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Automotive (A Special Report) --- The Other Alternative: Hybrids get all the attention, but biofuels are also starting to gather steam

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DAN FREEMAN never intended to sell biodiesel fuel.

For years, Dr. Dan's Alternative Fuelwerks, his auto-repair shop and alternative-fuel station, was focused on getting compressed natural gas into vehicles. But a few years ago, a local environmental group asked Mr. Freeman to start selling biodiesel, fuel made from soybeans that has lower emissions than regular diesel. At first he refused. But a few months later, he decided it was "the simplest, most perfect solution" for cutting dependency on foreign oil.

Now, sales of biodiesel -- which can be used in existing diesel automobiles -- are by far the biggest part of his business. Mr. Freeman, who has even become a de facto spokesman for the biodiesel movement, says he has more than 3,000 customers signed up, who get 24-hour access codes to the pump at his shop in Ballard, a historically Scandinavian fishing community in Seattle.

A typical customer, the 45-year-old Mr. Freeman says, drives up on a Thursday in a Subaru Outback wagon, and asks a series of questions. The person comes back the following Monday in a Volkswagen Jetta diesel, ready to fill it with biodiesel.

Why do they make the switch? A few reasons, Mr. Freeman says: They no longer want to support foreign oil. They want to clean up the environment. And they want to support the local economy and American farmers.

They like the "idea of never using petroleum again," he says.

While hybrids, which run on both gasoline and electric engines, have gotten much of the attention in the move by auto makers and consumers toward greener alternatives, another crop of vehicles also is gaining steam: those that run on biofuels, or fuels made from organic materials -- mainly ethanol and biodiesel.

Ethanol is predominantly derived from corn in the U.S., but there's research well under way that could make it cost-effective to use various plant matter, including switch grass and corn stalks. Biodiesel is predominantly made from soybeans here. Both biofuels have been around for years. Ford's Model T originally ran on ethanol. And Rudolf Diesel, the German mechanical engineer who built the first internal-combustion diesel engine in the late 19th century, once used peanut oil in his engine. But the idea of

Now, though, proponents of biofuels say they are an idea whose time has finally arrived -- and the push isn't just coming from environmentalists. The production and use of biofuels has picked up steam during the past year as the cost of gasoline has remained volatile and "dependence on foreign oil" has become a catchphrase for many American ills. The federal government is offering tax breaks and President Bush himself has been talking up their use. Some U.S. auto makers are hawking vehicles that can run on both regular gasoline and ethanol. And some state legislatures are pushing to require that biofuels be blended in small amounts into fuel supplies.

The primary market for both fuels right now is what's called lower-level blends, in which a small amount of the alternative fuel is mixed in with a larger amount of the regular fuel -- say, 20% biodiesel and 80% diesel fuel. But proponents believe this is an important step in getting alternative fuels into the marketplace.

Production of the two biofuels already is revved up. U.S. biodiesel production tripled in 2005 from a year earlier, to 75 million gallons sold. That was after growing by just five million gallons in each of the two previous years, according to the National Biodiesel Board, a trade group based in Jefferson City, Mo. Production in 2006 is expected to nearly double, to 140 million gallons. Still, that's a drop in the bucket of the 37 billion gallons of diesel sold in the U.S. for highway use in 2004, the most recent figures available.

"It's kind of a 13-year overnight success," says Joe Jobe, chief executive of the National Biodiesel Board. Mr. Jobe says biodiesel production had been growing strong for some time, but "when energy spikes happened . . . it really kicked into overdrive."

Ethanol production showed steady but unremarkable growth throughout the 1980s and '90s. But production more than doubled to four billion gallons last year from 2001 levels -- though it still represents just a fraction of gasoline sales.

The primary users of biofuels these days are fleets -- cars and trucks that the government and corporations allow employees to use. Many of those cars run on a blend of 20% biodiesel, known as B20. Others are so-called flex-fuel cars, which can run on a combination of gasoline and ethanol.

Ed Stone, fleet manager for the city of Wilmington, Del., has been running city vehicles on E85 -- 85% ethanol and 15% gasoline -- for three years. "The initial cost can't be beat," he says, noting how he just purchased 32 fuel-flex Dodge Stratus sedans for about \$12,000 apiece. That, he says, compares with \$28,000 for a hybrid vehicle or the \$4,000 in upgrades needed to retrofit an existing vehicle to use compressed natural gas, which he's tried in the past and found to be maintenance-intensive. Electric cars, meanwhile, have a limited range and cost at least \$8,000 more than a comparable vehicle, not including infrastructure upgrades to plug them in.

Mr. Stone says he has about 80 city vehicles running on E85. Even though there's a 25% loss in fuel economy compared with the car running on regular gasoline, he's a big proponent. "I haven't seen any problems," he says.

U.S. auto makers are counting on such views. In the long term, they seem to be placing their environmental bets on fuel-cell vehicles powered by hydrogen. But in the near term, manufacturers are hedging their bets with other environmentally friendly options like ethanol.

