

Siemens supplies SF₆-free high-voltage products for E.ON in Sweden

- **First CO₂-neutral high-voltage project for Siemens in Sweden**
- **Vacuum switching technology combined with “clean air” replaces SF₆ as switching and insulating medium**
- **High operational performance even at lowest temperatures**

Siemens will equip a 145-kilovolt (kV) substation owned by E.ON Sweden with SF₆-free high-voltage products by the middle of 2020. The orders comprise six bays, including circuit breakers for 72.5-kV and 145-kV as well as 145-kV instrument transformers.

With these innovative products of the so called “blue portfolio,” Siemens is supporting E.ON Sweden’s goal towards a sustainable F-gas free power transmission. The solution will be deployed at the Fårhult project site located in southern Sweden close to Västervik. It will deliver high-performance operation at extreme temperatures as low as -55° Celsius without a heating system.

The Fårhult substation is an important hub in the local power grid. It operates at voltages levels of 20, 50, and up to 130 kV and supplies electricity to more than 4,000 customers, both households and industry. The innovative, eco-friendly, high-voltage circuit breakers and instrument transformers from Siemens will be deployed in Sweden for the first time. “Using no SF₆ is one way to support our goal of using less greenhouse gases in grid operation,” says Mats Andersson, Director Regional Grid at E.ON Sweden. “With Siemens we have a competent and trusted partner on board for realizing this first CO₂-neutral high-voltage project in Sweden.”

The orders comprise five 145-kV bays with five “blue” 145-kV circuit breakers, nine “blue” 145-kV current transformers (CT), and the same number of 145-kV voltage transformers (VT).

In addition, one 72.5-kV bay with another “blue” circuit breaker will be installed. The circuit breakers use proven vacuum-switching technology combined with “clean air” to replace sulfur hexafluoride (SF₆) as the insulating medium.

A vacuum-interrupter unit switches and extinguishes the arc. Technically prepared and purified air in a mixing ratio of 80 percent nitrogen to 20 percent oxygen (“clean air”) provides the insulation for the current-carrying conductors inside the housing. This insulation will also be used in the current and voltage transformers, which are used to transform high current and voltage levels into low levels that can be processed by measuring and protection instruments like relays and recorders.

“In recent years, Siemens has developed a new generation of high-voltage products to meet the requirements of customers with respect to climate-neutral operation, decarbonization, and sustainability,” explains Ralf Christian, CEO of the Siemens Energy Management Division. “Our SF₆-free high-voltage products not only significantly reduce the environmental footprint; they also allow existing power grids to modernize to the highest level of safety and reliability.”

“These products also increase performance and economic efficiency. They are especially suitable for the harsh environmental conditions in Scandinavian countries. We’re happy to be joining E.ON Sweden in taking this important step toward sustainable power transmission,” says Nils Klippenberg, CEO of Energy Management Nordics.

The blue portfolio represents Siemens’ work with insulating media that contain no fluorine gases and therefore meet all the strictest safety and environmental standards. The benefits of this technology over conventional SF₆ insulation include operation at lower temperatures without heating systems and easier handling during shipping, installation, operation, maintenance, and recycling. They don’t require F-gas reporting during operation and have the same lifespan as their SF₆ counterparts.

This press release and press pictures are available at

www.siemens.com/press/PR2018110066EMEN

For further information on Division Energy Management, please see

www.siemens.com/energy-management

For further information on Siemens blue portfolio, please see

siemens.com/eco-transparency

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