

## “The TCG 2016 genset and MWM’s service are a success story for us”

“The 2010 investment in the cogeneration power plant including the MWM TCG 2016 gas engine was the right decision. I’m very satisfied with the engine and the service provided by MWM. The plant achieves power production of 3.7 million kWh and a thermal output of 3 million kWh per year. The utilization of thermal energy is practically 100%: Thanks to the

operation of a digestion residue dryer, we utilize the waste heat of the genset for drying the digestion residue produced by the system. This enables us to produce a high-grade and sterile bedding material for our cow barn. At the same time, we achieve high overall efficiency, which also allows us to meet the planned amortization period.”



### “Perfect service is synonymous with success”

“I have only great things to say about the service at MWM. The employees are optimally trained and know the genset inside out. This allows it to be perfectly adopted and configured to my needs. For me, the key factors involved are the quick response time and reliable service to prevent downtimes and ensure smooth operation of the engine. I’m still very satisfied with this level of performance. With respect to efficiency, the MWM TCG 2016 gas engine is unbeatable in its class. That’s why I would make the investment in this system again at any time.”

### “Biogas as a useful and economically attractive supplement for farmers”

Detlef Petersen, CEO of Bioenergie Fargau GmbH & CoKG: “With the installation of the biogas plant in the year 2010, we created a second mainstay for our operations. At that time, milk prices were under pressure, and for me as a farmer, biogas was a logical, economically attractive supplement. Our farm has 265 ha of land and 200 dairy cows with its own breeding operations. This enables us to cover one third of the substrate required for gas production out of liquid manure produced from farming. For us, this translates into significant savings in corn consumption and results in additional profits for our operations.”

“For the future, we are planning to implement online management for our three CHP plants.”



Detlef Petersen, Director  
Bioenergie Fargau GmbH & Co. KG

## Bioenergie Fargau GmbH & Co. KG Fargau/Plön, Germany

<b>Contact</b>	Detlef Petersen
<b>City</b>	Fargau/Plön
<b>Country</b>	Germany
<b>Substrate</b>	Corn silage, liquid manure
<b>Partners</b>	3
<b>Acreage</b>	265 ha
<b>Annual gas consumption</b>	1,635,552 Bm <sup>3</sup> /h
<b>Power production</b>	3,700 MWh per year
<b>Heat output</b>	3,000 MWh per year
<b>Commissioning</b>	2010



## Technical specifications for CHP plants

<b>Commissioning</b>	2010
<b>Engine type</b>	TCG 2016 V8 C
<b>Generator</b>	Marelli MJB 355 MB4
<b>Electrical output</b>	400 kW
<b>Electrical efficiency</b>	40.4%
<b>Thermal efficiency</b>	43.7
<b>Overall efficiency</b>	84.1
<b>Power-to-heat ratio</b>	0.92
<b>Lubricating oil consumption</b>	0.2 g/kWh



## Details

The MWM service department provided optimum support for the genset and adapted it to the specific needs of Bioenergie Fargau GmbH & Co. KG to boost efficiency.

### Caterpillar Energy Solutions GmbH

Carl-Benz-Straße 1  
DE-68167 Mannheim  
T +49 621 384-0 | info@mwm.net  
F +49 621 384-8800 | www.mwm.net