

Green Initiatives and Community Engagement



2018 Annual Report



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MLGW: Serving You Is What We Do

We take service to the community seriously. Our primary goal centers on giving customers safe, affordable and reliable utility services.

But we go beyond that. Through the hard work and generosity of our employees, we make the lives of our customers better. It comes in many forms. It's encouraging businesses to make energy efficiency upgrades. It's giving energy kits to homeowners. It's teaching students how to design and race model solar cars. It's raising money and volunteering for local non-profits.

This annual overview highlights many of our efforts to make our community more sustainable and improve the neighborhoods, schools and businesses we serve.

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Conservation at Home

Saving energy begins with one individual: YOU. Sharing resources and information for residential customers that help them to monitor and reduce their usage is a vital part of our mission to do what is best for those we serve. Not only does conservation save money for the individual customer, it helps keep rates low, benefiting everyone.

eScore

eScore is a residential energy program that provides homeowners with a clear path to make their home a 10 – its most energy efficient. The program also increases home comfort, saves money and connects participants with quality contractors while offering assurance that the work is done right.

eScore allows homeowners to work toward a score of 10 for their home at their own pace, earning rebates on qualified smart energy technology upgrades and re-engaging with the program as many times as needed to achieve their home's best possible energy performance. Registered homeowners have two options to join the program:



- 1. Get an eScore evaluation upfront.** For a \$75 fee, a professional energy advisor will evaluate your home and provide a list of recommended improvements on making your home more energy efficient. Then, the homeowner selects a contractor from the TVA-approved Quality Contractor Network to begin the desired improvements.
- 2. Start work with a TVA approved contractor and get an eScore after the work is finished.** The contractor will discuss options, available incentives for eligible improvements and program details with the homeowner.

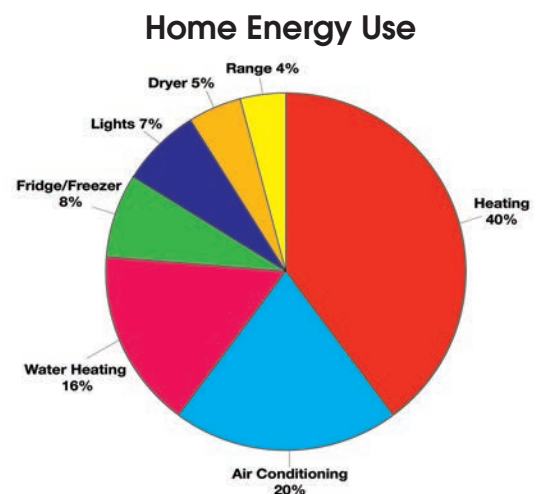
The eScore evaluation includes a detailed eScore report that contains:

- An eScore card that ranks the home from 1 – 10
- A customized list of energy-efficiency upgrades that can be made over time to achieve a rating of 10
- A list of rebates for qualified upgrades
- Photos of evaluated areas
- Instant-saving measures installed at the time of the home evaluation

To learn more and register, visit 2escore.com or call 1-855-2eScore (237-2673).

My Account – Residential

MLGW's comprehensive My Account customer portal enables customers to better understand their homes' energy and water usage and costs. Residential customers visited My Account more than **1.7 million** times in 2018, viewing more than **12 million** pages of content to analyze bill changes, see bill history, view smart meter data and learn about energy-saving opportunities for their homes. My Account also provides the ability to view bills, pay bills electronically and enroll in paperless eBilling, which reduces clutter and saves on paper and postage.



Among My Account users, more than 1,100 customers qualified to receive a free TVA energy kit, including common household items to start saving energy immediately. To qualify, log in, click “My Home Energy Advisor” and complete at least one category in the Energy Profile. Since this promotion began in 2008, nearly 40,000 residential customers have received free energy kits as well as customized recommendations and the ability to track their savings goals. Considering the energy-saving potential of items in each kit, that’s a **combined savings of more than 2.3 million kilowatt-hours (kWh) per year** – which equals the annual electricity use of **153 households**.

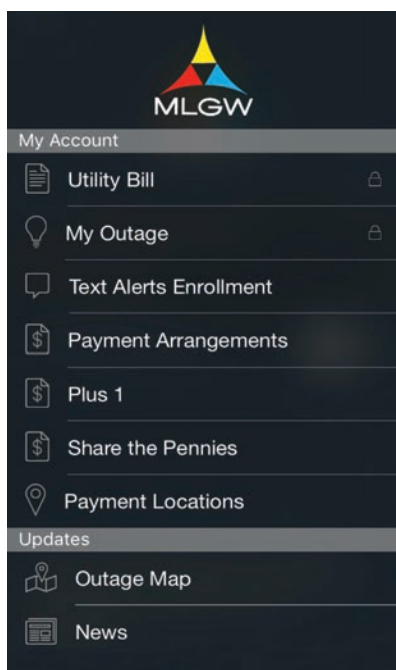
Smart meters

By the end of 2018, MLGW and its contractor had installed about **80%** of the one million smart meters. Nearly every residential customer has a smart electric meter. Residential smart gas and water meters are next. We also are wrapping up with new meters for businesses and organizations. MLGW remains on target to finish by 2020.

MLGW continued to monitor the telecommunications system to ensure high performance. Several storms in 2018 illustrated the benefit of a mesh network. The network allows meters to find alternate communications paths automatically if their original path is interrupted by damage from bad weather (or bad drivers hitting utility poles).

With this quantity of meters, it’s no surprise that MLGW manages tens of thousands of meter alerts each month – including tilt/tamper alarms, water leak alerts, outage alerts and voltage alerts.

This two-way communication with utility meters is what makes them “smart.” It allows MLGW to monitor the meters’ operational status as well as collect consumption information daily. These alerts help reduce utility theft, notify customers of potential water leaks and identify potential hazards which may not be apparent yet to customers at the property.



What does your smart meter data mean?

Smart meters provide two types of usage data: daily billing read and interval data. Think of the billing read as an odometer reading on your car. If you were taking a trip, you might record the start and stop odometer readings to determine the total miles driven. That’s essentially what MLGW does when it calculates your utility usage: we subtract the last billing cycle’s reading from the current billing cycle’s reading.

