

TVA ENERGYRIGHT® SOLUTIONS

Highlights Report 2012

Energy Efficiency
Demand Response
Renewable Energy



EXECUTIVE MESSAGE

Becoming a leader in energy efficiency – one kilowatt hour at a time

In partnership with TVPPA, 155 local power company customers and 57 directly served customers, TVA remains committed to its goal of becoming the Southeast's leader in low-cost and cleaner energy by the end of 2020. TVA and its nearly 13,000 employees did great things in FY2012 and continue to bring the company ever closer to accomplishing this goal. Our EnergyRight Solutions team contributed greatly through its extraordinary efforts in developing and managing energy efficiency and demand response programs that save energy for end-use customers, stabilize power usage during high-demand periods, and increase our ability over time to minimize TVA's need for new power plants.

For the fifth year in a row, TVA and local power companies have exceeded energy efficiency and demand response targets, achieving an organizational best savings of **560 gigawatt hours** in FY2012 alone! Our goal is to continue to fortify this leadership position by supporting TVA's commitment to our stakeholders and providing the best service possible to the people of the Tennessee Valley.



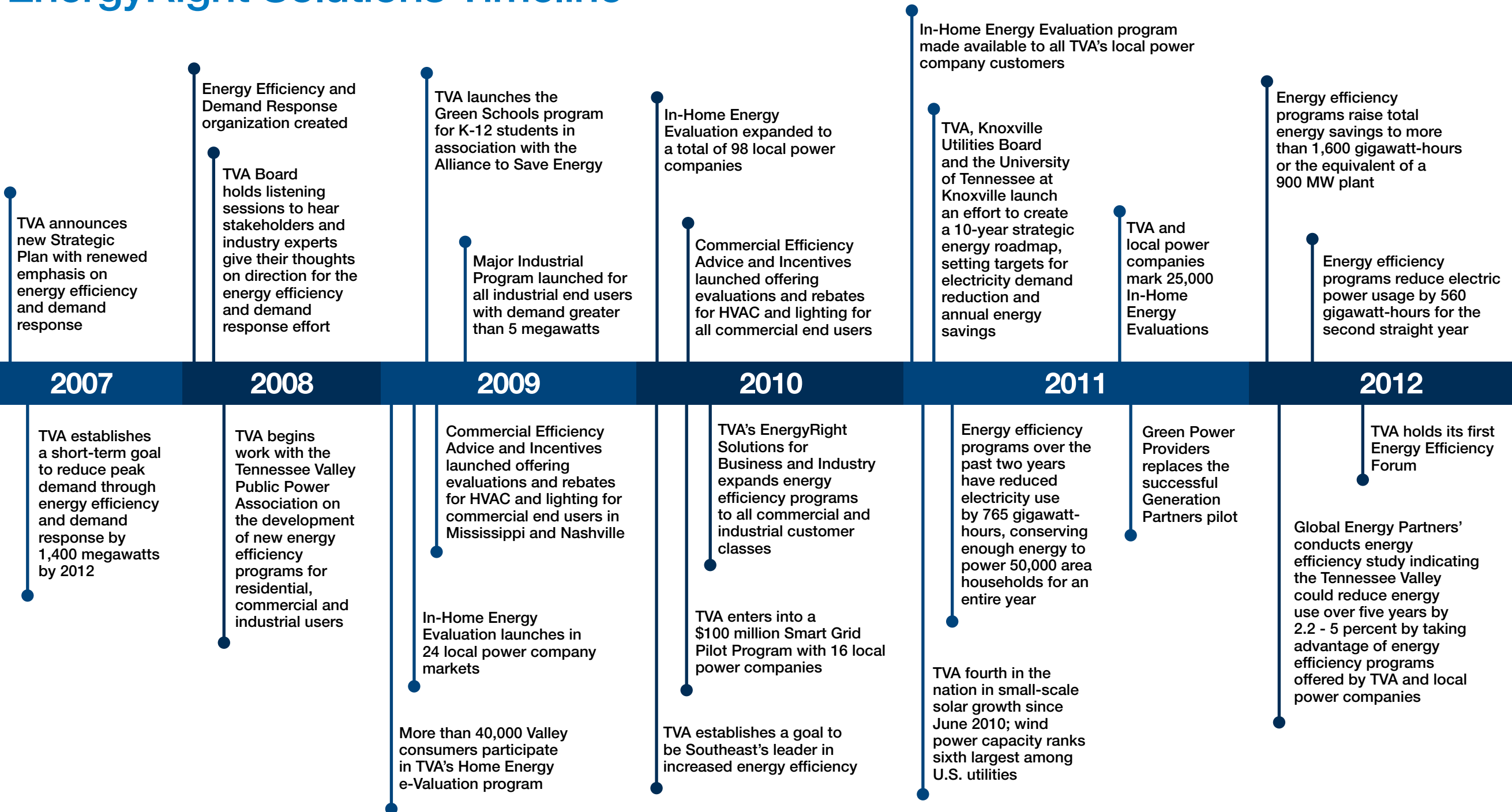
Sincerely,

A handwritten signature in black ink, appearing to read "Robert M. Balzar".

