



FLORIDA SOLAR ENERGY CENTER®

Creating Energy Independence



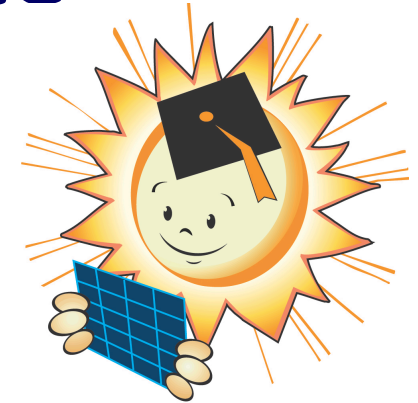
*Dr. James Fenton, Director
April 18, 2014*

A Research Institute of the University of Central Florida



K-12 Education Update

- EnergyWhiz Olympics
 - Sat., May 3, 2014
 - New event “Critter Comfort Cottage”
 - Drive Electric Florida provides EV Ride and Drive
 - First regional event in Gainesville, April 2014
- Solar workshops for teachers
 - Duke, TECO, FPL
- JSS car-building workshop and solar cooker workshop at FSEC



UCF's FSEC Leads in Energy



FEEDER Foundations for Engineering Education
for Distributed Energy Resources



UCF/FSEC Partnerships

[November 07, 2013]

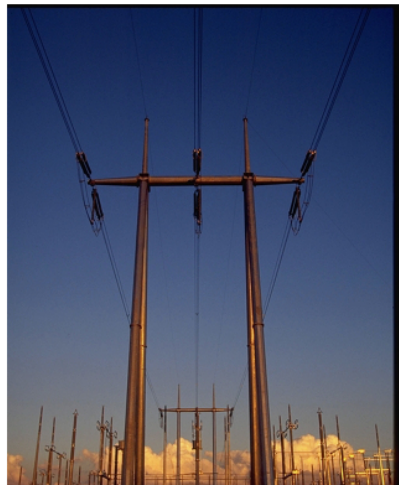
FEEDER



UCF to Lead Effort in Advancing U.S. Renewable Energy and Electric Grid

ORLANDO, Fla. --(Business Wire)--

The University of Central Florida (UCF) has been awarded \$3.2 million to lead one of 4 national consortia to develop distributed technologies, to increase engineering capacity and traditional sources of electricity to renewables such as solar and



"This multi-university demonstration project is being led by one of the nation's leading universities in the field of electrical and computer engineering, the University of Central Florida." --Dr. Robert M. White, UCF President

The team of engineering and research resources at UCF is supported by a \$12 million grant from the U.S. Department of Energy (DOE) through the FEEDER Initiative 2 Accelerated Energy Research (GEAREC).

The FEEDER Initiative 2 Accelerated Energy Research (GEAREC) is a multi-university partnership.

DOT Selects UCF to Develop 'Smart Grid' for Plug-in Electric Vehicles



As interest in electric vehicles continues to keep the automotive industry charged, the nation is strategizing how to best 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 chart that course in Florida.

The Electric Vehicle Transportation Center operated by UCF's Florida Solar Energy Center in Cocoa is a newly funded, four-year, \$9 million research effort to help develop the nation's electric-vehicle transportation network. Research conducted by the center will help transportation planners prepare our nation's highways for the influx of plug-in electric vehicles (PEV), while

Go Solar

Posted by EyesOnNews.com on November 12, 2013 at 9:33 am

Go SOLAR Receives Dept of Energy Award to Increase Use of Solar Energy

For EyesOnNews.com, Nov 12, 2013 - BROWARD COUNTY FLA. -The U.S. Department of Energy (DOE) has awarded the Go SOLAR – Florida team a \$1.6 million SunShot Initiative Rooftop Solar Challenge II competitive award to make it easier for Floridians to install solar panels on their roofs. Go SOLAR Florida is one of only 8 recipients nationwide of a SunShot Initiative award. The purpose of the award is to increase the use of and access to solar energy by state's residents and businesses by reducing market barriers, lowering installation costs and providing access to financing options over the next two

The Go SOLAR Florida team is a partnership of Florida counties, cities, the Florida Solar Energy Center at the University of Central Florida representing approximately 4 million Floridians. Six Florida counties are participating: [Alachua](#), [Broward](#), [Miami-Dade](#), [Monroe](#), [Orange](#) and [St. Lucie](#). County municipalities include [Cooper City](#), [Hollywood](#), [Lauderdale](#), [Lighthouse Point](#), [Margate](#), [Pembroke Pines](#), [Plantation](#) and [Wilton Manors](#) in Sarasota County.

The SunShot Initiative program empowers teams to undertake initiatives that make it easier for Americans to go solar, reducing "plug-in" costs by streamlining permitting and zoning codes, improving standards for connecting solar panels to the grid and increasing access to financing.



