

OAK ISLAND

# Scientist researches alternative algae uses

Grant pays for ideas  
to create clean energy

By JIM BRUMM  
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Algae natural to the Cape Fear region have the potential to provide carbon-neutral fuel in the years ahead, a potential that Kimberly Jones is researching in a trailer and an array of tubes tucked in a back corner at the Oak Island wastewater treatment plant.



Jones

a natural, local algae that can be grown as a biodiesel feedstock.

The tubes are a photobioreactor, collecting solar energy to fuel the algae growth, Jones said.

Since algae are plants and plants absorb carbon dioxide as they

## ALGAE

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grow, Jones explained, when fuel produced from the algae is burned, the carbon dioxide released is equal to that absorbed as the algae grew, making the process carbon neutral to the local environment.

The Alganomics pilot plant at the Oak Island sewage treatment plant is seeking proof of concept and validation of the technologies being used to grow and harvest the algae, Jones said.

The harvest phase will be moving ahead because of a \$59,500 grant from North Carolina's Green Business Fund, one of three grants made to Wilmington-area businesses this fall, the governor's office said earlier this month.

More than \$1 million in Federal Recovery Act funds made these and 15 other third-round grants possible this fall, according to John Hardin, the state Commerce Department's director of science and technology. The state's Board of Science and Technology administers the Green Business Fund.

A news release from the governor's office estimated the grants will create more than 200 private-sector jobs, spread across 18 cities and

spanning 18 North Carolina counties.

Some of the jobs will be the result of green building training the Cape Fear Green Building Alliance will provide to professional builders over the next year, according to Executive Director Joy Allen.

The alliance, in partnership with Sapona Green Building Center and Building Performance Specialists, received a \$79,368 grant to fund the hands-on training by providing green retrofits for 14 homes selected by another partner, the Wilmington Area Rebuilding Ministry, Allen said.

The third Wilmington-area grant is \$60,000 going to Holloman Investing LLC to fund commercialization of its mag lift, vertical axis wind turbines.

Holloman's grant application talked of participating in Progress Energy's wind research efforts, but the utility is not in active discussions with the turbine maker, Progress Energy spokesman Scott Sutton said.

He noted the company's small-scale wind turbine research project has been postponed until next year.

The N.C. Green Business Fund got its start in 2007 when the General Assembly provided for distribution of \$1 million each in 2008 and

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Gov. Beverly Perdue, who initially proposed creation of the fund as lieutenant governor, had \$10 million in federal Recovery Act funds directed to significantly enlarge the Green Business Fund.

The \$1 million distributed this fall came from those funds. Proposals for additional grants of the federal funds will be sought by year-end, Hardin said.

Besides solar-powered production of carbon-neutral fuel, Alganomics' algae promise help in processing wastewater by consuming the nutrients in the waste stream, Jones said.

Beyond the sewage plants, she continued, there are the waste lagoons on hog farms across North Carolina that could provide the nutrients the algae need, while the carbon dioxide needed for algae growth could be harvested from a power plant fueled by methane from the lagoon.