



August 17, 2023

Green Invest Amendment

Resolution 1482



Green Invest Update

- TVA program designed to bring new, renewable sources of power generation to the Tennessee Valley
- KUB entered agreements for the purchase of 502 MW of new solar to be developed over several years
- Purchases funded by TVA Partnership Agreement credits
- Solar industry changes increased pricing and extended timing of projects
- Green Invest solar commitments reduced to 325 MW
 - Required amendments to previously executed agreements
 - Amendments totaling 270 MW approved fall 2022
 - Amendment for 55 MW presented for consideration today

Green Invest Solar Purchases

	KUB Share	KUB Annual	Contract Price		Contract
Solar Site	MW	Output (MWH)	(\$/MWH)	Annual Cost	In-Service Date
Solar - Golden Triangle (MS)	70	153,300	\$3.23	\$495,159	Q2 - 2024
Solar - Optimist (MS)	200	438,000	\$5.02	\$2,198,760	Q1 – 2025
Solar - Tullahoma (TN)	55	120,450	\$3.08	\$370,986	Q2 - 2026
	325	711,750		\$3,064,905	

Solar Project Under Construction



Golden Triangle Project - Mississippi

Resolution 1482

- Authorizes execution of Green Invest amendment for the purchase of 55 MW of new solar
- Replaces previously executed amendment

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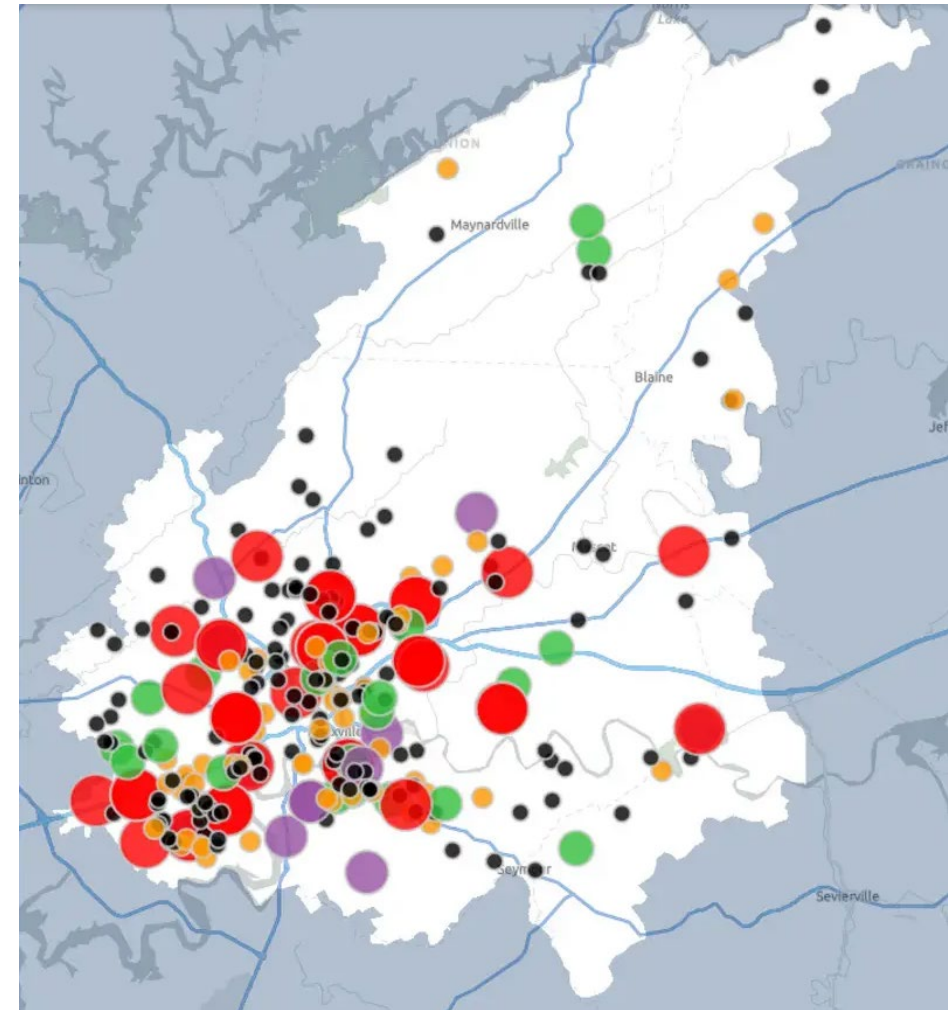
August 17, 2023

