



# **Funding the Vision: Investing in Safe, Reliable Service**

---

KUB Financial Plan Executive Summary  
Fiscal Year 2015



## Table of Contents

<b>Funding The Vision: Investing in Safe, Reliable Service .....</b>	<b>1</b>
<b>KUB Proposed Fiscal Year 2015 Budget .....</b>	<b>2</b>
<b>10-Year Financial Plans by Utility System .....</b>	<b>3-6</b>
<b>Cost Management/Rate Comparisons .....</b>	<b>7</b>



Electric • Natural Gas • Water • Wastewater

## Funding the Vision: Investing in Safe, Reliable Service KUB Financial Plan Executive Summary Fiscal Year 2015

For 75 years, our customers have counted on KUB for safe, reliable service at affordable rates. To meet customer expectations and regulatory requirements, KUB must constantly balance customer needs with the needs of our utility systems—now and in the future.

Aging pipes and wires have been an issue for utilities across the nation for many years, and KUB's systems are no different. The American Society of Civil Engineers 2013 Report Card for American Infrastructure gave the overall condition of the nation's infrastructure a "D+." [The report card graded all types of public infrastructure, including roads, bridges, levees, aviation, and utilities.] The report card estimates it would take \$3.6 trillion by the year 2020 to bring our national infrastructure up to a grade of "B," or "in good repair."

To improve infrastructure nationwide, the ASCE recommends three key points:

1. Increase leadership in infrastructure renewal.
2. Promote sustainability and resilience.
3. Develop and fund plans to maintain and enhance America's infrastructure.

Under the leadership of our Board of Commissioners, KUB has already taken steps to help address those key points. KUB started the proactive, long-term Century II program in 2007 to step up efforts to replace our aging infrastructure. It includes maintenance and replacement strategies for our electric, gas, water, and wastewater systems based on sound planning, resource allocation, and continued, but accelerated, investment.

To meet our obligation to the future, KUB is making needed infrastructure replacements now and has established sustainable replacement cycles. KUB's Board helped do that in 2011 by endorsing a [10-year funding plan](#) for electric and water systems to address replacement needs while keeping our financial plans sound. In 2013, the Board took a similar approach to funding our natural gas and wastewater systems.

Century II requires rate increases and increased debt levels to provide sufficient funding for infrastructure needs, but we are not relying on those things alone. We continue to focus on finding cost-savings and using technology efficiently.

As our proposed fiscal year 2015 budget shows, our financial strategy includes ongoing cost management and steady investments over time in sustainable replacement plans for each of our four utility systems. The Board challenges KUB to show that we are using funds wisely before approving any rate increase, and our proposed budget for each system includes a section on how the budget will improve that system.

To see our full proposed 2015 budget and a copy of the [ASCE Report Card Executive Summary](#), see the [Financial Reports](#) page on [www.kub.org](http://www.kub.org).

# KUB Proposed Fiscal Year 2015 Budget [July 2014–June 2015]

KUB presented a proposed fiscal year 2015 budget of \$867 million to the Board April 17, 2014. That is an increase of only 1.8 percent over the current year budget and includes continued capital investment for KUB’s Century II and PACE 10 infrastructure programs. [PACE 10 covers wastewater system improvements required under a federal Consent Decree (CD); the wastewater system will be covered under Century II when the CD ends in 2021.]

The Board also reviewed long-term funding plans for each of the four KUB systems, which include proposed rate increases for fiscal years 2015 through 2017 to help fund needed infrastructure investments.

## Proposed FY 15 Budget: \$867M

	Electric	Gas	Water	Wastewater	Total
<b>Energy Cost</b>	\$412.4	\$61.0	\$ --	\$ --	\$473.4
<b>O&amp;M</b>	\$57.0	\$18.2	\$23.4	\$33.7	\$132.3
<b>Capital</b>	\$69.1	\$31.5	\$27.2	\$40.4	\$168.2
<b>Debt Service</b>	\$16.5	\$9.5	\$8.9	\$28.9	\$63.8
<b>Taxes &amp; Equivalents</b>	\$15.3	\$6.9	\$3.3	\$4.4	\$29.9
	<b>\$570.3</b>	<b>\$127.1</b>	<b>\$62.8</b>	<b>\$107.4</b>	<b>\$867.6</b>

## FY 15 Budget Key Components

Capital costs are a significant portion of KUB’s budget, second only to energy costs. Within the capital category, key components in the FY 15 budget include new substations and a new major natural gas main project to support community growth and provide continued reliability and resiliency in our utility systems. The largest expenses are investments in infrastructure, rehabilitation, and replacement for all four systems under Century II and PACE 10.

