



Powering the Community

2014 Green Initiatives and Community Report



MLGW 2014 Green Initiatives Report

Powering the Community

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Message from the President

MLGW President and CEO Jerry Collins Jr.



For three quarters of a century, Memphis Light, Gas and Water has provided reliable power, natural gas and drinking water. In 2014, we celebrated this milestone anniversary, 75 years as a leading utility provider to the residents of Memphis and Shelby County.

MLGW began operating as the city's first utility company in 1939. We are now the nation's largest three-service municipal utility with some of the lowest combined bills of any utility in the country.

Our business goes well beyond providing power. This Green Initiatives and Community Report highlights our social and economic responsibility to improve the community we serve by participating in community-based activities and offering customer programs and internal processes designed to increase energy efficiency and environmental awareness, reduce energy waste and improve air quality through lower power generation emissions.

Many took note of MLGW's efforts as an employer, a corporate neighbor and an industry leader in 2014. MLGW was recognized by the Tennessee Society of Professional Engineers as an Outstanding Employer; Tennessee Municipal Electric Power Association awarded MLGW the Community Service Award; American Public Gas Association gave us their SOAR Award for operations excellence; and Security Magazine named us one of the top 30 utilities for data security.

We are committed to serving the area where our employees live and work to make it a better place. I am proud to work with more than 2,700 employees that have given their time, resources and funds to organizations that improve the quality of life for all Shelby County residents.

Jerry R. Collins Jr.

About MLGW

MLGW is the nation's largest three-service municipal utility. Since 1939, MLGW has met the needs of Memphis and Shelby County residents by delivering reliable and affordable electric, natural gas and water services.

Electricity is supplied to MLGW by the Tennessee Valley Authority (TVA), while natural gas is purchased from a variety of suppliers and transported by three pipeline companies—Texas Gas Transmission Corporation, Trunkline Gas Company and ANR Pipeline Company. Memphis receives its water from one of the largest artesian water systems in the world located beneath the city.

MLGW is led by a President and a five-member Board of Commissioners who are appointed by the Mayor of Memphis and approved by the Memphis City Council.

Our Mission: To improve the quality of life for all Memphis and Shelby County customers through the efficient and safe delivery of electricity, natural gas and water.

Vision: To be the best utility for our customers.

Values: Customers-Safety-Trust-Employees

Powering Learning & Education

Powering Learning and Education

At MLGW, we believe that a sound educational system is the foundation for a healthy community. Therefore, we offer a number of programs to support students, teachers and the community at large in being safe and successful.

Conservation Days and Community Conservation Days

During 2014, MLGW's Residential Services hosted 44 events at various locations throughout the City of Memphis and Shelby County. These events were held at MLGW Community Offices, libraries,



museums, colleges and community centers. MLGW employees and volunteers set up informational tables and provided attendees with energy efficiency and energy conservation tips.

Attendees also received free energy efficiency kits which contained a compact fluorescent light bulb, outlet switch covers and a faucet aerator. Customers can potentially save up to 58 kWh per year if they install all of these items. More than 5,000 energy efficiency kits were distributed in 2014, representing potential electricity savings of over 290,000 kilowatt-hours (kWh).

Call 901-528-4188 for a list of upcoming Community Conservation Days.

MLGW Goes to School encourages students in Shelby County Schools to explore career opportunities in the utility business. Students become familiar with the study and training needed to prepare themselves for careers in the utility industry.

MLGW's "**Here's How**" is a video series that covers issues such as energy conservation, safety and much more. Visit www.mlgw.com/hereshow to view videos that can help you save energy and money on your utility bill.

MLGW successfully completed its second **A-Blazing Race**, a model solar car race for children in third through eighth grades. The race was held Saturday, August 16 at MLGW's Beale Street Landing parking garage rooftop. The goal of the race is to promote MLGW's interest in solar energy and to challenge children to use scientific know-how, creative thinking, experimentation and teamwork to design and build high-performance model solar vehicles. MLGW provided kits containing a solar panel and motor. Using any other materials, the competitors designed and built a solar powered vehicle that will race on a 20-meter race course. In preparation for the competition, MLGW offered an A-Blazing Race Engineering workshop.

For more information visit www.mlgw.com/community/ablaze.



The 2014 winner of the A-Blazing race, "Cookie Monster" team from Girl Scout Troop 10103.

Memphis Light, Gas and Water participates in an array of fairs and exhibitions in the Memphis and Shelby County area. Through participation in **Community Fairs and Exhibits**, MLGW is able to heighten the awareness in the community about utilities as well as talk with customers about their concerns. Southern Women's Show, U of M Housing Fair, Africa in April, Bridge Builders Eco Fairs, Shelby Farms Summer Concert Series, A Day of Merrymaking in Overton Park, Earth Day at St. Jude, Earth Day at ALSAC, Senior Expo, Sisterhood Showcase, Juneteenth Festival, Delta Fair, Stone Soul Picnic, Memphis Black Expo and Senior Safari are just a few of the events MLGW participates in each year.



Water quality, residential safety and energy conservation information was offered to students and game attendants during the Redbirds Education Day at AutoZone Park.



MLGW, through a partnership with TVA and the City of Memphis and Shelby County governments, provides free, 90-minute workshops that provide an overview of energy efficiency information, hands-on demonstrations and detailed training on how to make residential energy efficiency improvements. **EnergySmart Memphis** trainers

discuss common household energy problems, demonstrate weatherization measures and review basic strategies to manage energy costs.

Attendees receive a large EnergySmart Memphis kit (\$45 value) that contains compact fluorescent bulbs, a caulk gun, caulk, plastic window covering, gasket insulators and other energy-saving items. Customers can potentially save up to 116 kWh per year if they install all of the items in the kit.

MLGW conducted 57 EnergySmart Memphis workshops in 2014. More than 470 kits were distributed at the workshops, representing potential savings of over 54,000 kWh.

To host a workshop, please call 528-4188.

October is National Energy Awareness Month and Memphis Light, Gas and Water Division sponsors the annual **Energy Awareness Month Poster Contest** for Shelby County students. The theme of the contest is Energy Awareness and Energy Conservation. Students learn about energy savings and share their ideas through poster entries. Eighty-nine students from schools within Shelby County submitted art for the 2014 contest.

If you are looking for a speaker for your classroom, community group, church or civic organization checkout MLGW's **Speakers Bureau**, where representatives are available to speak on a variety of utility related topics such as energy conservation, safety, careers and more. Visit www.mlgw.com/community/schoolenrichment to complete the speaker request form.



Energy Awareness Month Poster Contest judges smile with the winning posters.

At MLGW we consistently promote natural gas safety. During **Gas Safety Days**, Gas Engineering employees arrange display tables at several locations to provide information on gas safety, which is especially relevant in the springtime, when many homeowners and contractors engage in digging, excavating, landscaping and gardening, and construction projects. They also provide information about Tennessee One Call, the national 811 safe digging hotline and the “Call before You Dig” law.

