



JUSTIN P. WILSON
Comptroller

JASON E. MUMPOWER
Deputy Comptroller

March 5, 2020

Honorable Indya Kincannon, Mayor
and City Council
City of Knoxville
P.O. Box 1631
Knoxville, Tennessee 37901

Dear Mayor Kincannon and Members of the Council:

Thank you for your recent correspondence. We acknowledge receipt on February 21, 2020, of a request from the City of Knoxville (the "City") for a report on a plan of refunding (the "Plan") for the City's proposed issuance of an estimated \$30,390,000 Wastewater System Revenue Refunding Bonds, Series 2020.

Pursuant to the provisions of Tennessee Code Annotated Title 9 Chapter 21, enclosed is a report based upon our review of the City's Plan. The Plan, this letter, and the enclosed report should be made available on the City's website and must be presented to each member of the Council for review prior to the adoption of a refunding bond authorizing resolution.

Changes to our Office

We are enclosing a memorandum about the newly created Division of Local Government Finance within the Comptroller's Office.

If you should have questions or need assistance, please feel free to contact your financial analyst, William Wood, at 615.401.7893 or William.Wood@cot.tn.gov. You may also contact our office by mail at the address located at the bottom of this page. Please send it to the attention of your analyst.

Very truly yours,

A handwritten signature in blue ink, appearing to read "B. Knotts".

Betsy Knotts
Director of the Division of Local Government Finance

cc: Ms. Jean Suh, Contract Audit Review Manager, Division of Local Government Audit
Mr. Gabriel J. Bolas, KUB President and CEO, Knoxville Utilities Board
Mr. Mark Walker, Chief Financial Officer, Knoxville Utilities Board

Enclosures: Report of the Director of the Division of Local Government Finance
Comptroller's Memorandum Regarding New Division

BK:ww



JUSTIN P. WILSON
Comptroller

JASON E. MUMPOWER
Deputy Comptroller

**Report of the Director of the Division of Local Government Finance
Concerning the Proposed Issuance of
Wastewater System Revenue Refunding Bonds, Series 2020
Knoxville, Tennessee**

This report is being issued pursuant to T.C.A. § 9-21-1003 and is based upon information as presented in a plan of refunding (the "Plan") received by our office on February 21, 2020, from the City of Knoxville (the "City"). Our report provides information to assist the governing body in its responsibility to understand the nature of the refunding transaction, including the costs, risks, and benefits, prior to approving the issuance of the refunding bonds and is designed to provide consistent and comparable information for all local governments in Tennessee.

This report does not constitute approval or disapproval of the Plan or a determination that a refunding is advantageous or necessary nor that any of the refunded obligations should be refinanced or remain outstanding until their respective dates of maturity. This report does not address compliance with federal tax regulations and is not to be relied upon for that purpose. The City should discuss these issues with bond counsel. This report and the City's Plan must be presented to the governing body prior to the adoption of a refunding bond resolution.

Refunding Analysis

At the request of the President and CEO of the Knoxville Utilities Board, our office has reviewed the City's Plan, as required by TCA § 9-21-1003, and provides the following analysis based upon the assumptions outlined in the Plan:

The City intends to issue by competitive sale approximately \$30,390,000 Wastewater System Revenue Refunding Bonds, Series 2020 (the "Series 2020 Refunding Bonds") priced at par to refund \$30,000,000 Wastewater System Revenue Bonds, Series 2010 (Build America Bonds) maturing April 1, 2043 through April 1, 2045.

- The City's objective for the refunding is to achieve net present value debt service savings. The estimated net present value debt service savings is \$7,308,624 or 24.36% of the refunded principal amount of \$30,000,000.
- The City plans to contribute \$74,278 from its cash on hand to the transaction to pay the accrued interest on the Refunded Bonds.
- The final maturity of the Series 2020 Refunding Bonds does not extend beyond the final maturity of the Refunded Bonds.

- The City currently has a Standard & Poor’s rating of AA+ on some of its long-term wastewater revenue debt, therefore, the proposed structure of the Series 2020 Refunding Bonds is not balloon indebtedness as defined in T.C.A. § 9-21-134.
- Estimated costs of issuance are summarized below:

	Amount	Price per \$1,000 Bond
Estimated Underwriter's Discount	\$ 228,305	\$ 7.51
Financial Advisor (Cumberland Securities Company)	45,500	1.50
Bond Counsel (Bass Berry & Sims)	34,000	1.12
Rating Agency	68,000	2.24
Miscellaneous Fees (Paying Agent, Etc.)	14,195	0.47
Total Cost of Issuance	<u>\$ 390,000</u>	<u>\$ 12.84</u>

Financial Information for the Fiscal Year Ended June 30, 2019

For the fiscal year ended June 30, 2019, the District’s audited financial statements reflected operating income of \$37,966,027, and a positive change in net position of \$19,477,141. The District’s statement of cash flows reflected debt service payments of \$33,447,001, consisting of principal payments of \$12,895,000 and interest payments of \$20,552,001. At June 30, 2019 the District reported \$22,233,080 in unrestricted cash and cash equivalents.

Financial Professionals

The Plan was prepared with the assistance of the City’s financial advisors, Cumberland Securities Inc. Financial advisors have a fiduciary responsibility to the City. Underwriters have no fiduciary responsibility to the City. They represent the interests of their firm and are not required to act in the City’s best interest without regard to their own or other interests.

The Municipal Securities Rulemaking Board (MSRB) establishes rules and notices that municipal advisors and underwriters must follow when engaging in municipal securities transactions and advising investors and local governments. To learn more about the obligations of the City’s underwriter and municipal advisor, please read the information posted on the MSRB website: www.msrb.org.

