



Executive Message Partnerships Success Stories 2019 Highlights Residential Business & Industry Demand Response Renewable Energy

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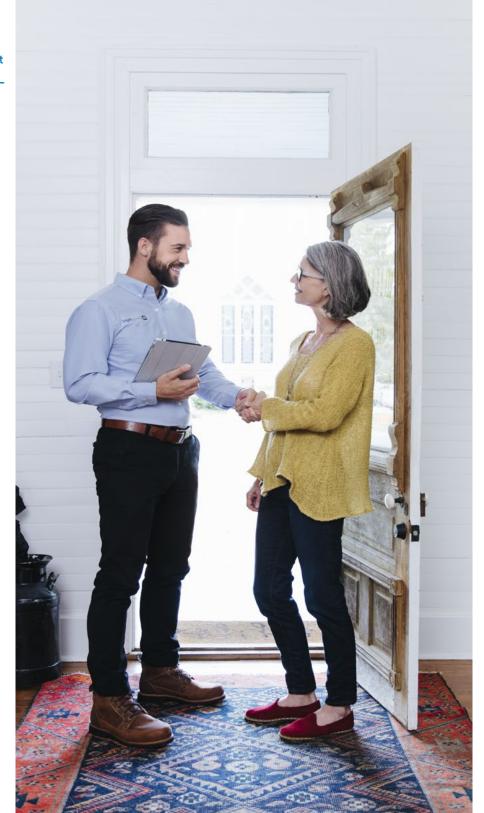
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We entered FY2019 knowing it would be filled with exciting challenges as TVA EnergyRight® strives to make life better in the Tennessee Valley. The year did not disappoint, as it certainly was just that – exciting and challenging.

We have been on a journey over the past few years to ensure TVA EnergyRight, in partnership with local power companies, is offering innovative and valuable programs to the residents and businesses in the Tennessee Valley. We are continually looking for ways to improve our partnership and impact, as we move forward with innovative program offerings. During the last year we were able to launch efforts to promote smart-energy technologies and find creative, cost effective ways to fund low-income programs across our region.

One aspect of our change was a new brand platform and focus on co-branding with local power companies. We developed a simplified, cleaner look and made a switch from TVA EnergyRight® Solutions to TVA EnergyRight®. We believe this simplification and emphasis on partnership will help us and local power companies position the brand and the program offerings in a new light with consumers. The revised name, logo refresh and improved, user-friendly website are just a few of the ways we are looking to improve our offerings. You'll see more of this in FY2020.

As we begin the new year, we will keep striving for success. I'm confident the next year will be just as bright and exciting for TVA EnergyRight as the past years have been. We are positioning TVA and local power companies for the changing energy industry – one driven by evolving consumer habits, new technologies and non-traditional competition. This is a great time to be in our industry and we are so excited to share these successes with you.

The bottom line is will strive to serve while ensuring we maintain the integrity and reputation of TVA, the local power companies and our direct-serve customers. These efforts truly make life better for the people of the Valley.

Sincerely,

Cindy L. Herron

Vice President

TVA EnergyRight®





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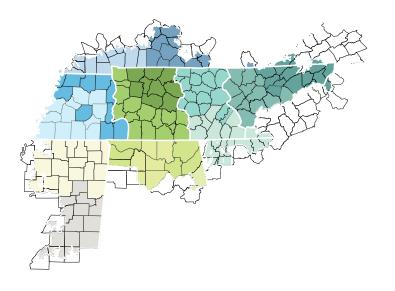
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Powerful Partnerships

Thank you to our local power company (LPC) partners, the Tennessee Valley Public Power Association, Inc. (TVPPA), the Seven States Power Corporation and the Tennessee Valley Industrial Committee (TVIC). You make it possible for TVA EnergyRight to connect residents and businesses across the Valley to the energy resources they need. Whether it's showing local businesses even more ways they can go green or helping a customer pick out a new HVAC unit, your work is powerful.



TVA and LPCs - Proudly serving more than 10 million customers across seven states.

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Success Stories

Across the region, you're putting TVA EnergyRight principles into practice and making a lasting impact. Here are just a few of the ways—as homeowners, businesses, industry and local power companies—you're helping to change the Valley:

- 1. 100th Nashville Home Uplift participant watches bill go down \$100.
- 2. Business & Industry and MLGW help local rail products manufacturer grow.
- 3. Annual conference looks at how we use energy in buildings.
- 4. Engineer of the Year recipient balances technical know-how & customer service.
- 5. New EV models electrify test drivers.
- 6. Building Futures initiative creates a more diverse contractor network.
- 7. Chattanooga homeowner breathes easier thanks to Home Uplift.
- 8. On a quest to turn abandoned buildings into thriving businesses.
- 9. Knox County Home Uplift program reaches new milestone.
- 10. Memphis Weatherization Workshop teaches money-saving tips.
- 11. High-tech lettuce farm helps feed more families in need.
- 12. Energetic fourth graders learn about energy from TVA EnergyRight & NES.
- 13. Supporting customer service representatives with Home Energy Workshops.
- 14. Captain D's makes better fried fish faster.
- 15. Giving the Valley's economic engines a way to boost their bottom lines.





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SUCCESS STORIES

100th Nashville Home Uplift participant watches bill go down \$100

It's not every day you get a chance to knock \$100 a month off your monthly electric utility bill. But for Nashville's Beverly Truett, that's just what happened when she qualified to participate in TVA EnergyRight's Home Uplift program.

Launched in Nashville in the summer of 2018 as a partnership between TVA, the Nashville Mayor's office and Nashville Electric Service (NES), Home Uplift brings whole-home energy improvements to low-income families in the Nashville area. Homeowners receive help to make their homes more comfortable and energy efficient. With less energy being used, more money can be saved. And that makes a big difference for Truett, the pilot program's 100th participant.

"Since [Home Uplift] completed the work, my bill has gone down about \$100 per month," she says. "I can't thank everyone enough. This is such a blessing."

Efficiency upgrades to Truett's home included air sealing plus the installation of attic insulation, mini-split heat pumps, a water heater insulation wrap, a ventilation fan and carbon monoxide and smoke detectors.

"It is such a privilege to be a partner with NES and the City of Nashville to bring Home Uplift to community members like Ms. Truett," says Cindy Herron, vice president, TVA EnergyRight. "This program gets to the core of TVA's mission to serve the people of the Valley to make life better, so we're always looking for new partners to expand the program and help even more families live comfortably in their homes."

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Business & Industry and Memphis Light, Gas and Water help local rail products manufacturer grow

There's a modern manufacturing renaissance happening in Memphis, and one of the companies leading the charge is Atlantic Track. Since the 1920s, the railroad products manufacturer has helped keep America's tracks train-ready.

Now, in partnership with TVA EnergyRight Business & Industry and Memphis Light, Gas and Water (MLGW), the nearly century-old manufacturer is adding smart energy technologies to its new 14-acre facility. Energy efficient welding machines, cutting blades and a computer-controlled cutting machine (one of only 20 in the world) mean Atlantic Track can increase their competitive edge while taking advantage of valuable incentives.

"MLGW is proud to be a part of the expansion of Atlantic Track," said J.T. Young, MLGW president and CEO. "We, along with our partners at TVA, look forward to working with Atlantic Track as they continue to grow and are committed to serving their utility needs."

And when local companies like Atlantic Track are set up for success, entire cities win too. Cindy Herron, vice president of TVA EnergyRight, says, "This partnership is just one of many examples of how businesses, local power companies and TVA can all work together to offer efficient electric technologies that provide solutions that help everyone."

This is just one of many examples of how businesses, LPCs and TVA can all work together to . . . provide solutions that help everyone.

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Annual conference looks at how we use energy in buildings

Now in its 11th year, the nationally renowned conference on building codes, building technology, tax credits and financial incentives, energy efficiency programs and new and emerging technologies returned to Bowling Green, Kentucky.

Sponsored by TVA EnergyRight, the conference—now called the Building Science Conference and Expo—fine-tuned its focus on building science, the study of how environment affects buildings.

"Building science is becoming an increasingly important aspect of the overall energy picture for TVA's energy programs," says Frank Rapley, senior manager TVA EnergyRight, who spoke on both how technology is serving the weatherization community and TVA's low-income assistance programs.

Rapley wasn't the only one to represent TVA EnergyRight at the conference. Several other staff members, including vice president Cindy Herron, Ashley Dickens, Clay Hoover, Cortney McKibben, Elizabeth Moore and Jason Snyder, provided expert insight on industry topics.

"This conference is a great opportunity for us to get together with industry leaders and discuss best practices," adds Rapley. "These are the folks that live and breathe this. We're excited to be a part of that."

The conference attracted a variety of attendees, including new home builders, retrofit remodeling contractors, real estate agents, HVAC contractors, HERS raters, building analysts, and weatherization program and utilities managers.

After 11 years in Kentucky, the sought-after industry event will move to Knoxville in 2020.

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Engineer of the Year recipient balances technical know-how & customer service

TVA EnergyRight is all about connecting people to solutions. And this year, Cortney McKibben, senior program manager for Business & Industry, was a leader in doing just that.

McKibben was named Engineer of the Year, one of TVA's highest honors, for his business unit. He was one of only six people to receive this prestigious award.

