

BIODIESEL

MAGAZINE

AUGUST 2007

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TRANSPORTATION

Within the Petroleum Distribution Network



A partnership between Kinder Morgan Energy Partners LP and Green Earth Fuels LLC literally places biodiesel production within the petroleum distribution network, right next to the pipelines. Kinder Morgan believes this would be effective in taking biodiesel out of its niche fuel status.

By Anduin Kirkbride McElroy

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MAGAZINE

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Green Earth Fuels LLC is a new biodiesel company, but those involved aren't new to the energy industry. The management team has significant experience with traditional energy infrastructure like pipelines and power plants. "The team we put together understands the industry well and can relate to the companies that aren't coming from an agricultural background, but from an energy background," says Jeff Trucksess, executive vice president of government and regulatory affairs for Green Earth Fuels.

"We looked at the model of how biodiesel would enter the mainstream and developed a model of what oil does," Trucksess says. The petroleum industry operates on a strict level of quality, scale, ratatability and access in the terminals. Having access in the terminals is one of the key points to the company's philosophy. "Being in the terminal is the ideal location," Trucksess says. "It gives you access to the distribution system." The company focused its efforts on the Gulf Coast because it's the launching point for the oil and gas systems. "In our mind, it's cheaper to move vegetable oil than it is to move the finished product," Trucksess says. "It seems to make more economic sense."

This line of thinking resulted in a business plan that is consistent with how the energy industry thinks and works, as opposed to some of the biodiesel companies that came out of the agricultural sector, Trucksess notes. It was the company's business plan that helped it land a major partnership with Kinder



The Green Earth Fuels biodiesel facility is shown under construction in May at the Galena Park terminal in Houston. The construction site can be seen at the bottom of this picture, adjacent to the railroad tracks. Shown at the top of the picture are the feedstock oil and biodiesel storage tanks being built by Kinder Morgan.

Morgan Energy Partners LP (KMP). In late February, KMP announced plans to invest up to \$100 million to expand its terminal facilities to help serve the growing U.S. biodiesel market. KMP will build up to 1.3 million barrels of tankage that will handle approximately 8 million barrels of biodiesel production at its terminals on the Houston Ship Channel, the Port of New Orleans and in New York Harbor. Tanks will be provided for both biodiesel and the raw vegetable oil feedstock.

The plans include a long-term agreement with Green Earth Fuels, in which the biodiesel company has rights to lease KMP land to build biodiesel production facilities at various KMP terminal sites in these regions, and options for expansion to other terminals in the future. "It gives us an opportunity to have a tremendous footprint, and locate in parts of the country where the infrastructure is set up for oil and gas distribution," Trucksess says.

Green Earth didn't waste any time implementing the terms of the agreement. Its first biodiesel plant, Green Earth Fuels of Houston LLC, which is located at KMP's Galena Park Terminal on the Houston Ship Channel, is scheduled to start production in July in half of the 86 MMgy facility. The facility is essentially two

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Having immediate access to standard distribution modalities such as truck racks and barges is certainly crucial, but where this agreement will really realize its power is the proximity to the pipelines.

43 MMgy plants; the second production line is scheduled to come on line in September. Construction on a 90 MMgy facility in Harvey, La., will likely begin this year as well, Trucksess says. The company is also just starting the development process for a third plant in New York.

Trucksess doesn't anticipate that the building process will stop in New York. "Kinder Morgan is the largest terminaling company in the United States," he says. "They have lots of strategic locations that we're exploring. We think it has tremendous opportunities and advantages to be aligned with the leading terminal company. The dramatic benefit of biodiesel is it can use existing infrastructure. It doesn't have some of the challenges that ethanol distribution has, so it seems to make sense to locate right in the heart of that infrastructure."

KMP also sees the synergies of biodiesel and petroleum



Kinder Morgan has almost 20 million barrels of storage capacity at its two Houston terminals. More than 1 million barrels of product is moved each day. The Galena Park terminal, where the biodiesel storage is located, has 4.5 million barrels of storage.

infrastructure across the country. "Certainly within our own group, there are literally over 100 spots that we would be interested in talking with customers about, and promoting that within the industry," says John Mahon, who does business development for renewable fuels at KMP. It all comes down to where the markets are, which are primarily in the Gulf Coast, East Coast and West Coast, he adds.