August Storm Response



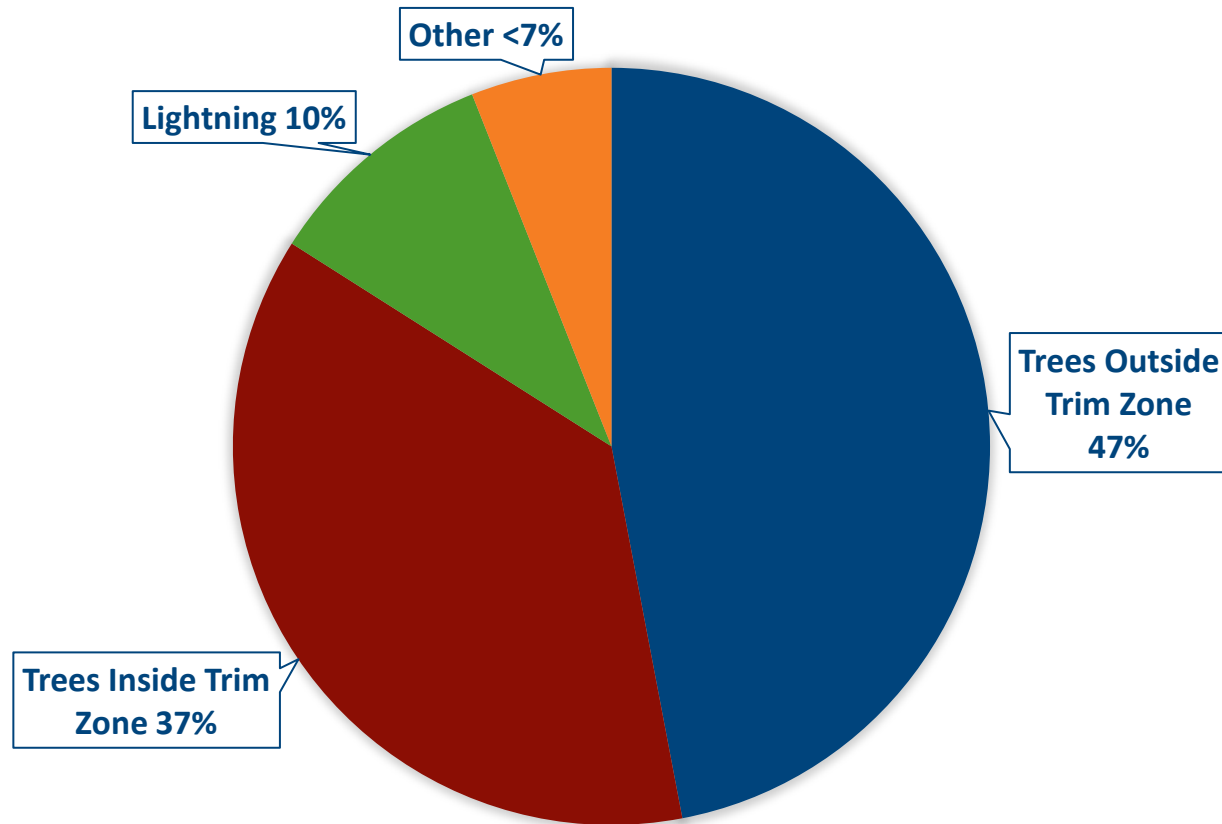
August 7, 2023: Third Largest Storm Outage in KUB History

- High winds and EF2 tornado broke and uprooted customer trees
 - 81 broken poles
 - 66 transformers damaged
- 74,615 customers experienced an outage
 - 57,000 peak customer outages
 - 49,316 customer calls between 2-6 p.m.
 - 7,800 calls directed to call center staff

