of the Healthy Annuitant Mortality Table, both projected from the 2010 base rates using scale MP2018 fully generational
Inflation:	2.5%

* Schedule of Employer Contribution information is not reflected prior to 2014 due to changes in actuary methodologies required under GASB 67, which was implemented 2014. Please refer to prior year's audited financial statements for prior methods and assumptions.

Knoxville Utilities Board
Required Supplementary Information – Schedule of Changes in Net OPEB Liability and Related Ratios
June 30, 2022

	*Year ended June 30				
	2022	**2021**	**2020**	**2019**	**2018**
Total OPEB liability					
Service cost	$ 416,277	$ 283,786	$ 256,270	$ 270,515	$ 202,603
Interest	3,858,276	3,861,304	3,672,291	3,624,737	3,295,240
Change of benefit terms	6,594,293	-	(202,408)	-	-
Differences between expected and actual experience	60,951	42,802	43,902	999,098	1,324,769
Changes of assumptions	-	(4,105,835)	3,604,843	3,231,601	(397,180)
Benefit payments	(3,908,635)	(3,111,179)	(3,028,596)	(3,532,444)	(3,298,739)
Net change in total OPEB liability	7,021,162	(3,029,122)	4,346,302	4,593,507	1,126,693
Total OPEB liability - beginning	51,515,118	54,544,240	50,197,938	45,604,431	44,477,738
Total OPEB liability - ending (a)	$ 58,536,280	$ 51,515,118	$ 54,544,240	$ 50,197,938	$ 45,604,431
Plan fiduciary net position					
Contributions - employer	$ 1,989,066	$ 757,226	$ 311,324	$ -	$ -
Net investment income	(8,122,417)	12,890,602	975,155	2,981,928	3,705,473
Benefit payments	(3,908,635)	(3,111,179)	(3,028,596)	(3,532,444)	(3,298,739)
Administrative expense	(71,187)	(44,496)	(53,286)	(54,787)	(51,668)
Net change in plan fiduciary net position	(10,113,173)	10,492,153	(1,795,403)	(605,303)	355,066
Plan fiduciary net position - beginning	57,446,946	46,954,793	48,750,196	49,355,499	49,000,433
Plan fiduciary net position - ending (b)	$ 47,333,773	$ 57,446,946	$ 46,954,793	$ 48,750,196	$ 49,355,499
Net OPEB liability (asset) - ending (a) - (b)	$ 11,202,507	$ (5,931,828)	$ 7,589,447	$ 1,447,742	$ (3,751,068)
Plan fiduciary net position as a percentage of the total OPEB liability	80.86%	111.51%	86.09%	97.12%	108.23%
Covered employee payroll**	$ 73,927,857	$ 21,578,366	$ 23,363,536	$ 24,346,735	$ 23,677,080
Net OPEB liability (asset) as a percentage of covered employee payroll	15.15%	(27.49%)	32.48%	5.95%	(15.84%)

Notes to Schedule:

* Information not reflected prior to 2018 due to changes in actuary methodologies required under GASB 75, which was implemented in 2018.

** The covered-employee payroll increased in FY 2022 due to the inclusion of plan participants eligible for the HRA benefits.

See accompanying Independent Auditor's Report

Knoxville Utilities Board
Required Supplementary Information – Schedule of Employer OPEB Contributions
June 30, 2022

	*Year ended June 30				
	2022	2021	2020	2019	2018
Actuarially determined contribution	$ 489,066	$ 757,226	$ 311,324	$ -	$ -
Contribution in relation to the annual required contribution	1,989,066	757,226	311,324	-	-
Contribution deficiency/(excess)	$ (1,500,000)	$ -	$ -	$ -	$ -
Covered employee payroll*	$ 73,927,857	$ 21,578,366	$ 23,363,536	$ 24,346,735	$ 23,677,080
Contributions as a percentage of covered employee payroll	2.69%	3.51%	1.33%	0.00%	0.00%

* The covered-employee payroll increased in FY 2022 due to the inclusion of plan participants eligible for the HRA benefits.

KUB elected to make a $1,500,000 voluntary contribution to the Trust to initially fund the HRA benefit which was effective January 1, 2022. This contribution was not required.

Notes to Schedule:

Valuation Date:	January 1, 2020 and January 1, 2019
Timing:	Actuarially determined contribution rates are calculated based on the actuarial valuation completed 18 months before the beginning of the fiscal year.

Key methods and assumptions used to determine contribution rates:

Actuarial cost method:	Entry age normal
Asset valuation method:	5-year smoothed market
Amortization method:	Level dollar, 30-year closed period with 16 years remaining as of January 1, 2020 (17 years as of January 1, 2019), or a level dollar, 30-year open period for a negative unfunded liability; As of January 1, 2019 and 2020, the unfunded liability was positive
Discount rate:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Healthcare cost trend rate:	Pre-Medicare: 6.75% grading down to 4.04% over 20 years as of January 1, 2020; 7.83% grading down to 4.50% over 19 years as of January 1, 2019 Medicare: 6.30% grading down to 4.04% over 20 years as of January 1, 2020; 6.88% grading down to 4.50% over 19 years as of January 1, 2019 Administrative expenses: 3.0% per year
Salary increases:	From 2.50% to 5.65%, based on years of service
Mortality:	115% and 110% of the Public Sector Healthy Annuitant Mortality Table (PubG-2010), respectively for males and females, using the Public Sector General Employee Table (PubG-2010) for ages prior to the start of the Health Annuitant Mortality Table, both projected using scale MP2018 fully generational
Inflation:	2.5%
Investment rate of return:	7.25% as of January 1, 2020; 7.5% as of January 1, 2019
Retirement age:	2% at ages 50-57, grading up to 100% at age 70

* Schedule of Employer Contribution information is not reflected prior to 2018 due to changes in actuary methodologies required under GASB 75, which was implemented in 2018.
Please refer to prior year's audited financial statement for prior methods and assumptions.

See accompanying Independent Auditor's Report

Knoxville Utilities Board
Required Supplementary Information – Qualified Governmental Excess Benefit Arrangement
Schedule of Changes in Total Pension Liability and Related Ratios
June 30, 2022

	*Year ended December 31					
	2021	2020	2019	2018	2017	2016
Total pension liability						
Service cost	$ -	$ -	$ -	$ 941	$ 584	$ -
Interest (includes interest on service cost)	268	388	9,181	9,676	7,535	-
Changes of benefit terms	-	-	(218,272)	-	-	185,077
Differences between expected and actual experience	(6,816)	10,165	34	(36,125)	13,684	-
Changes of assumptions	-	91	13,342	(22,950)	73,461	-
Benefit payments, including refunds of member contributions	(12,166)	(12,166)	(15,932)	-	-	-
Net change in total pension liability	(18,714)	(1,522)	(211,647)	(48,458)	95,264	185,077
Total pension liability - beginning	18,714	20,236	231,883	280,341	185,077	-
Total pension liability - ending	$ -	$ 18,714	$ 20,236	$ 231,883	$ 280,341	$ 185,077
Covered payroll	$ 38,074,863	$ 41,524,273	$ 40,276,197	$ 42,150,040	$ 43,309,374	$ 44,437,747
Total pension liability as a percentage of covered payroll	0.00%	0.05%	0.05%	0.55%	0.65%	0.42%

Notes to Schedule:

* There are no assets accumulated in a trust that meet the criteria in paragraph 4 of GASB 73 to pay related benefits.

See accompanying Independent Auditor's Report

Crime
Covers losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $5,000,000; $250,000 retention.

Directors' and Officers' Liability Insurance
Covers KUB personnel appropriately authorized to make decisions on behalf of KUB (including but not limited to Commissioners, President and CEO, Senior Vice Presidents, Vice Presidents, and Directors) for wrongful acts. Limits of coverage - $20,000,000; $500,000 corporate deductible, $0 individual deductible.

Employment Practices Liability
Coverage for costs related to actual or alleged employment practices violations for amounts exceeding specified amount ($500,000). Limits of coverage - $10,000,000.

Fiduciary
Covers losses resulting from wrongful acts related to KUB's Pension, 401(k), OPEB Trust funds, and Medical Plan. Limits of coverage - $10,000,000; $150,000 deductible.

Pollution Legal Liability
New conditions coverage for losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - $15,000,000.

Property Insurance
This coverage provides protection of KUB's property for fire, extended coverage, vandalism and malicious mischief, and coverage on boilers and machinery. Also included are flood and earthquake damage and mechanical failure. Limits of coverage - $250,000,000 per occurrence (subject to certain sublimits); $2,500,000 deductible per occurrence.

Travel Accident
Covers losses related to employees' business travel. Limits of coverage - $3,000,000 aggregate.

Excess Insurance for General Liability
As a governmental entity, KUB's liability is limited under the Tennessee Governmental Tort Liability Act (TCA §29-20-403). KUB is self-insured for the first $700,000 of any accident and has insurance of $4,300,000 above this retention.

Excess Insurance for Workers' Compensation
Covers all losses exceeding specified amount per occurrence ($1,000,000). Limits of coverage - Statutory; stop loss coverage applies for aggregate losses over $5,000,000.

Employee Health Plan Stop Loss Coverage
KUB's employee health plan is self-funded. KUB has purchased stop loss insurance, which covers KUB's exposure to annual expenses in excess of $600,000 per individual participant.

Cyber Security Liability
Covers losses resulting from employee dishonesty, robbery, burglary, and computer fraud. Limits of coverage - $3,000,000; $500,000 retention.

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Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

Board of Commissioners
Knoxville Utilities Board
Knoxville, Tennessee

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*), the financial statements of the Knoxville Utilities Board (KUB), a component unit of the City of Knoxville, Tennessee, as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise KUB's basic financial statements, and have issued our report thereon dated October 25, 2022.

Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered KUB's internal control over financial reporting (internal control) as a basis for designing procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of KUB's internal control. Accordingly, we do not express an opinion on the effectiveness of KUB's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of KUB's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

Board of Commissioners
Knoxville Utilities Board
Knoxville, Tennessee

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether KUB's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of KUB's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering KUB's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Coulter & Justus, P.C.

Knoxville, Tennessee
October 25, 2022

Knoxville Utilities Board
Schedule of Findings and Questioned Costs
June 30, 2022

Section I -- Summary of Auditor's Results

Financial Statements

Type of auditors' report issued:	Unmodified
Internal control over financial reporting:	
Material weakness(es) identified?	No
Significant deficiency(s) identified not considered to be material weaknesses?	None reported
Noncompliance material to financial statements:	No

Section II -- Financial Statement Findings
None reported.

Section III – Findings Required by the State of Tennessee Audit Manual
None reported.

Section IV -- Summary Schedule of Prior Year Audit Findings
Not applicable as there were no prior year findings reported.

APPENDIX E

SUMMARY OF CERTAIN PROVISIONS OF ELECTRIC BOND RESOLUTION

SUMMARY OF CERTAIN PROVISIONS OF THE ELECTRIC BOND RESOLUTIONS

The following statements are brief summaries of certain provisions of the Electric Bond Resolutions, copies of which are available for examination at the offices of the Knoxville Utilities Board (the "Board"). Terms defined in the Electric Bond Resolutions and not defined below or elsewhere in this Official Statement shall have the meaning set forth in the Electric Bond Resolutions. Section numbers refer to sections of Resolution No. 1644, as amended by Resolution No. 2171, Resolution No. 3491, Resolution No. R-317-90, Resolution No. R-422-98, Resolution No. R-149-01, Resolution No. R-332-2010 and Resolution No. R-230-2018, and as supplemented by Resolution No. R-221-2022 and as otherwise supplemented prior to the date hereof (collectively, the "Resolution").

Security

The Series OO-2022 Bonds constitute and, when issued will be Bonds under the Resolution. All Series OO-2022 Bonds are limited obligations of the City, payable solely and ratably from the net revenues of the Electric System of the City and are on parity with each other in all respects.

The Series OO-2022 Bonds will be issued pursuant to the Resolution which sets forth in detail covenants of the City with respect to the Series OO-2022 Bonds. The following summary is a brief outline of certain provisions contained in the Resolution and is not to be considered as a full statement thereof. This summary is qualified by reference to and is subject to the Resolution, copies of which may be examined at the office of the Board.

Certain Definitions

"Accreted Value" shall mean, with respect to any Capital Appreciation Debt, an amount equal to the principal amount of such Capital Appreciation Debt (determined on the basis of the principal amount per $5,000 at maturity thereof) plus the amount assuming semi-annual compounding of earnings which would be produced on the investment of such principal amount, beginning on the dated date of such Capital Appreciation Debt and ending at the date such Accreted Value is calculated, at a yield which, if produced until maturity, will produce $5,000 at maturity. As of any Valuation Date, the Accreted Value of any Capital Appreciation Debt shall mean the amount set forth for such date in the resolution authorizing such Capital Appreciation Debt, which amount shall be required to be determined in the manner described above, and as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Accreted Values for such Valuation Dates.

"Aggregate Debt Service" for any period shall mean, as of any date of calculation, the sum of the amounts of Debt Service for such period with respect to all indebtedness with respect to which such calculation is required to be made for such period.

"Balloon Date" shall mean any maturity date for Balloon Indebtedness in a Balloon Year.

"Balloon Indebtedness" shall mean any bonds, notes or other indebtedness of the Board or the City, on behalf of the Board, other than Short-Term Indebtedness, twenty-five percent or more of the initial principal amount of which matures (or must be redeemed at the option of the holder) during any

twelve month period, if such twenty-five percent or more is not to be amortized to below twenty-five percent by mandatory redemption prior to the beginning of such twelve month period.

"Balloon Year" shall mean any 12-month period in which more than 25% of the original principal amount of related Balloon Indebtedness matures or is subject to mandatory redemption by the Authority.

"Capital Appreciation Debt" shall mean any bonds, notes or other indebtedness of the Board or of the City on behalf of the Board as to which interest is payable only at the maturity or prior redemption of such bonds.

"Commitment," when used with respect to Balloon Indebtedness, shall mean a binding written commitment from a financial institution, surety, or insurance company to refinance such Balloon Indebtedness on or prior to any Balloon Date thereof.

"Consulting Engineer" shall mean (i) an engineering firm or individual engineer employed by the Board with substantial experience in advising utilities similar to the System operated by the Board as to the construction and maintenance of the System and in the projection of relative costs of expansion in the System or (ii) an engineer or engineers who are employees of the Board whose reports or projections are certified by a financial advisor with substantial experience in advising utilities similar to the System.

