



CELEBRATING  
85 YEARS OF SERVICE



ANNUAL  
REPORT 2024



From The President & CEO

As we celebrate 85 years serving our community, reflecting on Knoxville Utilities Board’s impact is especially meaningful. Not only have we continued to maintain safe, efficient, and reliable utility services, but we have become a sustainability leader among public utility providers and have broadened our assistance efforts with the KUB ConnectED student internet access program.

One of our most noteworthy investments throughout the years has been in our Century II infrastructure maintenance and replacement program. Seventeen years after the program’s launch, we can see the positive impact it has had on our services. Electric reliability has improved by 33%; sanitary sewer overflows in the wastewater system have decreased by 80%; water main breaks have reduced by 60%; and metal natural gas distribution mains have been reduced by 50%. This year, KUB developed an Inflation Response Plan to ensure Century II work continues in the midst of inflationary impacts and unprecedented growth in KUB’s service territory.

While we work to renew those systems, I am extremely proud of our continued fiber system rollout and the progress made to serve customers who previously had no access or unaffordable, lower quality options for internet service. The testimonials we hear from customers make it clear how high-speed KUB Fiber is making businesses stronger and improving quality of life for households all across our area. KUB also remains dedicated to a cleaner energy future, assisting customers in need, and more – as outlined in our annual Environmental, Social, and Governance Report.

With 85 years of experience to build upon, I am excited to see where the future takes us, and I am proud to be part of KUB’s service to our community.

Gabriel J. Bolas II, KUB President & CEO



Environmental, Social, & Governance Reporting

KUB’s annual Environmental, Social, and Governance (ESG) Report provides stakeholders with an overview of sustainability progress and a look at aspirations for the future. This includes KUB’s commitments to renewable energy, further adoption of alternative fuels within its fleet, and a robust Diversity, Equity, and Inclusion initiative. As outlined throughout the ESG Report, KUB works to improve its social impact within the company and throughout the community to ensure customer needs are at the forefront of KUB business decisions.



Looking Ahead: Our Aspirations

- Advance the development of 400 MW of new-to-the-Valley renewable energy projects by 2030
- Support community weatherization efforts to reach milestone of 4,500 homes by 2030
- Deploy fiber broadband to provide access to 100% of KUB electric customers by 2030
- Achieve 70% alternative fuel vehicles in KUB’s light-duty fleet by 2035





## Electric Division

KUB's Electric Division is its largest, with more than 221,000 customers in its 689-square-mile service territory. KUB works to maintain and improve its electric system reliability through innovative technologies and its Century II infrastructure maintenance and replacement program.

As part of Century II, 1,447 poles, 6.67 miles of transmission line, and 5.77 miles of underground cable were replaced in FY24. KUB's substation modernization project is 84% complete. In FY24, KUB brought online a new Western Avenue infeed substation – the tenth in KUB's service territory and the first in nearly ten years. The new infeed substation provides critical system redundancy so Century II upgrades may be completed on other substations.

KUB's long-term rollout of fault location, isolation, and service restoration (FLISR) devices continues to improve reliability on its system in conjunction with

advanced metering infrastructure (AMI) and fiber technology. Since 2020, this technology has avoided more than 28 million minutes of service interruption for KUB's customers. The increased pace of fiber deployment to rollout KUB Fiber internet allowed for an increased pace of FLISR device installation. The FLISR rollout will be complete in FY30, at which time KUB's grid will be optimized so that no more than 300 customers are impacted by a single distribution outage.

Additionally, KUB works to ensure reliability through proactive vegetation management. KUB trims trees and other vegetation on a three- to five-year cycle, and in FY24, KUB invested \$11.5 million to trim along 1,354 miles of electric lines and remove 3,138 hazardous trees.



## Electric Division by the Numbers

**221,945** customers

**689-square-mile** service area

**5,530 miles** of service lines

**64** substations

**6,005,018 MWh** total purchased power

**\$447 million** purchased power cost; **70%** of sales

**1350.5 MW** peak day (January 21, 2024)

**3,359,500 kVA** peak capacity

**12,000 kWh** annual use by the typical residential customer

**\$4.08 per day** for the typical residential customer



## FINANCIALS

**\$47 million** positive change in net position

**\$409.3 million** outstanding debt (revenue bonds)

**42.6%** debt ratio

**Aa2** Moody's Bond Rating

**AA-** Standard & Poor's Bond Rating



Fiber Division

Launched in 2022, KUB Fiber is KUB's newest utility division. FY24 was the second year of a seven-year fiber optic cable buildout spanning across KUB's electric service territory. By the end of FY29, KUB will have 5,490 miles of fiber providing high-speed internet to its customers.