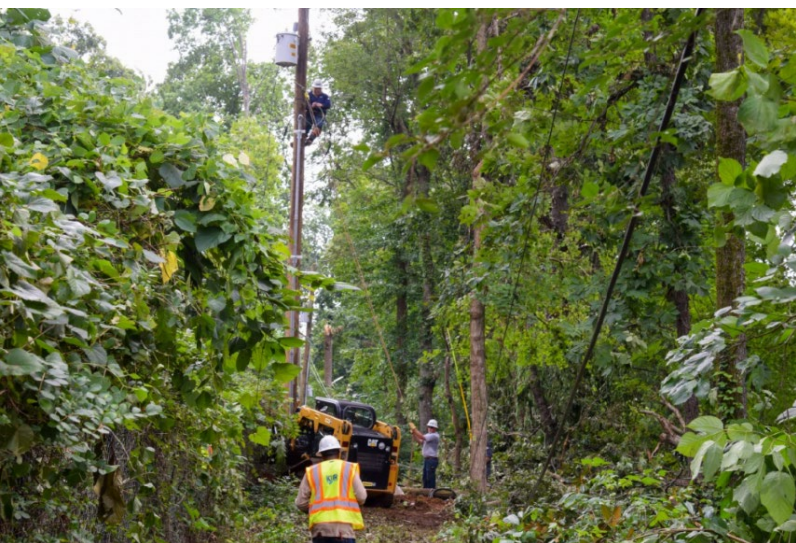


83 Percent of Outages from Trees

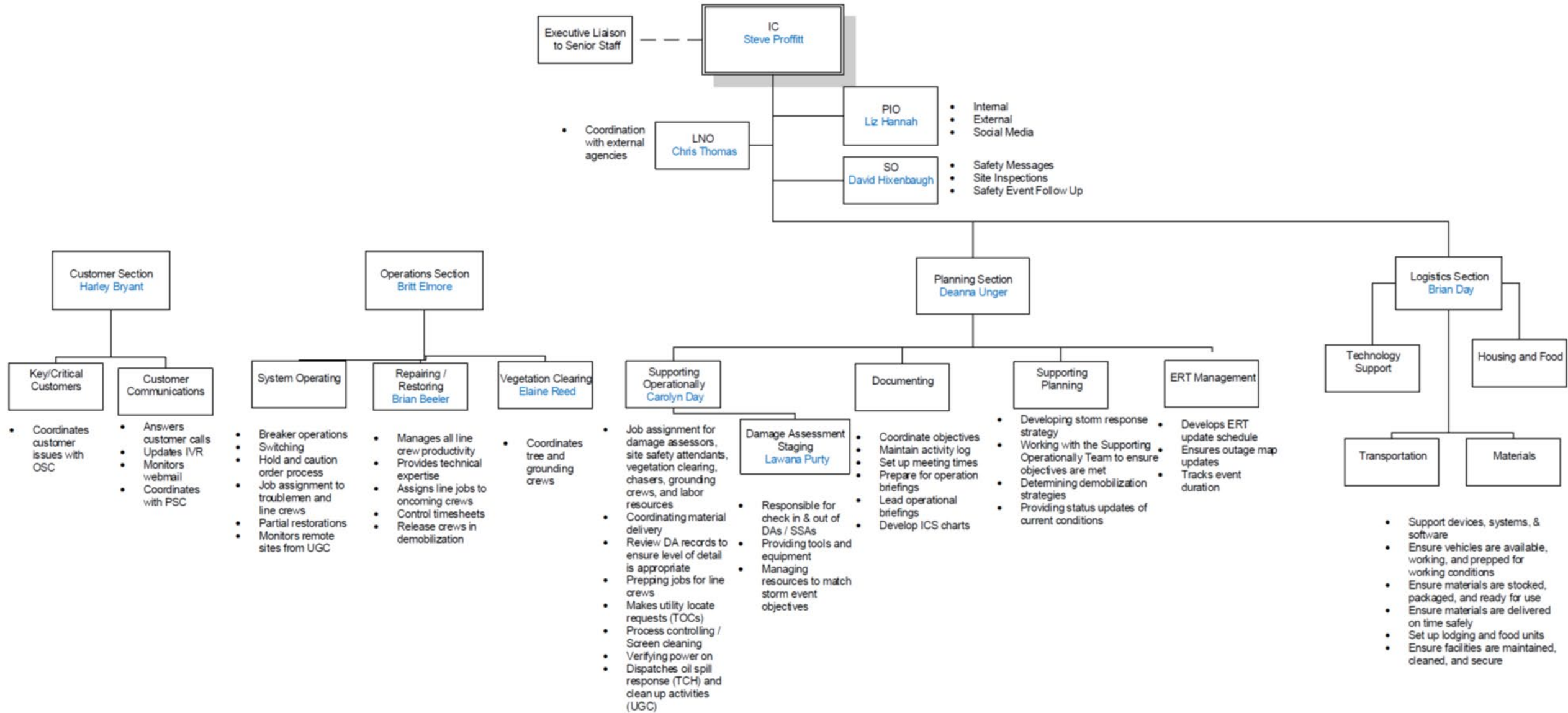
Outage Causes



Over 100 Crews Worked Continuously to Restore Service



Incident Command Structure Managed Event



Historical Comparison

	March 1993 Blizzard of '93	April 2011 Hail Storm	June 2011 Storms*	July 2015 Storm	May 2017 Storm	August 2023 Storm
Customers out	40,000+	75,000+	127,000+	56,000+	54,000+	74,000+
Poles replaced	100	142	151	81	40	81+
Transformers replaced	45	91	132	40	19	66+
Customer Events	N/A	7,800	23,000	2,700	3,400	1,905
Customer calls	50,000+	45,000+	220,000+	71,000+	28,000+	49,316
Restoration length	8 days	7 days	7 days	3 days	2.5 days	3.25 days
Estimated cost	\$2 million	\$2 million	\$4 million	\$2.5 million	\$1.2 million	\$3.7 million+

* June 2011 event includes two separate storms on June 21 and June 23

Thank You!

KUB employees (and families)
35 off-system crews
44 contract tree crews

Utility System Assistance

Boling Green Municipal Utilities (KY)
Bristol TN Essential Services
City of High Point, NC
Glasgow EPB
Greeneville
LaFollette Utilities
Morristown Utility Systems
Wilson Energy (NC)

Contractor Assistance

ABC Professional Tree Service
Asplundh Tree Expert
David H. Elliott
Service Electric
Pike Electric
Trees LLC/First Choice Tree Service
Xylem Tree Service



Customers Recognized our Employees' Hard Work

"KUB crews are doing amazing work and repairing pretty severe damage expeditiously. Thank you!"

– Knoxville Mayor Indya Kincannon

The entire Holston Hills neighborhood sends an enormous THANK YOU, KUB!!! Y'all are heroic—doing the hard work in difficult conditions to make sure everyone get their power restored. Amazing work by the brave KUB line technicians! -Tori S.

"Please thank the crews who have been working nonstop to restore service to everyone." – Joshua C.

"I was one of the individual houses that was without power on my street. I could see KUB employees working past 10 pm on my road to get my power back on last night at midnight. I am super grateful to the people who were away from their families and beds last night so my family could sleep better last night. Thank you! It's important to remember these are our friends and neighbors out there working day and night." – Jessica S.

"Thank you KUB for all the hard work you are doing. We have no idea how blessed we are until we don't have the things we take for granted." – Brenda H.

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August 17, 2023

FY23 Organizational Performance



FY23 Organizational Performance

- New Blueprint
- First KUB Fiber customer
- Operational responses
 - Winter Storm Elliott
 - Boyd's Bridge water/wastewater event
- Community Solar launch
- Weatherized 2,600th low-income household
- Systems financially sound

FY23 Financial Performance

- Positive earnings, except fiber
- All divisions under budget appropriations
- O&M \$12 million over budget, reflecting inflation
- Capital \$75 million under budget, due to timing and deferrals
- Water/wastewater margins up; gas flat; electric down
- Interest income up \$6 million
- Cash positions solid
- Debt level rose \$47 million
- High-quality bond ratings