Plan Assumptions

The assumptions of the Plan are the assertions of the City. An evaluation of the preparation, support and underlying assumptions of the Plan has not been performed by our office. This report provides no assurances of the reasonableness of the underlying assumptions. The assumptions included in the City’s Plan may not reflect either current market conditions or market conditions at the time of sale. The Series 2020 Refunding Bonds may be issued with a structure different from that of the Plan.

Debt Management Policy

The City has adopted a debt management policy and has indicated in its Plan that the proposed refunding transaction complies with the City's policy.

Requirements After the Refunding Bonds Have Been Issued

We have included a listing of certain compliance requirements your local government will be responsible for once the bonds are issued. The listing is not all inclusive and you should work with your municipal advisor and bond counsel to ensure compliance with legal and regulatory requirements related to the proposed refunding.

Effective Date for this Report

This report is effective for a period of ninety (90) days from the date of the report. If the refunding transaction has not been priced during this ninety (90) day period, a new plan of refunding, with new analysis and estimates based on market conditions at that time, must be submitted to our office. We will then issue a report on the new plan for the City Council to review prior to adopting a new refunding bond authorizing resolution.



Betsy Knotts
Director of the Division of Local Government Finance
Date: March 5, 2020

Enclosure: Requirements After Debt is Issued



JUSTIN P. WILSON
Comptroller

JASON E. MUMPOWER
Deputy Comptroller

Requirements After Debt is Issued

- **Annual Budget Approval**

Your local government will be subject to an annual budget approval process for the life of the outstanding debt as required by TCA § 9-21-403. Please refer to our online guidance at: tncot.cc/budget.

- **Bonds not Refunded**

If all the bonds are not refunded as a part of the proposed refunding transaction and the City wishes to refund them in a subsequent bond issue, then a new plan must be submitted to our office for review.

- **Debt Management Policy**

Your local government should regularly review and, if necessary, amend its debt management policy. Please submit any amended policy to our office immediately upon adoption. Guidance concerning debt management policies is available at: tncot.cc/debt-policy.

- **Required Notification**

We recognize that the information provided in the Plan submitted to our office is based on preliminary analysis and estimates and that actual results will be determined by market conditions at the time of sale. However, if it is determined prior to the issuance of the debt, that the actual results will differ significantly from the information provided in the submitted Plan and the City decides to proceed with the issue, the City's governing body and our office should be notified after the sale by the local government's Chief Executive Officer or the Chief Financial Officer regarding these differences. The Chief Executive Officer must state that they were aware of the differences and determined to proceed with the issuance of the debt. Notification will be necessary only if there is a change of ten percent (10%) or more in any of the following:

- (1) An increase in the principal amount of the debt issued;
- (2) An increase in costs of issuance; or
- (3) A decrease in the cumulative savings or increase in the loss.

The notification must include an explanation for any significant differences and the justification for a change of ten percent (10%) or more from the amounts in the plan. This notification should be presented to the City's governing body and our office with the required filing of the Report on Debt Obligation, Form CT-0253.

- **Report on Debt Obligation (State Form CT – 0253)**

Pursuant to T.C.A. § 9-21-151(6)(c), a Report on Debt Obligation (the “Report”) shall be completed and filed with the governing body of the local government no later than forty-five (45) days after the issuance of the Notes, with a copy (including attachments, if any) filed with the Division of Local Government Finance. The Report and instructions may be accessed at: tncot.cc/debt-report. No public entity may enter into additional debt if it has failed to file the Report.

- **Rule 15c2-12 of the Securities Exchange Act**

Local governments that have issued municipal securities on or after February 27, 2019, are required to report certain information related to the issuance of financial obligations. Information on the reporting requirements is available on the Municipal Securities Rulemaking Board (MSRB) Electronic Municipal Market Access EMMA® website: emma.msrb.org.



February 20, 2020

Ms. Sandra Thompson
Director of Office of State and Local Finance
Cordell Hull Building
425 Fifth Avenue North
Nashville, TN 37243-3400

Re: Knoxville Utilities Board / City of Knoxville, Tennessee - Wastewater System

Dear Ms. Thompson:

The Knoxville Utilities Board ("KUB") of the City of Knoxville, Tennessee (the "City") is pleased to enclose for your consideration a report entitled "Plan of Refunding" dated February 20, 2020. This report is being delivered to you to comply with Chapter 34, Title 7 and Chapter 21, Title 9 Tennessee Code Annotated.

Entity Information:

(A) KUB, governed by a Board of Commissioners, on behalf of the City of Knoxville, Tennessee, governed by the City Council, pursuant to the City's Charter, KUB has full legal authority and controls all aspects of the issuance of the proposed refunding debt.

(B) Indya Kincannon, Mayor
P.O. Box 1631 Knoxville, TN 37901

Gabriel J. Bolas II, KUB President and CEO
445 South Gay Street Knoxville, TN 37902

Mark Walker, KUB CFO (865) 594-7428
445 South Gay Street Knoxville, TN 37902

E-Mail address: gabriel.bolas@kub.org and mark.walker@kub.org

(C) Contacts for additional information:
Financial Advisor: Cumberland Securities Company, Inc. (865-988-2663)
Joe Ayres: joe.ayres@cumberlandsecurities.com and
Scott P. Gibson: scott.gibson@cumberlandsecurities.com

Bond Counsel: Bass, Berry & Sims (865-521-0365)
Mark Mamantov: mmamantov@bassberry.com

Timing Information:

(A) March 24, 2020 regularly scheduled City Council Meeting

Specific Request for:

(A) KUB on behalf of the City hereby requests a Report from the Office of State and Local Finance on the enclosed Plan of Refunding pursuant to Chapter 34, Title 7 and Chapter 21, Title 9 Tennessee Code Annotated.