The **Neighborhood Leaders Conference** held on August 1, 2014 and hosted by MLGW was a success. The conference is an annual event geared towards providing workshops and networking opportunities for neighborhood leaders. Participants acquired information and resources to better equip them in supporting and building their neighborhoods, particularly through artistic expression and collaboration. From learning more about city budgeting to witnessing the impact of performing arts on the city’s youth, attendees walked away with a myriad of tools to better empower Memphis communities.



During the 2014 Neighborhood Leaders Conference, participants learned ways to transform neighborhoods through the arts with workshops and networking opportunities for neighborhood leaders.

Powering Conservation

Powering Conservation

Federal Energy Efficiency and Conservation Block Grant

Through the 2009 American Recovery and Reinvestment Act, the U.S. Department of Energy's Energy Efficiency and Conservation Block Grant (EECBG) provided \$3.2 billion in grant money to local communities to develop energy efficiency and conservation projects. This represented the largest nationwide direct investment in energy efficiency and renewable energy technologies at the community level in U.S. history.

MLGW received a \$5 million EECBG with the purpose of creating energy savings by providing weatherization and energy efficiency improvements for low-income residents of Shelby County. MLGW's program was implemented between the fall of 2010 through the spring of 2013. MLGW's program provided 889 customers with an average of \$4,267 in energy efficiency and weatherization measures. An additional 850 customers received new, programmable thermostats (average installed cost \$150).

A detailed savings analysis on the program was conducted in 2015 and revealed the following savings:

Block Grant Recipients

- Electric savings \$88 – \$244 per year
- Gas savings \$85 – \$261 per year

Programmable Thermostat Recipients

- Overall savings \$101 per year

eScore

eScore is an energy-efficiency program from TVA and MLGW. The program gives customers a way to identify a home's energy efficiency level based on a rating from 1 – 10 with 10 being the most energy efficient. First, homeowners must register to participate and then have two options to start with the program:

- Identify a TVA Quality Contractor Network (QCN) member and begin energy-efficiency improvements right away. The QCN member will discuss options, rebates and program details with the homeowner.

Or –

- Request an eScore evaluation to determine how to make a home more energy efficient. A professional energy advisor will provide a list of recommended improvements. Then, select a QCN member to begin the desired improvements.



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 all qualified energy-efficiency upgrades
- Photos of evaluated areas
- Instant-saving measures installed at the time of the home evaluation

For additional information, program details, restrictions or to register, visit www.2eScore.com or call 1-855-2eScore (1-855-237-2673).

On Track, a payment program provided by MLGW, provides energy and financial information to customers in need of help. By joining the program and working together with MLGW staff, customers can get back “On Track” with their bills.

On Track is designed to help residential customers with limited incomes manage debt and pay off their bills over a period of time. The program focuses on education, financial management and social services.

For more information, visit www.mlgw.com/ontrack.

Project CARE

Project CARE is an energy-efficiency/weatherization program administered by MLGW in conjunction with MIFA. The program is designed to help the elderly, disabled and/or people undergoing critical medical care by providing a \$1,500 grant for minor home repairs to reduce energy consumption. Repair work includes sealing the building envelope of the home, providing proper levels of insulation and addressing water and/or gas leaks.

To date, Project CARE has provided more than \$145,000 in repair work and assisted over 170 neighbors in the community. Preliminary analysis reveals that Project CARE recipients with at least one year of pre- and post-installation consumption data saved 6.2 percent on their electric bills and 3.8 percent on their gas bills when compared to a control group.

To apply for Project CARE assistance, please call 901-528-4188.

Applicants must be 60 years or older and/or disabled or undergoing critical medical care. Household income cannot exceed \$32,000 per year and all property taxes must be current.



Rental Housing Energy Efficiency Ordinance

The City of Memphis ordinance (Memphis Housing Code section 48-133) adopted in 2009 allows MLGW to inspect rental properties that have been identified for excessive energy usage. MLGW Residential Service Technicians will look for a number of energy-wasting issues such as holes in

exterior walls, holes in the roof, water leaks, insulation problems and broken window panes as well as non-functional heating or cooling units. MLGW will ensure that minimum energy-efficiency standards are met and if necessary, take the landlord to Environmental Court if the energy-related issues are not addressed within a reasonable amount of time.

In 2014, MLGW inspected more than 140 rental properties. All landlords have complied and brought their properties up to the Rental Ordinance standard.

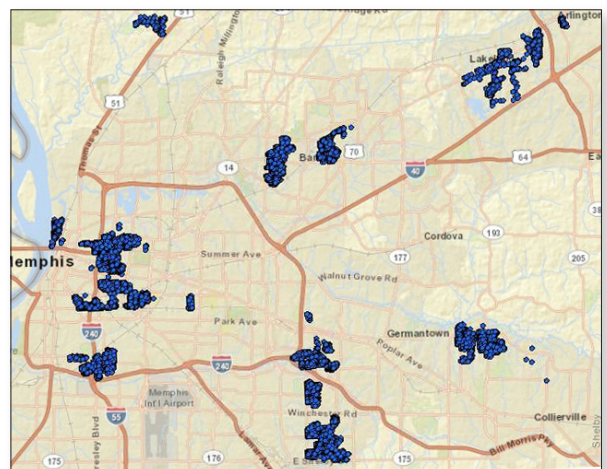
For more information or to schedule a Rental Ordinance inspection, call 901-322-5757.

Smart Meters

In 2014, MLGW installed smart meters at approximately 24,000 homes in phase 1 of the smart meter deployment plan. MLGW meters were replaced with smart electric, gas and water models, enabling MLGW to communicate with meters on a daily basis, instead of sending a Meter Reader to each property to collect consumption data once a month.

Highlights:

- Excellent remote meter-reading results mean customers can keep gates locked and pets safely outdoors on meter reading day.
- Customers with smart meters can access their previous day's electricity, gas and water usage online through My Account at www.mlgw.com. Customers can review the data and recall what activities occurred or what appliances and equipment may have operated to see the usage impact and to identify opportunities to save.
- Electric smart meters have voltage sensors to alert MLGW to potential problems before they may be apparent to customers.
- Electric smart meters have sensors to determine if the meter has been removed or tampered with, enabling MLGW to investigate utility theft much faster and to remotely disconnect electric service so illegal reconnecting will not take place. As a result, utility theft has decreased since smart meters have been installed.
- Water smart meters feature a leak detection capability, enabling MLGW to notify customers of emerging problems. Approximately one-third of water smart meters have identified potential leaks thus far, giving customers the opportunity to save on water and sewer costs after making repairs.
- Less than four percent of customers in phase 1 smart meter zones opted out, meaning that most customers found benefits from smart meters.



Areas where smart meters were installed at residences in 2014.

