



2018 Highlights Report

SMART ENERGY TECHNOLOGIES · ENERGY EFFICIENCY · LOW-INCOME
DEMAND RESPONSE · RENEWABLE ENERGY

EXECUTIVE
MESSAGE

PARTNERSHIPS

SUCCESS
STORIES

HIGHLIGHTS
2018

FOR
THE HOME

BUSINESS
+ INDUSTRY

INDUSTRIAL
MARKETING

DEMAND
RESPONSE

RENEWABLE
ENERGY

APPENDIX



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Executive Message

This has been another tremendous year for EnergyRight® Solutions (ERS) and for the Tennessee Valley. We have so much to be proud of in FY2018. First and foremost – we kept the success streak going and this is the **11th straight year** we made or exceeded our overall goal! This is an amazing accomplishment that we do not take lightly. It takes our local power companies and key stakeholders, working closely with TVA, to accomplish this task. Together, we are making a difference and I want to thank each and every one of you that contributed to making this happen.

A great indicator of how valuable our programs were this past year is the fact that we touched more than 50,000 consumers across the Valley in a variety of ways. Touchpoints included home energy improvements, low-income initiatives, smart energy technologies for business and industry, and demand response programs, all under the EnergyRight® Solutions brand. These programs are made possible by the Valley public power model and focus on bringing benefits to the businesses and citizens of the Valley.

We are very excited about the newest initiatives introduced this year, smart energy technologies (i.e., electrification) and low-income programs! Electrification saw over 5,300 participants go through the program and we realized a direct impact to local communities of approximately \$97 million in leveraged funds. Our new low-income initiative, Home Uplift, saw 1,043 participants go through the programs and realized savings of over 3,800 kWh per home. We met with many of these participants to ensure they were being well-served by these programs and were able to see first-hand how people's lives are being changed for the better. We are planning to increase the size and impact of both of these initiatives in the future.

These accomplishments were made possible only through the hard work, collaboration, dedication and focus that our many partners provided throughout the year. We showed that by working collaboratively with a unified mission, we can accomplish great things for the residential and business consumers who call the Tennessee Valley home.

We will keep striving for success and are confident the next year will be just as bright and exciting for EnergyRight Solutions. We are positioning ourselves and TVA for the dynamic energy industry – one driven by changing consumer habits, new technologies and non-traditional competition. This is a great time to be in our industry and I am so excited to share these successes with you.

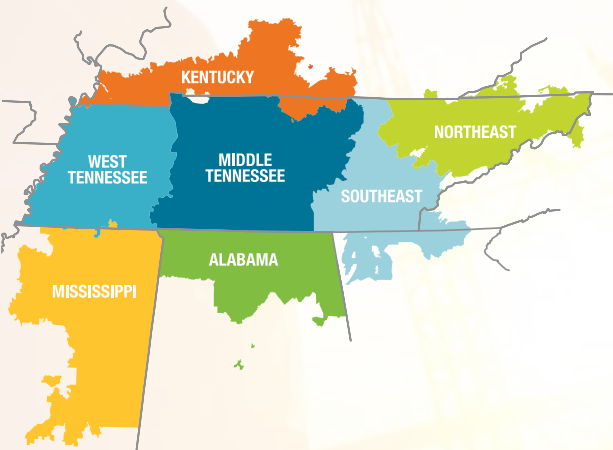


Sincerely,

Cynthia L. Herron
Vice President
EnergyRight® Solutions

Powerful Partnerships

TVA would like to thank our local power company (LPC) partners and directly served customers, the Tennessee Valley Public Power Association, Inc. (TVPPA), Seven States Power Corporation and the Tennessee Valley Industrial Committee (TVIC) for being an integral part of delivering ERS to people across the Valley. These programs would not be possible without the participation and partnership of these groups.



Success Stories

Across the region, homeowners, businesses, industry and local power companies have put ERS principles into practice with impressive results. These are some of their stories:

1. ERS Team Honored
2. Home Uplift Helps Families
3. TVA’s First Energy-Smart Opportunities
4. Keeping Music City Cool
5. Providing Smart Energy Solutions for Manufacturing Operations
6. TVA and ORED “Top” Renewable Energy Lists
7. The Power of Community
8. Meeting Demand in a Whole New Way



ERS Team Honored for Innovative Thinking

In 2018, TVA’s EnergyRight Solutions for the Home (ERSH) team was recognized for innovation in customer design. The award, presented by E Source, was received for the design and human-centered approaches used to help reposition ERS’s eScore program in the changing utility marketplace.

“Our market research told us that what consumers really want is for their local power company and TVA to help them make good energy-related decisions about their homes, help them find high quality contractors, inspect their work and be their advocate if necessary to make sure the job was done right,” said Frank Rapley, senior manager, ERSH.

The research also discovered that LPCs want eScore to help them deepen trust and create meaningful engagement with consumers and that contractors want to differentiate themselves from competitors and generate customer leads.