"Current Operating Expenses" shall include but not be limited to, expenses for ordinary repairs, removals and replacements of the System, salaries and wages, employees' health, hospitalization, pension and retirement expenses, fees for services, materials and supplies, rents, administrative and general expenses (including legal, engineering, accounting and financial advisory fees and expenses and costs of other consulting or technical services not funded with proceeds of indebtedness), insurance expenses, taxes and other governmental charges, the imposition or amount of which is not subject to control of the Board or the City, any payments made by the Board during any fiscal year to purchase electrical power for delivery during or after the end of that fiscal year, and other payments made under any electrical power supply contract, and any principal or interest payments made by the Board during any fiscal year on bonds, notes or other obligations, including loan agreements, issued or entered into for the purpose of financing the purchase of electrical power, and to the extent so provided by the resolution authorizing such bonds, notes or obligations and to the extent not inconsistent with generally accepted accounting principles. Current Operating Expenses do not include depreciation or obsolescence charges or reserves therefor, amortization of intangibles or other bookkeeping entries of a similar nature, interest charges and charges for the payment of principal or amortization of bonded or other indebtedness of the Board or the City, on behalf of the Board, payable from revenues of the System, costs or charges made therefor, capital additions, replacements, betterments, extensions or improvements to or retirement from the System which under generally accepted accounting principles are properly chargeable to the capital account or the reserve for depreciation, and do not include losses from the sale, abandonment, reclassification, revaluation or other disposition of any properties of the System, nor such property items, including taxes and fuels, which are capitalized pursuant to the then existing accounting practices of the Board or expenses of a system that is merged into the System, as permitted hereunder, if revenues of the merged system are not included in Revenues at the election of the Board. If the Board operates its utilities as a Combined System, as defined herein, Current Operating Expenses shall be deemed to refer to the Current Operating Expenses of the Combined System.

"Debt Service" for any period shall mean, as of any date of calculation and with respect to the indebtedness with respect to which such calculation is being made, an amount equal to (i) the interest accruing during such period on such indebtedness plus (ii) the portion of each Principal Installment which would accrue during such period if such Principal Installment were deemed to accrue periodically in equal amounts from the next preceding Principal Installment due date for such indebtedness (or, if there

shall be no such preceding Principal Installment due date, from a date of issuance of the indebtedness). For purposes of this definition:

(a) The principal and interest portions of the Accreted Value of Capital Appreciation Debt becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments in such manner and during such period of time as is specified in the resolution authorizing such Capital Appreciation Debt.

(b) The annual principal and interest requirement on Short-Term Indebtedness shall be calculated as that amount necessary to amortize the Short-Term Indebtedness from the date it was issued over twenty (20) years in twenty (20) approximately equal annual payments of principal and interest using an assumed interest rate (which shall be the interest rate as of the date of issuance or the date of calculation, whichever is less, certified by a Financial Advisor to be the interest rate at which the City on behalf of the Board could reasonably expect to borrow the same amount by issuing indebtedness with the same priority of lien as such Balloon Indebtedness and with a 20-year term).

(c) With respect to any Variable Rate Indebtedness, including Hedged Indebtedness if the interest thereon calculated as set forth below is expected to vary, the interest coming due in any specified future period shall be determined as if the interest rate in effect at all times during such future period was, at the option of the Board, either (1) the average of the actual interest rates which were in effect (weighted according to the length of the period during which each such interest rate was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period), or (2) the current average annual fixed rate of interest on securities of similar quality having a similar maturity date as certified by a Financial Advisor.

(d) With respect to any Hedged Indebtedness, the interest on such Hedged Indebtedness during any Hedge Period and for so long as the provider of the related Hedge Agreement has not defaulted on its payment obligations thereunder shall be calculated by adding (x) the amount of interest payable by the City or the Board on such Hedged Indebtedness pursuant to its terms and (y) the amount of Hedge Payments payable by the City or the Board under the related Hedge Agreement and subtracting (z) the amount of Hedge Receipts payable by the provider of the related Hedge Agreement at the rate specified in the related Hedge Agreement; provided, however, that to the extent that the provider of any Hedge Agreement is in default thereunder, the amount of interest payable by the City or the Board on the related Hedged Indebtedness shall be the interest calculated as if such Hedge Agreement had not been executed. In determining the amount of Hedge Payments or Hedge Receipts that are not fixed throughout the Hedge Period (i.e., which are variable), payable or receivable for any future period, such Hedge Payments or Receipts for any period of calculation (the "Determination Period") shall be computed by assuming that the variables comprising the calculation (e.g., indices) applicable to the Determination Period are equal to the average of the actual variables which were in effect (weighted according to the length of the period during which each such variable was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period).

(e) With respect to Balloon Indebtedness (1) which is subject to a Commitment or (2) which does not have a Balloon Year commencing within 12 months from the date of calculation, such Balloon Indebtedness shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of 20 years from the date of issuance at an assumed interest rate (which shall be the interest rate as of the date of issuance or the date of calculation, whichever is less, certified by a Financial Advisor to be the interest rate at which the City on behalf of the Board could reasonably expect to borrow the same amount by issuing indebtedness with the same priority

of lien as such Balloon Indebtedness and with a 20-year term); provided, however, that if the maturity of such Balloon Indebtedness (taking into account the term of any Commitment) is in excess of 20 years from the date of issuance, then such Balloon Indebtedness shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of years equal to the number of years from the date of issuance of such Balloon Indebtedness to maturity (including the Commitment) and at the interest rate provided above. For the purpose of calculating the Debt Service Requirement on Balloon Indebtedness (a) which are not subject to a Commitment and (b) which have a Balloon Year commencing within 12 months from the date of calculation, the principal payable on such Balloon Indebtedness during the Balloon Year shall be calculated as if paid on the Balloon Date.

(f) The principal of and interest on Parity Indebtedness and Hedge Payments shall be excluded from the determination of Debt Service to the extent that the same were or are expected to be paid with amounts on deposit on the date of calculation (or proceeds of indebtedness to be deposited on the date of issuance of any proposed Parity Indebtedness) in a fund established for such purpose.

(g) In calculating the Debt Service on any Parity Indebtedness or proposed Parity Indebtedness with respect to which the federal government or any agency thereof is or is expected to be obligated to make tax refunds or other payments to the City or the Board for the purpose of reducing the interest costs associated therewith, the Board may offset any stated interest payment on such Parity Indebtedness or proposed Parity Indebtedness by the amount of the scheduled tax refund or other payment corresponding thereto.

"Financial Advisor" shall mean an investment banking or financial advisory firm or commercial bank who or which is retained by the Board for the purpose of passing on questions relating to the availability and terms of specified types of indebtedness and is actively engaged in and, in the good faith opinion of the Board, has a favorable reputation for skill and experience in underwriting or providing financial advisory services in respect of similar types of securities.

"Fiscal Year" shall mean the twelve month period beginning July 1 of each year and ending June 30 of the following year.

"Hedge Agreement" shall mean, without limitation, (i) any contract known as or referred to or which performs the function of an interest rate swap agreement, currency swap agreement, forward payment conversion agreement, or futures contract; (ii) any contract providing for payments based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices; (iii) any contract to exchange cash flows or payments or series of payments; (iv) any type of contract called, or designed to perform the function of, interest rate floors, collars, or caps, options, puts, or calls, to hedge or minimize any type of financial risk, including, without limitation, payment, currency, rate, or other financial risk; and (v) any other type of contract or arrangement that the Board determines is to be used, or is intended to be used, to manage or reduce the cost of any indebtedness or other obligations, to convert any element of any indebtedness or other obligations from one form to another, to maximize or increase investment return, to minimize investment return risk, or to protect against any type of financial risk or uncertainty. A Hedge Agreement shall not include any commodity hedge agreement or similar arrangement. For purposes of Resolution No. 1644, as amended, a Hedge Agreement shall be deemed not to have any principal amount for purposes of obtaining consents or approvals of holders of Parity Indebtedness or for otherwise determining the amount of Outstanding Parity Indebtedness.

"Hedged Indebtedness" shall mean any indebtedness or other obligation for which the Board or the City, on behalf of the Board, shall have entered into a Qualified Hedge Agreement.

"Hedge Payments" shall mean amounts payable by the Board or the City, on behalf of the Board, pursuant to any Hedge Agreement, other than termination payments, fees, expenses, and indemnity payments.

"Hedge Period" shall mean the period during which a Hedged Agreement is in effect.

"Hedge Receipts" shall mean amounts payable by any provider of a Hedge Agreement pursuant to such Hedge Agreement, other than termination payments, fees, expenses, and indemnity payments.

"Maximum Annual Aggregate Debt Service" shall mean the maximum Aggregate Debt Service in the Fiscal Year during which such calculation is made or any future Fiscal Year.

"Net Revenues" shall mean Revenues, excluding any profits or losses on the sale or other disposition, not in the ordinary course of business, of investments or fixed or capital assets, less Current Operating Expenses.

"Outstanding Parity Indebtedness" shall mean any Parity Indebtedness that is outstanding under the Resolution or other document under which such Parity Indebtedness is issued.

"Parity Indebtedness" shall mean bonds, notes, loan agreements, and other debt obligations, including Balloon Indebtedness, Short-Term Indebtedness, Variable Rate Indebtedness and Hedge Agreements (but only to the extent of Hedge Payments), issued by or entered into by the Board or by the City on behalf of the Board on a parity of lien under Resolution No. 1644 in accordance with the restrictive provisions of the Resolution described herein, including any bonds, notes, loan agreements or other obligations secured by a pledge of and/or lien on a Merged System and the revenues derived from the operation of such Merged System, as defined herein, (provided such pledge and lien are subject only to normal and customary expenses of operating, maintaining, repairing and insuring any such System), so long as the Merged System is not being operated separately from the System as is permitted herein.

"Principal Installment" shall mean, as of the date of calculation and with respect to the indebtedness with respect to which the calculation is being made, (i) the principal amount of the indebtedness due on a certain future date for which no Sinking Fund Installments have been established, (ii) Sinking Fund Installment due on a certain future date for such indebtedness and (iii) if such future dates coincide, the sum of such principal amount and any such Sinking Fund Installment.

"Qualified Hedge Provider" shall mean an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, or whose payment obligations under the related Hedge Agreement are absolutely and unconditionally guaranteed or insured or collateralized by an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, are rated either (i) at least as high as "A" or better by Standard & Poors' Rating Group (or any successor thereto) ("S&P") or "A2" or better by Moody's Investors Services, Inc. (or any successor thereto) ("Moody's") (the "Initial Rating Requirement") and such entity maintains a rating on its debt or claims paying ability of not less than "A-" from S&P or "A3" from Moody's (the "Minimum Rating Requirement"); provided that this requirement shall be deemed to have been met, even if the rating of such entity is reduced below the Minimum Rating Requirement, if such entity is replaced with an entity meeting the Initial Rating Requirement within twenty business days from when the Board receives notice that the Minimum Rating Requirement has not been met. An entity's status as a Qualified Hedge Provider is made as of the time the applicable calculation is made.

"Revenues" shall mean all revenues, rentals, earnings and income of the System from whatever source, determined in accordance with generally accepted accounting principles, including all revenues

derived from the operation of the System; proceeds from the sale of property; proceeds of insurance and condemnation awards and compensation for damages, to the extent not applied to the payment of the cost of repairs, replacements and improvements; and all amounts realized from the investment of money in the accounts and funds of the System (excluding any investment earnings from construction or improvement funds created for the deposit of bond, note, or loan agreement proceeds pending use, to the extent such income is applied to the purposes for which the bonds, notes or loan agreement were issued, and funds created to refund any outstanding obligations payable from Revenues of the System) and at the election of the Board, shall not include any rates, fees, rentals or other charges or other income received by the Board from the operation of a Merged System. "Revenues" shall also not include any payments to the Board with respect to which an adjustment to Debt Service has been made pursuant to subparagraph (g) of the definition of Debt Service.

"Short-Term Indebtedness" shall mean bonds, notes or other obligations, including Variable Rate Indebtedness, maturing five (5) years or less from their date of issuance which are issued in anticipation of the issuance of revenue bonds the proceeds of which will be used to pay the Short-Term Indebtedness.

"Sinking Fund Installment" shall mean, as of any particular date of calculation, the amount required to be paid on a certain future date for the retirement of Outstanding Parity Indebtedness which mature after said future date, but does not include any amount payable by reason of the maturity of an Outstanding Parity Indebtedness or by call for redemption at the election of the Board or the City on behalf of the Board.

"Valuation Date" shall mean with respect to any Capital Appreciation Indebtedness, the date or dates set forth in the resolution authorizing such Capital Appreciation Bonds on which specific Accreted Values are assigned to the Capital Appreciation Bonds.

"Variable Rate Indebtedness" shall mean any bonds, notes or other obligations of the Board or the City, on behalf of the Board, the interest rate on which is subject to periodic adjustment, at intervals, at such times and in such manner as shall be determined by the resolution authorizing such indebtedness, provided that if the interest rate shall have been fixed for the remainder of the term thereof (including a fixed rate pursuant to a Hedge Agreement with a Qualified Hedge Provider), it shall no longer be Variable Rate Indebtedness.

The term "Bonds" in Resolution No. 1644 shall for all purposes have the same meaning as "Parity Indebtedness" described above unless the context clearly requires otherwise, and notwithstanding any provision of Resolution No. 1644 to the contrary, any Parity Indebtedness issued on a parity of lien under the Resolution, as amended, may be in such form, may be executed in such manner, may be payable upon such terms and upon such dates, may be subject to such registration provisions, may be designated in such manner, may be issued for such purpose and may be issued pursuant to such applicable laws as is provided in the resolution authorizing such Parity Indebtedness.

Pledge of Revenues

The punctual payment of principal and premium, if any, and interest on all Parity Indebtedness and Hedge Payments with respect to Parity Indebtedness shall be payable from and secured equally and ratably by the Net Revenues of the System, without priority by reason of number or time of sale or execution or delivery and such Net Revenues are irrevocably pledged to the punctual payment of such principal, premium, interest and Hedge Payments as the same become due.

Disposition of Revenues

As long as any Parity Indebtedness shall be outstanding and unpaid either as to principal or as to interest, or until the discharge and satisfaction of the Parity Indebtedness as provided in the resolution authorizing said Parity Indebtedness, the entire income and revenues of the System shall be deposited as collected in the Revenue Fund established by the Resolution (the "Revenue Fund"), to be administered and controlled by the Board. The income and revenues deposited therein shall be used only as follows:

(a) The money in the Revenue Fund shall be disbursed first from month to month for the payment of Current Operating Expenses.

