



2018
Environmental Report

KUB Continues Environmental Stewardship Commitment



Gabriel J. Bolas
KUB President and CEO

KUB exists to serve its customers by providing safe, reliable, and affordable utility services, but our mission is about more than pipes and wires: it's about being good stewards of the environment and our communities' resources and safeguarding them for generations to come.

KUB has a long history of making environmental responsibility a priority. For example, some of KUB's well-known white trucks went green with the use of compressed natural gas in the 1970's – it's hard to believe those first investments in alternative fuels were nearly 50 years ago! While we are proud to reflect on sustainability achievements of the past, we know environmental stewardship requires a continual focus to ensure we make progress.

KUB's Environmental Stewardship Strategic Initiative Team looks for future opportunities and provides oversight for current initiatives. With representatives from diverse areas within KUB, the team ensures a broad view of sustainability, from advancement of the alternative fuel fleet, to improvements for the recycling program and projects to improve efficiency of our operations. KUB is also very fortunate to have a strong network of community partners who share our commitment to sustainability and help make progress with programs such as Round It Up for low-income weatherization assistance and energy efficiency education.

This report highlights achievements over the last year that align with KUB's goal to be environmentally responsible in our operations and that support our ongoing initiatives to promote the sustainability of our communities' natural resources. We are dedicated to continuing to find new ways to incorporate sustainability improvements in everything we do.

Gabriel J. Bolas



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SERVING OUR COMMUNITY THROUGH ENVIRONMENTAL STEWARDSHIP	1
KUB RECEIVES ITS HIGHEST RANKING IN 100 BEST FLEETS PROGRAM	2
EFFICIENCY AT FOREFRONT OF FACILITY UPGRADES	3
KUB BOARD VOTES TO CONTINUE ROUND IT UP	4-5

Corporate Environmental Policy



Knoxville Utilities Board's (KUB's) mission is to act as good stewards of our communities' resources, including the environment. KUB demonstrates environmental responsibility by making financially sound investments in our utility systems and facilities in ways that protect and sustain the environment. We serve as a resource for our customers who would like to do the same.

Serving Our Community Through Environmental Stewardship

KUB and its employees are proud to be good stewards of our community and its natural resources. Our employees are active with opportunities to help the environment, including with use of Vol Time, KUB's volunteer time policy to support employees' volunteer efforts. Each year, employees participate in projects with an environmental focus. Those projects include Adopt-A-Highway, River Rescue, and projects with Ijams Nature Center. This spring, 35 employees cleaned up KUB's "adopted" section of Middlebrook Pike by collecting about 75 bags of trash, and employee volunteers removed trash, tires, and even a bicycle from local waterways during Ijams Nature Center's River Rescue event. KUB also participates in community outreach events like EarthFest and WaterFest to provide information on renewable energy, energy efficiency, water quality and conservation, and other sustainability efforts.

Through KUB's surplus materials reuse program, the community can request items that are no longer of value to KUB, such as wood utility poles, wood pallets, empty wire reels, and wood timbers and crates that are part of the shipping materials received with KUB construction materials. The program allows for beneficial reuse of the materials in the community and avoids landfill disposal of the items.

KUB has a long-standing partnership with Habitat for Humanity to plant a tree at each new Habitat home in our service area. This past year, new homeowners received 15 dogwood trees to add to the more than 250 trees KUB has planted at Habitat homes over the years. As an Arbor Day Foundation Tree Line USA® utility since 2001, KUB is committed to an active tree planting program for environmental benefits and to add beauty to our community.



Top: In FY 18, KUB's Leadership Development Group completed a project for the Nature Preschool program at Ijams Nature Center. KUB employees utilized materials from KUB's surplus materials reuse program. Left: KUB Employees volunteer at EarthFest. Above right: This spring, employees helped clean up a section of Middlebrook Pike as part of the Adopt-A-Highway program.

