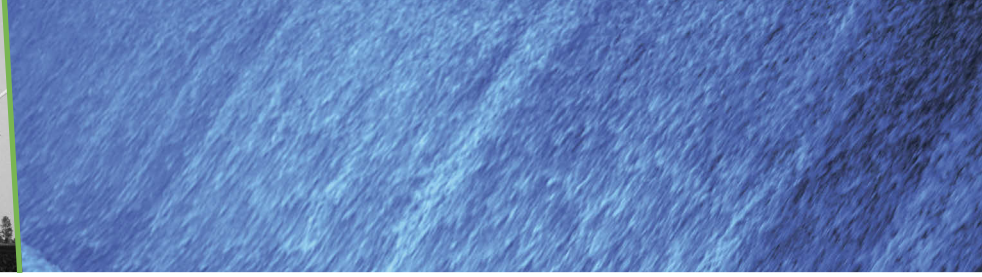


NordLink

Benefits of the NordLink interconnector

NordLink – the ‘green link’ for exchanging German wind energy with Norwegian hydropower – is a connection of two optimally complementary systems. NordLink is a lighthouse project and an enormously important component of the European energy transition to compensate for dark periods and at the same time to make green energy available safely and affordably in the EU.

A driving force for the energy transition/integration of renewable energy

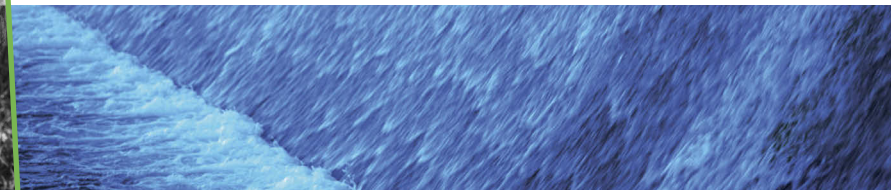
NordLink is a milestone in the realisation of the energy transition. With the incorporation of the project into the Federal Requirements Plan Act, the necessity and urgent need for the implementation of the project for the energy market has been established by law. The conferral of the status of ‚Project of Common Interest’ by the European Union, in accordance with the new guidelines for trans-European energy infrastructure, underlines the high economic and energy-economical importance of the project at European level.

NordLink – the ‚green link’ – creates a connection to the capacities of hydropower plants in Norway and will counteract bottlenecks in the German transmission grid. This interconnector increases facilities for the exchange of renewable energy and plays its part in the reduction of carbon emissions and achievement of climatic objectives.

NordLink has a capacity of 1,400 megawatts (MW) and can supply more than 3.6 million German households with renewable energy. This is equivalent to the same feed-in power as would be produced by 466 wind turbines at 3 MW each. This means that the capacity of the interconnector is slightly higher than that of a large conventional power station.

European market integration

NordLink is the first interconnector to provide a direct link between the Norwegian and German energy markets. This connection promotes the integration of the North-western European energy market, increases market efficiency and contributes to a stabilisation of energy prices.



NordLink

Exchange of wind and hydro power

Interconnectors improve security of supply under the changing dynamics of energy markets in Europe. To connect hydro power to wind generation enables TenneT and Statnett to better match demand for and supply of electricity. When there is a surplus of electricity from renewable energy sources in Germany, this can be exported to Norway via NordLink.

In those times the water reservoirs in Norway can work as a natural storage for energy by keeping the water in the reservoir. Vice versa Germany can import Norwegian renewable energy in times of high demand. During dry and cold seasons in Norway the connection to Germany via NordLink will increase security of supply. This possibility requires also national grid expansion both, in Germany and Norway. In Germany, NordLink is a vital project in order to ensure future base load capability of the German renewable electricity system.

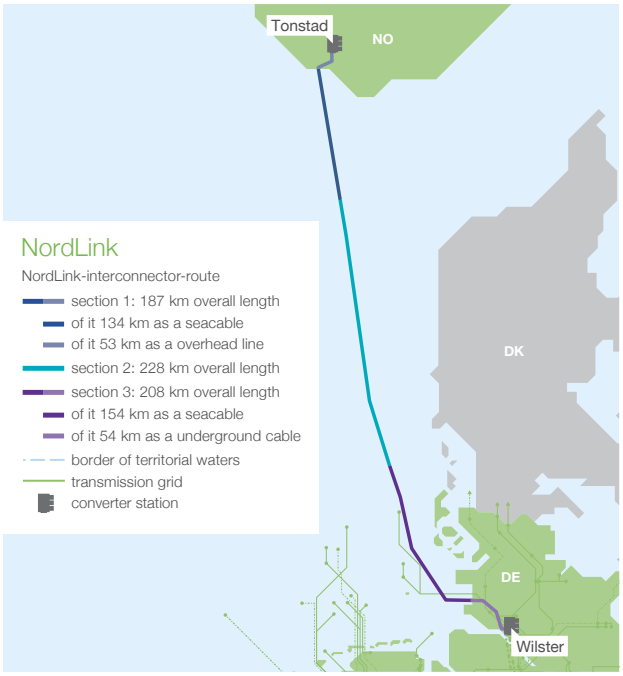
Welfare

NordLink generates socio-economic benefits across borders. The socio-economic benefit is the sum of change in congestion rent, producer and consumer surplus and depends on several factors such as the development of electricity prices, the future energy mix and market developments. An important part of the benefit is achieved by income from trade of capacity over the interconnector. The congestion revenue is used for investing in grid projects or to lower grid fees. At times with high electricity prices in Germany (low photovoltaics and low wind in-feed), consumers profit from the positive effect on the power prices due to the import of reasonable hydroelectric power from Norway.

In Norway, the interconnector will increase value creation for producers when there is a surplus of power, and benefit consumers when there is a shortage of power.

German-Norwegian cooperation

The NordLink project was implemented 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 was responsible for the construction and approvals on the German part of the project.



Facts and figures

Connection
623 km grid connection DC (HVDC)
Capacity: 1.400 MW at ± 525 kV DC
Onshore: 53 km overhead line (Vollesfjord to Tonstad/NO)
Offshore: 516 km subsea cable
Onshore: 54 km land cable (Büsum to Wilster/DE)

Grid connection points
Substations Wilster (DE) and
Tonstad (NO)

Project status
In operation

TenneT is a leading European grid operator. We are committed to providing a secure and reliable supply of electricity 24 hours a day, 365 days a year, while helping to drive the energy transition in our pursuit of a brighter energy future – more sustainable, reliable and affordable than ever before. In our role as the first cross-border Transmission System Operator (TSO) we design, build, maintain and operate 23,900 km of high-voltage electricity grid in the Netherlands and large parts of Germany, and facilitate the European energy market through our 16 interconnectors to neighbouring countries. We are one of the largest investors in national and international onshore and offshore electricity grids, with a turnover of EUR 4.5 billion and a total asset value of EUR 27 billion. Every day our 5,700 employees take ownership, show courage and make and maintain connections to ensure that the supply and demand of electricity is balanced for over 42 million people. **Lighting the way ahead together.**

TenneT TSO GmbH, Bernecker Straße 70, D-95448 Bayreuth, www.tennet.eu, www.nordlink.eu

Statnett \ TenneT \ KfW

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