The City, acting by and through KUB, is proposing to refinance the following outstanding obligations: Wastewater System Revenue Bonds, Series 2010, dated February 10, 2010, maturing April 1, 2043 through April 1, 2045 in the outstanding principal amount of \$30,000,000 (the "Series 2010 Bonds").

The enclosed Plan of Refunding outlines the projected structure based upon current market conditions. To maximize flexibility the City's bond resolution will be drafted to authorize the refunding of all or any portion of the above referenced debt. Therefore, the final structure and sizing could vary from the enclosed request based on the final structure of the proposed Bonds.

The City Council is scheduled to meet on Tuesday, March 24, 2020 to discuss the Plan of Refunding and other documents related to this refinancing plan.

If you have any questions or need any additional information with respect to this financing, please do not hesitate to contact me or our Financial Advisor, Mr. Joe Ayres or Mr. Scott P. Gibson at Cumberland Securities Company, Inc. (865-988-2663) at your earliest convenience.

Very truly yours,



Gabriel J. Bolas II
President and CEO

c: Mayor Indya Kincannon
Mr. Joe Ayres
Mr. Mark Mamantov

Enclosure

Plan of Refunding – Wastewater System

Knoxville Utilities Board / City of Knoxville, Tennessee

A) Identification of Key Professionals (including financial advisors, bond counsel, underwriters, or lenders) who have provided advice or proposals on which the Entity relied to prepare the Plan):

1. Underwriter: Determined at Competitive Public Sale
2. Bond Counsel: Bass, Berry & Sims
3. Financial Advisor: Cumberland Securities Company, Inc.

B) Purpose(s) of Refunding, including parameters:

1. **Cost Savings: include a projection of the savings and amortization schedules for both refunding and refunded debt:**
 - a. See attached Preliminary Refunding Analysis page 1.
2. **Restructuring: provide a comparison of existing and proposed structures, describing why debt is being restructured:**
 - a. N/A
3. **Covenant change: Clearly describe covenant to be eliminated or revised and any change in the structure:**
 - a. N/A
4. **Reduction or elimination of risk: describe risk to be reduced or eliminated:**
 - a. The proposed refunded bonds are fixed rate and will be refunded with fixed rate bonds, therefore, there will be no change in risk.

C) Statement that the proposed refunding complies with the Entity's adopted debt management policy and a description of how the transaction is consistent with the policy, including any savings threshold. If there is no adopted policy or the transaction is not consistent, the Entity shall provide a detailed explanation.

1. KUB adopted a debt management policy on November 17, 2011 and amended the policy on September 20, 2012. The proposed structure does have savings in excess of 3% and does not extend debt past the original life of the issue which is consistent with the KUB debt management policy. Additionally, the proposed debt is traditional fixed rate debt and is the preferred form of debt under KUB's debt management policy.

D) Other Information

1. **Amortization schedules for both (proposed) refunding and (outstanding) debt to be refunded,**
 - a. Proposed refunding debt schedule: See attached Preliminary Refunding Analysis pages 2.
 - b. Outstanding debt schedule(s): See attached Preliminary Refunding Analysis page 4 and page 5.

As well as the following:

2. **Refunding Debt:**
 - a. **Maximum size to be authorized by the governing body, identifying all outstanding debt that could be included in the refunding:**
 - i. Maximum size authorized by governing body = \$30,400,000. To refund the Wastewater System Revenue Bonds, Series 2010, dated February 10, 2010, maturing April 1, 2043 through April 1, 2045 in the outstanding principal amount of \$30,000,000 (the "Series 2010 Bonds").
 - b. **Anticipated Size = \$30,395,000**
 - c. **Anticipated final maturity and weighted average maturity. If the final maturity is extended beyond the fiscal year of final maturity of debt to be refunded or the weighted average maturity is increased, list the projects as required below for refunded debt:**
 - i. **Final Maturity = 4/1/2045 (Same as refunded Debt)**
 - ii. **Weighted Average Maturity = 14.21 Years**
 - d. **Estimated Breakdown of Costs of Issuance:** See attached Preliminary Refunding Analysis page 6.
 - e. **Estimated Sources and Uses of Funds:** See attached Preliminary Refunding Analysis page 6.
3. **Refunded Debt: Information must be provided with respect to *each debt issue to be refunded*; (if all currently outstanding debt will not be refunded, identify maturities that are candidates for refunding).**
 - a. **Name of issue, type of debt, original terms, including whether the debt is federally tax-exempt or taxable.**

- i. Wastewater System Revenue Bonds, Series 2010, dated February 10, 2010, maturing April 1, 2043 through April 1, 2045 in the outstanding principal amount of \$30,000,000 (the "Series 2010 Bonds"). The Series 2010 Bonds are tax-exempt, fixed-rate debt, with a final maturity on April 1, 2045.
- b. **Date of issue and copy of CT-0253 filed.**
 - i. Date of Issue = February 10, 2010. The CT-0253 was filed with the Office of State and Local Finance in connection with the issue of the Series 2010 Bonds.
- c. **Date of authorization by the governing body.**
 - i. The Series 2010 Bonds were authorized by the City's governing body on December 15, 2009.
- d. **Whether bank-qualified or under other small issuer exception.**
 - i. No
- e. **Projects funded with proceeds of issue and remaining average life of projects (if final maturity or weighted average maturity of debt is extended).**
 - i. The purpose of the Series 2010 Bonds being refunded were to provide funds to pay the costs of the construction, renovation, extension and improvements to the System; and to pay costs incident to the issuance and sale of Bonds. The average life of the proposed refunding bonds will not be longer than the average remaining life of the assets financed.
- f. **Derivative product, if any, and copy of Report of Compliance:**
 - i. There is no derivative agreement associated with the Series 2010 Bonds.

