

FOR IMMEDIATE RELEASE**Partnership Tests New Remote Sensing Tool
for Evaluating Energy Potential of South
Carolina's Offshore Winds**

AIKEN, S.C. (August 4, 2010) – On a U.S. Coast Guard platform off the coast of Georgetown, S.C., the Savannah River National Laboratory (SRNL), the Clemson University Restoration Institute (CURI), and their partners have begun testing technology to provide insight into how much energy potential South Carolina's offshore winds offer. The ultimate goal is the deployment of offshore wind energy technology to diversify South Carolina's energy resources and significantly increase the region's energy independence.



Crews install the SODAR station on a Coast Guard platform off the coast of Georgetown, S.C. (Photo provided by CURI)

SRNL, CURI and partners – utility provider Santee Cooper, Clemson University's S.C. Institute for Energy Studies, Coastal Carolina University, Center for Hydrogen Research, and the U.S. Coast Guard – make up the South Carolina Consortium for Offshore Wind. This consortium will study South Carolina's coastal winds to determine the viability of developing the state's first offshore wind farm.

The Eastern seaboard has one of the largest untapped supplies of wind energy (currently one of the most cost effective renewable energy sources) in the United States. It has been estimated that South Carolina alone could produce up to 3.5 GW of power from its coastal and offshore wind resources using existing technology. Capturing less than 3 percent of this potential would reduce greenhouse gas emissions by 1.2 to 2.5 M tons per year and up to 16K tons of SO₂ emissions.

Before the region can make use of this wind, however, it is necessary to find out its potential as a cost-effective, practical energy source.

On Wednesday (Aug. 4), SRNL, CURI and their partners installed Second Wind's Triton® Sonic Wind Profiler, which uses sound detection and ranging (SODAR) technology, on an offshore Coast Guard platform to study SODAR technology's potential as an offshore wind measurement tool. SODAR, which measures wind movement by detecting its effect on sound waves, provides wind measurements at a much greater range of altitudes than traditional meteorological towers. The technology can measure wind speed, direction, and other characteristics at heights extending up to 200 meters, compared to a typical 60-meter meteorological tower.

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Evaluating S.C. Wind Energy Potential

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“The use of SODAR could reduce the cost of offshore wind energy exploration, significantly improve offshore wind energy forecasts, and accelerate the offshore wind energy development,” said Ralph Nichols, who leads SRNL’s wind initiatives.

Although SODAR technology has been in use for other types of atmospheric measurements for a number of years, the SRNL-CURI project is the first use of remote sensing technology to measure wind offshore on the Atlantic seaboard. It is also the first offshore use of Second Wind’s Triton.

“This is a step forward both for offshore wind power and for remote sensing systems, and we are pleased to be boosting the development of offshore wind in the United States,” said Second Wind CEO Larry Letteney.

On the platform, the team will test and evaluate the SODAR technology’s compatibility with ocean conditions. They will also develop calculations to correct for movement caused by ocean waves, and study the impact of the ocean’s acoustic environment on the station’s operation. Data will be collected from the platform for one year to better understand the wind characteristics along the transitional area from offshore to the coast.

Prior to installation on the offshore platform, the SODAR station was tested at the Savannah River Site near Aiken, S.C., then on an island near Georgetown. Those tests confirmed that the SODAR station’s performance was equivalent to traditional anemometers and established a coastline reference point for the offshore test site.

Funding for the project came from a grant by the S.C. Energy Office.

As part of this project, the partners have also installed small wind turbines at five high schools and the Center for Hydrogen Research in Aiken, S.C., where much of SRNL’s energy research and development is located. These are intended as permanent installations to educate communities about wind power, and understand their concerns regarding its use.

About SRNL

SRNL is DOE’s applied research and development national laboratory at SRS. SRNL puts science to work to support DOE and the nation in the areas of environmental management, national and homeland security, and energy security. The management and operating contractor for SRS and SRNL is Savannah River Nuclear Solutions, LLC.

About The Clemson University Restoration Institute

The mission of the Clemson University Restoration Institute is to advance knowledge in integrative approaches to the restoration and sustainability of historic, ecological and urban infrastructure resources, and drive economic growth. The institute’s vision is to build a sustainable future through education, collaborative restoration research and strategic partnerships. On the Web at www.clemson.edu/restoration/. Information about the S.C. Wind Collaborative is available at S.C. Offshore Wind Collaborative: www.clemson.edu/scwind.

About Second Wind

Second Wind develops wind measurement systems that make wind power pay off for consumers, investors and the environment. The company’s technology provides wind farm developers with the bankable wind data they need to plan, finance and operate highly efficient wind generation facilities. Second Wind’s systems are making wind farm development profitable in 50 countries on seven continents. Second Wind’s systems include the wind industry’s leading remote sensing system, wind data logger and web-based data service. For more information about Boston-based Second Wind, please visit www.secondwind.com.

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