Press release

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Less waste, more security of supply: Siemens Energy receives major order for first power connection to Great Britain

- Surplus wind energy from Germany for Great Britain
- 1.4 gigawatts, supplying 1.5 million homes
- Saving of 16 million tons of CO2 emissions

Siemens Energy and the NeuConnect consortium have signed a contract for the supply of a turnkey High-Voltage Direct Current (HVDC) transmission system for the first power link between Great Britain and Germany ("NeuConnect Interconnector"). The HVDC link will connect two of Europe's largest energy markets and enable up to 1.4 gigawatts of electricity to be exchanged in both directions, enough to power up to 1.5 million homes. Access to a more diverse and sustainable energy mix will increase security of supply in both countries. Through the more efficient use of renewable energy, the connection will result in savings of up to 16 million tons of CO_2 emissions. The order value for Siemens Energy is in the high three-digit million euro range and will be booked for the current fiscal year. NeuConnect is a privately-financed interconnector led by global investors Meridiam, Allianz Capital Partners and Kansai Electric Power.

Wind energy is a key part of decarbonization in many countries. Globally installed onshore and offshore wind energy capacity has increased nearly 75-fold over the past two decades. Germany and Great Britain are among the world leaders in terms of installed wind power capacity. However, due to grid bottlenecks, excess wind energy in Germany often cannot be fed into the grid. Wind turbines must therefore be switched off regularly (so-called curtailment), otherwise the grid could be overloaded and, in the worst case, a black out could occur. In order to avoid this waste of energy and the costly curtailment in the future, the NeuConnect power link will transport the excess power from Germany to Great Britain, and vice versa if necessary. In the long term, both countries will benefit from access to a more diverse and sustainable energy mix and from increased resilience. This ensures greater security of supply and flexibility in the power supply.

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"If we want to achieve the switch to renewable energy quickly, safely and affordably, we can no longer afford to have to curtail wind energy due to grid bottlenecks and have to cover demand elsewhere with fossil-based power generation," says Tim Holt, member of the board of Siemens Energy. “The electricity connection between Germany and Great Britain represents the increasing integration of the European electricity market. Efficient and cross-border electricity connections unite the countries in their efforts to decarbonize. They are the perfect example that we can only achieve the energy transition together.”

To connect the two power grids, Siemens Energy will build two turnkey HVDC converter stations - one in the Isle of Grain in England, the other in the Wilhelmshaven region in the north of Germany. The converter station on one side of the link converts AC voltage to DC voltage so that the energy can be transmitted with as little loss as possible. The energy is then transported through British, Dutch and German waters via a 720-kilometer-long HVDC submarine cable system from Prysmian. In the other converter station, the direct current is converted back into alternating current and fed into the national grid, which brings the energy to the sockets of the consumers.

In addition to power transmission, the HVDC PLUS system from Siemens Energy will also perform other important functions in the grid: It can regulate the AC voltage and thus stabilize weak AC grids. In the event of an error, it can restart network segments that have been switched off. Like a firewall on a computer, the HVDC system prevents the problem from spreading to other parts of the network via a domino effect if there is a disruption in the network.

The European Commission supports the cross-border infrastructure project as it promotes decarbonization in line with the Paris Agreement. The project is expected to be completed by the middle of this decade.

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Siemens Energy is one of the world's leading energy technology companies. The company works with its customers and partners on energy systems for the future, thus supporting the transition to a more sustainable world. With its portfolio of products, solutions and services, Siemens Energy covers almost the entire energy value chain – from power generation and transmission to storage. The portfolio includes conventional and renewable energy technology, such as gas and steam turbines, hybrid power plants operated with hydrogen, and power generators and transformers. More than 50 percent of the portfolio has already been decarbonized. A majority stake in the listed company Siemens Gamesa Renewable Energy (SGRE) makes Siemens Energy a global market leader for renewable energies. An estimated one-sixth of the electricity generated worldwide is based on technologies from Siemens Energy. Siemens Energy employs around 91,000 people worldwide in more than 90 countries and generated revenue of €28.5 billion in fiscal year 2021. www.siemens-energy.com.

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