Combining technical knowledge with a customer-centered and empathetic approach to service is not always an easy balance to strike. But McKibben does it with ease. Following extensive conversations with stakeholders, he is able to help everyone move forward with project details that align with the end goal.

"For over 85 years, TVA employees have been committed to improving life in the Valley. Those recognized as engineers of the year exemplify the values, competencies and commitment to that mission," says Steve Douglas, vice president of nuclear engineering and executive sponsor for the 2019 Engineer of the Year Program.



CORTNEY MCKIBBEN

SENIOR PROGRAM MANAGER,
TVA ENERGYRIGHT FOR
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New EV models electrify test drivers

Changing habits doesn't always have to be an uphill climb. That's why we've teamed up with LPCs across the Valley to show residents that making the move from driving vehicles run on fossil fuels to electric vehicles (EVs) is easier than they think.

As more auto manufacturers give the green light for EV production, we're creating ways to put customers in the driver's seat of these cost-effective and energy efficient vehicles.

TVA EnergyRight helped sponsor the first Electric Car Guest Drive in Tennessee on September 25. Drivers interested in EVs were invited to Tusculum University to learn more about the technology, hear from current EV drivers and, of course, slide behind the wheel for a test spin.

"We wanted to show others that electric vehicles aren't just toys," says Bill Carroll, general manager of Greenville Light & Power. "They're viable transportation that is comfortable, fast and, in some cases, luxurious. I think the drivers at the event got the chance to experience that for themselves."

TVA employees, local business and economic development representatives, and community members registered more than 200 guests. And more than 100 drivers were able to test-drive EVs manufactured by Tesla, Jaguar, Chevrolet, Mitsubishi and Nissan and see that a move to an EV wouldn't be that hard at all.

"We wanted to show others that electric vehicles aren't just toys."

BILL CARROLL, GENERAL MANAGER, GREENVILLE LIGHT & POWER

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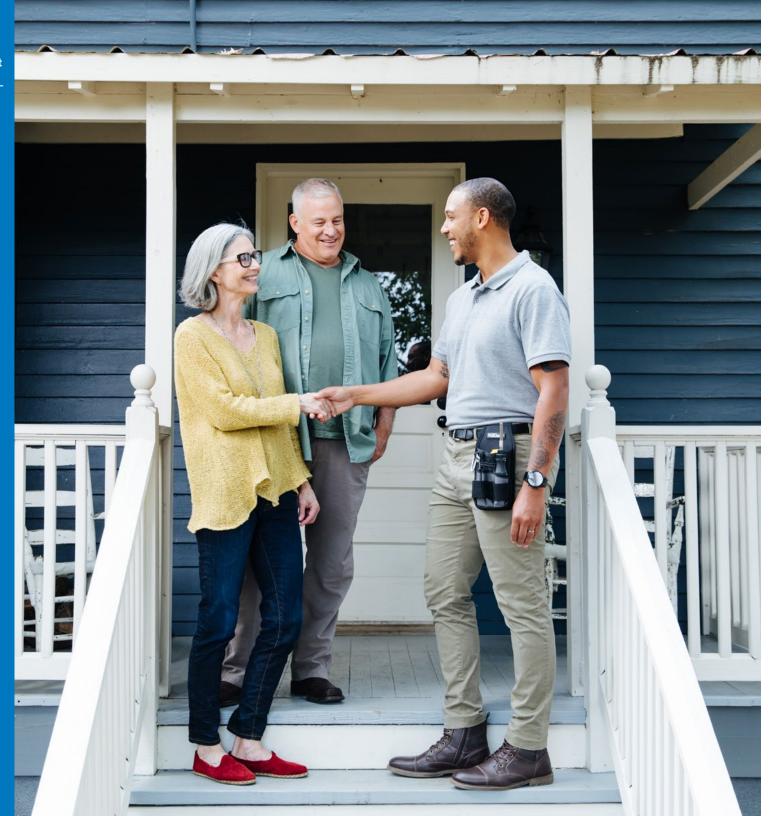
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Building Futures initiative creates a more diverse contractor network

Finding ways TVA expertise and resources can make life better in the Valley includes creating a more diverse contractor network. That's why Building Futures, a partnership between TVA EnergyRight and the Tennessee Urban League Affiliates, launched in 2019. Up-and-coming minority contractors in Chattanooga, Nashville, Knoxville and Memphis now have access to more technical and business skills training.

"We are thrilled to be launching this new training initiative with the support of the Urban League," says Frank Rapley, senior manager TVA EnergyRight. "The partnership will help grow Tennessee's workforce while at the same time addressing the needs of the Valley."

Participants in Building Futures learn technical skills like duct and air sealing and attic insulation installation, as well as business skills like effective communication, time management and networking.

Not only that, but at the end of training, participants are also connected to members of the Quality Contractor Network (QCN) for recruitment opportunities. QCN members work with TVA EnergyRight's Home Uplift program to provide free energy upgrades to qualified homeowners. Through the QCN, Building Futures participants will have an opportunity to expand Home Uplift efforts, helping Valley residents live more comfortably and reduce energy usage to lower their bill.

The Valley can expect a more diverse contractor network now thanks to Building Futures.

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Chattanooga homeowner breathes easier thanks to Home Uplift

Helping families with limited means achieve a better life through home upgrades drives the Home Uplift program. And for Hazel Benford of Chattanooga, being a recipient of the services Home Uplift provides has made a huge difference in her life. Even more valuable than the improved energy efficiency and lower monthly electricity bill is the overall improved comfort of her home.

"I can breathe better," says Benford of her new HVAC system. "You can tell there's a difference in the air. It's cleaner."

When Benford learned she was selected for Home Uplift, she was thrilled. Her home was the 250th to receive energy upgrades through a partnership between the Electric Power Board and TVA. Through this partnership, income-qualified homeowners receive home improvements at zero cost to them.

After the upgrades were completed, officials from EPB, the City of Chattanooga, Green Spaces and TVA CEO Jeff Lyash visited Benford's home to help her celebrate.

"Through Home Uplift, we're investing \$8,000 per home in energy upgrades," says Lyash. "That's a small price to pay considering the results are permanent and that the payoff can be a reduction of 25 percent or more on a monthly electric bill. That makes a big difference in the heat of summer when air conditioning is critical to quality of life."

"You can tell there's a difference in the air. It's cleaner."

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On a quest to turn abandoned buildings into thriving businesses

The owners of Dan & Dave's Sports Quest in Mayfield, Kentucky, suddenly found themselves on an entirely new kind of quest. When they spotted a vacant, rundown building that used to house a YMCA, they saw an opportunity. But converting an old YMCA into their next hub for gym rentals, baseball training and sporting events wasn't going to come cheap.

"There was no way we could afford the utility bills with the shape the building was in," says Sports Quest owner Daniel Sasseen. "We knew we needed to insulate and change to LED lighting if we wanted to make the building work. That's where the TVA EnergyRight incentives came in."

Together with local power company Mayfield Electric and Water Systems, TVA facilitated energy audits and power quality studies to help inform recommendations around the building's energy use potential.

"From the information I gathered, I approached the owners and gave them a plan of what we could offer based on how much load the building would use," says Bryan Moneymaker, TVA customer delivery project manager.

Incentives like the one Dan & Dave's Sports Quest received are a part of a larger TVA EnergyRight effort to promote growth and investment in the Valley, helping business owners revitalize once-forgotten and unused spaces in new and energy efficient ways. The incentives not only assist with the cost associated with renovating a building, but they also spur economic development.

Without TVA and Mayfield Electric, Sasseen says their new space would still be just a dream. "These programs allow small businesses to expand or grow, or even to start up. We now have a fully functional, energy efficient building and are providing our community with an opportunity for recreation."

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Knox County Home Uplift program reaches new milestone

Not only can record-breaking heat in the summer and freezing temps in the winter make life in an energy inefficient home uncomfortable, it can also be downright dangerous. But through a partnership with TVA, the Knoxville-Knox County Community Action Committee (CAC), the City of Knoxville and the Knoxville Utilities Board (KUB), the Home Uplift weatherization program is working to change that.

This year, TVA EnergyRight marked a milestone by serving the 400th Knox County family through its weatherization program. The Home Uplift program has provided funds to match the contributions from KUB customers through their Round It Up program. This effort has allowed the CAC to double the number of homes served in Knox County, pushing the program to the 400-home milestone.

"KUB is truly grateful to our customers who voluntarily contribute to Round It Up," says KUB board chair Kathy Hamilton. "The program is an excellent example of neighbors helping neighbors to make a difference in our community. TVA's contributions are helping those dollars stretch even further to help more households."

The weatherization assistance programs help address the root cause of high-energy bills for customers living in inefficient homes and without the resources to weatherize them.

"TVA recognizes the tremendous need and is strongly committed to energy efficiency solutions for income-limited customers," says Jeff Lyash, TVA President and Chief Executive Officer. "The success in the Knoxville area with the Home Uplift pilot has helped us build a broader program so we can help more families."