“Consumers feel a lot of anxiety when they have to make major purchases like replacing a heat pump or windows,” Rapley said. “They see their local power company and TVA as the unbiased experts that can help them through these decisions. That builds trust and loyalty, and it deepens the relationship between the end-use consumer and their power company.”



Home Uplift Helps Families Live More Comfortably

At the Northwoods Public Housing community in Huntsville, AL, the ERS Home Uplift program, in partnership with Huntsville Utilities and the Huntsville Housing Authority, was able to update HVAC, water heating and lighting in the homes of about 220 families. The program helped residents reduce their electric bills and made their homes more comfortable. Plus, it allowed the housing authority to use their funds for other weatherization and structural needs.

TVA believes the benefits of the Home Uplift are twofold.

“We want to improve the efficiency of low-income families’ homes so they have more money in their pockets,” said ERS Program Manager Scott Harrell. “And second, we are focused on the non-energy health impacts of these clean-air improvements. How will these upgrades affect COPD, asthma, days missed from school or work? We hope Home Uplift will positively impact residents’ lives, health and comfort.”

TVA's First Energy-Smart Opportunities

4-County Electric Power Association, in partnership with the Tennessee Valley Authority's ERS program, presented a \$1,289 incentive to Unruh Farms for converting from diesel-powered irrigation pumps to electric-powered pumps. According to Unruh Farms, utilizing an electric irrigation system increased crop yield by 250 percent during the 2017 farming season.

"Energy-smart opportunities offered through TVA's EnergyRight Solutions for Business + Industry help power companies partner with area businesses to lower their costs and improve efficiencies," said 4-County CEO Joe Cade. "4-County is proud to support our farming community and be the energy partner to help their business grow."

"Changing to electric irrigation pumps is a smart business decision for my farm and the environment," said Justin Unruh of Unruh Farms. "Electricity is cleaner and the operating cost is much lower and predictable. Eliminating diesel fuel and maintenance allows me to add money to my bottom line and implement more efficient farming practices to improve yields."

Keeping Music City Cool at Tequila Cowboy

Nashville is one of the top destination locations for tourists, and the city’s growth has been amazing to watch. But what do you do when you are a restaurateur who wants to open a store on bustling Broadway when more than half of the year it’s hot and humid? Purchase a variable refrigerant flow (VRF) system – one of the latest and most effective smart energy technologies on the market, of course!

Tequila Cowboy’s Adam Hesler did just that – by working with Nashville Electric Service (NES), TVA’s ERS and preferred partner the Weidt Group. They installed several nonducted VRF systems from Mitsubishi Electric throughout the facility. This included the outdoor condensing units as well as the indoor air distribution boxes on each floor. The project scope of work was for 72 tons of cooling, but the restaurant ended up installing several more units to condition the restaurant next door as well – Luke’s 32 Bridge – for a total of 85,000-square-feet of conditioned space.

This type of smart technology is something TVA and NES can support together. “We are happy to support local businesses,” said NES Energy Services Engineering Manager Tony Richman. “This cost-effective technology is a great example of how NES and TVA partner together to help Nashville businesses grow through smart energy projects.”



Providing Smart Energy Solutions For Manufacturing Operations

Industrial operations like Dynatronics', a manufacturer of medical and rehabilitation equipment in Southeast Tennessee, rely heavily on lift trucks for material handling, but internal combustion forklifts can be noisy, require significant maintenance and emit harmful pollutants.

EPB, Chattanooga's local power company, partnered with TVA's EnergyRight Solutions for Business + Industry (ERSB+I) program to offer an incentive to help Dynatronics replace an internal combustion forklift with an electric-powered unit.

"We are thankful for TVA's efforts to incentivize ways that can help us reduce our operational costs and provide a cleaner environment for our employees to serve our customers," said Al Bennett, Dynatronics' Chattanooga plant manager.

TVA and Oak Ridge Electric Department “Top” Renewable Energy Lists

In 2018, TVA was recognized by the National Renewable Energy Laboratory (NREL), a division of the U.S. Department of Energy, as a top public power utility in the U.S. when it comes to renewable energy. TVA was ranked fifth among public power providers’ utility green pricing programs, up from eighth the year before. TVA’s two programs, Green Power Switch and Southeastern RECs, generated 504,227 megawatt-hours of renewable power at the time of the report.

The NREL list also found seven of the top-10 green power sales rates in the country were from public power utilities, including local power company Oak Ridge Electric Department, which sells more than 7% percent of its power from TVA’s green energy sources.



The Power of Community

What was once a landfill off I-65 is now the site of Nashville’s first community solar park, aptly named “Music City Solar.”

Nashville Electric Service (NES) and TVA, along with community leaders and project partners, officially “plugged in” Nashville’s first community solar park in a ceremony on August 1, 2018. The commissioning marks the first solar project in TVA’s Distributed Solar Solutions pilot program to become operational.

The Music City Solar project will give NES customers access to local, green power generation in a sustainable, maintenance-free way that eliminates the hassle and costs associated with installing panels on their homes or businesses.

