

Press release

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Siemens Energy makes renewable energy transportable on German SuedOstLink electricity highway

- SuedOstLink will transport environmentally friendly electricity from northern to southern Germany
- High-voltage direct current transmission enables low-loss transport of up to two gigawatts over more than 500 kilometers

The demand for renewable energy is rising. In 2020, global production of electricity from renewable sources, such as wind or solar energy, increased by 10.3 percent. Most environmentally friendly electricity in Germany is produced on land and at sea by large wind power plants in the north. At the same time, Germany also needs electricity in its south region where most industrial plants are located, and a growing number of conventional power plants are being taken offline. To ensure a continued reliable supply of energy in Southern Germany, transmission system operators 50Hertz and TenneT are planning to build the SuedOstLink electricity highway. It will transport excess energy from northern Germany and ensure that green electricity can be supplied to the South. Siemens Energy will deliver the converter technology, that will enable the low-loss transport of electricity over more than 500 kilometers.

The converter stations, designed to convert direct to alternating current and vice versa, will be built at Wolmirstedt in Saxony-Anhalt and near Landshut in Bavaria. In the case of excess wind energy, the northern Wolmirstedt converter station will convert the alternating current into direct current. The energy will be transported to the south via underground cables with a voltage of 525 kilovolts. The Isar station in the south will convert the incoming direct current back into alternating current and feed it into the distribution network.

Up to two gigawatts of electricity can be transported in both directions to flexibly react to fluctuations in electricity demand and supply. The transmission capacity will be sufficient to supply more than four million households with electricity.

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"An essential component of the energy transition is an efficient grid," said Tim Holt, member of the Executive Board of Siemens Energy. "If we want to exploit the full potential of renewable energies and thus also of the energy transition, the transmission networks must be expanded accordingly. We are pleased to be able to make an important contribution to the European energy transition with SuedOstLink."

The high-voltage direct current (HVDC) link will include Siemens Energy's market leading HVDC PLUS with voltage-sourced converters (VSC) based on modular multi-level converter (MMC) technology. Compared to other technologies, these systems offer advantages for the overall network operation, including flexible power control, also in regard to reactive power, and black start capability to restore the network power supply. The project represents the most powerful HVDC system in VSC technology worldwide.

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www.siemens-energy.com/press

For further information on Siemens Energy Transmission, please see <https://www.siemens-energy.com/global/en/offerings/power-transmission.html>

For further information on high-voltage direct current technology, please see <https://www.siemens-energy.com/global/en/offerings/power-transmission/portfolio/high-voltage-direct-current-transmission-solutions.html>

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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

more than 90,000 people worldwide in more than 90 countries and generated revenue of around €27.5 billion in fiscal year 2020. www.siemens-energy.com.