

Focus on Research

Three New DOE Energy Centers Awarded



Dr. David Riley, Director of the Penn State Center for Sustainability has initiated three new energy-related centers in 2010 through contracts with the U.S. Department of Energy.

“Our energy challenges are not limited the need for new technology,” stated Prof. David Riley, Associate Professor of Architectural Engineering and Principal Investigator on the three projects. “We also face shortage of power system engineers, energy engineers and skilled workers in many energy-related fields. A common thread between each of these new centers is education and workforce development.” Riley also serves as the Director of the Center for Sustainability, which is administered by the Architectural Engineering Department at Penn State.

The Solar Education and Resource Center A \$2 million DOE grant will cultivate education and training programs in both solar thermal and solar photovoltaic systems at community colleges, universities, and NECA/IBEW training centers. The Solar Instructor Training Network promotes high-quality training in the installation of solar technologies. Nine regional resource and training providers support the professional development of trainers and instructors of solar photovoltaic (PV) and solar heating and cooling (SHC) technologies across the country. By engaging a broad spectrum of stakeholders, Penn State’s Northern Mid-Atlantic Solar Regional Training Center supports a comprehensive training infrastructure for sales, design, installation,

commissioning, and service of both solar PV and solar heating and cooling technologies. Solar Instructor Trainings are designed to accelerate market adoption of solar technologies by ensuring that high-quality installations are standard, and to create sustainable jobs within the solar installation industry.

The Smart Grid Training and Application Resource Center (GridSTAR) A \$5 million DOE grant will provide education and professional development programs in smart grid topics including smart grid power systems, energy economics, cyber security, building energy management, and distributed energy generation. The GridSTAR Center has been created to develop and deliver responsive professional and skilled workforce educational programming that is aligned with the caliber and pace of emerging smart grid investments and markets. The Center is coordinated by Penn State’s Center for Sustainability and Outreach operations and initialized at two strategic pre-existing service centers in Philadelphia and Pittsburgh. Working closely with the region’s top energy technology educators, utility officers, manufacturing executives, and workforce development agencies, the GridSTAR Center will address mega trends and workforce bottlenecks occurring in smart grid-related industries and develop an innovative continuing education and training delivery network.

The National Energy Leadership Corps Through funding from the DOE Building America program, Penn State is also helping to form a new research team referred to as The National Energy Leadership Corps. This team will mobilize a cadre of trained energy student leaders to provide free residential energy assessments, facilitating the education of homeowners about energy loss and energy retrofits of homes. The team will also spur energy job creation through the coalition of NECA contractors and other industry partners responding to increased demand for energy efficient products and services.

Each of these three new programs will lead to new classes and learning opportunities for Penn State students, such as a new solar PV design and construction course to be offered in Spring of 2011.

“A core mission of the Center for Sustainability is to increase opportunities for students to learn about subjects that will help prepare them for careers in fields critical to sustainability goals,” explained Riley. “These new centers will do that, and hopefully create valuable new programs for Penn State and the Architectural Engineering Department.