KUB Receives Its Highest Ranking in 100 Best Fleets Program

The 100 Best Fleets in the Americas program again recognized KUB's fleet in 2018, with KUB receiving its highest ranking ever at number 73. KUB first received this honor in 2009. The 100 Best Fleets award program recognizes peak performing public sector fleet operations in North and South America. The program also identifies and encourages ever-increasing levels of performance improvement within the fleet industry.

KUB also maintained its certification in the Tennessee Green Fleets Program. This program is administered by the Tennessee Clean Fuels Coalition (TCFC) and recognizes efforts to reduce petroleum consumption, use alternative fuels or advanced vehicle technologies, and reduce emissions. KUB serves on the Board of the TCFC and has been a Gold Partner since 2004.

Alternative fuels have been an element of the KUB fleet since the 1970s, and today's fleet includes vehicles that run on compressed natural gas (CNG), electricity, and electric hybrid technology. KUB's public CNG fueling station is now in its second year of operation, and KUB continues outreach to area fleets to encourage use of alternative fuels with access to the station.

As a participant in the Tennessee Workplace Charging Partnership, KUB shares educational information about electric vehicles with its employees and provides access to electric vehicle charging to employees (charging stations in KUB's Promenade Garage located in downtown Knoxville are also available to the public). KUB's new Engineering Building (see next page) will offer additional charging stations for employees and visitors, and KUB continues to assess interest in workplace charging for future planning.



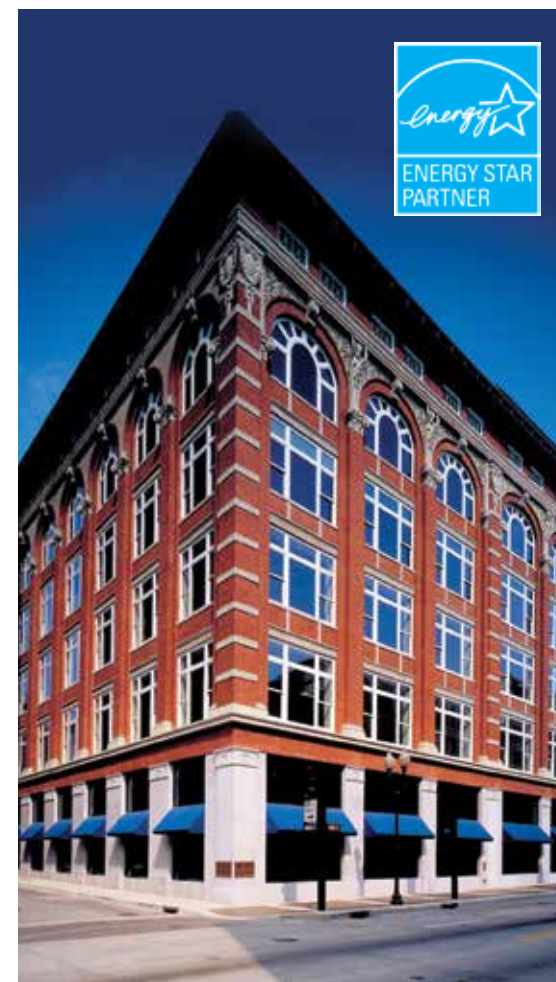
Pictured top: KUB's fleet includes a variety of alternative fuel vehicles. Bottom left: Hybrid electric bucket trucks allow crews to avoid use of diesel fuel while they work on electric lines. Bottom right: KUB's Compressed Natural Gas Fueling Station serves KUB's fleet and is also open to the public.

Efficiency at Forefront of Facility Upgrades

Improved efficiency in KUB's operations and facilities is good for the environment and benefits our ratepayers. KUB routinely incorporates sustainability elements into facilities upgrades. In February 2018, work began on KUB's new Engineering Building at the Hoskins Operations Center. The 45,000 square foot building is due for completion in summer 2019. The many sustainability features included in the design and construction approach are expected to result in Leadership in Energy and Environmental Design (LEED) certification. These features include recycling of materials during construction, energy efficient light and energy systems, a rooftop solar array, and electric vehicle charging stations. This will be the second solar project on the campus: a 50-kilowatt array was added to KUB's Corporate Services building last year.