“We are thrilled to provide our customers with affordable access to clean energy,” says Decosta Jenkins, NES president and CEO. “With the support of our project partners, city officials and TVA, Music City Solar will reshape the way renewable energy is created here in Middle Tennessee, and most important, create renewable energy that is accessible to all.”

Meeting Demand in a Whole New Way

In January 2018, TVA experienced a rash of extreme weather that put strain on our generation systems. While our generation stations were actively providing low-cost power for the Valley, TVA's ERS group helped meet system needs in a whole different way – through demand response. TVA called on these programs to provide an average of 973 MW of demand response on the four highest peak days in January 2018, with a maximum peak reduction of 1,114 MW on January 17, the highest energy use day in TVA history.

The ERS Demand Response group called on 108 hours' worth of demand response in January 2018, involving 120 LPCs, 11 directly served customers, and over 1,000 customers, with a performance of 107%. This impact not only relieved stressed assets and line congestion during a time of high need, but it also invested approximately \$500,000 back into our community through energy payments given to participants who helped us keep the lights on.

"At Morristown Utility Systems, we participate in demand response and work together with TVA and our end users to shave peak loads for TVA in critical times," said Jody Wigington, Morristown Utility Systems general manager and CEO. "Demand response is a win-win for all of us, bringing value by lowering TVA's cost, our costs and our end users' costs."



Highlights of 2018

Having a competitive position within our power system and resource planning models makes ERS a least-cost option. This enables us to reduce peak demand and offset the possible need for additional resources.

255.4 GWh

IN ENERGY EFFICIENCY
SAVINGS

119.5 GWh

IN SMART ENERGY
TECHNOLOGIES

THE VALLEY HAS EXCEEDED ITS LOAD MANAGEMENT
TARGETS 11 YEARS IN A ROW.

78.66 MW (DC)

RENEWABLES INSTALLED FY18

\$30.97 per MWh

AVERAGE LIFETIME COSTS FOR TVA'S ENERGY EFFICIENCY
PROGRAMS



EnergyRight Solutions for the Home

ERSH offers a variety of programs to help consumers use energy more wisely and save them money.

In this section:

1. eScore™ Program
2. eScore™ Program Self Audit
3. eScore™ Program Financing
4. New Homes Program
5. Home Uplift Initiative
6. Home Energy Workshops



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 (Quality Contractor Network)
- A free inspection of work performed through the program
- Assurance that the upgrade was installed correctly
- Financing to help homeowners make upgrades (where available)

25,965

PARTICIPANTS

25.16 GWh

ENERGY SAVED

TOP PERFORMERS

Nashville Electric Service	1,771,870 kWh
Middle Tennessee Electric Membership Corporation	1,364,009 kWh
Electric Power Board of Chattanooga	1,269,274 kWh
Knoxville Utilities Board	1,021,511 kWh
North Georgia Electric Membership Corporation	893,168 kWh

TOP SAVINGS, PERCENT OF SALES

McMinnville Electric System	0.31%
Muscle Shoals Electric Board	0.17%
Caney Fork Electric Cooperative Inc.	0.14%
Appalachian Electric Cooperative	0.14%
Cullman Power Board	0.13%

Almost 14,000 evaluations and inspections performed during FY18 with more than 25,900 homeowners making improvements.



eScore Program Smart Energy Technologies

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.

990

PARTICIPANTS

4.40 GWh

ENERGY ADDED

TOP PERFORMERS

Nashville Electric Service	397,731 kWh
Alcorn County Electric Power Association	169,042 kWh
City of Florence Electricity Department	155,367 kWh
Joe Wheeler Electric Membership Corporation	151,316 kWh
Meriweather Lewis Electric Cooperative	129,333 kWh

ADDED PERCENTAGE OF SALES

Amory Water & Electric	0.16%
McMinnville Electric System	0.11%
Cullman Power Board	0.08%
Alcorn County Electric Power Association	0.07%
Weakley County Municipal Electric System	0.05%



eScore Program Self Audit

The 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.

7,407

PARTICIPANTS

5.38 GWh

ENERGY SAVED

TOP PERFORMERS

Memphis Light, Gas & Water Division	894,855 kWh
Nashville Electric Service	709,800 kWh
Electric Power Board of Chattanooga	665,392 kWh
Knoxville Utilities Board	296,296 kWh
Clarksville (CDE Lightband)	208,936 kWh

TOP SAVINGS, PERCENT OF SALES

Cullman Power Board	0.033%
Rockwood Electric Utility	0.032%
Etowah Utilities	0.031%
Electric Power Board of Chattanooga	0.028%
Tallahatchie Valley Electric Power Association	0.026%

More than 220,000 homeowners have received a kit since the promotion began in 2008.



eScore Program 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 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.

