

FLORIDA ENERGY & CLIMATE COMMISSION

Staff Analysis

Subject: Grants Funded during FY 07-08 (Awarded in 2008)

Date: January 7, 2009

Prepared by: Alexander Mack, Community Program Administrator

Background

The Florida Energy Act established the Renewable Energy Technologies Grants Program to provide renewable energy matching grants for demonstration, commercialization, research and development projects relating to renewable energy technologies. The grant program is designed to stimulate capital investment in the state and promote and enhance the statewide utilization of renewable energy technologies. The 2007 Florida Legislature appropriated \$12.5 million in fixed capital outlay dollars (funds must be obligated within 18 months) for the grant program, for projects that generate or utilize other renewable energy resources, including hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat and hydroelectric power requiring grant agreements to be executed. In response to the 2007 Request for Grant Proposals, DEP received 139 grant proposals seeking nearly \$200 million in grant funding and providing more than \$700 million in cost share for renewable energy projects. Eight winners were selected and announced in February 2008. Negotiations have been in process since that time. The goal was to have these grants executed prior to July 1, 2008. Only two of the grants were executed prior to the transfer of the Energy Office. Grants funded during the 2007-2008 legislative session must be executed by January 31, 2009. The following grants are pending execution:

Development of Florida's Ethanol Industry Using Sweet Sorghum

Recipient: Renergie, Inc.

Location: Alachua, Columbia, Escambia, Hamilton, Jackson, Jefferson, Madison, Suwannee, Walton and Washington counties

Grant Funds Requested: \$2,500,000

Grant Funds Awarded: \$1,500,483 (Partial Funding)

Cost Share Amount: \$11,758,239

Project Objective: The recipient will design and construct Florida's first sweet sorghum mechanical harvesting system and sweet sorghum-to-ethanol plant. Once in operation, the plant will be capable of producing five million gallons of ethanol annually.

The project will lead to the development, construction and operation of a commercially viable large-scale decentralized network of sweet sorghum-to-ethanol production plants.

Sweet sorghum's water requirement is one-third that of sugarcane, is resistant to drought and can be grown in marginal soils, ranging from heavy clay to light sand. Sweet sorghum takes approximately four months to reach maturity, allowing for harvesting twice a year.

The project will also provide profit sharing, in the form of "cost plus" feedstock production payments and royalty payments, to Renergie's feedstock producers in Florida - marking the first time that Florida's farmers will share in the profits realized from the sale of value-added products made from their crops.

Energy Potential: Once constructed, the project will produce five million gallons of ethanol annually.

Economic Development: The project will stimulate Florida's economy by creating employment opportunities to support the development, construction and operation of the harvesting system and ethanol plant.

Small-Scale Wind Power in Florida

Recipient: Progress Energy Florida, Inc.

Location: Pinellas, Citrus, Levy, Sumter, and Orange or Lake Counties

Grant Funds Requested: \$123,868

Grant Funds Awarded: \$123,868

Cost Share Amount: \$1,198,952

Project Partners:

- ⌚ Abundant Renewable Energy
- ⌚ Bergey Windpower
- ⌚ Florida Institute of Technology
- ⌚ Florida's Turnpike Enterprise
- ⌚ Technological Research and Development Authority

Project Objective: The recipient will evaluate opportunities for wind energy generation in Florida by using five wind turbines at five different inland locations across the state.

Progress Energy Florida will conduct a wind site assessment at the five proposed locations to define the wind resources at each site, including a technology analysis to determine the specific turbine that best matches the wind resource and grid/load ability. Permitting, installation, start-up and operation of the wind turbines will follow.

Progress Energy Florida and Florida's Turnpike Enterprise have contributed approximately five acres (one acre in each county) for the project. The Florida Institute of Technology will provide technical expertise, research, and grant administration services. The Technological Research and Development Authority will provide educational and outreach services.