Interval data, in comparison, is time-stamped data that shows the pace at which utilities were used throughout the day. Think of it as your car’s fuel economy. A car’s fuel usage varies based on speed, road conditions and other factors. MLGW uses the daily billing reads for billing. We show the interval data in My Account to help you understand when your home used electricity, gas and water so you can link your household activities to utility use and costs. For more information, visit mlgw.com/smartgrid.

Conservation for Business

MLGW is a leader in the community, and as such, we set an example by being smart about energy usage. We encourage other organizations to follow our lead, by providing and promoting a number of programs designed to incentivize conservation, energy efficiency and sustainable practices.

TVA Energy Right Solutions for Business/Industry

Choosing to use energy wisely is a winning proposition for every company. TVA's Energy Right Solutions program helps MLGW business customers make smart energy choices to boost their bottom lines. Whether businesses want to be more energy efficient, increase productivity or enhance competitiveness by adopting emerging electric technologies, the program offers expert guidance and incentives to help businesses make the transition to a more energy-conscious facility.

In 2018, MLGW's business customers finished **58 projects**. They included upgrades in lighting, heating, cooling and business equipment (motors, commercial kitchens, etc).

Customers earned \$1.18 million in incentives for selecting higher efficiency equipment. That's enough electricity to meet the annual needs of **906 households**. These upgrades are projected to reduce **1,584 kilowatts** of peak electric load and save 13.5 million kilowatt-hours of electricity.

Resulting consumption and load savings historically have provided value to TVA and MLGW. We avoid the costs of generating electricity and reduce system demand. The effect is it keeps electric rates low. TVA shifted its incentives as usage and demand declined. Beginning in October, 2018, TVA now encourages the use of smart electric technologies that add new electric load. Incentives include electric forklifts and golf carts for transportation and new exterior LED lighting. Learn more at energyright.com.



My Account – Business

Businesses and organizations can register and access My Account at mlgw.com to view information about their MLGW bills. Up to 24 months of billing history, including consumption and costs, can be viewed, graphed and downloaded.

The screenshot shows the 'My Account' web interface. It has tabs for 'My Account', 'My Bills', 'My Payments', and 'My User Profile'. The 'My Bills' tab is selected, showing a 'Bill History' section with a description and 'Related Tools' like 'Business Energy Advisor' and 'Find Incentives'. Below this is an 'Account Summary' section with tabs for 'Basic Summary', 'Usage Detail', and 'Cost Detail'. The 'Basic Summary' tab is active, displaying a table of bills from 8/09/2019 to 2/18/2019. The table includes columns for Bill Date, Gas Usage, Gas Charges, Electric Usage, Electric Charges, Water Usage, Water Charges, Other Charges, and Total Current Charges. Each usage column has a small graph icon next to it.

Bill Date	Gas Usage (Ccf)	Gas Charges	Electric Usage (kWh)	Electric Charges	Water Usage (Ccf)	Water Charges	Other Charges	Total Current Charges
8/09/2019	11,654.0	\$4,022.27	354,000	\$34,656.73	1,292.0	\$2,456.54	\$4,581.79	\$45,717.33
7/12/2019	7,432.0	\$2,757.41	378,600	\$36,409.48	1,293.0	\$2,458.12	\$3,667.83	\$45,292.84
6/19/2019	10,080.0	\$4,245.49	402,000	\$37,212.97	1,509.0	\$2,797.28	\$4,404.50	\$48,660.24
5/21/2019	10,964.0	\$4,958.61	364,800	\$32,059.27	1,011.0	\$2,015.32	\$3,321.01	\$42,354.21
4/16/2019	15,184.0	\$6,225.90	368,400	\$33,249.70	1,096.0	\$2,148.79	\$3,503.94	\$45,128.33
3/22/2019	20,079.0	\$8,888.64	396,000	\$36,374.87	1,023.0	\$2,034.16	\$3,354.58	\$50,652.25
2/18/2019	18,213.0	\$9,211.14	394,200	\$36,307.11	1,573.0	\$2,809.60	\$4,531.48	\$52,859.33

In addition, small to mid-size businesses have access to bill analysis tools to identify factors that caused bills to change. Each month, an **average of 4,800 unique users** log in to view their commercial account information.

In 2018, MLGW saw more than **150,000 user sessions** among businesses who viewed more than **1.2 million pages of My Account** content. By downloading usage data, it eliminates the need to enter data manually and cuts the clutter of paper bills. Learn more at mlgw.com.

TVA EnerNOC demand response

Each month, MLGW records an electric system peak based on simultaneous electricity use among our 400,000-plus customers. These system peaks can add hundreds of thousands of dollars in demand charges to MLGW's wholesale electricity costs, which are then passed to customers through the electric rates, even if the peak lasts just a few minutes.

Likewise, TVA sets a peak based on the collective electricity use of all the region's energy users. These maximum levels are important because TVA must supply enough electricity to meet the system peak, no matter how high it is or how briefly it lasts. TVA can meet that peak by:

- Operating reserve power plants
- Buying supplemental electricity at market prices
- Or building new power plants

Each option carries significant cost, so TVA bills utilities for peak demand to encourage utilities –and their customers – to help control that peak. By doing so, everyone helps control power costs.

Another way to control system peaks is by signing up for the TVA-EnerNOC Demand Response program. The program pays businesses and organizations based on their willingness to reduce electric use during requested periods. Each participant receives a free demand response audit to find potential actions, communications to provide real-time electric load details and online access for tracking electric load.