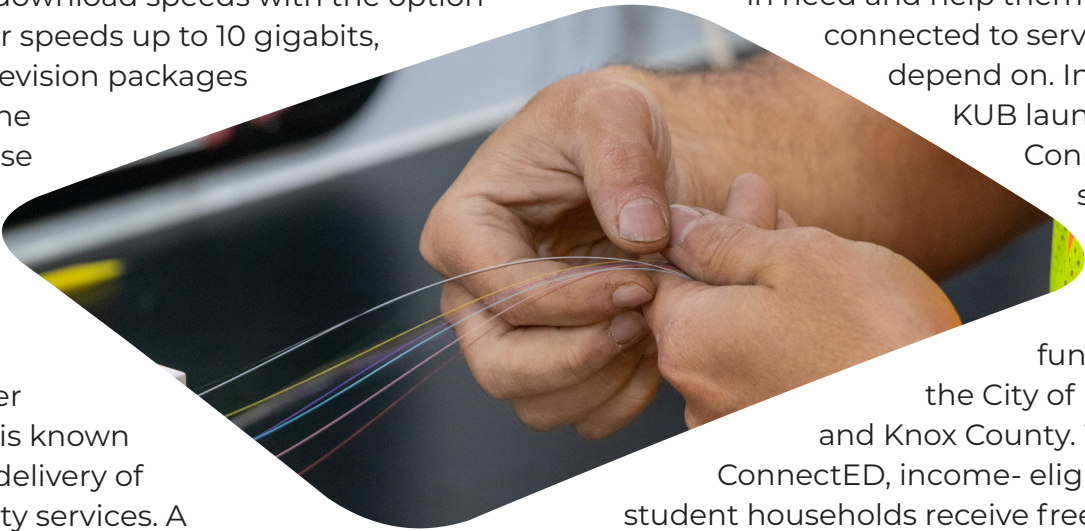
In total, approximately 1,000 miles of fiber were added throughout KUB's service territory this fiscal year. Each year, an average of 30,000 additional customers will have the option to subscribe to KUB Fiber service. KUB Fiber provides customers fiber internet at 1 gigabit upload and download speeds with the option of even faster speeds up to 10 gigabits, as well as television packages and telephone services. These services are supported by the same local workforce and customer service KUB is known for through delivery of its other utility services. A recent customer satisfaction survey confirmed 96% of KUB Fiber customers are "extremely" or "very" satisfied, and KUB is committed to ensuring they continue to receive excellent service.

In making the commitment to form its Fiber Division, KUB was proud to extend options for affordable, high quality internet service to its customers. Even more importantly, KUB recognized some of its customers, especially in rural areas, had no options – or poor quality and expensive options – for this essential service. In FY24, KUB secured grant funding from the

State of Tennessee to support fiber construction in portions of underserved and unserved rural Grainger, Union, Sevier, and Jefferson Counties within its service territory. This funding allowed KUB to expedite its fiber buildout in these areas, and at the end of FY24, KUB Fiber was available to all customers in Grainger County and 70% of KUB's Union County service territory with construction planned in Sevier and Jefferson Counties.

With all of its utility services, KUB is committed to developing solutions to assist customers in need and help them stay connected to services they depend on. In FY24, KUB launched its ConnectED student internet assistance program, funded by the City of Knoxville and Knox County. With ConnectED, income- eligible student households receive free high-speed internet service with the same high quality and reliability available to all KUB Fiber customers. This is especially impactful with the recent closure of the federal Affordable Connectivity Program. KUB enrolled 52 customers in KUB ConnectED in FY24 and is working to grow the program.

Funding for KUB Fiber uses a balance of rates and debt. As of FY24, \$37 million has been loaned from the Electric Division to support delivery of this essential utility to KUB customers. This loan will be paid back over the next eight years.



Fiber Division by the Numbers

- 10,759 customers
- 689-square-mile service area
- 1,700 miles of fiber
- 96% customer satisfaction rate

Financials

- \$8.2 million negative change in net position
- \$34.6 million outstanding debt (Note payable; interdivisional loan from Electric Division)





# Natural Gas Division

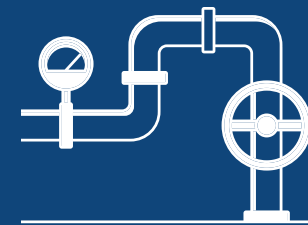
KUB is proud to provide a safe, reliable, and clean-burning energy source to more than 109,000 customers throughout its 298-square-mile natural gas service territory. As KUB Natural Gas continues to grow, more customers have the option to utilize the energy source of their choice and, in some cases, transition from fuels with higher emissions.

