PRESS INFORMATION

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Subsea cable pull-in of NordLink beneath Büsum dike (Germany) successfully completed

- **TenneT is now starting on the successive laying of the underground cable section between Büsum Dike and the Wilster converter system (Germany)**
- **The "green cable" serves for the exchange of German wind energy and Norwegian hydropower**

NordLink, the "green cable", which will directly connect the energy markets of Germany and Norway for the first time to allow the exchange of German wind energy and Norwegian hydropower, has achieved another important milestone. "With today's successful pulling of the subsea cable beneath the land protection dike, we have practically completed the laying of the NordLink subsea cable," said TenneT Managing Director Tim Meyerjürgens, "Now we are starting the successive laying of the 54-kilometre-long land cable section from Büsum Dike to the Wilster converter site."

NordLink has a total length of 623 kilometres and is being installed as a high voltage direct current transmission system (HVDC), including 516 kilometres of subsea cable in the North Sea waters of Norway, Denmark and Germany. In addition, there are 53 kilometres of overhead line in Norway and a 54-kilometre land cable route on the German side. The start and end points are the converter systems and substations in Tonstad (Norway) and Wilster (Schleswig-Holstein/Germany).

Two horizontal drilling sections of roughly 480 metres in length were carried out in the summer of 2017 to cross beneath the land protection dike in Neuenkoog (by Büsum/Schleswig-Holstein). Empty conduits were then drawn into the boreholes. The subsea cable has now been pulled into these conduits to be connected to the land cable on the inland side of the dike. From there, the land cable runs to the Wilster converter station.

The transmission system operator TenneT began the laying of the Nordlink subsea cable in the German North Sea already last year. The 154-kilometre section between the cable landing at the dike near Büsum and running through the tidal flats and offshore area up to the border of the Danish territorial waters is now nearly completed, as is the laying of subsea cable in the Danish and Norwegian waters. The few work items that remain, such as connecting the final subsea cable

joints at the territorial boundaries and some cable induction work, should be completed this year still. Construction of the 53-kilometre-long overhead line on Norwegian mainland is also expected to be completed this year.
The subsea cable work in the German sector was carried out in close collaboration with the nature conservation agencies. TenneT complies with strict nature conservation requirements set out by the German Federal Maritime and Hydrographic Agency, National Park administration and the Ministry of Energy, Agriculture, the Environment, Nature and Digitisation of the Federal State of Schleswig-Holstein. Nature conservation construction site monitoring ensures careful and considerate operations within the Wadden Sea National Park.

Background

NordLink connects two perfectly complementary systems for the exchange of renewable energy: German wind and solar power on the one side, and Norwegian hydropower on the other. The power line connects the capacities of Norwegian hydropower plants with those of wind and solar farms in Germany. The Norwegian water reservoirs essentially function as 'energy reservoirs': the water inside them is retained when energy is imported from Germany, especially when Germany has surplus wind energy to offer.
In turn, they can come into play during peak consumption periods in Germany, and when there is little production from solar and wind power plants at the same time. Then Norwegian hydropower is transported to Germany.
A considerable part of the socio-economic advantages of NordLink results from the profits generated by trading transmission capacity via the interconnector. These profits will be used to fund other grid projects or to lower energy rates.

German-Norwegian cooperation

The NordLink project will be realised by the Norwegian TSO Statnett and
DC Nordseekabel GmbH & Co. KG, each with 50% ownership. TenneT and KfW each have a 50% share in DC Nordseekabel. DC Nordseekabel is responsible for the construction and approvals on the German part of the project. Additional info at: www.nordlink.eu

Direct DC connection

NordLink itself will be built as a direct HVDC connection, i.e. as a point-to-point connection between the three-phase electric power grids (AC) in Germany and Norway. Due to the length of the route and the large transmission capacity, direct current is used for efficient transmission with low losses. Both cables (positive and negative poles) are connected to converter stations at each end. The converter stations will be built in Wilster, Schleswig-Holstein, and Tonstad in Norway. At these locations, the current will be converted from direct to three-phase electric power (or vice

versa, depending on the transmission direction) and fed into the German or Norwegian three-phase electric power transmission grid to supply homes and businesses with green electricity.

Facts and figures

- 623 km long, high-voltage direct current transmission (HVDC)
- A capacity of 1,400 MW at ± 525 kV
- Offshore: 516 km subsea cable
- Onshore: 54 km of landnd cable (Büsum – Wilster/Schleswig-Holstein) and a 53-km overhead line (Vollesfjord – Tonstad/NOR)
- Grid connection points: substations at Wilster (GER) and Tonstad (NOR)
- Commissioning in 2020

About TenneT

TenneT is a leading European electricity transmission system operator (TSO) with its main activities in the Netherlands and Germany. With over 23,000 kilometres of high-voltage connections we ensure a secure supply of electricity to 41 million end-users. TenneT is one of Europe's major investors in national and cross-border grid connections on land and at sea, bringing together the Northwest European energy markets and accelerating the energy transition. We make every effort to meet the needs of society by being responsible, engaged and connected.

Taking power further

(Editorial note: Video footage and photos in high resolution as well as graphics can be downloaded in the press section of the TenneT and NordLink websites.)