

# North Sea Link Interconnecting grids



ABB Id No: POW0105

The North Sea Link (NSL) interconnector links the Nordic and British markets, thus providing increased security of power supply and social-economic benefits for both regions.

The 1,400 megawatt (MW) capacity NSL (North Sea Link) interconnector being built for Statnett and National Grid, will be the longest subsea link in the world. It will also be the first interconnection between the UK and Norway. Using state-of-the-art HVDC Light® technology to connect energy markets in Norway and Britain, it brings several benefits such as:

- Increased reliability and security of electricity supply in both countries
- Enhanced opportunities to meet domestic/international renewable energy and climate change targets
- Added transmission capacity facilitating power trading and economic growth

The North Sea Link will help evacuate power from the UK, when for instance, wind power generation is high there and electricity demand low, conserving water in Norway's hydro-power reservoirs. When demand is high in the UK and wind power generation is low, low-carbon energy can flow from Norway, helping to secure the UK's electricity supply. The link will also facilitate power trading and electricity price arbitrage between the countries.

As part of its project scope, ABB will design, engineer and supply two 525-kilovolt (kV), 1,400-MW converter stations using HVDC Light or voltage sourced converter (VSC) technology, utilizing transistors for power conversion and featuring

several advanced capabilities to stabilize adjacent AC grids. A converter station will be located at each end of the 730-kilometer long interconnector - one in Blyth, UK, and the other in Kvittdal, Norway.

#### Main data:

Commissioning year:	2021
Power rating:	1,400 MW
No of circuits:	2
AC voltage:	420 kV (Kvittdal, Norway) 400 kV (Blyth, UK)
DC voltage:	±525 kV
Length DC cables:	730 km
Main reason for choosing HVDC Light:	Long submarine cable distance, stabilizing features.
Application:	Interconnecting grids