Robert M. Balzar

Vice President, Energy Efficiency and Demand Response
Tennessee Valley Authority

EnergyRight Solutions Timeline



Highlights of 2012

560 GWh FY2012 ENERGY EFFICIENCY
AND DEMAND RESPONSE ACHIEVEMENT

TVA has exceeded its load management targets five years in a row

EEDR has a competitive position within our power system and resource planning models making it a least-cost resource option.

\$540 million CAPITAL AVOIDANCE

At \$600 per kilowatt of installed costs

2¢ per kWh AVERAGE LIFETIME COSTS

For TVA's energy efficiency programs

Highlights of 2012

Our team has strong relationships with TVA's local power company partners whose performance contributes a significant portion of energy savings for the region, including Memphis Light, Gas and Water; Nashville Electric Service; Knoxville Utilities Board; Middle Tennessee Electric Membership Corporation; and Huntsville Utilities.

900_{MW} + >1,600_{GWh}

EQUIVALENT POWER PLANT

ENERGY NEEDS AVOIDED

Savings of TVA's EnergyRight Solutions programs from 2008 through 2012



Highlights of 2012

Utility Communicators International Advertising Awards

BEST OF SHOW

Radio Commercial (self audit program)

1ST PLACE – Complete Campaign
Marketing (energy efficiency)

1ST PLACE – Print Ad
Marketing (home energy evaluation)

3RD PLACE – Television Commercial
Marketing (energy efficiency)

E Source Advertising Awards

1ST PLACE

Best Television Commercial (energy efficiency)

1ST PLACE

Best Residential Print Ad (energy efficiency)
(The only Southeast utility to win any awards)

Platts Global Energy Awards

FINALIST

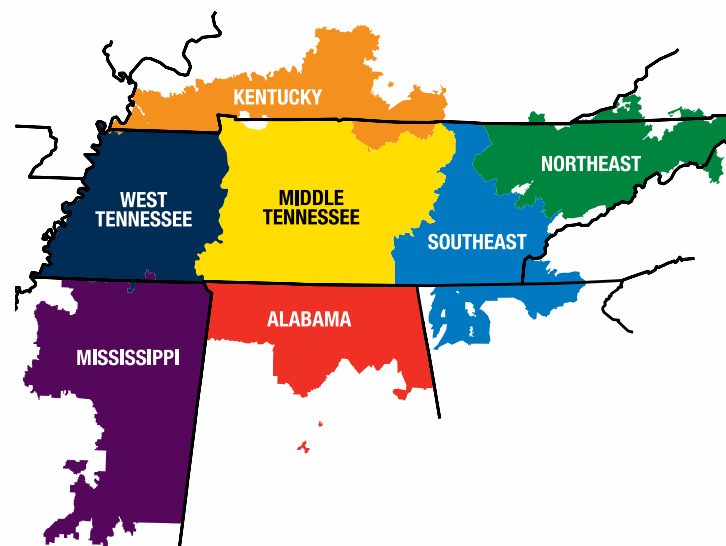
Energy Efficiency Program – Energy Supplier





Our People and Partners

TVA has a high-performing and dedicated team of energy efficiency and demand response professionals representing a diverse mix of industry experience both at TVA and nationally. This team brings a best-practice perspective to the region, as well as a unique delivery relationship with local power company partners and directly served industrial customers across its seven-state service territory.



Events

Energy Efficiency Forum

TVA continued to establish its leadership position in energy efficiency through its Energy Efficiency Forum, hosted in conjunction with the Tennessee Valley Public Power Association and the Alliance to Save Energy. The forum featured two days of presentations by national experts and in-depth discussions about the region's energy efficiency successes, challenges and opportunities. More than 400 national and regional industry leaders attended the event.



Tennessee Valley Solar Solutions Conference

Held in Memphis, this TVA-sponsored conference focused on how stakeholders can help transition solar into the mainstream. More than 400 people attended the conference, and over 60 exhibitors, ranging from installers to integrators to solar component manufacturers, showcased their products and services. The conference wrapped up with tours to the Agricenter International 998 kilowatt array and the University of Tennessee Living Light House at Shelby Farms Park.





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
- Weatherization Assistance Program



Self Audit Program

12,842 = 9.29_{GWh}
 PARTICIPANTS ENERGY SAVED

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.

>150,000 HOMEOWNERS

Received a kit since the promotion began in 2008

TOP PERFORMERS

Memphis Light, Gas & Water	2,733,120 kWh
Nashville Electric Service	785,512 kWh
Knoxville Utilities Board	486,304 kWh
Cumberland Electric Membership Corporation	339,976 kWh
Middle Tennessee Electric Membership Corporation	333,424 kWh

In-Home Energy Evaluation (IHEE) Pilot Program

17,861 + **13,560**

EVALUATIONS PERFORMED

INCENTIVES PAID

Record number of evaluations and implementations in FY2012. Program-to-date implementation ratio reached 70%, an all-time high from 57% in FY2010 and 67% in FY2011

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.

