



Big Green Bus Powered by Vegetable Oil and Solar Panels Stops at Saint Viator

August 27, 2010



Robert Collier, an engineering major from Etna, New Hampshire, holds a container of the vegetable oil used to fuel the Big Green Bus.

What's big and green and environmentally conscious all over? The Big Green Bus, built by science and engineering students from Dartmouth College, that's what.

The former diesel-run motor coach was retrofitted six years ago by Dartmouth students, and each summer a new group takes the bus out on a cross-country tour promoting alternative fuel and sustainable living.

They stopped Friday at Saint Viator High School in Arlington Heights, where 2010 Dartmouth graduate Ann Elise DeBelina of Palatine --- and bus passenger --- had attended high school. Her mother, Mary Lee, heads up the math department.

"Traveling around the country you hear so many stories and sense so much enthusiasm for the things we were promoting, like climate change and sustainability," said DeBelina. "It really starts with little things that people can do, that when added up, do make a difference."

The educational visit drew students from Saint Viator's environmental science, biology, physics, integrated science and calculus classes to explore the bus, as well as members of the school's new Querbes Scholars program.

"I was surprised that it only cost a few hundred dollars to convert the bus from diesel fuel to vegetable oil," commented Emily Zahrebelski, a freshman from Hoffman Estates and a participant in the Querbes Scholars program. "It made me realize that we can make changes in our own lives to be more 'green.' We don't need to waste so much."

Over the past five summers, Dartmouth students have traveled more than 56,000 miles and used about 6,500 gallons of waste vegetable oil --- acquired from restaurants along the way -- in place of diesel fuel.

The bus is equipped with a modified engine, solar panels, an interior completely constructed of sustainable materials, as well as a battery pack in the luggage bays to store unused energy captured by the solar panels.

Saint Viator students enjoyed exploring inside the bus and seeing its floors made of recycled bamboo, as well as its countertops made of recycled glass. However, learning how the waste vegetable oil is filtered up to three times, before it can fuel the engine, proved to be the most interesting.

Riding on the bus are nine Dartmouth students. Most, like DeBelina, are science or engineering majors.

"The Big Green Bus actually came to my high school," says Becky Niemiec, a biology major from Los Angeles. "That's what got me interested in going to Dartmouth, and ultimately getting involved with this trip.

“We go everywhere,” she added, “like farmer’s markets, schools, concerts, outdoor fests, basically anywhere where people will listen to us.”

Betsy Dain-Owens, one of the co-managers on the trip from Mercer Island, Washington, says the group hopes to create a network of people across the country to create tangible solutions to the complex environmental issues the country faces.

“We hope to connect with young and old alike,” she says, “to come up with small, easy ways that we can conserve money, energy, and resources in everyday lives.”