

Calif. firm to make fuel from recycled resin

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PLASTICS NEWS CORRESPONDENT

A California company plans to make diesel fuel from post-consumer polyethylene, polypropylene and polystyrene.

A sorting system will reject PVC because chlorine can cause air pollution, and PET because a state program recycles those containers.

Plastic Energy California LLC has convinced investors and regulators of the project's viability and in June plans to break ground on a plant adjacent to a materials-recovery facility near Hanford, Calif. Sites in Poland and South Korea already use an early version of the technology.

"We will do testing in December and deliver fuel ... in February," said Henry Dwyer, president of the Newcastle, Calif., firm.

"Industry is interested in technologies like we are developing," said Vice President George Larson. "We are not the total solution," but provide an option to divert waste

from landfills, modify the drain on oil reserves and meet changes in diesel-fuel standards.

Academic researcher Heinrich Smuda, a partner in the California project, developed the technology and a pilot plant in Poland in 1997. Dwyer and Larson began exploring his concept in 2000.

In Hanford, a catalytic cracking process will break down PP, PS and high and low density PE into monomers. A proprietary catalyst will help melt the resins in an oxygen-free environment at 400°-600° F without any burning.

A subsequent process will cool the gaseous material into petroleum distillate and then purify and separate the liquid into diesel, a low-octane gasoline and some light gases. The Hanford operation will use the byproduct gasoline to run an electrical turbine generator. Refineries may buy surplus gasoline and blend it for retail distribution.

Operators will remove the reactor's spent catalyst and dispose of the high-carbon char material.

Building and equipping the initial 12,500-square-foot plant, known as Plastic Energy-Hanford LLC, is expected to cost \$15 million. Private equity firms and investors in New York, Chicago and Baltimore have provided about \$8 million. The California Integrated Waste Management Board authorized a \$2 million loan.

The nonprofit Kings County Economic Development Corp. approved a loan for \$250,000 for

power generation equipment, and bank loans will provide the remainder of the financing.

The project's first phase is expected to produce 4 million gallons of diesel fuel annually. The firm anticipates adding more pre-processing equipment in one to two years, Larson said.

The facility will employ 12.

In Zabrze, Poland, a conversion plant opened in 1998 and now can reprocess 319 million pounds of

waste plastics per year.

Another site opened in Jaslo, Poland, in 2003, and a third — using next-generation technology — is to open in Pozman in the fall. Those two plants each can process 22.2 million pounds per year.

A facility in Seoul, South Korea, opened in 2001 and can process 2.2 million pounds per year.

Following in the Pozman plant's path, Plastic Energy-Hanford will use next-generation technology, which is cleaner and more efficient than the Zabrze, Jaslo or Seoul installations, according to Dwyer.

The organizers may build plants in the Los Angeles and San Francisco regions and set up conversion operations elsewhere in North and South America under common ownership and technology licensing arrangements.

Phoenix wins Belgian OK

PLASTICS NEWS REPORT

BOWLING GREEN, OHIO — PET recycler Phoenix Technologies International LLC has received approval from Belgian authorities to use its material in food and beverage applications, its first such certification in Europe.

The Bowling Green firm has had a lot of interest in its technology because of legislative pressure to boost recycled content of packaging in Belgium, said Jean

among the most sensitive end markets.

The company said it now also is offering to license its technology, which was developed by its managing partner, Plastic Technologies Inc. in Holland, Ohio.

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