SSTN News

October 25, 2013

U.S. DEPARTMENT OF ENERGY
Solar Instructor Training Network
Southeast Region

Powered by SunShot
U.S. Department of Energy

Upcoming Training

Florida Solar Energy Center, Cocoa, FL

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

Installing Photovoltaic Systems
[Feb. 3-7, 2014]
[July 14-18, 2014]
[Nov. 3-7, 2014]

Solar Water Heating Systems
[Mar. 4-6, 2014]

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

Contact Us

This e-newsletter is published by the Florida Solar Energy Center – a research institute of the University of Central Florida – while under contract with the U.S. Department of Energy.

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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.

The SSTN produced Principles of Photovoltaic Systems Design and Commissioning Workshop was conducted at the Florida Solar Energy Center on September 24-26, 2013. The workshop was attended by 14 educational institution instructors from throughout the Southeast. The course covered the principles for designing and commissioning utility-interactive solar photovoltaic (PV) systems. The specific course objectives were to develop the basic requirements for PV system documentation and design, and for commissioning tests and inspections. This well received course included lecture presentations as well as hands-on activities using the latest electronic commissioning equipment.

1. Solar Instructor Training Network

by Joe Sarubbi

Local Code Officials Have New User Friendly Version for Solar PV Online Training

The PV Online Training for Code Officials is now on the Moodle platform, an open source learning management system popular with educators as a tool for creating online, dynamic web-based content for students.Though the PV online curriculum was originally developed for code officials and Authorities Having Jurisdiction (AHJs), the training is available to anyone and will also become a useful tool for instructors and their students.

See: www.irecusa.org

2. Overlap in PV Solar Approval Processes Can Be Reduced

(October 8, 2013) - To successfully develop a rooftop solar photovoltaic (PV) project, installers must navigate multiple approval processes. Only then can the system be connected to the grid and operational. In a recently published paper, the Interstate Renewable Energy Council, Inc. (IREC) explores the many processes often in PV system approval.

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"Minimizing Overlap in PV System Approval Processes: Case Studies and Analysis" examines in great detail the overlap and synchronization of the many approval processes involved, in addition to their individual steps, and offers possible solutions on how to make them more efficient. In the paper, IREC also provides four case studies, which outline the approval paths for PV systems in four cities in the United States.

"By taking a close look at these four specific markets, we were able to gain a full understanding of the many approvals it takes to install a rooftop PV system in the United States, and identify those areas where there may be an opportunity to reduce overlap and increase efficiency," says lead author Sky Stanfield, part of a team who represents IREC in regulatory matters. "Such changes may be key to continued advancements in reducing soft costs for rooftop solar PV."

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3. Exploding fuel tankers driving US Army to solar power

The U.S. Army is spending billions of dollars shifting toward solar energy, recycled water and better-insulated tents. The effort isn't about saving the planet Earth. Instead, military commanders have found they can save lives through energy conservation. It's especially true in Afghanistan, where protecting fuel convoys is one of the most dangerous jobs, with one casualty for every 24 missions in some years.

With renewable energy, "there is no supply chain vulnerability, there are no commodity costs and there's a lower chance of disruption," Richard Kidd, the deputy assistant secretary of the Army in charge of energy security, said in an interview. "A fuel tanker can be shot at and blown up. The sun's rays will still be there." While President Barack Obama called on the U.S. government to cut greenhouse-gas emissions 28 percent by 2020, the Army is embracing renewables to make the business of war safer for soldiers. In May, it announced plans to spend $7 billion buying electricity generated by solar, wind, geothermal and biomass projects over the next three decades.

See: http://www.stripes.com/news/army/exploding-fuel-tankers-driving-us-army-to-solar-power-1.244609

4. Scott Sklar speaks on Compatibilities & Logistics for the Military at the 7th Annual TIDES Tech Demo

Posted on October 21, 2013 by startides

On Tuesday October 2, 2013, Scott Sklar (President of Stella Group Ltd and an old friend of FSEC) facilitated a discussion on Compatibilities & Logistics for the Military. The talk focused on the necessity for decreasing our reliance on natural resources and investing into new energy solutions to assist with our military readiness.

To learn more about Mr. Scott Sklar and his insights, click here: http://thestellagroupltd.com/

5. FPL's Office of Clean Energy announces upcoming solar programs for customers

This fall, FPL will offer approximately $9 million in rebates for residential and business customers who wish to install solar water heating or solar photovoltaic (PV) systems. In addition, FPL plans to install solar arrays at nearly 100 public schools and other educational facilities throughout its territory while also helping more than 400 families in need by installing solar water heater systems in homes being built or refurbished by Habitat for Humanity and other non-profit organizations. All of these projects are part of a pilot program approved by the Florida Public Service Commission.

"FPL has long been an advocate for solar power and new technologies, and we recognize we're in a unique position to help educate the public, and especially young people, about energy which is such a critical issue for our future," said Buck Martinez, senior director of FPL's Office of Clean Energy. "We're excited to bring dynamic, hands-on educational tools to more and more Floridians than ever before over the course of the next year." The next application period for solar rebates opened on October 15.