Knoxville Utilities Board
of the
City of Knoxville, Tennessee
Proposed Wastewater System Refunding

**Preliminary
Refunding
Report**

February 20, 2020

Prepared By:

Cumberland Securities Company, Inc.

Independent Registered Municipal Advisors

P.O. Box 22715

Knoxville, Tennessee 37933

Telephone: (865) 988-2663

Facsimile: (865) 988-1863



CUMBERLAND SECURITIES

SINCE 1931

Disclaimer and Disclosures

Cumberland Securities Company, Inc. (the "Advisor") is registered as a Municipal Advisory firm with the U.S. Securities and Exchange Commission (the "SEC") and the Municipal Securities Rulemaking Board (the "MSRB"). A municipal advisory client brochure is posted on the website of the Municipal Securities Rulemaking Board (www.msrb.org) that describes the protections that may be provided by the Municipal Securities Rulemaking Board rules and how to file a complaint with an appropriate regulatory authority. The Advisor will maintain all required registrations with the SEC and the MSRB and the Advisor will disclose any legal or disciplinary events, including information about any criminal actions, regulatory actions, investigations, terminations, judgments, liens, civil judicial actions, customer complaints, arbitrations and civil litigation, and other detailed information. The Issuer may electronically access the Advisor's most recent Form MA and each employee's most recent Form MA-1 filed with the Commission at <https://www.sec.gov/edgar/searchedgar/companysearch.html>. As of the date hereof, Cumberland Securities Company, Inc. has never had legal or disciplinary event.

The Advisor hereby discloses that it generally operates under a contingent fee form of compensation. Under a contingent fee form of compensation, payment of the Municipal Advisor's fee is dependent upon the successful completion of a financing or other transaction. Although this form of compensation may be customary for the Issuer, it presents a conflict because the Advisor may have an incentive to recommend unnecessary financings or financings that are disadvantageous to the client. All recommended financings are reviewed by the firm to confirm that they are suitable for each client. Upon execution of a Municipal Advisory Agreement, the Advisor will have a legally binding fiduciary responsibility to put the financial interests of the Issuer before its own. The Advisor hereby discloses that the determination of any municipal advisory fee or other compensation will be mutually agreeable between the Issuer and the Advisor pursuant to a Fee Letter.

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This presentation/report may contain "forward-looking" information. Such information may include, but not be limited to, projections, forecasts or estimates of cash flows, interest rate coupons, yields or potential debt service savings, scenario analyses and proposed or expected debt portfolio composition. Any forward-looking information is based upon certain assumptions about future events or conditions and is intended only to illustrate hypothetical results under those assumptions (not all of which are specified herein or can be ascertained at this time). It does not represent actual results that may be available to you. Actual events or conditions are unlikely to be consistent with, and may differ significantly from, those assumed.

IRS Circular 230 Disclosure: The Advisor and its employees are not in the business of providing, and do not provide, tax or legal advice. Any statements in this presentation regarding tax matters were not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

Risk Disclosures:

Fixed Rate Bonds		
Material Risk Consideration	Description of Risk	Potential Consequences
Issuer Default Risk	Possibility that the Issuer defaults under the authorizing documents	<ul style="list-style-type: none">• Range of available remedies may be brought against Issuer (e.g. forcing Issuer to raise taxes or rates)• Credit ratings negatively impacted• Access to capital markets impaired• Possibility of receivership or bankruptcy for certain Issuers
Redemption Risk	The ability to redeem the bonds prior to maturity may be limited	<ul style="list-style-type: none">• Inability to refinance at lower interest rates
Refinancing Risk	Possibility that the bonds cannot be refinanced	<ul style="list-style-type: none">• Inability to refinance at lower interest rates
Reinvestment Risk	Possibility that the Issuer may be unable to invest unspent proceeds at or near the interest rate on the bonds	<ul style="list-style-type: none">• Negative arbitrage resulting in a higher cost of funds
Tax Compliance Risk	For tax-exempt bonds, possibility that failure to comply with tax-related covenants results in the bonds becoming taxable obligations	<ul style="list-style-type: none">• Increase in debt service costs retroactively to date of issuance• Possible mandatory redemption of bonds affected• Risk of IRS Audit• Difficulty in refinancing the bonds• Access to tax-exempt market impacted• Difficulty in issuing future tax-exempt debt

