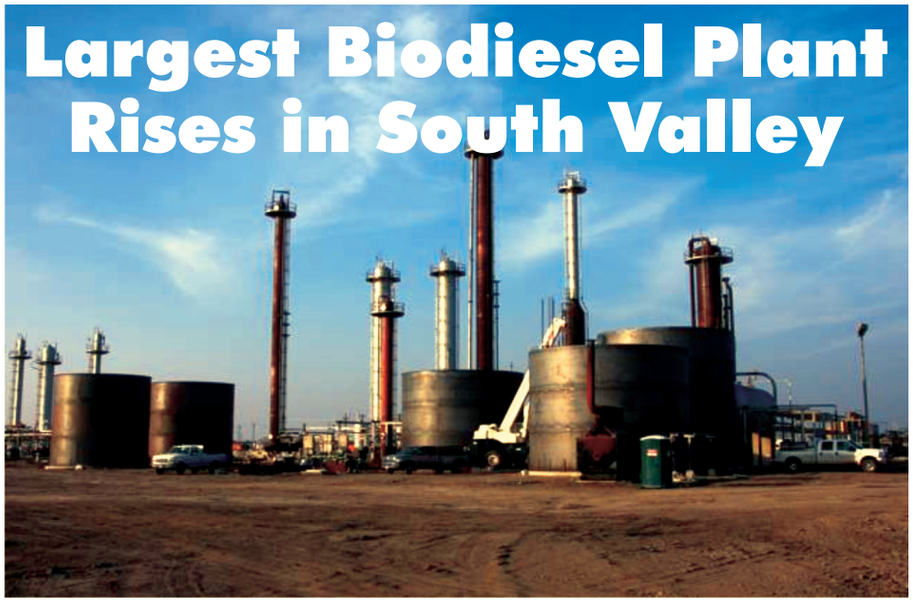
Largest Biodiesel Plant Rises in South Valley



Biodiesel Plant under construction near Bakersfield.

Going Green Not Easy

Colorado-based Crimson Renewable Energy LP is building California's largest biodiesel refinery near Bakersfield with production scheduled to begin May 1. The plant will have a capacity to make 30 million gallons of biodiesel a year, says company president Harry Simpson.

The Issue of Price

As the U.S. and California continue to use more diesel fuel, the demand is great for cleaner burning biodiesel that is typically blended with petroleum diesel "but the issue is price," admits Simpson.

That's because 85% of all biodiesel is made from soybeans. Soybeans, like other grains, have skyrocketed in price in the past year spurred on by the global appetite for these commodities.

"Soybean oil is now running 51 cents per pound, compared to 26 cents per pound in spring 2006," says Simpson. The result is that biodiesel today, even with a $1 per gallon incentive, costs customers about 12 cents more a gallon when comparing B20 (20% biodiesel) to conventional diesel. "At that price, point companies who want to do the right thing for the environment" by using biodiesel in their truck fleets, "have a tougher time justifying the extra cost," says Simpson – particularly in what is now a recessionary economy.

Despite record prices for diesel, buyers are motivated to buy the fuel since their overall mileage is better than gasoline vehicles and those vehicles tend to last longer. But this year, like all motorists, diesel customers have been paying $3.60 a gallon or more to fill up and they are price sensitive.

This reality has set back the biodiesel industry nationwide even though both state and federal incentives are pushing the renewable-based fuel.

Nationwide, construction of new biodiesel facilities has now reached 500mmg rising from as little as 25mmg in 2004 just before a federal biodiesel tax incentive kicked in.

Like the ethanol industry, there are plans on paper to build an amazing 2 billion gallons with all the concern over global warming and the desire to "go green."

The ethanol industry is in the doldrums because of high corn prices and it's clear the upstart biodiesel industry is in the same boat due to soy prices. But there are offsetting factors as well, notes Simpson.

With rapeseed, canola, soybean and palm oil all jumping in price to record levels recently, Crimson Renewable is designing its new Bakersfield plant to run on animal fats, says Simpson, where prices are more stable.

Making biodiesel from animal fat has some other advantages, says Simpson, including better lubricity of the fuels. "Some truckers tell us they just love it," says Simpson pointing to the fact that it can extend the life of a diesel engine.

Crimson is an oil exploration company in California that now wants to build its renewable portfolio here. The company has a distribution system to sell biodiesel now to customers and with the new production facility can cut out the middle man. Simpson says, "it made more sense to source our feedstock in California and build the plant here close to our end market" rather than ship to California.