(b) The money remaining in the Revenue Fund, after payment of Current Operating Expenses, shall next be used to make deposits into a separate and special fund, to be known as the Debt Service Fund (the "Debt Service Fund"), to be kept separate and apart from all other funds of the Board and used to pay principal of and interest on Parity Indebtedness and Hedge Payments (net of Hedge Receipts) with respect thereto as the same become due, either by maturity or mandatory redemption. Such deposits shall be made monthly, or as otherwise set forth herein or in the resolution authorizing such Parity Indebtedness or Hedged Payments, until all Parity Indebtedness is paid in full or discharged and satisfied. Unless otherwise authorized in the resolution authorizing any Parity Indebtedness, for the period commencing with the month next following the delivery of the Parity Indebtedness, each monthly deposit shall be an amount that, together with all other monthly deposits of approximately equal amounts during such period and amounts otherwise in said Fund, will be equal to principal due on the Parity Indebtedness on the next principal payment date, divided by the number of months from and including the month of the first such deposit to and including the months preceding the next principal payment date; provided that, if the next principal payment date is more than 13 months following the month next following the delivery of the Parity Indebtedness, such monthly deposits to the Debt Service Fund shall commence in the month that is 13 months prior to the month of the next principal payment date. Furthermore, during such period, there shall be deposited to the Debt Service Fund monthly an amount equal to one-sixth (1/6) of the interest coming due on the next interest payment date for Parity Indebtedness (unless otherwise specified in the resolution authorizing such Parity Indebtedness).

In each month thereafter, each monthly deposit shall consist of an interest component and a principal component except as provided above. If interest is payable semi-annually, then the interest component shall be an amount equal to not less than one-sixth (1/6th) of the interest coming due on any Parity Indebtedness on the next succeeding interest payment date, unless otherwise specified in the resolution authorizing such Parity Indebtedness. Unless otherwise specified in the resolution authorizing Parity Indebtedness, the principal component shall be an amount which shall be established annually on each July 1 for all payments to be made during the ensuing twelve-month period commencing in July of each calendar year and ending in June of the following calendar year and shall be not less than one-twelfth (1/12) of the principal amounts, as the case may be, coming due, whether by maturity or mandatory redemption, on the Parity Indebtedness then outstanding during such twelve-month period. No further deposit shall be required when the Debt Service Fund balance is equal to or greater than the amount needed to pay interest coming due on the next interest payment date and the total of the principal amounts payable, either by maturity or mandatory redemption, during the applicable twelve-month period. Money in the Debt Service Fund shall be used solely

and is expressly and exclusively pledged for the purpose of paying principal of and interest on Parity Indebtedness. Notwithstanding the foregoing, deposits for the payment of principal and interest on Variable Rate Indebtedness or Hedge Payments shall be made as set forth in the resolution authorizing such Variable Rate Indebtedness or Hedge Payments.

(c) The next available money in the Revenue Fund shall be paid to any issuer of an insurance policy, surety bond, letter of credit or similar instrument (a "Reserve Fund Credit Facility") (pro rata, if more than one) to the extent needed to reimburse the issuer for any amounts advanced under the Reserve Fund Credit Facility, including any amounts payable under any guaranty agreement relating to such amounts, together with reasonable related expenses incurred by the issuer of such Reserve Fund Credit Facility and any interest relating to such amounts.

(d) The next available money in the Revenue Fund shall be deposited to any reserve fund created pursuant to any resolution authorizing Parity Indebtedness in the manner provided in such resolution.

(e) The next available money in the Revenue Fund shall be used to pay liquidity fees, remarketing agent fees and similar fees that are payable in connection with the issuance of Parity Indebtedness.

(f) The next available money in the Revenue Fund shall be used for the payment of all other payments to be made under the Parity Indebtedness not provided for in the preceding subsections including payments in connection with Hedge Agreements that are not Hedge Payments, including termination payments.

(g) The next available money in the Revenue Fund shall be used for the purpose of making payments in lieu of taxes and, to the extent not so used, may be used for any lawful purpose, including such reserve funds and other funds as the Board deems necessary and appropriate.

(h) Money on deposit in the Funds described above may be invested by the Board in such investments as shall be permitted by applicable law, as determined by an authorized representative of the Board, all such investments to mature not later than the date on which the money so invested shall be required for the purpose for which the respective Fund was created. All income derived from such investments shall be regarded as revenues of the System and shall be deposited in the Revenue Fund. Such investments shall at any time necessary be liquidated and the proceeds thereof applied to the purpose for which the respective Fund was created. The Board is authorized to enter into contracts with third parties for the investment of funds in any of the Funds described herein.

(i) The Revenue Fund and the Debt Service Fund shall be held and maintained by the Board and, when not invested, kept on deposit with a bank or financial institution regulated by and the deposits of which are insured by the Federal Deposit Insurance Corporation or similar federal agency. All moneys in such Funds so deposited shall at all times be secured to the extent and in the manner required by applicable State law.

(j) Notwithstanding the foregoing, the Board may deposit any amounts described in subparagraph (g) of the definition of Debt Service directly into the Debt Service Fund at the Board's option.

Additional Indebtedness

The Series OO-2022 Bonds issued pursuant to the Resolution shall be on a parity with the Outstanding Parity Indebtedness, and with all Parity Indebtedness hereafter issued within the terms, limitations and restrictions of the Resolution, as amended.

The City has covenanted that it will incur no indebtedness payable from the revenues of the Electric System and having priority over the Series OO-2022 Bonds.

The following shall apply to the incurrence of additional Parity Indebtedness:

(a) All payments required to be made to the Debt Service Fund and into any reserve fund which may be required under resolutions authorizing Parity Indebtedness are current as of the date of issuance of the additional bonds, notes or other obligations, additional bonds, notes or other obligations may be issued or entered into by the City or the Board on a parity and equality of lien with the Outstanding Parity Indebtedness with respect to the lien and claim of such additional bonds, notes or other obligations to the net revenues of the System and the money on deposit in the Debt Service Fund for the following purposes and under the following conditions, but not otherwise:

(i) For the purpose of refunding any Outstanding Parity Indebtedness, subordinate bonds, notes, loan agreements or other obligations, provided that after the issuance of such additional Parity Indebtedness, the Aggregate Debt Service on all Outstanding Parity Indebtedness, including the additional Parity Indebtedness to be issued, in any Fiscal Year shall not increase by more than ten percent (10%) after the issuance of such additional Parity Indebtedness.

(ii) For the purpose of financing the completion or equipping of improvements to the System for which Outstanding Parity Indebtedness have previously been issued but only to the extent necessary to complete such improvements in the manner contemplated at the time of the issuance of the Outstanding Parity Indebtedness that financed such improvements.

(iii) For the purposes of refunding any Outstanding Parity Indebtedness or any Prior Lien Bonds, subordinated bonds, notes or other obligations or extending, improving or replacing the System or for any other lawful purposes under applicable law, if one of the following conditions shall have been met: (A) the Net Revenues for any twelve-month period selected by the Board ending within the twelve months prior to the date of the issuance of the additional Parity Indebtedness must have been equal to at least 120% of the Maximum Annual Aggregate Debt Service on Outstanding Parity Indebtedness plus the Debt Service on the additional Parity Indebtedness proposed to be issued or (B) the estimated Net Revenues of the System for each of the three Fiscal Years next succeeding the issuance of the additional Parity Indebtedness, must be equal at least to 120% of Maximum Annual Aggregate Debt Service on the Notes, any other Outstanding Parity Indebtedness and all outstanding Prior Lien Bonds plus the Debt Service on the additional Parity Indebtedness proposed to be issued; provided, however, that if the additional Parity Indebtedness is to be issued for the acquisition or construction

of any extension, improvement or replacement to the System, then the estimate of Net Revenues may be for the three Fiscal Years ensuing after the time that such improvement, extension or replacement is expected to be placed in service.

(iv) For the purpose of entering into a Hedge Agreement with a Qualified Hedge Provider with respect to Outstanding Parity Indebtedness but only to the extent of Hedge Payments.

(b) In calculating Net Revenues, Debt Service and Maximum Annual Aggregate Debt Service for all purposes under the Resolution, the following adjustments and assumptions shall be made:

(i) In calculating Net Revenues on a historical basis, the amount of such Net Revenues may be adjusted to take into account any rate increase adopted by the Board that is effective prior to the date of such calculation.

(ii) In calculating projected Net Revenues for any period in the future, the amount of such Net Revenues may be adjusted to take into account any rate increase adopted by the Board that is to be effective within one year of the date of such calculation, and if such calculation is being made in connection with the issuance of Parity Indebtedness, the Net Revenues may be calculated based upon the assumption that any improvements financed with proceeds of the Parity Indebtedness will be completed within a time period established in a report of a Consulting Engineer.

(c) Any calculation or projection of Net Revenues described above, whether for a historical period or for a future period, shall be set forth in a certificate of the President and Chief Executive Officer and Chief Financial Officer of the Board. If the calculation is made as to a future period, a Consulting Engineer shall state in a report that the assumptions underlying any projections of the Board as to Net Revenues are reasonable. Any calculation of the Maximum Annual Aggregate Debt Service shall also be set forth in a certificate of the President and Chief Executive Officer and Chief Financial Officer of the Board, which certificate shall be accompanied by a certificate of a financial advisory firm to the effect that the calculation of Maximum Annual Aggregate Debt Service is correct and is in compliance with the terms of the Resolution, but such certificate of the financial advisory firm shall only be required if Variable Rate Indebtedness, Balloon Indebtedness or Short-Term Indebtedness must be taken into account in the calculation of Maximum Annual Aggregate Debt Service.

(d) Any obligation of the Board to pay amounts under a Hedge Agreement other than Hedge Payments, including a termination payment upon the termination of a Hedge Agreement, shall be a subordinate obligation to the obligations with respect to Parity Indebtedness.

Collection of Revenues

All revenues which will be received by the City from the System shall be deposited in a separate fund, which shall be kept separate and distinct from all other funds of the City, and is designated as the "Electric Fund."

Rate Covenant

The City will fix rates and collect charges for electric energy and the services, facilities and commodities furnished by the System of the City so as to provide revenues sufficient to pay, as the same

shall become due, the principal of and interest on the bonds, in addition to pay, as the same shall become due, the necessary expenses or operating and maintaining the System and all other obligations and indebtedness payable out of the Electric Fund, and that such rates and charges shall not be reduced so as to be insufficient to provide revenues for such purposes.

Without limiting the foregoing, the Board will fix rates and collect charges for electric energy and the services, facilities and commodities furnished by the System so that the Net Revenues of the System will be at least sufficient for each Fiscal Year beginning on and after July 1, 2018, computed as of the date such rates and charges are established, to pay the sum of:

(i) an amount equal to 120% of the Aggregate Debt Service on all Outstanding Parity Indebtedness for such Fiscal Year; and

(ii) certain amounts, if any, required to be paid or deposited during such Fiscal Year relating to any reserve fund deposits, liquidity fees, remarketing agent fees and similar fees, and reimbursements under any Reserve Fund Credit Facility.

Operating and Maintenance

The City will maintain the System in good condition, and will operate the System in an efficient and economical manner, making such expenditures for equipment and for renewals and replacement as may be proper for the economical operation and maintenance thereof.

Discharge and Satisfaction of Bonds

If the Board, on behalf of the City, shall pay and discharge the indebtedness evidenced by any of the Series OO-2022 Bonds or Parity Bonds (referred to hereinafter, collectively, in this Section as the "Bonds") in any one or more of the following ways:

(a) By paying or causing to be paid, by deposit of sufficient funds as and when required with the Registration Agent, the principal of and interest on such Bonds as and when the same become due and payable;

(b) By depositing or causing to be deposited with any financial institution which has trust powers and which is regulated by and the deposits of which are insured by the Federal Deposit Insurance Corporation or similar federal agency ("as Agent"; which Agent may be the Registration Agent), in trust or escrow, on or before the date of maturity or redemption, sufficient money or Defeasance Obligations, the principal of and interest on which, when due and payable, will provide sufficient moneys to pay or redeem such Bonds and to pay premium, if any, and interest thereon when due until the maturity or redemption date (provided, if such Bonds are to be redeemed prior to maturity thereof, proper notice of such redemption shall have been given or adequate provision shall have been made for the giving of such notice); or

(c) By delivering such Bonds to the Registration Agent, for cancellation by it;

and if the Board, on behalf of the City, shall also pay or cause to be paid all other sums payable under the Resolution by the Board or the City with respect to such Bonds, or make adequate provision therefor, and by resolution of the Board instruct any such Agent to pay amounts when and as required to the Registration Agent for the payment of principal of and interest and redemption premiums, if any, on such Bonds when due, then and in that case the indebtedness evidenced by such Bonds shall be discharged and satisfied and all covenants, liens, pledges, agreements and obligations entered into, created or imposed

under the Resolution, including the pledge of and lien on the net revenues of the System set forth herein, shall be fully discharged and satisfied with respect to such Bonds and the owners thereof and shall thereupon cease, terminate and become void.

If the Board, on behalf of the City, shall pay and discharge or cause to be paid and discharged the indebtedness evidenced by any of the Bonds in the manner provided in either clause (a) or clause (b) above, then the registration owners thereof shall thereafter be entitled only to payment out of the money or Defeasance Obligations deposited as aforesaid.

Except as otherwise provided in the Resolution, neither Defeasance Obligations nor moneys deposited with the Agent pursuant to this Section nor principal or interest payments on any such Defeasance Obligations shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal of and premium, if any, and interest on said Bonds; provided that any cash received from such principal or interest payments on such Defeasance Obligations deposited with the Agent, (A) to the extent such cash will not be required at any time for such purpose, shall be paid over to the Board as received by the Agent and (B) to the extent such cash will be required for such purpose at a later date, shall, to the extent practicable, be reinvested in Defeasance Obligations maturing at times and in amounts sufficient to pay when due the principal and premium, if any, and interest to become due on said Bonds on or prior to such redemption date or maturity date thereof, as the case may be, and interest earned from such reinvestments, to the extent not needed for the payment of such principal, premium and interest, shall be paid over to the Board, as received by the Agent. For the purposes described herein, Defeasance Obligations shall mean direct obligations of, or obligations, the principal of and interest on which are guaranteed by, the United States of America, or any agency thereof, obligations of any agency or instrumentality of the United States or any other obligations at the time of the purchase thereof are permitted investments under Tennessee law for the purposes described in this Section, which bonds or other obligations shall not be subject to redemption prior to their maturity other than at the option of the registered owner thereof.

