

FLEXIBLE POWER SOLUTION

for the dairy sector

Background

With an annual production volume of 47,600 metric tons, Milchwerke Oberfranken is a leading international manufacturer of specialty cheeses. The renowned business receives daily deliveries of 1.2 million liters of milk, which is processed at two high-tech plants to make hard, sliced, and soft cheese as well as prepared foods, such as breaded Camembert.

The company wanted a future-proof energy solution to make operations at the plant, located in Wiesenfeld, roughly 120 km north of Nuremberg, more environmentally sustainable and cost-effective. It chose INNIO's Jenbacher combined heat and power (CHP) unit, which also can supply back-up power during outages.

Sustainable solution

INNIO's flexible solution, powered by a Jenbacher J612 unit, can autonomously supply the cheese makers with power and heat in island mode. With this solution, the risk of production stoppages due to power outages is reduced, and the company's in-house energy supply means less power drawn from the public grid. Plus, this solution significantly lowers energy costs.

While the high-temperature heat generated is used for pasteurization (heating milk), the steam is used to heat up the cheese maker's cleaning systems and reheating.

The CHP system at the Milchwerk Wiesenfeld dairy has a power output of 2 MWel and a thermal output of 1.8 MWth. This is equivalent to the average power consumption of about 4,000 German households and the heat consumption of 1,500 German households.



» INNIO's flexible Jenbacher cogeneration plant gives us a dependable power and heat source for our dairy. That significantly reduces our current energy costs and increases the reliability of our energy supply while also markedly improving our environmental footprint.«

Kai Henneberg, CTO at Milchwerke Oberfranken



Result

Even considering its broad usage, the high-efficiency Jenbacher cogeneration unit achieves an overall efficiency of roughly 86% and an electrical efficiency of 45%.

In addition to significantly increasing the reliability of the supply and operating efficiency, this energy solution also considerably reduces emissions through the cogeneration of power and heat. In this way, the Jenbacher combined heat and power unit reduces annual CO₂ emissions by 5,000 metric tons*, resulting in a marked improvement in Milchwerke Oberfranken's environmental footprint and paving the way to a greener energy future for Germany.

The J612 unit is the 20,000th Jenbacher engine that INNIO has sold worldwide.

* <https://www.bkww.de/wp-content/uploads/2021/06/BHKW-des-Monats-September-Oktober-2020.pdf>

Plant facts Milchwerke Oberfranken

Installed engines	J612
Electrical output	2 MW
Thermal output	1.8 MW
Total efficiency	86%
Annual reduction CO ₂ emissions	5,000 tons
Energy source	Pipeline gas
Year of commissioning	2019



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Customer benefits

- Greater profitability
- Reduced environmental impact
- Improved supply reliability
- Flexible use in island mode or grid-parallel mode



INNIO is a leading energy solution and service provider that empowers industries and communities to make sustainable energy work today. With our product brands Jenbacher and Waukesha and our digital platform myPlant, INNIO offers innovative solutions for the power generation and compression segments that help industries and communities generate and manage energy sustainably while navigating the fast-changing landscape of traditional and green energy sources. We are individual in scope, but global in scale. With our flexible, scalable, and resilient energy solutions and services, we are enabling our customers to manage the energy transition along the energy value chain wherever they are in their transition journey.

INNIO is headquartered in Jenbach (Austria), with other primary operations in Waukesha (Wisconsin, U.S.) and Welland (Ontario, Canada). A team of more than 3,500 experts provides life-cycle support to the more than 54,000 delivered engines globally through a service network in more than 80 countries.

INNIO's ESG Risk Rating places it number one of more than 500 worldwide companies in the machinery industry assessed by Sustainalytics.

For more information, visit INNIO's website at www.innio.com

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