

Green Power Switch® News

www.greenpowerswitch.com

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In this Issue

TVA Launches New Renewable Power Initiative, Continues Generation Partners Growth

Green Power Switch Performing in Top Quartile in Southeast

Product Redesign Under Way

Poultry Farms in Mississippi Go for Solar

TVA and local public power companies, working in cooperation with the environmental community, developed Green Power Switch as a way to bring green power — electricity that's generated by clean, renewable resources like solar, wind and methane gas — to Valley consumers. Green Power Switch is a TVA Renewable Energy Initiative.



The UT Knoxville Living Light home with (inset) the UT Zero experimental prototype

UT Team to Compete in Solar Decathlon

Living Light, an interdisciplinary team at UT Knoxville, was accepted into the Department of Energy's Solar Decathlon 2011.

This competition challenges 20 student teams from around the globe to design, build and operate a 1,000-square-foot solar powered home on the National Mall in Washington, D.C. The goal is to educate both participants and visitors about the possibilities and savings of energy-efficient design. It also challenges students to use today's technologies in a new and innovative way. This is the first time the university will be participating in the competition.

Since its acceptance this spring, the team has been designing and raising the funds needed to construct the project. Design completion is set for December of this year, with construction beginning in January 2011. Classes dedicated to Living Light are currently being held at the university, enrolling 120 students from seven departments on campus, including architecture, engineering, graphic design, interior design, landscape design and business. Working on projects of this caliber has provided

students with the opportunity to develop lasting professional, academic and commercial partnerships.

In 2009, the team completed construction of the UT Zero prototype on campus. The UT Zero home is about one-third the size of the Living Light home and is completely off the grid. The prototype project has served as a testing ground for ideas for the Solar Decathlon competition, allowing team members to study the integration of aesthetics, technology and energy-efficient construction through the idea of Living Light. These concepts not only relate to the sun and energy; they are a way of life that engages participants in a learning experience to promote sustainable living.

The knowledge gained from this project will extend past the educational realm. The Living Light house, by design, can be easily transported in one piece and will tour the state following the competition to educate Tennesseans on efficient design for our climate. For more information, visit livinglight.utk.edu. ■

By Lauren Rogers, a UT graduate and Solar Decathlete.

GENERATION UPDATE
March 2010 – September 2010



Solar Power
143,329 kWh



Wind Power
20,777,616 kWh



Methane Gas
2,811,749 kWh



Landfill Gas
1,941,170 kWh



Generation Partners
1,526,106 kWh

To learn more about our generation sites and to find the one nearest you, please visit www.greenpowerswitch.com.

PARTICIPATION UPDATE
As of September 1, 2010

47,917 | Total number of green power blocks subscribed

11,523 | Number of residential customers subscribing

2 | Average number of green power blocks per residential customer

496 | Number of business customers subscribing

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COMMENTS OR SUGGESTIONS

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We'd like your suggestions on articles for the newsletter. E-mail your comments to greenpowerswitch@tva.com, or write to Green Power Switch, 1101 Market Street, MR 3M, Chattanooga, TN 37402-2881.

TVA Launches New Renewable Power Initiative, Continues Generation Partners Growth

In October 2010, the Tennessee Valley Authority announced another addition to its growing renewable power portfolio with the launch of a new initiative for mid-size renewable generators.

The TVA Renewable Standard Offer Program was designed to support generation projects too large for TVA's Generation Partners program, which serves residential and small commercial customers that have a capacity of 200 kilowatts (kW) or less. The Renewable Standard Offer will be available for new projects capable of producing between 201 kW and 20 megawatts (MW) of power. The program will encourage more renewable development by allowing participants to enter into long-term price contracts with TVA.

A number of states and utility companies purchase renewable power from developers or excess power from customers' renewable energy systems using a "standard offer," or set price, to encourage the growth of power sources that emit no pollution or greenhouse gases.

TVA will pay this set price for renewable power based on the time of day the electricity is available to the TVA grid. The new initiative will help TVA meet peak power demand as well as increase renewable generation.

"This plan strikes a balance between supporting renewable energy markets, helping TVA reach its renewable energy generation targets and keeping electricity costs affordable," says John Trawick, TVA senior vice president for Commercial Operations and Pricing. "TVA's Renewable Standard Offer makes it easier for mid-sized renewable generation facilities to contribute to TVA's electricity supply needs and receive a fair and stable price for the power they provide."

Contracts of up to 20 years will help TVA avoid rising prices for purchased power and keep consumer prices down. The long-term contracts also will make financing the projects



easier for participating developers. Biomass, solar and wind projects will be eligible.

The Renewable Standard Offer initially will be limited to a total of 100 MW from all participants, with no single technology representing more than 50 MW of the total.

The new initiative complements TVA's Generation Partners pilot program. In the past few months, Generation Partners has grown from about 200 projects to almost 500 projects totaling about 60 MW. Nearly 45 MW of that power is solar.