Nothing described above shall be construed to alter or change the redemption provisions relating to the Series OO-2022 Bonds. No redemption privilege shall be exercised with respect to the Series OO-2022 Bonds or any Parity Bonds except at the option and election of the Board. The right to redemption set forth in the Resolution shall not be exercised by any Registration Agent or Agent unless expressly directed in writing by an authorized representative of the Board.

Sale of Electric System

The System may be sold, mortgaged, leased or otherwise disposed of only as a whole, or substantially as a whole, and only if the proceeds to be realized shall be sufficient to fully retire all obligations of the System and upon consent by the holders of sixty-five percent (65%) in the aggregate principal amount of the outstanding Bonds (exclusive of issuer-owned Bonds) to be obtained in the manner provided in the Resolution; provided, however, that the City shall have, and reserves the right to sell, lease, or otherwise dispose of any of the property comprising a part of the System determined to be no longer necessary and useful in the operation thereof, which is found, by the Board, or such other body as may be authorized to manage and operate the System, not to be both useful and necessary for the continued operation of the System substantially as it now exists; and, prior to any such sale, lease or other disposition of said property, the Board, or such other body as may be authorized to manage and operate the System shall, by resolution duly adopted, have made said finding and authorized such sale, lease or other disposition of the property. The proceeds from any such property shall be paid into the Renewal and Replacement Fund, but shall not reduce the amount otherwise required to be paid into said fund. Disbursement of such additional payments shall be made in the same manner and for the same purposes as other disbursements from the Renewal and Replacement Fund.

Notwithstanding anything elsewhere provided in the Resolution, and without being subject to any of the foregoing restrictions, the City shall have the right to sell, lease, transfer, or otherwise dispose of the System, as a whole or substantially as a whole, to any municipal corporation, county, political subdivision, governmental corporation, or governmental agency (each of which shall be included within the term "Transferee" as herein used), provided the Transferee thus acquiring the System from the City will assume the performance of and be bound by all of the City's obligations to the holders of the Bonds under the covenants and provisions of the Resolution, as amended.

Insurance

The City will carry adequate fire and windstorm insurance on buildings and contents of buildings of the System and provide for adequate public liability insurance, and the City will also carry such other insurance as is ordinarily carried by utility companies privately or municipally owned and doing a similar business in territory contiguous to the City. Proceeds from any insurance policies, except public liability, shall be paid into the Renewal and Replacement Fund which payments shall not reduce the amount otherwise required to be paid into said fund. Disbursements of such proceeds of insurance shall be made in the same manner and for the same purposes as other disbursements from the Renewal and Replacement Fund.

Audits

The City will cause proper books and accounts adapted to the System to be kept and will cause the books and accounts with respect to the System to be audited annually by an independent firm of certified public accountants, and will make generally available to security holders the balance sheet and the profit and loss statement of the System as certified by such accountants.

Appointment of Receiver

Any holder of the Bonds, including a trustee or trustees for such holders shall, in addition to all other remedies and rights of holders of any of the Bonds, have the right, by appropriate proceedings in any court of competent jurisdiction, in the event of default in the payment of the principal of or interest on the Bonds, to obtain the appointment of a receiver for the System, which receiver may enter upon and take possession of the System, operate and maintain the System, fix rates and collect all revenues arising therefrom in as full a manner and to the same extent as the City itself might do. The receiver shall deposit all moneys collected by him in a separate account or accounts and shall dispose of such revenues in accordance with the terms and conditions of the Resolution and as the court shall direct.

Amendment of Resolution

The Resolution may be amended without the consent of or notice to the holders of the Parity Indebtedness for the purposes of (i) curing any ambiguity or formal defect or omission in the Resolution; (ii) making such amendments as are necessary to prevent interest on any Parity Indebtedness from being included in gross income of the holders thereof for federal income tax purposes; (iii) adding to the covenants and agreements of the City or the Board or surrendering or limiting any right or power of the City or the Board; or (iv) making such amendments as are necessary for any Parity Indebtedness to be held or continue to be held in book-entry form.

In addition to the amendments to the Resolution without the consent of the holders as referred to above, the Resolution may be amended from time to time if such amendment shall have been consented to by the holders of not less than a majority in principal amount of Outstanding Parity Indebtedness (not

including in any case any Bonds or Parity Indebtedness which may then be held or owned by or for the account of the City or Board); but the Resolution may not be so amended (without the consent of all affected holders of Outstanding Parity Indebtedness) in such manner as to:

(a) make any change in the maturity or interest rate (other than in accordance with its terms) of the Parity Indebtedness, or modify the terms of payment of principal of or interest on Parity Indebtedness or impose any conditions with respect to such payment; or

(b) to make any Parity Indebtedness redeemable other than in accordance with its terms; or

(c) to create a preference or priority of any Parity Indebtedness over any other Parity Indebtedness; or

(d) reduce the percentage of the principal amount of Parity Indebtedness the consent of the holders of which is required to effect a further amendment.

Whenever the City shall propose to amend the Resolution as described above, the Board shall cause notice of the proposed amendment to the holders of the Parity Indebtedness by sending a summary of such proposed amendment to such holders and shall state that a copy of the proposed amendatory resolution is on file in the office of the Secretary of the Board. The holders of Parity Indebtedness shall be determined by the registration records of the City or the Board or any registration agent therefor or in such other manner as is commercially reasonable.

Whenever at any time within one year from the date of the mailing of such notice there shall be filed with the Secretary an instrument or instruments executed by the holders of at least a majority aggregate principal amount of the Outstanding Parity Indebtedness, which instrument or instruments shall refer to the proposed amendatory resolution described in such notice and shall specifically consent to and approve the adoption thereof, then the Board and/or the City may adopt such amendatory resolution and such resolution shall become effective and binding upon the holders of all Parity Indebtedness.

Any consent given by the holder of Parity Indebtedness as described above shall be irrevocable for a period for one year from the date of the instrument evidencing such consent and shall be conclusive and binding upon all future holders of the same Parity Indebtedness during such period. Such consent may be revoked at any time after one year from the date of such instrument by the holder who gave such consent or by a successor in title by filing notice of such revocation with the Secretary.

For purposes of determining the aggregate principal amount of Parity Indebtedness outstanding for purposes of amendments, and whether the holders of a sufficient percentage in aggregate principal amount of Bonds and Parity Indebtedness have consented to any amendment, the Board may make such determination at any time while a request for consents to such amendment is outstanding and may include any Parity Indebtedness issued during such period in making such determination. The Accreted Value of any Capital Appreciation Debt as of the time of any such determination shall be used in making any such determination.

The fact and date of the execution of any instrument relative to amendments may be proved by the certificate of any officer in any jurisdiction who by the laws thereof is authorized to take acknowledgments of deeds within such jurisdiction, that the person signing such instrument acknowledged before him the execution thereof, or may be proved by an affidavit of a witness to such execution sworn to before such officer. In the event that any Parity Indebtedness is held in book-entry

form, any consent to an amendment may be executed by any beneficial owner of such Parity Indebtedness, which beneficial ownership may be proved by an affidavit of the beneficial owner.

Notwithstanding anything in the Resolution to the contrary, the Board and/or the City may adopt amendments to the Resolution that do not become effective until the payment or defeasance of any Parity Indebtedness outstanding on the date such amendments are adopted.

Separate Systems

Nothing contained in the Resolution shall prevent the Board from acquiring a separate electric transmission or distribution system or any combination thereof, or any other system, facilities or equipment which municipalities in Tennessee operating electric distribution systems are authorized to own, operate or finance, and nothing herein shall prevent the issuance of bonds, notes, warrants, certificates or other obligations or evidences of indebtedness, to acquire any such system or facilities. Any facilities or system acquired by the Board, at the election of the Board, may be operated as a separate and independent system or be merged into the System and operated as a single unified system with the System (the "Merged Systems"). Revenues of the Merged Systems may be commingled without keeping separate accounts of the funds of each of the systems, provided all Revenues of the Merged Systems are applied in accordance with the Resolution, including the payment of principal of and interest on all bonds, notes or other obligations of the acquired system. All Outstanding Parity Indebtedness and any bonds, notes and other obligations of the acquired system outstanding upon the merger of the systems designated by the Board may be payable from revenues of the Merged Systems on a parity and equality of lien with each other, provided the Net Revenues of the Merged Systems, for a period of twelve consecutive months (hereinafter sometimes called the "Twelve-Month Period") out of the eighteen months immediately preceding the merger of the systems shall be equal to at least 1.2 times the Maximum Annual Aggregate Debt Service on all Outstanding Parity Indebtedness, all bonds, notes and obligations of the acquired system then outstanding and any additional indebtedness to be then issued; or if within twelve months prior to any such calculation, the Board shall have put into effect a revised schedule of rates for the Merged Systems or any part thereof, then the Net Revenues of the Merged Systems, as certified by a Consulting Engineer or Financial Adviser, that would have resulted from such revised rates had they been in effect for the Twelve-Month Period, may be used in lieu of the actual Net Revenues for such Twelve-Month Period.

Combined Systems

Notwithstanding anything provided in the Resolution, nothing contained in the Resolution shall prevent the Board from combining any or all of the Board's utility systems into a single unified operation (the "Combined System") and commingling the revenues of the systems so combined in the Combined System without keeping separate accounts of the funds of each of such systems, provided payments from the funds of the Combined System are required to be made into the Debt Service Fund created hereunder from time to time in amounts sufficient to comply with provisions thereof and in amounts sufficient to pay the principal of and interest on the Outstanding Parity Indebtedness as such principal and interest becomes due. Bonds, notes and other obligations ("Parity Combined System Obligations") payable from revenues of the Combined System may be issued on a parity with Outstanding Parity Indebtedness provided at the time of the issuance of any such Parity Combined System Obligations, the following conditions have been complied with. The Net Revenues of the Combined System, for a period of twelve consecutive months (hereinafter sometimes called the "Combined Twelve-Month Period") out of the eighteen months immediately preceding the issuance of such Parity Combined System Obligations shall be equal to at least 1.2 times the Maximum Annual Aggregate Debt Service on all Outstanding Parity Indebtedness and the obligations proposed to be issued; or if within twelve months prior to the issuance of the Parity Combined System Obligations a revised schedule of rates for the Combined System or any part

thereof shall have been put into effect, then the Net Revenues of the Combined System for the Twelve-Month Period, as certified by a Consulting Engineer or Financial Advisor, that would have resulted from such revised rates had they been in effect for the Twelve-Month Period, may be used in lieu of the actual Net Revenues for such Twelve-Month Period.

APPENDIX F

SUMMARY OF CERTAIN PROVISIONS OF WASTEWATER BOND RESOLUTION

SUMMARY OF CERTAIN PROVISIONS OF THE WASTEWATER SYSTEM BOND RESOLUTIONS

The following statements are brief summaries of certain provisions of the Wastewater Bond Resolutions, copies of which are available for examination at the offices of the Knoxville Utilities Board (the "Board"). Terms defined in the Wastewater Bond Resolutions and not defined elsewhere in this Official Statement shall have the meaning set forth in the Wastewater Bond Resolutions. Section numbers refer to sections of Resolution No. R-129-90, as amended by Resolution No. R-5-98, Resolution No. R-148-01 and Resolution No. 11-S, and as supplemented by Resolution No. R-223-2022 and as otherwise supplemented prior to the date hereof (collectively, the "Resolution").

Security

The Series 2022C Bonds constitute and, when issued, will be Bonds under the Resolution. All Series 2022C Bonds are limited obligations of the City, payable solely and ratably from the net revenues of the Wastewater System of the City and are on parity with each other in all respects.

The Series 2022C Bonds will be issued pursuant to the Resolution, which sets forth in detail the terms and covenants of the City with respect to the Series 2022C Bonds. The following summary is a brief outline of certain provisions contained in the Resolution and is not to be considered as a full statement thereof. This summary is qualified by reference to and is subject to said resolution, copies of which may be examined at the office of the Board.

Certain Definitions

The following are definitions in summary form of certain terms contained in the Resolution and used herein:

"Accreted Value" shall mean, with respect to any Capital Appreciation Debt, an amount equal to the principal amount of such Capital Appreciation Debt (determined on the basis of the principal amount per $5,000 at maturity thereof) plus the amount assuming semi-annual compounding of earnings which would be produced on the investment of such principal amount, beginning on the dated date of such Capital Appreciation Debt and ending at the date such Accreted Value is calculated, at a yield which, if produced until maturity, will produce $5,000 at maturity. As of any Valuation Date, the Accreted Value of any Capital Appreciation Debt shall mean the amount set forth for such date in the resolution authorizing such Capital Appreciation Debt, which amount shall be required to be determined in the manner described above, and as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Accreted Values for such Valuation Dates.

"Aggregate Debt Service" for any period shall mean, as of any date of calculation, the sum of the amounts of Debt Service for such period with respect to all indebtedness with respect to which such calculation is required to be made for such period.

"Balloon Date" shall mean any maturity date for Balloon Indebtedness in a Balloon Year.

"Balloon Indebtedness" shall mean any bonds, notes or other indebtedness of the Board or the City, on behalf of the Board, other than Short-Term Indebtedness, twenty-five percent or more of the

initial principal amount of which matures (or must be redeemed at the option of the holder) during any twelve month period, if such twenty-five percent or more is not to be amortized to below twenty-five percent by mandatory redemption prior to the beginning of such twelve month period.

"Balloon Year" shall mean any 12-month period in which more than 25% of the original principal amount of related Balloon Indebtedness matures or is subject to mandatory redemption by the Authority.

"Bondholder" shall mean the registered owner of any Bond which at the time shall be registered other than to bearer, or such holders' duly authorized attorney in fact, representative or assigns.

"Bondholders' Committee" shall mean a committee elected by the Bondholders to exercise certain rights upon the occurrence of an Event of Default pursuant to the Resolution.

"Bonds" shall mean Wastewater System Revenue Bonds issued from time to time pursuant to and under the authority of the Resolution and shall for all purposes have the same meaning as "Parity Indebtedness" unless the context clearly requires otherwise.

