Press release

Berlin, September 27, 2022

Siemens Energy supplies control system for offshore wind farm

- "Brain" for 900-megawatt EnBW He Dreiht wind farm in the North Sea
- Provision of control technology, central IT network, cybersecurity solutions, and long-term service
- Contributes to carbon neutrality in the power supply

Siemens Energy is supplying its control system to an offshore wind farm for the first time. The system which has already been established in conventional power plants, will be the "brain" of the 900-megawatt EnBW He Dreiht wind farm being built approximately 90 kilometers northwest of the German North Sea coast off the island of Borkum. Along with the control technology for switchgear and secondary systems, Siemens Energy is supplying the central IT network, including cybersecurity solutions, and has also signed a long-term service agreement with EnBW.

The cybersecurity solution will ensure that the plant meets the legal requirements for critical infrastructure. Due to its size, the He Dreiht offshore wind farm is subject to special guidelines from the Bundesamt für Sicherheit in der Informationstechnik (German Federal Office for Information Security).

"Offshore wind farms are a key component of the future climate-neutral energy mix," says Tim Holt, Member of the Siemens Energy Managing Board. "As the facility's capacity continues to grow, so do the monitoring, control, and security requirements. We're pleased to have contributed to this project with our proven technology."

"We have an experienced partner for control systems in Siemens Energy, and we welcome them on board the project for our first unsubsidized offshore wind farm," says Hartwig Schnöckel, Project Manager for Offshore Wind at EnBW. "A key component of EnBW's strategy is to expand renewable energy. It will help ensure that at least half our generation portfolio is made up of renewables by the end of 2025, and it will pave the way to making the company climate neutral by 2035."

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The offshore wind farm is expected to begin operation in 2025. Siemens Energy received an order back in August 2020 from the grid operator TenneT to supply the high-voltage direct-current transmission technology. This system ensures the low-loss transmission of power to shore.

More information for the trade media

As the wind farm expands globally and increases in size, so does the demand for more and more powerful management and control technology. Siemens Energy's Omnivise T3000 control system has proved successful for the past 17 years in thousands of conventional power plants around the world.

The Omnivise T3000 SCADA (Supervisory Control and Data Acquisition) system is a higher-level control system that integrates the automation of switchgear and many secondary systems and also establishes the interface to the wind farm controller. This integrated solution for the wind farm enables EnBW to respond quickly to changes in power demand so that the facility can produce electricity flexibly. Omnivise T3000 is certified under the IEC 62443 cybersecurity standard, one of the leading standards for IT security. It also includes the IT infrastructure for connecting the secondary systems according to the German BSI Kritis regulation.

To guarantee reliable operation under all environmental conditions as well as conformity with maritime electrical engineering standards, Siemens Energy will use components that meet the special requirements of the offshore sector.

During the wind farm's minimum operating period of 25 years, Siemens Energy will support the operator EnBW with automation components, software solutions, and cybersecurity. The corresponding service activities will ensure that the control system continues to operate smoothly over the long term.

The Omnivise T3000 system's flexibility and versatility allow it to be used for conventional and renewable power generation as well as in hybrid plants, which combine renewable energy with electrolysis, hydrogen storage, and hydrogen applications. It's also easy to integrate other digital applications like those used for direct power marketing and predictive maintenance and solutions for optimizing operation.

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