- East Knox Substation\*..... \$8.5M
- Cherokee Trail Substation\*..... \$3.2M
- South Loop  
Natural Gas Main Replacement\*..... \$13.5M
- Natural Gas Cast Iron  
Main Replacements ..... \$3.4M
- Century II Infrastructure  
Replacement Program ..... \$78.1M
- PACE 10 Wastewater  
Replacement Program ..... \$27.9M

*\*Multi-year project. Data represents FY 15 only.*



Pictured above is a Century II infrastructure improvement project that involved natural gas, water, and wastewater pipeline upgrades along 1.5 miles of Lyons View Pike.

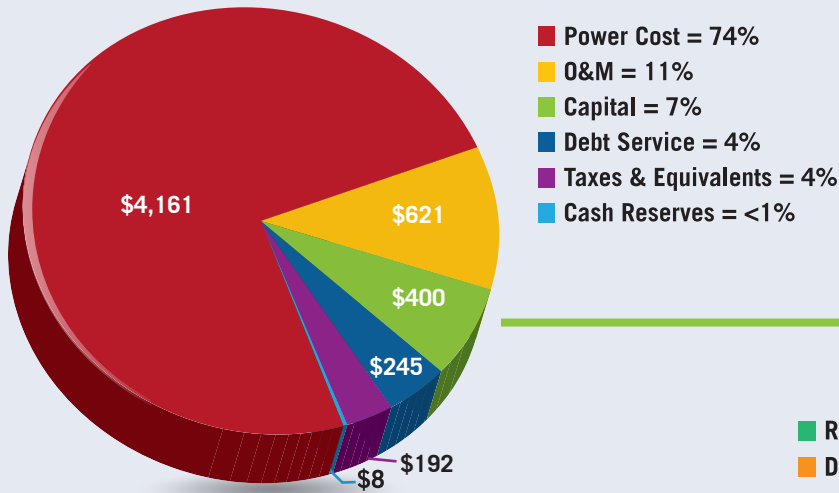
# 10-Year Financial Plans by Utility System

## Electric System

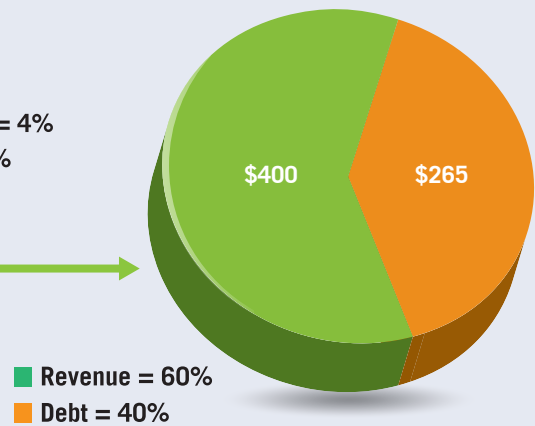
Barring any severe weather events before the end of FY 14, KUB’s electric system is on track for FY 2014 to have its best year of reliability. The investments in the system for FY 15–24 will allow us to maintain and improve the system to continue to provide reliable service to our customers and support a sustainable life-cycle replacement program. The largest cost for the electric system is purchasing power from TVA: approximately 74 cents of every dollar paid by electric customers goes toward purchasing power.

### Electric Financial Plan FY 15 – FY 24

**Revenue = \$5.6 Billion**



**Capital = \$665 Million**



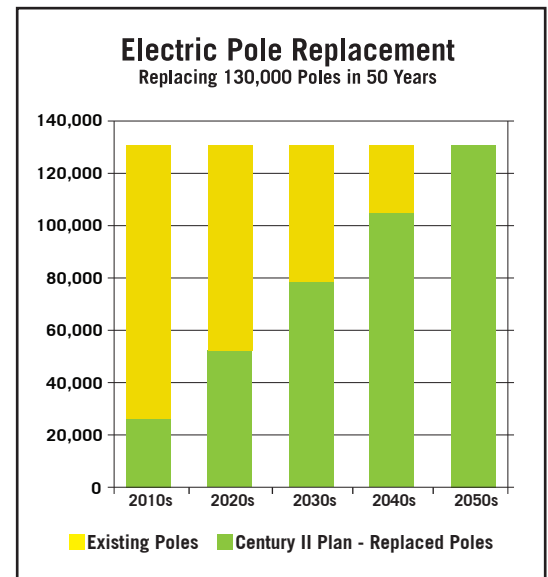
KUB projects spending \$665 million on electric system capital projects from FY 15–24. Of that amount, \$400 million, or 60 percent, will come from revenue received from customer rates. KUB plans to fund the remaining \$265 million with debt.