Variable Rate Demand Bonds ("VRDB") / Floating Rate Notes ("FRN") / Bank Index Loan ("Index") / "Put Loan" (e.g. Fixed Rate for Five (5) Years, then Rate Resets to New Rate)		
Material Risk Consideration	Description of Risk (Type of Debt Risk Applicable to)	Potential Consequences
Interest Rate Risk	Possibility that the interest rate may increase on an interest reset date (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Increase in debt service cost (up to maximum rate)• Lower debt service coverage• Lower cash reserves
Index Risk	Possibility that the method of determining the Index (LIBOR or SIFMA) could change Indices may be affected by factors unrelated to FRN's/Index Loan or the tax-exempt market (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Increase in debt service costs• Lower debt service coverage• Lower cash reserves• Provision should be made for alternate mechanism to determine rate
Issuer Default Risk	Possibility that the Issuer defaults under the authorizing documents (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Range of available remedies may be brought against Issuer (e.g., forcing Issuer to raise taxes or revenues)• Credit ratings negatively impacted• Default could impact remarketing which could cause increase in debt service costs• Access to capital markets impaired
Issuer Ratings Downgrade Risk	Possibility that a downgrade of the Issuer's rating(s) may result in optional tenders or an increase in fees payable to the bank providing the liquidity facility (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Ratings change could impact remarketing which could cause an increase in debt service cost• Higher liquidity facility fees resulting in higher cost of funds
Liquidity Risk	Possibility that VRDB's cannot be successfully remarketing, resulting in Bank Bonds (VRDB)	<ul style="list-style-type: none">• Increase in debt service costs due to higher bank bond rate and accelerated principal repayment• May be required to refinance or term out the VRDB's• Inability to refinance or possibly higher interest rates
Liquidity Provider Default Risk	Possibility that the bank providing the liquidity facility supporting the VRDB's defaults in its obligations under the liquidity facility (VRDB)	<ul style="list-style-type: none">• Issuer required to repay principal and accrued interest if Issuer is not able to refinance• Increase in debt service costs
Liquidity Provider Ratings Downgrade	Possibility that a downgrade of the liquidity provider's rating(s) may result in optional tenders (VRDB)	<ul style="list-style-type: none">• Ratings change could impact remarketing which could cause an increase in debt service cost
Refinancing Risk	Possibility that the FRN, Index or Put Loan cannot be remarketed or refinanced (FRN, Index, Put Loans)	<ul style="list-style-type: none">• Hard Put: must repay principal and accrued interest or Event of Default• Soft Put: higher interest rate on debt and higher debt service costs up to maximum rate• Increase in debt service costs upon any refinancing• Inability to refinance or possibly higher interest rates
Regulatory Risk	Possibility that prospective regulatory requirements increase cost of obtaining and maintaining the liquidity facility (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Increase in debt service costs• Higher liquidity facility fees resulting in higher cost of funds
Reinvestment Risk	Possibility that the Issuer may be unable to invest unspent proceeds at or near the interest rate on the bonds (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Negative arbitrage resulting in higher cost of funds
Remarketing Risk	Possibility that the remarketing agent does not perform its duties in a satisfactory manner or may resign or cease its remarketing efforts (VRDB)	<ul style="list-style-type: none">• Higher interest rates• Difficulty remarketing the VRDB's• May require appointment of a successor remarketing agent
Renewal Risk	Possibility that the facility or loan will not be extended for a successive commitment period or not be replaced at a reasonable cost (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Issuer required to repay principal and accrued interest on tender date if Issuer is not able to refinance• Increase in debt service costs
Tax Compliance Risk	For tax exempt bonds, possibility that failure to comply with tax related covenants result in the bonds becoming taxable obligations (VRDB, FRN, Index, Put Loans)	<ul style="list-style-type: none">• Increase in debt service costs retroactively to date of issuance• Possible mandatory redemption of bonds affected• Risk of IRS audit• Difficulty in refinancing the bonds• Access to tax exempt market impacted• Difficulty in issuing future tax-exempt debt



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Knoxville Utilities Board of the City of Knoxville, Tennessee
Wastewater System Revenue Refunding Bonds, Series 2020

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ESTIMATED SAVINGS ANALYSIS

Knoxville Utilities Board of the City of Knoxville, Tennessee Wastewater System Revenue Refunding Bonds, Series 2020

Date	Principal	Estimated Interest Rate	Interest	Total P+I	Refunded D/S	Savings	Present Value to 04/15/2020 at 2.787913%
04/01/2021	960,000.00	1.500%	742,518.40	1,702,518.40	1,280,941.50	(421,576.90)	(406,648.67)
04/01/2022	945,000.00	1.600%	758,162.50	1,703,162.50	1,280,941.50	(422,221.00)	(396,456.04)
04/01/2023	960,000.00	1.650%	743,042.50	1,703,042.50	1,280,941.50	(422,101.00)	(385,422.43)
04/01/2024	975,000.00	1.750%	727,202.50	1,702,202.50	1,280,941.50	(421,261.00)	(374,046.08)
04/01/2025	990,000.00	1.800%	710,140.00	1,700,140.00	1,280,941.50	(419,198.50)	(361,930.60)
04/01/2026	1,010,000.00	1.850%	692,320.00	1,702,320.00	1,280,941.50	(421,378.50)	(353,790.44)
04/01/2027	1,030,000.00	1.900%	673,635.00	1,703,635.00	1,280,941.50	(422,693.50)	(345,106.63)
04/01/2028	1,050,000.00	2.000%	654,065.00	1,704,065.00	1,280,941.50	(423,123.50)	(335,918.37)
04/01/2029	1,070,000.00	2.100%	633,065.00	1,703,065.00	1,280,941.50	(422,123.50)	(325,851.02)
04/01/2030	1,090,000.00	2.250%	610,595.00	1,700,595.00	1,280,941.50	(419,653.50)	(314,959.53)
04/01/2031	1,115,000.00	2.350%	586,070.00	1,701,070.00	1,280,941.50	(420,128.50)	(306,583.45)
04/01/2032	1,145,000.00	2.500%	559,867.50	1,704,867.50	1,280,941.50	(423,926.00)	(300,807.42)
04/01/2033	1,170,000.00	2.550%	531,242.50	1,701,242.50	1,280,941.50	(420,301.00)	(289,921.98)
04/01/2034	1,200,000.00	2.600%	501,407.50	1,701,407.50	1,280,941.50	(420,466.00)	(281,975.95)
04/01/2035	1,230,000.00	2.650%	470,207.50	1,700,207.50	1,280,941.50	(419,266.00)	(273,339.34)
04/01/2036	1,265,000.00	2.700%	437,612.50	1,702,612.50	1,280,941.50	(421,671.00)	(267,275.22)
04/01/2037	1,300,000.00	2.850%	403,457.50	1,703,457.50	1,280,941.50	(422,516.00)	(260,356.28)
04/01/2038	1,335,000.00	2.900%	366,407.50	1,701,407.50	1,280,941.50	(420,466.00)	(251,842.94)
04/01/2039	1,375,000.00	2.950%	327,692.50	1,702,692.50	1,280,941.50	(421,751.00)	(245,566.45)
04/01/2040	1,415,000.00	3.000%	287,130.00	1,702,130.00	1,280,941.50	(421,188.50)	(238,374.46)
04/01/2041	1,460,000.00	3.050%	244,680.00	1,704,680.00	1,280,941.50	(423,738.50)	(233,126.85)
04/01/2042	1,500,000.00	3.100%	200,150.00	1,700,150.00	1,280,941.50	(419,208.50)	(224,125.69)
04/01/2043	1,550,000.00	3.150%	153,650.00	1,703,650.00	11,280,941.50	9,577,291.50	5,075,878.23
04/01/2044	1,600,000.00	3.200%	104,825.00	1,704,825.00	10,845,019.00	9,140,194.00	4,710,735.08
04/01/2045	1,650,000.00	3.250%	53,625.00	1,703,625.00	10,422,509.50	8,718,884.50	4,369,714.25
	30,390,000.00		12,172,770.90	42,562,770.90	60,729,183.00	18,166,412.10	7,382,901.72

