

## Sewage turned to power

### Treatment plant's incinerators will generate electricity

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**CUYAHOGA HEIGHTS** — Sure, they won't turn poop-into-power entirely, but sludge incinerators that could neutralize the carbon footprint at the state's largest sewage treatment plant still have local officials pretty pumped.

Northeast Ohio Regional Sewer District leaders said last week that plans to replace half-century old furnaces at the East 49th Street sewage treatment plant will now include steam-powered electricity generators — fueled mostly by the solid human waste.

The district had announced three years ago a plan to install a trio of new, more efficient incinerators at its Southerly Treatment Plant, which treats about 90 percent of the waste from Cleveland and its surrounding suburbs.

Last week's revision has a clear ecological upside: The new incinerators would use 98 percent less natural gas to operate, could produce enough steam-generated electric power to pay for a portion of their operating costs and should make the incineration of the sewer sludge an effectively "carbon neutral" operation.

"And you'll be doing the right thing and you'll be seen as a better neighbor," Cecil Lue-Hing, a biosolids expert told district leaders Friday. Lue-Hing and a half-dozen other experts took part last week in a four-day review of the district's new incineration plan.

But the new plan also comes with a steep economic downside: design, construction and installation costs of \$120 million — \$22 million of that to add the biogas component to the project.

Those costs would likely be passed on to the district's 330,000 ratepayers, who are already facing double-digit annual increases for the next decade or more. Officials did not say, however, how the project cost would affect sewer rates.

"It's a costly, but necessary, project with long-term implications," said Julius Ciaccia, sewer district executive director. "We want to make certain we're moving forward with the most progressive plan possible."

That means replacing the 44-year-old incinerators before they break down or maintenance costs break the bank, said Kellie Rotunno, the sewer district's director of engineering.

"There's a huge cost to not doing anything," she said. She also said the district could save \$2.6 million by moving construction up a year from the initial 2013 target.

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"But it's a pretty exciting thing to think that we could be carbon neutral in the handling of our waste," she said.

Carbon neutral means that a given process — treating sewage, in this case — does not produce more carbon dioxide than it saves. Most scientists concur that an atmospheric accumulation of carbon dioxide, methane and water vapor is the leading cause of global warming.

Rotunno said the district's plans differ from those by a company in Rialto, Calif. that is building a \$160 million plant to turn sewage sludge into a pellet-like fuel that can run small power plants.

"We're not precisely poo-to-power, but if we get the OK from our power provider to do this and if the state of Ohio ever offers credits for green power, this would be a huge benefit for us," Rotunno said.

The reduction of natural gas

fuel alone would provide a drastic reduction of greenhouse gas emissions, said Scott Harder of a Minneapolis environmental planning group.

The current sewer district set-up releases about 20,000 metric tons of carbon into the atmosphere; the new incinerators would have a net impact of minus-10,000 metric tons — a 30,000 ton difference, Harder said.

Meanwhile, the new incinerators could generate up to 2.6 megawatts of electricity — about a fifth of what the waste treatment plant uses, said Lori Stone, a Kansas City-based consultant who took part in the group study last week.

Further, the new furnaces would also reduce air pollution, specifically regulated pollutants nitrous oxide and sulfur oxide, by 100 tons a year, Rotunno said.

Ciaccia said since the project is the largest since he took over leadership of the district in 2007, he wanted to make sure it was economically and environmentally sound.

"This is the way we're going to go — I'm sold on it," he said.

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The Northeast Ohio Regional Sewer District is looking to replace this quartet of incinerators at its Southerly Treatment Plant in Cuyahoga Heights with three more-efficient incinerators at a cost of \$120 million.

For more information, contact Public Information Specialist  
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