

U.S. DEPARTMENT OF
ENERGY

Solar Instructor
Training Network

Southeast Region



This newsletter is produced by the Southeast Solar Training Network (SSTN) for the purpose of supplying solar-related news to our educational and energy office partners. The information presented is from public websites such as the U.S. Department of Energy's (DOE) Energy Efficiency and Renewable Energy (EERE), the Interstate Renewable Energy Council (IREC), the Solar Instructor Training Network (SITN) and general energy related websites.

The goal of SITN is to help facilitate and support the creation of a well-trained and highly-qualified solar energy workforce of sufficient size and diversity to meet the projected workforce needs of the United States. The SSTN is one of nine DOE-funded Regional Training Providers and serves in the capacity of trainer and mentor for solar and photovoltaic-related faculty at southeast educational institutions.

We hope you find this information useful.

Upcoming Training

**Florida Solar Energy Center,
Cocoa, FL**

PV Workshop for Code Officials
hosted by Building Officials
Association of Florida
[Sept. 17, 2013]

**Principles of Photovoltaic Systems
Design and Commissioning**
[Sept. 24-26, 2013]

Installing Photovoltaic Systems
[Oct. 7-11, 2013]

**Photovoltaic Technical Sales &
Business Operations**
[Nov. 13-14, 2013]

Solar Water Heating Systems
[Sept. 11-13, 2013]

For more course details, visit
<http://ce.fsec.ucf.edu/>

Contact Us

This e-newsletter is published by the
Florida Solar Energy Center – a

1. US Department of Energy Sunshot Initiative Newsletter

The Southeast Solar Training Network is part of the Department of Energy Sunshot solar initiative program. The Sunshot initiative is a national collaborative effort to make solar energy cost-competitive with other forms of electricity by the end of this decade. The program and its participants drive research, manufacturing, market solutions and training to make the abundant solar energy resources in the United States more affordable and accessible. To subscribe to the Sunshot newsletter please see the site below. This is a good tool for your students to keep up with the PV activities in the US.

<http://apps1.eere.energy.gov/solar/newsletter/>

2. Photovoltaic Laboratory Development for Solar Energy Education and Training

Photovoltaic Laboratories Best Practices, the latest in a unique Solar Energy Education and Training Best Practices series, was released today by the Interstate Renewable Energy Council, Inc. (IREC) and the Solar Instructor Training Network. The SSTN and your institution is part of that network.

This seventh document in the solar education best practices series is designed to assist faculty and administrators at colleges, universities and other technical training institutions who are interested in developing new photovoltaic laboratories or improving existing ones.

[See the Photovoltaic Laboratory Best Practices](#)

3. Expedited permits Process for PV Systems, Solar America Board

research institute of the University of Central Florida – while under contract with the U.S. Department of Energy.

Project Staff

David L. Block
321-638-1001
block@fsec.ucf.edu

John Harrison
321-638-1506
harrison@fsec.ucf.edu

Colleen Kettles
321-638-1004
ckettles@fsec.ucf.edu

JoAnn Stirling
321-638-1014
joann@fsec.ucf.edu

for Codes and Standards

A major concern with the installation of PV systems is the permitting process that installers must adhere to. The document below presents an expedited permit process for small-scale PV systems.

<http://www.solarabcs.org/about/publications/reports/expedited-permit/pdfs/Experimprocess.pdf>

4. National Report on Solar Installation Trends 2012 Offers Insight and Analysis

The drivers of the booming U.S. solar installation market are addressed in a nationally recognized annual report on solar installation trends released today by the Interstate Renewable Energy Council (IREC). The solar market is an increasingly important and vital part of the American economy. What are the trends in this market, and what forces are at work? Which sectors of the market are strongest, and why? What are the activities in your region? What are the prospects for solar energy in the near future?

According to the report, the capacity of photovoltaic (PV) installations increased by 80 percent in 2012, compared with 2011. And over 50 percent of that capacity was in the utility sector for the first time.