FY23 Budget Expenditure Variance

	Electric	Gas	Water	Wastewater	Fiber	Total
Purchased Energy / COGS	(\$57,515)	(\$18,962)	---	---	\$4,063	(\$72,414)
O&M	(\$11,226)	(\$501)	(\$2,029)	(\$2,953)	\$4,401	(\$12,308)
Capital	\$38,647	\$6,475	\$16,221	\$12,933	\$927	\$75,203
Debt Service	\$1,394	\$0	\$600	\$160	(\$390)	\$1,764
Taxes & Equivalents	\$1,276	\$459	\$133	(\$10)	\$118	\$1,976
Loan to Fiber Division	\$0	---	---	---	---	\$0
Original Budget Variance	(\$27,424)	(\$12,529)	\$14,925	\$10,130	\$9,119	(\$5,779)
Additional Appropriations	\$35,000	\$15,000	---	---	---	\$50,000
	\$7,576	\$2,471	\$14,925	\$10,130	\$9,119	\$44,221
\$ in 000's	() = Over Budget					

FY23 Budget Revenue Variance

	Electric	Gas	Water	Wastewater	Fiber	Total
Sales Revenue	\$53,409	\$18,460	\$2,390	\$5,890	(\$9,132)	\$71,017
Other Revenue	\$2,571	\$746	(\$3,405)	\$1,470	\$379	\$1,761
Increase (Decrease)	\$55,980	\$19,206	(\$1,015)	\$7,360	(\$8,753)	\$72,778

\$ in 000's

() = Under Budget

FY23 Budget Cash Impact

	Electric	Gas	Water	Wastewater	Fiber	Total
Budget Revenues	\$55,980	\$19,206	(\$1,015)	\$7,360	(\$8,753)	\$72,778
Budget Expenses	(\$27,424)	(\$12,529)	\$14,925	\$10,130	\$9,119	(\$5,779)
Increase (Decrease)	\$28,556	\$6,677	\$13,910	\$17,490	\$366	\$66,999

\$ in 000's () = Less Cash

Primarily due to Capital Timing/Deferrals

FY23 Long-Term Debt Position

System	Outstanding Bonds	Interest on Bonds	S&P Ratings	Moody's Ratings	Debt Coverage vs. Target
Electric	\$369.8M	\$192.2M	AA- / Stable	Aa2 / Stable	3.11 > 3.00
Natural Gas	78.1M	22.6M	AA / Stable	Aa2 / Stable	3.81 > 3.00
Water	184.3M	72.8M	AAA / Stable	Aa1 / Stable	2.53 > 2.00
Wastewater	467.3M	239.5M	AA+ / Positive	Aa2 / Stable	1.97 > 1.50
	\$1,099.5M	\$527.1M			

FY23 Financial Metrics Performance

Metric	Target	Electric	Gas	Water	Wastewater	Fiber
O&M	Budget or Less	X	X	X	X	✓
Cash Generated from Operations	Budget or Greater	X	✓	✓	✓	X
Debt Service Coverage	Financial Plan Target or Greater	✓	✓	✓	✓	---
Bond Ratings	AA or Greater	✓	✓	✓	✓	---

FY23 Organizational Metric Performance

Metric		
Safety	✓	
Electric Reliability	✓	
Century II	✓	
Diversity, Equity, and Inclusion	✓	
Call Center Performance		X
Environmental Stewardship	✓	
Fiber Take Rate		X

Safety Performance

FY	Serious, Preventable Injuries	Goal
2023	0	1
2022	2	1
2021	0	2
2020	0	3
2019	1	3
2018	3	4

Electric Reliability

	Average Hours without Power	Goal Duration (Hours)	Average Occurrence without Power	Goal Frequency (Events)
FY				
2023	1.93	2.00	1.33	1.45
2022	1.89	2.05	1.45	1.45
2021	1.83	2.10	1.24	1.50
2020	2.44	1.85	2.01	1.25
2019	2.42	1.85	1.70	1.25
2018	1.77	1.90	1.22	1.30