For more information, visit www.mlgw.com/smartgrid.

My Account (residential)

MLGW's My Account web service continues to attract an average 81,000 customers per month who login to see information about their bill, usage, payments and more. Customers used My Account more than 2 million times in 2014, viewing 10 million pages of content to analyze bill changes, see billing history and learn about energy-saving opportunities for their homes. My Account also provides the ability to view bills and pay bills electronically, and enables customers to enroll in paperless eBilling.

Among these My Account users, more than 1,500 qualified in 2014 to receive a free TVA energy kit, including common household items to start saving energy immediately. To receive their kit, customers logged into My Account at www.mlgw.com, clicked the tab labeled My Home Energy Advisor and then completed (and saved!) at least one category in the Energy Profile. (Since this promotion began in 2008, nearly 35,000 customers have received an energy kit. Have you?)

The screenshot shows the 'Energy Profile' form in a web browser. The form is titled 'Energy Profile' and includes a sub-header 'Family Saver Action Plan member since July 2013'. It contains several sections for inputting home information: 'Your Home', 'Major Appliances', 'Heating & Cooling', 'Lighting & Home Electronics', 'Insulation, Windows, Doors', and 'Water Heating & Water Use'. The 'Water Heating & Water Use' section is expanded, showing fields for 'Water heater' (Gas), 'Shower' (Normal flow), 'Lawn Size (square feet)' (1,500-4,500), 'Faucets (leaky)' (1), 'Toilets - leaking (count)' (0), and 'Garden Size (square feet)' (<1,500). A 'Save' button is at the bottom of the form.

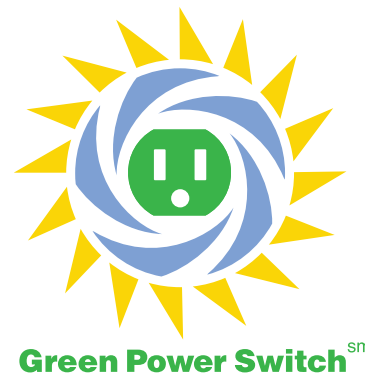


Fact: About 20 percent of MLGW customers login to My Account in any given month to see information about their usage, pay their bill electronically or find ways to save electricity, gas and water. Have you visited My Account lately?

Renewable Generation

Green Power Switch

MLGW participated in TVA's spring direct mail campaign to recruit Green Power Switch participants. The campaign produced significant results, with more than 100 new local subscribers, bringing MLGW's 2014 Green Power Switch statistics to 1,576 participants, helping offset earlier declines attributed to the economy.



These customers sponsored 51,615 blocks of green power in 2014, which equals 7.7 million kWh of generation—enough to meet the annual electricity needs of 516 average Shelby County households. The environmental impact of this renewable generation commitment is equivalent to: recycling 33 million aluminum cans, or planting 2,151 acres of trees, or recycling 1,899 tons of newspaper, or removing 717 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: 5,791 tons of carbon dioxide (CO₂), 39 tons of nitrogen oxides (NO_x) and 15 tons of sulfur dioxide (SO₂) each year.

The following businesses participate in Green Power Switch and are recognized on both MLGW's and TVA's websites for their commitment to renewable power:

- Askew Nixon Ferguson Architects
- Rhodes College
- Cloverleaf Animal Clinic
- River Inn at Harbor Town Landing
- EnSafe Inc.
- Shelby Farms Park Conservancy
- GG Lutherie
- State of Tennessee Department of Environment & Conservation (T.O. Fuller and Shelby Forest parks)
- Haizlip Firm
- Superior Carriers
- Jabberblabber Inc.
- The Daily News
- Kele, Inc.
- Village at Cypresswood
- Memphis Light, Gas and Water
- Westmoreland Cabinetry
- Midtown Yoga
- New Tech Packaging

Green Power Switch information is available at: www.mlgw.com/greenpower. TVA has a great calculator that illustrates Green Power Switch purchases as a percentage of your household electricity use, as well as showing the environmental impact of your support. Check it out at: www.tva.com/greenpowerswitch.

Green Power Providers

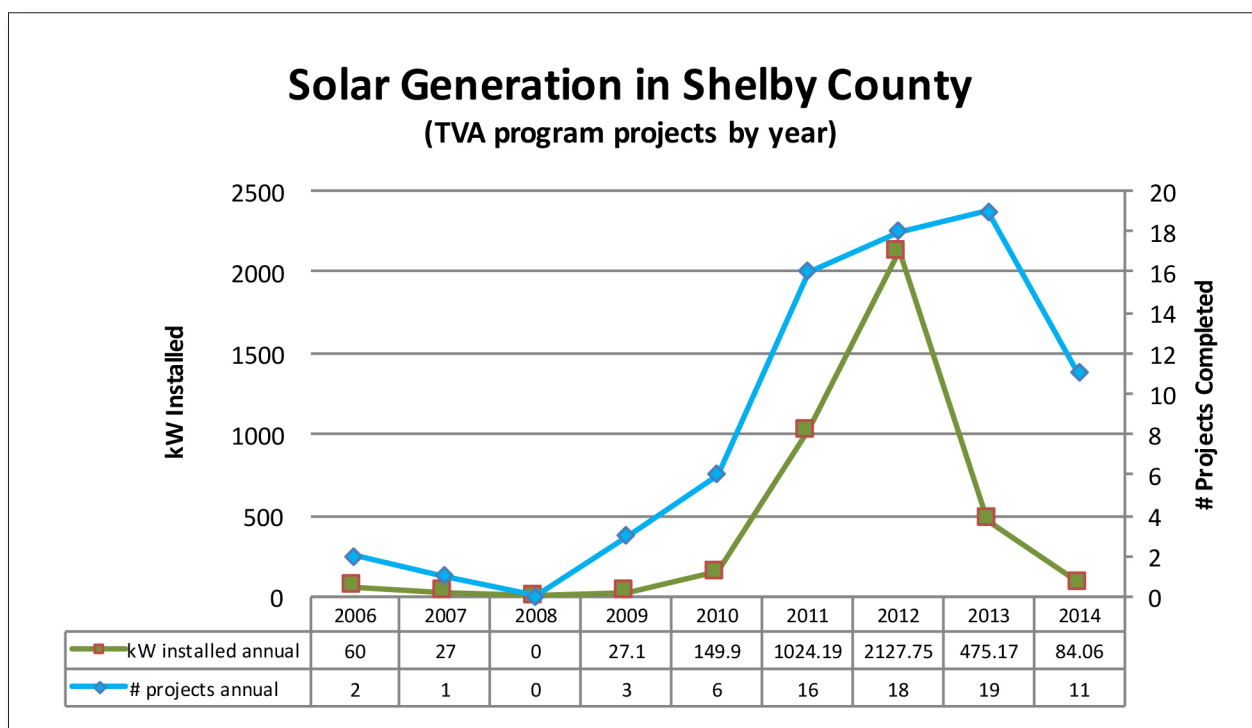
Nine MLGW customers completed new solar installations in 2014, along with two residential customers who expanded existing solar arrays. These activities brought total solar generation capacity through the Green Power Providers program (previously called Generation Partners) to 3,975 kW.

