

Press release

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Wind power for 1.8 million people: Siemens Energy wins largest grid connection order to date

- Turnkey installation and service of the grid connection systems BorWin4 and DolWin4
- Green wind power for around 1.8 million people
- Largest offshore grid connection order in the history of Siemens Energy

Two new power links set the course for more wind energy in the German power grid: DolWin4 and BorWin4 will transport up to 1.8 gigawatts (GW) of green wind power from several wind farms in the German North Sea to land with low losses. As a result, they will be able to meet the demand of a major city like Hamburg with 1.8 million inhabitants. Amprion Offshore GmbH has now commissioned Siemens Energy to supply the necessary technology for the converter stations of their first grid connection projects. The order value is in the high three-digit million-euro range, making it the largest offshore grid connection order Siemens Energy has received to date.

"The share of renewable energies in Germany's power supply is set to rise to 80 percent by 2030. Therefore, building new wind power plants is important but ultimately pointless if the energy does not reach consumers. We also need to invest in our power grid to supply the country with sustainable energy reliably," says Tim Holt, member of the Managing Board at Siemens Energy.

Siemens Energy's scope of supply consists of two converter platforms at sea and two associated stations on land. The platforms convert alternating current, as produced by wind turbines, into direct current. The direct current is then transferred to a high-voltage direct current transmission cable (HVDC cable) for transport. A second converter station on land then converts the electricity back into alternating current. Only in this way can the large amounts of energy cover the distance of around 215 km (DolWin4) and 280 km (BorWin4) without significant losses (low-loss). The two connections will be installed in parallel and are scheduled to begin operating in 2028. BorWin4 would thus even be connected to the grid one year earlier than originally planned.

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Since the transmission grid in the coastal region of Lower Saxony is already heavily utilized by numerous wind farms, the connection points for the links are located far inland. Siemens Energy will build the land converter stations near Amprion's Hanekenfähr substation in Lingen in southern Emsland. The grid hub currently connects the Emsland nuclear power plant to the transmission grid, which is scheduled to be shut down at the end of 2022. DolWin4 and BorWin4 will replace the generation capacity, thus eliminated with 1.8 GW of offshore wind energy.

In addition to supplying the technology, Siemens Energy will also take over the complete maintenance of the converter solutions for an initial period of 10 years. All high-voltage equipment for the two connection systems, such as converter technology, transformers, and switchgear, will be manufactured by Siemens Energy in Europe. The Spanish consortium partner Dragados Offshore S.A. (a subsidiary of the VINCI Group) is responsible for the design, construction, and offshore installation of the associated platforms. Construction will take place at the company's yard in Cádiz, Spain.

Nine of the current 15 HVDC grid connection projects in the German North Sea use Siemens Energy technology. Meanwhile, the United Kingdom wants to generate enough green energy through offshore wind by 2030 to supply every household in the country with electricity. The United Kingdom recently gave the go-ahead for five more offshore wind farm projects in the largest ever round of contracts for difference. According to the operators' current plans, four of these projects will be equipped with grid connection systems from Siemens Energy. Most recently, Siemens Energy booked the order for the grid connection of the East Anglia Three offshore wind farm in July. After commissioning, the 1.4GW wind farm is expected to supply around one million households with green electricity.

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For further information on offshore grid connections, please see

<https://www.siemens-energy.com/global/en/offerings/power-transmission/portfolio/offshore-grid-connections.html>

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