Mahon is optimistic about the opportunities for biodiesel to feed the nation's appetite for fuel. "Even if you build six [40 MMgy biodiesel plants], the distillate pool is so much bigger—you can't be big enough to service that market on your own," he says. "We've been talking about gallons, they talk in barrels and/or metric tons on the gasoline side. You could build several 200 MMgy biodiesel plants in the Houston area and it would all be consumed."

The \$100 million investment is large, especially for a fuel that will be just a small part of KMP's total fuel load. In the Houston area, KMP's Pasadena terminal has over 15 million barrels of storage capacity. "We move over one million barrels per day," Mahon says. "That is the marketplace for petroleum finished products." For these reasons, Green Earth is just one of a num-

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ber of potential players that can fit into this infrastructure network, he says.

Financially, KMP will likely find it necessary to increase the biodiesel production capacity at its sites to utilize the infrastructure, which is totally separate from the petroleum infrastructure. “Many petroleum facilities use common infrastructure—they can move multiple grades in the same infrastructure,” Mahon says. “We’re building dedicated equipment like a chemical facility. Biodiesel has to bear the fiscal burden of that infrastructure on its own.”

The biodiesel infrastructure is set up to blend seamlessly into the petroleum infrastructure. The feedstock will be stored in dedicated tanks and can be piped to the biodiesel facility. The biodiesel that’s produced can then be piped to dedicated tanks. From there, it can be piped to other parts of the KMP terminal, such as truck racks or boat docks. “The Galena Park facility is connected to the system by four different pipelines that we own,” Mahon says. “We blend biodiesel on the Galena side, and we can transfer product from Galena to Pasadena.”

For now, Green Earth’s biodiesel will be distributed locally and beyond. “Barging is our major modal,” says Trucksess. “Because we’re in Kinder Morgan, the standard distribution system at the local level is through truck racks. We will use the standard transportation modalities, relying mostly on barging.”

Having immediate access to standard distribution modalities such as truck racks and barges is certainly crucial, but where this

agreement will really realize its power is the proximity to the pipelines. “That’s one of the best means to leave the niche fuel status,” Mahon says. “Getting through the pipeline is how it gets to markets.”

At the Galena Park site in Houston, Green Earth is located at the starting point of the pipelines. “This gives us tremendous logistical advantages,” Trucksess says, noting that each of the KMP locations will provide access to the pipelines. When other companies have tested biodiesel in pipelines, just getting the biodiesel to the pipeline was a logistical challenge involving trucks, tanks and barges.

Mahon says KMP is still researching the effects of biodiesel in pipelines. “We’re still in the tentative stage right now,” he says. “Kinder Morgan is an entry point to other pipelines. We also own a fair amount of pipeline ourselves, so we can do something internally.” Nevertheless, he says no specific tests are being announced right now.

When biodiesel is allowed into a pipeline, Mahon confirms that it will likely start at a B5 blend because there is more knowledge on the effects of that blend in a pipeline. “We have good intelligence on a B5 blend in a pipeline,” Mahon says. It may not be long beyond that however, that B20 makes its way into the pipeline. “There is a fair amount of data out there that it won’t be that high of a hurdle,” he says. Nevertheless, since research is still being done, he anticipates that B20 won’t be transported much beyond a regional basis.

When pipeline transportation of biodiesel becomes a reality, Green Earth will already be integrated into the distribution system. “If you don’t own a crushing unit for soybean oil, the next best place to be is where there is infrastructure,” Mahon says. “It makes sense to team up with a terminal that has those things already. We offer all those things, but we offer those things next door to the petroleum world. Our solution happens to be better than everyone else’s.”

This solution appears to be a win for many parties—especially consumers who will eventually benefit from a more efficient method of biodiesel distribution. ■

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