In the new program, TVA is partnering with participating distributors to add 31 systems that are larger than 200 kW. "Together, TVA's Renewable Standard Offer and Generation Partners pilot programs will help grow the renewable generation industry in the region, promote TVA's economic development goals, and support TVA's vision and long-term strategy to emphasize cleaner air and greater energy efficiency," Trawick says.

To learn more about the Standard Offer, visit www.tva.com/renewablestandardoffer. To learn more about Generation Partners, visit www.generationpartners.com.

Green Power Switch Performing in Top Quartile in Southeast

Green Power Switch is the leading renewable energy program in the Southeast, measured by both number of customers and total green power sales (see chart).

The price of Green Power Switch, at 2.67 cents per kilowatt-hour (kWh), is in the middle of the pack in the region, but the national average price of green power is lower, at 1.8 cents per kWh. Here's a look at some of the other green power programs offered in the Southeastern states:

ALABAMA: Green Power Choice is a program offered by the PowerSouth Energy Cooperative, which includes 20 cooperative and municipal utilities around the state.

The program, which was launched in 2006, supports energy generated by landfill gas. Customers can purchase 100 kWh blocks for \$2 per month, or 2 cents per kWh, with a minimum participation period of one year.

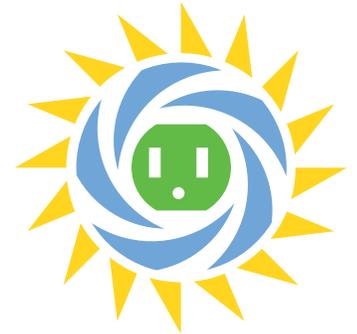
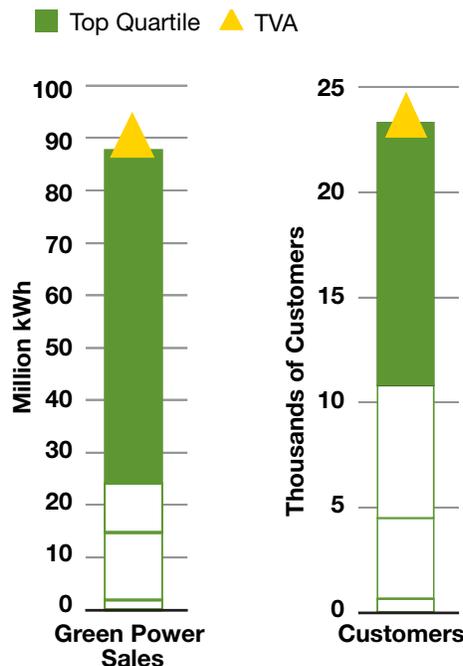
FLORIDA: Tampa Electric Company has offered a program called Renewable Energy since 2001. Energy sources include photovoltaic solar (PV), landfill gas and biomass cofiring. The cost is \$5 a month for a 200 kWh block, or 2.5 cents per kWh. Tampa Electric also offers a one-time purchase option for family, social, business or political events. The facility where the event is held must be serviced by Tampa Electric, and a minimum purchase of 200 kWh is required.

GEORGIA: Thirty-five of the 42 cooperatives in the Georgia Electric Membership Corporation offer Green Power EMC, which began in 2001. The program, which uses landfill gas and photovoltaic solar at schools, costs \$3 to \$5 per month for a 150 kWh block, or 2 cents to 3.3 cents per kWh. Through the Sun Power for Schools program, participating schools receive a PV installation and metering equipment that can be used to teach students about solar power.

KENTUCKY: The East Kentucky Power Cooperative, consisting of 16 utilities, offers a landfill gas program called EnviroWatts. Launched in 2002, the program costs \$2.75 per 100 kWh block, or 2.75 cents per kWh.

NORTH CAROLINA: NC Green Power is a statewide program supported by Dominion North Carolina Power, Duke Energy, the 21 participating municipal utilities of ElectriCities, and 22 of the North Carolina Electric Cooperative's members. The program, which started in 2003, offers biomass, hydro, landfill gas, PV and wind power for 2.5 to 4 cents per kWh. Most residential and small commercial customers pay \$4 per 100 kWh block, or 4 cents per kWh. Large-volume customers who purchase a minimum of 100 blocks per month pay \$2.50 per 100 kWh block. Carbon offsets are also available for \$4 per 500 pounds of emissions avoided. Contributions may be tax-deductible.