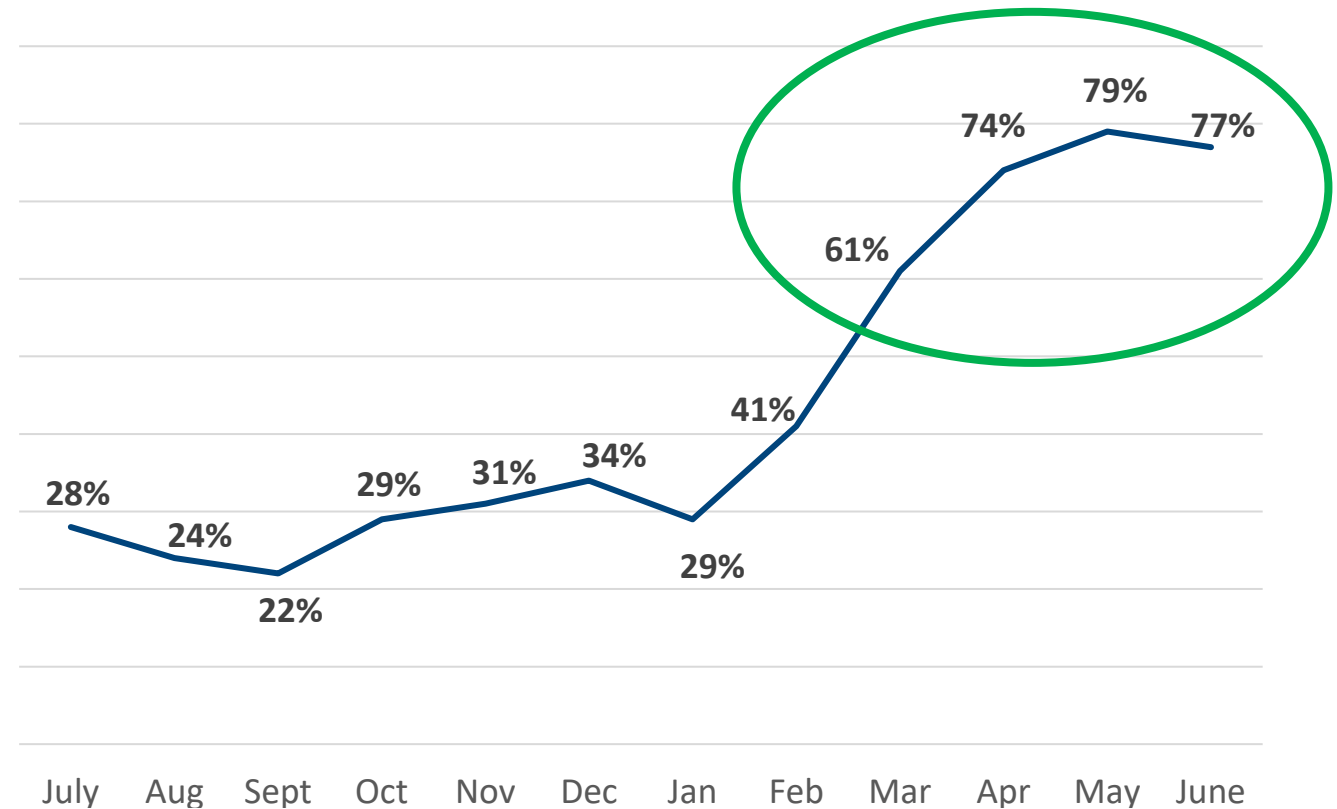
Century II Performance

System	Asset	Goal	Result
Electric	Substation Projects	2 Substations	2 Substations
Electric	Underground Cable	6 Miles	6.9 Miles
Electric	Transmission Lines	9 Miles	9 Miles
Natural Gas	Low-Pressure Steel Main Replacement	6 Miles	6 Miles
Water	Main Replacement	8.25 Miles	8.40 Miles
Wastewater	Main Replacement	12 Miles	9.53 Miles

Utility Call Center Performance

- Significant progress made during FY23
 - Increased staffing
 - Modified callback and phone system configurations
 - Implemented various other process improvements

	Goal	Result
% of Calls Answered in 90 Seconds	60%	44%



Award-Winning Service



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August 17, 2023

Community Advisory Panel Update – Federal Funding Opportunities



May & July Meetings

Federal Funding Opportunities

- KUB consultant West Monroe provided background research and helped prioritize opportunities
- May CAP meeting
 - West Monroe presentation/education
 - Initial discussion about next steps
- July CAP meeting
 - Discussion among CAP members regarding potential local partnerships
 - Suggestions for communicating with customers

Federal Funding at a Glance

THE INFRASTRUCTURE INVESTMENT & JOBS ACT (IIJA)

Enacted: November 15, 2021

Purpose: Investment in our nation's infrastructure and competitiveness by rebuilding aging roads, bridges, and rails; expanding access to clean drinking water; ensuring every American has access to high-speed internet; tackling the climate crisis; advancing environmental justice; and investing in communities

Primary Financial Mechanisms: Infrastructure grant programs

Funding: \$1.2 trillion

THE INFLATION REDUCTION ACT (IRA)

Enacted: August 16, 2022

Purpose: Down payment on deficit reduction to fight inflation, invest in domestic energy production and manufacturing, and reduce carbon emissions by roughly 40% by 2030

Primary Financial Mechanisms: Tax credits and other incentives designed to make decarbonization investments and technologies as or more attractive than fossil fuel alternatives

Funding: \$773 billion

Inflation Reduction Act – KUB Opportunities

- Clean energy tax credits/direct pay incentives
 - Community solar
 - Electric vehicle charging infrastructure
 - Potential future solar projects under TVA Flexibility provisions



Inflation Reduction – Customer Opportunities

- Residential energy tax credits – available now
 - 30% of costs up to \$3,200 per year for qualified improvements
 - 30% of costs for new clean energy installations (solar, geothermal, batteries, etc.)
- Clean transportation – available now
 - Credits for both new and used electric vehicles
 - Will be offered at point of sale starting in 2024
- Home energy rebates – coming soon
 - Home Energy Performance-Based Whole House Rebate Program
 - High-Efficiency Electric Home Rebate Program
 - Will be administered by State Energy Office
 - \$168 million anticipated for Tennessee

