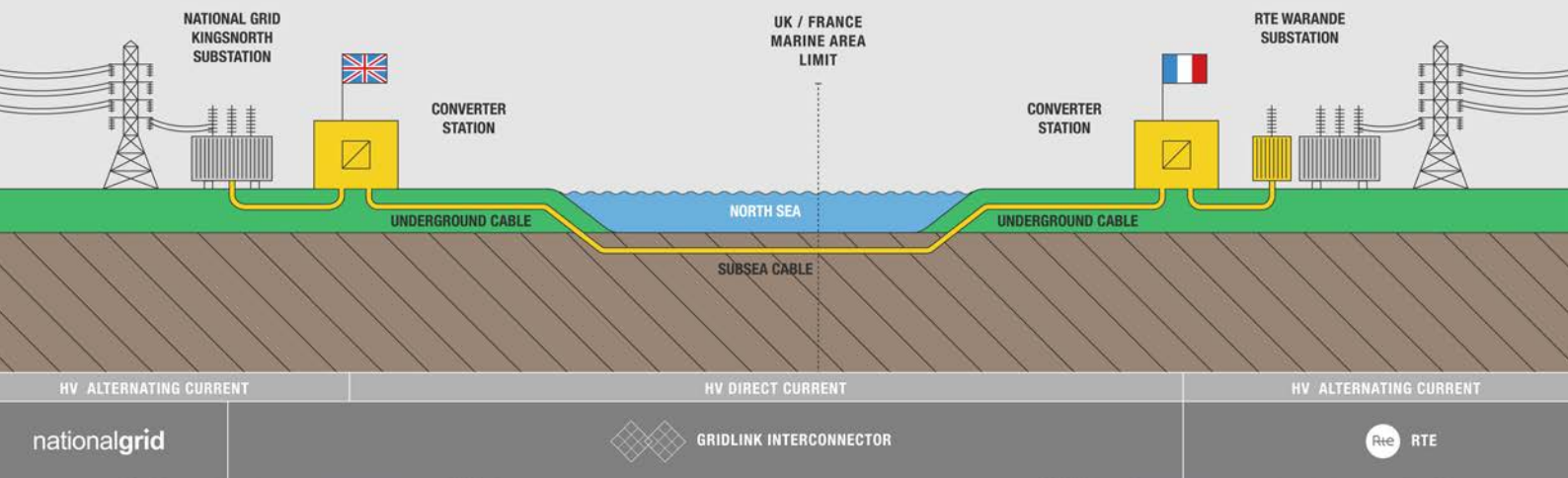


GRIDLINK INTERCONNECTOR PROJECT

A new 1,400 MW electricity interconnector between the UK and France



The GridLink Interconnector Project is a 1,400MW high voltage electricity cable that will provide a link for transmission of electricity between the national grids of the UK and France.

The cable connects the National Grid 400 kV sub-station at Kingsnorth in Kent, UK to the RTE 400 kV sub-station at Warande near Dunkerque in Nord Region, France.

The cable route passes through the Medway Estuary and Thames Estuary, before turning south-east to cross the southern North Sea to the French coast.



GridLink cable route and converter station sites

KEY FACTS

- High voltage, direct current subsea cable
- Nominal capacity of 1.4GW, which corresponds to electricity supply for 2.2 million homes
- 140km of submarine cable – 108km in UK territorial waters and 32km in French territorial waters
- After crossing each coastline, 13.5km of underground cable in France and <1 km of underground cable in UK
- Converter stations in France and UK
- To connect from the converter stations to the national grids in each country, 3km of underground cable in France and 1.5km in UK
- Investment cost of approximately 900 million euros

**Diversifies sources of supply
Improves integration of renewable energy
Helps network stability
Reduces grid system constraints**

ALTERNATIVES

GridLink has selected the cable route and converter station sites after extensive studies of alternative routes and sites.

The studies have included desk-top research of published information, bathymetric, geophysical, geotechnical and environmental surveys, consultations with navigation authorities (Grand Port Maritime de Dunkerque, Port of London Authority, Peel Ports) and coordination with third party cable owners.