In addition to striving for LEED certification for the Engineering Building, KUB's historic Miller's Building in downtown Knoxville continues to achieve ENERGY STAR certification. This signifies the building performs in the top 25 percent of similar facilities nationwide for energy efficiency and meets strict performance levels set by the U.S. Environmental Protection Agency. The building was originally built in 1905 as a downtown department store. Since renovating the building in partnership with the City of Knoxville in 2000, KUB has strived to maintain the historic character of the building as well as efficient operations.

KUB has also made many efficiency improvements at its plants over the years. In FY 18, over 550 light fixtures were replaced with new LED fixtures, with a projected annual savings of 468,000 kilowatt hours and \$34,000. That reduction is equal to removing 75 cars from the road. TVA's EnergyRight® Solutions program provided an incentive of nearly \$14,000 for the project.



Engineering Building Sustainability Features

- Energy efficient light & energy systems
- Rooftop Solar Array
- Electric Vehicle Charging Stations

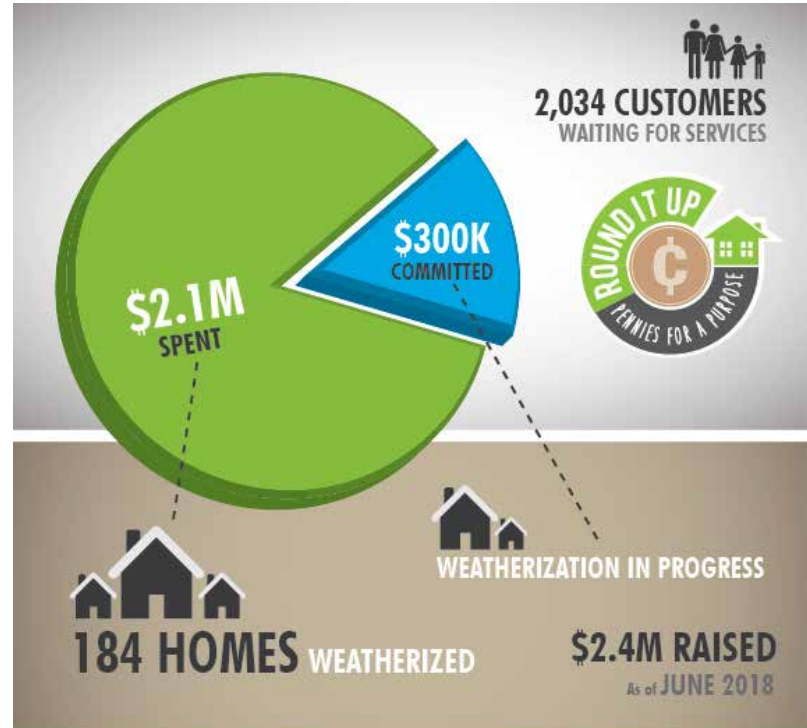
Pictured left: Miller's Building. Above top: Architectural rendering of the engineering building.

KUB Board Votes To Continue Round It Up

KUB customers are making a big difference in the community with contributions to the Round It Up (RIU) program. KUB started the program as a pilot in 2015 in partnership with the City of Knoxville and the Knoxville-Knox County Community Action Committee (CAC). Since then, KUB customers have voluntarily donated over \$2.3 million by rounding their bills up to the next dollar. KUB sends 100 percent of donations to CAC's Weatherization Assistance program to help improve energy efficiency for low-income homeowners and renters, and the customer contributions have assisted more than 180 homes. Due to this success, the KUB Board voted unanimously at its March 2018 meeting to continue the program.

Weatherization assistance is vital for low-income households in our area, and it provides a root cause solution to the ongoing problem of energy inefficient homes that are costly to heat and cool. By continuing RIU, KUB customers are providing a sustainable, local funding source to assist those in need.

