

# New Technology Harnesses Ocean Energy from Florida's Gulf Stream

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Florida Atlantic University has been selected by the Florida Technology, Research and Scholarship Board to receive \$5 million to establish The Florida Center of Excellence in Ocean Energy Technology. Ranked in second place, FAU is among six Florida universities that have been selected out of 32 proposals submitted to the Board. This new center will be FAU's second Center of Excellence—its first Center of Excellence in Biomedical and Marine Biotechnology was established in 2003.

The Center of Excellence in Ocean Energy Technology will address Florida's energy crisis by looking at South Florida's ocean currents, specifically the Gulf Stream (the most energy dense ocean current), as an abundant renewable energy source to meet not just Florida's power needs but also the world's power needs. As one of the fastest growing states, Florida's electricity consumption is estimated to increase by nearly 30 percent over the next 10 years. In-state energy production is less than one percent of consumption, leaving the state heavily reliant on imported sources of energy. Ocean generated electricity would have a significant economic impact for Florida, creating a new industry and over 26,500 new Florida-based jobs, changing Florida from an energy importer to a leader in energy exports.

"The major objective of funding these centers of excellence is to stimulate Florida's economy and have a significant impact on creating a highly skilled workforce," said Frank T. Brogan, president of FAU. "We are very proud to be among the universities selected for a center of excellence. The great research occurring at FAU will help move us closer to providing a better quality of life for our community, state, nation and the world."

Each of the centers of excellence will be funded with money appropriated by the Florida Legislature under the 21st Century Technology, Research and Enhancement Act. The Florida Board of Governors of the State University System of Florida met on Thursday to review and approve the recommendations of the Florida Technology, Research and Scholarship Board.

"This funding will lead to the establishment of a world-class center that will revolutionize future energy production on our planet," said Dr. Larry F. Lemanski, vice president for research at FAU and principal offeror of FAU's new center of excellence. "We are very excited about developing these innovative, energy-producing technologies, and we have put

together a strong partnership base composed of industrial, academic and government partners to accomplish our goals and mission for our new center of excellence.”

FAU will work with the U.S. Navy, the U.S. Department of Energy, the National Renewable Energy Laboratory, Florida Power & Light, Ocean Renewable Power, Lockheed Martin, Clipper Windpower, Oceaneering, Aquantis, the University of Central Florida, Nova Southeastern University and Harbor Branch Oceanographic Institution in establishing the center.

“Our Florida Center of Excellence in Ocean Energy Technology will be a synergistic partnership utilizing our combined ocean engineering expertise to foster the research, design, development, implementation, testing and commercialization of cutting-edge ocean energies that are cost-competitive with existing power technologies such as fossil-fuel-based power generation,” said Dr. Rick Driscoll, associate professor in FAU’s department of ocean engineering and co-principal technical personnel for the project. “This new industry will provide a clean, reliable, and renewable source of energy that can be used to generate electricity, unlimited hydrogen and potable water, as well as provide alternative methods for residential cooling or A/C.” Driscoll will co-lead the project with Dr. Manhar Dhanak, professor and chair of the department of ocean engineering at FAU and co-principal technical personnel for the project.

“To harness ocean energy for power is a laudable goal for any ocean engineer,” said Dhanak. “This is a really exciting opportunity for our department.”

Source: Florida Atlantic University

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