Additional Input from CAP Members – Local & Statewide Funding Opportunities

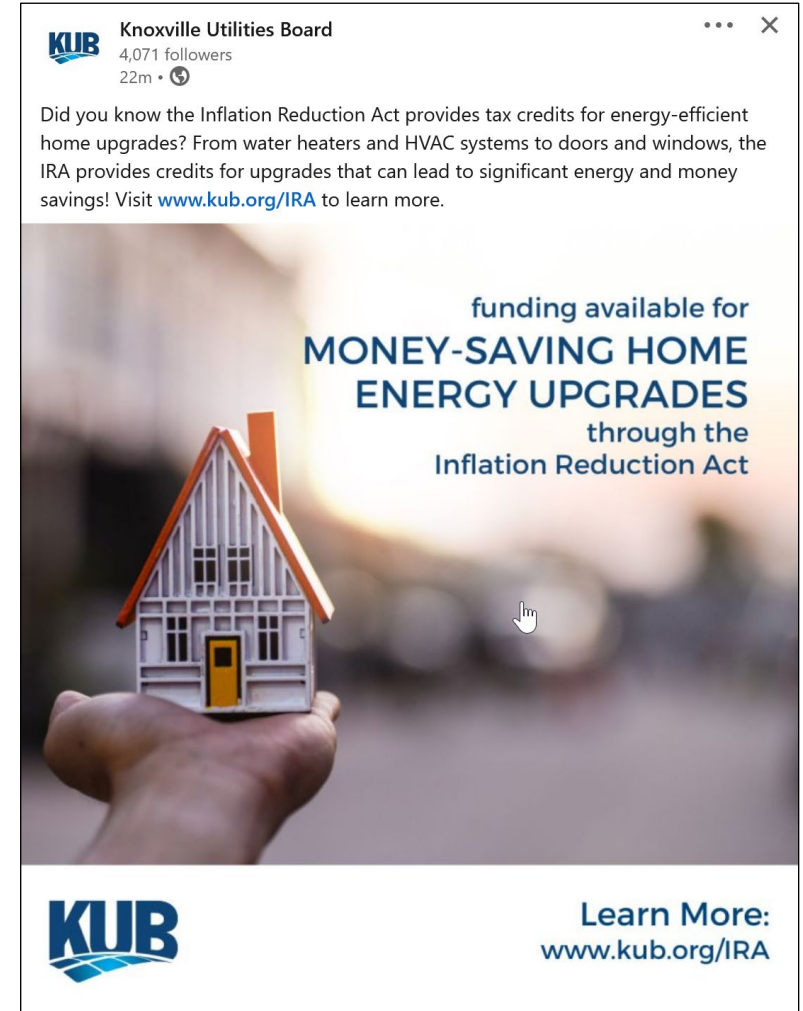
- CAC rooftop solar program pilot
- City of Knoxville grant applications for:
 - Climate pollution reduction planning grant
 - Electric vehicle charging infrastructure
 - Energy efficiency and conservation block grant for City of Knoxville facilities
 - Urban and community forestry grant
 - Overhead electric charging infrastructure for Knoxville Area Transit buses (awarded)
- Southern Alliance for Clean Energy
 - Potential statewide project related to multi-family housing through THDA

CAP Communication Priorities

- Leverage program communications from implementing entities, rather than starting from scratch
- Build on these resources with local, trusted messengers
- Outreach to businesses to help reach customers at the point of sale
- Partner with agencies to distribute information
 - Consider CAC tax prep program as a way to share information about tax credits
 - Continue community partnership for energy efficiency workshops and outreach
- Ensure KUB website resources are kept up to date and easy to find

Communication with Customers

- Website
 - Information included at www.kub.org/IRA
 - Ad space on kub.org homepage and mobile app
 - Banner ad prominent on customer account landing page
- Social media
- Energy efficiency workshops
- Messaging set for all customers' September bills
- Continued collaboration with partners



KUB Knoxville Utilities Board
4,071 followers
22m • 🌐

Did you know the Inflation Reduction Act provides tax credits for energy-efficient home upgrades? From water heaters and HVAC systems to doors and windows, the IRA provides credits for upgrades that can lead to significant energy and money savings! Visit www.kub.org/IRA to learn more.

funding available for
MONEY-SAVING HOME ENERGY UPGRADES
through the
Inflation Reduction Act

KUB Learn More:
www.kub.org/IRA

The image shows a hand holding a small white house model with a yellow door and orange roof against a blurred background of a street scene. The text is overlaid on the right side of the image.

Additional Grant Opportunities

- Numerous opportunities under both IIJA and IRA
- Internal team has been assembled to:
 - Track and prioritize opportunities
 - Apply for grants
 - Manage compliance and reporting
- So far, KUB has applied for more than \$180 million in funding
 - \$42 million awarded for water plant, fiber, and electric vehicle charging
 - \$138 million in applications for electric grid modernization, water/wastewater projects, and natural gas main replacement
 - \$500,000 in investment tax credits for community solar project

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American Public Gas Association Awards



American Public Gas Association

- APGA represents America's municipally owned natural gas local distribution companies
- The APGA Safety Contest is an annual award given to APGA members for a dedication to employee safety
 - KUB won in the largest category, utilities with more than 70,001 work hours logged
 - 2nd consecutive year KUB has received this award
- The annual Communications & Marketing Award recognizes APGA systems for communicating to customers and marketing natural gas
 - KUB placed 3rd for Natural Gas Growth



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TeenWork Program



Program History and Overview

- Began in 1995 as a partnership with Austin-East High School
- Educates high school juniors about careers and professional skills
- Offers community service opportunities
- Includes workshops and summer internships
- Over 500 students have successfully completed the program

2022-2023 Recap

- Continued partnership with Austin-East, Fulton, and Central high schools
- Hosted career and college fairs
- Engaged Strategic Team on long-term vision; 865 Academies partnership