7,010

APPLICATIONS RECEIVED

3,663

LOANS FUNDED

>\$29 MILLION

FUNDED



Quality Contractor Network (QCN)

The QCN, a group of highly skilled and knowledgeable contractors who have been specially trained and approved by TVA and the LPC, ensure that homeowners’ energy upgrades are installed correctly. Members of the QCN help the eScore and Home Uplift initiatives provide quality energy improvements at scale.

11,533

eSCORE INSPECTIONS IN FY18

83%

PARTICIPANTS ENTERING eSCORE PROGRAM
THROUGH CONTRACTOR PATH

\$110.84 MILLION

IN CUSTOMER SPENDING THROUGH eSCORE
IN FY18

4.6 OUT OF 5

CUSTOMER SATISFACTION WITH QCN



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.

4,498

NEW HOMES
INCENTIVIZED

32.6 GWh

ENERGY ADDED

TOP PERFORMERS

Huntsville Utilities	8,027,697 kWh
Nashville Electric Service	2,573,387 kWh
Murfreesboro Electric Department	2,445,234 kWh
Clarksville (CDE Lightband)	1,959,465 kWh
Middle Tennessee Electric Membership Corporation	1,779,762 kWh

ADDED PERCENTAGE OF SALES

Cookeville Electric Department	0.54%
Sparta Electric & Public Works	0.43%
Huntsville Utilities	0.32%
Murfreesboro Electric Department	0.30%
Loudon Utilities	0.26%



Home Uplift Initiative

The Home Uplift Initiative partners with LPCs and community organizations to provide home energy evaluations and free upgrades that increase the energy efficiency and comfort of homes for low-income families.

582

PARTICIPANTS

1.83 GWh

ENERGY SAVED

TOP PERFORMERS

Nashville Electric Service	440,723 kWh
Electric Power Board of Chattanooga	406,618 kWh
Huntsville Utilities	342,137 kWh
Memphis Light, Gas & Water Division	252,473 kWh
Knoxville Utilities Board	211,489 kWh

TOP SAVINGS, PERCENT OF SALES

4-County Electric Power Association	0.03%
Electric Power Board of Chattanooga	0.02%
Huntsville Utilities	0.01%
Nashville Electric Service	0.01%
Knoxville Utilities Board	0.01%

Home Energy Workshops

Free Home Energy Workshops are offered by TVA in partnership with LPCs to share tips and assistance around energy conservation and reducing energy costs.

1,197

PARTICIPANTS

0.87 GWh

ENERGY SAVED

TOP PERFORMERS

Memphis Light, Gas & Water Division	346,528 kWh
Electric Power Board of Chattanooga	160,888 kWh
Duck River Electric Membership Corporation	110,656 kWh
Nashville Electric Service	85,904 kWh
Columbus Light & Water	74,256 kWh

TOP SAVINGS, PERCENT OF SALES

Columbus Light & Water	0.057%
Duck River Electric Membership Corporation	0.010%
Electric Power Board of Chattanooga	0.007%
Chickamauga Electric System	0.006%
Memphis Light, Gas & Water Division	0.006%



EnergyRight Solutions for Business + Industry

When qualifying companies make an investment in energy upgrades through the ERSB+I program, they boost their bottom line, improve the quality of their products and services and enhance their competitiveness by adopting emerging electric technologies. In this section:

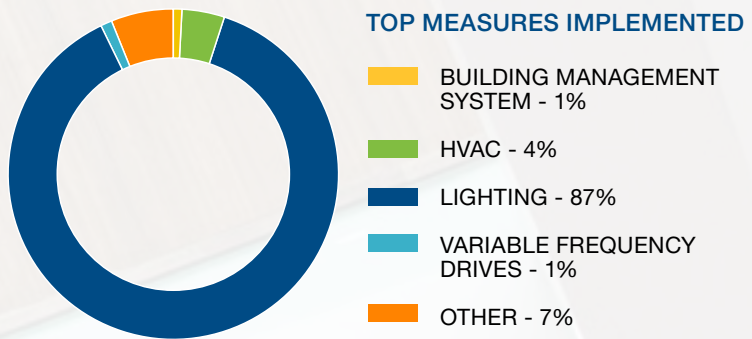
1. EnergyRight Solutions for Business (ERSB) GWh Saved
2. ERSB Incentives Paid
3. ERSB Smart Energy Technologies
4. EnergyRight Solutions for Industry (ERSI) GWh Saved
5. ERSI Incentives Paid
6. ERSI Smart Energy Technologies
7. Preferred Partners Network (PPN)

ERSB GWh Saved

ERSB helps businesses use energy wisely by providing assessments of energy use and incentives for qualifying businesses.