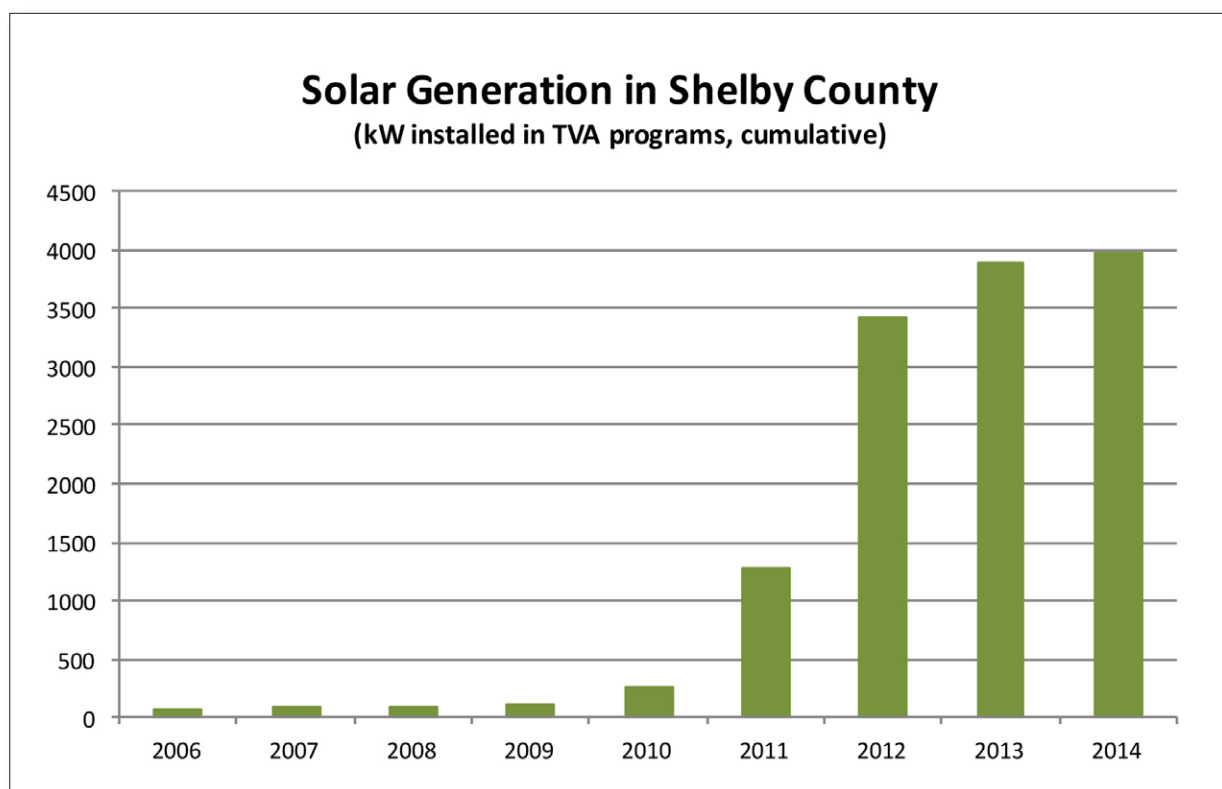
Program Highlights:

- As of December 31, 2014, there are 76 MLGW customers generating solar power to sell to TVA. Of those customers, 46 percent are residential and 54 percent are businesses or organizations.
- These systems can generate nearly 5 million kilowatt-hours (kWh) of solar power each year. That's enough to meet the annual electricity needs of 330 average homes served by MLGW.
- Customers participating in Green Power Providers sell 100 percent of their generation to TVA under a 20-year agreement. They are paid the retail rate for electricity. In addition, they receive a premium for the first 10 years of the agreement. Customers who executed agreements in 2014 receive a \$0.04 premium above the retail rate. The premium is expected to decline for customers who execute agreements later.

Green Power Providers has shown significant growth since 2006, when the first two solar installations were completed, totaling 60 kW of generation capacity.

The 30 percent federal solar investment tax credit that has spurred solar development in the United States will expire on December 31, 2016 for residential installations and fall to 10 percent for business installations. Details: <http://www.seia.org/policy/finance-tax/solar-investment-tax-credit>.

