

AN ALTERNATIVE TO DIESEL CALLED BIODIESEL IS CATCHING ON IN SAN LUIS OBISPO COUNTY. SOME VEHICLE OWNERS ARE GOING SO FAR AS TO BREW THEIR OWN FUEL BY COLLECTING WASTE VEGETABLE OIL FROM AREA RESTAURANTS. OTHERS ARE TAKING ADVANTAGE OF TAX CREDITS THAT ENCOURAGE THE USE OF THE RENEWABLE FUEL SOURCE

About two years ago, Travis Semmes began making biodiesel fuel to fill his truck using waste vegetable oil he collected from local sushi and Chinese restaurants.

The Atascadero native wanted to make a political statement against U.S. dependence on nonrenewable energy sources. So, he met weekly with several friends to whip up 25 to 50 gallons of the alternative fuel.

Semmes is one of many county residents powering the growth of biodiesel. A 2005 federal tax incentive has helped to elevate it out of the garages of environmentalists and into a growing number of local business vehicles and equipment.

"The price of biodiesel is now in line with diesel," said Semmes, equipment manager at Semmes & Co., a sustainable building construction company in Atascadero owned by his father. He orchestrated the switch to biodiesel last year for the company's fleet of diesel vehicles.

Biodiesel is a renewable fuel low in particulate emissions for diesel engines that can be made from any animal fat or vegetable oil. A chemical process removes the glycerin from the oil, allowing the nontoxic biodegradable fuel to be used in diesel engines with little or no modification. Biodiesel does not contain any petroleum but can be mixed with diesel, the most common blend being 20 percent biodiesel mixed with 80 percent diesel, which is also called B20 fuel.

For many local users, the environmental benefits of biodiesel over diesel make it an obvious choice to help maintain high air quality in the county. A U.S. Department of Energy study showed that the production and use of biodiesel, compared with petroleum diesel, cut carbon dioxide emissions by 78.5 percent, according to the National Biodiesel Board. Carbon dioxide is a key greenhouse gas linked to global warming.

On its Web site, the industry trade group notes that biodiesel has become the fastest growing alternative fuel in the country, with 75 million gallons sold in 2005, up from 500,000 gallons in 1999. The industry is on track to sell 150 million gallons this year. "We are seeing a large movement towards biodiesel here on the Central Coast," said Aeron Arlin Genet, chairwoman of the Central Coast Clean Cities Coalition and planning manager at the San Luis Obispo County Air Pollution Control District. "Reducing dependency on foreign oil is no longer such an out-there concept."

The coalition's mission is to expand the use of alternative-fuel vehicles and fueling infrastructure throughout the Central Coast. In June, the group received U.S. Department of Energy designation that will enable it to seek federal, state and local grants to pursue its goal for more alternative fuel vehicles and infrastructure.

#### FEDERAL SUPPORT BOLSTERS DEMAND FOR BIODIESEL

Until recently, the higher cost of biodiesel made it a less attractive alternative. But a tax incentive approved in 2005 has changed that. The federal excise tax credit equates to one penny per percent of biodiesel in a fuel blend made from agricultural products including vegetable oils, and one-half penny per percent for recycled oils. "When the energy bill passed and the tax benefit was added, biodiesel became more competitive with diesel," said Ken Dewar, president of J.B. Dewar, a locally owned distributor of fuel and lubricants. "We've seen much more interest and inquiries from local businesses in the last year."

The incentive is taken at the blender level, namely petroleum distributors, and passed on to consumers. In late June, Reps. Kenny Hushof, R-Missouri, and Earl Pomeroy, D-North Dakota, introduced the Renewable Fuels and Energy Independence Promotion Act that would make the tax credit permanent. It is now set to expire in 2008.

Mike Hoover, owner of the Chicago Grade Landfill, is one of the largest consumers of biodiesel in the county. Hoover switched to B20 fuel mix for his trucks in June of 2005 when the tax credit kicked in. His waste management plant and its sister facility in Nipomo will spend approximately \$160,000 this year on about 50,000 gallons of biodiesel. "I started using biodiesel last June when the price became comparable to diesel," said Hoover. "From an economic perspective it suddenly made sense. But this is a philosophical decision as well. We as a nation need to become energy independent."

The Energy Policy Act of 2005 also established a renewable fuels standard that requires the use of 7.5 billion gallons of ethanol and biodiesel annually by 2012 -- a nearly 90 percent increase over today's usage. The bill also provides a 30 percent tax credit for the installation of alternative fuel stations, up to a maximum of \$30,000 per year.

In April, Eagle Energy Inc., a provider of fuels and lubricants on the Central Coast, opened the county's first biodiesel pump at a 76 station at 2400 Golden Hill Road at Highway 46 East in Paso Robles. Early reception for the pump, which offers B20 fuel, has been good -- and getting better each day, says operations manager Steve Murdock. "People are curious so they are trying it out," he said, leaving open the possibility that Eagle Energy may open additional pumps in the county.

A second biodiesel pump is expected to open soon by J.B. Dewar on Prado Road in San Luis Obispo. A county inspection was scheduled to take place at the end of June.

#### FRYING PAN TO FUEL TANK

Purchasing biodiesel is not the only option for interested users. "The beauty of biodiesel is that you can make it at home," said William Seavey, a Cambria-based alternative energy consultant who will teach a class at Cal Poly's Osher Lifelong Learning Institute this fall on alternative energy.

The Internet is rife with recipes to make home-brewed fuel. And as local interest grows, a number of area restaurants are getting requests for waste vegetable oil, including Mission Grill in San Luis Obispo, which has one person pick up fryer grease to fuel his car, said owner Sean Faries.

Ian Woertz, founder of the Cal Poly Biodiesel Club, said he hopes the university will agree to convert 120 gallons of waste vegetable oil produced weekly by campus dining facilities into biodiesel for campus vehicles and student club members.

The fifth-year civil engineering student, who recently won an Environmental Protection Agency grant for biodiesel research, formed the club last year after a class project on biodiesel. He helped persuade the university to purchase biodiesel for one of its tractors, which it began doing in June. "They were apprehensive at first," said Woertz about officials' reaction to his biodiesel suggestions. "But they are catching on really quickly."

#### QUALITY CONTROL CRITICAL

Biodiesel users, including Atascadero's Travis Semmes, echo that fuel performance is similar to traditional diesel. "Biodiesel is a much better lubricant than diesel, but it does have some cold-start issues, which isn't a big deal for us in this part of the country," said Semmes.

"There is a little less horsepower," added Hoover, "but at least one of my drivers didn't even realize that we had made the switch." With an increasing number of companies entering the field of biodiesel, an important issue is quality control.

Jason Hoar, president of AgriFuels LLC, a national biodiesel consulting, sales and marketing company with a San Luis Obispo office, is addressing this problem. His company is helping industry participants -- from producers to distributors -- meet a voluntary national standard -- also known as BQ-9000 standards. AgriFuels is developing a Web-based testing product that it expects to be released for sale in early 2007.

"The industry is growing so rapidly right now," explained Hoar. "Quality control is critical to further establish biodiesel as a reliable alternative fuel."

While the biodiesel industry is quickly evolving, many users point out that the alternative fuel is an important part of the nation's energy supply. "I don't feel that biodiesel will ever replace diesel 100 percent, but I do think that it is a great product to extend our resources," said Dewar. "The country is moving in the right direction by increasing our use of biodiesel," added Hoover. "It's definitely part of the answer to reduce our dependence on foreign crude."

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