



# What you don't eat will heat your home

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## University of California, Davis wants to light the world with old melon rinds.

The university will show off an experimental facility next week that takes wilted lettuce, fish heads and other leftover food bits and turns it into biogas, a combination of natural gas and carbon dioxide. Separating the CO<sub>2</sub> leaves commercial grade natural gas.

The technology, called an anaerobic phased solids digester, has been licensed from the university and adapted for commercial use by Onsite Power Systems. In the digester, [microbes](#) eat the garbage and give off valuable gases.

Several companies are experimenting with figuring out ways to exploit waste products as an energy source. Natural gas releases fewer pollutants than coal or car gas. And the fuel stock costs little to obtain and has little independent value. Who wants a chewed up piece of meat that got spit out into a napkin, after all? In fact, garbage costs money to get rid of, so using it as fuel can cut other operational costs. (Microbes are also gaining more attention from venture capitalists.)

In Texas, [Microgy](#) is opening up a series of thermophilic digesters that will transform [cow manure](#) into natural gas and biogas. So much gas can be produced that Microgy will ship it over commercial natural-gas lines.

Eight tons of leftovers will be processed weekly at the Davis facility, and in the future the facility could turn 8 pounds of leftovers a day into gas.

The leftovers will come from some of San Francisco's fancier restaurants, including Slanted Door, Jardiniere, Scoma's, Boulevard and Zuni Cafe.

These restaurants are located about 60 miles from Davis, so trucking in the "clean" fuel stock will likely require a diesel-burning, fume-belching truck. Diesel trucks, however, can be modified to run on old vegetable oil from [deep fat fryers](#).

"Each ton of broccoli spears, cantaloupe rinds and fish bones should produce enough energy on average to power and heat 10 California homes," the university said in a statement. "The natural gas produced could also be used to power cars and trucks."

The university, however, did not state whether it would resort to getting scraps from restaurants in the Davis region, like Murder Burger (also known as Redrum Burger) or Eppie's.

Ruihong Zhang, a UC Davis professor of biological and agricultural engineering, and Dave Konwinski, CEO of Onsite Power Systems will discuss the technology and show off the facility on Tuesday.

UC Davis is one of California's leading energy and agricultural schools. Professors there are currently working on [plug-in hybrids](#) and [hydrogen cars](#). One start-up in the area is [AgraQuest](#), which finds microbes that kill harmful garden pests.