"In 2012, more than 90,000 photovoltaic installations were installed in the U.S. with a total capacity of 3.3 GW. This represents a 75 percent increase over installations completed in 2011," according to Larry Sherwood, IREC vice president & COO and author of IREC's Solar Market and Installation Trends Report 2013.

[Download the report](#)

5. Forget solar panels, here come building-integrated photovoltaics

By John Upton

Solar panels are becoming passé. Why put solar panels on top of building construction materials when you could just tap the power of the sun directly through the construction materials themselves? Bloomberg reports on the rapid growth in building-integrated photovoltaics, or BIPV. These are solar power-harvesting cells that are incorporated into the walls, roofs, and windows of buildings — integrated seamlessly instead of being bolted onto a finished building as an apparent afterthought. Expect green buildings of the future to look a lot bluer.

See:

<http://grist.org/news/forget-solar-panels-here-come-building-integrated-photovoltaics/>

6. Are Solar Panels Strong? Yes!

Provided by Peter DeNapoli of SolarWorld , July 12, 2013

See short module quality video at <http://youtu.be/M6v2IDa8Hos>

7. Water Stress Threatens Future Energy Production

Posted by Sandra Postel of National Geographic's Freshwater Initiative in Water Currents on July 18, 2013

When we flip on a light, we rarely think about water. But electricity generation is the biggest user of water in the United States. Thermoelectric power plants alone use more than 200 billion gallons of water a day – about 49 percent of the nation's total water withdrawals.

Large quantities of water are needed as well for the production, refining and transport of the fuels that light and heat our homes and buildings, and run our buses and cars. Every gallon of gasoline at the pump takes about 13 gallons of water to make.

Interesting figures from a recent DOE report compares the water requirements of seven different types of electric power facilities – nuclear, coal, biopower, natural gas combined-cycle, concentrated solar, photovoltaic solar and wind. The last two come out as by far the most water-conserving electricity sources. In contrast to the 20,000-60,000 gallons per megawatt-hour needed for nuclear and coal plants with “once-through” cooling systems, PV solar and wind require only negligible quantities.

And for the southeast, of the one hundred coal-fired power plants deemed to be most vulnerable to water shortages, most are located in the southeastern states of Alabama, Florida, Georgia, North Carolina and South Carolina. In these states, water for cooling may be constrained by low river flows, high water temperatures or both – forcing utilities to cut back on power generation.

See:

<http://newswatch.nationalgeographic.com/2013/07/18/water-stress-threatens-future-energy-production/>

8. U.S. Military Bets \$20 Million On 500 Electric Vehicles For EV-To-Grid Initiative

Among the many sustainable energy programs recently launched by the U.S. military, the Defense Department's new military electric-vehicles-to-grid initiative is especially worth noting. With the announcement of a \$20 million, 500-vehicle leasing program soon to get underway, in one fell swoop it's going to accelerate several major trends that have been slowly leaking into the civilian mainstream. That includes the marriage of zero emission electric vehicles with the potential for zero-emission recharging from solar panels or other renewable sources, smart grid technology with off-peak power maximization, and the flexibility of local energy storage to help secure facilities (or individual buildings) against brownouts and more serious grid disruptions.

As described by Camron Gorguinpour, special assistant to the assistant secretary of the Air Force for installations, environment and logistics, the prospect of reducing greenhouse gas emissions at military facilities is side benefit to the main attractions of switching to EV's: saving money on fleet expenses, meeting energy efficiency goals.

Meanwhile, back in the civilian sector, a mirror trend has been taking place in which consumers are finding themselves at the cusp of a transition from vehicles that you just fill up and drive, to vehicles that partner with you to achieve the most efficient, lowest-cost, lowest-emission energy consumption patterns across the spectrum of your needs, from mobility to

household use. We've already seen a steady growth in the integration of EV manufacturers, charging station manufacturers and rooftop solar companies, and now auto manufacturers are taking it to the next level.

See:

<http://cleantechnica.com/2013/01/13/500-more-military-electric-vehicles-under-ev-to-grid-program/>



Copyright ©2013 Florida Solar Energy Center. All Rights Reserved.
1679 Clearlake Road, Cocoa, FL 32922-5703