TOP PERFORMERS

Electric Power Board of Chattanooga	3,064,020 kWh
Nashville Electric Service	2,834,548 kWh
Memphis Light, Gas & Water	1,830,928 kWh
Knoxville Utilities Board	1,735,060 kWh
Middle Tennessee Electric Membership Corporation	1,434,456 kWh

>46,000

EVALUATIONS PERFORMED

Since 2009 with more than 30,000 homeowners making improvements



Heat Pump Program

20.61 GWh + **11,457**
ENERGY SAVED INSTALLATIONS

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 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 heat pumps in the Tennessee Valley. This promotion alone achieved almost 4.3 GWh of savings.

TOP PERFORMERS

Knoxville Utilities Board	1,252,978 kWh
Upper Cumberland Electric Membership Corporation	717,536 kWh
Volunteer Energy Cooperative	689,669 kWh
Cumberland Electric Membership Corporation	641,995 kWh
Clarksville (CDE Lightband)	635,687 kWh
North Georgia Electric Membership Corporation	622,675 kWh



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 by simply installing an advanced water heater.

3,092 = 10.7 GWh

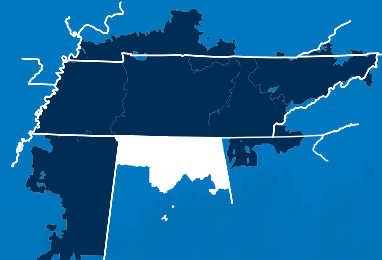
NEW HOMES INCENTIVIZED

ENERGY SAVED

75% of these homes qualified as the most energy efficient home, EnergyRight Platinum

TOP PERFORMERS

Huntsville Utilities	5,535,129 kWh
City of Florence Electricity Department	748,095 kWh
City of Athens Electric Department	628,452 kWh
Sevier County Electric System	445,737 kWh
Blue Ridge Mountain Electric Membership Corporation	259,578 kWh



1,738
NEW HOMES

Alabama had the top performing district, with 1,216 of all new homes built in the Huntsville Utilities service area





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 the homeowner to not only have efficient air conditioning, but save on their heating costs as well.

TOP PERFORMERS

Volunteer Energy Cooperative	593,901 kWh
Knoxville Utilities Board	431,928 kWh
Greeneville Light & Power System	362,511 kWh
Powell Valley Electric Cooperative	308,520 kWh
Joe Wheeler Electric Membership Corporation	277,668 kWh

1,140
HEAT PUMPS INSTALLED

8.8 GWh
ENERGY SAVED

"The incentive that TVA offers helps manufactured homeowners select the 'right' HVAC system that will save them money going forward."

Tim Kentner
Chief Financial Officer
Blevins Inc.

ENERGY STAR Pilot Program for Manufactured Homes

Through incentives paid to manufactured homes producers, TVA is helping to offset the cost to build 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.

481

ENERGY STAR
MANUFACTURED HOMES

Clayton Homes is responsible for
93% of homes reported in FY2012

5.7 GWh

ENERGY SAVED

“We’ve never seen an efficiency program succeed to this degree: Within a one year period, ENERGY STAR Certified manufactured home sales in the Valley grew from near zero to over a 70% market share. What caused the transformation? TVA dug in, methodically assessed what would be required to change deeply-entrenched building habits and crafted a program designed for success. The close partnership with industry stakeholders forged by TVA played a huge role in moving the market to ENERGY STAR.”

Emanuel Levy
Executive Director
Systems Building Research Alliance



Weatherization Assistance Program

In 2009, TVA partnered with the state of Tennessee Weatherization Assistance Program (WAP) to develop a curriculum for energy auditors and contractors in response to a program ramp-up made possible by American Recovery and Reinvestment Act (ARRA) funding. In 2012, TVA started providing energy savings kits to all qualifying participants of the WAP program.

13,837

WEATHERIZED HOMES REPORTED IN FY2012

22,357 weatherized homes program total

>1,200

PEOPLE TRAINED IN PROGRAM TO DATE

For jobs performing audits and making home efficiency upgrades for low-income participants

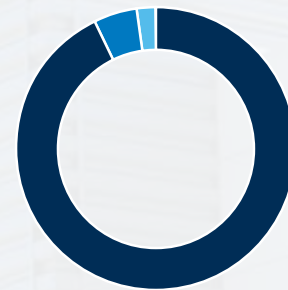
“I have worked with the weatherization program for about two decades, and prior to the TVA program C&W was primarily funded through government funding and stimulus programs. Thanks to the TVA program we have been able to introduce ourselves into the private sector and reinvent the company. With the decline in government funding for weatherization programs, TVA is what has kept C&W a successful business.”

