



TENNESSEE VALLEY AUTHORITY ENERGYRIGHT® SOLUTIONS

2014 | HIGHLIGHTS REPORT

ENERGY EFFICIENCY · CUSTOMER SYSTEMS · RENEWABLE ENERGY

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EXECUTIVE MESSAGE

2014: Doing the Right Thing Successfully!

Through hard work and dedication, the EnergyRight® and Renewable Solutions team successfully met and exceeded our goals for the seventh straight year!

Together with local power companies and directly served customer partners, we accomplished great things in 2014. With programs covering self-audits, in-home energy evaluations, heat pumps, programs for business and industry, as well as programs for manufactured and new homes, we offered solutions for all of the 9 million Valley consumers that saved them both energy and money. In addition, our Renewable Energy Solutions program promotes clean energy that makes our Valley a better place to live, work, play and raise happy families.

Let me share a few highlights with you:

- EnergyRight Solutions for the Home produced \$68 million in homeowner investments for energy efficiency measures and generated enough annual energy savings to power 5,835 homes.
- EnergyRight Solutions for Business and Industry helped customers complete 1,431 independent energy efficiency projects and 3,526 small business direct installation (Knoxville and Memphis) projects representing approximately \$300 million in energy efficiency measures. These efforts yielded an annual savings of 416.8 gigawatt hours (GWh).

- Our In-Home Energy Evaluation program ended the fiscal year with more than 85,000 evaluations over the life of the program, and an industry leading 74 percent implementation rate. In FY 2015, this program will be transitioning into our eScore™ program, which we are very excited about.

We expect 2015 to be just as exciting as we launch the new eScore program, which will allow us to utilize cutting edge technology to give Valley homeowners a customizable path for making their home a “10” in energy efficiency, and begin accepting new applications for our ERSB incentive program.

We will continue to build on our successes by offering a full package of energy efficiency, demand response and renewable energy products and services including rebates and incentives, energy analyses, training and education to the people of the Tennessee Valley. We will do so because it is both good business and, more importantly, **the right thing to do.**



Sincerely,

Cynthia L. Herron

Cynthia L. Herron
Vice President
EnergyRight® and Renewable Solutions

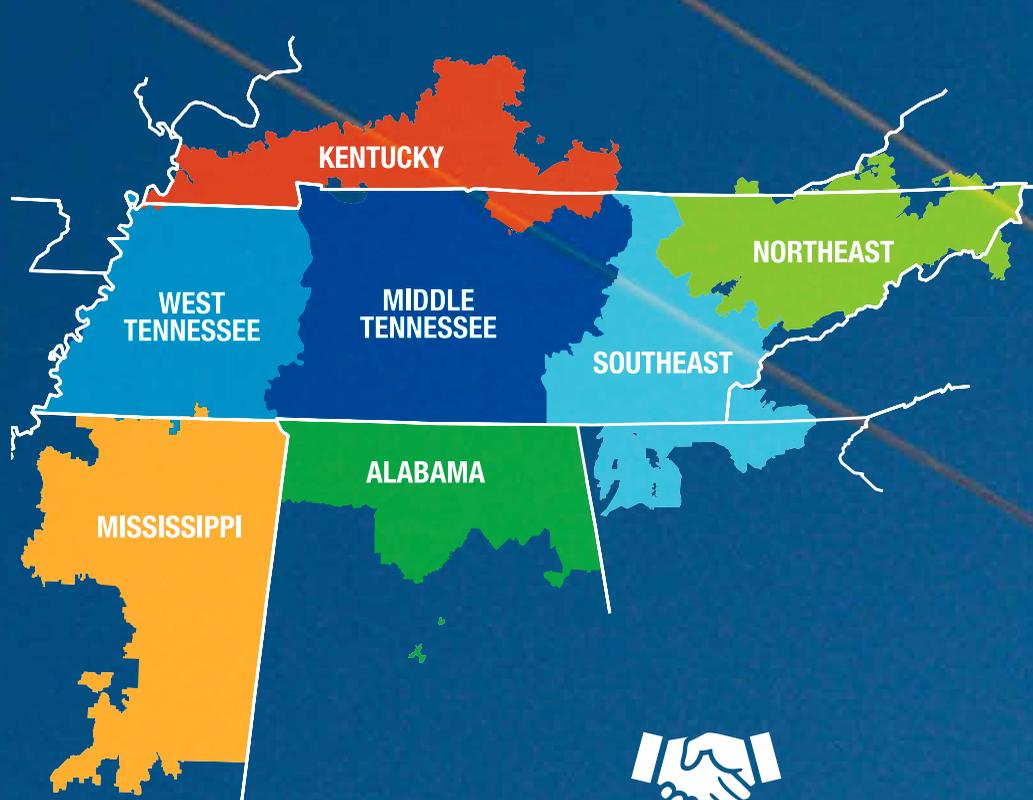


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POWERFUL PARTNERSHIPS

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



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HIGHLIGHTS OF 2014

Alabama District



The state of Alabama House of Representatives recognized Huntsville Utilities, the Huntsville Madison County Builders Association, the city of Huntsville, the city of Madison and the Madison County Commission for outstanding collaboration in to the development of State Energy Code Compliance pathways. One of these pathways included the EnergyRight Platinum Certification, which was approved by the state as an above-code program to ensure all new residential homes will be compliant with the Alabama Energy Code and thereby reduce potential energy consumption.

The Cullman Regional Medical Center and the Huntsville City Board of Education were awarded State Energy Program grants from the Energy Division of the Alabama Department of Economic and Community Affairs. These grants will be used to implement retrofits to reduce energy consumption.



Wise Alloys in Muscle Shoals was recognized by the Industrial Energy Efficiency Network for reducing its energy costs. Wise Alloys combined funds from the AlabamaSAVES energy loan program with TVA rebates to make energy upgrades to save an expected \$1.7 million a year in energy costs.

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HIGHLIGHTS OF 2014

Kentucky District

The highly successful In-Home Energy Evaluation program concluded in September 2014. The Kentucky District recorded 4,523 evaluations with an implementation rate of almost 80 percent. Over \$1.6 million of incentives were paid to homeowners. The program proved to be a boost to the local economy with at least \$10.6 million invested by homeowners in energy efficiency improvements to their homes. All local power companies in the Kentucky District participated in the program.



Warren RECC and West Kentucky RECC ranked in the top 10 Valleywide for both installed capacity and number of installations in the Green Power Providers program.



The Kentucky State Park System participated in the EnergyRight Solutions for Business Program at five different state parks. This initiative was supported by Pennyrile RECC, Tri-County EMC and West Kentucky RECC. The state parks implemented extensive lighting retrofits and improvements in their HVAC systems. This resulted in almost 6.7 GWh in energy savings and earned the Park System incentives of \$496,039.

Westlake Chemical Corporation, a directly served customer in Calvert City, Kentucky, participated in the EnergyRight Solutions for Industry program. Westlake implemented a project to increase production rates and improve the efficiency of the process. The project is expected to save approximately 88 GWh with a total incentive of \$8.7 million upon final measurement.

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HIGHLIGHTS OF 2014

Middle Tennessee District



Nashville Electric Service (NES), in partnership with TVA, presented nine do-it-yourself energy efficiency/ weatherization workshops throughout the NES service area. The workshops provided 250 homeowners suggested behavior changes and hands-on learning opportunities to fix air infiltration and install energy efficient equipment saving 126,063 kWh.

The Science Alliance of Tennessee, TVA and the Adventure Science Center in Nashville partnered to deliver enhanced educational opportunities focusing on science, technology, engineering and math (STEM). Throughout April the center sponsored a series of events and exhibits to engage children

and families in energy awareness. Activities included learning the daily activities of utility lineman, a do-it-yourself energy efficiency workshop and a panel discussion on “Powering the Grid with NEGAwatts” at the Science Café.



Middle Tennessee Electric
Membership Corporation

Nissan Motors partnered with Middle Tennessee Electric Membership Corporation (MTEMC) and TVA to engage Nissan employees in energy efficiency awareness. This annual event provides employees exposure to their utility and special interest groups and teaches them about products and programs geared toward saving energy and reducing their carbon footprint.

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Mississippi District

Mississippi was named “Most Improved Energy Efficiency State” by ACEEE (American Council for an Energy Efficient Economy).

