## **How Colorado Is Turning Food Waste into Electricity**

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Luke Runyon / KUNC, Harvest Public Media At the Heartland Biogas Project, millions of tons of food waste are collected and converted into usable methane gas

The six huge cream-colored holding tanks at Heartland — which can hold 1.7 million gallons of food waste and manure slurry — work like enormous stomachs. Pretty much anything you could eat can go into the digester.

And as with our own digestive systems, what comes out at the end is a liquid (a water-based sludge, technically) — which is captured in lagoons and reused in the digestion process; a solid — used for composting; and a gas.

That third thing — methane gas — is what really interests the owners of the Heartland plant. Methane is captured, sent into an interstate pipeline and used to generate electricity.

If all the food waste processed at the plant were sent to the dump instead, it would still release methane as it rotted and decomposed — but all that wasted gas would seep directly into the atmosphere and contribute to climate change. Methane is a powerful greenhouse gas.

In fact, most of the 130 billion pounds of food that Americans wasted in 2015 sits in landfills, giving off methane.

So in that way, anaerobic digesters are able solve a few problems at once. A recent report from the nonprofit group ReFED found that digesters not only generate renewable energy, they also divert food waste from landfills, cut down on harmful emissions and provide a few jobs along the way.

"We've seen a lot of those types of digesters in Europe and we're just starting to see them emerge in the U.S.," says Darby Hoover, a resource specialist with the Natural Resources Defense Council, which contributed to the ReFED report.

Anaerobic digestion is one promising piece of a much larger puzzle to solve the food waste problem, Hoover says. But digesters are expensive, and many require policy fixes to get off the ground.

Cities like Sacramento, Calif., which is working to meet high state standards for renewable energy production, are using biogas generators like Heartland to meet those standards. The Sacramento Municipal Utility District is locked in a 20-year agreement with EDF Renewable Energy — the private development company that runs Heartland — to buy all the gas generated there.