Steve Clark
C&W Weatherization



EnergyRight Solutions for Business (ERSB)

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



TOP MEASURES IMPLEMENTED

- Lighting – **91.42%**
- HVAC – **5.12%**
- Motors – **1.97%**

109.9 GWh

ENERGY SAVED

21.0 GWh

AMOUNT EXCEEDED GOAL FOR ERSB

TOP PERFORMERS

Nashville Electric Service	16,694,015 kWh
Memphis Light, Gas & Water	15,115,634 kWh
Middle Tennessee Electric Membership Corporation	7,067,053 kWh
Knoxville Utilities Board	5,507,670 kWh
Electric Power Board of Chattanooga (EPB)	5,172,220 kWh

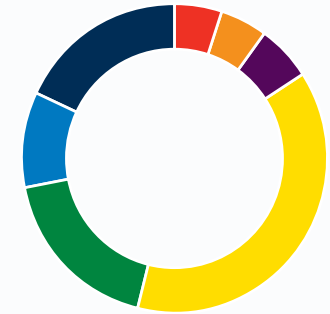




EnergyRight Solutions for Business

\$8.45 million

INCENTIVES PAID TO BUSINESS CUSTOMERS



ENERGY SAVINGS BY DISTRICT

- AL – 5%
- KY – 5%
- MS – 6%
- MID TN – 38%
- NE – 18%
- SE – 10%
- WEST TN – 18%

TOP BUSINESS PROGRAM PARTICIPANTS

Warehouse and Storage	36%
Retail	20%
Office	11%
Education	11%
Assembly/Congregation	5%

“EnergyRight Solutions for Business provides an excellent option for our customers to upgrade the efficiency of their buildings by lowering their energy needs.”

Jim Purcell
Energy Services Manager Nashville Electric Service

155

LOCAL POWER
COMPANY
PARTICIPANTS

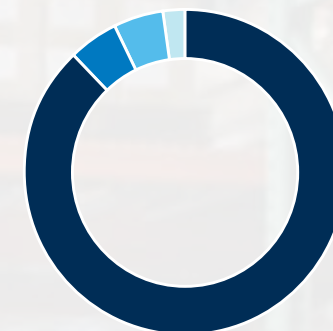


EnergyRight Solutions for Industry (ERSI)

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.

168.7 GWh ENERGY SAVED

Directly served customers reduced energy 27.4 GWh or 16% of the total 168.7 GWh saved



TOP PERFORMERS

Warren Rural Electric Cooperative Corporation	9.75 GWh
Memphis Light, Gas & Water	9.42 GWh
Morristown Utilities Commission	7.39 GWh
Holston Electric Cooperative	6.24 GWh
Franklin Electric Plant Board (KY)	5.87 GWh
Electric Power Board of Chattanooga (EPB)	5.74 GWh

TOP MEASURES IMPLEMENTED

- Lighting – **88%**
- Fans – **5%**
- Compressed Air – **5%**
- Process Heating – **2%**



EnergyRight Solutions for Industry

\$12.03 million

INCENTIVES PAID TO INDUSTRIAL CUSTOMERS

\$3.35 million went to directly served customers, the remaining went to LPC-served customers



ENERGY SAVINGS BY DISTRICT

- AL – 9%
- KY – 16%
- MS – 11%
- MID TN – 21%
- NE – 18%
- SE – 11%
- WEST TN – 14%

TOP INDUSTRIAL PROGRAM PARTICIPANTS

Transportation Industrial Equipment	21%
Fabricated Metal Products	11%
Primary Metal Industries	10%
Rubber and Miscellaneous Plastic Products	9%
Chemicals and Allied Products	8%

ERSI Success Story



Southeastern Container and Cleveland Utilities have joined ranks to create one of the largest energy savings projects ever in Bradley County, Tenn., and build their reputations as leaders in energy efficiency and efficient production.

As part of Cleveland Utilities' EnergyRight Solutions for Industry program, Southeastern Container installed new high-efficiency fluorescent T8 lighting fixtures to replace existing metal halide lights that used more power.

\$116,000

INCENTIVE PAYMENT

Paid to Southeastern Container by TVA upon completion of the efficient lighting renovation

1.55 GWh

PROJECTED SAVINGS PER YEAR

The lighting improvement project savings are enough to power about 100 Tennessee Valley homes each year

“Helping companies save energy helps them save money. That attracts more industry, which creates more jobs and promotes local economic development. We are very pleased that the technical assistance and incentive payments in our EnergyRight Solutions for Industry program have helped Southeastern Container achieve their energy savings goals.”

Tom Wheeler
Cleveland Utilities President and CEO

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.

2,300 IHEE
EVALUATIONS

Referred by QCN members in FY2012

“The EnergyRight Solutions for the Home programs were definitely the right decision for my company, Insulation Works LLC. By being a QCN contractor I was able to introduce my customers to the program and increase my revenue substantially.”

Tim Moore
Insulation Works, Alabama

29%

INCREASE IN QCN
PARTICIPATION IN
RESIDENTIAL PROGRAMS

56%

INCREASE IN QCN
REFERRALS TO THE
IHEE PROGRAM

70%

IHEE PROGRAM-TO-DATE
IMPLEMENTATION RATE





Preferred Partner Network (PPN)

278.6 GWh

SAVED BY ERSB AND ERSI PROGRAMS

114.2 GWh

SAVED BY PPN MEMBERS

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 EnergyRight Solutions for Business (ERSB) and EnergyRight Solutions for Industry (ERSI) programs.