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Memphis Weatherization Workshop teaches money-saving tips

Ask anyone who's weatherized their home, and they'll tell you that small changes make a big difference. So when the Memphis chapter of the NAACP hosted a Weatherization Workshop in January alongside TVA EnergyRight and Memphis Light, Gas and Water (MLGW), more than 100 homeowners showed up to learn how to weatherize their homes and make a difference in their utility bills.

"Home weatherization is extremely important," says Gale Jones Carson, vice president of community and external affairs at MLGW and moderator for the event. "A lot of people think their utility bills will be high no matter what. But if your home is weatherized, it will have a direct impact on your utility consumption, which will reduce your energy bill."

Guests at the event received tools and resources they can use to start saving money on their monthly utility bills. Frank Rapley, senior manager TVA EnergyRight, attended the event and served as a panelist alongside Chad Bowman from the City of Memphis, Rico Watson and Christy Dumas from Home Depot and Telice Lewis from E Source.

"You do have control of your monthly costs," Carson adds. "This is the first step to getting there—learning how to take care of your home and learning how to put more money into your pocket."

"You do have control of your monthly costs. This is the first step to getting there."

GALE JONES CARSON, VP OF COMMUNITY & EXTERNAL AFFAIRS AT MLGW

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High-tech lettuce farm helps feed more families in need

There's power in community. For Manna House, a non-profit serving the homeless in Huntsville, Alabama, reaching more people in need is a top priority. And now through a partnership with TVA EnergyRight for Business & Industry, they can help feed more people than ever before.

Manna House harvests 5,250 heads of fresh lettuce each week, providing food for between 3,000 and 5,000 families. But it wasn't always that way.

"It's expensive to buy that much lettuce. So, we decided there had to be a better way to have a more consistent supply at an affordable price," says Fran Fluhler, director of Manna House.

TVA EnergyRight Business & Industry stepped in with a solution. The program helped Manna House offset startup costs to launch their Fields of Green Hydroponic Garden, a new 15,000-square-foot indoor lettuce farm. Fields of Green can produce up to 21,000 heads of lettuce each month using 1,300 LED electric lamps powered by Joe Wheeler EMC.

Manna House donates 10 percent of their lettuce harvest to other ministries and non-profits each month. From the remaining 90 percent, about half is sold to local caterers and restaurants. Those proceeds are then used to buy and distribute nearly 30 pallets of groceries each day to families who wait in line, sometimes for up to three hours, to be served.

"TVA's partnership has been such a blessing. I loved the fact that they cared enough to come back and walk through the garden," says Fluhler. "Some of the employees even came down and volunteered."

1,300 LED electric lamps help Fields of Green produce up to 21,000 heads of lettuce per month.

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Energetic fourth graders learn about energy from TVA EnergyRight & NES

Energy conservation begins with education. And who better to have a conversation about conservation with than a group of fourth graders learning about energy?

Fourth graders from Lipscomb Academy in Nashville got some real-world energy application when representatives from TVA EnergyRight and the Nashville Electric Service (NES) came to their school.

Sharing about how energy affects their everyday lives, the TVA EnergyRight and NES guests used Home Energy Workshop displays to help the students learn firsthand about energy efficiency. Students learned why properly insulating an attic is important to stop heat penetration, how LED bulbs are different from other lighting options and other practical ways to save energy in their home. They also got a close-up look at a solar panel as they learned about Nashville's Music City solar site.

Leading up to the visit, students were given an eScore Self Audit survey to take home and fill out with their family. Students who returned the survey were given an energy-saving kit filled with items like LED bulbs, a hot water temperature gauge and sink aerators.

"This was such a great outreach opportunity," says Brad Wagner, TVA EnergyRight senior program manager. "In all, nearly 100 fourth graders were able to take what they've been studying in class and learn how to practically apply it in and around their own homes."

Who better to have a conversation about conservation with than a group of fourth graders learning about energy?

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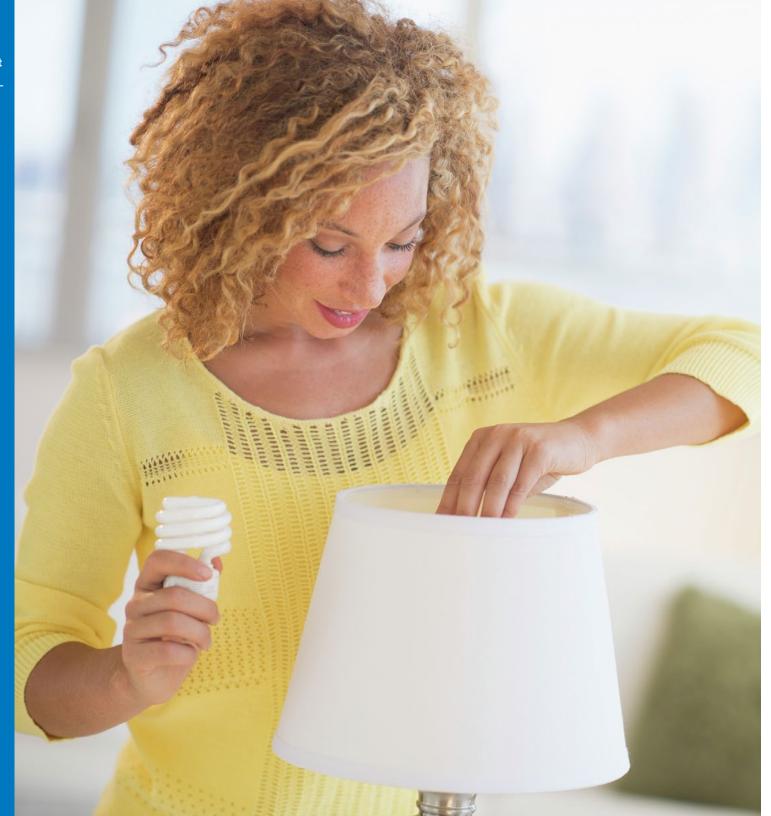
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Supporting customer service representatives with Home Energy Workshops

TVA EnergyRight didn't have to look far for a new audience to bring its Home Energy Workshops. They started with employees at the Knoxville Utilities Board (KUB). Not only did the 55 customer service representatives learn energy efficiency tips they could use in their own homes, but they also learned how to better support KUB's customers experiencing large power bills.

"The workshops serve as a good training opportunity, and we are looking forward to taking this program out in the community to benefit our customers," says Tiffany Martin, director of KUB customer service. "Partnering with TVA to roll out these workshops gives us an opportunity to engage with our community and provide practical tips to help lower bills for those who desire to reduce their energy costs."

Following the workshop, KUB customer service representatives said they felt better prepared to walk customers through practical solutions for lowering future bills. KUB also worked to incorporate water savings information into the workshop to help representatives support customers with all their utility needs.

"Our local power company partners see the value that home energy workshops can have for some of their most valuable customers," says Cindy Herron, vice president of TVA EnergyRight. "They also give us an opportunity to engage face-to-face with the people of the Valley."

"Home Energy Workshops give us an opportunity to engage face-to-face with the people of the Valley."

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Captain D's makes better fried fish faster

The proof is in the pudding. Or in this case, the fried fish. "There is no comparison. I'd rather have these any day," says Lynn Travis, a Captain D's manager of the new fryer technology being used in stores. Now through a partnership between TVA EnergyRight for Business & Industry and Captain D's restaurants, the fast-food giant is equipping its restaurants across the Valley with smart electric frying technology.

The result? Shorter cook times, improved efficiency in stores and—the best part—better tasting food. "I get a better tasting product, not to mention the old gas fryers were a lot messier," adds Travis, who has been with the company for 18 years.

In addition to improved customer satisfaction and lower utility bills for Captain D's, the partnership has an added environmental benefit. Incentives from TVA EnergyRight, which allowed the restaurant chain to wave goodbye to their traditional natural gas fryers, has meant improved air quality and a reduction in carbon emissions—benefits everyone in the Valley can enjoy.

"There are a lot of big wins. Just from the utility standpoint, the electric fryers are a lot easier on our air conditioning units," he says. "The amount we now save each year is pretty substantial."

The success of the Captain D's project in Dayton was made possible through a partnership with local power company Dayton Electric. Steve Clift, general manager of Dayton Electric, says, "We were happy to partner with TVA to give our customer the opportunity to enjoy sustainable improvements to their operations, from smarter use of kitchen space to improved workflow to better tasting food—all from switching to electric fryers."

