

SUSTAINABLE HEAT SUPPLY

with innovative, intelligently controlled cogeneration of heat and power

»With our iCHP plant, which is intelligently controlled by INNIO technology, we save 3,600 tons of CO₂ per year in the final expansion. This corresponds to the emissions of 3,000 VW Golfs. We offset the remaining amount of CO₂ emissions through certified climate protection projects. This means that the energy we supply – heat and electricity – is climate-neutral in balance sheet terms.«

Dominik Mühlbauer, Operations manager of the Heat Supply Division at Stadtwerke Bad Reichenhall



Background

“Green” heat is at the heart of Stadtwerke Bad Reichenhall’s innovative combined heat and power system. Primarily used for regional heat supply, this “iCHP” system flexibly combines several key technologies centered on two highly efficient Jenbacher combined heat and power (CHP) plants from INNIO.

These heat and electricity producers are supplemented by two large groundwater heat pumps, which use renewable environmental heat and green electricity to generate green heat. Two power-to-heat systems convert surplus green electricity into heat, and a photovoltaic system is used for the iCHP system’s own electricity requirements.

In addition, three large heat accumulators enable flexible use of the individual heat generators, depending on heat consumption.

Solution

Intelligent solutions are needed to manage such highly complex integrated systems. For optimal use, they must have common control and regulation technology.

For this reason, Stadtwerke Bad Reichenhall also chose INNIO’s myPlant Optimization, a digital all-in-one energy management solution from the original manufacturer. This software combines INNIO’s many years of Jenbacher plant experience with an optimized heat and storage schedule. It supports the municipal utility in heat generation in line with demand while providing it in a cost-optimized and sustainable way.

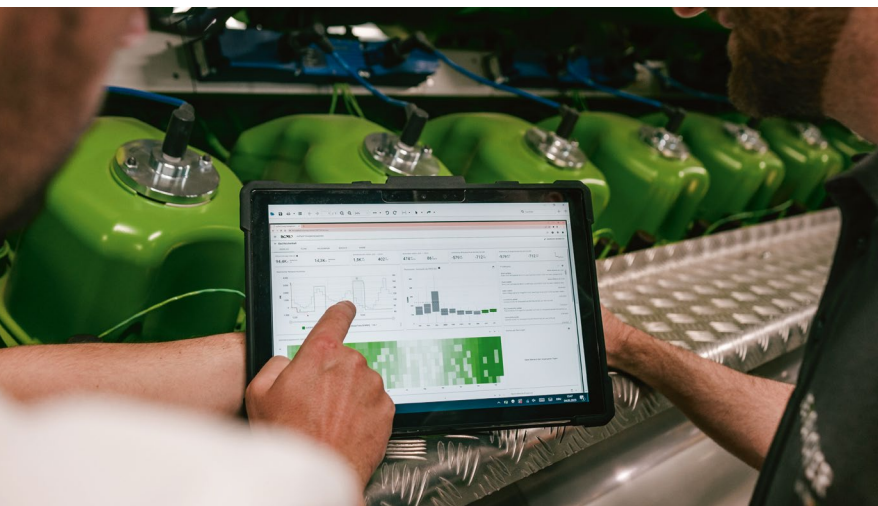
For supply stability, the overall system reacts flexibly to fluctuations in the two energy sectors of heat and power.

Result

With the Jenbacher energy management solution, the municipal utility has everything under control: the overall iCHP system, the supply for the two energy sectors, and its sustainability goals.

If the quantities of electricity available in the grid are low, the Jenbacher CHP units produce electricity and feed it into the grid for grid stabilization. If the reverse occurs and the quantities of electricity in the supply system are too high, then the electric heat generators are switched on and the electricity is used to produce heat.

As an intelligently networked system, the iCHP plant enables an increased share of renewable energy in the heating network. In this way, it helps to advance the energy and heat transition, reduce greenhouse gas emissions, and implement a climate-friendly regional heat supply.



Key technical data

Installed engines	2 x J620
Electrical power	3.4 MW
Thermal power	3.2 MW
Energy source	Pipeline gas
Commissioning	1/2022 (Jenbacher engines & myPlant Optimization energy management solution)



You can find your local support online at:
www.innio.com/en/company/providers



iCHP customer video:
 Scan the QR code for more information on the intelligently controlled power to heat system.

"Optimization/optimize" refers to the automatically generated recommendations for action by the myPlant energy management solution to improve the status quo of electricity trading and resource-efficient plant operation.

Customer benefits

Advantages from Jenbacher myPlant Optimization:

- Support for operational management through intelligent algorithms
- Holistic optimization of the plant fleet
- Increased overall economic efficiency through the integration of flexible options
- Intelligently controlled forecasts that adapt to the dynamic environment
- Better decision-making through transparency

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, we offer 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. INNIO is individual in scope, but global in scale. With our flexible, scalable, and resilient energy solutions and services, we enable 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 4,000 experts provides life-cycle support to the more than 55,000 delivered engines globally through a service network in more than 100 countries.

INNIO's improved ESG Risk Rating again secures the number one position across more than 500 companies globally in the machinery industry assessed by Sustainalytics.

For more information, visit the INNIO website at innio.com, the Jenbacher website at jenbacher.com or the myPlant Optimization website at jenbacher.com/en/myplant-optimization

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