96.15 GWh

ENERGY SAVED



TOP PERFORMERS

Nashville Electric Service	11,209,183 kWh
Memphis Light, Gas & Water Division	7,211,984 kWh
Middle Tennessee Electric Membership Corporation	6,120,879 kWh
Electric Power Board of Chattanooga	4,942,979 kWh
Cookeville Electric Department	2,936,505 kWh

TOP SAVINGS, PERCENT OF SALES

Brownsville Utility Department	2.88%
Amory Water & Electric	1.46%
Pulaski (PES Energize)	1.46%
Milan Department of Public Utilities	1.45%
City of Water Valley Electric Department	1.17%

ERSB Incentives Paid

\$5,152,459

INCENTIVES PAID TO BUSINESS CUSTOMERS

128

LPC PARTICIPANTS ACTIVE IN FY18



ENERGY SAVINGS BY DISTRICT

AL – 8%	NE – 11%
KY – 4%	SE – 9%
MS – 13%	WEST TN – 17%
MID TN – 38%	

TOP BUSINESS PROGRAM PARTICIPANTS

Accommodation and food services	10%
Administrative and support, waste management and remediation services	1%
Educational services	28%
Finance and insurance	2%
Health care and social assistance	7%
Information	1%
Manufacturing	3%
Mining	2%
Other services	15%
Real estate and rental leasing	4%
Retail trade	24%
Transportation and warehousing	2%



ERSB Smart Energy Technologies

97

PARTICIPANTS

32.11 GWh

ENERGY ADDED

TOP PERFORMERS

Marshall-DeKalb Electric Cooperative	6,943,410 kWh
Nashville Electric Service	6,682,282 kWh
Northcentral Mississippi Electric Power Association	3,433,806 kWh
Central Electric Power Association	2,563,001 kWh
Electric Power Board of Chattanooga	2,432,656 kWh

ADDED PERCENTAGE OF SALES

Marshall-DeKalb Electric Cooperative	3.6%
Central Electric Power Association	1.03%
Northcentral Mississippi Electric Power Association	0.78%
Joe Wheeler Electric Membership Corporation	0.51%
4-County Electric Power Association	0.45%

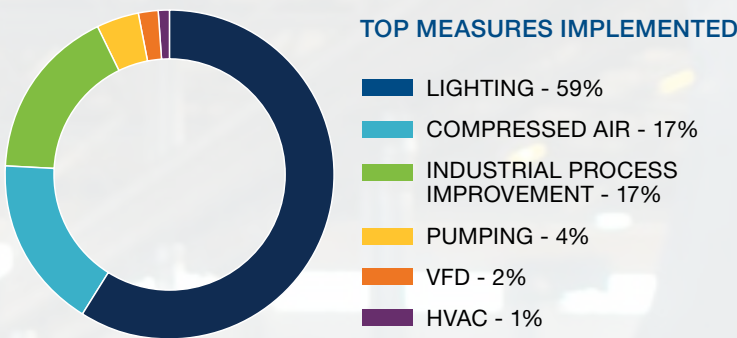


ERSI GWh Saved

The industrial sector alone accounts for about one-third of U.S. energy use. Customized TVA technical assistance is available to industrial users of power to devise plantwide, holistic approaches to using energy wisely. TVA helps customers maximize efficiency, control expenses and boost their bottom lines.

109.91 GWh

ENERGY SAVED



TOP PERFORMERS

Huntsville Utilities	5,271,416 kWh
City of Athens Electric Department	3,755,908 kWh
Memphis Light, Gas & Water Division	3,124,386 kWh
Nashville Electric Service	2,908,885 kWh
City of Maryville Electric Department	2,908,884 kWh

TOP SAVINGS, PERCENT OF SALES

Holly Springs Electric Department	6.11%
Tuscumbia Electricity Department	3.97%
Tulahoma Board of Public Utilities	3.21%
Tishomingo County Electric Power Association	2.87%
Trenton Light & Water Department	2.82%

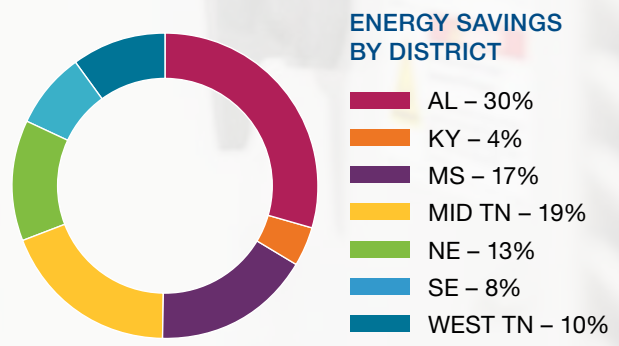
Includes Industrial Marketing & Services numbers.



ERSI Incentives Paid

\$7,079,463

INCENTIVES PAID TO INDUSTRIAL
CONSUMERS



TOP INDUSTRIAL PROGRAM PARTICIPANTS

Manufacturing	91%
Mining	3%
Other services	3%
Retail trade	2%

Includes Industrial Marketing & Services numbers.



ERSI Smart Energy Technologies

50

PARTICIPANTS

50.35 GWh

ENERGY ADDED

TOP PERFORMERS

Middle Tennessee Electric Membership Corporation	1,424,362 kWh
Murphy Power Board	969,561 kWh
Cumberland Electric Membership Corporation	752,680 kWh
Cullman Electric Cooperative	460,130 kWh
Electric Power Board of Chattanooga	316,390 kWh

ADDED PERCENTAGE OF SALES

Murphy Power Board	1.03%
Powell Valley Electric Cooperative	0.26%
Middle Tennessee Electric Membership Corporation	0.24%
City of Dayton Electric Department	0.21%
Cullman Electric Cooperative	0.18%

Includes Industrial Marketing & Services numbers.