SOUTH CAROLINA: Seventeen utilities offer Santee Cooper's Green Power Program, which began in 2001. The landfill gas option costs 3 cents per kWh. Three other South Carolina utilities offer a program called Palmetto Clean Energy (PaCE). Started in 2008, PaCE offers wind, PV and landfill gas energy at a cost of \$4 per 100 kWh block, or 4 cents per kWh. Direct contributions are also accepted. PaCE is a 501(c)(3) tax-exempt nonprofit organization, so contributions are tax-deductible. ■



Green Power Switch®

Product Redesign Under Way

This year marks the 10th anniversary of Green Power Switch, the Tennessee Valley Authority's renewable energy program. Green Power Switch now brings solar, wind and methane gas power to more than 12,000 residential and commercial customers.

Green Power Switch is the leading renewable energy program in the Southeast (see preceding story) and has increased participation by about 7.5 percent for the past two years. With these successes in mind, TVA has assembled a team of staff, consultants, local power distributors and environmental stakeholders to reassess the program and ensure another 10 successful years.

Look for more on the Green Power Switch redesign, which aims to reenergize the program going forward and better enable residential and business customers to meet their environmental and sustainability goals.

If you have any questions or comments about the redesign, please e-mail greenpowerswitch@tva.gov.

Poultry Farms in Mississippi Go for Solar

Poultry farmers across the state of Mississippi are looking at solar power as a way to cut the cost of their utility bills.

Spencer Pope, owner of Pope's Farms in Leake County, installed a grid-tied solar system on one of his six poultry houses in summer 2009. The system was designed and installed by Mississippi Solar, a solar installer based in Philadelphia, Miss. The 8.4 kilowatt (kW) system consists of 48 solar panels that will reduce energy expenses for Pope's poultry houses by up to 15 percent, according to Mississippi Solar.

The system has done so well that Pope plans to add an additional 180 panels, bringing his system's total size to 47 kW. Although this system is large enough to effectively cover all his electricity needs, Pope is selling all the power he generates to TVA through Generation Partners.

Will Hegman, owner and founder of Mississippi Solar, sees a bright future



PHOTO © MISSISSIPPI SOLAR LLC

in the cooperation between poultry houses and solar energy production in Mississippi. Boasting approximately 8,000 poultry farms, the state has the potential to produce significant amounts of clean energy by integrating solar systems into its poultry industry. According to Hegman, around 10 percent of Mississippi's electrical needs could be supplied by its poultry houses if they went solar. The preexisting conditions on poultry farms — southern-facing exposures and little shade — make them ideal for solar power.

Aid for farmers installing these systems is increasingly available. Pope's costs were

partially offset by a grant from the U.S. Department of Agriculture, the first of its kind to fund solar on a Mississippi poultry farm. A 30 percent federal tax credit is also available to farmers who decide to go solar.

Generation Partners provides an incentive of \$1,000 and also pays 12 cents per kilowatt-hour above the local retail rate. All this means Pope's original system (before his plans for additional capacity) had an approximate 6.3-year payback and a 30-year estimated life span. ■

By Carolyn Hegman of Mississippi Solar LLC.

1101 Market St., MR 3M
Chattanooga, TN 37402-2881

TVA and your
local power company
Green Power Switch[®]



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Chattanooga, TN

PRODUCT CONTENT LABEL

The product is sold in blocks of 150 kilowatt-hours (kWh).
In 2009 the product was made up of the following renewable resources.

Green-e Energy Certified New ² Renewables in Green Power Switch [®]		Generation Location
Biomass	41.25%	TN
Solar	0.40%	AL, KY, MS, TN, VA, GA, NC
Wind	58.35%	TN, KY, NC, GA
TOTAL	100%	

1. These figures reflect the power that we have contracted to provide. Actual figures may vary according to resource availability. We will annually report to you the actual resource mix of the electricity you purchased during the preceding year.
2. New renewables come from generation facilities that first began commercial operation on or after January 1, 1997.
3. Eligible hydroelectric facilities are defined in the Green-e Energy National Standard (www.green-e.org/getcert_re_stan.shtml) and include facilities certified by the Low Impact Hydropower Institute (www.lowimpacthydro.org); facilities that are run-of-the-river hydropower facilities with a total rated nameplate capacity equal to or less than 5 megawatts; and facilities comprised of a turbine in a pipeline or a turbine in an irrigation canal.

For comparison, the current average mix of resources supplying the TVA region includes: coal (52%), nuclear (32 %), natural gas (2 %), hydroelectric (6 %), and other (8 %). *(Source: TVA, 2009)*

The average home in the Tennessee Valley uses 1,335 kWh per month. *(Source: Energy Information Administration)*

For specific information about this electricity product and to see a 2010 Prospective Product Content Label, please contact your local power company or TVA Green Power Switch at greenpowerswitch@tva.gov; call the toll-free Renewable Energy Information Call Center at 1-866-673-4340; or visit www.greenpowerswitch.com.



Green-e Energy certifies that Green Power Switch meets the minimum environmental and consumer protection standards established by the nonprofit Center for Resource Solutions. For more information on Green-e Energy certification requirements, call 1-888-63-GREEN or log on to www.green-e.org.