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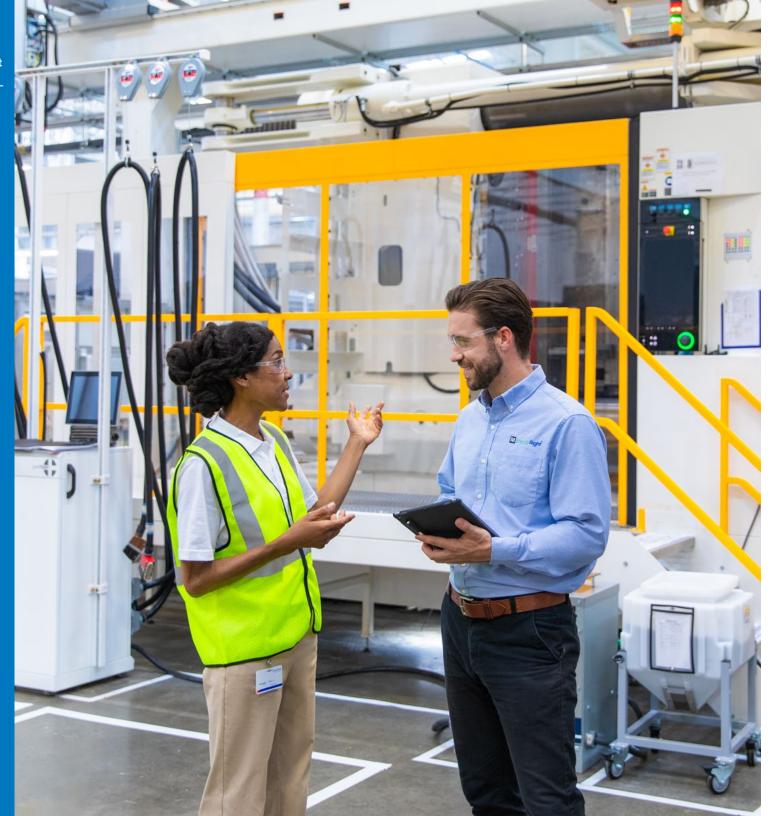
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Giving the Valley's economic engines a way to boost their bottom lines

Energy upgrades at large companies and institutions aren't always as straightforward as those for individual homes and small businesses. It can take years to properly identify areas for improvement, get approval from stakeholders to make upgrades and then implement changes. That's why the Strategic Energy Management (SEM) initiative has taken an inventive approach to helping these larger, more complex customers achieve continuous energy improvement.

TVA EnergyRight, together with Industrial Marketing & Services and Customer Delivery, is leading two groups of approximately 10 larger customers from the business and industry sectors through a multi-year campaign to identify low- and no-cost energy upgrades, capital projects and electrification opportunities.

As part of the Middle Tennessee-Kentucky cohort, Tennessee Tech University (TTU) is hoping the program will help them gain a sustained focus on energy management.

"Through this initiative, we hope to make it second nature for our Facilities personnel to continually look for and suggest ways to potentially save energy," says Delayne Miller, the sustainability manager for facilities and business services at TTU.

Cookeville Electric Department (CED), an LPC involved in the program, sees the initiative as a way to work more closely with TTU, their largest customer.

CED's Karen Brown says, "We want to be the university's trusted energy advisor and have them be comfortable calling us whenever we can help. In the end, we hope it makes a positive difference in their operations."

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Lighter loads mean energy saved. TVA EnergyRight is a least-cost option because of our competitive position within our power system and our resource planning models. That means we can reduce peak demand and offset the possible need for additional resources.

44.7_{GWh}
In Energy Efficiency
Savings

143.8 GWh

In Smart Energy Technologies





For 12 years running, the Valley has exceeded its load management targets.

123.5 MW (DC)

Renewables Installed in 2019



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Residential

TVA EnergyRight is here to make it easier for Valley residents to use energy more wisely so they can save money and reduce their carbon footprint. Here are the programs that help make that possible:

- 1. eScore Program Energy Efficiency
- 2. eScore Program Smart Energy Technologies
- 3. eScore Program Self Audit
- 4. eScore Program Financing
- 5. Quality Contractor Network (QCN)
- 6. New Homes Program
- 7. Home Uplift Initiative
- 8. Home Energy Workshops



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eScore Program Energy Efficiency

eScore is a home energy upgrade program designed to provide homeowners with smart energy advice, access to a network of specially trained and approved contractors through our Quality Contractor Network, a free inspection on any work performed, and the assurance that the job will be done right. Homeowners can reengage with the program as many times as needed to achieve their home's best possible energy performance. Financing is available in most areas to help homeowners make upgrades. Rebates are available for qualifying smart energy technology upgrades.

14,418
Participants

12.3 GWh Energy saved

Top performers

Nashville Electric Service	1,501,195 kWh
Middle Tennessee EMC	974,243 kWh
Knoxville Utilities Board	613,564 kWh
Appalachian Electric Cooperative	483,514 kWh
Memphis Light, Gas & Water Division	439,658 kWh

Top savings, percent of sales

Springfield Department of Electricity	0.08%
Appalachian Electric Cooperative	0.08%
McMinnville Electric System	0.08%
Courtland Electric Department	0.08%
Sweetwater Utilities Board	0.06%

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eScore Program Smart Energy Technologies

Electricity as a primary fuel source has many advantages over fossil fuel. Those considering switching to efficient electric power can reduce the number of bills they pay while being more environmentally friendly. Financing is available in most areas, and rebates are available for qualifying smart energy technology upgrades.

1,163
Participants

6.6 GWh Energy added

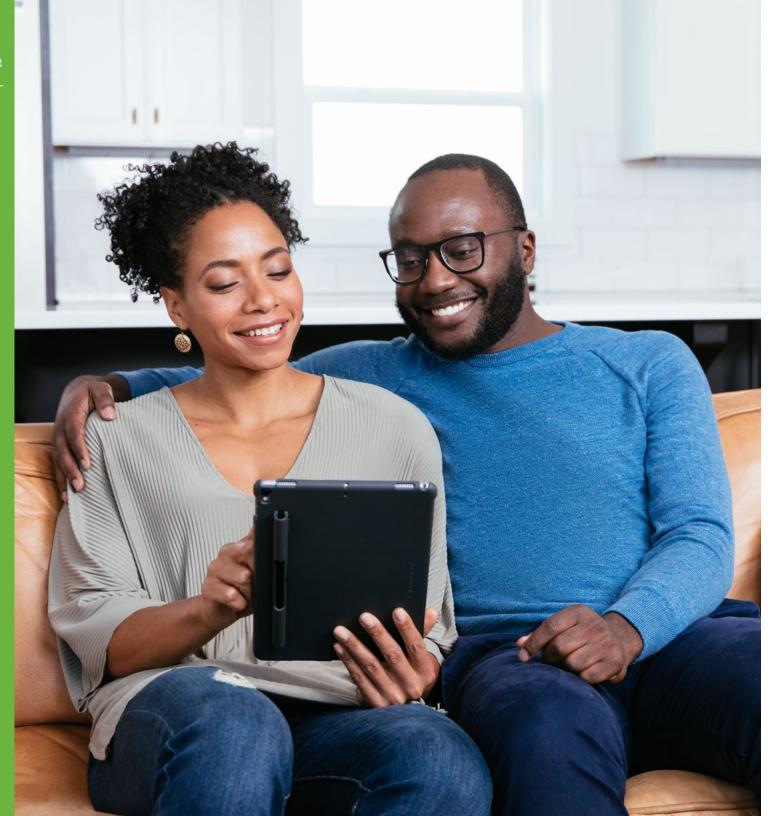
Top performers

Nashville Electric Service	1,192,607 kWh
Joe Wheeler EMC	262,489 kWh
Blue Ridge Mountain EMC	249,003 kWh
Appalachian Electric Cooperative	213,803 kWh
Volunteer Energy Cooperative	184,535 kWh

Added percentage of sales

City of Amory Utilities	0.15%
Aberdeen Electric Department	0.08%
Blue Ridge Mountain EMC	0.05%
Tennessee Valley Electric Cooperative	0.05%
Pickwick Electric Cooperative	0.05%

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eScore Program Self Audit

eScore Self Audit is a do-it-yourself online evaluation that allows residential customers to input information about their home and receive a personalized report with energy efficiency recommendations. Customers completing an audit may then participate in the eScore program. First-time participants also receive an energy efficiency starter kit.

5,300

Participants

4.8_{GWh} **Energy saved**

Top performers

Memphis Light, Gas & Water Division	1,054,527 kWh
Knoxville Utilities Board	587,946 kWh
Nashville Electric Service	583,451 kWh
Volunteer Energy Cooperative	203,174 kWh
Electric Power Board of Chattanooga	165,416 kWh

Top savings, percent of sales

Erwin Utilities	0.03%
Knoxville Utilities Board	0.02%
Glasgow Electric Plant Board	0.02%
Memphis Light, Gas & Water Division	0.02%
Hartselle Utilities	0.02%

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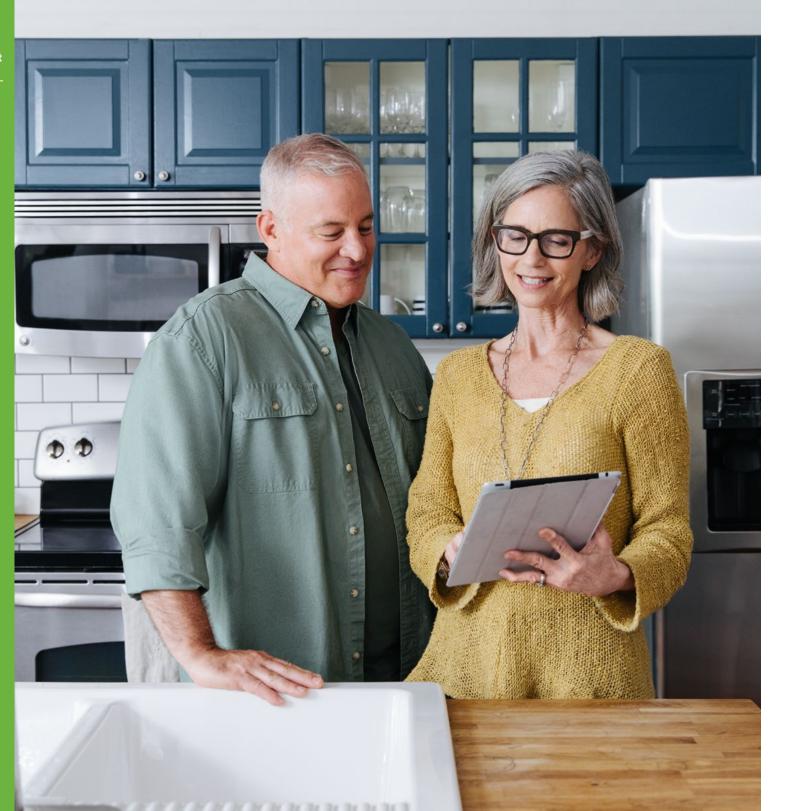
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eScore Program Financing

