POWERPROFILE

Customer:	DTE Biomass
Location:	Uwharrie Environmental Landfill in Mt. Gilead, North Carolina
Market Segment:	Biogas to Energy
Customer Business Issue:	Converting methane gas created by landfill to electricity
Solution:	Six CAT® G3520 gas generator sets

POWER NEED

In October 2014, DTE Biomass completed their 9.6-megawatt landfill gas-to-energy project at Uwharrie Environmental Landfill, locally owned and operated by Republic Services of North Carolina. DTE Biomass, based in Ann Arbor, Michigan, operates the facility at the landfill. As trash there breaks down, it releases methane gas into the atmosphere. The facility captures that methane gas and converts it into electricity, subsequently sold to Duke Energy. The Uwharrie facility more than doubles DTE Biomass' generation capacity in North Carolina, where it already operates multiple other renewable energy projects.

SOLUTION

Carolina CAT Power Systems closely worked with DTE Biomass on this renewable energy project, installing six CAT G3520 generators that run 24/7/265 at the landfill, constantly converting methane gas into electricity, powering over 7,200 homes in the area. Gas Engine Sales Manager Dave Morel, Product Support Representative Tom Wommack, and Senior Project Manager Mike Clifford were all an integral part of this project.

This project has a very strong green energy initiative. Without these gas engines, the landfill would be "flaring" the methane, burning it into the atmosphere. Instead, the gas from the landfill will be used to power 7,236 homes per year, which is enough power for over 18,000 people. Furthermore, what is extremely unique about this project is that the power will go from the engines directly into the high voltage main power line. "This project is definitely one of the very few, if not the only, project of this type in the entire country, where the engines are producing at 4,160 volts and being fed directly into a higher voltage power line, said Dave Morel. "Based on the most recent US Census for Montgomery County, where the generators are located, we should be able to provide enough power for approximately 70% of all the homes in that county, which is very impressive."

Carolina Power Systems CAT

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