TVA and local power companies joined with the Institutions of Higher Learning (IHL) and the Mississippi Development Authority (MDA) to help the University of Mississippi, Mississippi State University and the Mississippi University for Women exceed public university energy savings targets.

Students from the University of Mississippi Integrated Marketing Program selected EnergyRight Solutions for their class project. The students developed and presented energy efficiency program insights and marketing ideas to TVA.



Oxford Electric, Northeast EPA and TVA partnered with the Oxford City School System to implement energy efficiency improvements for Oxford’s new LEED High School.



Northcentral EPA and Starkville Electric System introduced a Commercial Water Heater Pilot program.

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Northeast District



Johnson City Power Board, Clinton Utilities Board and BVU Authority transitioned from direct load control capacity to the dispatchable voltage regulation program to align with the utilities' business objectives.



EnergyRight Solutions worked with the University of Tennessee's facilities personnel to identify \$900,000 worth of energy savings projects at the campus. The list of projects led to the decision to fund a full-time energy manager position and a revolving fund of \$250,000 was established to support investment in efficiency projects.



Mountain Electric Cooperative successfully interconnected the district's first Renewable Standard Offer project – a 1 MW solar array.



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Southeast District



The Electric Power Board of Chattanooga helped the Moccasin Bend Wastewater Treatment Plant

install variable frequency drives on the motors of the four oxygenation tanks that operate the facility. The motor speeds will be controlled by dissolved oxygen (DO) sensors that will maintain the desired levels of DO in the tanks. Additionally, a pump station motor was replaced with a more efficient motor, and programmable thermostats were placed on the HVAC system throughout the facility. This will result in an expected kWh reduction of 6,237,313 kWh and annual savings of approximately \$410,000.

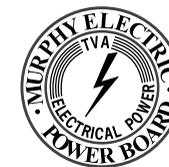


**Fort Loudoun
Electric Cooperative**

Fort Loudoun Electric Cooperative helped HAVCO Wood Products

install controlled low-pressure/high-volume blowers on their air knives so that they could be removed from the compressed air system. They also installed a control system to manage the two main compressors and pressure/flow control valves to help manage system pressure and pressure drop. The expected kW reduction is 21.9 kW in the summer and 38.0 kW in the winter with approximately \$50,000 annually savings on HAVCO's utility bill.

Green Power Providers in the Southeast District had the highest program-to-date operating MWs across the Tennessee Valley at 29.3 MWs.



Murphy Electric Power Board Green Power Providers had their first installation in FY 2014. The project was installed in October 2013; currently, Murphy has three executed projects.



**Blue Ridge
Mountain EMC**

Blue Ridge Mountain Electric Membership Corporation leads all LPCs

in program-to-date operating MWs at 14.53 and added a 684 kW system through the Solar Solutions Initiative/Renewable Standard Offer.

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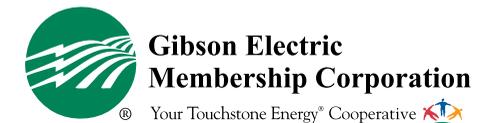
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West Tennessee District



MLGW celebrated the one-year anniversary of eScore™. The efforts of the MLGW pilot enabled TVA to roll out this more advanced program to all LPCs in the TVA service area in December 2014.

TVA partnered with MLGW and the Memphis-Shelby County Office of Sustainability to help produce part of the first status report on energy efficiency for Shelby County. The Memphis-Shelby County Office of Sustainability is the regional advocate and resource on topics such as energy efficiency, waste reduction, recycling, sustainable economic development, food systems and green building practices.



Tennessee State Representative Bill Sanderson and his wife, Marjie, of Kenton were among those who participated in the Green Power Providers program (GPP) offered through Gibson EMC. In accordance

with the GPP Program, the couple installed a tracking solar panel unit at their White Squirrel Winery. With this solar project they have been able to double production while still using the same amount of energy.

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HIGHLIGHTS OF 2014

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

553 GWh FY 2014 ENERGY EFFICIENCY
AND CUSTOMER SYSTEMS ACHIEVEMENT

The Valley has exceeded its load management targets seven years in a row.

\$676 million

CAPITAL AVOIDANCE AT \$600 PER
KILOWATT OF INSTALLED COSTS

1.8¢ per kWh

AVERAGE LIFETIME COSTS FOR TVA'S
ENERGY EFFICIENCY PROGRAMS

1,126 MW

AVOIDED CAPACITY ADDITION

>2,600 GWh

ENERGY NEEDS AVOIDED

Savings of EnergyRight Solutions programs from 2008 to 2014



ENERGYRIGHT SOLUTIONS FOR THE HOME

EnergyRight Solutions for the Home offers a variety of programs to help customers save energy and money. Programs include:

Self Audit Program

In-Home Energy Evaluation (IHEE) Pilot Program

Heat Pump Program

New Homes Program

Volume Heat Pump Program
for Manufactured Homes

ENERGY STAR® Pilot Program
for Manufactured Homes

eScore™ Pilot





SELF AUDIT PROGRAM

The Self Audit Program is a do-it-yourself program that allows residential customers to identify home energy use and recommends personalized energy improvements. TVA provides energy efficiency starter kits to all first-time program participants.

10,264

PARTICIPANTS

7.45 GWh

ENERGY SAVED

More than 170,000 homeowners have received a kit since the promotion began in 2008.

TOP PERFORMERS

Memphis Light, Gas and Water Division	1,283,607 kWh
Nashville Electric Service	802,256 kWh
Middle Tennessee Electric Membership Corporation	523,432 kWh
Knoxville Utilities Board	492,128 kWh
Huntsville Utilities	369,824 kWh

TOP SAVINGS, PERCENT OF SALES

Scottsboro Electric Power Board	0.10%
North Alabama Electric Cooperative	0.06%
Guntersville Electric Board	0.05%
Starkville Electric System	0.03%
Clarksville (CDE Lightband)	0.03%

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MORE THAN **85,000** EVALUATIONS PERFORMED SINCE 2009 WITH MORE THAN **60,000** HOMEOWNERS MAKING IMPROVEMENTS



IN-HOME ENERGY EVALUATION

IHEE offers a comprehensive in-home energy assessment, as well as rebates and financing options to help homeowners who choose to make investments in significant energy efficiency improvements. Evaluations are performed by TVA-certified energy advisors and improvements are inspected after installation.

20,369

EVALUATIONS PERFORMED

31.18 GWh

ENERGY SAVED

Program-to-date implementation ratio reached 74% in FY 2014.

TOP PERFORMERS

Nashville Electric Service	4,598,076 kWh
Electric Power Board of Chattanooga	3,326,454 kWh
Knoxville Utilities Board	2,296,015 kWh
Middle Tennessee Electric Membership Corporation	1,846,656 kWh
Cumberland Electric Membership Corporation	1,016,396 kWh

TOP SAVINGS, PERCENT OF SALES

City of Tupelo Water and Light Department	0.26%
Franklin Electric Plant Board	0.16%
Electric Power Board of Chattanooga	0.14%
Oak Ridge Electric Department	0.13%
Tuscumbia Electricity Department	0.13%



HEAT PUMP PROGRAM

One of TVA's longest running efficiency programs, the Heat Pump Program promotes the installation of high-efficiency heat pumps in homes and small businesses by offering incentives to local power companies and dealers for installations.

TVA fosters a Quality Contractor Network (QCN) to maintain high installation standards. An added benefit for QCN members has been a sales promotion for qualifying installations to help increase the number of heat pumps in the Tennessee Valley. This promotion alone achieved more than 5.4 GWh of savings.

12,149

INSTALLATIONS

18.58 GWh

ENERGY SAVED

TOP PERFORMERS

Knoxville Utilities Board	934,293 kWh
Upper Cumberland Electric Membership Corporation	747,342 kWh
Clarksville (CDE Lightband)	744,125 kWh
North Georgia Electric Membership Corporation	740,832 kWh
Middle Tennessee Electric Membership Corporation	560,600 kWh

TOP SAVINGS, PERCENT OF SALES

Scottsboro Electric Power Board	0.21%
Tishomingo County Electric Power Association	0.15%
North Alabama Electric Cooperative	0.14%
Upper Cumberland Electric Membership Corporation	0.12%
McMinnville Electric System	0.10%



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1,138 new homes
 ALABAMA HAD THE TOP PERFORMING DISTRICT, WITH 55% OF ALL NEW HOMES IN THE DISTRICT BUILT IN THE HUNTSVILLE UTILITIES SERVICE AREA.