The University of Central Florida

2013
Annual Report

UCF Office of Research & Commercialization

POWERING
FLORIDA'S PROSPERITY

UCF's Research & Commercialization Leadership Receives Recognition

UCF was founded 50 years ago as Florida Technological University to develop work-force and technology to serve the Space Coast. UCF has grown, but fostering innovation and economic development remains the cornerstone of our identity.

The cover features a composite image of Florida assembled from data acquired by the Suomi National Polar-orbiting Partnership satellite. The satellite's Visible Infrared Imaging Radiometer Suite was able to make the first quantitative measurements of light emissions and reflections, distinguishing the intensity and the sources of night light. The resulting image shows clearly the power and intensity of the UCF service area and the Florida High Tech Corridor.

The inside cover includes logos of some of the hundreds of companies that have benefited from UCF programs.

UCF is a vital force for driving the economic prosperity of the region and state and is truly America's Partnership University.

CREDITS

Cover image: NASA Earth Observatory image by Robert Simmon, using Suomi NPP VIIRS data provided courtesy of Chris Elvidge (NOAA National Geophysical Data Center). Suomi NPP is the result of a partnership between NASA, NOAA, and the Department of Defense.

Design: KP Creative, kpcreativefl@gmail.com
Principal photography: Jack Edwards
Photography, jackedwardsphotography.com



In recognition of UCF's impact on the economic development of Central Florida, the Orlando Economic Development Commission (EDC) selected MJ Soileau, vice president for Research & Commercialization, as the recipient of its coveted Chairman's Award for 2014.

Soileau, who was the first director of the now internationally recognized Center for Research and Education in Optics and Lasers (CREOL), is laser-focused on what he considers to be fundamental missions of a research university, serving as a hub for intellectual pursuit and coupling research expertise to the economic needs of the region.

Under Soileau's leadership, research funding earned by UCF faculty members has increased to more than \$100 million annually for each of the past nine years. UCF also has been recognized for ranking among the world's top universities for patents earned by faculty members.

Soileau has also helped guide UCF's Business Incubation Program since its founding in 1999. The program, led by Associate Vice President for Research & Commercialization Tom O'Neal, was recognized as the National Incubator Network of the Year by the National Business Incubation Association.

"MJ's intelligence, tenacity and passion have helped our university grow into one of the nation's major metropolitan research universities and, more important, have helped UCF make major contributions to the economic growth and diversity of the Central Florida region," said President John C. Hitt.

The Chairman's Award, first presented in 2007, recognizes a long-term contributor to the work of the Orlando EDC.

Soileau and O'Neal, direct the strategy that is producing cutting edge research, world-recognized commercialization activity, and intellectual innovation.