Savings Summary

PV of savings from cash flow	7,382,901.72
Less: Prior funds on hand	(74,277.78)
Net PV Savings	7,308,623.94
Net PV Benefit/ Refunded Principal	24.3621%
Dated	04/15/2020
First Coupon Date	10/01/2020
Weighted Average Maturity	14.21
Average Coupon	2.8190%
Bond Yield for Arbitrage Purpose	2.7879134%
True Interest Cost (TIC)	2.8548035%

ESTIMATED DEBT SERVICE

Knoxville Utilities Board of the City of Knoxville, Tennessee
Wastewater System Revenue Refunding Bonds, Series 2020

Date	Principal	Estimated Coupon	Interest	Total P+I	Fiscal Total
10/01/2020			356,237.15	356,237.15	
04/01/2021	960,000.00	1.500%	386,281.25	1,346,281.25	1,702,518.40
10/01/2021			379,081.25	379,081.25	
04/01/2022	945,000.00	1.600%	379,081.25	1,324,081.25	1,703,162.50
10/01/2022			371,521.25	371,521.25	
04/01/2023	960,000.00	1.650%	371,521.25	1,331,521.25	1,703,042.50
10/01/2023			363,601.25	363,601.25	
04/01/2024	975,000.00	1.750%	363,601.25	1,338,601.25	1,702,202.50
10/01/2024			355,070.00	355,070.00	
04/01/2025	990,000.00	1.800%	355,070.00	1,345,070.00	1,700,140.00
10/01/2025			346,160.00	346,160.00	
04/01/2026	1,010,000.00	1.850%	346,160.00	1,356,160.00	1,702,320.00
10/01/2026			336,817.50	336,817.50	
04/01/2027	1,030,000.00	1.900%	336,817.50	1,366,817.50	1,703,635.00
10/01/2027			327,032.50	327,032.50	
04/01/2028	1,050,000.00	2.000%	327,032.50	1,377,032.50	1,704,065.00
10/01/2028			316,532.50	316,532.50	
04/01/2029	1,070,000.00	2.100%	316,532.50	1,386,532.50	1,703,065.00
10/01/2029			305,297.50	305,297.50	
04/01/2030	1,090,000.00	2.250%	305,297.50	1,395,297.50	1,700,595.00
10/01/2030			293,035.00	293,035.00	
04/01/2031	1,115,000.00	2.350%	293,035.00	1,408,035.00	1,701,070.00
10/01/2031			279,933.75	279,933.75	
04/01/2032	1,145,000.00	2.500%	279,933.75	1,424,933.75	1,704,867.50
10/01/2032			265,621.25	265,621.25	
04/01/2033	1,170,000.00	2.550%	265,621.25	1,435,621.25	1,701,242.50
10/01/2033			250,703.75	250,703.75	
04/01/2034	1,200,000.00	2.600%	250,703.75	1,450,703.75	1,701,407.50
10/01/2034			235,103.75	235,103.75	
04/01/2035	1,230,000.00	2.650%	235,103.75	1,465,103.75	1,700,207.50
10/01/2035			218,806.25	218,806.25	
04/01/2036	1,265,000.00	2.700%	218,806.25	1,483,806.25	1,702,612.50
10/01/2036			201,728.75	201,728.75	
04/01/2037	1,300,000.00	2.850%	201,728.75	1,501,728.75	1,703,457.50
10/01/2037			183,203.75	183,203.75	
04/01/2038	1,335,000.00	2.900%	183,203.75	1,518,203.75	1,701,407.50
10/01/2038			163,846.25	163,846.25	
04/01/2039	1,375,000.00	2.950%	163,846.25	1,538,846.25	1,702,692.50
10/01/2039			143,565.00	143,565.00	
04/01/2040	1,415,000.00	3.000%	143,565.00	1,558,565.00	1,702,130.00
10/01/2040			122,340.00	122,340.00	
04/01/2041	1,460,000.00	3.050%	122,340.00	1,582,340.00	1,704,680.00
10/01/2041			100,075.00	100,075.00	
04/01/2042	1,500,000.00	3.100%	100,075.00	1,600,075.00	1,700,150.00
10/01/2042			76,825.00	76,825.00	
04/01/2043	1,550,000.00	3.150%	76,825.00	1,626,825.00	1,703,650.00
10/01/2043			52,412.50	52,412.50	
04/01/2044	1,600,000.00	3.200%	52,412.50	1,652,412.50	1,704,825.00
10/01/2044			26,812.50	26,812.50	
04/01/2045	1,650,000.00	3.250%	26,812.50	1,676,812.50	1,703,625.00
	30,390,000.00		12,172,770.90	42,562,770.90	

