



TREMONT INSTITUTE HOLDS SOLAR WORKSHOP

The Great Smoky Mountains Institute at Tremont presented its first Solar Energy Workshop on June 30. Members of the Tremont staff were joined by presenters from Green Earth Services, the Tennessee Valley Authority, Sevier County Electric System, Oak Ridge National Laboratory (ORNL), and Liles Acres Organic Farm. Over 30 people attended the workshop to learn about solar energy and home energy efficiency. Employees from Alcoa, whose Alcoa Foundation provided the grant for Tremont's solar array, also attended.

Tremont's Executive Director, Ken Voorhis, and Facilities Manager, Sam Crowe, discussed the facility's new array and how it relates to Tremont's mission. Ed Zubko, a solar installer with Green Earth Services, then discussed the basics of solar energy. His company installed the Tremont solar array.

Jenny Wright from TVA's Green Power Switch® and Lucas Harkleroad of Sevier County Electric System (SCES) discussed the two renewable programs available for Tennessee Valley residents, Green Power Switch and Generation Partners. "There are green options for all levels of investment," Wright said. "Green Power Switch is for the consumer who wants to do their part to help the environment but doesn't have a lot of capital to invest, and Generation Partners is for individuals and businesses that want to generate renewable energy."

Harkleroad pointed out that efficiency is key and that the power generated from any sort of green energy system is best used in a home that is otherwise energy-efficient.

Jeff Christian of ORNL expanded on ways to accomplish residential energy efficiency. He shared his experience of building near-zero-



Pictured from left to right are Ed Zubko (Green Earth Services), Sherri Liles (Liles Acres), Ken Voorhis (GSMI Tremont), Russell Liles (Liles Acres), Jeff Christian (ORNL), Jenny Wright (TVA), Ben Dieterle (National Park Service), Gary Free (Alcoa), Christy Newman (Alcoa), Lucas Harkleroad (SCES), Sam Crowe (Tremont), and John DiDiego (Tremont).

energy homes that cost around \$1 per day to power. The average American home costs closer to \$5 per day. "Every single home in America should be on the path to sustainability," Christian said.

Russell and Sherri Liles of Liles Acres Organic Farm told how they installed the first solar array in Maryville three years ago. They use their array not only to power their organic farm, but also as a teaching tool for the community. "People don't think twice about buying a car they'll only use for a few years," Russell said, "but the same amount of money can bring you zero energy cost."

Adapted with permission from an article by Michelle Key, formerly of GSMNI at Tremont

MORSØ'S COMMITMENT TO THE ENVIRONMENT



Linda Turner of CEMC presents Craig Shankster, President of Morsø US LLC, with the company's GPS certificate, welcoming them as a new supporter of green power.

Morsø US LLC, a wholesaler of cast iron wood stoves manufactured in Denmark, is now a Green Power Switch Friend. Based in Portland, Tennessee, Morsø began purchasing Green Power Switch from Cumberland Electric Membership Corporation in spring 2009. Its monthly purchase amount is enough to offset 100% of its energy usage.

"It's part of our overall global strategy that we are very green conscious," Morsø President Craig Shankster said. "Our mother company in Denmark is very green: 80% of the energy that's used in production comes from renewable

resources – 69% wind and 11% biogas. So it's a natural step for us to integrate that policy."

Morsø's environmental policy is also displayed in the products themselves. According to Shankster, "(The wood stoves) are made from 98% recycled material, and the packaging is 100% recycled."

Morsø has roughly 350 nationwide accounts. Hearth and Home, located in Knoxville, Tenn., is a retailer of Morsø wood stoves.

Adapted with permission from an article by Scott Shelton of CEMC



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.



FISCAL YEAR 2009
GENERATION UPDATE
October 2008 – September 2009



Solar Power
234,890 kWh



Wind Power
51,064,870 kWh



Methane Gas
28,429,880 kWh



Generation Partners
547,890 kWh

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

PARTICIPATION UPDATE As of November 1, 2009

41,826 | Total number of green power blocks subscribed

12,225 | Number of residential customers subscribing

2 | Average number of green power blocks per residential customer

520 | Number of business customers subscribing

ENVIRONMENTAL BENEFITS

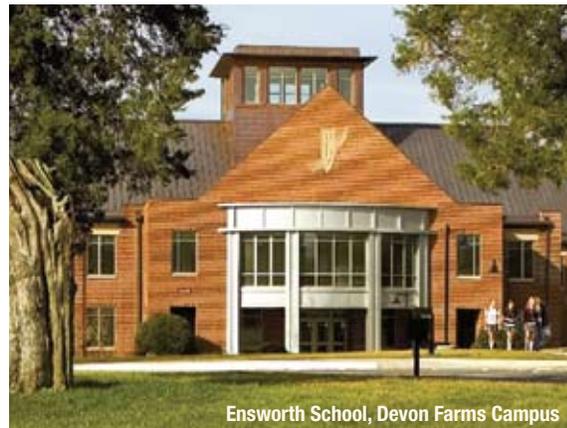
GPS participants purchased a total of 41,826 blocks of green power during the month of November 2009. That's the equivalent of 6,274 MW of renewable energy, 100% of which is generated right here in the Tennessee Valley. That offsets the annual carbon usage of 789 average US homes for a year!