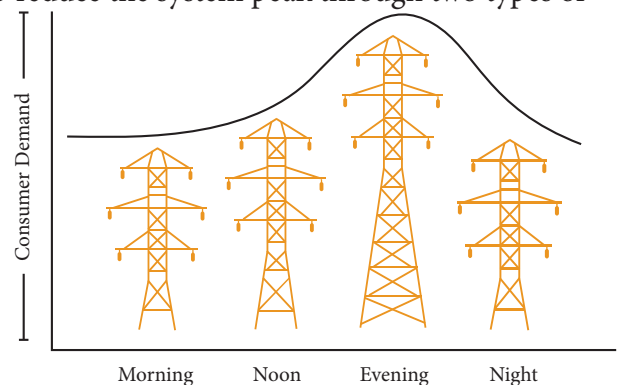
Participants are paid quarterly based on their agreed-to capacity, whether or not an event is called. In addition, they receive payments for each kilowatt of electric load they reduce during demand response events called by TVA. Learn more at mlgw.com/EnerNOC.

Reducing the peak, saving energy

MLGW's electric system reaches its peak in the mid-afternoon and early evening hours, all year-round. TVA's system has two distinct peaks, which vary by season. In winter, TVA peaks between 4 a.m. and 10 a.m. In summer, between 1 p.m. and 7 p.m. All customers can help reduce the system peak through two types of activities: conservation and load shifting.

Conservation includes eliminating energy waste during peak hours through simple steps, such as turning off computers and office lights before leaving work and adjusting residential thermostats to the most efficient settings when you are away. Each kilowatt-hour of electricity you eliminate saves on your MLGW bill and helps reduce the community's total system peak.

Load shifting includes delaying the time at which you perform energy-intensive activities until after peak hours have passed. Examples include using the delay setting on your dishwasher instead of starting the appliance immediately after dinner, or waiting until after 7 p.m. to run the clothes dryer on summer weeknights. The same activities are performed with the same outcomes—clean dishes and dry clothes—but during hours when TVA's electricity generation costs are lower. For more ideas, visit mlgw.com/peakalerts.



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Renewable Energy

MLGW provides options for those interested in renewable energy. If you want to install solar panels at your home or support renewable power through an off-site project, MLGW and TVA have options to meet your needs.

TVA Green Power Switch



Green Power SwitchSM

Green Power Switch enables customers to support renewable power generation without spending money to install generation at their homes and businesses. Whether you have a shady lot, rent or simply don't wish to make a big investment, Green Power Switch is a great alternative! For as little as \$4 per month, you can make the “switch” and offset a portion of your electricity use with clean, green power.

In 2018, nearly **1,200** households and businesses (including MLGW's Administration Building) participated in Green Power Switch. These customers sponsored **3,160** blocks of green power per month, which equals **5.69 million kWh** of generation—enough to meet the annual electricity needs of **379** average Shelby County households. The environmental impact of this commitment to renewable generation is equivalent to: recycling **24 million** aluminum cans, or planting **1,580 acres** of trees, or removing **527 cars** from the roads for a full year.

In scientific terms, MLGW's Green Power Switch customers were responsible for avoided generation emissions equal to: **5,202 tons** of carbon dioxide, **35 tons** of nitrogen oxides and **4.7 tons** of sulfur dioxide each year.

Curious about the impact you could make with Green Power Switch? Check out the Green Power Switch Calculator at tva.gov.

Here are the Green Power Switch businesses who are committed to renewable energy:

- ANF Architects
- Cloverleaf Animal Clinic
- Ensafe Inc.
- GG Lutherie
- Haizlip Firm
- Kele Inc.
- Memphis Light, Gas and Water
- Midtown Yoga
- New Tech Packaging
- River Inn at Harbor Town Landing
- Shelby Farms Park Conservancy
- T.O. Fuller and Shelby Forest state parks
- Superior Carriers
- The Daily News
- Village at Cypresswood
- Westmoreland Cabinetry

Commercial and Industrial Community Solar Pilot

2018 marks the first full year of operation for TVA’s Allen Solar Farm. It is located at the new Allen Combined Cycle Gas Plant on President’s Island. The 997 kW solar array produces more than **one million kilowatt-hours** of renewable energy, equal to the annual electricity use of about **75 households**.

TVA’s solar farm helps MLGW offer a unique and local solution for companies looking to meet their sustainability goals. MLGW buys what is known as “green attributes” or Renewable Energy Certificates (RECs) from TVA.

In turn, MLGW resells those certificates to two commercial customers as a part of a community solar pilot. The RECs allow the buyers to claim an equal portion of their electric use is from renewable sources.



