

Getting everything right

“We fed more than 5 million kilowatt hours into the grid last year,” states Thomas Külz, managing director of BIOgasfarm GmbH Löberitz, with just a hint of pride. And yet he is actually a farmer and not an energy producer. But the Löberitz biogas farm, a subsidiary of the Löberitz Agricultural Cooperative, operates so efficiently that it is possible to achieve this level of feed-in. The 13 members of the cooperative farm around 2,700 hectares of agricultural land in the rural district of Anhalt-Bitterfeld, just north of Leipzig, and run a pig-fattening operation with 4,000 pigs, as well as farming cattle. Add the biogas production and the cooperative in Löberitz represents a broad-based agricultural enterprise.



Photo: D. Finger

High availability

Five years ago, the cooperative and its partners invested some €3 million in a biogas plant with a container cogeneration plant and silo facility at the Löberitz site. The biogas plant has an electrical output of 600 kW and is operated using farm slurry, farmyard manure and plant-derived biomass material in the form of maize silage. The cogeneration plant has an MWM TCG 2016 V12 gas engine which has been managed and serviced by the MWM Service Centre in Erfurt since it was installed five years ago and the availability of the plant at around 8,200 operating hours per year is particularly high. The collaboration works without a hitch and plant manager Uwe Hesse, who is always on site, has a good relationship with the service centre: “It’s the only way we’re able to feed high wattages into the grid continuously,” says Külz confidently.

Test plant plus trials

The waste heat generated in the CHP plant is used for heating the adjacent pig-fattening operation, while some of it can also be used

for drying cereals as and when required. Since it was commissioned in 2011, the biogas plant has also served as a test plant for trialling the process technology used in MWM engines. Specialists from Mannheim come here to test new materials and components and take measurements. Külz believes this works best when the manufacturer and the customer have a relationship which is based on genuine partnership. “At the moment, catalytic converter trials are being run on our plant in cooperation with the German Biomass Research Centre (DBFZ),” explains Külz. The biogas farm also benefits from this since the catalytic converter which is fitted to the plant and is being tested has been running trouble-free for four years now – a huge benefit, as otherwise catalytic converters – which aim to minimise formaldehyde and other emissions – have to be replaced at regular intervals of two to three years. Külz is impressed by the biogas plant with the MWM cogeneration plant: “We got everything right back then! The use of renewable sources of energy, such as the biogas plant and the photovoltaic units at our sites at Löberitz and Salzfurtpapelle, is our contribution to protecting the climate and the environment.”



Photo: D. Finger

“As a test site for biogas, we benefit from the trials and the results”



Photo: D. Finger

Löberitz BIOgasfarm Project

Contact	Thomas Külz
Location	06780 Zörbig OT Löberitz, Rüsterweg
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State	Saxony-Anhalt, Germany
Substrate	Maize, winter rye, pig slurry, pig manure, cattle manure
Cogeneration plant output	600 KW/h
Gas tank volume	1150 m ³
Commissioned	9/2011
Plant manager	Uwe Hesse



Photo: D. Finger

Uwe Hesse, Plant Manager
Löberitz BIOgasfarm Project

Technical data – cogeneration plants

Engine type	MWM gas engine TCG 2016 V12C
Generator	Marelli MJB 400 LA4
Electrical power output	600 KW



Photo: M. Dürrschmidt

Test plant

Since it was installed, the biogas plant at Löberitz has also served as a test plant for the process technology used by MWM. Components are tested under real conditions and measurements taken. At the moment, catalytic converter trials are being run for two research projects and a catalytic converter manufacturer. These projects are implemented by MWM in collaboration with the German Biomass Research Centre.

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