

\$3.6M DOE Grant to Florida Universities and Industry Team to Address Integration of Large Amounts of Solar PV into the Electric Grid



Tampa, Fl. (October 20, 2009) - The Dept. of Energy has announced intent to award \$3.6 million to a team consisting of Florida State University, the University of Central Florida, and the University of South Florida, joined by a number of Florida electric utilities and several solar industry suppliers, to launch the Sunshine State Solar Grid Initiative (SUNGRIN), a 5-year project to investigate the effects of integrating high levels of solar photovoltaic (PV) energy resources into the electric power grid.

Florida utility team members include Florida Power and Light, Tampa Electric, Jacksonville Electric Authority, Orlando Utilities Commission, Gainesville Regional Utilities, Lakeland Electric, and the Florida Municipal Power Authority, with coordination and involvement from the Florida Reliability Coordinating Council. Also on the team are leading solar technology suppliers SunPower Corp. and Satcon Technologies, and, system integration and engineering firm, AMEC.

With a number of major projects and initiatives announced by the state's utilities, Florida is positioned to become a national leader in installations of grid-connected solar PV. While solar energy can help reduce green house gas emissions and reduce reliance on fossil fuels, it can also pose challenges to a power grid that was not necessarily built to accommodate large amounts of intermittent resources such as solar PV. In Florida and across the country it is increasingly important to more fully understand and address the implications this may have relative to continued secure and reliable operation of the power system.

According to Bob Reedy, Director, Solar Energy Division for the Florida Solar Energy Center at UCF, "High-level penetrations of PV are likely within utility planning horizons, so very soon, we need to understand the resulting grid response. My guess is we will go beyond making PV acceptable to the grid operators, and actually see the unique advantages of PV become desirable in improving grid reliability", "The SUNGRIN effort is particularly timely given the need to determine how Smart Grid development being considered for wide-scale installation can be made to enhance the effectiveness of our solar energy production portfolio," said Alex Domijan, Director and Professor, Power Center for Utility Explorations at USF. PCUE Deputy Director Arif Islam also added, "The time is now to plan for new solar

PV installations with interaction studies with the rest of the power system as it begins to be transformed to a smart grid. Certainly our new efforts in Smart Grids, Energy Storage and Demand Response among others at the PCUE will find a synergy developed by this joint effort with CAPS and FSEC."

Steinar Dale, Director of the FSU Center for Advanced Power Systems points out that "Solar energy is the largest non-dispatchable renewable energy resource in Florida. This grant will allow us to better understand how high penetration of solar energy both on the customer side and grid connected will impact the grid system operation, and how it impacts dispatch of traditional generation from nuclear, coal and natural gas. And, Rick Meeker, who will lead the initiative from FSU CAPS, states, "We are most pleased that this Florida-led team will have the opportunity to work with the Department of Energy's Office of *Energy Efficiency and Renewable Energy* to make important contributions to accelerating clean solar energy deployment and diversifying the Nation's electricity supply. It seems only fitting that the Sunshine State plays a key role in charting a successful future for the integration of solar PV. "

For information on the SUNGRIN initiative, contact Rick Meeker, meeker@caps.fsu.edu. For information on the university partners, see,

FSU Center for Advanced Power Systems, <http://www.caps.fsu.edu/>

UCF Florida Solar Energy Center, <http://www.fsec.ucf.edu/>

USF Power Center for Utility Explorations, <http://pcue.eng.usf.edu/>

The University of South Florida is one of the nation's top 63 public research universities and one of only 25 public research universities nationwide with very high research activity that is designated as community engaged by the Carnegie Foundation for the Advancement of Teaching. USF was awarded \$380.4 million in research contracts and grants in FY 2008/2009. The university offers 232 degree programs at the undergraduate, graduate, specialist and doctoral levels, including the doctor of medicine. The USF System has a \$1.8 billion annual budget, an annual economic impact of \$3.2 billion, and serves more than 47,000 students on institutions/campuses in Tampa, St. Petersburg, Sarasota-Manatee and Lakeland. USF is a member of the Big East Athletic Conference.