Date Structure

Date 04/15/2020
First Coupon Date 10/01/2020

Yield Statistics

Average Coupon 2.8189576%
Weighted Average Maturity 14.209
True Interest Cost (TIC) 2.8548035%

PRIOR BOND DEBT SERVICE

Knoxville Utilities Board of the City of Knoxville, Tennessee \$30,000,000 Wastewater System Revenue Bonds, Series 2010 (BAB's)

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service	Other Cash Flow	Total	Annual Total
10/01/2020			955,000	955,000		(314,529.25)	640,470.75	
04/01/2021			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2021			955,000	955,000		(314,529.25)	640,470.75	
04/01/2022			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2022			955,000	955,000		(314,529.25)	640,470.75	
04/01/2023			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2023			955,000	955,000		(314,529.25)	640,470.75	
04/01/2024			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2024			955,000	955,000		(314,529.25)	640,470.75	
04/01/2025			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2025			955,000	955,000		(314,529.25)	640,470.75	
04/01/2026			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2026			955,000	955,000		(314,529.25)	640,470.75	
04/01/2027			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2027			955,000	955,000		(314,529.25)	640,470.75	
04/01/2028			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2028			955,000	955,000		(314,529.25)	640,470.75	
04/01/2029			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2029			955,000	955,000		(314,529.25)	640,470.75	
04/01/2030			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2030			955,000	955,000		(314,529.25)	640,470.75	
04/01/2031			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2031			955,000	955,000		(314,529.25)	640,470.75	
04/01/2032			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2032			955,000	955,000		(314,529.25)	640,470.75	
04/01/2033			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2033			955,000	955,000		(314,529.25)	640,470.75	
04/01/2034			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2034			955,000	955,000		(314,529.25)	640,470.75	
04/01/2035			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2035			955,000	955,000		(314,529.25)	640,470.75	
04/01/2036			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2036			955,000	955,000		(314,529.25)	640,470.75	
04/01/2037			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2037			955,000	955,000		(314,529.25)	640,470.75	
04/01/2038			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2038			955,000	955,000		(314,529.25)	640,470.75	
04/01/2039			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2039			955,000	955,000		(314,529.25)	640,470.75	
04/01/2040			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2040			955,000	955,000		(314,529.25)	640,470.75	
04/01/2041			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2041			955,000	955,000		(314,529.25)	640,470.75	
04/01/2042			955,000	955,000	1,910,000	(314,529.25)	640,470.75	1,280,941.50
10/01/2042			955,000	955,000		(314,529.25)	640,470.75	
04/01/2043	10,000,000	6.500%	955,000	10,955,000	11,910,000	(314,529.25)	10,640,470.75	11,280,941.50
10/01/2043			630,000	630,000		(207,490.50)	422,509.50	
04/01/2044	10,000,000	6.300%	630,000	10,630,000	11,260,000	(207,490.50)	10,422,509.50	10,845,019.00
10/01/2044			315,000	315,000		(103,745.25)	211,254.75	
04/01/2045	10,000,000	6.300%	315,000	10,315,000	10,630,000	(103,745.25)	10,211,254.75	10,422,509.50
	30,000,000		45,820,000	75,820,000	75,820,000	(15,090,817.00)	60,729,183.00	60,729,183.00

SUMMARY OF BONDS REFUNDED

Knoxville Utilities Board of the City of Knoxville, Tennessee
Wastewater System Revenue Refunding Bonds, Series 2020

Bond	Maturity Date	Interest Rate	Par Amount	Call Date	Call Price
\$30,000,000 Wastewater System Revenue Bonds, Series 2010 (Federally Taxable BAB's), BOND:					
	04/01/2043	6.500%	10,000,000.00	04/15/2020	100.000
\$30,000,000 Wastewater System Revenue Bonds, Series 2010 (Federally Taxable BAB's), 2045TERM:					
	04/01/2044	6.300%	10,000,000.00	04/15/2020	100.000
	04/01/2045	6.300%	10,000,000.00	04/15/2020	100.000
			20,000,000.00		
			30,000,000.00		

SOURCES AND USES OF FUNDS

**Knoxville Utilities Board of the City of Knoxville, Tennessee
Wastewater System Revenue Refunding Bonds, Series 2020**

Sources:

Bond Proceeds:	
Par Amount	30,390,000.00
Other Sources of Funds:	
KUB Contributions for Accrued Interest	74,277.78
	<u>30,464,277.78</u>

Uses:

Refunding Escrow Deposits:	
Cash Deposit	30,074,277.78
Cost of Issuance:	
Municipal Advisor	45,500.00
Bond Counsel	34,000.00
Rating Agency - Moody's	35,500.00
Rating Agency - S&P Global	32,500.00
Paying Agent	700.00
POS/Official Statement	7,500.00
Advertising	1,000.00
Miscellaneous	<u>4,995.00</u>
	161,695.00
Underwriter's Discount:	
Underwriter's Discount (Awarded to Lowest Bidder)	228,305.00
	<u>30,464,277.78</u>

