

# Raleigh green startup to generate electricity from food scraps

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A Raleigh green energy startup has signed its first commercial contract to build a facility that will turn 120 tons of food scraps a day into electricity.



Orbit Energy, founded in 2004, said this week it signed a 15-year agreement to sell renewable electricity to National Grid, a power company in New England.

Orbit CEO Anwar Shareef said his company has plans for 15 similar facilities across the country, including one in North Carolina scheduled for construction later this year.

The company is negotiating a power purchase agreement with Duke Energy for a 4.8 megawatt plant near Charlotte, Shareef said. The project was approved by the N.C. Utilities Commission last year but still requires an air emissions permit from state environmental regulators.

"We're very close to launching several of these, most of them on the West Coast," Shareef said.

Orbit's technology turns food waste into a biogas that is burned as a fuel to run an electric generator. The process has been tested at Orbit's pilot facility in Clinton, where food waste from Wal-Mart and Fort Bragg is combined with bacteria to accelerate decomposition and release gas as a byproduct.

In this country, most food waste goes into landfills, some of which are rigged to trap the seeping methane gas and use it to generate electricity. Shareef said the benefit of Orbit's technology is that it captures 100 percent of the gas, rather than about a third of it, and the waste-to-gas conversion cycle takes several days, rather than months or years.

The Rhode Island plant will cost \$15 million and is expected to begin generating electricity late this year. It will produce 3 megawatts of power, enough to power about 2,300 homes, by using food scraps from restaurants and grocery stores.

"I'm amazed that you can do this," National Grid's senior counsel Jennifer Brooks Hutchinson told the Providence Journal newspaper in Rhode Island. "Your waste product can turn into power."

Green energy companies in North Carolina and elsewhere are experimenting with extracting energy from a wide range of biomass -- wood scraps, animal dung and even human feces -- by drying it and burning it, or by extracting flammable gases.

The projects are driven by state mandates that require power companies to buy renewable energy from non-traditional fuel sources. The main drawback is the high cost of trash-sourced energy, though in some communities air emissions are also a concern.

Orbit, with 10 employees, is privately funded by about 60 shareholders, Shareef said. The company has raised more than \$7 million from private investors.

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## About the blogger



John Murawski has been a full-time newspaper reporter since 1991, with stints at Legal Times and The Chronicle of Philanthropy (both in Washington, DC), The Philadelphia Inquirer and The Palm Beach Post (in South Florida) before arriving at the N&O in December 2004. At the N&O he covers energy (nuclear, coal, renewable, efficiency), utilities (electric, natural gas, telephone) and telecommunications. His beat

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