Through TVA relationships with third-party lenders, most customers who participate in eScore have access to TVA-sponsored financing. On-bill financing is made available to consumers through the LPC and Regions Bank. Off-bill financing is made available to the consumer through Vanderbilt Mortgage and Finance, Inc. LPCs choose the option that will be made available to their customers. These consumer loans assist homeowners in making energy upgrades to their home, as well as help homeowners in making emergency upgrades, such as replacement of heating/cooling equipment failures.

6,276 Applications Received

3,205 Loans Funded

>\$25.5 Million Funded

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Quality Contractor Network (QCN)

Easily one of the most stressful parts of making home improvements is finding the best person to do the work. That's where TVA EnergyRight can help. The QCN is a group of highly skilled and knowledgeable contractors who have been specially trained and approved by TVA EnergyRight to make sure energy upgrades are installed correctly. TVA EnergyRight will even inspect the work after it's been completed. Members of the QCN also help the eScore and Home Uplift initiatives to provide quality energy improvements at scale.

5,652 eScore Inspections in FY19

60% Participants Entering eScore Program Through Contractor Path

\$78.35 Million in Customer Spending Through eScore in FY19

4.6 Out Of 5 Customer Satisfaction with QCN

91 Out Of 100 eScore Net Performer Score

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New Homes Program

The New Homes Program offers a suite of HVAC and water heating equipment incentives to encourage builders to use electric equipment instead of non-electric. Incentives are offered for single family homes, duplexes and multifamily homes. The New Homes Program incentives help builders purchase technologies that are highly desired for efficiency, effectiveness and longevity, making these homes more marketable.

> 6,290 **New Homes**

Incentivized

43.9_{GWh} Energy added

Top performers

Huntsville Utilities	9,228,820 kWh
Middle TN EMC	3,227,536 kWh
Murfreesboro Electric Department	2,704,056 kWh
Nashville Electric Service	2,151,112 kWh
Sevier County Electric System	1,953,573 kWh

Added percentage of sales

City of Oxford Electric Department	0.78%
Cookeville Electric Department	0.53%
Franklin Electric Plant Board	0.53%
Sevier County Electric System	0.39%
Huntsville Utilities	0.36%

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Home Uplift Initiative

Launched in 2018, Home Uplift seeks to create a sustainable, quality program to increase weatherization for low-income families. The program consists of free home upgrades that increase the energy efficiency and comfort of homes and enable low-income families to lower their energy bills. Funds are used for HVAC repair/replacement, insulation, air penetration reduction, windows and doors, as well as minor health and safety repairs that enable energy upgrades.

971Participants

5.2 GWh Energy saved

Top performers

Electric Power Board of Chattanooga	905,868 kWh
Nashville Electric Service	855,724 kWh
Memphis Light, Gas & Water Division	673,194 kWh
Knoxville Utilities Board	346,588 kWh
Huntsville Utilities	316,547 kWh

Top savings, percent of sales

Electric Power Board of Chattanooga	0.04%
West Kentucky RECC	0.02%
Nashville Electric Service	0.02%
Knoxville Utilities Board	0.01%
Memphis Light, Gas & Water Division	0.01%



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Home Energy Workshops

TVA EnergyRight and LPCs partner to offer free Home Energy Workshops around the Valley. When more people know about all the money-saving tips and energy conservation assistance available to them, everyone in the Valley wins.

2,829
Participants

2.6 GWh Energy saved

Top performers

Electric Power Board of Chattanooga	1,077,901 kWh
Knoxville Utilities Board	425,227 kWh
Duck River EMC	158,224 kWh
Volunteer Energy Cooperative	149,234 kWh
Memphis Light, Gas & Water Division	109,678 kWh

Top savings, percent of sales

Etowah Utilities	0.06%
Electric Power Board of Chattanooga	0.05%
City of Dayton Electric Department	0.04%
Columbus Light and Water Department	0.03%
Smithville Electric System	0.03%

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Business & Industry

TVA's portfolio of Business & Industry programs, offered through LPCs, provides expert guidance, professional energy evaluation tools, research and support to consumers in the commercial, public-sector, institutional and industrial sectors. TVA EnergyRight helps businesses and other organizations make the right energy choices while supporting TVA's load optimization efforts.

- 1. Business GWh Electrification
- 2. Business Incentives Paid
- 3. Industrial Smart Energy Technologies
- 4. Industry Incentives Paid
- 5. Preferred Partners Network (PPN)



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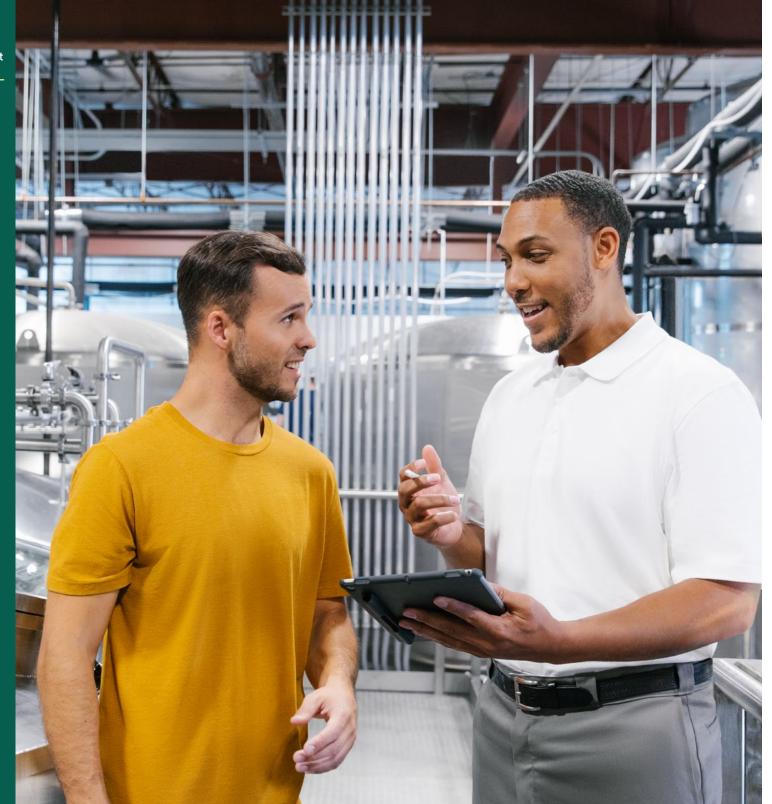
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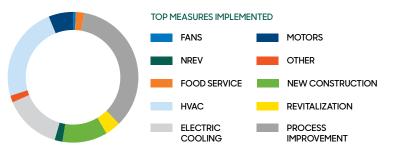


BUSINESS & INDUSTRY

Business Smart Energy Technologies

TVA EnergyRight for Business is making it easier than ever for businesses to change their energy consumption habits. By providing energy assessments and incentives, qualifying businesses get to take even more control of their bottom line and energy use.

26.3 GWh Energy added 121
Participants



Top performers

City of West Point Water and Light Department	5,523,928 kWh
Nashville Electric Service	5,458,707 kWh
Memphis Light, Gas & Water Division	1,802,132 kWh
Huntsville Utilities	1,773,497 kWh
City of Athens Electric Department	1,482,352 kWh

Top electrification, percent of sales

City of West Point Electric System	13.00%
City of Okolona Electric Department	1.09%
Arab Electric Cooperative, Inc.	0.96%
City of Water Valley Electric Department	0.54%
City of Athens Electric Department	0.42%

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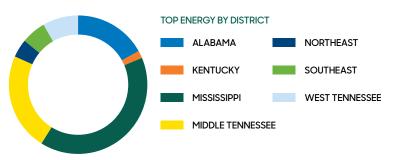
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Business Incentives Paid

\$3,285,411

Incentives paid to business customers

56 LPC participants active in FY19



Top Business Program Participants

Restaurant: Full Service	11.57%
School - High School/College	11.57%
Other	8.26%
School - Primary	8.26%
Warehouse: Conditioned	8.26%
Small Office Building (<30000 sq ft)	7.44%
Public Assembly/Congregation	6.61%
Industrial - 2 Shift	4.96%
Industrial - 3 Shift	4.96%
Warehouse: Unconditioned	4.96%
Restaurant: Fast Food	3.31%
Small Retail Building	3.31%

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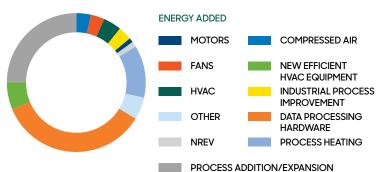
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Industry Smart Energy Technologies

Maximizing efficiency for industrial power users makes a big impact. That's why TVA EnergyRight works with industrial users to create customized, plant-wide approaches that help them control expenses, boost their bottom lines and use energy more efficiently.