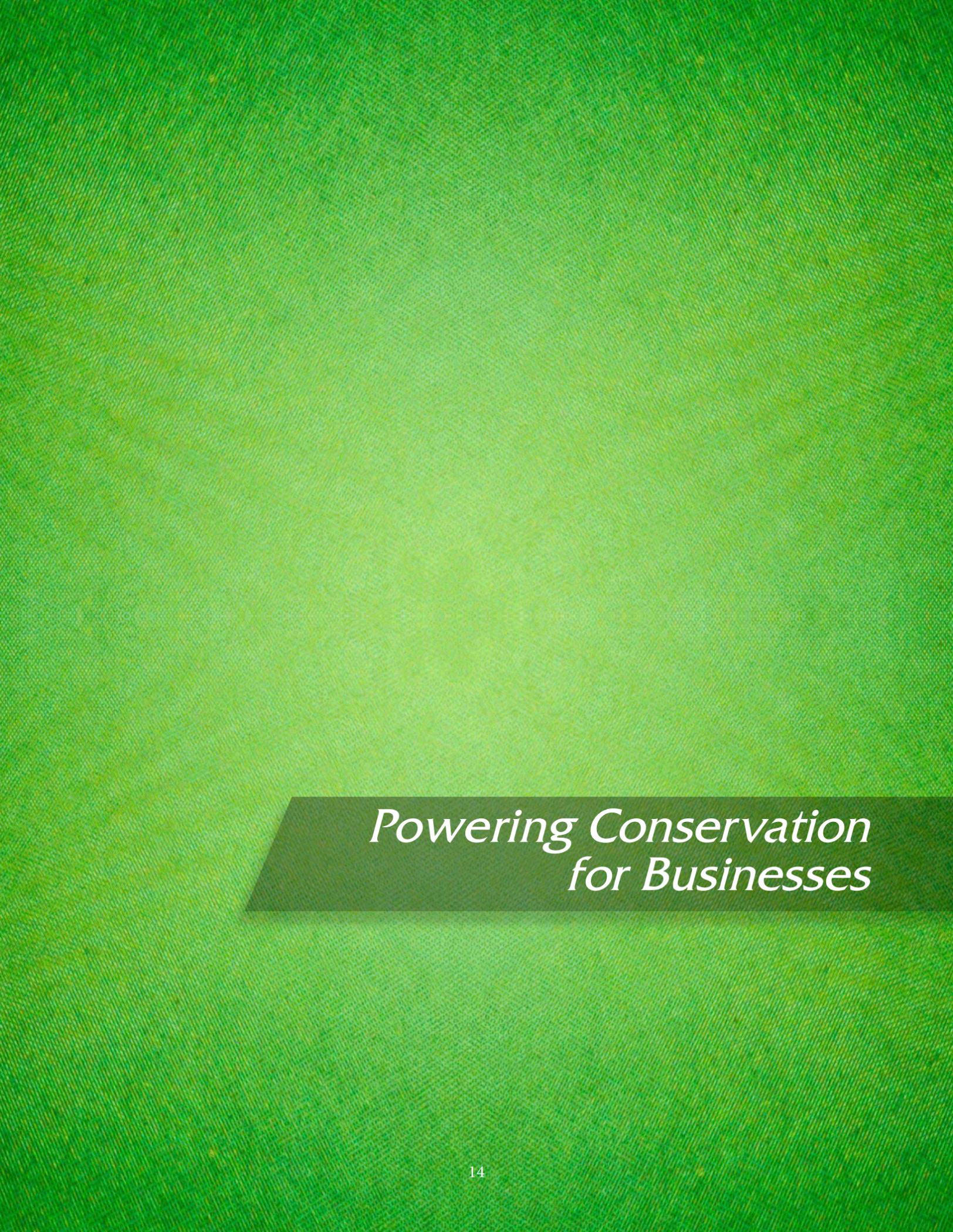




Renewable Standard Offer

Green power generation projects above 50 kW and up to 20 MW are eligible for TVA's Renewable Standard Offer, which allows customers—as well as third-party generators/developers—to install and sell their generation to TVA under long-term contracts at set market prices. For this program, parties submit the application to and get approval from TVA, with MLGW involved only in the interconnection. TVA reads the generation meter remotely and pays the incentive directly to the generator.

There are four completed RSO solar projects in Shelby County, totaling 607 kW of solar capacity. Information is available at <http://tva.com/renewablestandardoffer/>.



*Powering Conservation
for Businesses*

Powering Conservation for Businesses

Many of the energy conservation efforts targeted for businesses boost the local economy through increased business profitability and increased opportunities for companies in the energy improvement fields. Actions also will slow local peak electric demand, helping TVA control operating expenses and thereby controlling electric rates.

TVA Energy Right Solutions for Business/Industry

Businesses and organizations planning to make energy efficiency upgrades at existing facilities can qualify for incentives through the Energy Right Solutions for Business/Industry programs. TVA helps businesses lower operating costs by providing incentives to encourage the selection of higher efficiency equipment. Incentives are available for qualified lighting, heating and cooling, and business equipment. Learn more at www.energyright.com.

Although the program did not accept new applications in 2014 due to a sizable backlog, 137 previously approved projects for MLGW customers were completed in 2014, earning \$3.5 million in incentives. These local energy efficiency upgrades are projected to save 35 gigawatt-hours (GWh) of electricity—or enough electricity to meet the needs of 2,328 average local households—and reduce nearly seven megawatts (MW) of peak electric load. These consumption and load savings provide value to TVA and MLGW in terms of avoided generation costs and reduced system demand during peak periods, thereby helping keep electric rates low.

Program funding returns to normal levels in 2015. Learn more at www.energyright.com.

TVA EnerNOC Demand Response

The TVA-EnerNOC Demand Response Program recruits and pays businesses and organizations based on their ability and willingness to reduce electric use during requested periods. Each participant received a free demand response audit to identify potential actions, communications to provide real-time electric load details and access to a website for tracking electric load. Participants are paid quarterly based on their agreed-to capacity, whether or not an event is called. They are also paid for each kilowatt (kW) of electric load they reduce during demand response events called by TVA. Learn more at www.mlgw.com/enernoc.



2014 Highlights:

- Nine demand response events were called, representing a total of 32 hours of requested load control. Seven events were in the morning hours, reflecting the overall demand on TVA's system across the Valley where electric heating is more common than it is in Shelby County.
- Four demand response events occurred in January 2014, to help reduce system load due to extremely cold temperatures from the Polar Vortex.
- Participants' ability to achieve their committed load reduction averaged 89 percent, with some events achieving up to 143 percent of the requested reduction.
- Participants earned more than \$500,000 in collective payments for their 2014 results.
- The average event reduced MLGW's system load by 16 MW, or approximately 0.5 percent, illustrating that individual efforts to reduce usage during high-demand periods can add up to a sizable benefit across the region.

TVA Main Street Efficiency

A pilot effort was launched in October 2013 to assist small businesses in upgrading inefficient interior lighting. The pilot, Main Street Efficiency, is sponsored by MLGW and TVA. It funded up to \$1,500 in interior lighting improvements for eligible small businesses and organizations. Focusing on facilities with electric demand of no more than 50 kilowatts, program staff provided a free lighting energy assessment with a report showing how the customer's facility could reduce energy use with specific lighting upgrades, then utilized program contractors to install the lighting and followed up with post-installation visits for quality assurance.



MLGW mailed participant update letters in late 2014, touting the pilot's overall impact on small businesses (see below) and announcing that TVA would continue program funding through September 2015. In addition to direct mail to eligible businesses, word-of-mouth referrals from participants provided a robust group of interested customers for this innovative small business pilot.

Success results (October 1, 2013 – September 30, 2014):

- 2,986 free lighting assessments were conducted, educating business owners and operators on energy-saving opportunities.
- 2,776 facilities received lighting upgrades, benefitting from improved lighting and visual appearance as well as reduced electricity use.
- 16,667,058 kilowatt-hours (kWh) of electricity were saved on an annual basis, a direct savings on utility expenses that will be repeated each year of the equipment's operating life.
- 4,513 kilowatts (kW) of electric demand were reduced, a direct decrease in the amount of electricity TVA must generate or purchase to meet local system power demand.