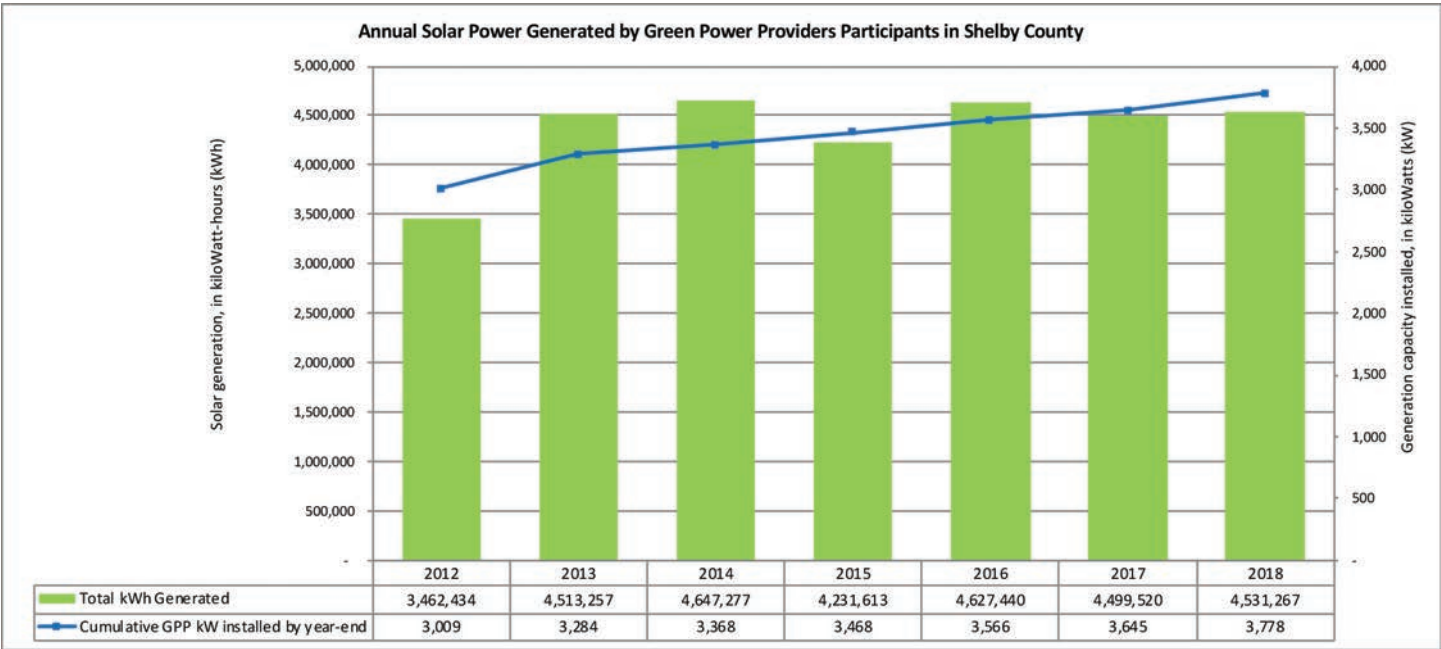
Distributed generation

Customer interest in renewable energy generation continues to grow, spurred by rapidly declining prices for solar equipment, a 30% federal tax credit and interest from companies that have set corporate sustainability goals.

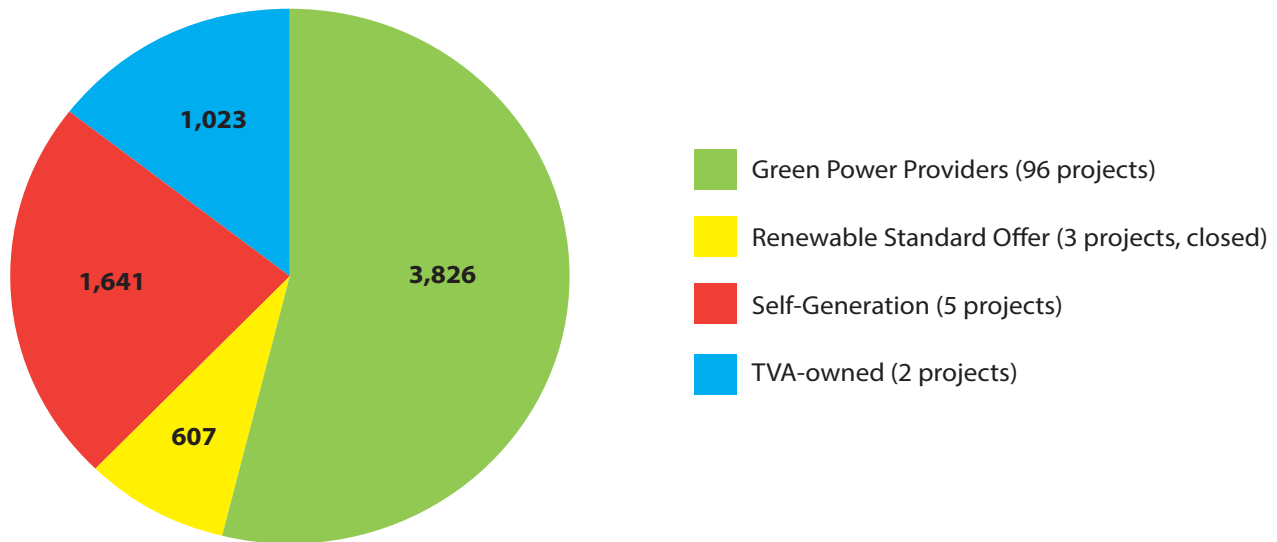
Looking to understand the cost and payback for installing solar?

Go to the TVA solar calculator at: tva.gov. It’s designed to show results for systems up to 50 kilowatts.

Using utility-specific rates and Tennessee Valley weather data, the calculator provides more accurate estimates than national solar calculators. It’s also a great way to fact-check installer information on output, costs and payback periods.



Installed kW System Capacity in Shelby County by Generation Option (as of 12/31/2018)



MLGW offers these renewable energy options:

- Green Power Providers allow customers to install small-scale generation at their homes and businesses. They can sell 100% of the output to TVA through 20-year agreements and receive generation credits on their MLGW bills. Eligible system sizes range from 500 watts (W) to 50 kilowatts (kW). MLGW has **96 customers enrolled in Green Power Providers** as of Dec. 31, 2018. Find total annual generation data from local Green Power Providers at mlgw.com/images/content/files/pdf/SolarGraphic.pdf
- Dispersed Power Production allows customers to install onsite renewable generation and sell all or a part of their output to TVA at variable short-term avoided costs. TVA pays the incentives directly.
- Self-Generation permits customers to generate power for use at their homes or businesses. Any power generated in excess of instantaneous consumption flows to the MLGW grid without financial benefit, so it's vital to size the generation capacity carefully. As of Dec. 31, 2018, five businesses create a portion of their own power while MLGW's electric grid provides the majority of their daily electricity needs.
- Distributed Solar Solutions, a TVA pilot program, selected a two megawatt (MW) solar project proposal from MLGW in 2017. Planning and engineering design phases were conducted in 2018 for the solar array, which will be located in Frayser.



Learn more at mlgw.com/greenpower.

Responsible Energy in New Construction

Whether building a new home or constructing a large industrial facility, customers can have a positive impact on the environment while saving themselves money in the long run. To plan for efficiency and sustainability from the beginning is the best way to be energy smart.

EcoBUILD

EcoBUILD is a voluntary green-building program that includes a set of construction standards that exceed the 2012 International Energy Conservation Code and common building practices.

Benefits to EcoBUILD homeowners:

- Energy savings of 30% when compared to standard construction practices
- More comfortable indoor temperatures with less thermostat adjustments
- Better indoor air quality with fewer allergens from building materials used
- Potential higher resale value in the future
- Personal satisfaction by going green



Visit mlgw.com/ecobuild, or to apply for EcoBUILD certification, call 901-528-4887.