Preferred Partners Network (PPN)

The PPN is a network of general contractors, architects, engineers and other trade allies who are trained by TVA and are experts in their field. These partners install upgrades and provide insight into the ERSB+I programs.

186.5 GWh

ENERGY SAVED BY ERSB+I PROGRAMS

18 GWh

ENERGY ADDED BY ERSB+I PROGRAMS

1,143

PROJECTS BY PPN MEMBERS

280

TOTAL PPN MEMBERS
AS OF SEPTEMBER 30, 2018



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APPENDIX

Industrial Marketing

Customer satisfaction and relationship management are the cornerstones of Industrial Marketing’s strategy. It is focused on strengthening customer relationships, offering competitive pricing products, capitalizing on opportunities to better manage TVA’s load and implementing creative economic development programs.

Industrial Marketing Energy Efficiency

56.47 GWh

ENERGY SAVED

70

PARTICIPANTS

INDUSTRIAL MARKETING PROGRAMS

Tailored Solutions for Industry	30.183 GWh
Industrial Standard Incentive	26.288 GWh



Industrial Marketing Smart Energy Technologies

44.82 GWh

ENERGY ADDED

12

PARTICIPANTS

INDUSTRIAL MARKETING PROGRAMS

Custom Industrial	44,535,445 kWh
Standard Industrial	287,807 kWh

EnergyRight Solutions Demand Response

The energy business is a balance of power demand and generation. New systems of demand monitoring and response add megawatts to the balance, not by building brick and mortar power generation plants, but by using “virtual power plants” to lower power consumption.

Interruptible Power

Interruptible Power enables TVA to suspend a portion of participating customers’ load during times of power system need.

1,424 MW

TOTAL CAPACITY

INTERRUPTIBLE POWER PROGRAMS

Interruptible Power – 5 minutes’ notice	655 MW
Interruptible Power – 30 minutes’ notice	769 MW
Instantaneous Response	599 MW

Aggregated Demand Response

Aggregated Demand Response delivers turnkey demand response programs that provide economic load reduction by utilizing third-party implementers.

192 MW

TOTAL CAPACITY

AGGREGATED DEMAND RESPONSE PROGRAMS

Seven States Aggregated Demand Response Program	6 MW
EnerNOC Demand Response Program	186 MW

Voltage Optimization

Voltage Optimization saves energy and lowers peak demand by enabling LPCs to operate distribution feeder voltages in the lower half of the standard voltage range.

LPCs may also use the voltage optimization equipment to better operate their system and improve distribution system reliability.

185 MW

TOTAL CAPACITY

(Programs combined and not individually delineated)

Renewable Energy Solutions

Renewable energy in the form of wind, solar, low-impact hydro and biomass is contributing significant generation to the TVA service area. These programs are adding to the mix:

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

Green Power Switch

Green Power Switch offers a simple way for consumers to support renewable energy sources such as wind, solar and biomass. Each \$4 purchase ensures a block of 150 kilowatt-hours of renewable energy is delivered to TVA’s electricity mix.

1,156 GWh

SALES PROGRAM-TO-DATE

10,568

CONSUMERS IN FY18

62,641

MWh SOLD FOR FY18

TOP PERFORMERS

MWh SOLD

Nashville Electric Service	9,515 MWh
Knoxville Utilities Board	8,683 MWh
Memphis Light, Gas & Water Division	6,363 MWh
Murfreesboro Electric Department	6,076 MWh
Huntsville Utilities	4,084 MWh

Since the program began, GPS participants have supported enough megawatt-hours of renewable energy to supply the annual electricity needs for more than 80,000 average homes in the TVA service area.

Green Power Switch Southeastern RECs

Green Power Switch Southeastern RECs is a bulk purchase option for businesses in the Valley. It gives an organization the ability to make renewable energy claims, and allows them to demonstrate to their customers and stakeholders that they support green initiatives. This option is a pilot program only available in a limited number of LPC regions.

629,176

MWh SOLD IN FY18

14

CUSTOMERS IN FY18



Green Power Providers

Green Power Providers supports Valley homeowners and businesses who install and operate their own renewable energy systems.

3,500

INSTALLATIONS
PROGRAM-TO-DATE

108.39 MW

RENEWABLE GENERATION DC
NAMEPLATE CAPACITY
PROGRAM-TO-DATE

RESOURCE	OPERATING NAMEPLATE DC CAPACITY
Solar	98.764
Biomass (landfill gas and wastewater methane)	9.524
Wind	0.096
Low-Impact Hydro	0.009
Total Operating	108.393

RESOURCE	OPERATING NAMEPLATE DC CAPACITY
Blue Ridge Mountain Electric Membership Corporation	15.40
Nashville Electric Service	6.20
Fayetteville Public Utilities	5.67
Electric Power Board of Chattanooga	5.54
Middle Tennessee Electric Membership Corporation	5.19

Another 172 projects, representing 3.55 MWdc of additional capacity, were approved by TVA and in various stages of construction as of September 30, 2018.

