



Bavarian Utility Installs GE's J920 FleXtra Gas Engine Cogeneration System to Support Germany's Energy Transition Plan

- *GE's Largest Jenbacher Gas Engine Powering Innovative Cogeneration Expansion Project*
- *J920 FleXtra Installation Supports Germany's Goal to Increase Power from Combined Heat and Power to 25 Percent of Country's Total Energy Supply by 2020*
- *Project Illustrates How GE's Distributed Power Solutions Promote Energy Security in Europe*

ROSENHEIM, GERMANY—April 10, 2013—With Germany's "Energiewende" energy transition plan emphasizing greater industrial energy efficiency, Bavarian Minister of State for Environment & Health Dr. Marcel Huber and other government and business leaders today celebrated the official startup of the Stadtwerke Rosenheim municipal cogeneration plant expansion in the city of Rosenheim.

"The energy transition plan 'Energiewende' can be achieved only if there is a cooperative effort, including contributions by municipal providers. Investments in innovative, modern power plants create an important foundation for the successful execution of our energy transition plan," Huber said.

Secure and Environmentally Sound Energy Supply for Rosenheim

The project's centerpiece is GE's (NYSE: GE) largest Jenbacher gas engine, the 9.5-megawatt (MW) ecomagination qualified [J920 FleXtra](#). GE's new, flexible power solution combines extra innovation, power and efficiency to help customers address their local energy security priorities while achieving improved environmental performance.

Stadtwerke Rosenheim's integrated combined heat and power (CHP) facility also features an existing waste incineration plant and four previously installed Jenbacher engines—three 3.35-MW [J620](#) engines and a 4.4-MW [two-stage turbocharged J624 unit](#). The utility's upgraded cogeneration facility (36.1 MWe and 43.8 MWth) now meets about 40 percent of the electricity needs and 20 percent of the heating requirements of Rosenheim, which has more than 61,000 inhabitants.

Click here to learn more about the J920 FleXtra gas engine:
<http://www.youtube.com/watch?v=bgaWzEnpANY>.

Important Step toward the Energy Transition Plan

Germany plans to shut down its remaining nuclear power plants by 2022. To replace the massive amount of low-carbon baseload electricity from the nuclear power plants, the government's energy transition plan calls for increasing the use of natural gas and renewable energy as well as a greater use of energy efficiency technologies.

Installing the J920 FleXtra helps Stadtwerke Rosenheim more closely align its cogeneration plant with Germany's goal to increase CHP power generation to 25 percent of the country's total power supply by 2020. The project also serves as a model for other countries seeking to deploy new CHP systems to meet their European Union energy efficiency and environmental targets.

Environmentally Sound, Flexible and Efficient

The new J920 FleXtra demonstrates GE's commitment to [ecomagination](#), offering important environmental benefits to the city of Rosenheim. The natural gas-fired J920 CHP system provides electricity and thermal power (hot water) for local residents and industrial customers with a lower carbon footprint compared to conventional power plants, supporting Germany's effort to reduce greenhouse gas emissions by 40 percent by 2020. Also, the J920 FleXtra engine's extremely short start-up time increases Stadtwerke Rosenheim's operational flexibility to overcome the challenges of intermittency associated with adding more wind, solar and other renewable energy supplies.

"Our new cogeneration plant featuring GE technology will enable us to deliver a reliable, efficient and more flexible supply of power and heat to our business and residential customers," said Dr. Götz Brühl, CEO of Stadtwerke Rosenheim.

GE's J920 FleXtra commands the highest electrical efficiency in the 10-MW class and is designed to achieve an industry-leading electrical efficiency of 48.7 percent and about 90 percent efficiency in cogeneration mode. The J920 FleXtra's innovative, two-stage turbocharging design will help Stadtwerke Rosenheim meet Germany's goal to improve its energy productivity—related to prime energy usage—by 2.1 percent annually.

"Our flexible J920 technology offers both high efficiency and reliability levels, which makes it the ideal large gas engine distributed power solution for industrial and grid stabilization applications while also minimizing the customer's carbon footprint," said Karl Wetzlmayer, general manager of gas engines for power generation—GE Power & Water.

As a leading gas engine manufacturer, GE applied more than 50 years of power generation experience in the development of its newest Jenbacher engine. During the development of the J920 FleXtra more than half a million engineering hours was devoted into design, analysis, testing and verification of the product. The team utilized innovative analysis and diagnosis tools also employing technologies and methodologies developed through GE's global engineering operations and Global Research Center.

"GE and Stadtwerke Rosenheim have shared almost a decade of gas engine innovation and cooperation, making the utility an ideal associate to showcase the J920 FleXtra," Wetzlmayer added.

About the J920 FleXtra

Operating a J920 FleXtra at 48.7 percent electrical efficiency provides the capacity to produce more than 76 million kWh of electricity, enough to power more than 18,500 European households for a year. Operating a J920 FleXtra avoids:

- The consumption of more than 6.4 million kWh of natural gas per year.
- The emission of approximately 1,500 metric tons of CO₂ per year, equivalent to the annual CO₂ emissions of about 800 cars on European roads.

In cogeneration mode, the J920 Flextra offers an overall efficiency of about 90 percent—compared to the separate production of heat and electricity by a natural gas-fired boiler and delivery of electricity on the EU grid. Over the course of a year, the J920 Flextra can achieve:

- More than 130 million kWh in primary energy savings, equivalent to the energy contained in more than 76,000 barrels of oil.
- The reduction of more than 7,800 metric tons of CO₂, equivalent to the CO₂ emissions of more than 4,100 cars on European roads.

The J920 Flextra lowers life-cycle costs through reduced fuel consumption. Its operational flexibility benefits also complement GE's existing FlexEfficiency gas turbine product portfolio.

GE's Jenbacher gas engines are a key part of the company's portfolio of innovative distributed power solutions that give businesses and communities around the world the ability to generate reliable and efficient power—using a variety of fuels—on or off the grid. GE's distributed power portfolio also includes [GE's aeroderivative gas turbines](#), [Waukesha gas engines](#) and [Clean Cycle waste heat recovery solutions](#).

About GE

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About GE Power & Water

GE Power & Water provides customers with a broad array of power generation, energy delivery and water process technologies to solve their challenges locally. Power & Water works in all areas of the energy industry including renewable resources such as wind and solar, biogas and alternative fuels; and coal, oil, natural gas and nuclear energy. The business also develops advanced technologies to help solve the world's most complex challenges related to water availability and quality. Power & Water's six business units include Distributed Power, Nuclear Energy, Power Generation Services, Renewable Energy, Thermal Products and Water & Process Technologies. Headquartered in Schenectady, N.Y., Power & Water is GE's largest industrial business.

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