## Electric System in 10 Years (FY 24)

The electric system continues to focus on replacing or upgrading aging poles, overhead wires, and underground cables. We are on track to replace 2,600 poles and 14 miles of underground cable a year, which is a sustainable life-cycle replacement program for those elements. We are also concentrating on our substations, some of which have been in service since the 1940s. Good maintenance over the years means they still provide good service, but we need to upgrade or replace some equipment to ensure it continues to meet customers’ needs as electric demand—and technologies—change.

At the proposed level of investment over 10 years, the electric system will be able to:

- Replace 26,000 poles (20 percent of the system)
- Replace all cross-linked polyethylene (XLPE) underground cable
- Modernize 98 percent of our substations
- Update 70 percent of our distribution system
- Link all substations by fiber-optic lines for better communications



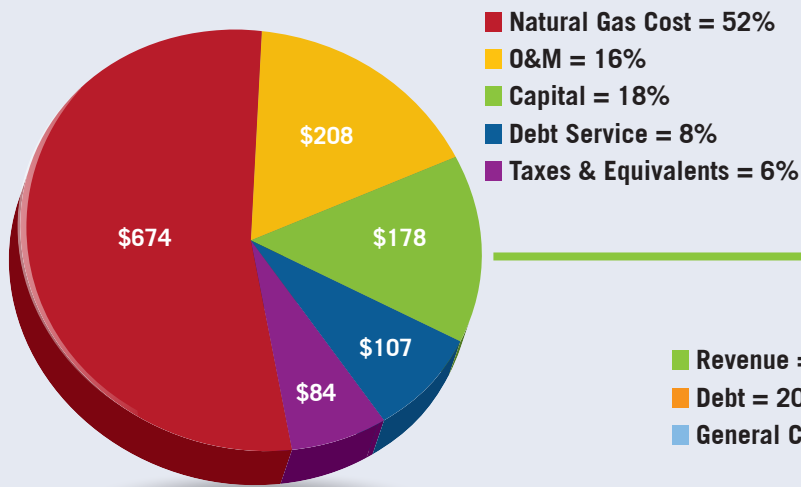
# 10-Year Financial Plans by Utility System

## Natural Gas System

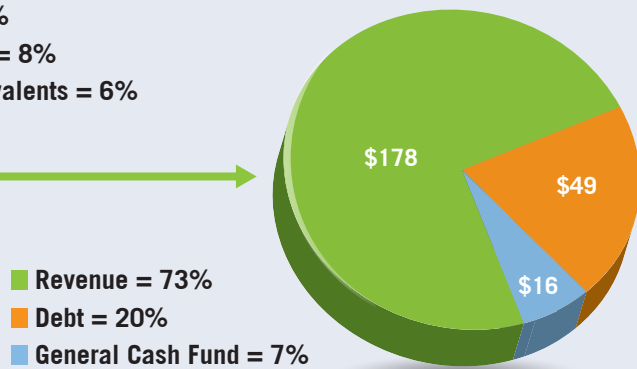
KUB's natural gas system is safe and reliable. The funding proposed will help ensure that KUB can continue to maintain and upgrade the system to meet regulatory requirements and serve the needs of current and future customers.

### Natural Gas Financial Plan FY 15 – FY 24

**Revenue = \$1.3 Billion**



**Capital = \$243 Million**



KUB projects spending \$243 million on natural gas system capital projects from FY 15–24. Of that amount, \$178 million, or 73 percent, will come from revenue received from customer rates. KUB plans to fund the remaining \$65 million with debt and general fund cash.