Making buildings greener: LEED Incentive

LeBonheur Children's Hospital joined a growing number of companies which are making buildings greener. The hospital gained a LEED Silver award for its new Faculty Office Building. The building is designed to use **24% less energy** and **41% less water**.

LEED stands for Leadership in Energy and Environmental Design.

Since 2009, the U.S. Green Building Council – Tennessee Chapter has honored businesses with a grant funded by MLGW. The grant encourages companies to use more energy-efficient and environmentally responsible construction practices. The grant is a companion to EcoBUILD, MLGW's residential green building program.

To apply for these funds, qualified project teams must submit an application – including the project's final LEED scorecard, detailed review and an educational document highlighting the project's sustainability attributes – to the USGBC Tennessee Chapter. Learn more at usgbc.org.

Read about previous local green building projects at mlgw.com/leedincentive.



Members of the LeBonheur Children's Hospital project team received a \$5,000 award from MLGW and U.S. Green Building Council representatives in recognition of LEED Silver certification for the new Faculty Office Building.

Energy Management within MLGW

Energy management and resource conservation opportunities within MLGW abound. Controlling our operating costs is one way of managing utility rate increases. In addition, energy management enables MLGW to “lead by example,” showing customers that everyone has the potential to reduce energy waste.

MLGW Driving Green

MLGW owns and operates a diverse fleet of alternative fuel vehicles for service calls, field inspections and project operations. In addition, there are five charging stations including one in the Beale Street Landing Garage which is accessible to the public. The portfolio includes:

- Flex-fuel: **518** on-road, light and medium duty vehicles which use unleaded gas or ethanol fuel
- CNG: **123** on-road, half-ton and three-quarter-ton trucks
- Hybrid: **23** vehicles (Toyota Prius, Ford Escape & Fusion) powered by unleaded gas and lithium batteries
- Plug-in Electric: **Four** Nissan Leaf all-electric vehicles
- Plug-in Hybrid Electric: **One** Odyne on-road, heavy duty bucket truck powered by diesel and lithium batteries and used in electric line repairs and installations

Building automation and insight

Knowing how facilities use energy helps us identify ways we can save on utility costs. At MLGW, we have installed control systems to automate heating, ventilation and air conditioning systems. These systems are now in eight buildings: MLGW also views the metering data graphically and gains insight into how and when facilities use energy. Automated Energy and Energy Star’s Portfolio Manager assists in identifying operational efficiencies.

- Administration Building
- Netters Business Operations Center
- North Service Center Building 8
- Electric & Systems Operations
- MLGW University
- Water Laboratory
- North Community Office (air handlers)
- Beale Street Landing

Energy Star partner

MLGW has been an Energy Star partner since 2004. ENERGY STAR® is the government-backed symbol for energy efficiency, providing simple, credible and unbiased information that consumers and businesses rely on to make informed decisions.

See what products and resources are available online at mlgw.com/energystar or visit the energystar.gov. At a glance, Memphis Energy Star facts:

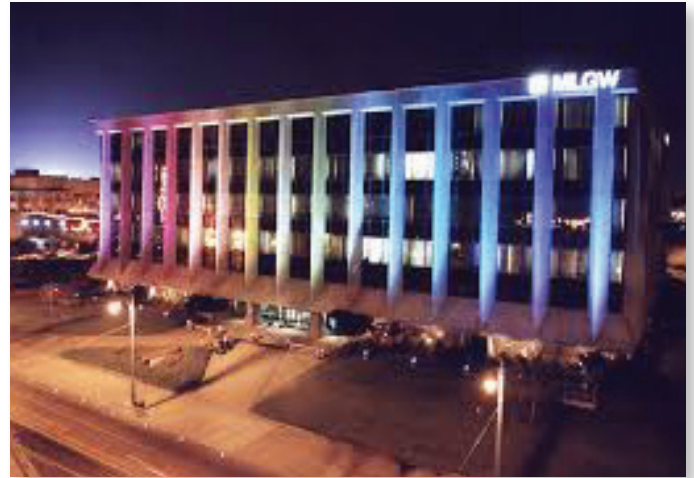
- **861 Energy Star certified homes** built to date
- **12 Energy Star certified homes** built in 2018 and another 11 built in 2019 to date
- **11 Energy Star builder partners**



Tracking, master planning, energy audits, demand response

Tracking: Data drives our decision making process. We track our utility usage in over **100 MLGW facilities**. The tracking allows us to identify the impact of facility upgrades, usage trends, operation adjustments and account anomalies.

Master Planning: Long range planning offers a framework for managing existing resources and expanding infrastructure while allowing us to make informed and cost-effective decisions. Within our framework, MLGW has five major components. They are a facilities master plan, an equipment replacement database, earthquake mitigation, compliance with Americans with Disabilities Act and energy audits.



- A facilities master plan provides a 10-year roadmap for capital improvements. Each year we tweak the plan to look at what our existing facilities need, any future facility demands and equipment upgrades. The plan encompasses almost two million square feet of buildings. That's the size of about 35 football fields scattered throughout Memphis and Shelby County.
- An equipment replacement database helps us decide when it's time to upgrade our equipment or construct a new facility. It also tracks our mechanical, plumbing and electrical needs along with any new building additions or structural projects.
- Shelby County sits on the New Madrid fault line. Five seismic recorders monitor our facilities for earthquakes. As a part of our earthquake mitigation, we screen and inventory our buildings and equipment to see what could be potential earthquake hazards in our community. For example, all substation power transformers have been retrofitted with seismic bracing. We anchor all of our HVAC and electrical equipment. We also install seismic valves and are replacing cast iron gas lines to prevent natural gas eruptions.
- The Americans with Disabilities Act established protections for people with disabilities. MLGW plans and upgrades its public buildings to make them more accessible. Improvements include wheelchair ramps, restroom accommodations and handicapped parking.
- Energy audits are another way we reduce our utility costs. This is especially true when buildings are not in use. We have added money saving measures such as automated heating and air controls, LED lighting and boiler equipment upgrades.

Demand response programs are popular among utilities and their customers.

As of 2018, MLGW has received **\$145,496.35** in energy and capacity payments from the program.

