

## **Biodiesel Consumers**

Biodiesel frequently costs more than petroleum-based diesel fuel. Still, a significant group of consumers are willing to select biodiesel at the pump. Given this price relationships it is important to understand the driving forces behind biodiesel purchases. Searches for published market research did not turn up reports which explain consumer behavior when it comes to diesel fuel purchase. There are, however, several media reports with interviews that provide case studies with consumer quotes.

Willie Nelson has become a visible national advocate for using biodiesel. In promotional materials linked to Nelson, common focal points include:

- Renewables being better for the environment
- The potential for reducing dependence on foreign oil
- A strengthening effect on the U.S. economy
- The potential for helping improve U.S. farm businesses
- The expected impact on urban sprawl and farmland preservation

Large oil companies have been making significant investments in biodiesel production facilities. Chevron invested \$15M in a 20 million gallon production facility. A company spokesperson explained that Chevron wants to understand issues associated with biodiesel production. (Houson Chronicle, 2006). Shell Oil purchased a minority share in a company named Choren. Choren has technology that uses whole oil seed plants to produce ultra-clean, low tar fuels. Shell Oil stated expectations that demand for biodiesel and biofuels will expand in future years (Green Car Congress, October 2006). Biodiesel Magazine reported that Biometrics made a \$28M investment in a Louisiana plant because of anticipated consumer demand for biodiesel.

Internet exchanges between biodiesel consumers provide insight into product traits that make the fuel preferred within certain circles. Common desirable attributes include:

- Lower CO and CO<sub>2</sub> emissions resulting in less risk of continued global warming
- Renewability of fuel source
- Purchase of biodiesel provides less support to hostile governments
- Prolonged engine life
- Improved engine lubricity
- Reduced carbon deposits
- Potential for reducing government payments to grain producers
- Reduced exposure to carcinogens in engine emissions
- A strong positive energy ratio making biodiesel production an efficient process
- Reduced risk from fuel spills due to biodegradability
- Diverse uses for biodiesel including transportation vehicles, heavy construction equipment, watercraft, and heating systems

Restraining forces that limit use of biodiesel in the U.S. market include:

- Availability of diesel fuel in general, and biodiesel in particular at service stations
- Low level of consumer education about biodiesel production and performance traits

- Consumer concerns about effects of biodiesel use on engine warranties
- Winter gelling issues
- Concerns about effects of biodiesel fuel on hoses and gaskets

To the extent that biodiesel has become popular, continued expansion of market share in the fuel sector is dependent on research that keeps biodiesel attractive relative to other fuel alternatives. Biodiesel consumers appear to be driven by their mission to use fuels they perceive to be most responsible from environmental and socio-political perspectives. Biodiesel blogs reveal that consumers frequently evaluate the costs and benefits of biodiesel against other fuel alternatives like fuel cells. Consumers are not buying biodiesel because it is biodiesel. They are using the fuel as a means to an end.