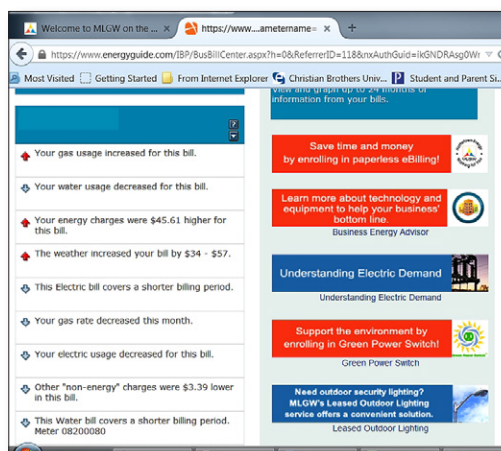
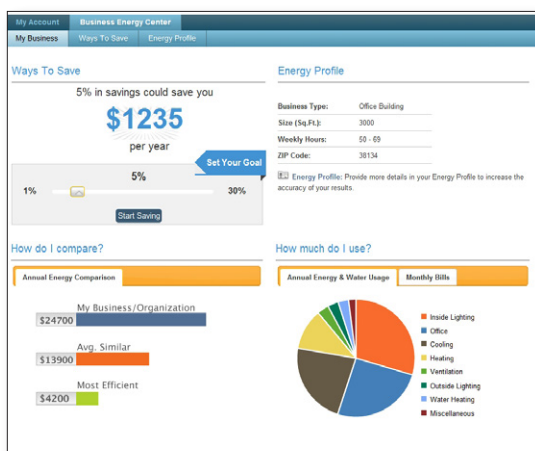
- \$2.8 million was invested by TVA, with \$227,258 paid by customers whose projects exceeded the \$1,500 incentive.
- 25 million pounds of carbon dioxide emissions were avoided, based on annual electricity reductions.

The Main Street Efficiency pilot will continue for a second year, through September 2015. Learn more at www.mlgw.com/mainstreet.

My Account (business)

Businesses and organizations can register and access My Account to view information about their MLGW bills. Up to 24 months of billing history, including consumption and costs, can be viewed, graphed and downloaded. Small to mid-size businesses also have access to bill analysis tools to identify factors that caused bills to change.

Each month, an average 3,000 unique users login to view their commercial account information. In 2014, more than 77,000 user sessions were recorded among businesses and organizations, who viewed more than 500,000 pages of content. One of the main attractions for business customers is the ability to download usage and cost information, which eliminates the need to manually enter data and eliminates the clutter of paper bills.



Energy Edge

Businesses and organizations interested in learning about MLGW programs, incentives, rates and other utility-related topics can subscribe to Energy Edge, our electronic newsletter. Customers can visit <http://mlgw.com/energyedge> to read current and past issues. Subscribe by emailing BusinessSolutionsCenter@mlgw.org to receive an email alert when each issue is posted online.

Powering Service and Giving

Powering Service and Giving

MLGW employees contribute to a wide cross-section of charities in a number of ways. For employees, there is a true sense of pride felt when it comes to community involvement. Whether they are contributing financially for those less fortunate, providing human resources to improve the quality of education, or encouraging artistic development in our community, MLGW employees are always willing to give their time and financial support.

MLGW encourages, supports and acknowledges the participation of its employees in voluntary activities in the community, civic and charitable organizations. Working together, MLGW employees donate more than \$1 million annually in goods and services and continue to strive to make a positive impact in the Memphis and Shelby County communities.

MLGW is not just a utility company; it is a group of people working together to make Memphis a better place to live.

Bike Rides

- The Tour de Cure bike ride, which features both a 10-mile and 30-mile course, was held on May 11. Twenty MLGW participants raised \$4,876 for the American Diabetes Association.
- MLGW bikers gathered June 22 to ride and raise funds for the Juvenile Diabetes Research Foundation at the annual Tour for a Cure. There were 11 riders who raised \$385 through personal sponsorships and funds from co-workers and friends.
- Employees and friends participated in the Bluff City Ride to Fight On where more than \$669 was raised by six participants benefitting the West Cancer Center.



Walks

- In June, MLGW walkers raised \$1,408 for the National Kidney Foundation at the annual Kidney Walk held at Rhodes College. MLGW received the second place award in the Corporate Division.
- Making Strides Against Breast Cancer raised \$182 in October.



- Every third Friday of the month from April to October, MLGW employees did healthy heart warm ups in anticipation of the American Heart Association Mid-South Heart Walk at AutoZone Park on November 1 where they raised \$9,345.
- In November, MLGW walked for American Diabetes Association Step-Out Walk and raised \$5,347.

Fishing Rodeo

Each year, hundreds of Memphis and Shelby County children and parents enjoy a day of family fun at the Tennessee Wildlife Resources Agency's Fishing Rodeo in Germantown, Tennessee. MLGW is a proud sponsor of the event and employee volunteers are a big part of the fishing rodeo's success.

Bowl-a-Thon

MLGW participates in raising funds for Junior Achievement programs and activities by taking part in the annual "Bowlin' On The River" Bowl-A-Thon. Proceeds from the Bowl-A-Thon help fund JA programs, activities and in-school classes in the Mid-South. In 2014, MLGW raised \$19,574 for Junior Achievement, placing third in the city to companies that participated in the fundraiser.



Special Olympics

MLGW is an annual sponsor of the Special Olympics Sportsfest each spring at Rhodes College. The Special Olympics is the world's largest sports organization for children and adults with intellectual disabilities, providing year-round training and competitions to more than 3.7 million athletes in more than 170 countries.

Plus-1

The Plus-1 program was created in 1982 and is a partnership between MIFA and MLGW to provide utility assistance for individuals and families experiencing a financial crisis. In 2014, Plus-1 kept the lights on for more than 2,400 families. To receive assistance, families must document a crisis such as debilitating illness or recent unemployment occurring within the last 90 days. Top reasons for assistance include medical crisis, employment related loss of income, disaster (fire, theft) and disabled and over 60. The Plus-1 program offers one-time assistance and serves as a "stop gap" measure to those in need, not an on-going source of assistance.

A large fundraiser for Plus-1 is the telethon. MLGW hosted its second annual Plus-1 telethon with MIFA and WREG in 2014. During the day-long telethon, viewers were urged to call and sign-up for Plus-1. By adding \$1 to their monthly bill or making a one-time gift, callers helped families in crisis. The telethon raised \$53,151 for the Plus-1 utility assistance program.



United Way

MLGW employees donated and raised a total of \$646,715.73 for United Way of the Mid-South. In addition to payroll deducted gifts, employees organized special events to boost the overall amount presented to United Way.

- The 6th Annual MLGW United Way Basketball Tournament was held Nov. 1-2. Teams competed and the event was staffed by MLGW volunteers and raised \$906 for United Way.
- The MLGW United Way Golf Tournament hit a high point last year. Held on Aug. 22, the event raised \$8,500 for United Way through player fees and sponsorships.
- MLGW's third annual Walk United along the Mississippi River raised \$1,720 on June 28.
- Besides fundraising, employees rolled up their sleeves to help. MLGW's United Way Steering Committee and several volunteers painted rooms at the Highland Avenue YWCA for the citywide Day of Caring in September.



Share the Pennies

Share the Pennies SMALL CHANGE, BIG DIFFERENCE.

Share the Pennies is a voluntary program sponsored by MLGW and MIFA. Share the Pennies encourages MLGW customers to round their utility bill to the next highest dollar amount. Here's how it works: if your utility bill is \$117.50 it will be rounded up to \$118 and your \$0.50 donation will be added to Project CARE, a home weatherization program administered in conjunction with MIFA. Project CARE funds are awarded to qualified elderly and/or disabled customers to assist with energy efficiency repairs to their homes.

