

New company aims to turn Sandy's trash into power, air advocates are skeptical

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Energy » Critics say that "gasification" has been tried before and has dismal track record.



Sandy wants to host Utah's first waste-to-energy plant using a new technology that cooks trash into methane, which is then burned to generate electricity.

While city officials say the \$125 million project will make Sandy the nation's first "total recycling city," clean-air advocates are deeply skeptical of [Navitus Sustainable Industries'](#) claims that its process would discharge far less pollution than traditional incineration.

They also doubt the commercial viability of its pyrolysis technology.

Such "gasification" dreams have been pursued in other U.S. cities, only to hit technical, legal and environmental snags and leave taxpayers exposed, according to Bradley Angel, executive director of Greenaction for Health and Environmental Justice. He is critical of the growing industry of waste-to-energy companies.

"This sounds great: Get rid of waste. Generate power. And do it with zero emissions," Angel said. "There's just one problem. It's just not true. In my 30 years of work in pollution issues, rarely have I ever heard more exaggerated and outright false claims."

A proposal for a similar plant in Wisconsin never was built and has led to litigation. And a gasification plant in Riverside County, Calif., is operating, but is plagued by problems, Angel said.

"I have dealt with proposed facilities and in every case, reality is completely and totally different than what is claimed," he added. "I have yet to see a company where this technology generates significant amounts of electricity."

Utah Department of Environmental Quality managers already have [signaled](#) they will issue an air-quality permit for the project, but are holding a public hearing Thursday night in Sandy and accepting public comment through Feb. 4.

The deal between the city and the San Jose-based company envisions Navitus collecting Sandy's municipal garbage, 325 tons a day, separating out the glass, metal and other recyclables, and converting most of the remainder into a clean, renewable energy source.

City leaders have signed a lease agreement with the 4-year-old company.

"Residents will no longer need to sort their trash into recyclables and nonrecyclables, as all sorting will be done at the new facility," according to a city website dedicated to pitching the project.

The company will build a combined gasification-generation plant on a 3.5-acre piece of the Sandy Public Works yard at 8800 S. and 700 West.

Sandy leaders originally planned to build a waste-transfer station on the site, but Navitus CEO Heidi Thorn, who lives in Sandy, approached officials two years ago with a different idea.

Officials were skeptical at first, according to city spokeswoman Nicole Martin.

"It is a revolutionary concept — if, in fact, it can do what it purports to do," Martin said. "We are watching the process carefully. We are making sure they are doing their due diligence and we are vetting the technology."

Navitus, launched in 2011, has yet to complete any generation projects, although it is developing proposals elsewhere in the United States and abroad, according to Thorn.

Thorn's Navitus biography claims a background in financing and business development and in "highly regulated" industries and government relations. Former U.S. Sen. Bob Bennett and Utah attorney Frank Suitter sit on Navitus' energy advisory board.

Martin says there is little risk for Sandy or its taxpayers.

"This is purely a land lease," Martin said. "If Navitus fails, we [Sandy] walk away with the land and a new building."

The city pays nothing to Navitus, but will be required to pay a "diversion fee" if it sends its garbage elsewhere. Sandy managers expect to save up to \$200,000 a year in landfill tipping fees.

"This will save us a significant number of trips to the landfill," Martin said. "It is a no-risk, all-benefit situation for us."

Navitus' proposed South Valley Recycling and Renewable Power Facility would separate out the 30 percent of the municipal trash that can be recycled by traditional means. The rest would be mixed with nonhazardous industrial waste and crushed into pieces no larger than two inches in size.

The plant then would dry the feedstock, a 2-to-1 mix of residential and industrial refuse, and run it through equipment using a proprietary technology known as "Tucker Advanced Pyrolysis," which heats the waste to between 1,600 and 1,800 degrees. Pyrolysis essentially burns the garbage in the absence of oxygen, releasing water and hydrocarbon vapors. After the liquids are removed, the remaining gas is 90 percent methane, the most simple of hydrocarbon molecules, Thorn said.

"The heat is forcing the large molecules into smaller molecules, so we are producing a synthetic gas instead of smoke," she said. "We are selectively generating methane."

The methane, the primary ingredient in natural gas, will be burned in internal-combustion engines to generate 15 megawatts of power, which it would pipe into Utah's electrical grid. After pyrolysis, about 5 percent of the feedstock will remain as a substance known as char, which can be landfilled, according to the company's DEQ filings.

Navitus executives hopes to begin construction this summer and have the plant online within 20 months of breaking ground.

DEQ's proposed permit predicts fairly minor levels of emissions for various pollutants.

For example, the plant would discharge 60 pounds of fine particulate pollution, 7.6 tons of nitrogen oxides and 33 tons of carbon monoxide a year.

Navitus' pyrolysis unit would be equipped with a flare to burn off gases that would otherwise be vented during breaks in normal operations. The company predicts the flare would operate 50 hours a year.

Still, Utah clean-air activists are concerned about hazardous air pollutants and volatile organic compounds the plant would be allowed to emit.

"We are taking samples every three seconds," Thorn said, "so we continuously know what we are producing."

She says she has every reason to make sure the plant is operating cleanly: Her two children have asthma. She is sensitive to air-quality impacts.

"I share the concerns and skepticism the environmental community has," Thorn added. "We should take a close, hard look at anything that is proposed."

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