

## Siemens and Netze BW make distribution grids more sustainable and smarter

- **Siemens and Netze BW cooperating on multi-year field test**
- **First distribution substation with innovative blue GIS 24 kV ring main unit live in Oberallgäu**
- **Fluorine gas-free Clean Air switchgear and bio-ester transformer boost sustainability**

In conjunction with their ongoing research cooperation, Siemens Smart Infrastructure and Netze BW GmbH, headquartered in Stuttgart, have co-developed an intelligent and environmentally-friendly distribution substation. For the first time, the new station combines the F-gas-free 24 kilovolt (kV) ring main unit (RMU) from the Siemens blue GIS portfolio with a 630 kilovolt-ampere (kVA) distribution grid transformer. Instead of mineral oil, the Eco Design 2-certified transformer uses fully biodegradable, natural bio-ester oil for insulation. The integrated automation system from the Siemens' Sicam portfolio is designed for the special requirements of distributed grids and enables reliable monitoring and control of the grid. The innovative substation, which will connect the medium-voltage distribution grid and the low-voltage local grid in the town of Kreuzthal in the Oberallgäu region, is now being tested under real-life conditions.

“Power generation from renewable energy sources is increasingly depending on the weather, posing new challenges especially for medium and low-voltage grids. That’s why we’re working with Siemens on future-proof solutions that will continue to

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ensure a reliable and yet sustainable power supply for all connected cities and communities,” said Martin Konermann, technical managing director at Netze BW.

The core of the station is a blue GIS 24 kV Ring Main Unit (RMU). It combines the Clean Air insulation medium, a mixture of natural, atmospheric gases, with proven and reliable vacuum switching technology. This eliminates the need for any fluorine-based gas mixtures (F-gas). Integrated into the Netze BW distribution grid the switchgear will be tested live – and join the blue GIS family as the next new member.

“Distribution substations are key components of the distribution grid. Together with Netze BW, we have piloted a one-of-a-kind solution that combines our proven switching technology with environmentally-friendly technologies and digital intelligence. With this solution, we are setting a new standard for smart and eco-friendly energy distribution,” stated Stephan May, CEO of the Distribution Systems Business Unit at Siemens Smart Infrastructure.

Via an integrated remote terminal unit (RTU) and a satellite modem, allowing reliable operation as well as monitoring and control from the main control center, the station is connected to the grid control center of Netze BW. This enables Netze BW to guarantee consistently high power and grid quality even in times of increasingly distributed energy production.

As the largest grid operator for power, gas and water in the EnBW group, Netze BW has 83 locations across Baden-Württemberg, Germany, covering an area of approximately 17,700 km<sup>2</sup>.

This press release as well as press photos can be found at  
[www.sie.ag/2Yw7kbE](http://www.sie.ag/2Yw7kbE)

Joint press release  
from **Siemens and Netze BW**

For further information on Siemens blue GIS, please see  
[www.siemens.com/blueGIS](http://www.siemens.com/blueGIS)

For further information on Siemens Smart Infrastructure, please see  
[www.siemens.com/smartinfrastructure](http://www.siemens.com/smartinfrastructure)

For further information on NetzeBW, please see  
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**Siemens Smart Infrastructure (SI)** is shaping the market for intelligent, adaptive infrastructure for today and the future. It addresses the pressing challenges of urbanization and climate change by connecting energy systems, buildings and industries. SI provides customers with a comprehensive end-to-end portfolio from a single source – with products, systems, solutions and services from the point of power generation all the way to consumption. With an increasingly digitalized ecosystem, it helps customers thrive and communities progress while contributing toward protecting the planet. SI creates environments that care. Siemens Smart Infrastructure has its global headquarters in Zug, Switzerland, and has around 72,000 employees worldwide.

**Siemens AG** (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 170 years. Active around the world, the company

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focuses on intelligent infrastructure for buildings and distributed energy systems and on automation and digitalization in the process and manufacturing industries. Siemens brings together the digital and physical worlds to benefit customers and society. Through Mobility, a leading supplier of intelligent mobility solutions for rail and road transport, Siemens is helping to shape the world market for passenger and freight services. Via its majority stake in the publicly listed company Siemens Healthineers, Siemens is also a world-leading supplier of medical technology and digital health services. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power that has been listed on the stock exchange since September 28, 2020. In fiscal 2019, which ended on September 30, 2019, the Siemens Group generated revenue of €58.5 billion and net income of €5.6 billion. As of September 30, 2019, the company had around 295,000 employees worldwide on the basis of continuing operations. Further information is available on the Internet at [www.siemens.com](http://www.siemens.com).

As the largest grid company for electricity, gas and water in Baden-Württemberg, Germany, **Netze BW** operates almost 95,000 km of high-, medium- and low-voltage grids and thereby supplies around 2.4 million customers. In addition to the digitization project #NETZlive, the EnBW subsidiary is developing in its NETZlaboratories solutions on how the integration of sensors and actuators on central equipment and points in the grid can sustainably promote efficient grid expansion and secure grid operation. [www.netze-bw.de](http://www.netze-bw.de)

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