67.10 GWh Energy added

67
Participants



Top performers

North Georgia EMC	17,000,000 kWh
Murphy Power Board	10,969,707 kWh
Pulaski (PES Energize)	8,176,753 kWh
Huntsville Utilities	3,540,685 kWh
Duck River EMC	2,313,923 kWh

Top electrification, percent of sales

Pulaski (PES Energize)	5.76%
North Georgia EMC	5.16%
Murphy Power Board	3.73%
Carroll County Electric Department	1.40%
Hartselle Utilities	1.18%

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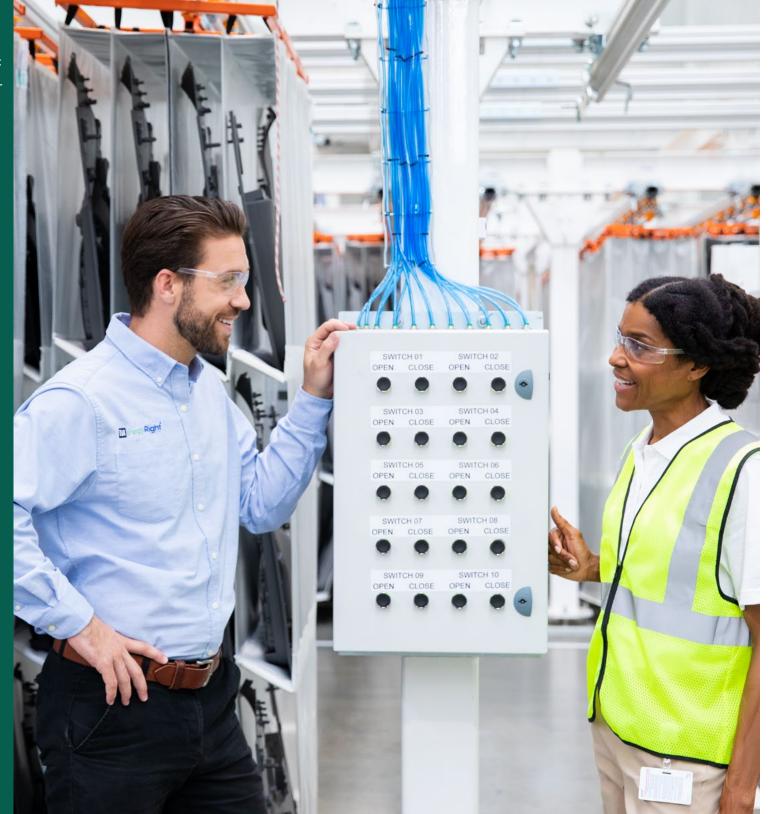
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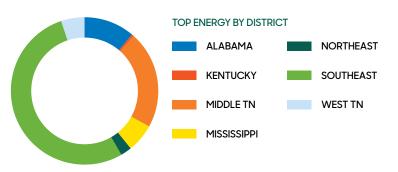


BUSINESS & INDUSTRY

Industry Incentives Paid

\$5,637,122

Incentives paid to industrial customers



Top Industrial Program Participants

Industrial - 3 Shift	36.23%
Industrial - 8760 Operation	21.74%
Industrial - 2 Shift	17.39%
Industrial - 1 Shift	15.94%
Warehouse: Unconditioned	7.25%
Small Office Building (<30000 sq ft)	1.45%

Includes Industrial Marketing & Services numbers.

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BUSINESS & INDUSTRY

Preferred Partners Network (PPN)

Like the QCN for individual customers, the PPN was created for Business & Industry customers to relieve some of the stress of finding trustworthy experts to make energy upgrades. Business & Industry customers can find and hire everyone from general contractors and architects to engineers and other trade allies, each vetted by TVA EnergyRight.

93.40 GWh
Energy added by ERBI programs

242 Total PPN projects

223 Total PPNs (as of Sept 30, 2019)

\$64.7_{MILLION}
Total project cost of all PPN projects

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Demand Response

TVA reliably manages the power grid by ramping up power generation at the moment people need it. But what happens when there is not enough generation? Demand response programs are then used as a zero emission option to keep power flowing. Demand response adds megawatts to the balance, not by building physical power generation plants, but by providing an opportunity for participating consumers to reduce their energy usage when it is needed most. These customers play a significant role in keeping the power grid reliable.

- 1. Interruptible Power
- 2. Peak Power Partners
- 3. Voltage Optimization



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Interruptible Power

TVA EnergyRight can suspend a portion of participating customers' load with 5 or 30 minutes' notice during times of the power system's need. IP-5 minute participants receive a monthly demand credit in exchange for curtailment. IP-30 minute customers may be called upon to curtail consumption up to 12 hours per year and receive a monthly demand credit and event-based energy credit.

1,424 MW Interruptible power capacity

599 MW Instantaneous response

Interruptible Power Programs

Interruptible Power - 5 minutes' notice	668 MW
Interruptible Power - 30 minutes' notice	756 MW
Instantaneous Response	599 MW



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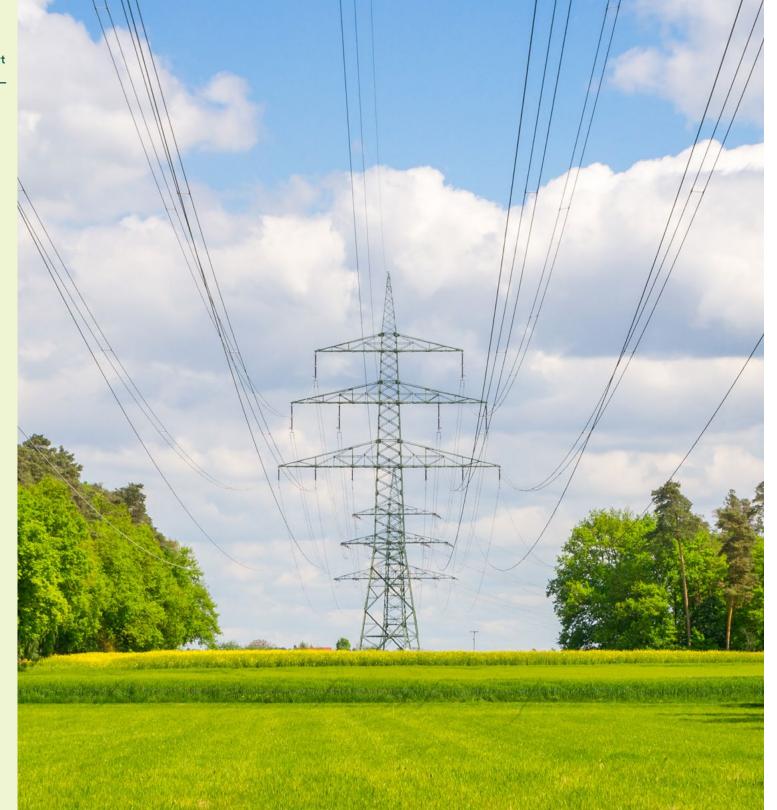
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Peak Power Partners

Peak Power Partners are demand response programs administered by external program delivery partners.

158 MW Total capacity

Peak Power Partners Programs

Seven States Power Corporation 6 MW

Enel X 152 MW

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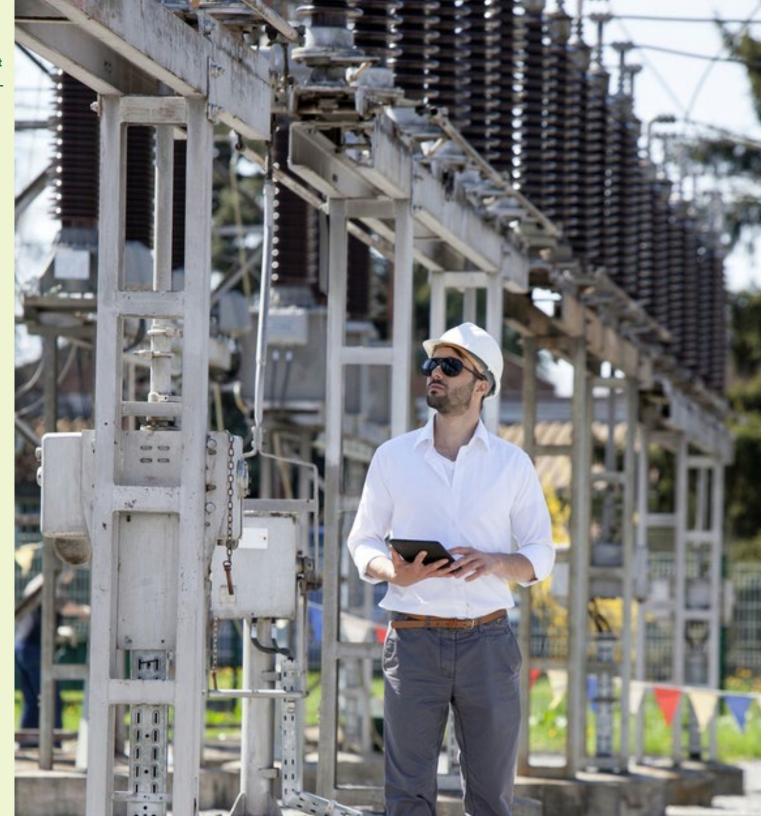
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Voltage Optimization

TVA EnergyRight offers voltage optimization programs with local power companies that operate distribution feeder voltages in the lower half of the ANSI standard voltage range, thereby reducing energy consumption annually.

