The Salt Lake Tribune

Utah's rotten, stinky food can now be transformed into natural gas and fertilizer. Grocery stores and restaurants rejoice.

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Published: May 27
Updated: May 28, 2019

North Salt Lake

Imagine Utah as home to a voracious beast, able to consume 5 million gallons of food scraps — from rotten lettuce and rancid hamburger to spoiled milk and dirty frying oil.

What if this giant creature could grind and liquefy the waste, keeping it out of landfills and turning it into useful products such as natural gas and fertilizer?

This animal isn't make-believe. It exists and is just waiting to be fed the stinkiest, sourest, most disgusting leftovers the state can scrape off its plates.

Utah's first anaerobic food digester revved up in late February and, as of last week, was taking in about 100,000 gallons of food waste a day — one-third its capacity.

It's still in the fine-tuning "pilot phase," explained Morgan Olsen Bowerman, the sustainability manager for Wasatch Resource Recovery, which operates the digester. Food waste collection is expected to increase throughout the summer, and the facility should be operating at full capacity later this year.

The digester — actually two giant towers that hold 2.5 million gallons each — is located on the same site as the South Davis Sewer District plant in North Salt Lake, a natural location since anaerobic digesters also have been used for decades for wastewater treatment.

Stand-alone food digesters have been in operation in Europe for several decades, but the technology has caught on in the U.S. in recent years as the nation deals with its massive food waste problem.

According to the U.S. Department of Agriculture, about 40 percent of food produced in the United States is wasted and nearly all of it ends up in landfills, where it is buried and causes greenhouse emissions as it decomposes.

The Utah food digester took about two years to build and cost $45 million as part of a public-private partnership with the sewer district and ALPRO Energy & Water.
It uses water, heat and naturally occurring bacteria to grind and liquefy food waste. "It's a giant synthetic animal," Bowerman said, "that breaks it all down."

The process creates two end products: methane gas, which will be converted into natural gas, and solids, which will be transformed into nutrient-rich fertilizer. Once at full capacity, the digester is expected to produce enough natural gas to continuously supply a city of 40,000 people — nearly the size of Bountiful.

The digesting process takes place inside several large buildings connected with underground pipes and with — surprisingly — minimal stench.

“Sometimes it smells like your kitchen garbage,” Bowerman said, “but we’ve put in a lot of air control measure to keep that under wraps.”

The facility’s location — west of Legacy Highway and next to the wastewater treatment plant and conservation lands — means “we don’t get a lot of complaints.”

Unlike a compost facility, which can take only fruit and vegetable scraps, the anaerobic digester is able to take “a full plate of foods,” Bowerman noted, including meat, breads, dairy, fats, oil and grease as well as processed foods — still in their packaging — and bottled beverages such as milk, beer, iced coffee and soda.

On a recent day, dozen of pallets of organic milk were sent through Wasatch Resource Recovery’s de-packaging equipment, which separates the milk from the plastic containers. The milk is sent down pipes and filtered into the digester while the containers fall into a cardboard box destined to be recycled.

Large manufacturing plants across the Wasatch Front — which process ice cream, yogurt, beer and frozen items — provide most of the food waste, but so do grocery stores, restaurants and catering companies.

Harmons Grocery currently is transporting food waste from its West Valley City and Kearns stores to the digester, said Pou Ahkiong, the chain’s sustainability manager.

“It varies, but our pickups range from 3 to 5 tons a week,” she said. “It’s amazing how much food waste comes out of a grocery store.”

The initial phase is going so well that over the next few months that food waste from 12 other Harmons stores along the Wasatch Front will be transported to the facility.

The digester should make it easier for small restaurants and food companies — which often lack the staff and time — to separate the compostables into a food bin, explained Jason Utgaard, general manager for Momentum Recycling.

“This is a big game changer,” he said. “Now they can scrape the plate.” They no longer have to separate the fruits and vegetables from the breads, meats and cheeses.

If the occasional paper napkin or plastic straw makes it into the bin, that’s OK, he said, “because the digester can separate those out, too.”

Momentum Recycling — which picks up the majority of food waste at restaurants, bars, hospitals, grocery stores and convention centers in Utah — already is transporting “multiple loads a day to the digester," said Utgaard.

The company anticipates that trips will increase in the future and recently purchased a new truck specifically designed to haul food waste.

Emery Lortsher, co-owner of The Blended Table, is eagerly awaiting a new food recycling bin that will allow the boutique catering company in Salt Lake City to send food waste to the digester.

“It will probably quadruple what we can recycle,” she said, including cooked food and leftovers from parties and events that — up until now — have gone in the trash.

“We donate as much food as we can to the Rescue Mission,” she said, “but there are certain foods we just can’t donate.”

Wasatch Resource Recovery is working on a way that consumers can drop off food scraps, said Bowerman, adding that she’d like to have something in place by October to capture all those jack-o’-lanterns people carve for Halloween.

Hungry beasts probably like pumpkin.