

# Landfill's methane gas generates electricity

## Capstone MicroTurbines™ installation



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### Situation

The Sauk County Landfill in southwestern Wisconsin has approximately 625,000 tons of waste. In the past, methane gas produced at the 20-acre site was burned using an open flare. Alliant Energy-Wisconsin Power and Light (WP&L) and RMT, Inc., an environmental consulting firm and Alliant Energy affiliate, partnered with Sauk County to install the first multi-turbine Capstone installation in Wisconsin in June, 2003. Now the gas is being used more productively.

This distributed generation project captures methane gas produced by decomposing waste and uses it to fuel twelve 30kW Capstone MicroTurbines. The turbines will produce enough electricity to power about 150 average homes for the expected ten year life of the project. That energy is sold back to Alliant Energy-WP&L.



### Facilities

#### Sauk County Landfill – Wisconsin

Waste in place:	625,000 tons
Biogas produced:	260,000 ft <sup>3</sup> /day
Equipment installed:	Twelve 30kW Capstone MicroTurbines, Enerflex Gas Conditioning Skid
Electrical energy produced:	6,600 kWh/day
Contact:	John Carroll, Site Manager, (608) 524-6515

### Installations

Since installation, the Sauk County Landfill has lowered its emissions, reduced its energy bill and generated revenue. The landfill is located between Baraboo and Reedsburg off Highway 33, about 50 miles northwest of Madison.

*“Using the Capstone turbines is a great plan because they produce lower emissions than we are currently producing by burning the methane in an open flare. So, we’re not only generating revenue, we’re helping the environment as well.”*

**— John Carroll,  
Site Manager, Sauk County Landfill**

*“Energy recovery is nothing new, but this is the first multi-turbine Capstone installation in Wisconsin. These MicroTurbines are unique because they now make energy recovery at a small landfill viable.”*

**— Steve Wittmann,  
Project Director, RMT, Inc.**