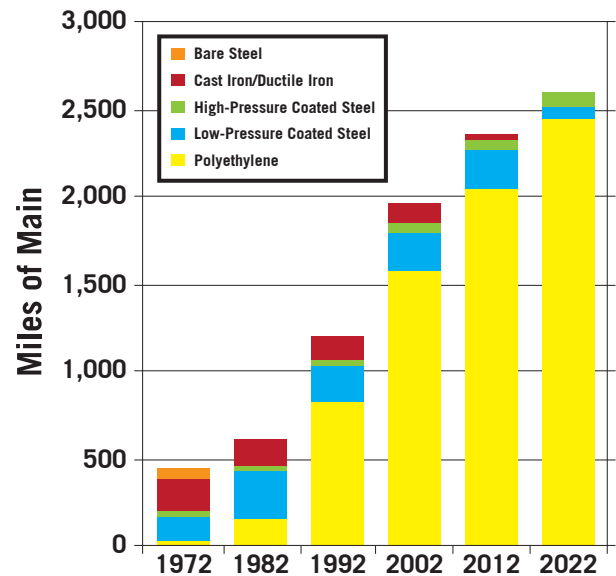
## Natural Gas System in 10 Years (FY 24)

The natural gas system continues to focus on replacing older pipe types with plastic pipe that has a longer life and lower maintenance costs. Revenues over this timeframe will also help fund new construction, support regulatory programs, and increase safety surveys and corrosion monitoring.

At the proposed level of investment over 10 years, the natural gas system will be able to:

- Complete the 35-year cast iron main replacement program that started in 1980. By 2015, no cast iron pipe will remain in the gas system
- Complete the South Loop Project connecting KUB's transmission lines with UT's new natural gas-fired steam plant and improving system redundancy
- Bring the low-pressure steel main replacement program to 50 percent completion
- Change the make-up of the system to include predominantly newer, longer lasting pipe types: 93 percent plastic, 4 percent low-pressure steel, 3 percent high-pressure steel

## Natural Gas Mains by Material



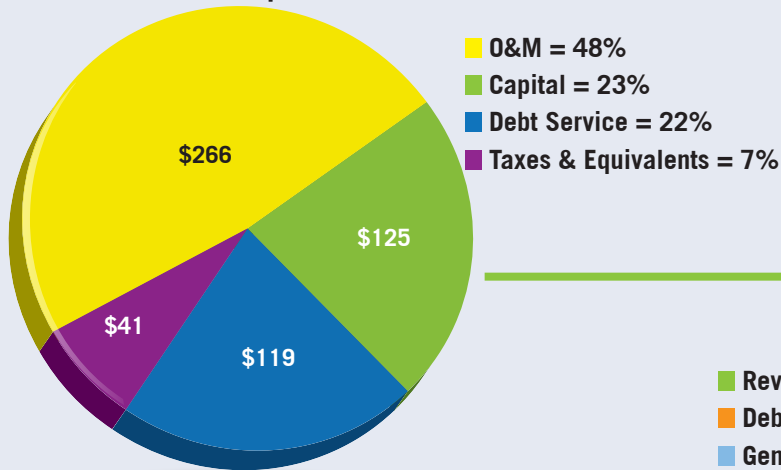
# 10-Year Financial Plans by Utility System

## Water System

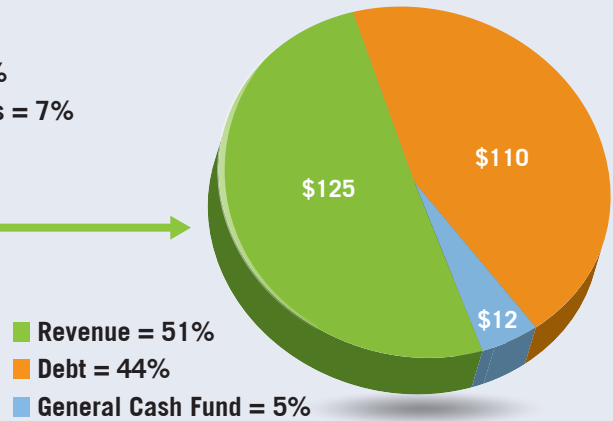
KUB has an excellent water quality record, and we are committed to maintaining it. Century II funding supports replacing 1 percent of the water system per year. KUB replaces aging pipe with newer pipe that has an average life of 100 years, which keeps us on a sustainable replacement schedule.

