

RESULTS OF THE EMPOWER LOUISIANA RENEWABLE ENERGY GRANT PROGRAM

by
Bryan Crouch, P.E.

The EmPower Louisiana Renewable Energy Grant Program (the Program) is now finished and all projects that received funding through the Program are complete. The Program was established by the Louisiana Department of Natural Resources (DNR) for the purpose of implementing cost-effective renewable energy technologies in Louisiana to offset the use of fossil fuels, to support the creation of employment opportunities, and to stimulate the further investment in renewable energy technologies. The Program was funded through the U.S. Department of Energy with dollars allocated from the American Recovery and Reinvestment Act (ARRA) of 2009.

Six grants, totaling \$9.8 million, were awarded from the Program and grant recipients contributed an additional \$31.7 million. The funding was used to purchase and install equipment for renewable energy generation projects, including solar PV, solar thermal, biomass, and biomass gasification.

An estimated 21.5 million kWh of renewable energy will be generated annually as a result of these projects; enough to power 1,300 homes in Louisiana.

The projects receiving funds from the Program were:

- The University of Louisiana at Lafayette received funding to construct Louisiana's first solar thermal power plant. The pilot-scale 20 kW project harnesses the sun's energy to heat water, which drives an organic rankine cycle that spins an electric generator. The process produces zero emissions.



- Agrielectric Power has operated a unique rice-hull fueled biomass power plant in Lake Charles, Louisiana since 1984. The facility produces reliable, renewable electrical power for Louisiana businesses and residential customers. Agrielectric received funding for upgrades to their plant that will result in an increase of the current turbine/generator capacity rating from 10.62MW to 12MW without a complete teardown and re-build of the facility. The modifications include a new boiler, replacement of several key plant components to increase efficiency, piping and routing improvements, new baghouse modules and enhancements to the turbine/generator unit to maximize electrical power production.

- HRI Solar Solutions installed 1 megawatt of solar photovoltaic panels on rooftops and parking structures of multiple apartment buildings in New Orleans, Houma, and Shreveport. One particular site, the American Can Apartments in New Orleans, utilized an innovative mounting system for flat roofs that does not require roof penetrations and still meets the required wind load specifications.



- The Community Church Unitarian Universalist was flooded with nine feet of water during Hurricane Katrina and was rebuilt using many energy-saving features. Community Church received funding to purchase and install a solar PV system on the roof of their new sanctuary. The PV system will provide nearly all of the power consumed by the building.



- Lamar Advertising of Louisiana received funding to install 700 kW of solar PV panels on billboard structures throughout the state. In addition, the project also made use of efficient LED lighting and digital on-line controls to reduce the electricity consumption of the billboards. The highly visible project is being supported by a statewide billboard advertising campaign that is intended to increase public awareness of renewable energy and energy efficiency.
- Cleco Power LLC received funding to construct a 3-ton per day biomass fed gasifier that will generate an estimated 30 kW of electricity while also having the potential to slip-stream syngas for production of chemicals such as biofuels. This project is a key step of a multi-phase project that Cleco is initiating with eventual plans to construct and operate several distributed power generating systems across Louisiana.