

GE completes one of power industry's largest reactive power upgrades with 100% reliability

- *GE has completed the largest Static Var Compensator (SVC) upgrade project for two of Norway transmission system operator Statnett's substations*
- *The trial run for both substations was executed without a single interruption of service, and the stations have continued their operation into commercial service*
- *GE provides leading technological solutions to ever-evolving grid challenges, including the integration of more and more renewable energy, through successful implementation of its new "SmoothSine" modularized control software for SVC and STATCOM*

Paris, France — May 11, 2022 — GE's Grid Solutions business [NYSE:GE] has successfully completed the three-month trial of its Static Var Compensator (SVC) upgrade to the existing SVCs at two substations belonging to Statnett, Norway's electrical transmission system operator (TSO). The [Flexible AC Transmission System \(FACTS\)](#) upgrade improves the operational efficiency and stability of Statnett's alternating current (AC) power system in order to accommodate more renewable energy. The upgrade marks the largest SVC revamp project Statnett has ever undertaken — and is also one of the largest in the industry.

During the three-month performance trial period, which ended in October 2021, not a single interruption occurred at the Rød and Verdal substations. Ongoing operation of the two SVCs continues, including the use of advanced features such as Power Oscillation Damping, due to the implementation of GE's "SmoothSine" control software, which provides better consistency and efficiency of the software development, testing and implementation. This repeatable, standardized, robust software and architecture offers the ability for GE to "configure" all control functions in a very simplified manner for every specific project implementation.

"With the successful completion of this project for Statnett, GE has once again proven the technical and project execution capabilities of our FACTS solutions using



our innovative “SmoothSine” software approach,” said [Fabrice Jullien](#), FACTS Global Business Leader at GE’s Grid Solutions. “SmoothSine will create the simplicity needed to enable our customers to embrace the energy transition with confidence.”

GE leads the industry in developing high-voltage reactive compensation solutions, including [Static Synchronous Compensators \(STATCOMs\)](#), [Static Var Compensators \(SVCs\)](#), [Series Compensation Systems](#) and [Synchronous Condensers](#) — resulting in operational cost savings, increased quality, greater reliability, and lower environmental impact as these technologies allow utilities to get higher efficiencies from their existing assets instead of needing to spend significantly more for new, larger transmission infrastructure.

Unlike traditional 6-pulse rectifier-based SVCs, Rød and Verdal SVCs use a 12-pulse rectifier configuration enabling configuration without passive filters, which means they take up less space. Additionally, due to the limited space within the substation, GE introduced a unique three-phase stacked thyristor valve configuration which contributed to a 66% footprint reduction.

GE's FACTS technology allows utilities to provide reactive power support, enhancing controllability, improving stability, and increasing power transfer capacity of AC transmission systems. The system design involves upgrades to Statnett's existing SVCs to regulate the voltage in the system during normal operations and provide reactive power compensation during faults in the system.

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About GE’s Grid Solutions

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

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