NEW HOMES PROGRAM

Energy efficient new homes built to TVA's standards not only save homeowners money on their energy bill each month and provide increased comfort, but may also be eligible for incentives from TVA and local power companies. Builders participating in the program find it flexible since they may achieve energy efficiency at three levels: EnergyRight, EnergyRight Platinum, and EnergyRight Platinum Certified. Additional incentives are available for simply installing an advanced water heater.

2,051

NEW HOMES INCENTIVIZED

6.40 GWh

ENERGY SAVED

TOP PERFORMERS

Huntsville Utilities	2,636,849 kWh
Muscle Shoals Electric Board	498,259 kWh
City of Athens Electric Department	441,738 kWh
Sevier County Electric System	248,832 kWh
Middle Tennessee Electric Membership Corporation	236,808 kWh

TOP SAVINGS, PERCENT OF SALES

Muscle Shoals Electric Board	0.50%
Russellville Electric Board	0.20%
Huntsville Utilities	0.10%
City of Athens Electric Department	0.07%
Sevier County Electric System	0.05%



VOLUME HEAT PUMP PROGRAM FOR MANUFACTURED HOMES

TVA's Volume Heat Pump Program for Manufactured Homes promotes the installation of electric heat pumps in qualified manufactured homes. This program is administered by working with and paying incentives directly to a network of HVAC wholesalers. Those wholesalers are incentivized for selling properly sized heat pumps in lieu of central air conditioning units. This allows homeowners to not only have efficient air conditioning, but save on their heating costs as well.

2,168

HEAT PUMPS INSTALLED

8.30 GWh

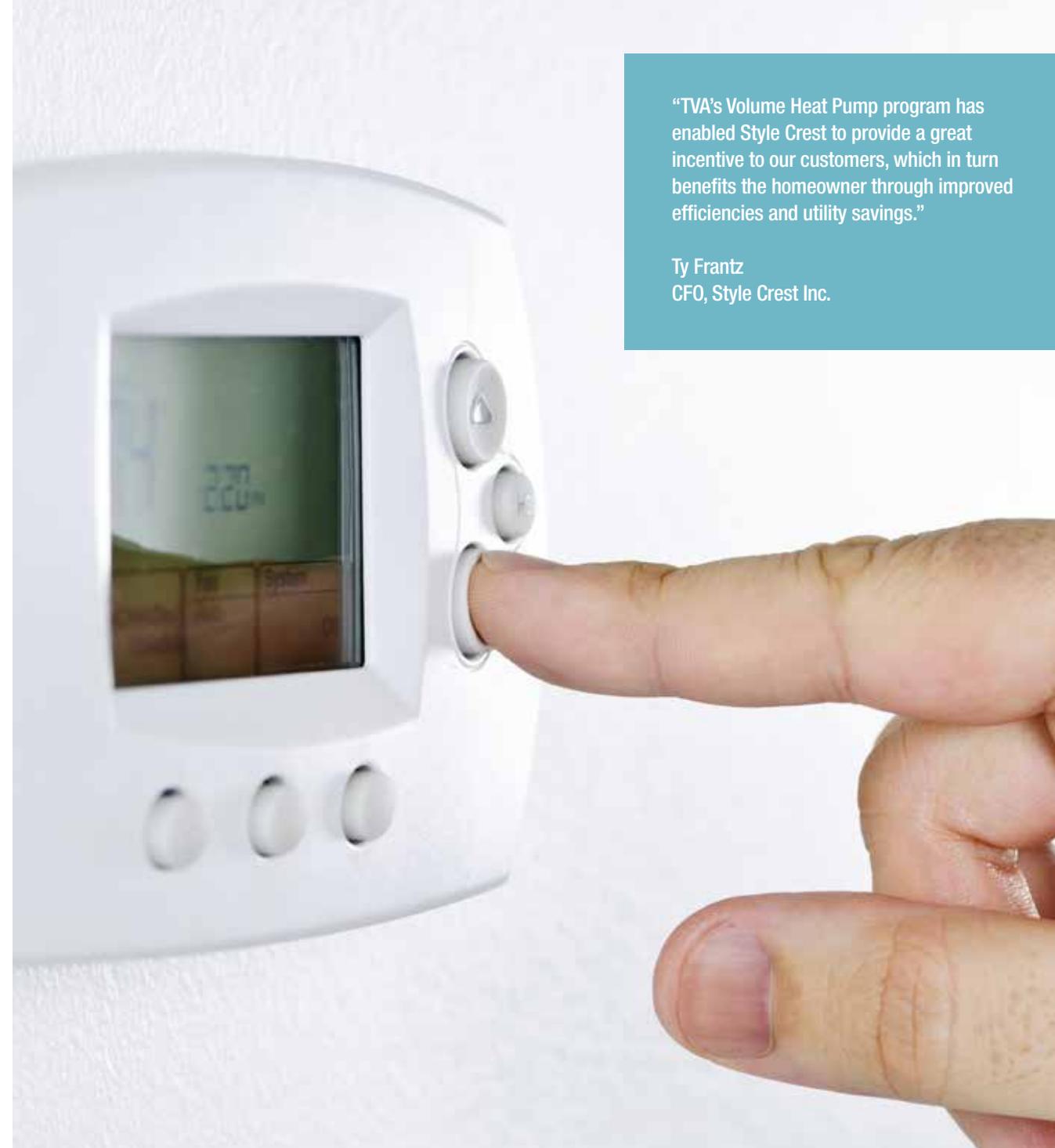
ENERGY SAVED

TOP PERFORMERS

Volunteer Energy Cooperative	551,088 kWh
Tombigbee Electric Power Association	332,949 kWh
Knoxville Utilities Board	283,198 kWh
4-County Electric Power Association	221,966 kWh
Appalachian Electric Cooperative	221,966 kWh

TOP SAVINGS, PERCENT OF SALES

Tippah Electric Power Association	0.07%
Plateau Electric Cooperative	0.07%
Sweetwater Utilities Board	0.07%
Tombigbee Electric Power Association	0.06%
Prentiss County Electric Power Association	0.06%



“TVA’s Volume Heat Pump program has enabled Style Crest to provide a great incentive to our customers, which in turn benefits the homeowner through improved efficiencies and utility savings.”

Ty Frantz
CFO, Style Crest Inc.



ENERGY STAR PILOT PROGRAM FOR MANUFACTURED HOMES

Through incentives paid to manufactured homes producers, TVA is helping to offset the cost of building ENERGY STAR qualified manufactured homes to be sited in the Valley with an electric heat pump. ENERGY STAR manufactured homes with a heat pump will lower home electric bills by \$50-\$70 per month, providing thousands of dollars in savings over the life of the home. FY 2014 installations increased 53% over FY 2013.