Austin-East High School



Central High School



Fulton High School

TeenWork in Action




2022-23 Recap

- Continued partnerships with local businesses
- Added a new partner



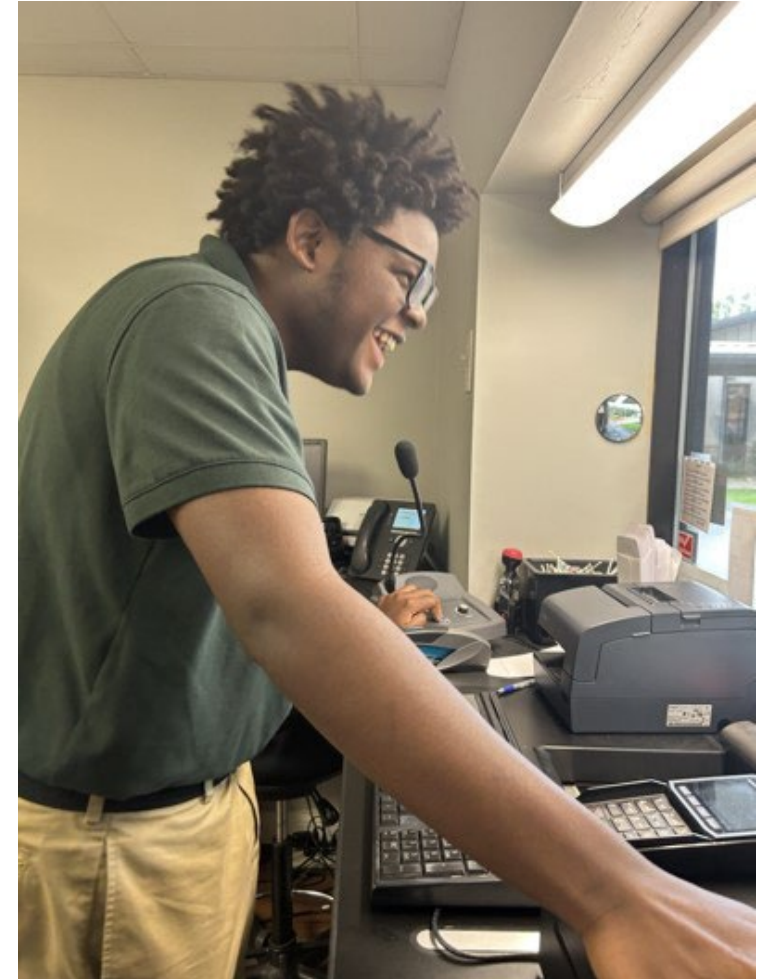
2023 Summer Projects



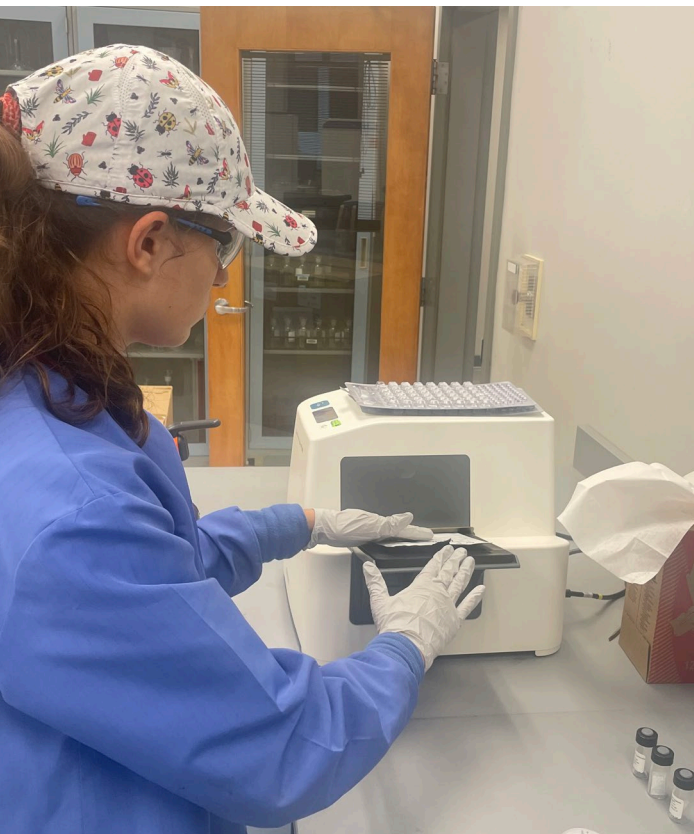
BRANCHING OUT

TeenWork
FOR TOMORROW Summer 2023
TEENWORK PROGRAM AND ALUMNI NEWSLETTER

KJLB TEENWORK



2023 Summer Projects



Jakob's KUB Summer Blog

HOME ABOUT CONTACT BLOG MORE

HAVE A GOOD READ

SEARCH HERE

July, 25th, 2023

Today, I spent time diligently working on my presentation slides, ensuring that everything was well-prepared and in good shape before the scheduled meeting with my mentors. I wanted to make sure that my presentation was as polished and effective as possible. I then proceeded...

Published on July 25, 2023 | 0 min read

July, 18th, 2023

Today, I dedicated time to fine-tuning my slides, ensuring that everything was in order before the presentation to my mentors. I wanted to make sure that the content and visuals were well-prepared and polished. I then proceeded to present the slides twice to my mentors, allowing them L...

Published on July 18, 2023 | 0 min read

July, 17th, 2023

Today, I wrapped up my web page design project, completing the necessary tasks for the day. Following that, I engaged in a call with my mentors to discuss my upcoming slide show for KUB. We had a productive conversation, exchanging ideas and getting clarity on the requirements...