See: http://www.stripes.com/news/army/exploding-fuel-tankers-driving-us-army-to-solar-power-1.244609

Also see:
http://www.fpl.com/landing/solar_rebate/index.shtml?cid=aliassolarrebates

6. U.S. Department of Transportation Awards $63 Million in University Transportation Center Grants -- FSEC wins Electric Vehicle Transportation Center (See next story also)

Date: Thursday, September 26, 2013
Media Contact: Nancy Wilochka, 202-366-5128

Funds will support 33 transportation research centers at colleges around the country

WASHINGTON–The U.S. Department of Transportation's Research and Innovative Technology Administration (RITA) today announced approximately $63 million in grants to 33 University Transportation Centers (UTCs) to advance research and education programs that address critical transportation challenges facing our nation.

"University transportation centers are key to helping us address today's transportation needs, from environmental sustainability to safety," said U.S. Transportation Secretary Anthony Foxx. "The participating universities are a critical part of our national transportation strategy and to developing a professional workforce with the expertise and knowledge to tackle the challenges of the future."

Reflecting the popularity of the program, more than 142 applications were submitted to RITA. The grants being announced include five National UTCs, which address national transportation issues in line with DOT's key strategic goals, with awards of $2.8 million each. Eight Regional UTCs, which focus on regional transportation needs, received awards of $2.59 million each. Twenty additional UTCs received awards of $1.4 million each.

See: http://www.rita.dot.gov/utc/press_releases/utc01_13

7. DOT Awards UCF Electric Vehicle Transportation Center

COCOA, October 8, 2013— As interest in electric vehicles continues to keep the automotive industry charged, the U.S. is challenged to integrate plug-in vehicles with its electrical grid and highways. Now with funding from the U.S. Department of Transportation for the creation of the first transportation center with a focus on electric vehicles, the University of Central Florida will help meet that challenge in Florida. The Electric Vehicle Transportation Center (EVTC), operated by UCF's Florida Solar Energy Center, is a newly funded four-year, $9 million research effort to help transform the nation's electric-vehicle transportation network into a fully integrated "smart" system. This new paradigm will be one with both a "smart grid" and a "smart transportation network." The work conducted by the center will help prepare transportation planners to allow our nation's highways to better accommodate the influx of electric vehicles, while at the same time, seizing the opportunity these vehicles present to enhance electric grid modernization efforts.

Electric vehicles provide the unique capability of being able to store energy, unlike other distributed power systems, such as photovoltaics or wind energy. Capitalizing on this feature, electric vehicles will both use and supply energy to the grid. New "smart-grid enabled" inverters and chargers will feature real-time, two-way communication, providing live network access and the ability to control system power output remotely. The new transportation network will now be capable of feeding the electric transmission network.

"Today, electric vehicles–using Florida utility power–operate at an equivalent gasoline price of 99 cents a gallon," said FSEC director, Dr. James Fenton. "With fuel costs that low, it's no surprise projections indicate that Florida will have as many as 500,000 electric vehicles on its roads within 10 years, placing an unprecedented demand on today's utility grid."

Transformation of the U.S transportation system into a future one that uses electricity and its integration into a dynamic electrical grid will occur over many years and require extensive research and development. The new Electric Vehicle Transportation Center will leverage the resources of the University of Central Florida and its partner universities – the University of Hawaii and Tuskegee University – to conduct the research and development, and to inspire, train, and support the scientists, engineers, and technicians of the future.

View a map of the selected universities: http://www.rita.dot.gov/utc/sites/rita.dot.gov.utc/files/Consortiums_2014.pdf

For more information about the center, visit http://www.floridaenergycenter.org or call the FSEC Public Affairs Office at 321-638-1015.

8. Solar and wind innovation reflected in booming patents

Wendy Koch, USA TODAY, October 12, 2013

Just how much better can a solar panel or wind turbine be? Quite a bit, suggests the surging number of global patents for renewable technologies.

In the United States alone, the number of renewable-energy patents exceeded 1,000 annually by 2009 — up from fewer than 200 per year in the

1975-2000 period. In contrast, patents for coal, oil or gas technologies rose to about 300 in 2009, up from 100 annually in earlier decades.

"It's good news," says study co-author Jessika Trancik, an engineering professor at the Massachusetts Institute of Technology, noting power sources that emit little or no carbon dioxide help mitigate climate change. She attributes the increase to research funding and market demand, adding: "There's a lot of momentum in this area."

Worldwide, the number of wind patents increased 19% annually and solar ones 13% each year between 2004 and 2009, the study says. Japan has the most cumulative solar patents, followed by the United States and China, but China is obtaining more of these patents than any other country in recent years.

See: http://www.usatoday.com/story/news/nation/2013/10/12/solar-wind-renewable-patents-surge/2967985/

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