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Trash to get new life at plant

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A garbage-to-ethanol conversion facility is coming to Northern Nevada, but whether the region's own refuse or imported waste will be used remains to be seen.

Pleasanton, Calif.-based Fulcrum BioEnergy Inc. will begin building the \$120 million plant later this year in the Tahoe-Reno Industrial Center 17 miles east of Sparks using organic garbage otherwise destined for landfills.

If all goes according to plan, when operations begin in 2010 the plant will transform 90,000 tons of solid municipal waste into about 10.5 million gallons of ethanol annually.

Every ton of waste will produce an average of 120 gallons of ethanol as an alternative fuel for transportation needs, said Rick Barraza, vice president of administration at Fulcrum BioEnergy. And the environmental benefits don't end there, he said. "Roughly 85 percent of all trash is organic, but we are not trying nor do we want to replace recycling," he said. "Whatever we put into the process, less than 10 percent comes out at the end as waste we can't use.

"This will extend the life of landfills and help mitigate the need for new ones." Any waste the plant does generate, he said, will either go back to the landfill or be recycled for building or road construction use.

Even the conversion itself is relatively clean, a process Barraza said his company plans to replicate with three additional plants to be built in the New England region.

"There are very little emissions," he said. "We're not burning anything. There's no combustion, so there's no carbon dioxide. And there's lots of debate over the issue of ethanol and corn and feedstock costs and food availability. Ours is a solution to that. There's no food involved." Fulcrum President/CEO E. James Macias called the Nevada project a "watershed event" in the nation's efforts to create a sustainable source of renewable fuel for transportation. "We call it 'intelligent biofuel,'" he said.

TRI officials confirmed Fulcrum has purchased an 11-acre site in the Storey County industrial park for a commercial-scale production facility.

But whose garbage will go into the processing plant has not been determined, Barraza said, and he would not divulge whether Waste Management Inc., with landfill operations 10 miles east of Sparks, is a potential customer. "We're talking with various suppliers," he said. "We haven't nailed down those contracts yet." Waste Management officials in Reno could not be reached Monday for comment.

HOW IT WORKS

Organic matter (food, paper, plastics, yard waste, construction waste, rubber products but not concrete, metals, dirt) is collected from solid municipal waste. Matter is dried, chopped into 2- to 3-inch pieces, then put in high-temperature, closed-system "gasifier" to be broken down into hydrogen, carbon monoxide and carbon dioxide, and then mixed with a proprietary catalyst. It emerges as liquid ethanol fuel.