

///Application Profile////////////////////////////////////

# Landfill Power Generation

## Remote Equipment Monitoring and Reporting Solution

Brown County in Wisconsin maintains two closed sanitary engineered landfills which hold an estimated seven million cubic yards of solid waste. The County operates a power generation facility to convert methane produced by the landfill into electricity. The plant produces enough energy to power 2,000 homes. The challenge is reliable monitoring and reporting on a wide range of sub-systems within the plant, all in a very rugged environment.

### The Solution

ZTR Control Systems was chosen to provide monitoring and control for the landfill power plant. The company has over 15 years experience providing local and remote asset management services for about 40 landfill plants across North America. FABCO Power Systems, the local Caterpillar® dealer, was the general contractor for the construction of the plant. Two Caterpillar G3516 gas generators that are designed to run on landfill methane are used to produce the electrical output of the plant, which is then supplied to the electrical grid.

ZTR supplied a complete monitoring and communications system on site to collect and process data necessary for the day-to-day operations of the plant. The ZTR system interfaces directly with the generators' electronic control, the advanced switchgear, and the gas compression skid. Environmental data is also monitored for emissions compliance purposes.

From its Network Operations Center (NOC) in Minneapolis, ZTR provides a number of services for landfill power plants which include automated alarm notification, reports, and 24/7/365 support for the plant. Not only that, but ZTR saves the landfill a lot of money by providing alarm response during night and weekend shifts. The reports generated by ZTR's NOC are used for production, billing, maintenance and environmental compliance. According to Iven Mestry, Applications Engineer for ZTR, "If customers are operating multiple landfill power plants, the NOC aggregates data from all sites so that alarms and process data can be viewed in one place. In addition, summary reports aggregate important information from multiple sites and allows for easy comparison."

Clay Hardenburger, Renewable Energy Manager at FABCO Power Systems said, "Through ZTR, we were able to meet the monitoring and reporting requirements for the Brown County Port & Solid Waste Department. ZTR handled all data and communications issues with vendors to provide a complete solution. They made this project a success for FABCO and for the County."



### About ZTR Control Systems

ZTR Control Systems is a leader in remote monitoring systems and equipment management services for a variety of industries. With offices in Minneapolis, MN in the USA and London, ON, Canada, the company brings together a broad range of expertise in enterprise business systems, technology integration and industry applications. ZTR has been providing technology services to its customers since 1987 and is an ISO 9001 company.

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