1,731

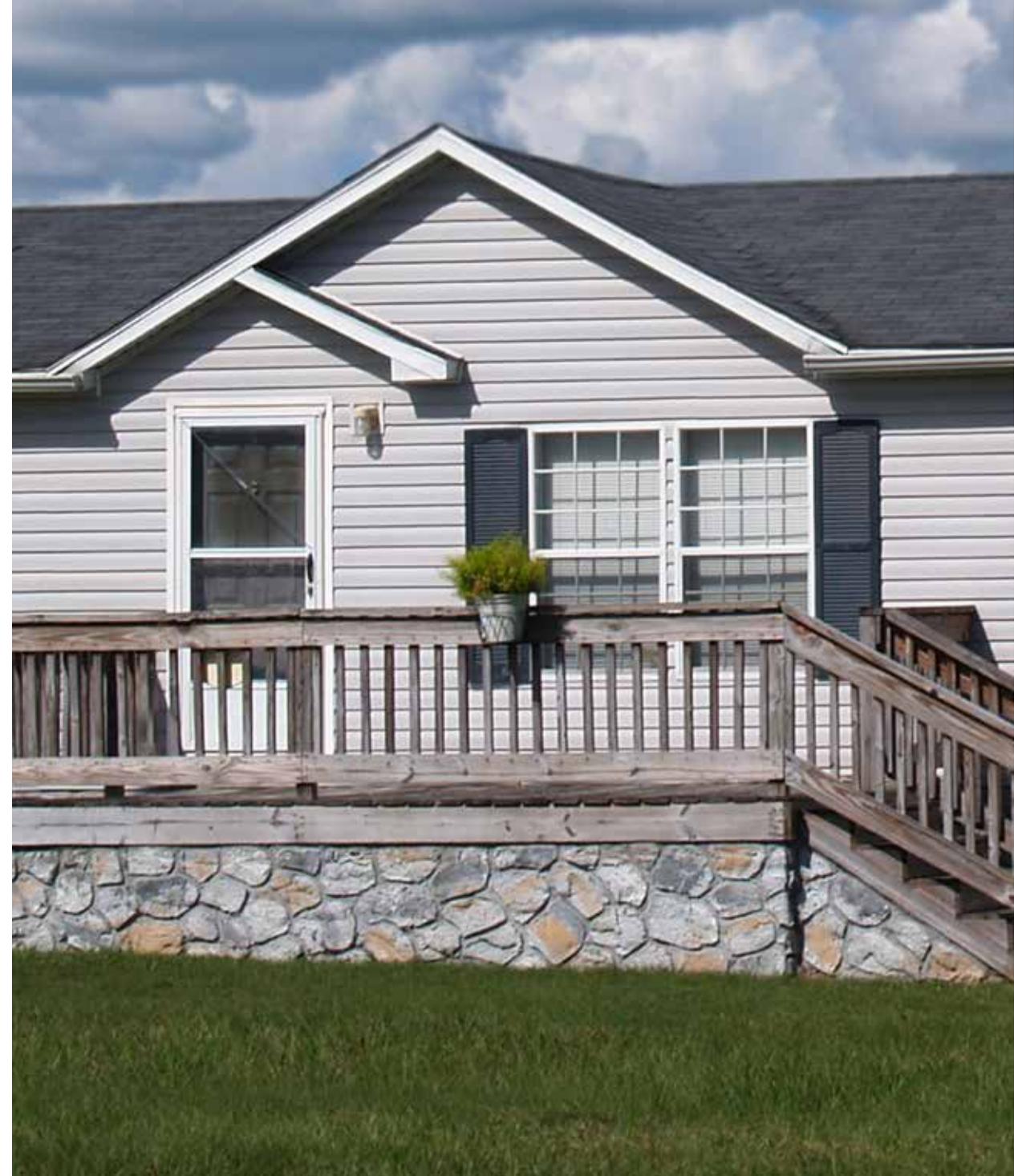
ENERGY STAR
MANUFACTURED HOMES

20.82 GWh

ENERGY SAVED

“Clayton Homes and our family of brands are committed to providing innovative, safe and energy efficient homes. TVA has provided a clear path for our homeowners to receive an ENERGY STAR certified home. The TVA program has helped thousands of homeowners enjoy the benefits of energy efficient upgrades, contributing to our purpose of opening doors to a better life, one home at a time.”

Mike Duncan, Vice President of Marketing, Clayton Homes





eScore PILOT PROGRAM

eScore™ is an energy efficiency home improvement offer from TVA that was initially piloted with Memphis, Light, Gas and Water from July 2013 through November 2014. The design of the program is to provide homeowners a simple path to making their home a “10” – its most energy efficient. eScore allows homeowners to work towards an energy efficiency score for their home at their own pace, earning rebates on qualified upgrades performed by Quality Contractor Network (QCN) members, and re-engaging with the program as many times as needed to achieve their home’s best possible energy performance. The upgrades completed by homeowners in FY 2014 yielded a savings of 634,203 kWh and sales by QCN members exceeding \$3.2 million. The successes and lessons learned in the eScore Pilot led to a Valley-wide rollout of the program on December 1, 2014.

634,203 kWh

ENERGY SAVED

1,170

PARTICIPANTS





“The EnergyRight Solutions program is the clear choice for me and my customers. Not only has it helped me keep my doors open, but I have increased my staffing to meet demand. It has also helped my customers save much needed dollars on their power bill. All in all, this has been a blessing to me and my community.”

Ken C., Owner, RBC Insulation



QUALITY CONTRACTOR NETWORK (QCN)

QCN, a group of highly skilled and knowledgeable contractors, helps ensure that homeowners’ systems are installed correctly, provides service down the road and even coordinates financing through the local power company.

9,173

IHEE EVALUATIONS REFERRED BY QCN MEMBERS IN FY 2014

69%

INCREASE IN QCN REFERRALS TO THE IHEE PROGRAM

\$5 million

INCREASE IN CUSTOMER SPENDING ON QCN REFERRAL JOBS

74%

IHEE PROGRAM-TO-DATE IMPLEMENTATION RATE

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ENERGYRIGHT SOLUTIONS FOR BUSINESS AND INDUSTRY

EnergyRight Solutions for Business (ERSB) and EnergyRight Solutions for Industry (ERSI) provide assessments of energy use and incentives for qualifying businesses and industries that can reduce their electricity usage. In this section:

ERSB GWh Saved

ERSB Incentives Paid

ERSI GWh Saved

ERSI Incentives Paid

Preferred Partners Network (PPN)

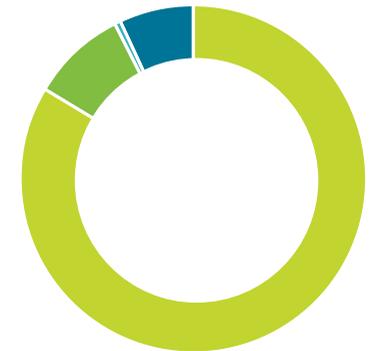


ERSB GWH SAVED

EnergyRight Solutions for Business helps businesses become more energy efficient by providing assessments of energy use and incentives for qualifying businesses.

151.81 GWh
ENERGY SAVED

4.64 GWh
AMOUNT EXCEEDED GOAL FOR ERSB



TOP MEASURES IMPLEMENTED

- Lighting – 84%
- HVAC – 9%
- Motors – .2%
- All Others – 6.8%

TOP PERFORMERS

Memphis Light, Gas and Water Division	26,655,791
Knoxville Utilities Board	19,678,587
Electric Power Board of Chattanooga	16,321,244
Nashville Electric Service	12,900,603
Starkville Electric System	7,347,989

TOP SAVINGS, PERCENT OF SALES

Starkville Electric System	4.95%
Hickman-Fulton Co. Rural Electric Cooperative Corp.	3.03%
West Kentucky Rural Electric Cooperative Corporation	2.02%
LaFollette Utilities Board	1.62%
Jellico Electric and Water Systems	1.50%