"Capital Appreciation Debt" shall mean any bonds, notes or other indebtedness of the Board or of the City on behalf of the Board as to which interest is payable only at the maturity or prior redemption of such bonds.

"Commitment," when used with respect to Balloon Indebtedness, shall mean a binding written commitment from a financial institution, surety, or insurance company to refinance such Balloon Indebtedness on or prior to any Balloon Date thereof.

"Consulting Engineer" shall mean (i) an engineering firm or individual engineer employed by the Board with substantial experience in advising utilities similar to the System operated by the Board as to the construction and maintenance of the System and in the projection of relative costs of expansion in the System or (ii) an engineer or engineers who are employees of the Board whose reports or projections are certified by a financial advisor with substantial experience in advising utilities similar to the System.

"Debt Service" for any period shall mean, as of any date of calculation and with respect to the indebtedness with respect to which such calculation is being made, an amount equal to (i) the interest accruing during such period on such indebtedness plus (ii) the portion of each Principal Installment which would accrue during such period if such Principal Installment were deemed to accrue periodically in equal amounts from the next preceding Principal Installment due date for such indebtedness (or, if there shall be no such preceding Principal Installment due date, from a date of issuance of the indebtedness). For purposes of this definition:

(A) The principal and interest portions of the Accreted Value of Capital Appreciation Debt becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments in such manner and during such period of time as is specified in the resolution authorizing such Capital Appreciation Debt.

(B) The annual principal and interest requirement on Short-Term Indebtedness shall be calculated as that amount necessary to amortize the Short-Term Indebtedness from the date it was issued over twenty (20) years in twenty (20) approximately equal annual payments of principal and interest using an assumed interest rate (which shall be the interest rate as of the date of issuance or the date of calculation, whichever is less, certified by a Financial Advisor to be the interest rate at which the City on behalf of the Board could reasonably expect to borrow the same amount by issuing indebtedness with the same priority of lien as such Balloon Indebtedness and with a 20-year term).

(C) With respect to any Variable Rate Indebtedness, including Hedged Indebtedness if the interest thereon calculated as set forth below is expected to vary, the interest coming due in any specified future period shall be determined as if the interest rate in effect at all times during such future period was, at the option of the Board, either (1) the average of the actual interest rates which were in effect (weighted according to the length of the period during which each such interest rate was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period), or (2) the current average annual fixed rate of interest on securities of similar quality having a similar maturity date as certified by a Financial Advisor.

(D) With respect to any Hedged Indebtedness, the interest on such Hedged Indebtedness during any Hedge Period and for so long as the provider of the related Hedge Agreement has not defaulted on its payment obligations thereunder shall be calculated by adding (x) the amount of interest payable by the City or the Board on such Hedged Indebtedness pursuant to its terms and (y) the amount of Hedge Payments payable by the City or the Board under the related Hedge Agreement and subtracting (z) the amount of Hedge Receipts payable by the provider of the related Hedge Agreement at the rate specified in the related Hedge Agreement; provided, however, that to the extent that the provider of any Hedge Agreement is in default thereunder, the amount of interest payable by the City or the Board on the related Hedged Indebtedness shall be the interest calculated as if such Hedge Agreement had not been executed. In determining the amount of Hedge Payments or Hedge Receipts that are not fixed throughout the Hedge Period (i.e., which are variable), payable or receivable for any future period, such Hedge Payments or Receipts for any period of calculation (the "Determination Period") shall be computed by assuming that the variables comprising the calculation (e.g., indices) applicable to the Determination Period are equal to the average of the actual variables which were in effect (weighted according to the length of the period during which each such variable was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period).

(E) With respect to Balloon Indebtedness (1) which is subject to a Commitment or (2) which does not have a Balloon Year commencing within 12 months from the date of calculation, such Balloon Indebtedness shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of 20 years from the date of issuance at an assumed interest rate (which shall be the interest rate as of the date of issuance or the date of calculation, whichever is less, certified by a Financial Advisor to be the interest rate at which the City on behalf of the Board could reasonably expect to borrow the same amount by issuing indebtedness with the same priority of lien as such Balloon Indebtedness and with a 20-year term); provided, however, that if the maturity of such Balloon Indebtedness (taking into account the term of any Commitment) is in excess of 20 years from the date of issuance, then such Balloon Indebtedness shall be assumed to be amortized in substantially equal annual amounts to be paid for principal and interest over an assumed amortization period of years equal to the number of years from the date of issuance of such Balloon Indebtedness to maturity (including the Commitment) and at the interest rate provided above. For the purpose of calculating the Debt Service Requirement on Balloon Indebtedness (a) which are not subject to a Commitment and (b) which have a Balloon Year commencing within 12 months from the date of calculation, the principal payable on such Balloon Indebtedness during the Balloon Year shall be calculated as if paid on the Balloon Date.

(F) The principal of and interest on Parity Indebtedness and Hedge Payments shall be excluded from the determination of Debt Service to the extent that the same were or are expected to be paid with amounts on deposit on the date of calculation (or proceeds of indebtedness to be deposited on the date of issuance of any proposed Parity Indebtedness) in a fund established for such purpose.

(G) In calculating the Debt Service on any Parity Indebtedness or proposed Parity Indebtedness with respect to which the federal government or any agency thereof is or is expected to be obligated to make tax refunds or other payments to the City or the Board for the purpose of reducing the interest costs associated therewith, the Board may offset any stated interest payment on such Parity Indebtedness or proposed Parity Indebtedness by the amount of the scheduled tax refund or other payment corresponding thereto..

"Debt Service Fund" shall mean the Debt Service Fund created as described herein.

"Financial Advisor" shall mean an investment banking or financial advisory firm or commercial bank who or which is retained by the Board for the purpose of passing on questions relating to the availability and terms of specified types of indebtedness and is actively engaged in and, in the good faith opinion of the Board, has a favorable reputation for skill and experience in underwriting or providing financial advisory services in respect of similar types of securities.

"Fiscal Year" shall mean the twelve month period established by the Board as its fiscal year, and which, as of the date of the adoption of the Resolution, is the twelve month period commencing on July 1 of any calendar year and ending on June 30 of the following calendar year.

"Hedge Agreement" shall mean, without limitation, (i) any contract known as or referred to or which performs the function of an interest rate swap agreement, currency swap agreement, forward payment conversion agreement, or futures contract; (ii) any contract providing for payments based on levels of, or changes or differences in, interest rates, currency exchange rates, or stock or other indices; (iii) any contract to exchange cash flows or payments or series of payments; (iv) any type of contract called, or designed to perform the function of, interest rate floors, collars, or caps, options, puts, or calls, to hedge or minimize any type of financial risk, including, without limitation, payment, currency, rate, or other financial risk; and (v) any other type of contract or arrangement that the Board determines is to be used, or is intended to be used, to manage or reduce the cost of any indebtedness or other obligations, to convert any element of any indebtedness or other obligations from one form to another, to maximize or increase investment return, to minimize investment return risk, or to protect against any type of financial risk or uncertainty. A Hedge Agreement shall not include any commodity hedge agreement or similar arrangement. For purposes of Resolution No. R-129-90, as amended, a Hedge Agreement shall be deemed not to have any principal amount for purposes of obtaining consents or approvals of holders of Parity Indebtedness or for otherwise determining the amount of Outstanding Parity Indebtedness.

"Hedged Indebtedness" shall mean any indebtedness or other obligation for which the Board or the City, on behalf of the Board, shall have entered into a Hedge Agreement.

"Hedge Payments" shall mean amounts payable by the Board or the City, on behalf of the Board, pursuant to any Hedge Agreement, other than termination payments, fees, expenses, and indemnity payments.

"Hedge Period" shall mean the period during which a Hedged Agreement is in effect.

"Hedge Receipts" shall mean amounts payable by any provider of a Hedge Agreement pursuant to such Hedge Agreement, other than termination payments, fees, expenses, and indemnity payments.

"Investment Securities" shall mean any of the following, if and to the extent that the same are legal for the investment of funds of the City and the Board:

(i) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America;

(ii) bonds, debentures, notes, participation certificates or other evidences of indebtedness issued or guaranteed by Bank for Cooperatives; Federal Intermediate Credit Bank; Federal Home Loan Bank System; Export-Import Bank of the United States Federal Land Banks; Federal National Mortgage Association; United States Postal Service; Government National Mortgage Association; Federal Financing Bank; Farmers Home Administration; Federal Home Loan Mortgage Association or any agency or instrumentality of the United States of America or any other corporation wholly-owned by the United States of America;

(iii) Public Housing Bonds issued by public agencies or municipalities and fully secured as to the payment of both principal and interest by a pledge of annual contributions under an annual contributions contract or contracts with the United States of America or any agency thereof; or Project Notes issued by public agencies or municipalities and fully secured as to the payment of both principal and interest by a requisition or payment agreement with the United States of America or any agency thereof;

(iv) direct and general obligations, to the payment of the principal of and interest on which the full faith and credit of the issuer is pledged, of any of the following: any state of the United States, or any political subdivision of any such state; provided that (a) as to such obligations of a political subdivision, all the taxable real property within such political subdivision shall be subject to taxation thereby to pay such obligations and the interest thereon, without limitation as to rate or amount, and (b) at the time of their purchase under the Resolution, such obligations of any such state or political subdivision are rated in either of the two highest rating categories by two nationally recognized bond rating agencies;

(v) bank time deposits evidenced by certificates of deposit and banker's acceptances issued by any bank, trust company or savings and loan association which is a member of the Federal Deposit Insurance Corporation, provided that such time deposits and bankers' acceptances (a) do not exceed at any one time in the aggregate five percent (5 %) of the total of the capital and surplus of such bank or trust company, or (b) are secured by obligations described in items (i) or (ii) of the definition of Investment Securities, which such obligations at all times have a market value (exclusive of accrued interest) at least equal to such time deposits so secured and, which are free and clear of any claims by third parties and are segregated in a custodial or trust account held by a third party as the agent solely of, or in trust solely for the benefit of, the Board;

(vi) repurchase agreements with any bank or trust company or savings and loan association which is a member of the Federal Deposit Insurance Corporation, which such agreements are secured by securities which are obligations described in items (i) or (ii) of this definition of Investment Securities provided that each such repurchase agreement (A) is in commercially reasonable form and is for a commercially reasonable period, and (B) results in transfer to the Board of legal title to, or the grant to the Board of a prior perfected security interest in, identified securities referred to in items (i) or (ii) above which are free and clear of any claims by third parties and are segregated in a custodial or trust account held by a third party (other than the repurchaser) as the agent solely of, or in trust solely for the benefit of, the Board; provided that such securities acquired pursuant to such repurchase agreements shall be valued at the lower of the then current market value of such securities or the repurchase price thereof set forth in the applicable repurchase agreement; and

(vii) deposits in the State of Tennessee Local Government Investment Pool created under Chapter 4, Title 9, Tennessee Code Annotated.

"Maximum Annual Aggregate Debt Service" shall mean the maximum Aggregate Debt Service in the Fiscal Year during which such calculation is made or any future Fiscal Year.

"Net Revenues" shall mean the Revenues after deducting the Operation and Maintenance Expenses.

"Operation and Maintenance Expenses" shall mean the costs and expenses of operating and maintaining the Wastewater System, including, without limiting the generality of the foregoing, (i) all expenses includable in the operation and maintenance expense accounts of the Board relating to the Wastewater System according to generally accepted accounting principles, exclusive of depreciation and amortization of property values or losses, and excluding any payments in-lieu-of taxes to the City or other taxing jurisdictions in the State of Tennessee and (ii) to the extent not included in the preceding clause (i) or paid from bond proceeds or otherwise, the Board's share of the costs and expenses of operating and maintaining any plants and properties jointly owned with others.

"Original Bonds" shall mean the outstanding bonds, as referred to in the definition of Original Resolution.

"Original Resolution" means the resolutions authorizing the issuance of the City's Sewer Revenue - General Obligation Bonds, Series M, dated April 1, 1977, as amended, and the resolutions supplemental thereto.

"Outstanding Parity Indebtedness" shall mean any Parity Indebtedness that is outstanding under the resolution or other document under which such Parity Indebtedness is issued.

"Parity Indebtedness" shall mean bonds, notes, loan agreements, and other debt obligations, including Balloon Indebtedness, Short-Term Indebtedness, Variable Rate Indebtedness and Hedge Agreements (but only to the extent of Hedge Payments), issued by or entered into by the Board or by the City on behalf of the Board on a parity of lien under the Resolution in accordance with the restrictive provisions of the Resolution described herein, including any bonds, notes, loan agreements or other obligations secured by a pledge of and/or lien on a Merged System (as defined herein) and the revenues derived from the operation of such Merged System, as defined herein, (provided such pledge and lien are subject only to normal and customary expenses of operating, maintaining, repairing and insuring any such System), so long as the Merged System is not being operated separately from the System as is permitted herein.

"Principal Installment" shall mean, as of the date of calculation and with respect to the indebtedness with respect to which the calculation is being made, (i) the principal amount of the indebtedness due on a certain future date for which no Sinking Fund Installments have been established, (ii) Sinking Fund Installment due on a certain future date for such indebtedness and (iii) if such future dates coincide, the sum of such principal amount and any such Sinking Fund Installment.

"Qualified Hedge Provider" shall mean an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, or whose payment obligations under the related Hedge Agreement are absolutely and unconditionally guaranteed or insured or collateralized by an entity whose senior unsecured long term obligations, financial program rating, counterparty rating, or claims paying ability, are rated either (i) at least as high as "A" or better by Standard & Poor's Rating Group (or any successor thereto) ("S&P") or "A2" or better by Moody's Investors Services, Inc. (or any successor thereto) ("Moody's") (the "Initial Rating Requirement") and such entity maintains a rating on its debt or claims paying ability of not less than "A-" from S&P or "A3" from Moody's (the "Minimum Rating Requirement"); provided that this requirement shall be deemed to

have been met, even if the rating of such entity is reduced below the Minimum Rating Requirement, if such entity is replaced with an entity meeting the Initial Rating Requirement within twenty business days from when the Board receives notice that the Minimum Rating Requirement has not been met. An entity's status as a Qualified Hedge Provider is made as of the time the applicable calculation is made.