Source of equivalency data is www.epa.gov/greenpower/pubs/calculator

Help us reduce paper waste!
Sign up to receive an e-mail notification when the next GPS newsletter is posted online. You can change your preference online at www.greenpowerswitch.com.

ENSWORTH SCHOOL NAMED TO TOP 20 K-12 SCHOOLS PURCHASING MOST GREEN POWER

Ensworth School in Nashville is making the grade with green power. The U.S. Environmental Protection Agency (EPA) announced in October 2009 that Ensworth appears on the new Top 20 K-12 Schools list of the largest green power purchasers among primary and secondary schools. Ensworth buys more than 300,000 kilowatt-hours (kWh) of green power annually, enough to meet 6 percent of the school's purchased electricity use. The school purchases Green Power Switch offered by Nashville Electric Service and TVA.



Ensworth School, Devon Farms Campus

More information on top 20 list of K-12 schools: <http://www.epa.gov/greenpower/toplists/top20k-12schools.htm>. Information on EPA's Green Power Partnership: <http://www.epa.gov/greenpower>.

(Adapted with permission from an article by Dawn Harris-Young of the EPA)

TVA TO PURCHASE 450 MW OF WIND POWER

Many of our Green Power Switch customers have taken note of TVA's recent announcement that we will be purchasing wind power from wind farms located in the mid-west. TVA's Executive Vice President of Power Supply and Fuels, Van Wardlaw, said recently "TVA is committed to increasing our generation from non-carbon-emitting sources by adding competitively priced wind, solar and biomass to our portfolio." This progressive mindset has resulted in the selection of two companies, both with large wind farms located in South and North Dakota. These companies will provide up to 250 MW each of renewable energy, which are the first purchases under the TVA Board's authorization to purchase up to 2,000 MW of renewable energy. This is good news to many GPS fans who are environmentally minded and would like to see a bigger shift towards renewables.

TVA's goal is to generate 50% clean and renewable energy by 2020. Clean energy is energy that is generated from any resource with zero to near-zero carbon emissions. Renewable energy is energy generated from a resource that is sustainable and naturally replenished, such as solar, wind, biomass, and certain types of hydro.

This wind generation will be added to TVA's overall supply of power to Valley customers and is not included in the Green Power Switch supply. The GPS generation mix is produced from resources located here in the Tennessee Valley. You can learn more about these resources at the Green Power Switch website.

HAPPY ANNIVERSARY GPS



TVA's Green Power Switch program is getting ready to have an anniversary! Next Earth Day, April 22, 2010, will mark the 10th year of our commitment to provide Valley residents with the option to support green power close to home. We are busy planning some events to mark our anniversary, but we would love to hear your ideas! Please submit any 10-year anniversary celebration ideas you may have to www.greenpowerswitch.com.

CROSSVILLE CUSTOMER IN THE LEAD FOR BEST SUSTAINABILITY PRACTICES



You don't have to convince Evelyn Dybzinski that the TVA and Volunteer Electric Cooperative Generation Partners Program can pay off for customers – she has the low power bills to prove it.

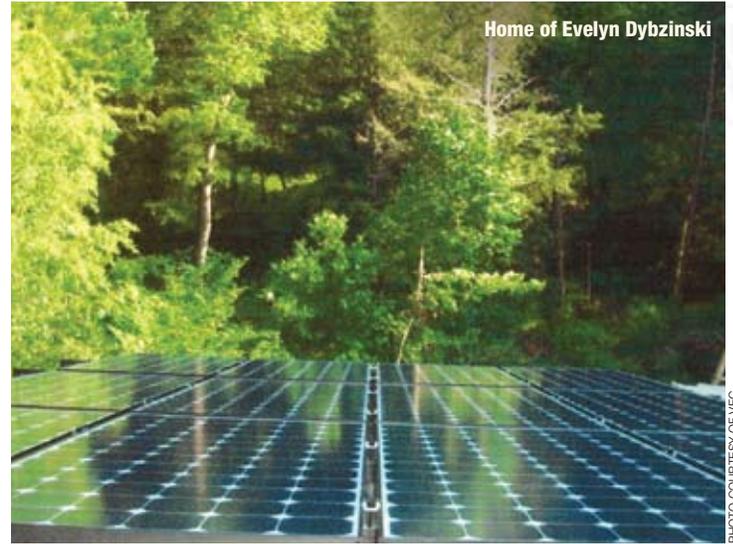
Dybzinski has had power bills as low as \$5 for an entire month of service. She expects them to go even lower this fall. But her savings are attributable to more than her participation in Generation Partners. She was “green” long before it became a popular environmental buzzword.