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ERSB INCENTIVES PAID

\$11.6 million

INCENTIVES PAID TO BUSINESS CUSTOMERS



ENERGY SAVINGS BY DISTRICT

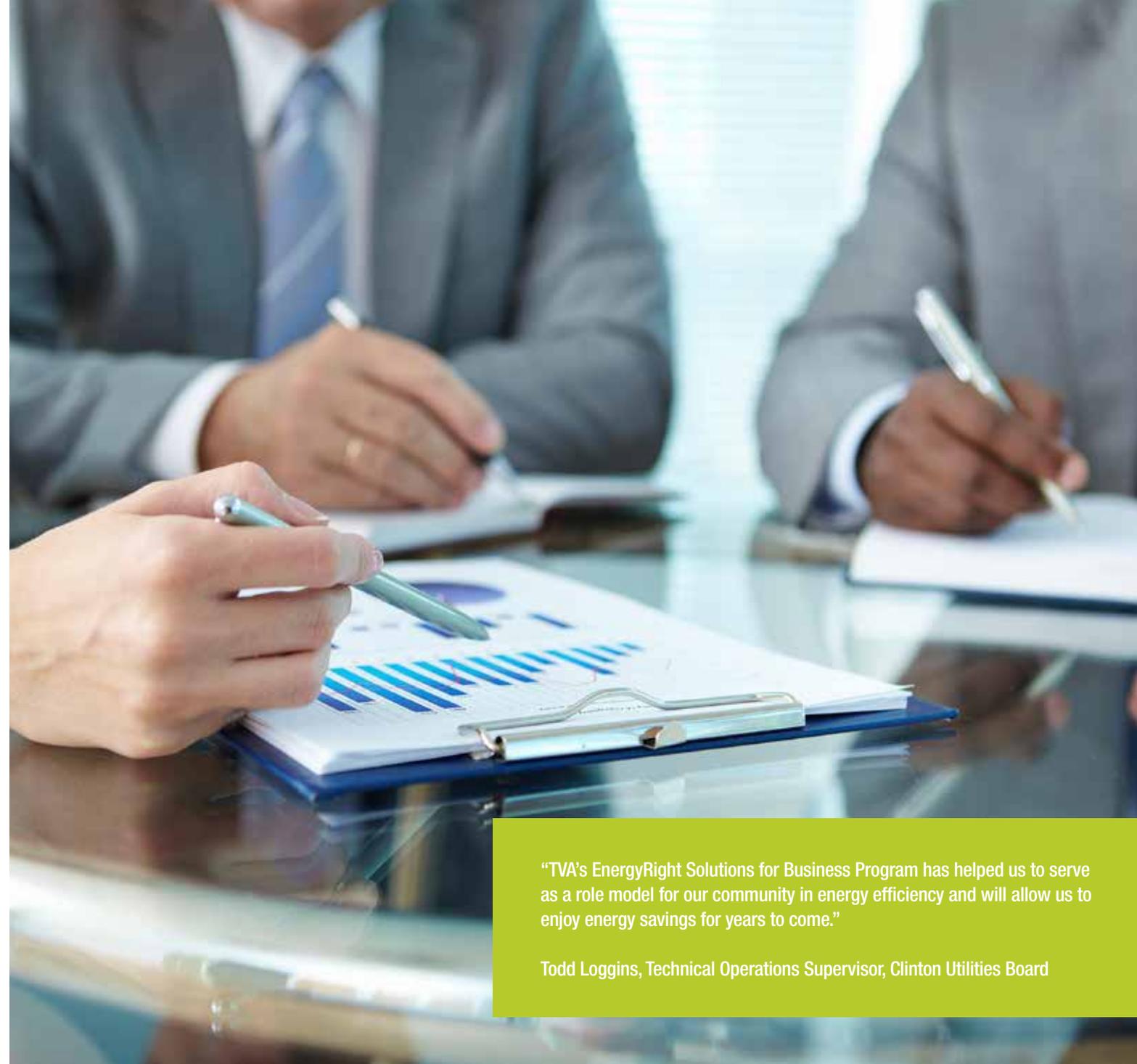
- AL – 7%
- KY – 7%
- MS – 15%
- MID TN – 17%
- NE – 20%
- SE – 13%
- WEST TN – 22%

TOP BUSINESS PROGRAM PARTICIPANTS

Education	21%
Warehouse and Storage	16%
Hospital/Medical	12%
Office	9%
Assembly/Congregation	6%

126

LOCAL POWER COMPANY PARTICIPANTS



“TVA’s EnergyRight Solutions for Business Program has helped us to serve as a role model for our community in energy efficiency and will allow us to enjoy energy savings for years to come.”

Todd Loggins, Technical Operations Supervisor, Clinton Utilities Board

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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 plant-wide, holistic approaches to energy savings. TVA helps customers maximize efficiency, control expenses and boost their bottom lines.

268.94 GWh

ENERGY SAVED



TOP MEASURES IMPLEMENTED

- Lighting – 96%
- Process Improvement – .4%
- Compressed Air – .6%
- All Others – 3%

Directly served customers reduced energy 104.43 GWh, or 38.8% of the total 268.94 GWh saved.

TOP PERFORMERS

Middle Tennessee Electric Membership Corporation	25.88 GWh
Memphis Light, Gas and Water Division	22.30 GWh
Electric Power Board of Chattanooga	6.68 GWh
Joe Wheeler Electric Membership Corporation	5.86 GWh
Greenville Light and Power System	5.34 GWh

TOP SAVINGS, PERCENT OF SALES

Plateau Electric Cooperative	9.27%
Franklin Electric Cooperative	8.38%
Lexington Electric System	6.24%
Hartselle Utilities	5.96%
Columbia Power and Water Systems	5.58%

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ERSI INCENTIVES PAID

\$24.09 million

INCENTIVES PAID TO INDUSTRIAL CUSTOMERS

\$8.9 million went to directly served customers and the rest to LPC-served customers.



ENERGY SAVINGS BY DISTRICT

- AL – 19%
- NE – 9%
- KY – 10%
- SE – 9%
- MS – 15%
- WEST TN – 13%
- MID TN – 24%

TOP INDUSTRIAL PROGRAM PARTICIPANTS

Transportation Equipment	17%
Primary Metal Industries	12%
Chemicals Products	7%
Paper Products	6%
Motor Freight Transportation and Warehouse	4%



PREFERRED PARTNERS NETWORK (PPN)

TVA's PPN is a network of general contractors, architects, engineers and trade allies who are experts in their field, and have training and insight into the ERSB and ERSI programs.

420.8 GWh

SAVED BY ERSB AND ERSI PROGRAMS

57%

OF GWH SAVINGS
BY PPN MEMBERS

228.6 GWh

SAVED BY PPN MEMBERS

199

TOTAL PPN MEMBERS
AS OF SEPTEMBER 30,
2014



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ENERGYRIGHT SOLUTIONS FOR CUSTOMER SYSTEMS

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.





ENERGYRIGHT SOLUTIONS FOR CUSTOMER SYSTEMS

As part of TVA's \$100 million Smart Grid investment, local power companies installed equipment and tested operational capability in TVA's Dispatchable Voltage Regulation pilot program, activating "virtual power plants" to help TVA manage peak power demand.

TOP PERFORMERS

Huntsville Utilities	16,610 KW
Electric Power Board of Chattanooga	12,740 KW
Sequachee Valley Electric Cooperative	3,803 KW
Volunteer Energy Cooperative	3,530 KW
Rockwood Electric Utility	2,960 KW

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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:

Green Power Switch

Green Power Switch Pilot Sales

Green Power Providers

Renewable Standard Offer
and Solar Solutions Initiative



GREEN POWER SWITCH

Green Power Switch offers a simple way for consumers to support renewable energy sources such as wind, solar, low-impact hydro and biomass. Each \$4 purchase ensures a block of 150 kilowatt-hours of renewable energy is added to the TVA grid, above and beyond what's already included in the general energy mix.

881,334 MWh

RENEWABLE GENERATION PROGRAM-TO-DATE

12,359

CUSTOMERS TO DATE

TOP PERFORMERS

BLOCKS SOLD

Nashville Electric Service	82,869
Knoxville Utilities Board	70,884
Memphis Light, Gas and Water Division	49,512
Murfreesboro Electric Department	40,831
Huntsville Utilities	30,335

491,680

BLOCKS SOLD FOR FY 2014

Since the program began, GPS customers have supported 1,062,260 megawatt-hours of renewable energy in the Tennessee Valley, enough to supply the electricity needs for more than 66,300 average homes in the TVA service area.





GREEN POWER SWITCH PILOT SALES

In 2014, Green Power Switch continued to pilot two additional customer options in a limited number of power company regions. The Southeastern RECs pilot offers larger customers the opportunity to purchase regional renewable energy in bulk at a discounted rate and the Pure Solar pilot provides customers an opportunity to focus their support on locally installed solar energy.

125,658 MWh

SOUTHEASTERN RECS

159 MWh

PURE SOLAR



GREEN POWER PROVIDERS

Green Power Providers incentivizes Valley homeowners and businesses to install and operate their own renewable energy systems.

2,176

PARTNER INSTALLATIONS
PROGRAM-TO-DATE

88.04 MW

RENEWABLE GENERATION DC NAMEPLATE
CAPACITY PROGRAM-TO-DATE

Another 283 projects, representing nearly 5.74 MW of additional power, were approved by TVA and were in various stages of construction as of September 30, 2014.

RESOURCE	OPERATING MW – DC NAMEPLATE
Solar	76.76
Biomass (including landfill gas and wastewater methane)	11.17
Wind	.121
Hydroelectric	.003
Total Operating	88.04



Mountain Electric Cooperative, TVA and WSOC Television Inc. worked together on this 1 MW project operational as of August 2014. This image was taken from a drone at Jonas Ridge Farm in Newland, North Carolina.