41% OF GWh SAVINGS BY PPN MEMBERS

316 TOTAL PPN MEMBERS AS OF SEPT. 30, 2012

PPN Member	TVA Districts Served	2012 kWh Saved	Member Since	Completed Projects (2012)
Trammell Bell, Middle TN District	All	11,976,873	2012	36
Advanced Energy Solutions Group, Middle TN District	All	7,505,021	2011	5



PPN Member Success Story



Ecoefficient Energy is located in Birmingham, Ala., and provides service in Alabama, Mississippi and Tennessee. Ecoefficient Energy had two projects demonstrating the benefit of being a PPN member and how the rebate money helped close the jobs. For both projects the rebate went to the PPN member enabling the end user to begin work without getting capital funding.

Heil Environmental FT. PAYNE, AL

3.88 GWh

ANNUAL SAVINGS

As a PPN member, Ecoefficient Energy was able to offer rebate savings to the end user

Dyna Pak LAWRENCEBURG, TN

282,042 kWh

ANNUAL SAVINGS

In addition to the savings, Ecoefficient Energy was able to help this customer fund the job without going through capital budgets

EnergyRight Solutions for Demand Response

As part of TVA's \$100 million Smart Grid investment, five 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.

Participants include:

- Chattanooga Electric Power Board
- Fort Loudoun Electric Cooperative
- Morristown Utilities Commission
- Nashville Electric Service
- North East Mississippi Electric Power Association

Additional participation in TVA's third-party load reduction aggregation program resulted in an increase of 51.8 MW of peak reduction potential.

TOP PERFORMERS

Nashville Electric Service	37,910 KW
Electric Power Board of Chattanooga (EPB)	30,600 KW
Morristown Utilities Commission	6,355 KW
Fort Loudoun Electric Cooperative	5,950 KW
Memphis Light, Gas & Water	5,591 KW

Demand Response Success Story



TVA, Glasgow Electric Plant Board and General Electric (GE) are conducting comparative field tests to evaluate the energy and demand savings potential of grid-enabled residential appliances. The project will also evaluate and test consumer behavior using a suite of GE grid smart ENERGY STAR appliances that respond automatically to demand, a home energy management system, and other GE home energy management devices in 20 residential test sites.



Demand Response Success Story



Clinton Utilities Board (CUB) is using state-of-the-art technology designed to perform Dispatchable Voltage Regulation, which automatically adjusts end-use voltages across its service area. It's part of a TVA Smart Grid pilot program to cut energy use during peak periods.

This “virtual power plant” enables CUB to make carefully monitored voltage reductions in its distribution system when requested by TVA. When CUB activates its demand reduction technology, less power is used throughout CUB's service territory, enabling TVA to use that power to meet increased system demand during critical periods.

\$800,000

LOCAL RATEPAYER SAVINGS

This technology can reduce CUB wholesale power costs and reduce peak demand for TVA, which will help control electricity costs throughout the Valley.

“When CUB gets a request from TVA for demand reduction, it occurs within seconds and its effects are invisible to our customers. This will help lower utility bills throughout the TVA service area.”

Ernie Bowles
CUB Assistant General Manager



Education and Outreach

TVA and the Alliance to Save Energy Green Schools Program provide comprehensive, educational programs for grades K-12. The goal is to educate students about energy and the link between energy efficiency and the environment, providing hands-on, real-world learning opportunities that empower them to make a real difference.

60 = **8.5** GWh
SCHOOLS ENERGY SAVED

K-12 schools across the Tennessee Valley participated in their second year of the Green Schools Pilot, where students learned how to use energy wisely at school and at home



Renewable Energy Programs



Green Power Switch®

An EnergyRight® Solution

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 added to the TVA grid, above and beyond what's already included in the general energy mix.

TOP PERFORMERS

BLOCKS SOLD

Knoxville Utilities Board	112,671
Nashville Electric Service	90,272
Murfreesboro Electric Department	61,082
Memphis Light, Gas & Water	38,081
Electric Power Board of Chattanooga (EPB)	37,722



Renewable Energy Programs



731,461 MWh RENEWABLE GENERATION
FROM PROGRAM TO DATE

12,594

CUSTOMERS AS OF
SEPTEMBER 30, 2012

531,652

BLOCKS SOLD FOR FY2012



Green Power Switch Leadership Awards

2012 Green Power Switch Leadership Awards held in Memphis, Tenn.:



Leader of the Year
KNOXVILLE UTILITIES BOARD

Awarded for highest total volume of Green Power Switch megawatt-hours sold in 2011



Leader of the Year
TULLAHOMA UTILITIES BOARD

Awarded for highest percentage of Green Power Switch megawatt-hours, based on total energy sales in 2011



SEVIER COUNTY
ELECTRIC SYSTEM

Transformer of the Year
SEVIER COUNTY ELECTRIC SYSTEM

Awarded for most total business customers signed up for Green Power Switch in 2011



Transformer of the Year
KNOXVILLE UTILITIES BOARD

Awarded for highest percentage of customers signed up for Green Power Switch, based on total number of customers in 2011



Top Recruiter of the Year
HUNTSVILLE UTILITIES

Awarded for most new Green Power Switch enrollments in 2011



Transformer of the Year
NASHVILLE ELECTRIC SERVICE

Awarded for most total customers signed up for Green Power Switch in 2011



Jackson Energy Authority
One thing you can count on.

