

Waste proves profitable in district CHP installation

When district utility Biogas Oberhessen GmbH & Co, a subsidiary of Ovag Energie AG, issued a tender for the construction of a new biogas installation near the town of Wölfersheim, north of Frankfurt, it was Perkins Gas Partner, Belgium-based E Van Wingen (EVW), who successfully landed the contract for the design, manufacturing, commissioning and maintenance of the cogeneration (CHP) unit that was part of the specification.

The new biogas plant, which has a capacity of 500Nm³/h methane, was seen as a major step forward for the area in the provision of both biomethane for transmission to the public gas grid and for the production of electricity for the 10,000 strong community of Wölfersheim.

EVW chose the Perkins 4006-23TRS2 gas engine as the basis for its CHP installation. Rated at 379 kW_e, the turbocharged, air-to-water charge cooled, six-cylinder unit can operate on a wide range of methane-based gases, making it the ideal choice to run on the new plant's biogas production which was being derived from a mixture of slurry, silage, sorghum, cereal waste and turkey manure.

Since the summer of 2012 the CHP plant has been generating electricity for export into the public grid while the heat is used to help the biogas digestion process and heat the facility's offices.

As part of its winning bid EVW enlisted the services of BU Power Systems. As an official Perkins 4000 Series Gas Centre of Excellence, BU Power Systems offered the necessary expertise and service that was required as part of the four-year maintenance contract with the local utility company.

Commenting on the project, EVW's managing director, Jean-Pierre Van Wingen said: "The Oberhessen installation is significant for a number of reasons. It is the first time that we have tendered and won a contract outside of Belgium for cogeneration and the first time we have worked together with BU Power Systems. The partnership with BU Power Systems will certainly give us scope to increase our business in the German market, where we see district CHP projects growing as part of the general trend to increase CHP's share of the power market."

Andrée Baganz, engineering consultant for the Oberhessen plant from Alensys Engineering, Berlin, said: “The Wölfersheim cogen unit has been running for almost a year and even constantly 24/24 hours in the past couple of weeks. At the time of engineering we were in close contact and this has proven useful for implementation and start-up of the project.

“The operator is happy with the CHP unit. This could only be achieved through permanent communication, joint problem solving and seeking to adjust installation parameters to meet the operator’s needs.”



Photos: The new biogas installation is powered by a Perkins 4006-23TRS2 gas engine.