RENEWABLE STANDARD OFFER AND SOLAR SOLUTIONS INITIATIVE

15 Projects-to-Date = 37.94 MW Operating

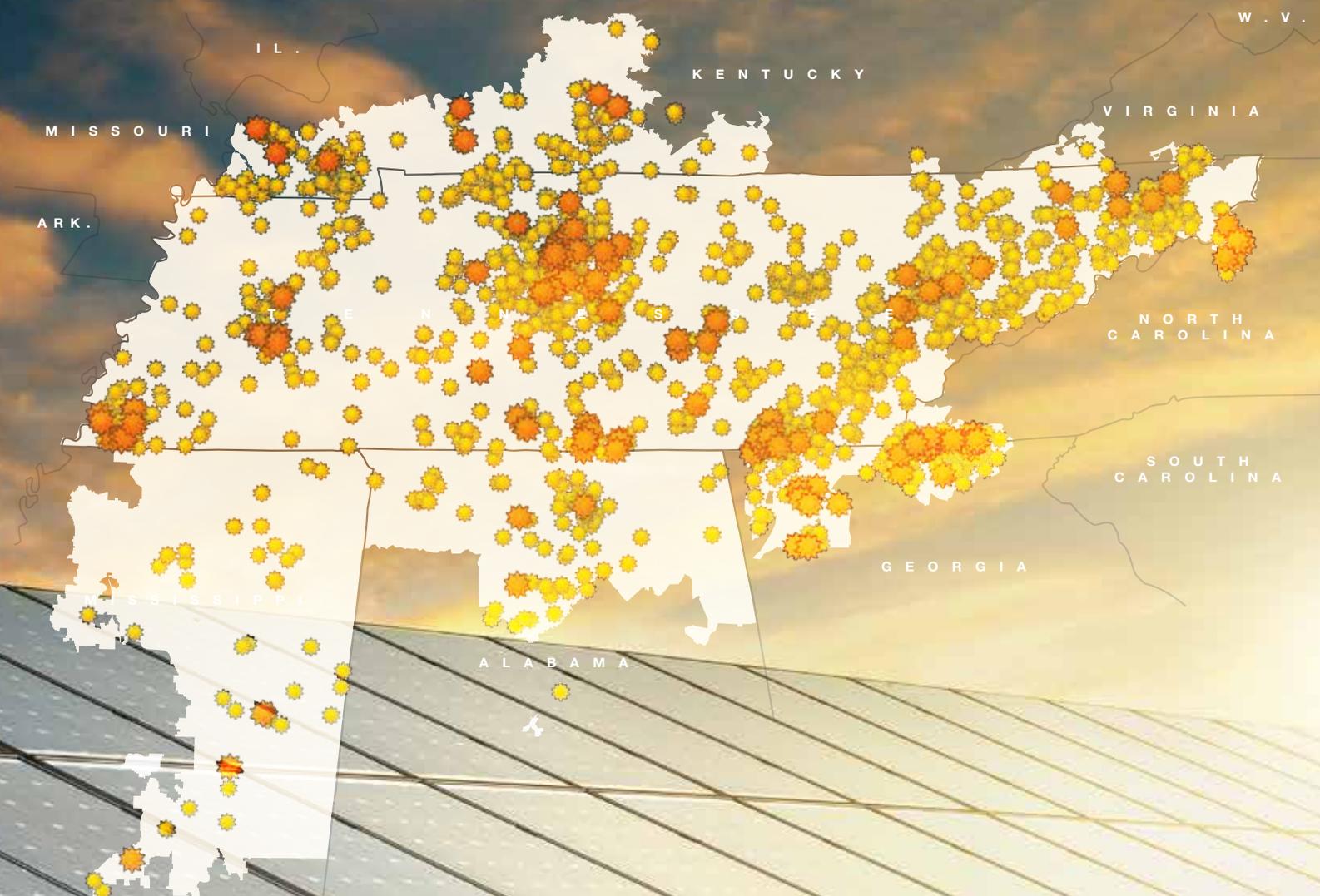
Another 48 project applications, representing about 224 MW of additional power, were either received or approved by TVA and were in various stages of construction as of September 30, 2014.

Of these totals, six projects (3.23 MW) were operating under the Solar Solutions Initiative, with another 36 projects (29.43 MW) at various stages of construction as of September 30, 2014.

RESOURCE	NAMEPLATE MW
Solar	224.22
Biomass	20.00
Landfill Gas	17.65
Total	261.87



OPERATING SOLAR INSTALLATIONS



SOLAR INSTALLATIONS

-  Up to and including 50 kW (1,916 installations)
-  More than 50kW (192 installations)
-  TVA Service Area

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SUCCESS STORIES

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

Leroy Somer Compressed Air System Upgrade

Creative-CO-OP HVAC and Lighting Controls

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ERSI SUCCESS STORY

The compressed air system upgrade at the Leroy Somer facility in Lexington, Tennessee, included the installation of energy-efficient air compressors and cycling refrigerated air dryers, the implementation of controls to optimize the compressed air system's operation, and the removal of existing chillers and after coolers.

2.82 GWh

ENERGY SAVINGS

\$281,635

INCENTIVE



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creativeco-op
DESIGNED BY US – INSPIRED BY YOU



ERSI SUCCESS STORY

The HVAC and lighting controls project at Creative CO-OP Inc. in Memphis included the installation of energy efficient programmable thermostats on office HVAC units, VFDs and temperature controls on exhaust fans, high-volume/low-speed exhaust fans and occupancy sensors throughout the facility.

200,465 kWh

ENERGY SAVINGS

\$20,047

INCENTIVE





RECOGNITIONS

Since 2007, TVA as a declared corporate strategy has consciously pursued the goals of increased energy efficiency, use of renewable energy and implementation of demand response in its operations.

The record of progress toward these goals is clear, both in terms of measurable achievement, and regional and national recognition and awards. These include:

LPC Top Performers

GPS Leadership Awards

EPA Award for Oak Ridge

Seven Years of Success in the Valley



LPC TOP PERFORMERS

TOTAL PROGRAM SAVINGS		
TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL
Memphis Light, Gas and Water Division	50,908,704	12.22%
Middle Tennessee Electric Membership Corporation	34,099,903	8.18%
Electric Power Board of Chattanooga	28,250,056	6.78%
Knoxville Utilities Board	25,343,753	6.08%
Nashville Electric Service	21,360,694	5.13%
Huntsville Utilities	11,096,973	2.66%
Starkville Electric System	9,861,823	2.37%
Greeneville Light and Power System	7,800,962	1.87%
City of Tupelo Water and Light Department	7,540,074	1.81%
Joe Wheeler Electric Membership Corporation	7,204,967	1.73%
Program Total	416,755,893	75.30%

SAVINGS TO SALES		
TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY SALES TOTAL
Starkville Electric System	9,861,823	2.28%
Franklin Electric Cooperative	3,732,775	1.80%
City of Tupelo Water and Light Department	7,540,074	1.11%
Russellville Electric Plant Board	1,476,485	1.07%
Ripley Power and Light	2,034,585	0.99%
Hickman-Fulton County Rural Electric Cooperative Corporation	826,201	0.97%
Hartselle Utilities	1,486,895	0.95%
Lexington Electric System	4,382,166	0.91%
Guntersville Electric Board	2,119,144	0.87%
Mountain Electric Cooperative	5,338,252	0.84%
Program Total	416,755,893	0.30%



GPS LEADERSHIP AWARDS

2014 Green Power Switch Leadership Awards held in Oak Ridge, Tennessee



Leader of the Year CITY OF OAK RIDGE ELECTRIC DEPARTMENT

Awarded for highest percentage of Green Power Switch megawatt-hours, based on total energy sales in 2013



Top Recruiter of the Year WARREN RECC

Awarded for highest percent increase in Green Power Switch customers and highest increase in participation rate in 2013



Catalyst Award CDE LIGHTBAND

Awarded for adding the largest single new Green Power Switch block purchase in 2013



Leader of the Year KNOXVILLE UTILITIES BOARD

Awarded for highest total volume of Green Power Switch megawatt-hours sold in 2013



Catalyst Award LENOIR CITY UTILITIES BOARD

Awarded for adding the largest single new purchase through a Green Power Switch pilot in 2013



Top Recruiter of the Year MEMPHIS LIGHT, GAS AND WATER

Awarded for most new Green Power Switch enrollments and most new Green Power Switch blocks sold in 2013



