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BORDER

Biodiesel plan spans border

Bellingham man will make equipment for program



PHILIP A. DWYER THE BELLINGHAM HERALD

Bruce Barbour, owner of Biodiesel Works, holds used soybean cooking oil, right, that he refines into biodiesel fuel, left. Barbour says of the supply of used cooking oil, "We haven't even tapped it."

KATIE N. JOHANNES
THE BELLINGHAM HERALD

The next time you get fries with your meal, consider that your car could be burning off the grease that cooked them, while improving global air quality.

A cross-border project will try to expand that possibility, converting used restaurant fryer oil into biodiesel that will be pumped into power companies' utility trucks in Whatcom County and British Columbia.

The project, called Bio-49 Degrees, will teach technical college students on both sides of the border how to refine used oil, using mini

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refineries manufactured in a Bellingham man's home garage.

Bruce Barbour, who works for the state Department of Ecology, invented the refining machine after working at Whatcom Creek in the wake of the deadly 1999 pipeline explosion.

"I was pumping gas into my Honda ... and saw that it was just wrong for me to be using gasoline," he said.

A \$70,000 grant from the U.S. Environmental Protection Agency is paying for the Bio-49 project until September 2006. The trucks should be using the fuel as soon as January.

SAME AIRSHED

"The fact that it's a single (cross-border) project supports the whole notion that we're breathing from the same airshed," said Wayne Elson, a Seattle-based environmental protection specialist with the EPA.

Air flows from north to south in the summer, and south to north in the winter, carrying pollution with it, Elson said.

Generally, cars, trucks and buses in the Vancouver area are considered the primary northern air polluters. Industry and agriculture are likely causes of pollution from Whatcom County, Elson said.

He emphasized that pollution had not been pinned to a specific source.

"But we do know what the general movements of air pollution are, and when concentrations are high, the concerns are on both sides of the border."

He also said that regardless of airflow trends, air quality in the Northwest is generally very good - pollutants don't exceed national air quality standards.

In some cases, emissions are more of a global issue. Whether it's produced in Bellingham or China, carbon dioxide is known to eat away the Earth's atmosphere.

FRY POWER

One way to reduce those emissions is to use a cleaner-burning fuel such as biodiesel.

The Bio-49 project aims to help make biodiesel a common fuel source, said Jeff Morris, director of the Northwest Energy Technology Collaborative.

According to Bio-49 project information, switching from petroleum-based diesel to biodiesel can reduce the particulate pollution in auto emissions by 31 percent, carbon dioxide emissions by 24 percent and hydrocarbons by 50 percent.

NWETC is a joint effort of businesses, government, nonprofits and education with programs in Washington, Oregon, Idaho, Montana, Alaska, British Columbia and Alberta. It is a branch of the Washington Technology Center, a statewide economic development organization created by the Legislature and based at the University of Washington.

"We call (new energy) commercialization the Valley of Death," Morris

said. "It's hard to commercialize a new or alternative energy product."

While researching the project, Morris found Barbour's home-based biodiesel processor business.

NWETC is buying four of Barbour's processors - the base units are about the size of chest freezers - and putting them in Bellingham and British Columbia.

Morris said all four units cost NWETC about \$30,000. They normally would cost about \$22,000 apiece, Barbour said.

Students at Bellingham Technical College, Malaspina University in Nanaimo, and British Columbia Institute of Technology in Burnaby, will learn how to use the machines, which turn used restaurant oil into biodiesel.

Morris said project organizers are working on a deal to buy used oil from the Washington Restaurant Association, which collects some used oil from Bellingham restaurants and filters it.

After it's refined, the biodiesel product will fuel power company's utility trucks on both sides of the border - 13 Puget Sound Energy trucks, and at least eight BC Hydro trucks.

Most of the fuel produced will be a blend that's 20 percent vegetable oil, mixed with petroleum-based diesel. PSE is having one truck built that will run solely on 100 percent veggie fuel.

Barbour also points out that it's not combustible like gasoline.

"If we had been pumping biodiesel (in the pipeline near Whatcom Creek), nobody would have died," he said. "Somebody might have slipped and fallen. It's kind of slippery, but it doesn't blow up. And you could probably drink it in a pinch."

FRINGE BENEFITS

Besides touting the environmental benefits of Bio-49, Morris and others say the project comes with an array of fringe benefits.

Students will learn a new trade skill for an emerging technology. Barbour's business will get a boost. And infrastructure will be in place to help expand production, which should help reduce the price.

Yorkston Oil Co. was selling biodiesel Friday for \$3.29 a gallon and regular diesel for \$3.09 at two of its Bellingham gas stations. Diesel engines can burn either fuel.

Daren Germaine, an instructor in BCIT's heavy equipment program, sees the project as a way to further education and cross-border cooperation: "This is a great opportunity to see what both sides are doing in terms of the technical training."

John Irvine, the fleet services manager for BC Hydro, echoed Elson, of the EPA: "We're all in one airshed. We have to figure out how to help each other."

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