Since 2011, MLGW has participated in TVA's demand response program administrated by EnerNOC. To date, seven MLGW facilities are enrolled in the program:

- David F. Hansen Administration Building
- James L. Netters Business Operations Center
- Joyce M. Blackmon MLGW University
- Larry Papasan Electric & Systems Operations
- North Service Center Building 8
- Allen Water Pumping Station
- Shaw Water Pumping Station



2018 Energy efficiency equipment upgrade and operations

Sustainable energy efficient upgrades made through facility improvements at various locations include:

- Re-Cover/Replace Roofs & Air Conditioning Units
- Building Exterior Upgrades
- HVAC & Plumbing Upgrades

David F. Hansen Administration Building improvements:

- New elevator drives
- New fire pump (design)
- Chilled water pump replacements

James L. Netters Business Operations Center improvements:

- ADA compliance upgrades

Service Center & Community Office improvements:

- Roof replacements

Larry Papasan Electric & System Operations improvements:

- Uninterrupted power supply
- Generator upgrades
- Roof replacements

Electric Substation improvements:

- Roof replacements (continuation)

Water Pumping Stations improvements:

- Roof replacements at Allen (continuation)
- Elevator modernization at Allen (design)
- Water Lab upgrades



Energy Innovation

In 2018 during a company-wide reorganization, MLGW added a new division called Strategic Planning, Innovation and Analytics. Among many of its focuses is energy innovation.

Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG)

In 2018, MLGW saw **\$6.2 million** in liquefied natural gas sales revenue. By generating a nontraditional revenue fuel source, it helps keep our utility rates low. On average, MLGW sells more than a half million gallons of LNG per month.

LNG is natural gas that has been liquefied and chilled at extremely low temperatures for easier transport and storage. United Parcel Service ranks as MLGW's top LNG customer and buys the alternative fuel for its over-the-road delivery fleet. Using LNG to fuel vehicles reduces greenhouse gas emissions by 30 to 40%.

MLGW also uses LNG to supplement its natural gas supplies. If temperatures drop to subfreezing conditions and demand for gas spikes in Memphis, MLGW can tap into its 12 million-gallon LNG reserve tank.



In addition to LNG, MLGW sells 100% renewable Compressed Natural Gas (CNG) at our two public gas stations. Regional haulers, buses, taxis and garbage and delivery trucks use CNG. CNG reduces greenhouse gas emissions by 20 to 30% less than diesel. In 2018, MLGW distributed over **200,000 gasoline gallon equivalent (GGEs)** of CNG.

Renewable Natural Gas

At the Republic Services North Shelby Landfill in Millington, a partnership between MLGW and Aria Energy is turning discarded waste into an energy source. MLGW is adding about **\$250,000** annually to its budget because of the unique partnership.

Over time as buried trash decays, methane gas and carbon dioxide builds up underground. Aria Energy harnesses and converts the methane gas into a renewable energy. MLGW provides the pipeline to transport the gas to customers.

2018 Recycling and Reuse

Paper: MLGW recycled 261,800 pounds of paper. It is the equivalent of reducing 816 metric tons of CO₂e – or eliminating the greenhouse gases from 173 cars driven in a year – or reducing carbon dioxide emissions from 142 homes' electricity use in a year.

Printer ink and toner cartridges: 1,438 pounds were reused and recycled with MLGW's office supply vendor and cartridge recycler Guy Brown.

Materials exchange

Rather than toss it, MLGW started an internal materials exchange program in 2015. By promoting the benefits of reusing materials, MLGW has reduced the amount it sends to the landfill. What one department classifies as surplus may be reusable in another department. As of 2018, departments exchanged over **40 items** such as office products and construction materials. The exchanges diverted **90 pounds** of materials from the landfill and into useful purposes.



Green & Sustainable grounds

Erosion control: MLGW maintains its grounds through care and sustainable practices. Erosion control prevents the development of ruts and washed-out areas that are typically caused by rain, wind or vehicles. Eroded areas are refilled with reused soil, and silt fences are installed on banks or berms before trees are planted. These preventative measures insure that MLGW's properties are well maintained.

Sustainable plant material and maintenance practices: Much of MLGW's plants need minimal watering and are often native to the area. Perennials also are used in some cases to avoid replanting every year. MLGW uses Zoysia and Bermuda grass varieties as both thrive in this region. Our mowers recycle grass clippings into compost or mulch.

Integrated pest management practices are also used to treat plant material only when necessary. Pests are monitored and identified accurately, so that appropriate control decisions can be made in conjunction with action thresholds. MLGW also uses the newest and safest chemical technology.

Sustainable products: MLGW uses recycled paper products to clean and stock its restroom and kitchen areas. Environment-friendly products are also used to remove ice on parking lots and sidewalks.

Employee awareness

MLGW educates employees on the importance of saving resources while at work by promoting green campaigns such as: Fix Water Leaks Month (March), Earth Day (April), Energy Awareness Month (October) and America Recycles Day (November). Throughout the year, these initiatives provide tips on how to wisely use resources at MLGW facilities. Also, we remind our workers on how to help the company save energy during after-hours and holidays.

Diversity in Business

MLGW recognizes the power of diversity and the vast resource a diverse pool of suppliers and contractors offers businesses. The Supplier Diversity program demonstrates MLGW's intentional focus on creating opportunities for demographics that have been traditionally underrepresented in business.

Supplier Diversity

Its mission is to foster economic parity within the Memphis and Shelby County community. This program maximizes opportunities for certified businesses as a partner in the buyer-seller relationship with MLGW.

MLGW bases its diversity spending on independent certification that businesses are at least 51 percent owned, controlled, operated and managed by a person or persons who represent one of the three business classifications outlined in the program definition.