Excellence in Clean Energy Initiatives

JACKSON ENERGY AUTHORITY

Awarded by Tennessee Renewable Energy and Economic Development Council



Renewable Energy Programs



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

1,186 = 67.65 MW

PARTNER INSTALLATIONS
PROGRAM-TO-DATE

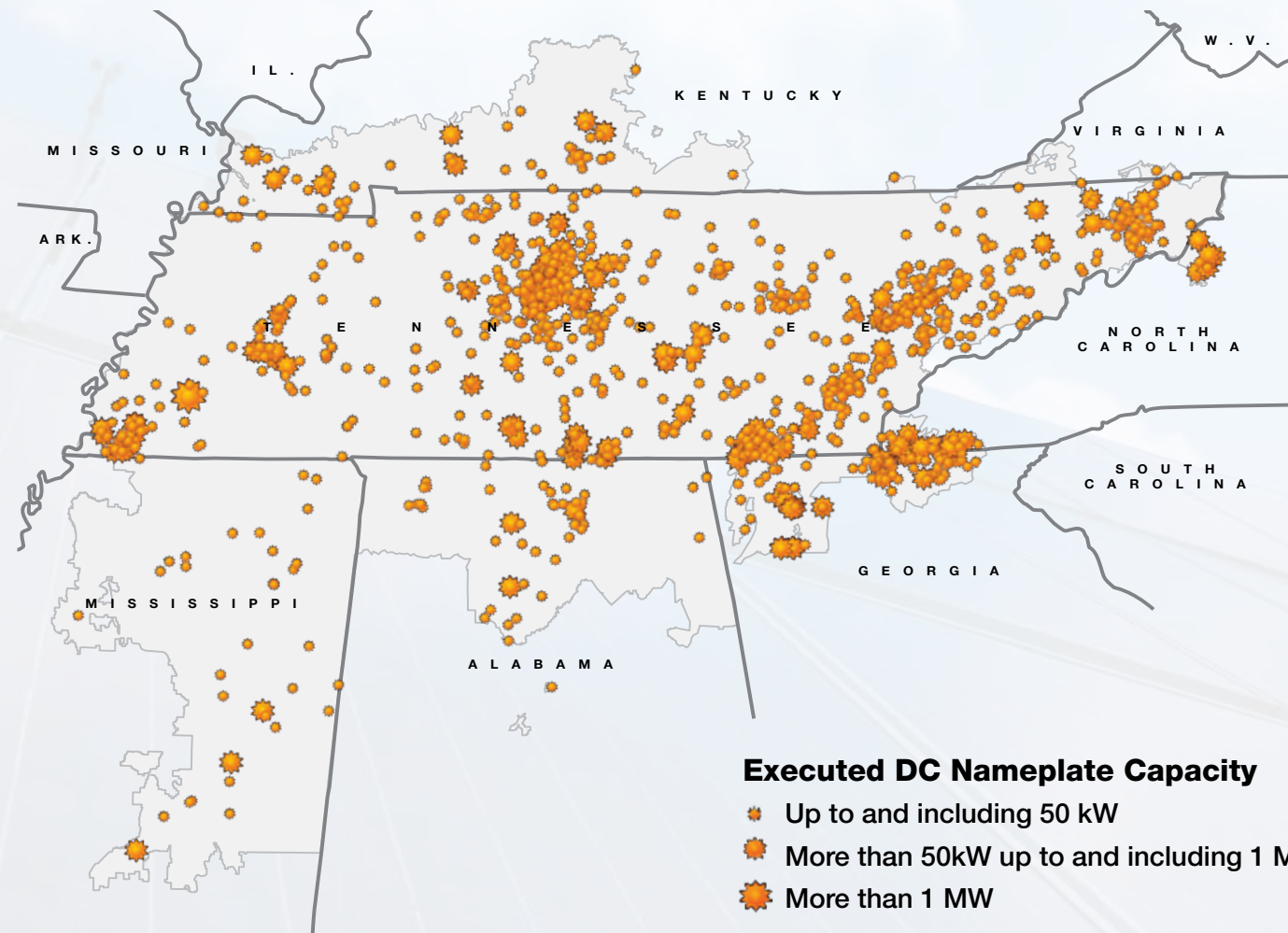
RENEWABLE GENERATION DC NAMEPLATE
CAPACITY PROGRAM-TO-DATE

Another 659 projects, representing nearly 29.49 MW of additional power, were approved by TVA and were in various stages of construction as of October 1, 2012

RESOURCE	OPERATING MW – DC NAMEPLATE
Solar	56.504
Biomass	11.023
Wind	.121
Hydroelectric	.003
Total Operating	67.651

Renewable Energy Programs

Operating Solar Installations





Success Story

Solar Electric Power Association (SEPA) Awards



Blue Ridge Mountain Electric Membership Corporation ranked No. 2 in the nation in solar watts per customer at the 2012 SEPA Awards.