### Water Financial Plan FY 15 – FY 24

#### Revenue = \$551 Million



#### Capital = \$247 Million



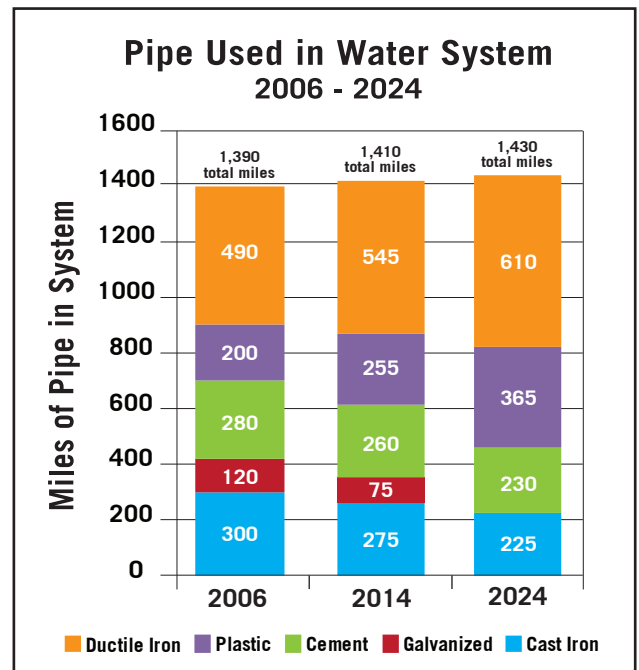
KUB projects spending \$247 million on water system capital projects from FY 15–24. Of that amount, \$125 million, or 51 percent, will come from revenue received from customer rates. KUB plans to fund the remaining \$122 million with debt and general fund cash.

## Water System in 10 Years (FY 24)

KUB was able to accelerate our rate of replacement for older pipes under the 10-year Century II financial plan approved in 2011. KUB increased the goal for removing older galvanized and cast iron pipe from our system from 7 miles a year to 17 miles a year.

With the proposed level of investment over 10 years, the Century II program will:

- Eliminate all galvanized main, which has the highest water break and leak rate
- Replace all but 5 miles of older large-diameter cast iron main, which is nearing the end of its useful life expectancy of 100 years
- Replace 40 miles of smaller-size cast iron main
- Replace 24 miles of cement pipe, which was installed between 1940 and 1980
- Significantly improve the system
  - Before: Older pipe types make up 50 percent of the system
  - In 10 years: Older pipe types will make up about 33 percent of the system





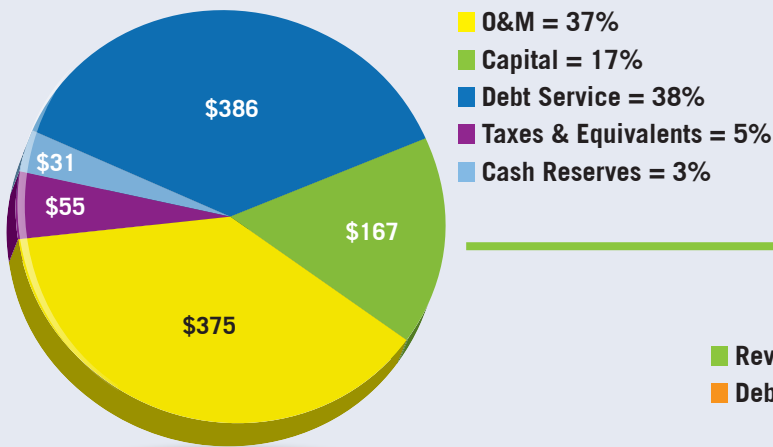
# 10-Year Financial Plans by Utility System

## Wastewater System

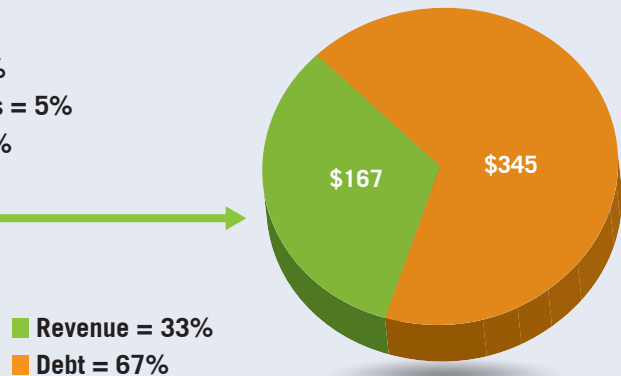
KUB accelerated wastewater system replacements in 2004 with the \$650 million PACE 10 program, which addresses requirements from the federal Consent Decree (CD) issued to KUB in 2005. Since PACE 10 began, KUB has upgraded an average of 25 miles of sewer line per year, which represents 2 percent of the system annually or a sustainable 50-year replacement cycle.

