

GE's STATCOM system to improve grid stability in Germany

- *Today's transmission grids are expected to carry power in ways they were never originally designed to accommodate, resulting in utility and transmission network operators worldwide turning to GE's STATCOM solution*
- *GE's Static Synchronous Compensator (STATCOM) technology will improve grid stability in Germany with an award from transmission system operator (TSO) 50Hertz Transmission GmbH for one of their critical substations*
- *This win reinforces customer confidence in GE's Reactive Power Compensation technologies and in GE's execution capability to deliver complex projects within the context of the energy transition*

Paris, FRANCE — September 1st, 2022 — GE Renewable Energy's Grid Solutions business (NYSE:GE) has entered into a framework agreement to deliver Static Synchronous Compensators (STATCOMs) in the coming years to Germany's transmission system operator (TSO) 50Hertz. As a part of the framework agreement, GE has been chosen to deliver the first two hybrid [Static Synchronous Compensators \(STATCOMs\)](#) to increase grid stability.

Each STATCOM systems will supply ± 300 Mvar at Elia Group's 50Hertz Transmission GmbH (50Hertz) substation in Bad Lauchstädt. The substation in the heart of the 50Hertz grid area plays an important role for the transmission of growing amounts of electricity from renewable sources. It is - for example - the starting point of the so-called 380 kV Südwestkuppelleitung from the region of Lower-Saxony via Thuringia to Bavaria.

As electrical transmission grid operators face increasing demand and complexity with an influx of renewable energy sources, GE's patented STATCOM technology offers an efficient, dynamic solution. The custom-designed system provides grid operators with reactive power compensation and improved range of operational voltage, resulting in a faster response time and with a smaller footprint than traditional static VAR compensator (SVC) solutions.

“50Hertz's strategy is to enable 100 percent renewables in electricity consumption in our grid area by 2032 and to help industrial companies to decarbonize their procedures," said Dr. Frank Golletz, Chief Technical Officer of 50Hertz. "Large coal-fired power plants, and therefore powerful generators, will exit the electricity system and in order to maintain the required voltage we will need to invest massively in dynamic as well as static reactive power compensation equipment," Golletz states. “The award of the contract to GE is an important building block in this strategy,” he added.

“Highly reliable and easy to integrate into both existing and new infrastructures, GE’s STATCOM system also has given 50Hertz an economical solution,” said [Johan Bindele](#), GE Grid Solutions’ Grid Integration Leader. “As grid networks change with the introduction of renewable power sources, utility and transmission network operators are increasingly recognizing that GE’s grid solutions are necessary—providing dynamic voltage support while maintaining the reliability and efficiency of the power supply.”

For this project, the latest generation STATCOM solution is a Voltage Source Converter (VSC) technology based on MMC architecture¹ leveraged from GE’s robust power electronics experience. This design provides more stable output power generation than other competitive solutions, helping customer grids handle faults and fault recovery within the industry’s best performance. This more powerful design, combined with GE’s experience from more than 400 shunt connected FACTS solutions, offers customers a complete, world-class, digitally enabled solution.

GE’s Alternating Current Solutions (ACS) teams based in Berlin and Dresden, Germany, will deliver the turnkey supply of the two hybrid STATCOMs, given their vast experience in delivering turnkey projects for 50Hertz Transmission GmbH. The project will cover engineering, integration, supply, construction including Civil Works, installation, mechanical completion, testing, commissioning and thereafter maintenance services for a period of five years. It will be executed with our German Civil Works partner RBS Raffinerie Bau Schwedt GmbH. Completion is planned for

2025 and 2027.

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Notes to the Editor:

1. The Modular Multilevel Converter (MMC) is a scalable technology, built up by identical but individually controllable submodules that make high voltage and power capability possible.

About GE’s Grid Solutions business

Grid Solutions, a GE Renewable Energy business, serves customers globally with over 12,000 employees. Grid Solutions provides power utilities and industries worldwide with equipment, systems and services to bring power reliably and efficiently from the point of generation to end power consumers. Grid Solutions is focused on addressing the challenges of the energy transition by enabling the safe and reliable connection of renewable and distributed energy resources to the grid. We electrify the world with advanced grid technologies and accelerate the energy transition. For more about GE’s Grid Solutions, visit

<https://www.gegridsolutions.com>.

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