



Sustainable Feedstocks

Community Fuels, Stockton, CA, Utilizes Animal Fats, Vegetable Oils

The owners of Community Fuels' new 10-million-gallon-per-year (MMGY) biodiesel plant in Stockton, CA, wanted to be sure the plant could utilize feedstocks that were sustainable, economical and locally available.

Therefore, the owners opted to build a plant which could accept multiple feedstocks such as animal fats, vegetable oils, and waste oils in the future.



Lisa Mortenson



multiple feedstocks also gives the company more flexibility with its biodiesel formulation.

"We can take advantage of markets and tailor our formulations for cloud point in summer or ►

Facility Feature

"Our goal is to deal with a wide variety of feedstocks simultaneously," said Community Fuels Chief

Executive Officer Lisa Mortenson.

"The industry is so dynamic that from year-to-year to be cost-effective, to be responsible, and have a sustainable operation, it is important to identify new sustainable feedstocks," She explained.

Unlike most biodiesel plants that utilize soybean oil as a feedstock Community Fuels will be using a blend of animal fats and vegetable oils.

"We are not using waste oil yet but we plan to integrate that in the near future," Mortenson said.

Dr. Christopher Guay, Community Fuels' director of research and development, said the technology to process

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Lisa Mortenson, CEO
Bruce Cohen, Plant Manager
Dr. Christopher Guay, Director of R & D
Ryan Lamberg, Director of Communications and Logistics
William Crooks, Controller

Employees: 14
Capacity: 10 MMGY
Feedstock: Multiple



Victoria Junquera, environmental health and safety manager, checks a sample of fuel inside the plant.

winter,” Guay said.

Guay explained that the multiple-feedstock production process accommodates a wide range of production parameters for feedstocks while producing the fuel inexpensively.

In addition, the plant worked with its electrical utility, Pacific Gas and Electric, to review the plant’s energy usage to ensure the most efficient operation.

“When the savings are quantified, it is estimated we can save up to 28% on energy costs,” Guay said.

“A lot of individual components are standard,” he said of the plant which is conventional in design.

“The innovative part is how we link those parts together and balance energy flows,” he explained.

Company History

In 2005, CEO Mortenson, Brad Baker and Jeff Allen cofounded American Biodiesel, Inc., to develop a regionally-based, clean energy solution company.

The partners put together a management team, based in Encinitas, CA, and began searching for a site for the biodiesel plant.

They found a three-acre site formerly housing a U.S. Naval warehouse located at the Port of Stockton.

The site had several logistical advantages:

- Access to deep water shipping.
- Access to rail and truck shipments.
- Proximity to feedstock and fuel hubs.

Process-related construction began in December 2007 and was completed in June.

Capacity, Storage

The process room and laboratory is housed in an existing 40,000-square-foot building, which was originally erected in 1945.

It has a storage capacity of more than 250,000 gallons for feedstock and finished product storage with more storage planned.

There is also a 900-square-foot laboratory with the capacity to fully test biodiesel in-house and support the company’s research and development activities.

Management, Expertise

“Our staff includes full-time chemical and mechanical engineers, plant operators and laboratory technicians,” Mortenson said.

Some of the key staff includes:

- **Bruce Cohen**, a chemist by profession, is the plant manager and has managed chemical processing plants for more than 20 years.

- **Dr. Chris Guay**, director of research and development leads the company’s algal biodiesel and solid catalyst projects. He has been a featured speaker on algal biodiesel at many prominent events



The distillation tower is located in the plant’s main yard.



Patrick Samson, assistant plant manager (left), discusses the plant's operation while out in the main yard with Plant Manager Bruce Cohen.



Inside the operating room are Ryan Lamberg, director of logistics (left), and Plant Manager Bruce Cohen.



Patrick Samson, assistant plant manager, discusses plant operations inside the plant with Environmental Manager Victoria Junquera.

including the 2007 Algae Biomass Summit and 2008 annual meeting of the American Oil Chemists' Society.

- **Dr. Clifford Detz**, member of the Board of directors, was a founding and senior member of Chevron Technology Ventures and brings expertise in the development and commercialization of fuel-related technologies.

Transportation/Location

Community Fuels is ideally situated with access to Stockton's deep water shipping channel, and two national rail lines, according to Mortenson.

"There's a lot of heavy industry near us and it is also an agricultural county," Mortenson explained.

The plant is located close to California's Central Valley agricultural and markets, close to fuel hubs, is a major trucking corridor, has heavy rail and shipping.

Also, she added, the area will be able to use biodiesel's emissions profile to reduce air pollution.

Marketing, Co-Products

Community Fuels is marketing its own biodiesel and glycerin.

Although preference will be given to local buyers, the fuel and glycerin will be marketed both domestically and internationally.

Myke Feinman, editor