In 2018, MLGW reported a total of **\$192 million** in year-end spending with roughly **\$66 million** going to minority, women and locally-owned small businesses. Broken down, MLGW spent:

- **\$33.9 million** – or **18%** – for **minority-owned**
- **\$10 million** – or **5%** – for **women-owned**
- **\$22.3 million** – or **12%** – for **locally-owned enterprises**

Vendor Fair

When MLGW hosts its Vendor Fair, we give guidance to business owners who may be unfamiliar with our bidding process. We invite representatives of local small businesses and minority- and women-owned enterprises to attend and learn how to do business with us. The business owners meet one-on-one with our project managers and purchasing professionals. The Vendor Fair allows business owners to understand the Division's utility needs and compete for a part of what we buy during the year.



Sheltered Market

We want to help local small businesses grow. That is why five years ago in 2014, we rolled out the Sheltered Market program. The race and gender neutral program “shelters” any purchase under \$100,000 by offering three or more certified local small businesses the chance to bid on our products or services.

In 2018, we spent **\$11.9 million** with local small businesses. Programs such as our Sheltered Market are essential in promoting a healthy local economy.

Community Education

At MLGW, we believe that a sound educational system is the foundation for a healthy community. As a result, we offer a number of programs to support students, teachers and the community at large. For more information about these programs, call 528-4820.

Community Conservation Days

Our Residential Services department hosts a number of conversation education events throughout Memphis and Shelby County. Our staff travels to all of our MLGW community offices, libraries, museums, colleges and community centers. They provide our customers with energy efficiency kits as well as offer tips on how to save energy.

EnergySmart Memphis

MLGW, in partnership with TVA, provides free, 90-minute EnergySmart Memphis workshops. Trainers discuss common household energy problems, lead hands-on demonstration of weatherization measures and review basic strategies in managing energy costs.



Attendees receive energy kits with compact fluorescent bulbs, a caulk gun, caulking, plastic window covering, gasket insulator and other energy-saving items. The kit is valued at \$100. Once all of the items are installed, customers can potentially save up to 116 kWh annually.

Collectively, our energy kit recipients are saving a potential of 627,199 kWh of electricity.

Gas safety days

At least once or twice annually, Gas Engineering staffers and MLGW employees volunteer to set up informational tables at local Lowe's Home Improvement stores to educate the public about natural gas safety. They talk with customers about why it's important to "Call 811 Before You Dig." If customers are hiring someone to dig, excavate or landscape, the contractor needs to call 811 three days before starting to have underground utilities marked to avoid accidents or explosions.

The volunteers also offer information about what to do if you smell a gas leak, what visual signs indicate an underground gas leak, gas appliance safety and more. With a plethora of recent natural gas explosions around the country – some involving fatalities – this is important information to share with residents of Memphis and Shelby County.

Neighborhood Leaders Conference

Neighborhoods and Government: Partners in Progress served as the 2018 theme for the Neighborhood Leaders Conference in August. The annual event gave about **140 neighborhood leaders** information about the local planning process, trash collection, crime reduction and the Neighborhood Protection Act. In addition, Memphis Mayor Jim Strickland and MLGW President and CEO J.T. Young spoke at the conference.

Zoom. Zoom. It's the A-Blazing Race

Who has the fastest miniature car powered by solar energy?

In 2018, Middle College captured the honor for the high school category and Kate Bond Middle whizzed past the competition for the middle school top award.

The A-Blazing Race promotes MLGW's interest in solar energy and engages youth in grades six through twelve in the design and construction of model solar cars while also introducing children to different engineering-related professions.

The object of the race is to design and build a vehicle that is powered strictly by solar power to compete in races with other similar cars. Students also compete in a design competition.

Students from 30 public, private and charter schools made up 48 teams who competed to see whose solar cars were the fastest, who came up with the best notebook and the best design work for their projects. The best notebook honors went to East High and Lausanne Collegiate. Lausanne also won best design among the high school teams and Memphis Business Academy won best design among the middle school teams.

The MLGW A-Blazing Race is a part of E-Day (Engineering Day) hosted by the University of Memphis' Herff College of Engineering.



Robotics Showcase

Nine schools joined in the fun for the 2018 Robotics Showcase hosted by MLGW and the Tennessee Valley Authority. The event gave students the chance to demonstrate their creativity and engineering skills in October. Their robotics and LEGO creations were outstanding and one of the ways we are encouraging the next generation of Science, Technology, Engineering and Math (STEM) workers.

Annual MLGW art poster contest

Each year, MLGW holds an annual poster contest for students throughout Shelby County. In 2018, we focused on gas safety awareness with the introduction of a new Power League Super Hero: The Blue Flame. In gas, a blue flame is a safe flame. Gas appliances should have a clear steady blue flame. The winners and their art teachers won \$150 gift cards to The Art Center. The 2018 winners:

K-2 Grade Student: Tiera Wren, 2nd Grade, KIPP Memphis Academy Elementary

3-5 Grade Student: Romey Walkley, 5th Grade, Snowden School

6-8 Grade Student: Julian Ward, 6th Grade, Grizzlies Preparatory Charter School

9-12 Grade Student: Jaylen Mark, 9th Grade, Central High School



L to R: Julian Ward, Tiera Wren and Romey Walkley are the Blue Flame winners. Not pictured is Jaylen Mark.

Terminator, Conservation Girl and Energy Vampire

The Terminator, Conservation Girl and the Energy Vampire entertain while educating our youngest energy users.

The fun and colorful Terminator bucket truck promotes safe energy use at home. At other events, a flashy SUV with energy tips acts as a backdrop as Conservation Girl's ride as she battles the Energy Vampire.

All the characters play important roles as energy superheroes and/or villains during school events, career day outings as well as local holiday community parades. In 2018, our employees participated in 23 Terminator, Conservation Girl or Energy Vampire appearances and **three** holiday parades.



Community Assistance

Because of the high level of poverty in our community, our customers face daily challenges with basic needs. MLGW offers several programs to help those who need a helping hand. It ranges from one-time events to long-term programs to help our customers get back on track.

Power of Warmth & Play It Cool

For many of us, turning up the thermostat on a cold winter night is a luxury we take for granted. For those on a limited income, a space heater or an electric blanket offers a reprieve from Old Man Winter. Through MLGW's Power of Warmth and in partnership with the Neighborhood Christian Center, employees handed out **183** space heaters and blankets to low-income seniors and disabled customers. As one of our recipients said, "I need it. These old knees need it."