Since the inception of the program in June 2013, Project CARE has received more than \$300,000 in donations from MLGW customers, employees and corporate partners. More than 7,000 customers are enrolled in the program.

Operation Feed

At the August 12 Operation Feed wrap-up ceremony, Mid-South Food Bank representatives thanked MLGW employees for their participation and explained how much donations make a difference for people in need. The Food Bank's inventory decreased by forty percent in July; but fortunately, media attention and Operation Feed came to the rescue. A record-breaking 121 companies across the region participated in the food drive that funds a million meals for those in need in the Mid-South.

MLGW placed first in the level-of-giving category for companies with 1,000-4,999 employees and raised \$28,165 for Operation Feed in 2014.



Play it Cool

MLGW and the Neighborhood Christian Center teamed up once again to “Play It Cool,” an annual initiative to provide window air-conditioning units to qualified low-income seniors and disabled residents of Shelby County. About 200 donated units were installed.

Neighborhood Christian Center hosted a screening and application process for the free units.

To qualify, applicants had to be a resident of Shelby County, a low-income senior 60 years of age or older, and without operable air conditioning. MLGW field inspections began in early May and the installation of units was performed by MLGW employees starting in June.

Power of Warmth

MLGW and The Neighborhood Christian Center teamed up to donate 100 space heaters and 100 electric blankets to low-income seniors and disabled residents of Shelby County through the Power of Warmth program. Customers (pictured left to right) Gussie Richmond and Bernice Tunstall left happy with blankets and Ms. Clark received a space heater just in time for Christmas.



Powering Construction



Memphis Light, Gas and Water Division



EcoBUILD is a voluntary green-building program that includes a set of construction standards that exceed the 2003 International Energy Conservation Code (IECC) and common building practices. This MLGW program was created to increase energy and environmental awareness through the promotion and use of energy-efficient and environmentally-friendly technology, materials and techniques for new home construction. Many advances in the home-building industry can help customers minimize wasted energy and save money on their MLGW utility bill. By following the EcoBUILD guidelines, participating builders can construct homes that use up to 30 percent less energy while providing greater customer comfort and other environmental benefits such as reducing the home's carbon footprint.

MLGW inspects EcoBUILD homes two times. The first inspection takes place during construction before the drywall is installed. The second inspection is performed after building completion to ensure compliance with all EcoBUILD standards.

In 2014, 14 EcoBUILD homes were constructed and certified representing over 8,000 kWh savings per year.

For more information visit www.mlgw.com/about/ecobuildaboutsection or to apply for EcoBuild certification, call 901-528-4887.

USGBC/MLGW LEED Incentive

The U.S. Green Building Council-Memphis Regional Chapter uses funds from an MLGW grant to encourage the adoption of energy-efficient and environmentally responsible construction practices in commercial facilities. To apply for these funds, qualified project teams must submit an application, the project's Final LEED Scorecard and detailed Review, and an educational document highlighting the project's sustainable attributes to the USGBC Memphis Chapter. To date, five projects have been recognized, although none qualified in 2014. Learn more at <http://www.usgbcmemphis.org/>.

Powering a Green Workplace

Powering a Green Workplace

MLGW owns and operates a diverse fleet of alternative fuel vehicles used by employees for service calls, field inspections and project deployments. The portfolio includes the following:

- Flex-fuel: More than 200 on-road light-duty vehicles which utilize unleaded gasoline or ethanol (E-85) fuel.
- CNG: 36 on-road light-duty F-150, F-1500 series trucks and 56 on-road heavy-duty F-2500, F350 series trucks.
- Hybrid: 24 (Ford Prius, Ford Escape and Fusion) vehicles which are powered by unleaded gasoline and a lithium battery.
- Plug-In Electric: Four Nissan Leaf vehicles powered 100 percent by lithium ion batteries which are charged by electricity from Level 2 EV charging stations. MLGW has five charging site locations: Administration Building, Beale Street Landing Parking Garage (accessible to the public), Electric & Systems Operations, North Service Center and Netters Business Operations Center.
- Plug-In Hybrid Electric: One Odyne on-road heavy-duty bucket truck used in electric line repair and installations.

Energy Management within MLGW

Energy management and resource conservation opportunities within MLGW abound. By focusing on internal operations, the company is implementing projects that control operating costs, thereby lowering its own utility expenses. In addition, energy management enables MLGW to “lead by example,” showing customers that everyone has the potential to reduce energy waste.



Tracking, Master Planning, Energy Audits, Demand Response

Tracking: Data from more than 100 electric, gas and water meters that serve MLGW facilities are tracked in order to identify the impact of facility upgrades, trends in usage, operations adjustments and account anomalies.

Planning: Long range planning provides a framework for managing existing resources and expanding infrastructure in a way that allows MLGW to make informed and cost-effective decisions. MLGW actively plans for the anticipated needs of its physical environment through the following:

- The MLGW Facilities Master Plan is developed on an annual basis in order to provide a roadmap of capital improvements to MLGW’s facilities. Based on a 10-year horizon, the plan details existing facilities, new facility developments and equipment upgrade installations in the 1.9 million-plus square feet of buildings.

- Equipment Replacement Database tracks envelope, mechanical/plumbing, electrical, new building additions and structural projects completed in each facility. The database aids in the planning process by identifying when upgrades are needed for equipment and space needs.
- Facility Seismic Mitigation planning is done in the areas of monitoring, screening, strengthening and containment. Facilities are monitored by seismograph equipment for earthquake events. MLGW's buildings have been screened and inventoried for potential earthquake hazards. Also, HVAC and electrical equipment has been anchored to prevent damage during seismic events. Finally, seismic valves have been installed at critical facilities to prevent natural gas eruptions during earthquake occurrences.
- Compliance planning in facilities is necessary in order to meet the American Disabilities Act requirements. MLGW has planned and implemented upgrades to its publicly accessible facilities. Improvements include entrance accessibility, rest room access accommodations and accessible parking spaces.

Energy Audits: Building tune-ups are done to identify quick-return opportunities, such as programming building automation controls to reduce energy use during vacant periods. Cost effective technologies have been identified for application such as LED lighting and efficient boiler equipment upgrades. Future plans to expand auditing practices include retro-commissioning of systems where economically feasible.

Demand Response: These programs are popular among utilities and their customers. Since 2011, MLGW has participated in TVA's demand response program administered by EnerNOC. To date, seven MLGW facilities are enrolled into the program including: David F. Hansen Administration Building, James L. Netters Business Operations Center, Joyce M. Blackmon MLGW University, Larry Papasan Electric & Systems Operation Facility, North Service Center #8 and the Allen and Shaw water pumping stations. In 2014, MLGW received \$35,017 in energy and capacity payments from the program.