SUMMARY OF REFUNDING RESULTS

Knoxville Utilities Board of the City of Knoxville, Tennessee Wastewater System Revenue Refunding Bonds, Series 2020

Dated Date	04/15/2020
Delivery Date	04/15/2020
Arbitrage yield	2.787913%
Escrow yield	0.000000%
Value of Negative Arbitrage	
Bond Par Amount	30,390,000.00
True Interest Cost	2.854804%
Net Interest Cost	2.871828%
Average Coupon	2.818958%
Average Life	14.209
Par amount of refunded bonds	30,000,000.00
Average coupon of refunded bonds	6.363884%
Average life of refunded bonds	23.961
PV of prior debt to 04/15/2020 @ 2.787913%	37,772,901.72
Net PV Savings	7,308,623.94
Percentage savings of refunded bonds	24.362080%
Percentage savings of refunding bonds	24.049437%

Issuer's No. _____
(To be filled out by State)

REPORT ON DEBT OBLIGATION
(Pursuant to Chapter 402, Public Acts of 1989)

1. Issuer:

Name Knoxville Utilities Board
Address Attn: President & CEO
445 Gay Street
Knoxville, Tennessee 37902

2. Debt Obligation:

- ☒ a. Bond
☐ b. CON
☐ c. BAN
☐ d. GAN
☐ e. Lease/Lease Purchase
☐ f. Loan Agreement

5. Face Amount of Debt Obligation: \$30,000,000

6. Type of Sale:

- ☒ a. Competitive Public Sale
☐ b. Negotiated
☐ c. Loan Program _____
specify

7. Tax Status

a. _____ Tax Exempt b. ☒ Taxable

3. Security for Debt Obligation:

- ☐ a. General Obligation
☐ b. General Obligation Revenue and Tax
☒ c. Revenue
☐ d. Annual Appropriations

8. Dated Date: February 10, 2010

9. Issue Date (Closing Date): February 10, 2010

4. Purpose of Issue

Percent of Issue:

- | | | |
|-------------------------------------|-----------------------------|-------------|
| <input type="checkbox"/> | a. General Government | _____ |
| <input type="checkbox"/> | b. Education | _____ |
| <input type="checkbox"/> | c. Highways and Streets | _____ |
| <input type="checkbox"/> | d. Public Safety | _____ |
| <input type="checkbox"/> | e. Solid Waste Disposal | _____ |
| <input type="checkbox"/> | f. Industrial Park | _____ |
| <input type="checkbox"/> | g. Manufacturing Facilities | _____ |
| <input type="checkbox"/> | h. Health Facilities | _____ |
| <input type="checkbox"/> | i. Airports | _____ |
| <input checked="" type="checkbox"/> | j. Utilities | _____ |
| <input type="checkbox"/> | i. Water | _____ |
| <input checked="" type="checkbox"/> | ii. Sewer | <u>100%</u> |
| <input type="checkbox"/> | iii. Electric | _____ |
| <input type="checkbox"/> | iv. Gas | _____ |
| <input type="checkbox"/> | k. Refunding or Renewal | _____ |
| <input type="checkbox"/> | l. Other _____ | _____ |
| | specify | |

10. Rating:

- a. Moody's "Aa3"
b. Standard & Poor's "AA+"
c. Unrated _____

11. Interest Cost:

4.1649108%

- ☒ a. TIC (Net of Rebate)
☐ b. NIC
☐ c. Variable
☐ d. Other

12. Recurring Costs:

a. Remarketing Agent Fees \$ _____
b. Liquidity Fees \$ _____
c. Credit Enhancement Fees \$ _____

SEE REVERSE SIDE

13. Maturity Dates, Amounts and Interest Rates

Year	Amount	Interest Rate
2043	\$10,000,000	6.50%
2045	20,000,000	6.30%

Year	Amount	Interest Rate

If additional space is needed, attach additional sheet.

14. Itemized Description of the Cost of Issuance

		Name of Firm
a. Financial Advisor Fees*	\$50,000	Morgan Keegan & Company, Inc.
b. Legal Fees		
i. Bond Counsel	\$22,500	Bass, Berry & Sims PLC
ii. Issuer's Counsel		
iii. Trustee's Counsel		
iv. Verification Fee		
c. Paying Agent Fees and Registration Fees	\$1,000	Regions Bank
d. Trustee Fees		
e. Remarketing Agent Fees		
f. Liquidity Fees		
g. Rating Agency Fees	\$25,000	Moody's, Standard & Poor's
h. Credit Enhancement Fees		
i. Underwriter's Discount(%)	\$372,300	Robert W. Baird & Co., Inc., Red Bank, New Jersey
i. Take Down		
ii. Management Fee		
iii. Risk Premium		
iv. Underwriter's Counsel		
v. Other Expenses		
j. Printing and Advertising Fees	\$6,400	Knoxville News-Sentinel, i-deal, Print Shop, CUSIP
k. Issuer Fees		
l. Real Estate Fees		
m. Other Costs	\$5,000	structuring, postage, Fed Ex, document production, etc.
n. Total Costs	\$482,200	

* If other costs are included, please itemize.

Note: Please enclose a copy of the DISCLOSURE DOCUMENT or OFFICIAL STATEMENT if one was developed.

15

Mistha C. Roach
Authorized Representative

President & CEO
Title

February 10, 2010
Date

/s/ Joseph K. Ayres

Preparer
Managing Director
Title

Morgan Keegan & Company, Inc.
Firm
February 10, 2010
Date

SEND TO: Comptroller of the Treasury, Director-Division of Local Finance, Suite 1700, 505 Denderick Street, James K. Polk State Office Building, Nashville, Tennessee 37243-0274