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— President John C. Hitt

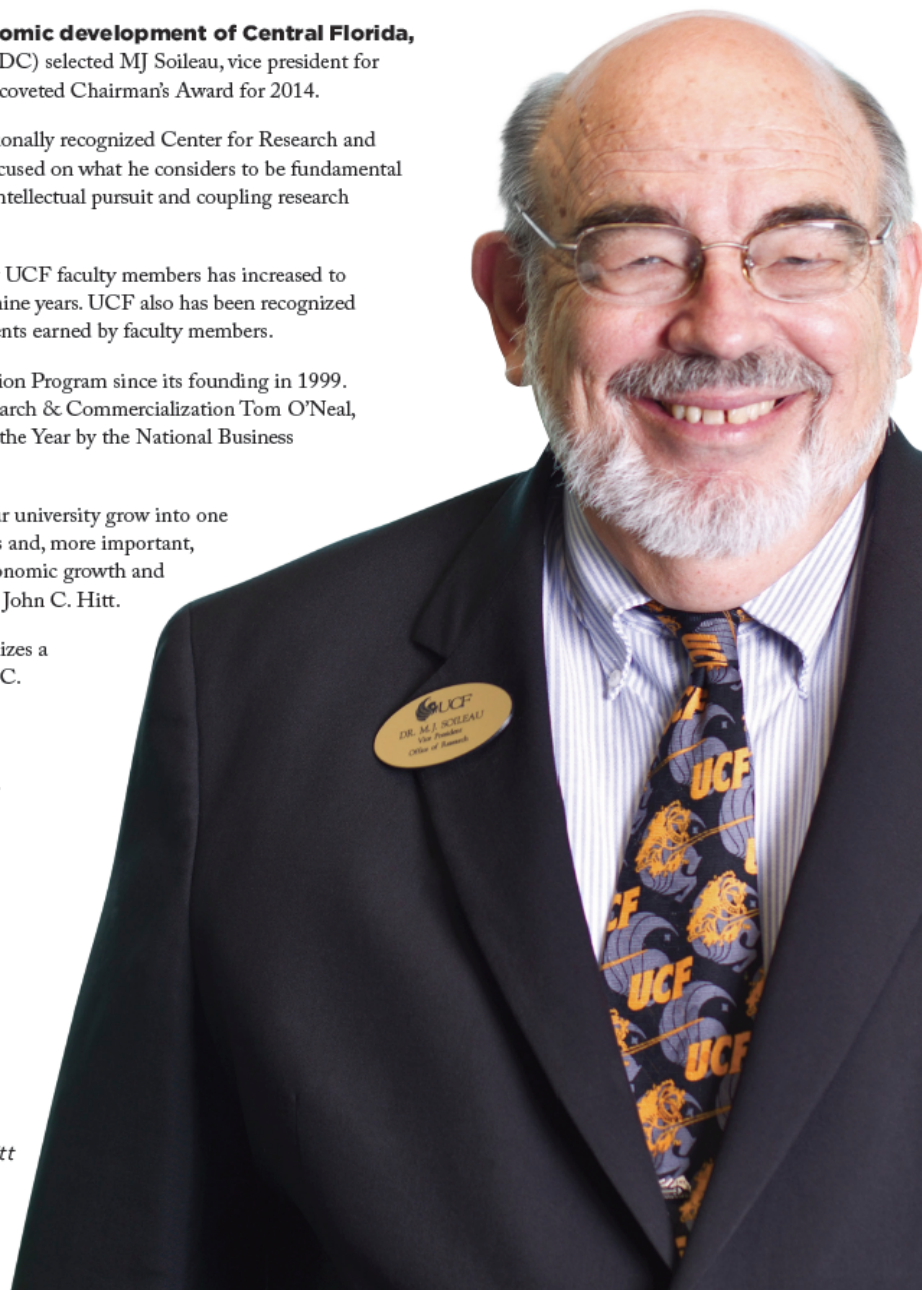




Photo by Enrico Sachetti

Energy Researchers & Engineers **FUEL LOCAL ECONOMY**

Research from the Florida Solar Energy Center (FSEC) and the College of Engineering and Computer Science (CECS) is helping the nation's transportation planners prepare the nation's highways for an influx in plug-in electric vehicles. The \$9 million grant funds the Electric Vehicle Transportation Center, located at the FSEC in Cocoa. The center will also focus on developing smart grid applications so that users of electric vehicles will have adequate power supplies.

Other successful collaborations between the CECS and FSEC include revamping the nation's energy grid in preparation for alternative energy sources and training the future workforce to develop and operate needed technologies. With a \$3.2 million grant from the U.S. Department of Energy, UCF is leading a team from throughout the southeast to develop research and training programs to prepare for a more energy-efficient future.





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225th
ECS Meeting

ORLANDO, FL

May 11-15, 2014

Hilton Orlando Bonnet Creek

Research Award of the Energy Technology Division



JAMES M. FENTON is the Director of the University of Central Florida's Florida Solar Energy Center (FSEC), where he leads a staff of 140 in the research and development of energy technologies that enhance Florida's and the nation's economy and environment and educate the public, students and practitioners on the results of the research. The US DOE is currently funding programs at FSEC in: "Building America" energy efficient homes,

Photovoltaic Manufacturing, Hot-Humid PV testing of large-scale PV to show bankability, train-the-trainers education for solar installations, and programs to decrease the soft-costs of PV installation. Recently, DOE provided funding to UCF to manage a smart-grid education consortium for university power electrical engineering students (FEEDER), and the US DOT awarded to UCF the nation's only University Electrical Vehicle Transportation Center (EVTC). Prior to joining FSEC, Dr. Fenton spent 20 years as a Chemical Engineering Professor at the University of Connecticut. He received his Ph.D. in Chemical Engineering from the University of Illinois in 1984 and his B.S. from UCLA in 1979.

He has over 30 years' experience in electrochemical energy devices and education topics which include: zinc/bromine, zinc/chlorine flow batteries, membrane durability, CO tolerance electrocatalysts, hydrogen purification processes, low-methanol crossover membranes, high temperature membranes, membranes needing no external humidification, selective oxidation catalysts, gas diffusion layer design, reversible PEM fuel cells, and biomass and landfill gas fuel processing. He is an Electrochemical Society Fellow and has strongly encouraged younger scientists and engineers in participating in The Electrochemical Society's, Energy Technology, and IEEE Division's technical symposia and in taking on service roles for the Society. He is the author of more than 120 scientific publications, a number of book chapters, and co-authored *Experimental Methods and Data Analyses for Polymer Electrolyte Fuel Cells*, and holds four patents. He led a 12-member university and industry research team on a \$19 million U.S. Department of Energy research program to develop the next generation proton exchange membrane (PEM) fuel cell automobile engine that would operate at 120 °C. He will be presenting "Membrane Electrode Assembly Fabrication from Membranes of the DOE High Temperature High Temperature Membrane Working Group," as the award address for the Research Award of the Energy Technology Division.

Partnerships and Joint Projects

- FSEC conducts PV, Energy Efficient Buildings, Alternative Fuels, Training and EV programs.
- What are possible cooperative programs that FSEC can conduct with industry stakeholders?