She and her late husband built the log cabin she lives in 30 years ago, and they incorporated features that are considered cutting edge for green construction today. “The logs are 8 to 10 inches thick and provide a lot of insulation, and we put one inch of foam insulation in the basement walls,” she says. “None of this is really new. It just takes about 30 years for these things to come back around and get attention again. The Pueblo Indians knew how to use the sun.”

Dybzinski knows how to use the sun, too. Her home is set five degrees from due south, and most of the southern façade of the home is glass. In winter the sun's position provides lots of heat and light. The north-facing façade has very small windows, so in summer the home has little solar heat gain. She has solar panels on the roof, and by using electricity very conservatively, she finds the panels provide almost all the electricity she needs.

For heat, Dybzinski burns wood, and she's even installed a heat exchanger that allows the wood-burning stove to produce more than enough hot water to meet her needs. In winter she hangs her laundry in the basement to dry by the heat of the stove, which she says also adds humidity to her home. For further savings, she uses fluorescent lighting.

About 15 months ago, Dybzinski joined the Generation Partners program, which provides incentives and technical support for the installation of renewable electricity generation systems. Participants benefit by defraying the costs of their renewable system's installation



and lowering their monthly energy bills through the revenue they receive from selling their green power back to TVA. Eligible resources include solar, wind, low-impact hydro, and biomass.

The typical two-kilowatt solar photovoltaic system in the Tennessee Valley produces an average of 200 kWh per month, which translates to a generation credit of about \$44 per month.

This fall Dybzinski says that by using electricity very conservatively, she will try to “zero out” – meaning she hopes to generate as much or more electricity than she uses.

Dybzinski's results aren't typical. Most VEC customers don't use electricity as sparingly as she does. But she's living proof that those who are willing to make energy-saving lifestyle changes can dramatically reduce their consumption. They can be on the cutting edge of energy saving technology – just as she has for 30 years.

(Adapted with permission from an article by Robert McCarty of Volunteer Energy Cooperative)

CAMPUS SUSTAINABILITY CONFERENCE HELD IN MURFREESBORO

The first Summit for Campus Sustainability Conference was held at Middle Tennessee State University on October 2. The Southern Alliance for Clean Energy, Tennessee Alumni and Students for Sustainable Campuses, Green Power Switch, and the Middle Tennessee State University Campus Fund hosted the event. Over 70 students, faculty, and administrative professionals from 12 colleges and universities attended.

The topics discussed included campus successes, the advantages of partnering with local utilities, best practices, and the role campuses play in leading communities toward more sustainable energy practices. Many of these campuses have enacted green fees, student-led initiatives that provide funds for energy efficiency

projects, conservation programs, on-site generation of renewable resources, and green power purchases. About a third of all Green Power Switch purchases are made by universities and colleges.

Award-winners at the conference were:

- Green Power Leadership: Middle Tennessee State University
- Energy Efficiency: University of Tennessee, Knoxville
- Campus Sustainability, Faculty: Bradley Reynolds, University of Tennessee, Chattanooga
- Campus Sustainability, Student: Lance Lewis, East Tennessee State University
- Campus Sustainability, Administration: Carl Hite, Cleveland State Community College.

UNIVERSITY OF KENTUCKY PLACES NINTH IN SOLAR DECATHLON



The 2009 Solar Decathlon took place October 8-18 in Washington, D.C. This biannual event consisted of 10 individual contests in such areas as architecture, engineering, lighting design, appliances, hot water, and home entertainment. Twenty universities from around the world were challenged to build a high-performance, energy-efficient home that exemplified ecologically sound energy use in building, resulting in a net-zero home. These solar houses were designed and constructed at the universities, then transported to the National Mall where they were reassembled as part of a grid-tied solar village. Over 300,000 visitors toured these homes during the event, which showcased innovations in residential sustainability and construction.



Photo courtesy of Stephen Patton, UKY College of Agriculture

TVA sponsored the University of Kentucky's s.ky blue team this year, and we're pleased to report that they placed ninth overall and fifth in the net metering competition, out of the 20 international competitors. The 25 members of Kentucky's team did a fantastic job incorporating state-of-the-art technology into the building and seamlessly integrating the house with the surrounding Kentucky landscape. Kudos to the team for designing, constructing, and operating such an attractive, effective, and sustainable solar-powered home.



COMMENTS OR SUGGESTIONS – Let us hear from you!

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.

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