Current program will sunset December 31, 2019. TVA is committed to engage LPCs and other stakeholders to explore future solution for the private-scale market.

Renewable Standard Offer and Solar Solutions Initiative

**76 Projects to Date = 200.28 MWdc
Operating**

Another three projects, representing 41 MWdc of additional capacity, were approved by TVA and were in various stages of construction as of September 30, 2018.

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, 2018.

RESOURCE	OPERATING NAMEPLATE DC CAPACITY
Solar	164.87
Landfill Gas	15.40
Biomass	20

Distributed Solar Solutions

Distributed Solar Solutions, a pilot program launched in 2016, is designed to encourage renewable projects led by local power company partners. Projects explore solutions to community solar, targeted deployment on distribution circuits to provide technical benefits and solar deployment in a micro-grid.

As of September 30, 2018:

APPLICATION PHASE

3 PROJECTS = 2.25 MWdc

CONTRACTED

8 PROJECTS = 20.67 MWdc

OPERATING

2 PROJECTS = 3 MWdc

Current pilot is closed. LPCs may now request applications through the Flexibility Research Project.



Appendix

For a complete list of activities by power company, [**click here**](#).

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

Top LPC Performers

TOTAL PROGRAM SAVINGS

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL
Nashville Electric Service	17,126,365	9.35%
Memphis Light, Gas & Water Division	12,226,500	6.68%
Huntsville Utilities	8,433,991	4.61%
Middle Tennessee Electric Membership Corporation	8,264,175	4.51%
Electric Power Board of Chattanooga	7,858,242	4.29%
Knoxville Utilities Board	4,707,186	2.57%
City of Athens Electric Department	4,412,981	2.41%
Cumberland Electric Membership Corporation	4,280,326	2.34%
City of Maryville Electric Department	3,797,231	2.07%
City of Florence Electricity Department	3,786,473	2.07%
Program Total	255,425,037	

SAVINGS TO SALES

TOP LPC PERFORMERS	KWH	% OF FY SALES TOTAL
Tulahoma Board of Public Utilities	2,490,726	0.84%
Brownsville Utility Department	1,730,470	0.80%
Smithville Electric System	885,941	0.68%
Amory Water & Electric	903,068	0.66%
Mayfield Electric & Water System	846,901	0.59%
Dyersburg Electric System	2,419,227	0.57%
Tuscumbia Electricity Department	568,797	0.57%
Cookeville Electric Department	3,149,860	0.55%
Philadelphia Utilities	660,983	0.53%
Pulaski (PES Energize)	2,412,701	0.53%
Program Total	255,425,037	0.14%

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Top Performers by Program

eSCORE (ENERGY EFFICIENCY)

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVING VS SALES
Nashville Electric Service (NES)	1,771,870	7.04%	2,412	0.04%
Middle Tennessee Electric Membership Corporation (MTEMCO)	1,364,009	5.42%	1,936	0.04%
Electric Power Board of Chattanooga (EPB)	1,269,274	5.04%	1,237	0.06%
Knoxville Utilities Board (KUB)	1,021,511	4.06%	1,696	0.04%
North Georgia Electric Membership Corporation	893,168	3.55%	473	0.06%
Program Total	25,159,467		25,965	

eSCORE (SMART ENERGY TECHNOLOGIES)

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	ADDED % OF SALES
Nashville Electric Service (NES)	397,731	9.04%	71	0.01%
Alcorn County Electric Power Association	169,042	3.84%	24	0.07%
City of Florence Electricity Department	155,367	3.53%	35	0.02%
Joe Wheeler Electric Membership Corporation	151,316	3.44%	39	0.03%
Meriwether Lewis Electric Cooperative	129,333	2.94%	42	0.03%
Program Total	4,397,444		990	

eSCORE SELF AUDIT

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVING VS SALES
Memphis Light, Gas & Water Division	894,855	16.64%	1,248	0.02%
Nashville Electric Service (NES)	709,800	13.20%	975	0.01%
Electric Power Board of Chattanooga (EPB)	665,392	12.37%	914	0.03%
Knoxville Utilities Board (KUB)	296,296	5.51%	407	0.01%
Clarksville (CDE Lightband)	208,936	3.88%	287	0.02%
Program Total	5,378,607		7,407	

NEW HOMES PROGRAM

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	ADDED % OF SALES
Huntsville Utilities	8,027,697	24.62%	1,193	0.32%
Nashville Electric Service (NES)	2,573,387	7.89%	320	0.05%
Murfreesboro Electric Department	2,445,234	7.50%	304	0.30%
Clarksville (CDE Lightband)	1,959,465	6.01%	280	0.21%
Middle Tennessee Electric Membership Corporation (MTEMCO)	1,779,762	5.46%	225	0.05%
Program Total	32,602,566		4,498	