Three manufacturers will provide five wind turbines for the project: Bergey Windpower Co. (10 kilowatts); Abundant Renewable Energy (2.5 kilowatts); Southwest Windpower Skystream (three turbines at 1.8 kilowatts each).

Energy Potential: The project will provide more than 15,000 kilowatt hours of wind energy annually.

Economic Development: The project will stimulate Florida's wind energy market.

Dollars & Sense: Renewable Energy for Florida Builders & Developers

Recipient: Exceed Corporation

Location: Indian Shores (Pinellas County)

Grant Funds Requested: \$990,000

Grant Funds Offered: \$990,000

Cost Share Amount: \$14,000,000

Project Partners:

- ⌚ 360 Energy Group
- ⌚ Exceed Properties, Inc.
- ⌚ Tuscan Bay, LLC

Project Objective: The recipient will develop a profitable model for replication that will provide solutions to up-front cost barriers on renewable energy investments for Florida developers.

By mid-2009, a 30 condominium demonstration site will be constructed in Indian Shores. The installation of geothermal heat pumps and solar energy systems at the demonstration site will be facilitated by utilizing an innovative financing mechanism. The funding mechanism will allow developers to own the renewable energy technologies and lease them back, or sell the energy generated back to the tenants through a condominium association.

Every process encountered by the developer will be noted, ultimately providing a proven financing mechanism for renewable energy lease projects. The methodology is transferable, repeatable and profitable, providing builders and developers with the ultimate incentive for increasing the sustainability of their designs. A guide for profitable incorporation of renewable technologies for developers will be developed by mid-2009, and a funding mechanism template for lease/sale of energy will be complete in early 2010.

Energy Potential: Through the project, an estimated 550,000 kilowatts of energy will be deferred annually and demand will be reduced by 180 kilowatts.

Economic Development: The project will stimulate Florida's economy by creating employment opportunities to support the installation of geothermal and solar renewable energy systems.

Production of Biodiesel Using Multiple Feedstocks

Recipient: Vecenergy

Location: Manatee County

Grant Funds Requested: \$2,500,000

Grant Funds Awarded: \$2,500,000

Cost Share Amount: \$31,331,000

Project Partners:

⌚ Vecellio Group Inc.

⌚ Vecenergy BIDA

Project Objective: The recipient will construct and operate a biodiesel facility in Manatee County. Once operating, the facility will be capable of producing 37.5 million gallons of biodiesel per year.

The project will use a biodiesel production technology that allows for the simultaneous use of multiple feedstocks, including animal fats and used cooking oils, and utilizes all of the byproducts and wastes of production. The project will also create a waste oil collection program, encouraging waste to be converted into energy.

The recipient will market the biodiesel produced at the facility to petroleum companies, fuel distributors, governments and municipalities, school systems, power companies and the transportation sector.

Energy Potential: The project will produce 37.5 million gallons of biodiesel annually.

Economic Development: The project will stimulate Florida's economy by creating employment opportunities to support the construction and operation of the biodiesel facility.

St. Lucie Wind

Recipient: Florida Power and Light

Location: Hutchinson Island, St. Lucie County

Grant Funds Requested: \$2,500,000

Grant Funds Awarded: \$2,500,000

Cost Share Amount: \$58,327,000

Project Objective: The recipient will construct the first wind energy facility located in Florida. Based on research by the National Renewable Energy Laboratory and wind studies conducted by Florida Power and Light, Florida's coastal locations have been identified as having marginal wind resource potential and are the best suited locations in the state for the development of wind energy.

The project will place up to nine wind turbine generation units at various locations in St. Lucie County where there are sufficient sustained wind speeds.

Energy Potential: The project has the capacity of 20 megawatt of wind energy.

Economic Development: The project will stimulate Florida's economy by creating employment opportunities to support the construction and operation of the wind turbines.

Summary of Action

As part of the Commission's delegation of authority to Executive Director to perform all functions to carry out the duties and responsibilities of the office, grant the Executive Director signature authority to execute the grants funded during the 2007-2008 fiscal year listed above.