

The NKT logo is positioned in the top left corner. It consists of the letters 'NKT' in a bold, white, sans-serif font. The background of the entire page is a blue-tinted photograph of a large, curved metal structure, likely part of a power cable system, with a thick cable wrapped in white tape running across it.

NKT

# NordLink HVDC The Green Link

Cable system from NKT is connecting the power grids of Norway and Germany.

[nkt.com](http://nkt.com)

# A landmark project securing green power supply

**NordLink enables efficient use and exchange of renewable energy in Europe.**

## The project

**NordLink is Europe's longest direct power link between the Norwegian and German electricity markets. The commercial operation started in 2021.**

Covering a total of 623 kilometers, NordLink is a HVDC (high-voltage direct current) transmission link which will increase energy security in both countries.

The consortium behind NordLink, which includes utilities Statnett and TenneT, has three important reasons for constructing the link. First, it supports the European Union's target for CO<sub>2</sub> emission reduction by allowing greater integration of renewables. The surplus wind power produced in Germany, which must be used as it is produced, can be transmitted to Norway.

Second, at the other end of the link, Norway can export more stable hydropower to help Germany meet the daily power demand. With the hydropower being used as a battery to balance the wind power generation, the link efficiently balances out fluctuations in demand, both daily and seasonal.

Third, the NordLink offers security of supply: interconnecting grids result in higher availability. The link is fundamental to connect Scandinavia with Germany and is designated to help create an integrated European energy market.

## The solution

**NKT play a key role in the NordLink project by offering a turnkey cable system solution ensuring reliable power transmission with low electrical losses.**

NKT designed, manufactured and installed the 525 kV MI (mass impregnated) cable system in the German sector. It includes 154 km of submarine and 54 km of underground cable route. The system is simplifying the interconnection of the grids and have the capacity to transmit 1,400 MW of renewable energy, which is enough to meet the power needs of about 3.6 million German households.

NKT did not only supply the cable system, produced at the Karlskrona factory running on 100% green electricity, but also ensured top quality and precision when it came to installation. We carried out the installation of the bundled offshore cable with our state-of-the-art cable-laying vessel NKT Victoria. The extensive onshore installation took 1,5 years and required the transportation of 96 cable drums, each with a weight of 67 tons.

The NordLink project was finalized and delivered in early 2021 on time and within the total budget of the customer. It is an excellent example of how HVDC technology can interconnect grids and help countries reach their targets for a renewable energy mix. The smart combination of renewables demonstrates that we can technologically enable a sustainable green energy policy across Europe. It also demonstrates NKT's commitment to efficient use of renewables; we bring clean power to millions of people and support the energy policies of Germany and Norway. Our cutting-edge technology supports a greener world.

“NordLink is a cornerstone project for an interconnected and green Europe.”



# Key Facts

**Client:**

Statnett, Norway, TenneT, Germany  
and KfW IPEX-Bank, Germany

**Total cable route length:**

154 km offshore and  
54 km onshore

**Location of the project:**

The North Sea (Norway-Germany)

**Duration:**

2015 - 2021

**Quantity of order:**

Turnkey 525 kV mass impregnated (MI)  
HVDC cable system for the German  
sector with a 1,400 MW power rating

## Scope

- HVDC cable system, including 2x154 km submarine DC cable (MI) and 2x54 km underground DC cable (MI)
- Cable system design and engineering
- Cable manufacturing and testing
- Submarine and underground cable-laying and installation

## Location

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