

Friends **Scott Estro '03** and **Bob Hatton '02** take a cross-country trip in a car fueled mostly by waste vegetable oil.



Greasy Riders

BY ELISABETH LINDSAY

When Bob Hatton '02 and Scott Estro '03 met, they were "your standard college kids," living on the 12th floor of West Tower and more interested in pizza than in a pioneering adventure in a vegetable oil-powered car. At least that's how sociology major Scott tells it.

But over the next three years the two men changed, according to Scott. "The excellent, broad liberal arts education we got at IC, as well as the general culture in Ithaca" raised their awareness and changed them into environmental activists.

"I took Environmental Biology in my freshman year with Professor John Confer," says Bob, who majored in drama and minored in religion. "That really opened my eyes." Scott credits politics professor Tom Shevory's Sociological Economics class with awakening him to broad political and economic issues.

Then in 2005 Bob went to the Grassroots Festival of Music and Dance in Trumansburg, just a few miles northwest of Ithaca. There he met Gregg Wicken and Lucas MacDonald from VegPower, a local company that converts diesel engines to burn waste vegetable oil, or WVO. The company sells kits and components and also will install a custom system in any diesel vehicle.

"I knew I would need a car starting in August 2005," says Bob. "I wanted to minimize the [ecological] impact, so I researched WVO vehicles. I bought a 2002 diesel Jetta for the purpose of getting it converted."

A converted diesel engine (car, truck, generator, boat, tractor, or heavy equipment) can still burn regular petroleum-based diesel fuel if WVO is unavailable. WVO must be filtered and warmed before it goes into the engine, so most vehicles run on a combination of regular diesel, biodiesel (which is derived from vegetable rather than petroleum sources), and vegetable oil fuels. "If you have a relationship with a restaurant, a lot of times you can get vegetable oil for free," Bob says. "It cost me roughly \$2,300 to convert my car, and I'm less than a year away from recovering that expense in saved fuel costs."

The environmental advantages to using WVO include decreased engine exhaust particulate emissions and, its proponents say, no new carbon pollution (the CO₂ produced was already removed from the air by the plants from which the oil is made). WVO is a superior lubricant that results in less engine noise, and because it contains no sulfur it does not contribute to acid rain.

After driving his converted car locally for a year with great success, Bob decided to drive it to the west coast, using only vegetable oil as fuel. Scott eagerly signed on for the adventure, and on August 8 the two set out from Long Island for Portland, Oregon. By blogging and networking along the route, they hoped to spread the word about sustainable fuels and serve as an example for other environmentally and economically concerned people. They loaded the Jetta to capacity inside and out with all of Bob's worldly possessions, as well as a bike rack and 30 gallon jugs of clean WVO.

Soon after they headed out, however, trouble hit.

"When I picked the car up after the conversion," Bob admits, "they

told me how to maintain it, but I don't think I took it all in. I'm not mechanically minded and I wasn't used to doing my own maintenance, so I missed some signs when things weren't running right." By the time the guys hit Ithaca, the car was running jerkily. The folks at VegPower discovered that the system had become fouled with water—a potential \$5,000 mistake—which required that the entire system of hoses, filters, and tanks be drained. A faulty gauge meant that a filter had gone 9,000 miles without cleaning, and then air in the fuel injector lines meant the car wouldn't start. Scott admits to a certain amount of trepidation at this point. "But," says Bob, "Gregg said over and over again that I could always call or e-mail him and he would be available to help me out. And he always has been."

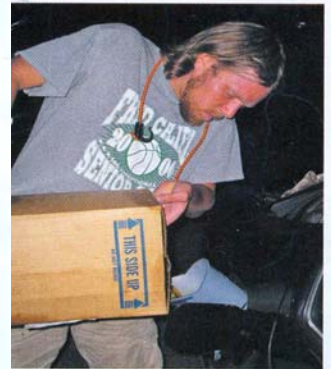
After this hard-learned lesson, Bob and Scott had few mechanical difficulties. Their primary challenge was finding fuel. They had planned to make it to Boulder, Colorado, from Ithaca (about 1,500 miles) on 45 gallons of WVO—a full tank plus the 30 spare gallons. The men assumed that Boulder, with its plethora of restaurants and lively alternative culture, would be a good place to get WVO to get them across the Rockies. Bob's calculations were based on the Jetta's projected 37 to 47 miles per gallon. But they quickly discovered that they were getting much lower MPG, with the enormous amount of weight in the car and the wind resistance created by the cargo on the roof. Their actual mileage turned out to be closer to 24 mpg.

It also proved to be hard to locate WVO sources in unfamiliar cities. In Chicago they sucked up some strange, foamy oil which fouled two of their three filters and cost them considerable time. Another promising-looking vat of oil was situated where they couldn't get the car close enough.

Several times they located restaurants with excellent WVO, only to discover that the oil was already spoken for. When they couldn't procure WVO, they had to try to find biodiesel, and if they couldn't do that, they were forced to use petroleum diesel. By journey's end they had burned an almost equal amount of WVO (97.8 gallons) and petrodiesel (90.78 gallons.) They'd also burned five gallons of B100 biodiesel. Even so, they saved an estimated \$310.70 in fuel overall.

"One thing I'd do differently," Scott says, "is spend more time in Chicago looking for clean oil and refilling our jugs to get us through the rural Midwest, because it was a lot harder to find oil than I thought it was going to be." Bob adds, "[I should have] researched biodiesel retailers and co-ops more." The men have since found a good website: www.biodiesel.org.

Scott and Bob hope their adventure encourages others to switch to a less environmentally damaging way to travel. It's not hard to do, but as Scott points out, "the infrastructure that exists to support the use of petrofuels makes it so easy for people to just continue to do that." Yet as awareness increases about the environmental and financial benefits of WVO vehicles, perhaps an equivalent infrastructure will grow to support their use. One day, Scott and Bob hope, it will be as commonplace to see people fueling their cars outside the Chinese Buffet as it is now to see them lining up at a Shell station. ■



Scott (far left) in the heartland, Bob (above) in the Rockies; filling the engine with waste cooking oil (top two)