

U.S. Department of Energy - Energy Efficiency and Renewable Energy EERE News

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Waste-to-Energy Projects Gain Momentum in the United States

A large number of projects are now underway throughout the United States to convert waste into electricity. Most projects are using methane generated either by landfills or by anaerobic digesters, devices that use anaerobic bacteria to break down organic substances. In addition, two projects take unique approaches to converting waste to energy. One involves Ameren Corporation's coal plant in St. Louis, Missouri, which is now blending coal with paint solids waste from a nearby DaimlerChrysler auto plant. The pilot program will burn 1,000 tons of paint solids that otherwise would have gone to a landfill. Another unique project, led by Intrinergy, will employ state-of-the-art gasification units to convert wood waste, shredded plastic automotive parts, and other waste into a gas that will fuel two pipe manufacturing plants in Alabama. Intrinergy plans to build and begin operating the two "synthesis gas" units next year. See the press releases from [Ameren](#) and Intrinergy ([PDF 359 KB](#)). [Download Adobe Reader](#).

Landfill gas-to-energy efforts are progressing in Alabama, California, Maryland, New Jersey, and Pennsylvania. In Moody, Alabama, the U.S. Environmental Protection Agency (EPA) provided technical assistance to the Jenkins Brick Company, which recently opened a new manufacturing plant that uses landfill gas to fuel its brick kilns. A 6.5-mile pipeline carries the gas from the landfill, which currently provides 40 percent of the plant's energy needs. In Mountain View, California, Alza Corporation is piping landfill gas to a facility that produces three megawatts of power and hot water for Alza's headquarter facilities. In Maryland, an effort is underway to run a pipeline from a landfill to the nearby Fort Meade army base, where the landfill gas will help fuel boilers. Nearby in New Jersey, Marina Energy and DCO Energy are working with Burlington County to build a 7.2-megawatt power plant at the county landfill by the end of 2007. GE Energy Financial Services (EFS) is financing two other landfill gas projects in New Jersey, which will produce a total of 7.4 megawatts of power when completed later this year. And finally, recognizing that pipelines are a key part of landfill gas projects, the State of Pennsylvania is encouraging such projects by making highway right-of-ways available for landfill gas pipelines. See the press releases from the [EPA](#), [Alza](#), Fort Meade ([PDF 114 KB](#)), [Marina Energy](#), GE EFS ([PDF 119 KB](#)), and the [Pennsylvania Department of Environmental Protection](#).

Anaerobic digester projects are underway in California, Maryland, and Nebraska. FuelCell Energy, Inc. has one operating project and two planned projects in California, each involving fuel cells that use methane from anaerobic digesters as fuel. The operating project uses beer waste to fuel its digesters, while the planned projects will be fueled with milk processing waste and wastewater. Wastewater is also the methane source for a project in Baltimore, Maryland. The city has signed an agreement with Johnson Controls, Inc. to produce electricity, steam, and hot water from the methane produced at a wastewater treatment plant. Manure is the energy source for Environmental Power Corporation (EPC), which has signed manure-handling agreements with six California dairies, allowing the company to install digesters at the dairies. Combined, the digesters will produce 8 million cubic feet of pipeline-quality methane per day, which EPC plans to sell to Pacific Gas & Electric Company (PG&E). EPC also plans to install digesters at Swift & Company's beef processing plant in Grand Island, Nebraska. Meanwhile, the University of California, Davis claims to have developed an improved anaerobic digester, which produces both methane and hydrogen gas. The university is fueling the digester with eight tons per week of food scraps produced at local restaurants. See the FuelCell Energy press releases on the projects using [beer waste](#), [milk processing waste](#), and

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[wastewater](#); the [Johnson Controls press release](#); the [EPC](#) and [PG&E](#) press releases on the cow manure project; the [EPC press release](#) on the beef processing plant; and the [UC Davis press release](#).

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