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Top Performers by Program

HOME UPLIFT

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVING VS SALES
Nashville Electric Service (NES)	440,723	24.12%	96	0.01%
Electric Power Board of Chattanooga (EPB)	406,618	22.26%	110	0.02%
Huntsville Utilities	342,137	18.73%	154	0.01%
Memphis Light, Gas & Water Division	252,473	13.82%	99	0.00%
Knoxville Utilities Board (KUB)	211,489	11.58%	73	0.01%
Program Total	1,826,835		582	

ENERGYRIGHT SOLUTIONS FOR BUSINESS (ENERGY EFFICIENCY)

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVING VS SALES
Nashville Electric Service (NES)	11,209,183	11.66%	66	0.18%
Memphis Light, Gas & Water Division	7,211,984	7.50%	61	0.12%
Middle Tennessee Electric Membership Corporation (MTEMCO)	6,120,879	6.37%	59	0.27%
Electric Power Board of Chattanooga (EPB)	4,942,979	5.14%	37	0.21%
Cookeville Electric Department	2,936,505	3.05%	19	0.89%
Program Total	96,151,431		829	

ENERGYRIGHT SOLUTIONS FOR BUSINESS (SMART ENERGY TECHNOLOGIES)

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	ADDED % OF SALES
Marshall-DeKalb Electric Cooperative	6,943,410	21.62%	1	3.69%
Nashville Electric Service (NES)	6,682,282	20.81%	19	0.11%
Northcentral Mississippi Electric Power Association	3,433,806	10.69%	4	0.78%
Central Electric Power Association	2,563,001	7.98%	2	1.03%
Electric Power Board of Chattanooga (EPB)	2,432,656	7.58%	8	0.10%
Program Total	32,114,225		97	

ENERGYRIGHT SOLUTIONS FOR INDUSTRY (ENERGY EFFICIENCY)

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVING VS SALES
Huntsville Utilities	5,271,416	4.80%	9	1.03%
City of Athens Electric Department	3,755,908	3.42%	5	2.05%
Memphis Light, Gas & Water Division	3,124,386	2.84%	12	0.16%
Nashville Electric Service (NES)	2,908,885	2.65%	8	0.28%
City of Maryville Electric Department	2,908,884	2.65%	3	1.18%
Program Total	109,914,604		234	

Top Performers by Program

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ENERGYRIGHT SOLUTIONS FOR INDUSTRY (SMART ENERGY TECHNOLOGIES)

TOP LPC PERFORMERS	KWH	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	ADDED % OF SALES
Middle Tennessee Electric Membership Corporation (MTEMC)	1,424,362	2.83%	5	0.24%
Murphy Power Board	969,561	1.93%	1	1.03%
Cumberland Electric Membership Corporation	752,680	1.49%	2	0.12%
Cullman Electric Cooperative	460,130	0.91%	1	0.18%
Electric Power Board of Chattanooga (EPB)	316,390	0.63%	3	0.03%
Program Total	50,352,096		50	

GREEN POWER SWITCH

TOP LPC PERFORMERS	MWH	% OF FY PROGRAM TOTAL
Nashville Electric Service (NES)	9,515	15.19%
Knoxville Utilities Board (KUB)	8,683	13.86%
Memphis Light, Gas & Water Division	6,363	10.16%
Murfreesboro Electric Department	6,076	9.70%
Huntsville Utilities	4,084	6.52%
Program Total	62,641	

GPS ranking is based on MWh sold in FY18.

GREEN POWER PROVIDERS

TOP LPC PERFORMERS	OPERATING KW - DC NAMEPLATE CAPACITY	% OF FY PROGRAM TOTAL
Blue Ridge Mountain Electric Membership Corporation	15,402	14.21%
Nashville Electric Service (NES)	6,201	5.72%
Fayetteville Public Utilities	5,667	5.23%
Electric Power Board of Chattanooga (EPB)	5,535	5.11%
Middle Tennessee Electric Membership Corporation (MTEMC)	5,189	4.79%
Program Total	108,391	

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

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ENERGYRIGHT SOLUTIONS 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 of 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.

ENERGYRIGHT SOLUTIONS 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. ERS helps 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 is 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.

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 2016 projects could range in size from greater than 50kW up to 5 MW of solar electricity and in 2017 project size was set at 2 MW or less.

Description of Programs

ENERGYRIGHT SOLUTIONS FOR DEMAND RESPONSE

Interruptible Power

ERS 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.

Aggregated Demand Response

ERS offers local power companies a turnkey demand response program that delivers economic load reduction up to 40 hours annually per customer. ERS leverages third-party implementers EnerNOC and Seven States Power Corporation (7SPC) to deliver a demand response program that provides capacity during times of power system need.

Voltage Optimization

ERS 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.



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