



17 MWe BIOGAS POWER PLANT WASTE MANAGEMENT & UTILITY

OWNER

Veolia Proprete

LOCATION

France

GAS TURBINES

Mars 100 Gas Turbine

CUSTOMER VALUE

Electricity Generation From Landfill Gas

Veolia Proprete required a sustainable solution to minimize the impact of methane from landfill gas produced by a solid waste management system at a site close to Paris. The project required finding an advanced technique to burn surplus landfill gas at extremely high temperatures in order to protect the environment from harmful greenhouse gases. Turbomach designed a solution by providing a combined cycle power plant that has demonstrated excellent emissions performance.

Turbomach
A Caterpillar Company

17 MWe GAS TURBINE COMBINED CYCLE POWER PLANT



PLANT DATA

Mars[®] 100 Gas Turbine (11 MWe)

Steam Turbine Generator (6 MWe)

Heat Recovery Steam Generator

Two Fuel Gas Compressors

Fuel: 100% Landfill Gas

OUR PRODUCT & SERVICES

Gas Turbine Package and Auxiliaries

Design

Construction

Installation and Commissioning

Maintenance

LOW EMISSIONS COST EFFICIENT SOLUTION BIOGAS

The project has enabled Veolia Proprete to efficiently utilize the low-calorific biogas produced at the landfill site, while meeting some of the strictest air pollution limits worldwide. Active carbon filters and high gas compression technology provide the right solution to burn landfill gas in a *Mars* 100 gas turbine with minimal environmental impact. Instead of being wasted by flaring, the gas is used to drive three steam boilers, resulting in steam that drives a turbine. The combined cycle power plant produces 17 MW of electricity and achieves over 80% overall efficiency. The excess electricity is transferred by a transformer to the grid and is sufficient to satisfy the energy needs of a city with a population of 96'000.

Turbomach is a fully integrated part of Solar Turbines, a subsidiary of Caterpillar Inc., and a leading manufacturer of mid-range industrial gas turbines with over 60 years of experience.

**FOR FURTHER INFORMATION,
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