



News from the Savannah River National Laboratory

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FOR IMMEDIATE RELEASE

STUDENTS CREATE AWARD-WINNING BUSINESS FROM SRNL TECHNOLOGY

AIKEN, S.C. (March 21, 2012) – An innovative energy technology from the U.S. Department of Energy’s Savannah River National Laboratory and a pair of entrepreneurial-minded students from Washington University in St. Louis proved to be a winning combination in a competition that challenged university students to develop clean-technology startups.

Michael Gidding and Daniel Garcia’s company Saturnis, LLC was awarded \$10,000 as the Missouri state winner in the Clean Energy Trust’s inaugural Student Challenge. The Clean Energy Trust presented five \$10,000 awards to state-level winners from universities across the Midwest in one of six regional competitions selected by the U.S. Department of Energy (DOE) as participants in the National Clean Energy Business Plan Competition. NuMat Technologies, the entry from Northwestern University in Illinois, took the top prize in the Midwest challenge, and will advance to DOE’s National Clean Energy Business Plan Competition.

“The National Clean Energy Business Plan Competition is engaging the next generation of America’s energy leaders,” said Energy Secretary Steven Chu. “The winning teams have developed effective strategies for commercializing new clean energy technologies that will help American businesses lead in the global economy.”

No mere academic exercise, the prize money in these competitions is intended to fund the winners in their quest to start up and build Saturnis into a contributor to the nation’s energy economy. In addition to the Clean Energy Trust’s competition, they entered Saturnis in the Idea To Product (I2P) competition founded by the University of Texas, where it won the Missouri-Illinois regional grand prize of \$2500 and advances to the global level of the competition in Stockholm, Sweden this November. They are continuing to enter other competitions to attract investors while performing bench scale tests of the process this summer.

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March 21, 2012

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The SRNL technology that is the basis of Saturnis provides an efficient biochemical method of producing biofuels as a source of energy to reduce the nation's reliance on imported fuels. Saturnis' business plan involves applying SRNL's technology to the conversion of switchgrass and other related grasses to produce synthetic crude for refineries. Previous methods for converting biomass to fuel cannot efficiently convert lignin and cellulose – the material in fast-growing energy crops like switchgrass. Switchgrass is a hardy plant that can be grown in a wide variety of habitats.

Gidding and Garcia found the SRNL technology through the DOE Office of Energy Efficiency and Renewable Energy's Energy Innovation Portal. The Portal provides information on energy efficiency and renewable energy technologies available for licensing developed by U.S. Department of Energy laboratories and participating research institutions. The process was invented by SRNL's Dr. X. Steve Xiao as a single-step hydrolysis process to convert any biomass with optional coal feed into a liquid fuel while generating a high purity carbon dioxide as a byproduct. The method, which involves the addition of a proprietary catalyst with water and heat, has been found to generate up to 95% liquid yield.

“These prizes will help the winning clean energy entrepreneurs move their technology out of the laboratory and into the marketplace, creating new high-tech jobs along the way,” said Amy Francetic, Clean Energy Trust executive director. “The Challenge is designed to commercialize innovation by identifying and rewarding the most promising clean energy businesses. It was a tough competition and these winners represent the best of the Midwest's new entrepreneurs in clean energy.” Chicago-based Clean Energy Trust was one of five regional organizations selected as part of DOE's Innovation Ecosystems Initiative.

The Energy Department's National Clean Energy Business Plan Competition (NCEBPC) for university students is part of Startup America, the White House campaign to inspire and promote entrepreneurship. This national initiative enables student participants to gain the skills required to build new businesses and transform promising innovative energy technologies from U.S. universities and National Laboratories into innovative new energy products that will to solve our nation's energy challenges, spur business creation, create American jobs, and boost American competitiveness.

SRNL is the U.S. Department of Energy's applied research and development national laboratory at the Savannah River Site. SRNL puts science to work to support DOE and the nation in the areas of environmental stewardship, national security, and clean energy. The management and operating contractor for SRS and SRNL is Savannah River Nuclear Solutions, LLC.