"Refunded Municipal Obligations" means obligations of any state, the District of Columbia or possession of the United States or any political subdivision thereof which obligations are rated in the highest rating category by Moody's Investors Service and Standard & Poor's Corporation and provision for the payment of the principal of and interest on which shall have been made by deposit with a trustee or escrow agent of direct obligations of the United States of America, which are held by a bank or trust company organized and existing under the laws of the United States of America or any state, the District of Columbia or possession thereof in the capacity as custodian, the maturing principal of and interest on which direct obligations of the United States of America when due and payable shall be sufficient to pay when due the principal of and interest on such obligations of such state, the District of Columbia, possession, or political subdivision.

"Revenues" shall mean and include all income, fees, charges, receipts, profits and other moneys derived by the Board from its ownership or operation of the Wastewater System, including, without limiting the generality of the foregoing, (i) all income, fees, charges, receipts, profits and other moneys derived from the furnishing or supplying of the services, facilities and commodities through the Wastewater System; and (ii) all income from investments of moneys held under the Resolution other than investment income on any construction fund but not including any earnings on moneys set aside for rebate to the United States under the provisions of Section 148(f) of the Internal Revenue Code of 1986, as amended. "Revenues" shall not include deposits subject to refund until such deposits have become the property of the Board; and income, fees, charges, receipts, profits or other moneys derived by the Board from its ownership or operation of any separate utility system or any gifts, grants, donations or other moneys received by the Board from any State or Federal agency or other person if such gifts, grants, donations or other moneys are the subject of any limitation or reservation (i) imposed by the donor or grantor or (ii) imposed by law or administrative regulation to which the donor or grantor is subject, limiting the application of such funds. "Revenues" shall also not include any payments to the Board with respect to which an adjustment to Debt Service has been made pursuant to the subparagraph (G) of the definition of Debt Service.

"Short-Term Indebtedness" shall mean bonds, notes or other obligations, including Variable Rate Indebtedness, maturing five (5) years or less from their date of issuance which are issued in anticipation of the issuance of revenue bonds the proceeds of which will be used to pay the Short-Term Indebtedness.

"Sinking Fund Installment" shall mean, as of any particular date of calculation, the amount required to be paid on a certain future date for the retirement of Outstanding Parity Indebtedness which mature after said future date, but does not include any amount payable by reason of the maturity of an Outstanding Parity Indebtedness or by call for redemption at the election of the Board or the City on behalf of the Board.

"Supplemental Resolution" shall mean any resolution adopted by the City pursuant to and in compliance with the Resolution providing for the issuance of Bonds, and shall also mean any other resolution adopted by the City pursuant to and in compliance with the provisions of the Resolution amending or supplementing the provisions of the Resolution.

"Valuation Date" shall mean with respect to any Capital Appreciation Indebtedness, the date or dates set forth in the resolution authorizing such Capital Appreciation Bonds on which specific Accreted Values are assigned to the Capital Appreciation Bonds.

"Variable Rate Indebtedness" shall mean any bonds, notes or other obligations of the Board or the City, on behalf of the Board, the interest rate on which is subject to periodic adjustment, at intervals, at such times and in such manner as shall be determined by the resolution authorizing such indebtedness, provided that if the interest rate shall have been fixed for the remainder of the term thereof (including a fixed rate pursuant to a Hedge Agreement with a Qualified Hedge Provider), it shall no longer be Variable Rate Indebtedness.

"Wastewater System" or "Wastewater Control System" shall mean all plants and properties, both real and personal and tangible and intangible, now or hereafter existing, of the City, both within and without the City, used for or pertaining to the collection, treatment and disposal of sewerage and wastewater, including industrial waste. Without limiting the generality of the foregoing, said term shall include: (1) the existing plants and properties comprising the Wastewater System of the City, as of the date of adoption of the Resolution; and (2) all additions, improvements, enlargements, extensions, expansions, and betterments to the Wastewater System of the City hereafter constructed or otherwise acquired, including, without limitation, properties acquired by purchase or annexations or properties acquired through the Board's participation in any regional wastewater system.

Authorization of Bonds

Bonds, notes and other obligations of the City or the Board may be issued that will have a parity of lien on the Net Revenues of the Wastewater System. Such Parity Indebtedness may be issued under the Resolution from time to time pursuant to the terms, conditions and limitations of the Resolution, in such amounts as may be determined by the Board, for any purpose authorized therein. The principal amount of Parity Indebtedness which may be issued thereunder and secured thereby shall not be limited, except as may be provided by law.

General Provisions for Issuance of Parity Indebtedness

Parity Indebtedness shall be issued by means of a Supplemental Resolution adopted by the City or the Board in accordance with applicable law.

Requirements for Issuing Additional Indebtedness

Additional Parity Indebtedness may be incurred provided the following requirements are met:

(a) Provided that all payments required to be made to the Debt Service Fund and into any reserve fund which may be required under resolutions authorizing Parity Indebtedness are current as of the date of issuance of the additional bonds, notes or other obligations, additional bonds, notes or other obligations may be issued or entered into by the City or the Board on a parity and equality of lien with the Outstanding Parity Indebtedness with respect to the lien and claim of such additional bonds, notes or other obligations to the net revenues of the System and the money on deposit in the Debt Service Fund for the following purposes and under the following conditions, but not otherwise:

(i) For the purpose of refunding any Outstanding Parity Indebtedness, subordinate bonds, notes, loan agreements or other obligations, provided that after the issuance of such additional Parity Indebtedness, the Aggregate Debt Service on all Outstanding Parity Indebtedness, including the additional Parity Indebtedness to be issued, in any Fiscal Year shall not increase by more than ten percent (10%) after the issuance of such additional Parity Indebtedness.

(ii) For the purpose of financing the completion or equipping of improvements to the System for which Outstanding Parity Indebtedness have previously been issued but only to the extent necessary to complete such improvements in the manner contemplated at the time of the issuance of the Outstanding Parity Indebtedness that financed such improvements.

(iii) For the purposes of refunding any Outstanding Parity Indebtedness or any Prior Lien Bonds, subordinated bonds, notes or other obligations or extending, improving or replacing the System or for any other lawful purpose under applicable law, if one of the following conditions shall have been met: (A) the Net Revenues for any twelve-month period selected by the Board ending within the twelve months prior to the date of the issuance of the additional Parity Indebtedness must have been equal to at least 120% of the Maximum Annual Aggregate Debt Service on Outstanding Parity Indebtedness plus the Debt Service on the additional Parity Indebtedness proposed to be issued or (B) the estimated Net Revenues of the System for each of the three Fiscal Years next succeeding the issuance of the additional Parity Indebtedness, must be equal at least to 120% of Maximum Annual Aggregate Debt Service on the Notes, any other Outstanding Parity Indebtedness and all outstanding Prior Lien Bonds plus the Debt Service on the additional Parity Indebtedness proposed to be issued; provided, however, that if the additional Parity Indebtedness is to be issued for the acquisition or construction of any extension, improvement or replacement to the System, then the estimate of Net Revenues may be for the three Fiscal Years ensuing after the time that such improvement, extension or replacement is expected to be placed in service.

(iv) For the purpose of entering into a Hedge Agreement with a Qualified Hedge Provider with respect to Outstanding Parity Indebtedness but only to the extent of Hedge Payments.

(b) In calculating Net Revenues, Debt Service and Maximum Annual Aggregate Debt Service for all purposes under the Resolution, the following adjustments and assumptions shall be made:

(i) In calculating the Net Revenues on a historical basis, the amount of such Net Revenues may be adjusted to take into account any rate increase adopted by the Board that is effective prior to the date of such calculation.

(ii) In calculating the Net Revenues for a period in the future, the amount of such Net Revenues may be adjusted to take into account any rate increase adopted by the Board that is to be effective within one year of the date of such calculation, and if such calculation is being made in connection with the issuance of Parity Indebtedness, the Net Revenues may be calculated based upon the assumption that any improvements financed with proceeds of the Parity Indebtedness will be completed within a time period established in a report of a Consulting Engineer.

(c) Any calculation or projection of Net Revenues described above, whether for a historical period or for a future period, shall be set forth in a certificate of the President and Chief Executive Officer and Chief Financial Officer of the Board. If the calculation is made as to a future period, a Consulting Engineer shall state in a report that the assumptions underlying any projections of the Board as to Net Revenues are reasonable. Any calculation of the Maximum Annual Aggregate Debt Service shall also be set forth in a certificate of the President and Chief Executive Officer and Chief Financial Officer of the Board, which certificate shall be accompanied by a certificate of a financial advisory firm to the effect that the calculation of Maximum Annual Aggregate Debt Service is correct and is in compliance with the terms of the Resolution, but such certificate of the financial advisory firm shall only be required if

Variable Rate Indebtedness, Balloon Indebtedness or Short-Term Indebtedness must be taken into account in the calculation of Maximum Annual Aggregate Debt Service.

(d) Any obligation of the Board to pay amounts under a Hedge Agreement other than Hedge Payments, including a termination payment upon the termination of a Hedge Agreement, shall be a subordinate obligation to the obligations with respect to Parity Indebtedness.

Application of Revenues

As long as any Parity Indebtedness shall be outstanding and unpaid either as to principal or as to interest, or until the discharge and satisfaction of the Parity Indebtedness as provided in the resolution authorizing said Parity Indebtedness, the entire income and revenues of the System shall be deposited as collected in the Revenue Fund established by the Resolution (the "Revenue Fund"), to be administered and controlled by the Board. The income and revenues deposited therein shall be used only as follows:

(a) The money in the Revenue Fund shall be disbursed first from month to month for the payment of Operation and Maintenance Expenses.

(b) The money remaining in the Revenue Fund, after payment of Operation and Maintenance Expenses, shall next be used to make deposits into a separate and special fund, to be known as the Debt Service Fund (the "Debt Service Fund"), to be kept separate and apart from all other funds of the Board and used to pay principal of and interest on Parity Indebtedness and Hedge Payments (net of Hedge Receipts) with respect thereto as the same become due, either by maturity or mandatory redemption. Such deposits shall be made monthly, or as otherwise set forth in the Resolution or in the resolution authorizing such Parity Indebtedness or Hedged Payments, until all Parity Indebtedness is paid in full or discharged and satisfied. Unless otherwise authorized in the resolution authorizing any Parity Indebtedness, for the period commencing with the month next following the delivery of the Parity Indebtedness, each monthly deposit shall be an amount that, together with all other monthly deposits of approximately equal amounts during such period and amounts otherwise in said Fund, will be equal to principal due on the Parity Indebtedness on the next principal payment date, divided by the number of months from and including the month of the first such deposit to and including the months preceding the next principal payment date; provided that, if the next principal payment date is more than 13 months following the month next following the delivery of the Parity Indebtedness, such monthly deposits to the Debt Service Fund shall commence in the month that is 13 months prior to the month of the next principal payment date. Furthermore, during such period, there shall be deposited to the Debt Service Fund monthly an amount equal to one-sixth (1/6) of the interest coming due on the next interest payment date for Parity Indebtedness (unless otherwise specified in the resolution authorizing such Parity Indebtedness).

In each month thereafter, each monthly deposit shall consist of an interest component and a principal component except as provided in the Resolution. If interest is payable semi-annually, then the interest component shall be an amount equal to not less than one-sixth (1/6th) of the interest coming due on any Parity Indebtedness on the next succeeding interest payment date, unless otherwise specified in the resolution authorizing such Parity Indebtedness. Unless otherwise specified in the resolution authorizing Parity Indebtedness, the principal component shall be an amount which shall be established annually on each July 1 for all payments to be made during the ensuing twelve-month period commencing in July of each calendar year and ending in June of the following calendar year and shall be not less than one-twelfth (1/12) of the principal amounts, as the case may be, coming due, whether by maturity or mandatory redemption, on the Parity Indebtedness then outstanding during such twelve-month period. No further deposit shall be required when the Debt Service Fund balance is equal to or greater than the amount needed to pay interest coming due on the next interest payment date and the total of the principal amounts payable, either by maturity or mandatory redemption, during the applicable twelve-month

period. Money in the Debt Service Fund shall be used solely and is expressly and exclusively pledged for the purpose of paying principal of and interest on Parity Indebtedness. Notwithstanding the foregoing, deposits for the payment of principal and interest on Variable Rate Indebtedness or Hedge Payments shall be made as set forth in the resolution authorizing such Variable Rate Indebtedness or Hedge Payments.

(c) The next available money in the Revenue Fund shall be paid to any issuer of an insurance policy, surety bond, letter of credit or similar instrument (a "Reserve Fund Credit Facility") (pro rata, if more than one) to the extent needed to reimburse the issuer for any amounts advanced under the Reserve Fund Credit Facility, including any amounts payable under any guaranty agreement relating to such amounts, together with reasonable related expenses incurred by the issuer of such Reserve Fund Credit Facility and any interest relating to such amounts.

(d) The next available money in the Revenue Fund shall be deposited to any reserve fund created pursuant to any resolution authorizing Parity Indebtedness in the manner provided in such resolution.

(e) The next available money in the Revenue Fund shall be used to pay liquidity fees, credit enhancement fees, remarketing agent fees and similar fees that are payable in connection with the issuance of Parity Indebtedness.

(f) The next available money in the Revenue Fund shall be used for the payment of all other payments to be made under the Parity Indebtedness not provided for in the preceding subsections including payments in connection with Hedge Agreements that are not Hedge Payments, including termination payments.

(g) The next available money in the Revenue Fund shall be used to pay principal of and interest on (including reasonable reserves therefor) any bonds, notes or obligations payable from the Revenues of the System, but junior and subordinate to the Parity Indebtedness and then for the purpose of the payment of liquidity fees, credit enhancement fees, remarketing agent fees and similar fees that are payable in connection with bonds, notes or other obligations payable from the Revenues of the System, but junior and subordinate to the Parity Indebtedness.

(h) The next available money in the Revenue Fund shall be used for the purpose of making payments in lieu of taxes and, to the extent not so used, may be used for any lawful purpose, including such reserve funds and other funds as the Board deems necessary and appropriate.

(i) Money on deposit in the Funds described above may be invested by the Board in such investments as shall be permitted by applicable law, as determined by an authorized representative of the Board, all such investments to mature not later than the date on which the money so invested shall be required for the purpose for which the respective Fund was created. All income derived from such investments shall be regarded as revenues of the System and shall be deposited in the Revenue Fund. Such investments shall at any time necessary be liquidated and the proceeds thereof applied to the purpose for which the respective Fund was created. The Board is authorized to enter into contracts with third parties for the investment of funds in any of the Funds described herein.