In 2018, KUB, along with TVA, CAC, the City of Knoxville, Alliance to Save Energy, and Socially Equal Energy Efficient Development (SEED), received the Governor's Environmental Stewardship Award for Knoxville Partnerships for Low-Income Weatherization. The award highlights the positive impact of RIU and the Knoxville Extreme Energy Makeover (KEEM) for energy efficiency retrofits of nearly 1,500 low-income homes since 2015, and it also recognizes the outreach



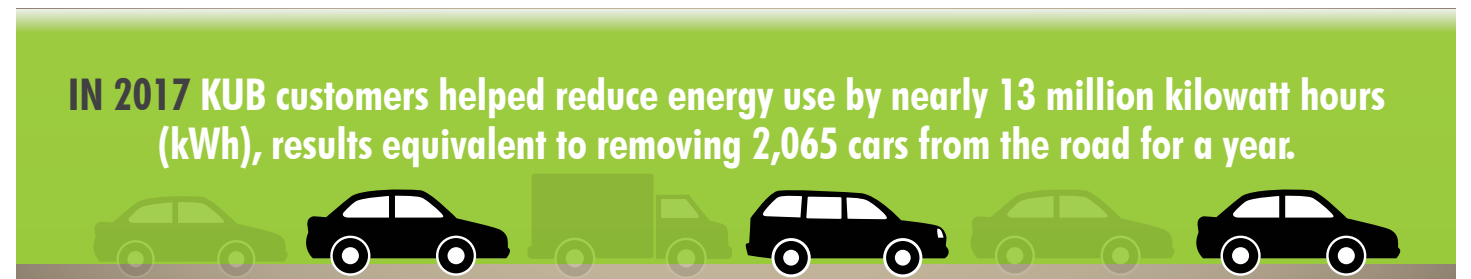
KUB Recognized with EnergyRight® and Renewable Solutions Awards

- Green Power Switch: Second
- eScore: Fourth
- eScore Self Audit: Fourth
- EnergyRight® Solutions for Business: Fourth
- Demand Side Programs: Fifth



and education initiatives that have shared information about ways to lower utility bills and conserve energy.

KUB customers also make a difference in the community with their participation in the EnergyRight® Solutions programs. In TVA's 2017 fiscal year, KUB customers helped reduce energy use by nearly 13 million kilowatt hours. That is 4.8 percent of all EnergyRight® Solutions program savings. With that, KUB ranked fourth among TVA distributors for total program savings in the Valley. These results are the equivalent to removing 2,065 cars from the road and saving enough energy to power more than 1,000 homes for a year.



Award Winning Environmental Results and Accomplishments

- EPA ENERGY STAR certification for KUB's Miller's Building headquarters
- Numerous Platinum, Gold, and Silver awards for wastewater plant operations
- Association of Metropolitan Water Agencies Platinum Award for Utility Excellence
- National Biosolids Partnership Platinum certification
- Kentucky-Tennessee Water Environment Association Beneficial Use of Biosolids award
- National Association of Clean Water Agencies' Water Resources Utility of the Future Today recognition
- Department of Energy's Sustainable Wastewater of the Future Program member
- American Water Works Association Partnership for Clean Water member
- TVA EnergyRight® Solutions Program Top Performer awards
- Founding Partner of the EPA Methane Challenge Program
- The Arbor Day Foundation's Annual Tree Line USA designation since 2001
- 100 Best Fleets in the Americas program recognition
- Tennessee Green Fleets Certification Program recognition by Tennessee Clean Fuels
- Knoxville Area Urban League's 2017 Corporate Leadership Award for KEEM and RIU initiatives
- Governor's Environmental Stewardship Award for Knoxville Partnerships for Low-Income Weatherization



Above: Knoxville Mayor Rogero joins KUB and other community partners in receiving the 2018 Governor's Environmental Stewardship Award.



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