

## Used cooking oil powers Furman equipment

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By Paul Alongi  
STAFF WRITER  
[palongi@greenvillenews.com](mailto:palongi@greenvillenews.com)

The grease from fried foods may clog your arteries, but it can also power a lawnmower.

Furman University students have started turning castoff dining hall grease into an environmentally friendly fuel that will supply about half the campus' diesel needs. They finished their first batch of "biodiesel" on Tuesday.

The students plan to make the fuel for about 60 cents a gallon and sell it at a mark-up to the facilities services department to raise money for their organization, Environmental Action Group. At the pump, diesel fuel is more than \$2 a gallon.

"They're getting a deal," said Adrienne DuBois, the group's president. "And it's better for the environment."

The processor that turns grease to go-juice sits in barn-shaped shed at Furman. Hardware stores sell most of the parts, including two jugs, a water heater and a pair of drums.

Some of the tougher-to-find ingredients include lye and methanol.

Students crowded into the shed and applauded as DuBois donned a pair of goggles and held a tube that spilled the amber fuel into a yellow, 55-gallon drum.

Daniella Fergusson, a sophomore from Charlotte, said she helped build the machine by outfitting the pipes with Teflon to prevent leaks. She hopes to send a message with her involvement.

"You don't have to buy oil from Iraq or drill up Alaska," she said.

Biodiesel can power conventional diesel engines without any modifications. Furman plans to use its fuel for lawnmowers, backhoes and tractors, said Bernie Stanton, the university's Health and Safety manager.

The exhaust may smell like a French fry or fried chicken, but biodiesel burns cleaner than gasoline.

It produces fewer of the tiny particles that cause coughing fits and emits 75 percent less carbon dioxide, which has been linked to global warming, according to the U.S. Department of Energy.

The Furman machine can make 55 gallons of fuel over two days with about three hours of student labor. It will produce about 2,500 gallons a year, said Travis Perry, the assistant biology professor overseeing the project.

The main limitation is that they don't have more dining hall grease, he said.

Lu Yoder, an Albuquerque consultant who helped students with the project, said it took one day to build the machine. And that was taking his time to show students how to do it.

"There are a lot of people in the United States who are making their own fuel in their garage like this," Yoder said.

Engines lose about 3 percent of their power when they run on biodiesel, probably not enough to notice.

One lawnmower can use up to eight gallons of diesel a day, Stanton said. While the cost savings may be a perk, there are other benefits the university hopes to reap.

"We want to make a commitment to the environment, too," Stanton said.

*Staff writer Paul Alongi can be reached at 298-4746.*

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