

## 97% Availability

Shutdown only for inspections and oil change: MWM TCG 3016 biogas engines ensure reliable heat and power supply in Langenau.



The German city of Langenau to the northeast of Ulm is famous for its many springs. In this water reserve, biogas facilities are required to meet high standards. For example, they are not permitted to use liquid manure. In fact, the digestion of energy plants is the only way to produce biogas in this region. In the Alb-Danube district, many biogas facilities are run by local agricultural businesses under a participation model. For example, BG Biogas Service GmbH runs two plants, each of which has a satellite cogeneration power plant, in a radius of 15 km around Langenau in the form of a participation model for local farmers. The cogeneration power plants in Langenau, Seligweiler, and Öllingen had previously been equipped with MWM TCG 2016 gensets. After about 70,000 operating hours, the oldest

cogeneration power plant in Langenau was to be equipped with a new genset. In the fall of 2018, the container was upsized, and the first new MWM TCG 3016 V16 genset was installed.

“In view of the excellent experience we have had with the TCG 2016, it was only natural that we opted for the successor model TCG 3016”, explains Hans Michael Keck, Managing Director of BG Biogas Service GmbH. The high efficiency of the engine, the reliability, and, last but not least, the high availability were key arguments for the investment in a new genset when the engine at the Seligweiler location also had to be replaced about a year later. Keck explains: “Since we did not experience any problems with the engine in the Langenau cogeneration power plant, our Advisory Board agreed to the new investment.”

**“The MWM TCG 3016 consumes far less lubricant. In this way, we save about €5,000 to €6,000 a year for each engine.”**

He feels that the MWM TCG 3016 V16 engines are very economical compared to similar engines of other providers. “Thanks to the transition to the new engine generation, we earn about €90,000 to €100,000 more every year”, says Michael Keck. Meanwhile, the TCG 3016 V16 in Langenau has completed some 16,500 operating hours, and the one in Seligweiler has reached 8,760 hours. According to Keck, both engines run very smoothly and reliably, and the vibration is very low. In late October 2020, the engine in Öllingen is to be replaced as well. The TCG 3016 V12 will thus be the third new engine to go live.



Hans Michael Keck, Managing Director BG Biogas Service GmbH

# Less Than 3 Percent Downtime/Year

The new TCG 3016 gensets were installed by VG Diesel- und Gasmotoren-Service GmbH. This company is also responsible for the regular maintenance of the three biogas cogeneration power plants. Managing Director Vinzenz Guggemos is convinced of the reliability of the gensets and emphasizes: "Usually, biogas cogeneration power plants do not have any backup gensets. Therefore, the operators depend on the hassle-free operation of the engines. The downtimes of the cogeneration power plants of BG Biogas Service amount to less than 3 percent, i.e. about 11 days a year. This already includes the maintenance work that is done after 2,000 operating hours."

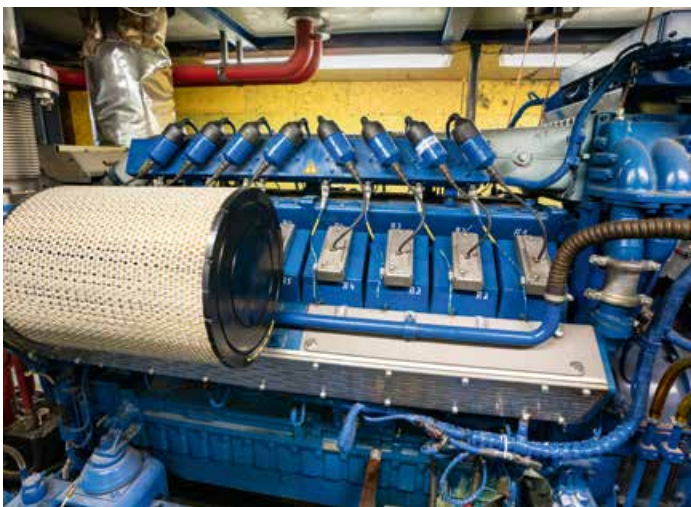


## CornTec Biogas-Langenau GmbH & Co. KG, CornTec Biogas-Seligweiler GmbH & Co. KG

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## Technical data CHP Langenau

<b>Go-live:</b>	2006
<b>Engine type:</b>	MWM TCG 3016 V16
<b>Generator:</b>	Marelli
<b>Control:</b>	Awite
<b>Gas type:</b>	Biogas
<b>Substrate:</b>	Corn and whole plant silage
<b>Gas storage (total):</b>	3,000 m <sup>3</sup>
<b>Plant builder:</b>	Corntec GmbH
<b>Electrical efficiency:</b>	43.1 %
<b>Thermal efficiency:</b>	42.6 %
<b>Electrical output:</b>	800 kW
<b>Thermal output:</b>	791 kW
<b>Total efficiency:</b>	85.7 %



All Photos: © Manfred Herrmann

## Short Routes

There is a good reason why the biogas plants are based at different locations and have not been consolidated to one large plant: at the two locations in Langenau and Seligweiler, for example, the facilities are located in close proximity to the areas where the energy plants are grown and are each connected to agricultural businesses. In this way, the energy resources do not have to travel a long distance to the substrate plants.

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