185 MW Total capacity

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Renewable Energy Solutions

More sources of power mean more options for LPCs on how to generate power for their customers. Renewable energy, like wind, solar, low-impact hydro and biomass, is changing the way Valley customers get their energy and significantly adding to the overall generation of power. Here are the programs making that possible:

- 1. Green Power Switch®
- 2. Green Power Switch® Southeastern RECs
- 3. Green Power Providers™
- 4. Renewable Standard Offer & Solar Solutions Initiative
- 5. Distributed Solar Solutions



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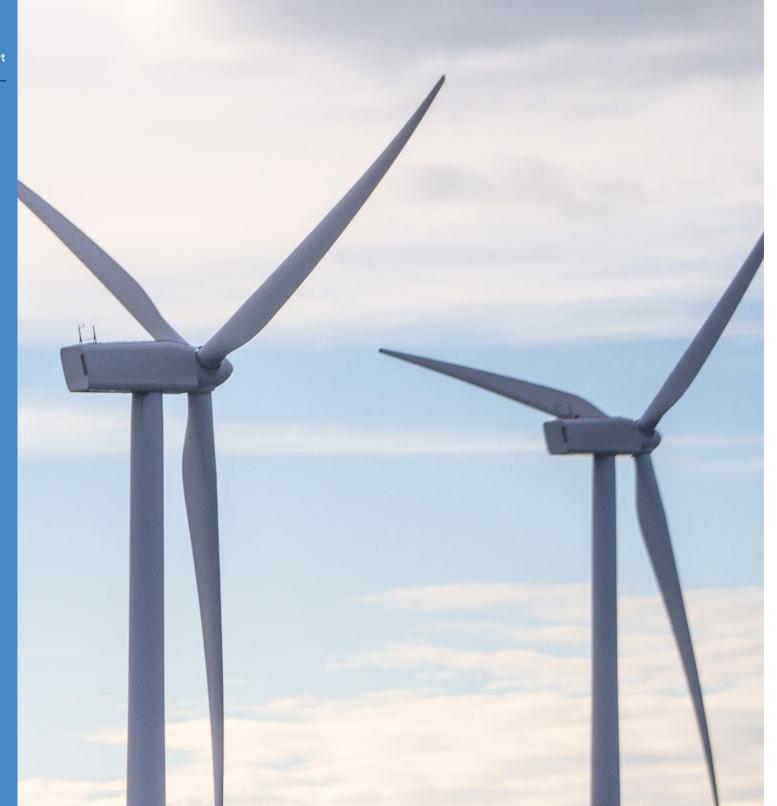
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Green Power Switch

Green Power Switch makes it easy for customers to support renewable energy sources like wind, solar and biomass. Each \$4 purchase ensures a block of 150 kilowatt-hours of renewable energy is added to TVA's electricity mix.

54.36 GWh Sales Program to Date

10,068 Consumers in FY19

Supply enough renewable power for approximately 84,000 homes

Top Performers

Nashville Electric Service	8,896
Knoxville Utilities Board	8,529
Memphis Light, Gas & Water Division	5,649
Huntsville Utilities	3,934
Electric Power Board of Chattanooga	3,111

Green Power Switch supplies enough renewable power for approximately 84,000 homes across the Valley.

Starting in 2020, Green Power Switch will be updated with a reduced price and a larger block size.

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Green Power Switch Southeastern RECs

Customers today aren't just buying products. They're also deciding if they support what a business stands for. That means customers want to see businesses that care about social responsibility. Like individual customers committed to the Green Power Switch program, businesses across the Valley can support using renewable energy sources too. With the Green Power Switch bulk purchasing option, Valley businesses can reassure customers and stakeholders they support green initiatives.

251,558 MWh Sold in FY19

13 Customers in FY19

Starting in 2020, this program will be updated and made available to all LPCs.

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Green Power Providers

Green Power Providers (up to 50 kW) replaced the successful Generation Partners pilot program that was initiated in 2003. Green Power Providers implements industry-best practices to continue helping add sustainable solar and renewable energy in the Tennessee Valley.

3,774

Installations Programs to Date **110.73** MW

Renewable Generation DC Nameplate Capacity Program-to-Date

Resource (MWdc) Solar 101.095 Biomass Wind Low-Impact Hydro Total Operating Operating Nameplate DC Capacity (MW) 101.095 101.095 101.095 101.095 110.733

Resource (MWdc)	Operating Nameplate DC Capacity (MW)
Blue Ridge Mountain EMC	15.47
Nashville Electric Service	6.43
Electric Power Board of Chattanooga	5.68
Fayetteville Public Utilities	5.67
Middle Tennessee EMC	5.29

197 projects were approved by TVA in 2019, representing 1.849 MWdc of additional capacity, and are in various stages of construction as of September 30, 2019.

Current program sunset on December 31, 2019, pending completion of an environmental review. TVA is working with LPCs and other stakeholders to develop future solutions for the private-scale market.

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Renewable Standard Offer & Solar Solutions Initiative

One other project, representing 1 MWdc of additional capacity, was approved by TVA as of September 30, 2019.

Of these totals, 56 projects (42.85 MWdc) were operating under the Solar Solutions Initiative, with one additional project (1.00 MWdc) under construction as of September 30, 2019.

78 Projects to Date = 242.52 MW

Operating

Resource Capacity	Nameplate DC
Solar	204.87
Landfill Gas	17.65
Biomass	20

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Distributed Solar Solutions

As more customers look to their LPCs to provide renewable energy options, TVA is here to help LPCs meet that demand. Distributed Solar Solutions was a pilot program, available 2016 to 2017, designed to encourage renewable projects led by local power company partners. Projects explored solutions for community solar and targeted deployment on distribution circuits to provide technical benefits and solar deployment in a micro-grid.

As of September 30, 2019:

Contracted

4 Projects = 10.95 MWdc

Operating

8 Projects = 13.61 MWdo

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Looking for something specific? For a complete list of activities by local power company, <u>click here</u>.

- 1. Top LPC Performers
- 2. Top Performers by Program
- 3. Description of Programs



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Top LPC Performers

TOTAL PROGRAM ENERGY

Top LPC Performers	KWH	% of FY Sales Total
North Georgia EMC	18,531,208	14.17%
Huntsville Utilities	14,543,002	11.12%
Murphy Power Board	10,969,707	8.39%
Nashville Electric Service	9,052,679	6.92%
Pulaski (PES Energize)	8,201,152	6.27%
City of West Point Water and Light Department	5,532,061	4.23%
Duck River EMC	4,593,656	3.51%
City of Athens Electric Department	4,000,746	3.06%
Electric Power Board of Chattanooga	3,523,833	2.69%
Middle Tennessee EMC	3,475,715	2.66%
Program Total	143,839,108	



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Top LPC Performers

ADDED PERCENTAGE OF SALES

Top LPC Performers	KWH	% of FY Sales Total
City of West Point Water and Light Department	5,532,061	6.80%
Murphy Power Board	10,969,707	2.63%
Pulaski (PES Energize)	8,201,152	1.92%
North Georgia EMC	18,531,208	0.77%
Carroll County Electric Department	2,077,147	0.49%
City of Okolona Electric Department	347,482	0.38%
City of Oxford Electric Department	798,831	0.36%
Arab Electric Cooperative, Inc.	1,071,002	0.35%
City of Athens Electric Department	4,000,746	0.32%
Huntsville Utilities	14,543,002	0.28%
Program Total	143,839,108	



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Top Performers by Program

eSCORE (ENERGY EFFICIENCY)

Top LPC Performers	KWH	% of FY Program Total	Total Participants	% of Savings vs. Sales
Nashville Electric Service	1,501,195	12.18%	2,158	0.03%
Middle Tennessee EMC	974,243	7.90%	788	0.03%
Knoxville Utilities Board	613,564	4.98%	997	0.02%
Appalachian Electric Cooperative	483,514	3.92%	440	0.08%
Memphis Light, Gas & Water Division	439,658	3.57%	1,104	0.01%
Program Total	12,328,370		14,418	

eSCORE (SMART ENERGY TECHNOLOGIES)