The company also has its eye on Sacramento where there is a possibility of a legislative requirement to produce renewable fuel within the state border that could be mandated in the future. In addition, made with animal fat as its base, Simpson believes there will be less price resistance from large fleet owners who want to use at least a B5 blend in their tanks in California motivated in part by the requirement to reduce greenhouse gas emissions in the state.

Governor Schwarzenegger has pushed for 20% of fuels used on vehicles in California be made from renewable sources by 2020.

This week California-based Safeway (Vons) announced it would convert its nationwide fleet of 1,000 trucks to a B20 blend supplied by a northern California biodiesel company. The blend requires no modification of its engines.

A B20 blend is far cleaner than petroleum diesel when it comes to particulate matter – considered perhaps the biggest problem in the valley – 47% lower as well as hydrocarbons that are 67% lower than diesel fuel. In addition, it reduces cancer-causing compounds.

More Diesel Cars Coming

Simpson says another factor that is bullish for biodiesel is the appetite for diesel continues to grow both in California and nationwide. "We see California diesel consumption growing by 60% with many of the car makers coming out with diesel technology that has been perfected in Europe." Simpson believes car makers faced with rising CAFÉ mileage standards for their fleet will increasingly turn to diesel vehicles that are popular in Europe where they have 35% market penetration. The cars are popular even though diesel prices are high. "If you go out and get a diesel Golf (VW), it gets the same mileage as a Prius," he notes.

Simpson adds that Honda and Nissan will be joining European manufacturers and Jeep by offering diesel-powered cars in 2009.

Light duty diesel vehicles use 38% less fuel per mile compared to their gasoline counterparts.

Simpson figures diesel consumption in California – now about 20% of all the fuel consumed – will go to 30% to 40% in the future. Using a biodiesel blend – diesel fuel will actually help clean the valley's sky.

When biofuels like biodiesel or ethanol are made from food-based oils as most of it is today, world prices for these oils like palm, soybean and canola have all reached record levels in recent weeks. Worldwide, all foodstuffs have climbed in price by 37% in the past year on top of a 14% gain in 2006. But animal fats and used cooking oil are local products and have not skyrocketed.

While much is made of the tension between these grains for fuel vs. food, the increases look tame compared to the price run up of crude oil in the past year. In 2007, oil has climbed from $50 a barrel in January to over $90 a year later. That's an 80% increase. But if the biofuel industry is to expand worldwide to its potential, it will need to find a non-food feedstock to fuel the rise. That's what makes the research into cellulose-based ethanol and new crops for biodiesel so critical. Demand for meat worldwide and corn based ethanol has caused corn prices to rise to $5 a bushel pushing down the acreage of other field crops including soybeans. Soybean acreage dropped 19% in the past year in the Midwest.

Simpson says the plant is being designed to run on animal fats but can use any vegetable oil source as well if some oil becomes more favorable. Simpson has met with local growers encouraging production of alternative crops that might include mustard or other low water demand crops as a possibility.

One of the most promising worldwide is the succulent plant – Jatropha Curcas - that produces a vegetable oil developed first in India. The plant yields four times as much fuel per hectare as soybeans and has been touted by Goldman Sachs recently. The plant can grow in poor soil and since it's not edible – does not compete with food uses the way corn and soybeans do. Simpson says if Jatropha takes off worldwide, developing countries could supply the oil cheaply as a feedstock.

Whatever vegetable oil crop we grow in the Valley to supply biodiesel fuel, one piece of the puzzle is lack of adequate crushing capacity, says Simpson. JG Boswell has the South Valley's only crusher used to process safflower oil, valuable as a food oil.

Biogas Too

Besides launching a biodiesel industry, Crimson is busy building a biogas facility that will process cattle manure from 6,000 cows into 150 million cubic feet of biogas per year – a renewable substitute for petroleum-based natural gas. Their long term goal would be to process waste from 100,000 cows – helping with another big valley problem – greenhouse gas emissions and smog precursors generated by the livestock industry. In adopting this technology, it is working along similar lines as another group in Fresno and Tulare County that is selling biogas to PG&E.

Besides making biodiesel at the Bakersfield plant, Simpson notes it will produce another byproduct – glycerin – used in soaps and lotions in large volume.