U.S. auto makers are the primary producers and sellers of vehicles that run on ethanol for the U.S. market. German auto makers Volkswagen AG and DaimlerChrysler AG are leading in producing diesel vehicles. Japanese auto makers Toyota Motor Corp. and Honda Motor Co., meanwhile, lead in the hybrid race.

In recent months, General Motors Corp. and Ford Motor Co. have been promoting E85. GM launched a national campaign, "Live Green Go Yellow," during this year's Super Bowl, and has been sending letters to owners of flex-fuel vehicles inviting them to get free yellow gas caps installed as a reminder that the vehicle also can run on ethanol.

In addition, GM has been pushing its dealers on ethanol, first in speeches at the Chicago Auto Show and more recently in Minneapolis. Brent Dewar, vice president of GM's North American sales, spent 20 minutes of a 30-minute speech to Minnesota salespeople on flex-fuel vehicles. "It was a call to action," says GM spokesman Terry Rhadigan.

GM will produce some 400,000 flex-fuel vehicles this year, up from 275,000 in 2005. Ford is planning 250,000 flex-fuel vehicles in 2006 (including versions of its popular F-150 pickup truck), up from some 200,000 last year.

All current U.S. vehicles can run on a blend of up to 10% ethanol. This was once known as gasohol. Ethanol is now blended into 30% of the country's gasoline, according to the Renewable Fuels Association, a trade group in Washington, D.C.

In addition, GM and Ford are lending their clout and even some money working with ethanol producers to expand the number of E85 pumps, particularly in the Midwest and Texas.

Meantime, some state legislatures are trying to introduce biofuels into the market by giving a boost to lower blends that would be mixed into regular fuel.

Minnesota for several years has required that all gasoline sold be mixed with 10% ethanol and more recently required that diesel fuel be mixed with 2% biodiesel. Washington state just passed a similar biodiesel law, and several other states are considering ethanol and biodiesel legislation. At Dr. Dan's Alternative Fuelwerks in Ballard, Mr. Freeman says his pumps dispense almost pure biodiesel -- B99, which has only 1% diesel.

Biodiesel already appears to be having some impact on diesel vehicle sales in the U.S. Diesel vehicles accounted for 3.37% of new-vehicle registrations in 2004, the latest data available, up from 2.25% in 2000, according to R.L. Polk, an auto-data provider in Southfield, Mich.

Perhaps even more significant, many diesel automobiles are selling without incentives and close to their suggested retail price -- an anomaly in the discount-driven car business. And diesels are holding their value significantly better than their gasoline counterparts.

The diesel version of VW's Jetta, for instance, is selling for 98.8% of the sticker price, compared with 95% for the gas version. A 2003 diesel Jetta is selling for an average of \$16,209; that's 85% of its original sticker price and some \$5,000 more than the gasoline-engine Jetta, according to auto-information firm Edmunds.com, based in San Monica, Calif.

Alex Rosten, an analyst at Edmunds.com, says the prices of used diesel vehicles have always been strong because new diesel-vehicle sales are limited in California and many Northeastern states due to emissions laws. But he adds that in environmentally progressive states, "biodiesel [also] has an impact" in keeping used prices high.

In Seattle, some dealers say biodiesel is driving much interest in diesel vehicles. VW dealers there say they're ordering as many new diesels as they can, especially since VW will stop diesel production later this year in preparation for cleaner-diesel technology coming in late 2007. They scout auction and used-car sites looking for bargains, knowing Seattle's growing biodiesel market will drive sales for the near future. A VW spokeswoman says any production disruptions will be minimal.

Matthew Welch, general manager at Carter Volkswagen, in Seattle's Ballard neighborhood, says 50% of Jetta orders are diesels, which he'll increase to 75% soon as VW begins to phase out production. Mr. Welch says he thinks biodiesel has caught on in the area because "more and more people are making statements" about foreign-oil dependency and the environment.

One such person is Jeffrey Pullen, a Dr. Dan's customer who was filling his Ford F-250 pickup truck on a recent afternoon. "I feel better about it with the biodiesel," says the 52-year-old self-employed boat hauler, who switched to biodiesel about six months ago. "The environmental impact is lessened. The demand on foreign oil is lessened. I'm certainly not saving the world single-handedly. But take 1,000 customers that buy 20 gallons a week. If everybody made the switch, then there would be significant changes."

Whether interest in alternative fuels will continue even if gasoline prices fall under \$2 again is still a guess.

Americans have been "lulled back into complacency many times before," says Mr. Jobe of the Biodiesel Board. "There's not an ingrained sense of energy conservation in our society. The more energy you can consume, it's almost a symbol of status -- bigger house bigger car, bigger boat."

Still, he says, people continue to worry about Middle East unrest. "I'm hopeful Americans will continue to think more about energy and conservation and stewardship," he says.

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