T 1000 4		% of FY		
Top LPC Performers	KWH	Program Total	Total Participants	Added % of Sales
Nashville Electric Service	1,192,607	18.19%	262	0.02%
Joe Wheeler EMC	262,489	4.00%	42	0.04%
Blue Ridge Mountain EMC	249,003	3.80%	56	0.05%
Appalachian Electric Cooperative	213,803	3.26%	34	0.03%
Volunteer Energy Cooperative	184,535	2.81%	21	0.01%
Program Total	6,557,371		1,163	

eSCORE SELF AUDIT

Top LPC Performers	KWH	% of FY Program Total	Total Participants	% of Savings vs. Sales
Memphis Light, Gas & Water Division	1,054,527	22.12%	1,170	0.02%
Knoxville Utilities Board	587,946	12.33%	654	0.02%
Nashville Electric Service	583,451	12.24%	649	0.01%
Volunteer Energy Cooperative	203,174	4.26%	226	0.01%
Electric Power Board of Chattanooga	165,416	3.47%	184	0.01%
Program Total	4,767,397		5,300	

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Top Performers by Program

NEW HOMES PROGRAM

Top LPC Performers	KWH	% of FY Program Total	Total Participants	Added % of Sales
Huntsville Utilities	9,228,820	21.03%	1,362	0.36%
Middle Tennessee EMC	3,227,536	7.36%	526	0.10%
Murfreesboro Electric Department	2,704,056	6.16%	333	0.34%
Nashville Electric Service	2,151,112	4.90%	281	0.04%
Sevier County Electric System	1,953,573	4.45%	332	0.39%
Program Total	43,878,363		6,290	

HOME UPLIFT

Top LPC Performers	KWH	% of FY Program Total	Total Participants	% of Savings vs. Sales
Electric Power Board of Chattanooga	905,868	17.40%	199	0.04%
Nashville Electric Service	100,475	16.44%	243	0.02%
Memphis Light, Gas & Water Division	855,724	12.93%	241	0.02%
Knoxville Utilities Board	346,588	6.66%	95	0.01%
Huntsville Utilities	673,194	6.08%	143	0.01%
Program Total	5,205,446		971	

TVA ENERGYRIGHT FOR BUSINESS (ENERGY EFFICIENCY)

Top LPC Performers	KWH	% of FY Program Total	Total Participants	% of Savings vs. Sales
Nashville Electric Service	2,011,497	20.34%	1	0.03%
Memphis Light, Gas & Water Division	1,885,281	17.67%	1	0.03%
Hopkinsville Electric System	1,661,769	15.57%	1	1.17%
Columbia Power & Water Systems	1,373,060	13.14%	12	0.43%
City of Maryville Electric Department	1,297,517	12.16%	6	0.49%
Program Total	10,460,112		29	

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Top Performers by Program

TVA ENERGYRIGHT FOR BUSINESS (SMART ENERGY TECHNOLOGIES)

Top LPC Performers	KWH	% of FY Program Total	Total Participants	Added % of Sales
City of West Point Water and Light Department	5,523,928	21.00%	1	13.00%
Nashville Electric Service	5,458,707	20.75%	14	0.09%
Memphis Light, Gas & Water Division	1,802,132	6.85%	14	0.03%
Huntsville Utilities	1,773,497	6.74%	2	0.08%
City of Athens Electric Department	1,482,352	5.64%	2	0.42%
Program Total	26,303,949		121	

TVA ENERGYRIGHT FOR INDUSTRY (ENERGY EFFICIENCY)

Top LPC Performers	KWH	% of FY Program Total	Total Participants	% of Savings vs. Sales
North Georgia EMC	504,304	24.30%	1	O.15%
Decatur Utilities	334,164	16.10%	1	0.06%
Program Total	2,074,927		31	

TVA ENERGYRIGHT FOR INDUSTRY (SMART ENERGY TECHNOLOGIES)

Top LPC Performers		% of FY		
	KWH	Program Total	Total Participants	Added % of Sales
North Georgia EMC	17,000,000	25.34%	1	5.16%
Murphy Power Board	10,969,707	16.35%	1	3.73%
Pulaski (PES Energize)	8,176,753	12.19%	1	5.76%
Huntsville Utilities	3,540,685	5.28%	3	0.74%
Duck River EMC	2,313,923	3.45%	1	0.71%
Program Total	67,099,426		69	

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GREEN POWER SWITCH

Top LPC Performers	MWH	% of FY Program Total
Nashville Electric Service	8,896	16.37%
Knoxville Utilities Board	8,529	15.69%
Memphis Light, Gas & Water Division	5,649	10.39%
Huntsville Utilities	3,934	7.24%
Electric Power Board of Chattanooga	3,111	5.72%
Program Total	54,355	

GPS ranking is based on MWh sold in FY19.

GREEN POWER PROVIDERS

Top LPC Performers	MWH	% of FY Program Total
Blue Ridge Mountain EMC	15.47	13.97%
Nashville Electric Service	6.43	5.81%
Electric Power Board of Chattanooga	5.68	5.13%
Fayetteville Public Utilities	5.67	5.12%
Middle Tennessee EMC	5.29	4.78%
Program Total	110.73	

GPP ranking is based on operating MW - DC nameplate capacity program to date.

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TVA EnergyRight for the Home eScore Program

eScore is a home energy upgrade program designed to provide homeowners with smart energy advice, access to a network of specially trained and approved contractors through our Quality Contractor Network, a free inspection on any work performed, and the assurance that the job will be done right. Homeowners can reengage with the program as many times as needed to achieve their home's best possible energy performance. Financing is available in most areas to help homeowners make upgrades. Rebates are available for qualifying smart energy technology upgrades.

eScore Self Audit

eScore Self Audit is a do-it-yourself online evaluation that allows residential customers to input information about their home and receive a personalized report with energy efficiency recommendations. Customers completing an audit may then participate in the eScore program. First-time participants also receive an energy efficiency starter kit.

eScore Financing

Most customers who participate in eScore have access to third-party financing as part of the program. On-bill financing is made available to customers through the local power company and Regions Bank. Off-bill financing is made available to the customers through Vanderbilt Mortgage and Finance, Inc. Local power companies choose the option that will be made available to their customers.

New Homes Program

The New Homes Program offers a suite of HVAC and water heating equipment incentives to encourage builders to use electric equipment instead of non-electric. Incentives are offered for single family homes, duplexes and multifamily homes. The New Homes Program incentives help builders purchase technologies that are highly desired for efficiency, effectiveness and longevity, making these new homes more marketable.

Home Uplift

Launched in 2018, Home Uplift seeks to create a sustainable, quality program to increase weatherization for low-income families. The program consists of free home upgrades that increase the energy efficiency and comfort of homes and enable low-income families to lower their energy bills. Funds are used for HVAC repair/replacement, insulation, air penetration reduction, windows and doors, as well as minor health and safety repairs that enable energy upgrades.

TVA EnergyRight for Business & Industry

TVA's portfolio of Business & Industry programs, offered through LPCs, provides expert guidance, professional energy evaluation tools, research and support to consumers in the commercial, public-sector, institutional and industrial sectors. These programs help businesses and other organizations make the right energy choices while supporting TVA's load optimization efforts.

Renewable Energy Solutions Green Power Switch®

This program offers a simple way to support regional renewable energy. Each block of Green Power Switch ensures 150 kilowatt-hours of electricity are generated by a renewable resource such as wind, solar or biomass.

Green Power ProvidersSM

Green Power Providers (up to 50 kW) replaced the successful Generation Partners pilot program that was initiated in 2003. Green Power Providers implements industry-best practices to continue helping add sustainable solar and renewable energy in the Tennessee Valley.

Solar Solutions Initiative

This pilot program was sunset at the end of CY15. It was intended for solar projects in the Valley (> 50 kW up to 1 MW) that use local, NABCEP-certified installers, helping support regional jobs and investment. The program was open to consumers, developers and local power companies who wished to install mid-size solar energy systems. The purchase price included a 10-year overlay to the base market prices offered in the Renewable Standard Offer.



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Renewable Standard Offer

This program was sunset at the end of CY15. It was intended for medium to larger renewable energy projects in the Valley (> 50 kW up to 20 MW). The program was open to consumers, developers and local power companies who wished to install mid- to large-size renewable energy systems. Eligible technologies included solar, wind and biomass energy.

Distributed Solar Solutions

This pilot program replaced the Solar Solutions Initiative pilot and was open for applications in 2016 and 2017. Distributed Solar Solutions was designed to encourage renewable energy projects that are directed by local power companies. In 2017 project size was set at 2MW or less.

TVA ENERGYRIGHT FOR DEMAND RESPONSE

Interruptible Power

This program can suspend a portion of participating customers' load with 5 or 30 minutes' notice during times of the power system's need. IP-5 minute participants receive a monthly demand credit in exchange for curtailment. IP-30 minute customers may be called upon to curtail consumption up to 12 hours per year and receive a monthly demand credit and event-based energy credit.

Peak Power Partners

Peak Power Partners are demand response programs administered by external program delivery partners. This model allows TVA to connect with hundreds of smaller commercial and industrial customers in the Valley to provide demand response benefits.

Voltage Optimization

This program offers voltage optimization programs with local power companies that operate distribution feeder voltages in the lower half of the ANSI standard voltage range, thereby reducing energy consumption annually.



M EnergyRight®