### Wastewater Financial Plan FY 15 – FY 24

#### Revenue = \$1 Billion



#### Capital = \$512 Million



KUB projects spending \$512 million on wastewater system capital projects from FY 15–24. Of that amount, \$167 million, or 33 percent, will come from revenue received from customer rates. KUB plans to fund the remaining \$345 million with debt.

## Wastewater System in 10 Years (FY 24)

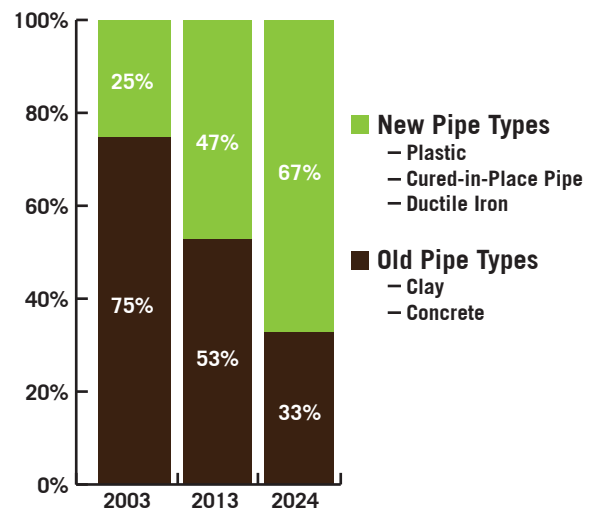
KUB finished the last of the 134 collection system projects required under the CD in 2014 and will complete required plant projects by the end of the CD term in 2021. At that time, KUB will complete PACE 10 and transition the wastewater system under Century II with our other systems.

With the proposed level of investment over 10 years, KUB will:

- Complete CD Phase II upgrades at Kuwahee and Fourth Creek wastewater treatment plants
- Establish an Infrastructure Replacement Program (IRP), as required by the CD, that will be administered under Century II just as with our other systems
- Continue to replace 25 miles of pipe per year (2 percent of system)
- Significantly improve the wastewater system
  - Before: Older pipe types make up 75 percent of system
  - In 10 years: Older pipe types about 33 percent of system

### Elimination of Old Pipe Types

At 25 Miles Per Year

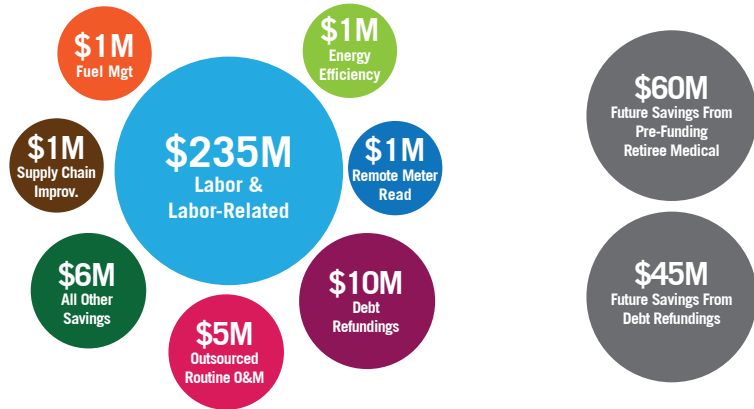




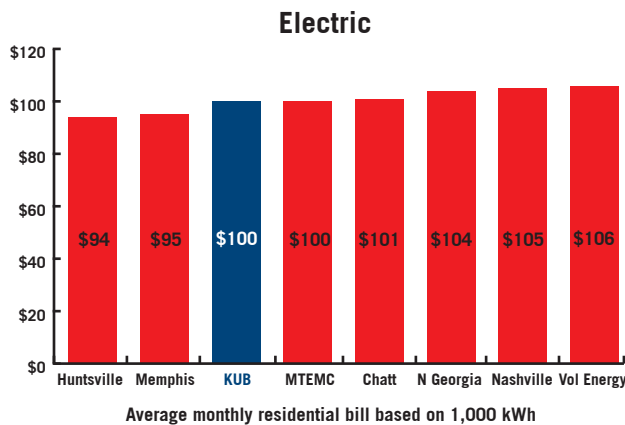
# Funding the Vision

To accomplish the goals of Century II and PACE 10, KUB's Board has endorsed long-range funding plans. These plans include modest rate increases in each system over time, but they also reflect cost management initiatives that have helped to keep rates affordable. In fact, since 1993, KUB efforts have saved customers \$260M by changing processes and managing work with fewer employees. These savings will continue into the future, helping to offset the need for larger rate increases.