Published on July 17, 2023 | 0 min read



Looking Ahead to 2023-24

- Resume partnerships with additional businesses
- Expand program to additional school
- Alumni as program ambassadors
- 865 Academies collaboration



Focus on the Future: Success Beyond TeenWork

2023 Internship Recipients



Thaily Reyes

Department: Overhead Construction
School: Pellissippi State Community College
Major: General Science

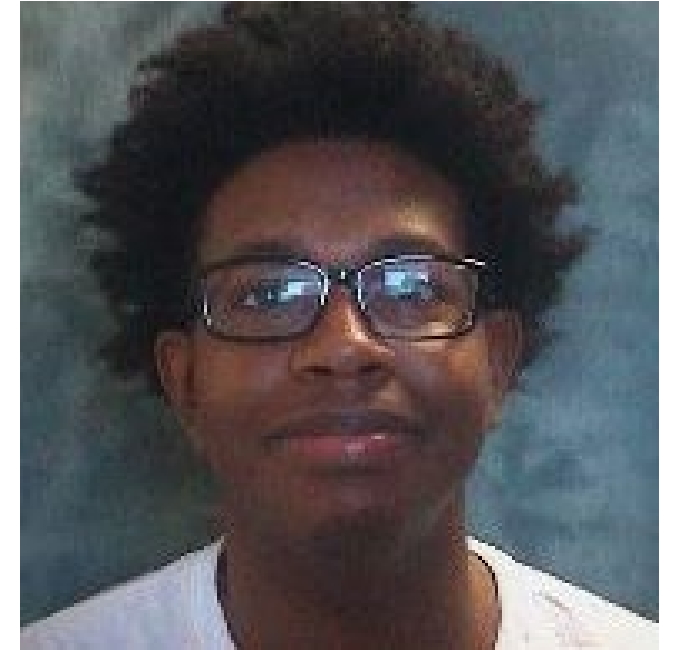


William Nichols

Department: System Operations
School: Tennessee College of Applied Technology
Major: Industrial Electricity

Focus on the Future: Success Beyond TeenWork

“I started as a student about two years ago. As a Computer Science major, getting experience with development and applications is some of the best experience you can get this early on. I was always told starting out in ISD that this isn’t a job. Our job is making other people’s jobs easier. Making websites, applications, and other things for others to have an easier working experience is how we succeed in our work.”



Anthony Toms

2021 TeenWork Alumni,
Current College Student Employee
Information Services (ISD)

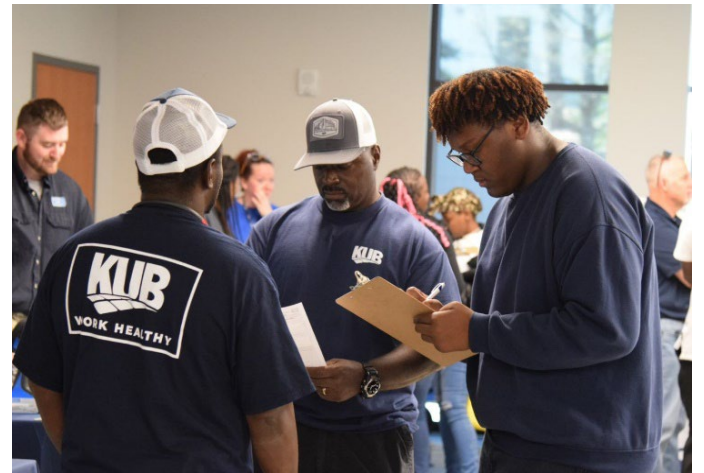
What We Hear About TeenWork

“I think the TeenWork program is very important to the community in that it gives the students a better chance to succeed. Not only does it teach them hard work, dependability and teamwork, but I feel it also better prepares them as people.”

Trisha Flynn, West Knox Utility District

“The TeenWork program has provided an opportunity for me to get the experience I need to prepare me for the professional world. Even in my college years, returning as an intern has given me hands-on experience directly related to my major and intended career.”

Noel Djenini, TeenWork Alumni & College Student



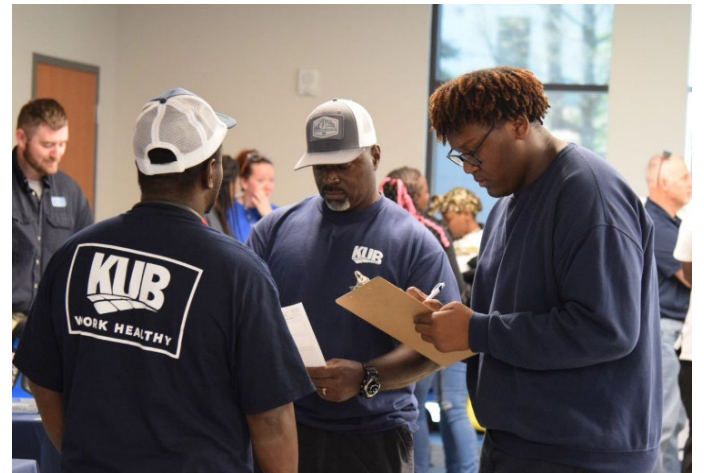
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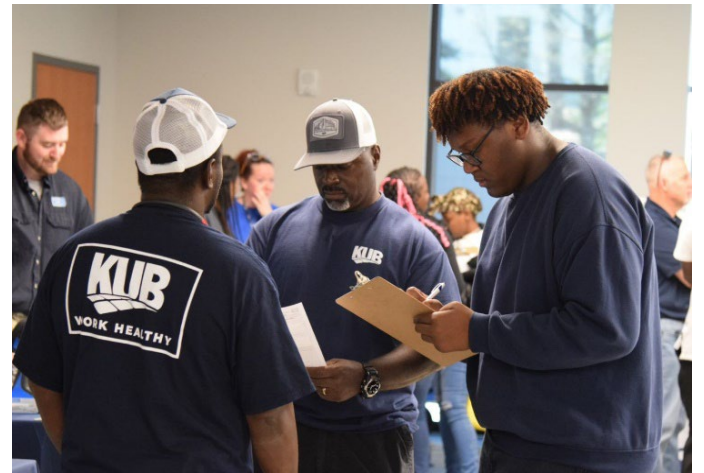
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