Electric • Water/Sewer • Natural Gas • Cable/Internet

Fayetteville Public Utilities ranked No. 3 in the nation in solar watts per customer at the 2012 SEPA Awards.

A large, white, house-shaped award sign with a pointed top. The text on the sign reads 'SEPA TOP 10' in a large, serif font. Below this, it says 'UTILITY SOLAR RANKINGS 2011' in a smaller font. At the bottom of the sign is the SEPA logo and the text 'SEPA solar electric power association'.

UTILITY SOLAR RANKINGS
2011

 SEPA
solar electric power association

Appendix

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

Top Performers – Total Program Savings		
TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL
Memphis Light, Gas & Water	29,357,531	8%
Nashville Electric Service	28,327,019	8%
Electric Power Board of Chattanooga (EPB)	17,908,158	5%
Middle Tennessee Electric Membership Corporation	13,539,749	4%
Huntsville Utilities	12,054,543	3%
Knoxville Utilities Board	11,727,280	3%
Warren Rural Electric Cooperative Corporation	11,331,343	3%
Volunteer Energy Cooperative	8,734,319	2%
Morristown Utilities Commission	8,508,354	2%
Holston Electric Cooperative	7,621,160	2%
Program Total	370,009,425	

Top Performers – Savings to Sales		
TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL
Franklin Electric Plant Board (KY)	5,962,606	1.16%
Cullman Power Board (AL Muni)	3,060,743	0.46%
Dyersburg Electric System	4,630,724	0.45%
Union City Electric System	2,712,402	0.41%
Holston Electric Cooperative	7,621,160	0.39%
Morristown Utilities Commission	8,508,354	0.38%
Brownsville Utility Department	1,958,615	0.37%
Bristol Virginia Utilities	4,709,110	0.34%
Lawrenceburg Utility Systems	3,775,814	0.33%
Starkville Electric System	3,156,188	0.31%
Program Total	370,009,425	0.12%

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 & Water	2,733,120	29%	1,016	40%	7,628	0.01%
Nashville Electric Service	785,512	8%	183	7%	2,158	0.00%
Knoxville Utilities Board	486,304	5%	114	4%	1,336	0.00%
Cumberland Electric Membership Corporation	339,976	4%	79	3%	934	0.01%
Middle Tennessee Electric Membership Corporation	333,424	4%	78	3%	916	0.00%
Program Total	9,290,216		2,547		25,658	0.00%

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
Electric Power Board of Chattanooga (EPB)	3,064,020	12%	905	12%	2,230	0.02%
Nashville Electric Service	2,834,548	11%	789	11%	1,912	0.01%
Memphis Light, Gas & Water Division	1,830,928	7%	525	7%	1,286	0.01%
Knoxville Utilities Board	1,735,060	7%	483	7%	1,170	0.01%
Middle Tennessee Electric Membership Corporation	1,434,456	6%	424	6%	1,044	0.01%
Program Total	25,681,105		7,319		17,862	0.01%

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	1,252,978	6%	616	7%	367	0.01%
Upper Cumberland Electric Membership Corporation	717,536	3%	297	3%	330	0.03%
Volunteer Energy Cooperative	689,669	3%	323	3%	226	0.01%
Cumberland Electric Membership Corporation	641,995	3%	300	3%	219	0.01%
Clarksville (CDE Lightband)	635,687	3%	273	3%	248	0.02%
Program Total	20,608,975		9,392		7,454	0.01%

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	5,535,129	52%	1,337	53%	1,216	0.04%
Florence Electricity Department, City of	748,095	7%	176	7%	284	0.03%
Athens Electric Department, City of (AL)	628,452	6%	152	6%	138	0.03%
Sevier County Electric System	445,737	4%	104	4%	216	0.01%
Blue Ridge Mountain Electric Membership Corporation	259,578	2%	63	3%	57	0.02%
Program Total	10,682,882		2,507		3,093	0.00%

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	593,901	7%	—	—	77	0.01%
Knoxville Utilities Board	431,928	5%	—	—	56	0.00%
Greeneville Light & Power System	362,511	4%	—	—	47	0.01%
Powell Valley Electric Cooperative	308,520	4%	—	—	40	0.02%
Joe Wheeler Electric Membership Corporation	277,668	3%	—	—	36	0.01%
Program Total	8,792,820				1,140	0.00%

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
Nashville Electric Service	16,694,015	15%	3,090	16%	174	0.06%
Memphis Light, Gas & Water	15,115,634	14%	2,475	13%	206	0.04%
Middle Tennessee Electric Membership Corporation	7,067,053	6%	1,395	7%	68	0.05%
Knoxville Utilities Board	5,507,670	5%	1,044	5%	118	0.04%
Electric Power Board of Chattanooga (EPB)	5,172,220	5%	912	5%	57	0.04%
Program Total	109,871,619		19,717		1,620	0.03%