(j) The Revenue Fund and the Debt Service Fund shall be held and maintained by the Board and, when not invested, kept on deposit with a bank or financial institution regulated by and the deposits of which are insured by the Federal Deposit Insurance Corporation or similar federal agency. All moneys in such Funds so deposited shall at all times be secured to the extent and in the manner required by applicable State law.

(k) Notwithstanding the foregoing, the Board may deposit any amounts described in subparagraph (G) of the definition of Debt Service directly into the Debt Service Fund at the Board's option.

Investment of Funds

Moneys in the Debt Service Fund shall, to the fullest extent practicable and reasonable, be invested and reinvested by the Board solely in, and obligations credited to such Accounts shall be, investments specified in item (i), (ii), (iii), (iv), (v)(b), (vi) and (vii) of the definition of Investment Securities which shall mature or be subject to redemption at the option of the holder thereof on or prior to the respective dates when the moneys in such accounts will be required for the purposes intended.

Moneys in the Revenue Fund not required for immediate disbursement for the purpose for which said Fund is created shall, to the fullest extent practicable and reasonable, be invested and reinvested by the Board, to the extent allowed by law, solely in, and obligations deposited in said Fund shall be, Investment Securities which shall mature or be subject to redemption at the option of the holder thereof, not later than such times as shall be necessary to provide moneys when needed to provide payments from such Fund.

Combined Systems

Notwithstanding anything elsewhere provided in the Resolution, nothing contained in the Resolution shall prevent the Board from combining any or all of the Board's utility systems into a single unified operation (the "Combined System") and commingling the revenues of the systems so combined in the Combined System without keeping separate accounts of the funds of each of such systems, provided payments from the funds of the Combined System are required to be made into the Debt Service Fund created under the Resolution from time to time in amounts sufficient to comply with provisions thereof and in amounts sufficient to pay the principal of and interest on the Outstanding Parity Indebtedness as such principal and interest becomes due. Bonds, notes and other obligations ("Parity Combined System Obligations") payable from revenues of the Combined System may be issued on a parity with Outstanding Parity Indebtedness provided at the time of the issuance of any such Parity Combined System Obligations, the following conditions have been complied with. The Net Revenues of the Combined System, for a period of twelve consecutive months (hereinafter sometimes called the "Combined Twelve-Month Period") out of the eighteen months immediately preceding the issuance of such Parity Combined System Obligations shall be equal to at least 1.2 times the Maximum Annual Aggregate Debt Service on all Outstanding Parity Indebtedness and the obligations proposed to be issued; or if within twelve months prior to the issuance of the Parity Combined System Obligations a revised schedule of rates for the Combined System or any part thereof shall have been put into effect, then the Net Revenues of the Combined System for the Twelve-Month Period, as certified by a Consulting Engineer or Financial Adviser, that would have resulted from such revised rates had they been in effect for the Twelve-Month Period, may be used in lieu of the actual Net Revenues for such Twelve-Month Period.

Separate System

Nothing contained in the Resolution shall prevent the Board from acquiring a separate wastewater transmission or distribution system or any combination thereof, or any other system, facilities or equipment which municipalities in Tennessee operating wastewater distribution systems are authorized to own, operate or finance, and nothing therein shall prevent the issuance of bonds, notes, warrants, certificates or other obligations or evidences of indebtedness, to acquire any such system or facilities. Any facilities or system acquired by the Board, at the election of the Board, may be operated as a separate and

independent system or be merged into the System and operated as a single unified system with the System (the "Merged Systems"). Revenues of the Merged Systems may be commingled without keeping separate accounts of the funds of each of the systems, provided all Revenues of the Merged Systems are applied in accordance with the Resolution, including the payment of principal of and interest on all bonds, notes or other obligations of the acquired system. All Outstanding Parity Indebtedness and any bonds, notes and other obligations of the acquired system outstanding upon the merger of the systems designated by the Board may be payable from revenues of the Merged Systems on a parity and equality of lien with each other, provided the Net Revenues of the Merged Systems, for a period of twelve consecutive months (hereinafter sometimes called the "Twelve-Month Period") out of the eighteen months immediately preceding the merger of the systems shall be equal to at least 1.2 times the Maximum Annual Aggregate Debt Service on all Outstanding Parity Indebtedness, all bonds, notes and obligations of the acquired system then outstanding and any additional indebtedness to be then issued; or if within twelve months prior to any such calculation, the Board shall have put into effect a revised schedule of rates for the Merged Systems or any part thereof, then the Net Revenues of the Merged Systems, as certified by a Consulting Engineer or Financial Adviser, that would have resulted from such revised rates had they been in effect for the Twelve-Month Period, may be used in lieu of the actual Net Revenues for such Twelve-Month Period.

Rate Covenant

The Board covenants and agrees that it shall fix, establish, maintain and collect rates and charges for the services or facilities furnished or supplied by the Wastewater System or which shall be any part thereof, which rates, tolls, rents and charges shall be sufficient in each Fiscal Year to produce Revenues in such Fiscal Year which together with other moneys which lawfully may be applied to the purpose, will be equal to at least the sum of (A) Debt Service on all Bonds and Original Bonds in such Fiscal Year, (B) the necessary expenses of operating, maintaining, renewing and replacing the Wastewater System and (C) the additional amounts, if any, required to pay all other charges or liens whatsoever payable from the Revenues in such Fiscal Year; provided, however, that such rates, tolls, rents, and other charges shall be sufficient to produce in any Fiscal Year Net Revenues at least equal to one and twenty-hundredths (1.20) times Debt Service on all Bonds and Original Bonds in such Fiscal Year.

Additional Covenants

To Maintain the Properties of the Wastewater System in Good Repair. The City shall (i) maintain, preserve, and keep, or cause to be maintained, preserved and kept, the properties of the Wastewater system and all additions and betterments thereto and extensions thereof, and every part and parcel thereof in good repair, working order and condition, (ii) from time to time make, or cause to be made, all necessary and proper repairs, renewals, replacements, additions, extensions and betterments thereto, so that at all times the business carried on in connection therewith shall be properly and advantageously conducted, and (iii) comply, or cause to be complied with the terms and conditions of any permit or license for the Wastewater System or any part thereof issued by any federal or state governmental agency or body and with any federal or state law or regulation applicable to the construction, operation, maintenance and repair of the Wastewater System or requiring a license, permit or approval therefor.

Sale, Lease or Other Disposition of Properties of the Wastewater System. The City shall not sell, mortgage, lease or otherwise dispose of the properties of the Wastewater System except as provided below.

(1) The City may sell, lease, or otherwise dispose of the properties comprising the Wastewater System upon compliance with the provisions of the Original Resolution so long as Original

Bonds are outstanding and if simultaneously with such sale or other disposition thereof provision is made for the payment of all Bonds then outstanding and such Bonds are no longer deemed outstanding within the meaning of the Resolution.

(2) The City may sell, lease or otherwise dispose of any part of the properties comprising the Wastewater system if an Authorized Officer of the Board shall certify in writing that such terms and conditions of the proposed sale, lease or other disposition of any such properties are fair and reasonable, and that the estimated Revenues to be derived from the remaining properties of the Wastewater System, after taking into consideration the use by the Board of the proceeds of such proposed sale, lease or other disposition of such properties, will be sufficient to enable the City to comply with all covenants and conditions of the Resolution Proceeds of any sale, lease or other disposition of any portion of the properties of the Wastewater System shall be paid: (i) if such proceeds are not in excess of $100,000, into the Revenue Fund, or (ii) if such proceeds are in excess of $100,000, (A) into the Bond Retirement Account in the Bond Fund and applied to the purchase or redemption of Bonds or (B) into the Revenue Fund and applied by the Board for the purpose of constructing extensions, betterments or improvements to the Wastewater System, as the Board shall determine.

(3) The City may sell, lease, or otherwise dispose of surplus lands, crops, timber, buildings and any other portion of the works, plant and facilities of the Wastewater System and real and personal property comprising a part thereof, which, in the opinion of the Board, shall have become unserviceable, inadequate, obsolete, worn out, or unfit to be used in the operation of the Wastewater System, or no longer necessary material to, or useful in such operation. Proceeds of any such sale, lease or other disposition of any portion of the properties of the Wastewater System shall be paid into the Revenue Fund.

(4) If permitted by the laws of the State of Tennessee, the City may transfer without consideration the properties comprising the Wastewater System to a public corporation or political subdivision of the State of Tennessee, provided such corporation or subdivision assumes all of the City s obligations and duties under the Resolution.

(5) In the event that any part of the properties comprising the Wastewater System shall be transferred from the City through the operation of law (including condemnation), any moneys received by the City as a result thereof shall be paid (i) if such proceeds are not in excess of $100,000, into the Revenue Fund, or (ii) if such proceeds are in excess of $100,000, (A) into the Bond Retirement Account in the Bond Fund and applied to the purchase or redemption of Bonds or (B) into the Revenue Fund and applied by the Board for the purpose of constructing extensions, betterments or improvements to the Wastewater System, as the Board shall determine.

Insurance. (A) Except as provided in paragraph (B) below, the City shall keep, or cause to be kept, the works, plants, and facilities comprising the properties of the Wastewater System and the operations thereof insured to the extent available at reasonable cost with responsible insurers, with policies payable to the Board, against risks of direct physical loss, damage to or destruction of the Wastewater System, or any part thereof, at least to the extent that similar insurance is usually carried by utilities operating like properties against accidents, casualties or negligence, including liability insurance and employer's liability; provided, however, that any time while any contractor engaged in constructing any part of the Wastewater System shall be fully responsible therefor, the City shall not be required to keep such part of the System insured. All policies of insurance shall be for the benefit of the holders of the Bonds and the Board as their respective interests may appear.

In the event of any loss or damage to the properties of the Wastewater System covered by insurance, the Board will (1) with respect to each such loss, promptly repair and reconstruct to the extent

necessary to the proper conduct of the operations of the Wastewater System the lost or damaged portion thereof and shall apply the proceeds of any insurance policy or policies covering such loss or damage for that purpose to the extent required therefor, unless, in case of loss or damage involving $100,000 or more the Board shall determine that such repair and reconstruction not be undertaken, and (2) if the Board shall not use the entire proceeds of such insurance to repair or reconstruct such lost or damaged property, the proceeds of such insurance policy or policies or any portion thereof not used for such repair or reconstruction, as the case may be, shall be paid into the Revenue Fund.

(B) If the Board elects to self-insure or fails to carry insurance against any of the risks normally insured against by operators of facilities similar to the Wastewater System, it must secure the concurrence of the Consulting Engineer or independent consultant having an expertise in the insurance of utilities. In making its decision whether to concur in such self insurance, the Consulting Engineer or independent consultant shall (i) make an estimate of the added financial risks, if any, assumed by the City as a result of the self-insurance, (ii) consider the availability of commercial insurance, the terms upon which such insurance is available and the costs of such available insurance, and the effect of such terms and costs upon the City's costs and charges for its services, (iii) determine whether the added financial risk, if any, being assumed by the City is prudent in light of the savings to be realized from such self-insurance or in light of the general availability of insurance.

Consulting Engineer. In the event that the City has not complied with its rate covenant, the Board shall retain and appoint, as Consulting Engineer, an independent consulting engineer or engineering firm or corporation having special skill knowledge and experience in analyzing the operations of wastewater systems, preparing rate analyses, forecasting the loads and revenues of wastewater systems, preparing feasibility reports respecting the financing of wastewater systems and advising on the operation of wastewater facilities. Such Consulting Engineer shall no later than 90 days following its retention make an examination of and report on the properties and operations of the Wastewater System. Each such report shall be in sufficient detail to show whether the City has satisfactorily performed and complied with the covenants, agreements and conditions set forth in the Resolution with respect to the management of the business of the Wastewater System, the sufficiency of the amount being charged and collected for services under the requirements of the Resolution, the proper maintenance of the Wastewater System, and the making of repairs, renewals, replacements, modifications, additions and betterments necessary or desirable to improve operating reliability or reduce costs and recommendations thereof. A copy of each such report shall be filed with the Board and sent to any Bondholder filing with the Board a written request for a copy thereof. On the filing of such report, the Board shall undertake a review of the management of the business of the Wastewater System and shall cause the prompt taking of such action as shall be necessary to fully perform and comply with the covenants, agreements and conditions as to which the report specified such failure of performance or compliance.

Books of Account; Annual Audit. The Board shall maintain and keep proper books of account relating to the Wastewater System and in accordance with generally accepted accounting principles. Within one hundred twenty (120) days after the end of each Fiscal Year, the Board shall cause such books of account to be audited by an independent certified public accountant. A copy of each audit report and financial statements prepared in conformity with generally accepted accounting principles shall be filed promptly with the Board and sent to any Bondholder filing with the Board a written request for a copy thereof.

Not to Furnish Free Service; Enforcement of Accounts Due. So long as any Bonds issued pursuant to the Resolution are outstanding and unpaid, the Board will not furnish or supply any service or facility furnished by it or in connection with the operation of the Wastewater System, free of charge to any person, firm or corporation, public or private, and the Board will promptly enforce the payment of

any and all accounts owing to the Board by reason of the ownership and operation of the Wastewater System.

Not to Issue Additional Bonds Under the Original Resolution. The City shall not issue any additional Bonds under the Original Resolution except bonds issued to refund Original Bond.

Amendment of Original Resolution. The City will not hereafter consent to or agree to any supplement, change, amendment or modification of the Original Resolution which would materially prejudice or adversely affect the rights or interests of the holders of the Bonds except as otherwise expressly provided in the Resolution.

Tax Covenant

The City has covenanted that throughout the term of the Bonds and through the date that the final rebate, if any, must be made to the United States in accordance with Section 148 of the Internal Revenue code of 1986, as amended (the "Code") it will comply with the provisions of Sections 103 and 141 through 150 of the Code, and the regulations adopted or promulgated under said Section that must be satisfied in order that interest on the Bonds shall be, and continue to be, excluded from gross income for federal income tax purposes under said Section 103.

Amendment of Resolution

The Resolution may be amended without the consent of or notice to the holders of the Parity Indebtedness for the purposes of (i) curing any ambiguity or formal defect or omission in the Resolution; (ii) making such amendments as are necessary to prevent interest on any Parity Indebtedness from being included in gross income of the holders thereof for federal income tax purposes; (iii) adding to the covenants and agreements of the City or the Board or surrendering or limiting any right or power of the City or the Board; or (iv) making such amendments as are necessary for any Parity Indebtedness to be held or continue to be held in book-entry form.