KUB's natural gas system is made up of 93% polyethylene pipe with plans to replace the remaining low-pressure steel pipe as part of the Century II infrastructure maintenance program. KUB's focus on system resiliency projects minimizes customer outages during planned and unplanned work. In addition to Century II replacement projects, maintenance programs include 40,000 proactive safety surveys, 4,500 valve inspections, 1,400 steel corrosion monitoring points, and regulator station functional assessments each year.

KUB is a leader in use of best practices and advancing technologies to minimize emissions and ensure customers can benefit from the important role of natural gas in a clean energy future. KUB's commitment to environmental stewardship in its gas operations is demonstrated through active leadership in the American Public Gas Association's Environmental Task Force and being a founding member of the EPA's Methane Challenge.

Natural gas expansion efforts continued in FY24, as KUB added 1,274 customers and 24 miles of distribution main to its system.

Through its Connect to Comfort growth initiative, KUB offers natural gas appliance rebates and water heater installation and financing options as part of the EasyConnect program. KUB's public compressed natural gas (CNG) fueling station serves KUB's fleet as well as public and commercial vehicles.



## Natural Gas Division by the Numbers

- 109,972 customers
- 298-square-mile service area
- 2,594 miles of distribution mains
- 13,446,347 dth total purchased gas
- \$50 million purchased gas cost; 44% of sales
- 169,458 dth peak day (December 23, 2022)
- 157,381 dth system capacity
- 600 therms annual use by the typical residential customer
- \$1.87 per day for the typical residential customer

## FINANCIALS

- \$16 million positive change in net position
- \$71.4 million outstanding debt (revenue bonds)
- 18.5% debt ratio
- Aa2 Moody's Bond Rating
- AA Standard & Poor's Bond Rating





## Water Division

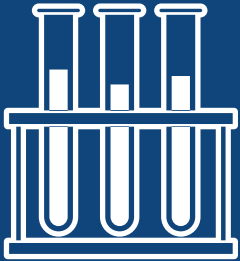
KUB takes in and treats over 30 million gallons of water from the Tennessee River each day at the Mark B. Whitaker (MBW) Water Treatment Plant. This is KUB's first step in providing more than 83,000 customers throughout its 188-square-mile service territory with high-quality water. KUB's water quality lab team performs more than 100,000 tests for more than 150 contaminants at KUB's state-certified Water Quality Laboratory at various stages of the water distribution process. Details about KUB's water quality can be found in the annual Water Quality Report published at [www.kub.org/water](http://www.kub.org/water).

Through the Century II infrastructure maintenance and replacement program, KUB ensures its distribution system maintains efficiency and reliability for generations to come. In FY24, 8.32 miles of galvanized, cast iron, and cement pipe were replaced on KUB's system. KUB also maintains 8,500 hydrants on a three-year inspection cycle and 20,000 water valves on a five-year inspection cycle.

In addition to Century II, KUB maintains a Water Supply Master Plan, a decades long initiative to improve resiliency and operational flexibility at KUB's Mark B. Whitaker Water Treatment Plant. KUB is currently in phase two of the plan, which includes the single largest construction project in KUB's history – a \$65 million filters project that will add 38 million gallons of daily capacity to the plant. The filters project is expected to be complete in FY25.



In FY24, KUB entered the pilot phase of an in-house drone inspection program that aims to increase efficiency of underground construction project planning. Drones are equipped with mapping technology used to create digital post-construction drawings outlining details of the infrastructure that will be used during future project analysis and planning. This builds on KUB's ongoing approach to leverage advancing technologies, such as enhanced leak detection and analytics, to deliver industry-leading water services to its customers.



## Water Division by the Numbers

- 83,687** customers
- 188-square-mile** service area
- 1,417 miles** of distribution mains
- 1** treatment plant
- 28** storage facilities
- 26** booster pump stations
- 62.9 million gallons** rated capacity
- 36.9 million gallons** reservoir capacity
- 12.9 billion gallons** treated water per year
- 35.3 million gallons/day** average flow
- 44,880 gallons** annual use by the typical residential customer
- \$1.04 per day** for the typical residential customer



FINANCIALS

\$16.1 million positive change in net position

\$196.5 million outstanding debt (revenue bonds)

43.6% debt ratio

Aa1 Moody's Bond Rating

AAA Standard & Poor's Bond Rating



## Wastewater Division

KUB treats 36 million gallons of wastewater each day from its 249-square-mile service territory serving more than 74,000 customers.