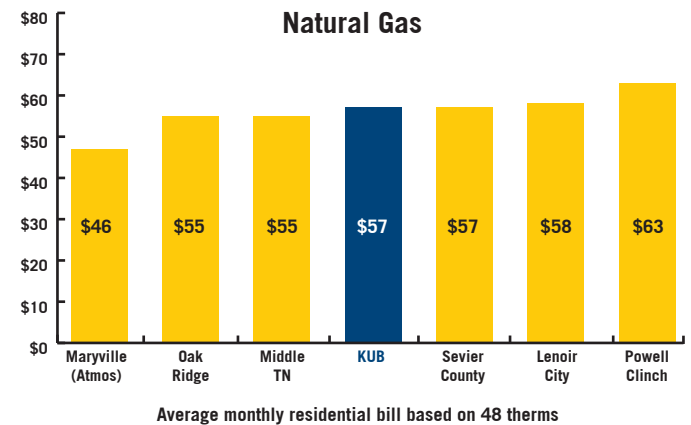
## \$260M in Cost Savings Since 1993 Continues Into the Future



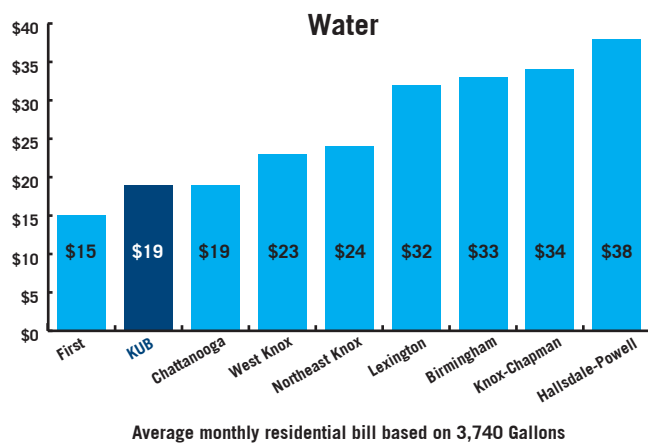
KUB's current rates remain affordable when compared to peer groups, as shown below:



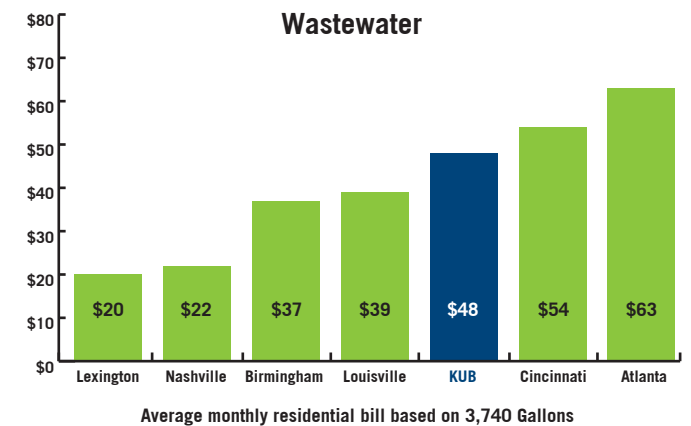
This peer group includes the largest eight power distributors in the TVA service area. The financial plan includes annual residential rate increases of \$1 per month for fiscal years 2015 – 2017.



This peer group includes natural gas distributors on the East Tennessee pipeline. The financial plan includes annual residential rate increases of \$1 per month for fiscal years 2015 – 2017.



This peer group includes both local and regional water utilities. The financial plan includes annual residential rate increases of \$2 per month in fiscal year 2015 and \$1 per month in both 2016 and 2017.



This peer group includes wastewater utilities which, like KUB, are subject to the mandates of federal Consent Decrees. The financial plan includes annual residential rate increases of \$3 per month for fiscal years 2015 – 2017.



[www.kub.org](http://www.kub.org) • (865) 524-2911