Local Power Company Innovator of the Year SEVIER COUNTY ELECTRIC SYSTEM

Awarded for their innovative and holistic approach to increasing local participation in Green Power Switch



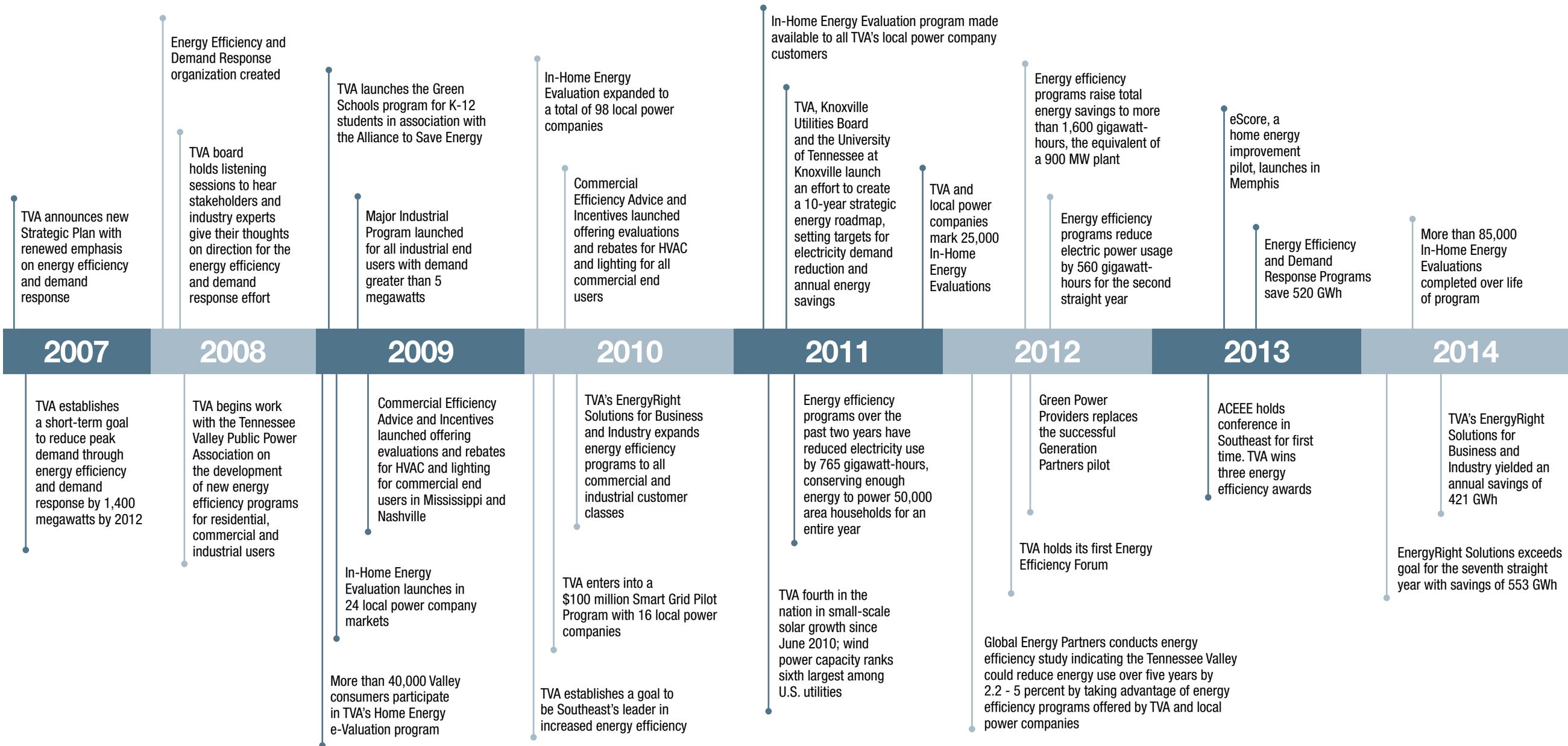
EPA AWARD FOR OAK RIDGE

Oak Ridge, Tennessee, was designated as the U.S. Environmental Protection Agency's first Green Power Community in the Southeast, based in part on TVA green power purchases.

To be designated as a Green Power Community, a local government or community must purchase or produce green power in amounts meeting EPA minimum purchase requirements based on community electricity usage. A collaborative effort among TVA's Renewable Energy Solutions, Customer Resources, Oak Ridge Electric Department, and the City of Oak Ridge played a key role in achieving this success for Oak Ridge, Tennessee. During the 2014 Oak Ridge Green Power Community Challenge, TVA deployed an outreach team to boost participation in the Green Power Switch (GPS) program and included a door-to-door effort, direct mail, on-bill messaging, Facebook and newspaper ads, public radio underwriting, and earned media coverage on TV. Another grass-roots event included participation in the dragon boat race and winning third place. The more than 300 GPS enrollments increased the participation to more than 800, tripling the original campaign goal.



SEVEN YEARS OF SUCCESS IN THE VALLEY



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

Top Performers by Program

Description of Programs

TOP PERFORMERS BY PROGRAM

TOP PERFORMERS – SELF AUDIT PROGRAM

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Memphis Light, Gas and Water Division	1,283,607	17%	488	25.3%	1,793	0.02%
Nashville Electric Service	802,256	11%	187	9.7%	1,102	0.02%
Middle Tennessee Electric Membership Corporation	523,432	7%	122	6.3%	719	0.02%
Knoxville Utilities Board	492,128	7%	115	6.0%	676	0.02%
Huntsville Utilities	369,824	5%	86	4.5%	508	0.01%
Program Total	7,450,495		1,928		10,264	

TOP PERFORMERS – IN-HOME ENERGY EVALUATION PROGRAM

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Nashville Electric Service	4,598,076	15%	1,212	14.09%	2,791	0.09%
Electric Power Board of Chattanooga	3,326,454	11%	983	11.43%	2,421	0.14%
Knoxville Utilities Board	2,296,015	7%	609	7.09%	1,409	0.09%
Middle Tennessee Electric Membership Corporation	1,846,656	6%	546	6.35%	1,344	0.06%
Cumberland Electric Membership Corporation	1,016,396	3%	269	3.12%	620	0.07%
Program Total	31,175,592		8,599		20,349	

TOP PERFORMERS – HEAT PUMP PROGRAM

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Knoxville Utilities Board	934,293	5%	499	5%	634	0.04%
Upper Cumberland Electric Membership Corporation	747,342	4%	338	4%	466	0.12%
Clarksville (CDE Lightband)	744,125	4%	354	4%	440	0.08%
North Georgia Electric Membership Corporation	740,832	4%	406	4%	519	0.05%
Middle Tennessee Electric Membership Corporation	560,600	3%	353	4%	468	0.02%
Program Total	18,584,118		9,420		12,149	

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TOP PERFORMERS – NEW HOMES PROGRAM

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Huntsville Utilities	2,636,849	41%	638	43%	631	0.10%
Muscle Shoals Electric Board	498,259	8%	117	8%	212	0.50%
City of Athens Electric Department	441,738	7%	107	7%	97	0.07%
Sevier County Electric System	248,832	4%	58	4%	68	0.05%
Middle Tennessee Electric Membership Corporation	236,808	4%	57	4%	52	0.01%
Program Total	6,403,854		1,477		2,051	

TOP PERFORMERS – VOLUME HEAT PUMP PROGRAM FOR MANUFACTURED HOMES

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Volunteer Energy Cooperative	551,088	7%	-		144	0.04%
Tombigbee Electric Power Association	332,949	4%	-		87	0.06%
Knoxville Utilities Board	283,198	3%	-		74	0.01%
4-County Electric Power Association	221,966	3%	-		58	0.04%
Appalachian Electric Cooperative	221,966	3%	-		58	0.04%
Program Total	8,296,936		-		2,168	

TOP PERFORMERS – ENERGYRIGHT SOLUTIONS FOR BUSINESS

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Memphis Light, Gas & Water Division	26,655,791	18%	5,603	21%	2,255	0.42%
Knoxville Utilities Board	19,678,587	13%	4,150	15%	1,449	0.87%
Electric Power Board of Chattanooga	16,321,244	11%	1,932	7%	87	0.70%
Nashville Electric Service	12,900,603	8%	2,235	8%	109	0.21%
Starkville Electric System	7,347,989	5%	974	4%	9	4.95%
Program Total	151,808,644		27,054		4,681	