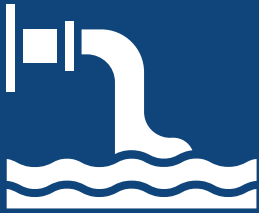
Through KUB's wastewater treatment process and regular testing conducted at KUB's Water Quality Laboratory, KUB returns water to the Tennessee River cleaner than the river itself. The solid waste from KUB's wastewater system is managed as part of KUB's Biosolids Beneficial Reuse Program. Through this program, KUB Biosolids are provided free to local farmers as a Tennessee Department of Agriculture registered fertilizer.

As part of KUB's Century II infrastructure maintenance and replacement program, 12.96 miles of pipe were replaced in FY24. Additionally, progress was made to replace KUB's Jones Street Pump Station and Walker Springs Pump Station as KUB continues to reduce sanitary sewer overflows (SSOs) on its system.

KUB's inspection and cleaning investments continue to improve as technology advances. Video pipe inspections enhanced with artificial intelligence, manhole inspections, smoke testing, and blockage abatement allow KUB to prevent overflows. KUB saw its first month with zero SSOs in March 2024 since at least 2003 when KUB's tracking began.

KUB eliminated chlorine gas from its operations in FY24 and transitioned to ultraviolet light and hypochlorite treatment. This improves operation and resiliency of KUB's disinfection process, while introducing a safer disinfection method that protects human health and the environment.

For the first time since acquiring the wastewater system in 1987, KUB received a bond rating increase to AAA, which is the highest bond rating level. Bond rating agency Standard & Poor's Global Ratings credited KUB's strengths in financial management, long-range planning, and Century II infrastructure investments as factors in the increased rating.



### Wastewater Division by the Numbers

- 74,952 customers
- 249-square-mile service area
- 1,345 miles of wastewater mains
- 4 treatment plants
- 6 storage facilities
- 74 lift stations
- 13.5 billion gallons treated water per year
- 37 million gallons/day average flow
- 66.4 million gallons rated capacity
- 44,880 gallons annual use by the typical residential customer
- \$2.33 per day for the typical residential customer



FINANCIALS

\$25.3 million

positive change in net position

\$452.8 million

outstanding debt (revenue bonds)

51.3%

debt ratio

Aa2

Moody's Bond Rating

AA+

Standard & Poor's Bond Rating (Increasing to AAA in FY25)



# KUB Consolidated Financial Position

## Operating Revenues

Electric	\$645 Million
Fiber	\$6.3 Million
Natural Gas	\$114.2 Million
Water	\$72.1 Million
Wastewater	\$113.9 Million
	<b>\$951.5 Million</b>

## Change in Net Position (Earnings)

Electric	\$47.0 Million
Fiber	(\$8.2) Million
Natural Gas	\$16.0 Million
Water	\$16.1 Million
Wastewater	\$25.3 Million
	<b>\$96.2 Million</b>

## Outstanding Bonds

Electric	\$409.3 Million
Fiber	---
Natural Gas	\$71.4 Million
Water	\$196.5 Million
Wastewater	\$452.8 Million
	<b>\$1.1 Billion</b>

## Debt Service Coverage

Electric	4.01X
Fiber	---
Natural Gas	3.84X
Water	2.58X
Wastewater	2.10X

## Capital Infrastructure Investment

Electric	\$135.6 Million
Fiber	---
Natural Gas	\$26.2 Million
Water	\$45.1 Million
Wastewater	\$44.7 Million
	<b>\$251.7 Million</b>

[View Full Audited Financials](#)



# AWARD-WINNING SERVICE

KUB’s utility systems are consistently recognized nationally by groups including the American Public Power Association, American Public Gas Association, and the National Association of Clean Water Agencies for excellent operations and exceeding standards.

KUB has also been recognized regularly for its continued commitment to sustainable operations across its systems and commitment to the community. Below are noteworthy awards KUB recently received.

American Public Gas Association System Operational Achievement Recognition (SOAR)

American Public Power Association Reliable Public Power Provider Designation

American Public Power Association Smart Energy Provider Designation

American Water Works Association Award of Excellence in Distribution System Operations

Arbor Day Foundation Tree Line USA Award

Association of Metropolitan Water Agencies Sustainable Water Utility Management Award

National Association of Clean Water Agencies Peak Performance Awards

National Association of Clean Water Agencies National Environmental Achievement Awards

Salvation Army Volunteer Group of the Year

U.S. Environmental Protection Agency (EPA) ENERGY STAR certification

Utility of the Future Today Recognition from the National Association of Clean Water Agencies, the Water Environment Federation, the Water Environment Research Foundation, and WateReuse

100 Best Fleets in the Americas Program and NAFA Fleet Management Association Green Fleet Awards





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