Energy Efficiency Equipment Upgrade and Operations at MLGW Facilities

MLGW Headquarters—David F. Hansen Administration Building: Envelope-limestone façade rehabilitation; elevator modernization; T-8 lighting retrofit; chiller and cooling tower retrofit/rebuild.

James L. Netters Business Operations: Protective window film, elevator controls to reduce lighting and fan energy usage when the cab is not in use; wireless occupancy controls on lighting; photocell installation to turn off parking lot and exterior building lighting.

Service Centers: Roof replacements; T-8 and T-5 lighting retrofits with occupancy sensors; boiler and A/C upgrades.

Community Offices: Remodeling upgrades and ADA compliance; roof replacements; T-8 lighting retrofits with occupancy sensors; HVAC upgrades (including BAS—North office).

Larry Papasan Electric & Systems Operations: Roof replacements; T-8 and T-5 lighting retrofits; HVAC upgrades.

Substations: Roof upgrades; replaced inefficient analog thermostats with programmable models with lockable capability; energy efficient A/C installations.

Water Pumping Stations: Roof upgrades; lighting retrofits with occupancy sensors; heating system replacements.

Building Automation and Insight

Insight into how facilities use energy can help identify efficiency opportunities. At MLGW, control systems have been installed to automate heating, ventilation and air conditioning systems in order to identify and resolve operations issues and reduce energy usage. Building automated systems are installed at the following buildings: Administration Building, Netters Business Operations Center, North Service Center Building #8, Electric & Systems Operations, MLGW University, Water Laboratory, North Community Office (Air Handlers) and Beale Street Landing.

MLGW also utilizes services to view the metering data graphically and to gain insight into how and when facilities use energy. Subscriptions to MLGW's Meter Intelligence and EnerNOC's EfficiencySmart web portals help MLGW identify operational efficiencies in the top energy spend facilities.

Energy Star Partner

MLGW has been an Energy Star partner since 2004, and provides information to employees and customers about energy-efficient products and resources via www.mlgw.com. There, customers can obtain up-to-date information about efficient home building, energy saving equipment and appliances, facility energy performance and resource conservation tools.

MLGW hosts and participates in many community outreach events held during the year throughout Memphis and Shelby. The company promotes its Energy Star partnership by distributing Energy Star brochures, pamphlets and kits to customers. These venues allow the company to lead by example in educating the community on how to wisely use its resources.

Recycling

- Paper: In 2014, MLGW's employees recycled 222,305 pounds of paper and beverage containers.

The emissions equivalencies of recycling paper and beverage containers at the company produced an avoided 567 metric tons of CO₂e. This is equivalent to the greenhouse gas emitted by 119 passenger vehicles, or the amount of carbon sequestered by 14,538 tree seedlings grown for 10 years.

- Cell Phone and Rechargeable Batteries: 40 pounds were recycled in 2014.

Recycling receptacles are available at the Administration building, Netters and Electric & Systems Operations buildings. The Rechargeable Battery Coalition recycles these items at no charge.

- Printer Ink and Toner Cartridges: 70 pounds were recycled in 2014. Employees can recycle cartridges at most facilities.

- **Tires:** Since 2012, MLGW has worked with Shelby County to recycle about 2,612 pounds of abandoned tires that were abandoned by others on the company's grounds and right-of-ways. There is no cost to MLGW for recycling the tires through the County's program.

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 on the grounds that are typically caused by precipitation, wind or vehicles. Eroded areas are refilled with reused soil, and silt fences are installed on banks or berms before trees are planted. These preventive measures ensure the company's properties are well maintained.

Sustainable Plant Material and Maintenance Practices:

The plant material selected to decorate the grounds have low moisture requirements and in some cases are perennials which do not require replanting every year. Remaining green waste is recycled through a local mulch yard turning the green waste into compost or mulch.

Turf areas are planted with grasses that will thrive in this region such as Zoysia and Bermuda. Mowers used to groom the turf are equipped with mulching kits and blades that recycle turf and leaves back into the soil.

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.

Trade-A-Tree Program: When trees/shrubs are deemed hazardous to MLGW's overhead power lines, they are removed. Dead or diseased trees are also removed from MLGW's properties. Through the Trade-a-Tree program, plant material is replaced with low-height varieties such as Bradford Pear or Crepe Myrtle trees, Foster Holly Photina, Weeping Privet or Japanese Maple shrubs. In 2014, 57 trees/shrubs were replaced in the program.

To learn more about MLGW's Trade-A-Tree program, or for guidance on how to safely plant near power lines, please call our Customer Care Center at 544-6549.



Water Conservation: MLGW assessed the irrigation systems at the down headquarters, David F. Hansen Administration building and the James L. Netters Business Operations Center. Smart sensors and controllers were installed on their irrigation systems. The new efficient systems schedule watering based on data downloaded from local weather stations. When precipitation is forecasted, the watering times are adjusted or delayed. The systems are projected to save a combined 1 million gallons (or 1,337 CCF) of water annually. This savings is equivalent to the amount of water used (indoor and outdoor) by 9.34 average American homes in one year.

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 from hardscape areas that are located on the company's grounds.

Supplier Diversity

MLGW recognizes the power of diversity and the vast resource a diverse pool of suppliers/contractors provides businesses. As the number of minority, women and locally-owned small business owners grows in Memphis, the utility wants to ensure suppliers reflect this increasing diversity. The Supplier Diversity Program gives certified businesses an equitable opportunity to partner with MLGW in a buyer-seller relationship. Its mission is to help foster economic parity within the Memphis and Shelby County community. The Supplier Diversity Program is designed to give maximum practical opportunities to certified businesses as a partner in the buyer-seller relationship with MLGW.

In 2014, MLGW spent \$33 million with minority-owned, women-owned and locally-owned small business enterprises. That represents 24 percent of the total spending for the Division.

In 2014:

- \$15.2 million was spent with minority owned firms
- \$12.2 million was spent with locally owned small businesses
- \$5.48 million was spent with women owned enterprises



Last year the Division rolled out a new Sheltered Market Program in which 26 companies qualified and were awarded \$7 million out of the \$33 million in bids mostly in the area of goods and supplies. The race and gender neutral program shelters any purchase under \$100,000 by offering three or more certified local small businesses the opportunity to bid on products or services.

For more information about MLGW's Supplier Diversity and Sheltered Market Programs, visit www.mlgw.com/sdpolicy.

Keys to the Future

MLGW has provided reliable power, natural gas and drinking water for three quarters of a century. Civic engagement and environmental awareness continue to guide practices at the Division for social and economic responsibility.

As a service provider for 420,000 customers, MLGW recognizes its position as a community partner and will continue investing in the Greater Memphis area. Additionally, increasing energy efficiency measures and environmental awareness, reducing energy waste and improving air quality will always be pivotal roles supported by the Division to help make Memphis a great place to live and work for many years to come.