In addition to the amendments to the Resolution without the consent of the holders as referred to above, the Resolution may be amended from time to time if such amendment shall have been consented to by the holders of not less than a majority in principal amount of Outstanding Parity Indebtedness (not including in any case any Bonds or Parity Indebtedness which may then be held or owned by or for the account of the City or Board); but the Resolution may not be so amended (without the consent of all affected holders of Outstanding Parity Indebtedness) in such manner as to:

(i) make any change in the maturity or interest rate (other than in accordance with its terms) of the Parity Indebtedness, or modify the terms of payment of principal of or interest on Parity Indebtedness or impose any conditions with respect to such payment; or

(ii) to make any Parity Indebtedness redeemable other than in accordance with its terms; or

(iii) to create a preference or priority of any Parity Indebtedness over, any other Parity Indebtedness; or

(iv) reduce the percentage of the principal amount of Parity Indebtedness the consent of the holders of which is required to effect a further amendment.

Whenever the City shall propose to amend the Resolution under the provisions of the Resolution, the Board shall cause notice of the proposed amendment to the holders of the Parity Indebtedness by sending a summary of such proposed amendment to such holders and shall state that a copy of the proposed amendatory resolution is on file in the office of the Secretary of the Board. The holders of Parity Indebtedness shall be determined by the registration records of the City or the Board or any registration agent therefor or in such other manner as is commercially reasonable.

Whenever at any time within one year from the date of the mailing of such notice there shall be filed with the Secretary an instrument or instruments executed by the holders of at least a majority aggregate principal amount of the Outstanding Parity Indebtedness, which instrument or instruments shall refer to the proposed amendatory resolution described in such notice and shall specifically consent to and approve the adoption thereof, then the Board and/or the City may adopt such amendatory resolution and such resolution shall become effective and binding upon the holders of all Parity Indebtedness.

Any consent given by the holder of Parity Indebtedness shall be irrevocable for a period for one year from the date of the instrument evidencing such consent and shall be conclusive and binding upon all future holders of the same Parity Indebtedness during such period. Such consent may be revoked at any time after one year from the date of such instrument by the holder who gave such consent or by a successor in title by filing notice of such revocation with the Secretary.

For purposes of determining the aggregate principal amount of Parity Indebtedness outstanding for purposes of amendments, whether the holders of a sufficient percentage in aggregate principal amount of Bonds and Parity Indebtedness have consented to any amendment, the Board may make such determination at any time while a request for consents to such amendment is outstanding and may include any Parity Indebtedness issued during such period in making such determination. The Accreted Value of any Capital Appreciation Debt as of the time of any such determination shall be used in making any such determination.

The fact and date of the execution of any instrument relative to amendments may be proved by the certificate of any officer in any jurisdiction who by the laws thereof is authorized to take acknowledgments of deeds within such jurisdiction, that the person signing such instrument acknowledged before him the execution thereof, or may be proved by an affidavit of a witness to such execution sworn to before such officer. In the event that any Parity Indebtedness is held in book-entry form, any consent to an amendment may be executed by any beneficial owner of such Parity Indebtedness, which beneficial ownership may be proved by an affidavit of the beneficial owner.

Notwithstanding anything in the Resolution to the contrary, the Board and/or the City may adopt amendments to the Resolution that do not become effective until the payment or defeasance of any Parity Indebtedness outstanding on the date such amendments are adopted.

Defaults and Remedies

A Bondholders' Committee or any Bondholder shall have authority to exercise each right and remedy granted in the Resolution only to the extent that the exercise of such right or remedy will not impair the rights of the holders of the Original Bonds.

The following events shall be Events of Default under the Resolution:

(1) Default shall be made in the due and punctual payment of the principal of and premium, if any, on any of the Bonds or Original Bonds when the same shall become due and payable, either at maturity or by proceedings for redemption or otherwise;

(2) Default shall be made in the due and punctual payment of any installment of interest on any Bond or Original Bond, or any sinking fund installment for Bonds when and as such installment of interest or sinking fund installment shall become due and payable;

(3) The City shall default in the observance and performance of any other of the covenants, conditions and agreements on the part of the City contained in the Resolution and such default or defaults shall have continued for a period of ninety (90) days, after written notice thereof to the City from the holders of not less than twenty-five percent (25%) in principal amount of the bonds then Outstanding; provided, however, that if such failure shall be such that it cannot be, corrected within such ninety day period, it shall not constitute an Event of Default if corrective action is instituted within such period and diligently pursued until the failure is corrected;

(4) An order, judgment or decree shall be entered by any court of competent jurisdiction with the consent or acquiescence of the City, or if such order, judgment or decree, having been entered without the consent or acquiescence of the City, shall not be vacated, set aside, discharged or stayed (or in case custody or control is assumed by said order, such custody or control shall not otherwise be terminated) within ninety days after the entry thereof, and if appealed,' shall not thereafter be vacated or discharged: (a) appointing a receiver, trustee or liquidator for the City under the provisions of Chapter IX of an Act to establish a Uniform Law on the Subject of Bankruptcies, II U.S.C. 901-946, (c) granting relief to, the City under any amendment to said Bankruptcy Act or under any other applicable bankruptcy act which shall give relief substantially similar to that afforded by said Chapter IX, or (d) assuming custody or control of the Wastewater System or any part thereof under the provisions of any other law for the relief or aid of debtors.

(5) The City shall (a) admit in writing its inability to pay its debts generally as they become due, (b) file a petition in bankruptcy or seeking a composition of indebtedness, (c) make an assignment for the benefit of its creditors, (d) consent to the appointment of a receiver of the whole or any substantial part of the Wastewater System, (e) file a petition or an answer seeking relief under said Bankruptcy Act as the same may be amended or any other applicable bankruptcy act which shall give relief substantially the same as that afforded by said chapter, or (f) consent to the assumption by any court of competent jurisdiction under the provisions of any other law for the relief or aid of debtors of custody or control of the City or of the whole or any substantial part of the Wastewater System.

If an event of Default shall have happened and shall not have been remedied, the books of record and account of the Board relating to the Wastewater System and all other records relating thereto shall at all times be subject to the inspection and use of any persons holding at least twenty-five percent (25%) of the principal amount of Bonds outstanding and of their respective agents and attorneys or of any committee thereof.

If an Event of Default shall have happened and shall not have been remedied, upon demand of a Bondholders' Committee, the Board shall pay over to the Bondholders' Committee and cause any construction fund trustee to pay over to the Bondholders Committee (i) forthwith, all moneys, securities and funds then held by the Board and pledged under the Resolution, and moneys, securities and funds then held by any construction fund trustee, and (ii) as promptly as practicable after receipt thereof, all Revenues.

During the continuance of an Event of Default as defined in items 1 and 2 above or of any other Event of Default resulting in an Event of Default as defined in items 1 and 2, the Revenues received by a Bondholders' Committee as the result of the taking of possession of the business and properties of the Wastewater System, shall be applied by the Bondholder Committee, subject to the provisions of the

Original Resolution so long as the Original Bonds are outstanding thereunder, firstly to the payment of all necessary and proper Operation and Maintenance Expenses of the Wastewater System and all other proper disbursements or liabilities made or incurred by the Bondholders' Committee, secondly, to the then due and overdue payments to the Bond Fund including the making up of deficiencies therein; and lastly, for any lawful purpose in connection with the Wastewater System.

In the event that at any time the funds held by the Bondholders' Committee shall be insufficient for the payment of the principal of and premium, if any, and interest then due on the Bonds, such funds (other than funds held for the payment or redemption of particular Bonds or coupons which have theretofore become due at maturity or by call for redemption) and all Revenues and other moneys received or collected for the benefit or for the account of Holders of the Bonds, subject to the provisions of the Original Resolution so long as the Original Bonds are outstanding thereunder, shall be applied as follows:

(1) Unless the principal of all of the Bonds shall have become due and payable,

FIRST, to the payment of all necessary and proper operating expenses of the Wastewater System and all other proper disbursements or liabilities made or incurred by the Bondholders' Committee;

SECOND, to the payment to the persons entitled thereto of all installments of interest (including any interest on overdue principal) then due in the order of the maturity of such installments, earliest maturities first, and, if the amount available shall not be sufficient to pay in full any installment or installments of interest maturing on the same date, then to the payment thereof ratable, according to the amounts due thereon, to the persons entitled thereto, without any discrimination or preference; and

THIRD, to the payment to the persons entitled thereto of the unpaid principal and premium, if any, due and unpaid upon the Bonds at the time of such payment, ratably, according to the amounts of principal and premium, if any, due on such date to the persons entitled thereto, without any discrimination or preference.

(2) If the principal of all of the Bonds shall have become due and payable,

FIRST, to the payment of all necessary and proper operating expenses of the Wastewater System and all other proper disbursements or liabilities made or incurred by the Bondholders' Committee;

SECOND, to the payment of the principal and interest then due and unpaid upon the Bonds without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest over any other installment of interest, or of any Bond over any other Bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or preference.

Upon the occurrence of an Event of Default and while such Event of Default shall be continuing, a Bondholders' Committee representing the holders of not less than a majority of the Bonds at the time outstanding, as a matter of right against the City, without the notice or demand, and without regard to the adequacy of the security for the Bonds, shall, but only if and to the extent then permitted by law and the Original Resolution be entitled to take possession and control of the business and properties of the Wastewater System and upon taking such possession, such Bondholders' Committee shall operate and maintain the Wastewater System, make any necessary repairs, renewals and replacements in respect thereof, prescribe rates and charges for services furnished through the facilities of the Wastewater System and collect the Revenues of the Wastewater System.

Upon the occurrence of an Event of Default and at any time while an Event of Default shall be continuing, the holders of twenty-five percent (25%) or more in principal amount of the Bonds then outstanding or any committee therefore shall, but only if and to the extent then permitted by law and the Original Resolution, be entitled to the appointment of a receiver to take possession of the Wastewater System, to manage, and receive and apply the Revenues.

If an Event of Default shall happen and shall not have been remedied, a Bondholders' Committee is empowered to proceed forthwith to institute such suits, actions and proceedings to protect and enforce its rights and the rights of the holders of the Bonds under the Resolution or, to file such proof of debt, amendment of proof of debt, claim, petition or other document as may be necessary or advisable in order to have the claims of the holders of the Bonds allowed in any equity receivership, insolvency, bankruptcy, liquidation, readjustment, reorganization or other similar proceedings.

The holders of not less than a majority in principal amount of the Bonds at the time outstanding shall be authorized and empowered (1) to direct the time, method, and place of conducting any proceeding for any remedy available to the holders of the Bonds; or (2) on behalf of the holders of the Bonds then outstanding, to consent to the waiver of any Event of Default or its consequences.

Any holder of any of the Bonds shall have the right to institute any suit, action or proceeding at law or in equity for the enforcement of any provision of the Resolution or the execution of any trust under the Resolution or for any remedy under the Resolution.

Defeasance

The obligations of the City under the Resolution and the liens, pledges, charges, trusts, covenants and agreements of the City therein made or provided for, shall be fully discharged and satisfied as to any Bond and such Bond shall no longer be deemed to be outstanding thereunder, (i) when such Bond shall have been canceled, or shall have been surrendered for cancellation or is subject to cancellation, or shall have been purchased from moneys held under the Resolution; or (ii) when payment of the principal of and premium, if any, on such Bond, plus interest on such principal to the due date thereof (whether such due date be by reason of maturity or upon redemption or prepayment, or otherwise) either (a) shall have been made or caused to be made in accordance with the terms thereof, or (b) shall have been provided for by irrevocably depositing with a Trustee, in trust, and irrevocably appropriating and setting aside exclusively for such payment, either (1) moneys sufficient to make such payment or (2) Refunded Municipal Obligations or Investment Securities which shall include only those obligations described in items (i) and (ii) of the definition of Investment Securities above maturing as to principal and interest in such amounts and at such times as will insure the availability of sufficient moneys to make such payment, whichever the City deems to be in its best interest, and all necessary and proper fees, compensation and expenses of such Trustee with respect to which such deposit is made shall have been paid or the payment thereof provided for to the satisfaction of said Trustee and proper notice of such redemption or prepayment shall have been previously published in accordance with the Resolution or provision shall have been irrevocably made for the giving of such notice.

Swap Contracts

If the City enters into an interest rate swap or other interest rate hedging transaction with respect to the payment of interest with respect to the Bonds, the amounts that the City pays or receives under such interest rate swap or other hedging transaction shall be taken into account in determining interest or the interest requirements on such Bonds for all purposes under the Resolution. Such payments shall be made or such funds received at such times and in such amounts as shall be established by a Supplemental Resolution authorizing the interest rate swap or other hedging transaction. In the case of variable rate

issues in which financial covenants are based on the synthetic fixed rate under a swap, utilization of the synthetic fixed rate under a swap for purposes of performing any required calculations under the applicable legal documentation shall be permitted only if such documentation and the applicable swap satisfy the following requirements:

(i) The swap provider must be rated least A-/A3 or better by Standard & Poor's and Moody's (the "Initial Rating Requirement").

(ii) Assuming satisfaction of the Initial Rating Requirement, and thereafter as long as the long-term indebtedness of the swap provider or the claims paying ability of the swap provider does not fall below Baa2 or BBB by either Standard & Poor's or Moody's (the "Minimum Rating Requirement"), all interest rate assumptions for purposes of establishing or demonstrating compliance with financial covenants (e.g., rate covenant, additional bonds test) may be based upon the synthetic fixed interest rate under the swap.

(iii) Failure to maintain a swap provider holding the Minimum Rating Requirement or, if the issuer elects, failure to replace any such swap provider by another swap provider which holds the Initial Rating Requirement within ten business days, will have the following effects: (1) compliance with any required rate covenant for the preceding Fiscal Year will be based on the actual interest paid on the Variable Rate Indebtedness during such Fiscal Year without regard to the swap; and (2) any "forward-looking" financial covenant based upon debt service will be based upon the variable rate.

(iv) For short-dated swaps having terms or weighted average maturities of ten years or less, whereupon related bonds automatically convert to a pre-set fixed rate, the embedded swap provider must meet the Initial Rating Requirement. With respect to financial covenants, the synthetic fixed rate based on the swap may be utilized for purposes of demonstrating or establishing compliance with the applicable covenant. Failure to maintain a swap provider holding the Minimum Rating Requirement during the embedded swap period will require replacement of the Swap provider within ten business days. Failure to replace will require re-calculation of the applicable financial covenants as described above.