During the summer, we joined forces again with the Neighborhood Christian Center for two Play It Cool events. We donated **168** window air-conditioner units to low-income seniors and disabled customers.



On Track

On Track helps residential customers with limited incomes manage debt and pay off their utility bills over a period of time. The program focuses on weatherization, financial management and social services. Among the **532** applications for the On Track program, **312** customers enrolled. Our On Track team held a **dozen** orientations to help our customers get back "On Track" with their bills through energy efficiency and financial management education and access to additional social service resources.



Plus-1

Founded in 1982, Plus-1 is a partnership with MIFA and MLGW. The program provides one-time assistance for individuals and families hit with an unexpected financial crisis like the loss of income, a fire or theft. The program is not an ongoing source of assistance. Customers can choose to add a dollar or more to their monthly bill to support families in need.

In 2018, almost **\$376,000** was contributed to help our customers.

One of our biggest supporters has been former Memphis Grizzlies forward Zach Randolph. Even after he left Memphis, Z-Bo showed his love by continuing his annual **\$20,000** donation to the Plus-1 program. His gift alone providing utility payments to **100** Memphis-area households.



Throughout the year MLGW represents our community. MLGW employees and volunteers participated in:

- 95-plus community, school and civic speaking engagements
- 76 school events
- 22 water tours
- 10 MLGW in Neighborhoods Everywhere (MINE) Green Families events
- 3 Holiday parades

Share the Pennies Home Weatherization Program

Share the Pennies is a voluntary program that provides weatherization grants for low-income homeowners. The program allows customers to round up their utility bill to the next highest dollar amount. Collectively, that small amount adds up to big changes in our community. Some examples of eligible program repairs are air sealing, attic insulation, window replacement, duct work and HVAC repair/replacement.

In 2018, over **\$1.4 million** was donated to the program and with additional funding from TVA, **129** homeowners received weatherization and energy-efficiency repairs.



Visit mifa.org/sharethepennies for more information about program eligibility guidelines and eligible repairs.

Energy Doctor & Rental Rescue

Whether you own your home or rent one, MLGW can help. We offer free energy audits for both homeowners and renters. Homeowners can go to mlgw.com/energydoctor. Renters can go to mlgw.com/rentalrescue.



The Memphis City Council adopted the rental housing energy efficiency ordinance in 2009. It allows MLGW to inspect rental properties that have been identified for excessive energy usage. MLGW Residential Service Technicians look for energy-wasting issues such as holes in exterior walls and roofs, leaks, insulation problems and non-functional heating or cooling units.

We ensure that minimum energy-efficiency standards are met by the landlord. If necessary, MLGW can take the landlord to Environmental Court if issues are not addressed. Since its inception, all landlords have complied before any issue was taken to court. To schedule a home audit, go online or call and leave a message at 322-5757.



Volunteering & Giving

By working together, MLGW employees are always eager to give back to the communities we serve. Their devotion shows by the number of hours we log after work and on weekends as well as the money we raise for a variety of local organizations.

United Way

MLGW employees organize and take part in numerous activities throughout the year to raise funds for the United Way of the Mid-South. As a large company, we are consistently in the top six for per capita donations to United Way of the Mid-South. **One hundred percent** of all MLGW contributions come from employee donations or fundraisers. Each year, MLGW employees also volunteer for United Way's Week of Caring where we serve local non-profits with our labor.

During the Second Annual United Way Best of the Best awards, MLGW took home two awards within the large company category. MLGW won for Best Team Effort because **83%** of our workforce gave to United Way during the 2018-19 campaign. Also, we won for Best Campaign Climber when donations rose by almost **7%** from the prior campaign.

In 2018, MLGW employees raised **\$612,323** for United Way. Events in 2018 included:

- The MLGW United Way Golf Tournament is the single largest fundraiser for the agency's eight-county region with **\$19,800** raised.
- MLGW 'Rip the Runway' charity fashion show with **\$7,022** raised.
- Park Like an Executive, where employees bid for a week of premium workplace parking.





L to R: MLGW Mid-South Food Bank co-chairwoman Liz Williams, executive sponsor Cliff DeBerry Jr., Mid-South Food Bank President & CEO Estella Mayhue-Greer, MLGW President & CEO J.T. Young and MLGW Board Chairman Steven Wishnia. The Mid-South Food Bank recognized MLGW for its **\$41,300** donation from employees. Not pictured is co-chairwoman Sharika Hollingsworth.

Operation Feed

Each year, employees participate in the Mid-South Food Bank's "Operation Feed the Need" campaign. In August, MLGW and TVA partnered together. Employees from both sorted canned food donations and prepared boxes for needy families at the Mid-South Food Bank's warehouse.

In 2018, MLGW employees donated **\$41,300** to Operation Feed.

Walking, Riding & Raising Funds for Local Charities

MLGW has an active group of employees and retirees who put their energy to good use, joining in walks and cycling events to raise money for a number of charities.

During Customer Service Week, organizers held its first Community Service Day in 2018. About **200** volunteers and retirees fanned out across the Riverview/Kansas area in South Memphis. They made minor energy repairs, trimmed bushes and yards at about **20** homes and delivered energy kits door-to-door.

MLGW workers saw another need and decided to help. Because some girls are forced to miss school for the lack of feminine hygiene products, MLGW started a local drive to keep girls in class. MLGW, the Council of Administrative Professionals and local chapters of Eastern Star collected over **34,000** feminine hygiene products for Shelby County Schools.

In 2018, MLGW workers also participated in the Junior Achievement's Bowlin' on the River, March of Dimes' March for Babies, Glynis Cancer Foundation's Walk on the Riverfront, American Heart Association's Heart Walk, National Kidney Foundation's Kidney Walk, Otis L. Sanford "Bowl for HER" Bowl-a-Thon for Her Faith Ministries, Mid-South Transplant Foundation's Ride for Life, Salvation Army bell ringers, Salvation Army Angels where gifts for **60** children and seniors were collected, Fishing Rodeo, Vitalant's local blood drives and more!