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TOP PERFORMERS – ENERGYRIGHT SOLUTIONS FOR INDUSTRY

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Middle Tennessee Electric Membership Corporation	25,879,303	10%	2,491	7%	13	4.24%
Memphis Light, Gas and Water Division	22,300,595	8%	2,659	7%	11	1.07%
Electric Power Board of Chattanooga	6,679,168	2%	728	2%	14	0.61%
Joe Wheeler Electric Membership Corporation	5,856,272	2%	622	2%	3	0.80%
Greeneville Light and Power System	5,344,628	2%	811	2%	8	1.66%
Program Total	268,943,524		37,848		246	

TOP PERFORMERS – ENERGYRIGHT SOLUTIONS FOR CUSTOMER SYSTEMS

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Huntsville Utilities	1,864,400	NA	16,610	NA	170,943	0.03%
Electric Power Board of Chattanooga	152,880	NA	12,740	NA	168,421	0.00%
Sequachee Valley Electric Cooperative	380,900	NA	3,803	NA	34,146	0.05%
Volunteer Energy Cooperative	42,360	NA	3,530	NA	1	0.00%
Rockwood Electric Utility	298,400	NA	2,960	NA	14,189	0.09%
Program Total	(90,160)		(43,988)		1,216,799	0.00%

TOP PERFORMERS – GREEN POWER SWITCH

TOP LOCAL POWER COMPANY PERFORMERS	GPS BLOCKS SOLD	% OF FY PROGRAM TOTAL
Nashville Electric Service	82,869	16.85%
Knoxville Utilities Board	70,884	14.42%
Memphis Light, Gas and Water Division	49,512	10.07%
Murfreesboro Electric Department	40,831	8.30%
Huntsville Utilities	30,335	6.17%
Program Total	491,680	

TOP PERFORMERS – GREEN POWER PROVIDERS

TOP LOCAL POWER COMPANY PERFORMERS	OPERATING MW - DC NAMEPLATE CAPACITY	% OF TOTAL CAPACITY	INSTALLATIONS
Nashville Electric Service	661.24	12%	35
West Kentucky Rural Electric Cooperative Corporation	490.23	9%	32
Electric Power Board of Chattanooga	462.65	9%	21
Pennyrile Rural Electric Cooperative Corporation	457.11	9%	19
Knoxville Utilities Board	322.32	6%	14
Warren Rural Electric Cooperative Corporation	304.37	6%	20
Program Total	5,324.02	100%	351

All rankings are based on energy savings with the exception of Demand Response, which is based on demand reduction.

DESCRIPTION OF PROGRAMS

ENERGYRIGHT SOLUTIONS FOR THE HOME

Self-Audit Program

TVA's do-it-yourself online audit helps homeowners take charge of saving energy from the comfort of their personal computer. With upgrade and behavioral suggestions, current product offers and an energy savings kit, using less is simpler than ever.

In-Home Energy Evaluation

TVA's certified Energy Advisors provide homeowners with an expert in-home energy evaluation, photos, incentivized upgrades and direct installations, all in a single visit.

Heat Pump Program

Valley residents have been benefiting from TVA's heating and cooling upgrade assistance for decades. Our Quality Contractor Network provides expert installation of energy efficient heat pumps to ensure high performance and customer satisfaction.

New Homes Program

TVA is encouraging the development of new, all-electric homes across the Valley. Homes built above code qualify as EnergyRight® Platinum or Platinum Certified (RESNET or ENERGY STAR® Certified). Buying a new, energy efficient home means savings from day one.

Manufactured Homes Programs

TVA's Manufactured Homes programs are reducing energy consumption in the Valley by incentivizing wholesalers to install electric heat pumps at point of sale and manufacturers to produce ENERGY STAR® Manufactured Homes for even greater efficiency. An energy efficient manufactured home saves energy and money right from the start.

eScore™ Pilot Program

eScore is an energy efficiency home improvement offer from TVA that was initially piloted with Memphis, Light, Gas and Water from July 2013 – November 2014. The design of the program is to provide homeowners a simple path to making their home a "10" – its most energy efficient.

ENERGYRIGHT SOLUTIONS FOR BUSINESS

TVA helps businesses become more energy efficient by providing assessments of energy use and incentives for qualifying businesses that can reduce their electricity usage. The program helps save money in these areas: lighting, heating and cooling, and business equipment.

ENERGYRIGHT SOLUTIONS FOR INDUSTRY

Customized TVA technical assistance is available to industrial users of power to devise plantwide, holistic approaches to energy savings. TVA helps customers maximize efficiency, control expenses and boost their bottom lines. In addition, program participants may be eligible for financial incentives to implement energy-saving changes in their operations and plant.

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 is 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 is open to consumers, developers and local power companies who wish to install mid-size solar energy systems. The purchase price includes a 10-year overlay to the base market prices offered in the Renewable Standard Offer.

Renewable Standard Offer

This program is for medium to larger renewable energy projects in the Valley (> 50 kW up to 20 MW). The program is open to consumers, developers and local power companies who wish to install mid- to large-size renewable energy systems. Eligible technologies include solar, wind and biomass energy. This is a 20-year wholesale or market-based program which helps support local jobs and investment as well as grow local clean energy sources at cost effective rates.

DESCRIPTION OF PROGRAMS

ENERGYRIGHT SOLUTIONS FOR CUSTOMER SYSTEMS

Commercial and Industrial Direct Load Control

A demand reduction program aimed at commercial and industrial customers that is available for dispatch up to 40 hours per year to mitigate high wholesale power prices, and allows unlimited hours for reliability calls. Program events are dispatched and monitored via near-real-time monitoring software. As an incentive, customers receive monthly capacity payments and energy payments based on performance during events. Current third party implementer is EnerNOC.

Conservation Voltage Regulation (CVR)

This program uses conservation voltage regulation (CVR) with local power companies to achieve energy savings by optimizing voltage levels along electric system distribution feeders on an “always-on” basis. The program utilizes a feeder voltage feedback loop to bias voltage regulators to maintain the lowest acceptable feeder voltage. Year-round energy savings occur from end-use devices operating more efficiently at designed voltage levels.

Dispatchable Voltage Regulation (DVR)

A component of the Smart Grid Pilot demonstration project in which 16 local power companies optimize distribution-level voltage to reduce 183 MW of peak demand. Electric system distribution feeders utilize a voltage feedback loop to bias voltage regulators to maintain the lowest acceptable feeder voltage. DVR is dispatched economically for up to 100 hours annually with energy cost tied to the variable Henry Hub natural gas index.

Residential Direct Load Control (DLC)

This program utilizes direct load control switches or devices to reduce 2.5 MW of peak demand from two local power companies. Two-way communicating direct load control switches or devices (i.e., programmable communicating thermostats) connected to electric water heaters, air conditioners and pool pumps shut the device down during called peak events. DLC is dispatched economically for up to 100 hours annually with energy cost tied to the variable Henry Hub natural gas index.

Aggregated Demand Response (ADR)

This program enables local power companies to aggregate and provide demand response load to TVA in a manner similar to the Commercial and Industrial DLC program. Under the current proof of concept pilot, demand reduction is available for dispatch up to 10 hours per year to mitigate high wholesale power prices, and allows unlimited hours for reliability calls. Program events are dispatched and monitored via near-real-time monitoring made available by local power companies and visible in the DR desk.

Advanced Metering Infrastructure (AMI) – DR Desk

In order to provide seamless and automatic notification of demand response events, the DR (demand response) Desk enables control of the past, present and future portfolio of DR products as a single entity where load can participate based on grid conditions. The desk facilitates aggregation and execution of activities that utilize load as a resource for the safe and reliable operation of the energy grid in the Tennessee Valley through efficient DR commodity management techniques.

AMI – LPC Connect

In order for the Valley to realize the greatest value from energy efficiency and demand response for consumers, local power companies and TVA, this project enables two-way communication between TVA's and the local power company's control centers. This will provide real-time system operations data sharing while providing secure transport of customer loads across the TVA service territory. The project establishes the framework by which expanding system response automation capabilities and reliable integration of the evolving mix of renewable generation will ensure the stability of the grid and the benefits realized.

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solutions