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
Warren Rural Electric Cooperative Corporation	9,754,313	6%	1,220	6%	13	0.22%
Memphis Light, Gas & Water	9,424,702	6%	1,340	6%	22	0.03%
Morristown Utilities Commission	7,394,404	4%	804	4%	13	0.33%
Holston Electric Cooperative	6,239,205	4%	668	3%	6	0.32%
Franklin Electric Plant Board (KY)	5,871,439	3%	1,397	6%	2	1.14%
Program Total	168,683,461		21,637		367	0.05%

Top Performers – EnergyRight Solutions for Demand Response

TOP LOCAL POWER COMPANY PERFORMERS	KWH	% OF FY PROGRAM TOTAL	KW	% OF FY PROGRAM TOTAL	TOTAL PARTICIPANTS	% OF SAVINGS VS SALES
Nashville Electric Service	3,916,400	37%	37,910	28%	346,010	0.01%
Electric Power Board of Chattanooga (EPB)	3,060,000	29%	30,600	22%	166,242	0.02%
Morristown Utilities Commission	614,500	6%	6,355	5%	13,858	0.03%
Fort Loudoun Electric Cooperative	598,000	6%	5,950	4%	30,215	0.04%
Memphis Light, Gas & Water	223,640	2%	5,591	4%	9	0.00%
Program Total	10,651,840		137,626		577,513	0.00%

Top Performers – Green Power Switch

TOP LOCAL POWER COMPANY PERFORMERS	GPS BLOCKS SOLD	% OF FY PROGRAM TOTAL
Knoxville Utilities Board	112,671	21%
Nashville Electric Service	90,272	17%
Murfreesboro Electric Department	61,082	11%
Memphis Light, Gas & Water	38,081	7%
Electric Power Board of Chattanooga (EPB)	37,722	7%
Huntsville Utilities	25,107	5%
Program Total	531,652	

Top Performers – Green Power Providers

TOP LOCAL POWER COMPANY PERFORMERS	OPERATING KW - DC NAMEPLATE CAPACITY	% OF TOTAL CAPACITY	INSTALLATIONS
Blue Ridge Mountain Electric Membership Corporation	14,277	21.10%	77
Fayetteville Public Utilities	5,180	7.66%	29
North Georgia Electric Membership Corporation	3,841	5.68%	27
Nashville Electric Service	3,817	5.64%	139
Middle Tennessee Electric Membership Corporation	3,785	5.59%	82
Warren Rural Electric Cooperative Corporation	3,499	5.17%	19
Program Total	531,652		137,626

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. With over 33,000 audits completed, something's clearly working.

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 (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 to produce ENERGY STAR® Manufactured Homes for even greater efficiency. An energy efficient manufactured home saves energy and money right from the start.

Tennessee Weatherization Assistance Program (WAP)

TVA has partnered with the state of Tennessee to share data collected during low-income audits under the DOE's Weatherization Assistance Program, enabling low-income families to permanently reduce their energy bills through DOE-funded energy efficient upgrades. Industry standard protocols are used to measure energy use and install energy improvements. The energy conservation resulting from these efforts helps decrease the cost of energy for families in need while improving the health and safety of their homes.

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 plant-wide, 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

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 replaces 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.

Description of Programs

ENERGYRIGHT SOLUTIONS FOR DEMAND RESPONSE

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 165 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)

DLC is a component, along with DVR, which completes the portfolio of responses to the Smart Grid Pilot RFP, a 240-MW effort currently being rolled-out by 19 local power companies. The program utilizes direct load control switches or devices to reduce 63 MW of peak demand from 15 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.

Pricing Products

The Pricing Products are Demand Response program offerings delivered to large industrial and commercial customers, enabling customers to deliver a contracted amount of capacity for TVA’s benefit. Expanded pricing product offerings to dispatch for both reliability and economic reasons are utilized through products including Reserve Preservation and Instantaneous Response. A 16-month Reserve Preservation pilot was

offered from June 1, 2011, to Sept. 30, 2012, moving into the current Reserve Preservation product with a five-year contract with three-year evergreen clause. Instantaneous Response will have a pilot of 60-minute-demand metering for a nonconforming load Valley Investment Initiative candidate to determine if load swings can be dramatically reduced.

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 pilot version, 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.

Residential Premise Energy Management

Under a pilot program design drawn up by partners Glasgow Electric Plant Board, General Electric and TVA, this program will identify and capture demand response capabilities that become available when a residential premise energy management system is installed. This program evaluates available demand and energy control of the seven major appliances in the home – the range, refrigerator, microwave, dishwasher, washer dryer and water heater – during peak periods, time-of-use periods and off-peak periods.

Description of Programs

ENERGYRIGHT SOLUTIONS FOR DEMAND RESPONSE (CONTINUED)

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 – Distributor Connectivity

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.