Key alternatives for the submarine cable route that have been studied are:

- Submarine cable routes in the Thames Estuary to the north and south of the BritNed cable and the Pan Sands sandbank;
- Alternative routes around London Array and Thanet windfarms, other restricted areas and obstacles, and at crossings of other cables
- Approaches to the shoreline at Dunkerque.

The converter station sites have been chosen as close as possible to the connection points to the national grids in UK and France at existing industrial sites – the former E.on coal-fired power station at Kingsnorth and the designated Zone de Grandes Industries (ZGI) at Dunkerque.

The sites have been selected based on sufficient size, commercially available, accessible to the cable connections, compatible industrial context and minimisation of environmental impacts.



Dunkerque Onshore Cable Route and Converter Station Site



Kingsnorth Converter Station Site

THE CONVERTER STATIONS

The converter stations change the high voltage direct current to alternating current and adjust the voltage to 400 kV for the connection to the national grids in UK and France.

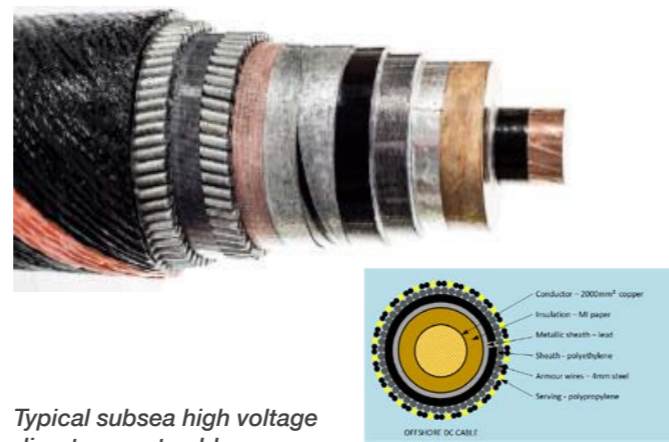
Each converter station comprises a main building divided into sections called a DC Hall, Valve Hall and Reactor Hall. Buildings accommodating the ancillary facilities, such as a control room, utilities services, spares, materials storage, workshop and maintenance, may be attached to the main building or separate buildings



Typical converter station layout (image courtesy of Siemens)

THE CABLE

The cable system comprises two cables. Each cable will have a copper conductor wrapped in insulation and armoured to protect it from external damage. The cables will be up to 150 mm in diameter.



Typical subsea high voltage direct current cable

The submarine cable is buried under the seabed by a cable-lay vessel.



Typical subsea cable-lay vessel

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

GridLink is committed to high standards of environmental management for the lifetime of the project.

All electricity cables are buried under the seabed and on land – there are no new overhead transmission lines.

The converter station sites are located in designated industrial areas where similar types of developments already exist or are planned.

Detailed environmental studies will assess any potential impacts and risks to the environment from cable installation, construction of converter stations and future operations.

The main potential submarine environmental effects from the subsea cable are:

- Disruption to shipping and navigation and fishing by cable installation vessels and changes to seabed conditions
- Disturbance of protected species or designated features of protected sites by marine operations, underwater noise and/or lighting
- Suspended solids in the water column and changes to siltation patterns
- Damage to marine archaeological heritage and wrecks
- Scour caused by changes to seabed conditions
- Snagging hazards for anchors and fishing gear

The main potential onshore environmental effects from the construction of the underground cables and converter stations are:

- Temporary disturbance of land and ecological impacts from construction vehicles and workers, including construction traffic generation, construction noise, disturbance of watergangs (in France only) and lighting
- Operational noise, visual and landscape impact from converter station buildings and loss of agricultural production after trench reinstatement (in France only).

The project is transboundary in that infrastructure is installed in the UK and France, but the only cross-border impacts that may occur are localised effects from cable installation across the boundary between the territorial waters of the UK and France caused by cable installation vessels or sediment mobilisation in the water column.

GridLink will implement mitigation measures to avoid, when possible, any negative environmental effects, reduce negative effects that cannot be avoided and, as a last resort, compensate for any residual effects. Therefore, a range of mitigation measures have been incorporated into the planning, design and construction works in accordance with this principle:

- Cable routing to avoid or minimise the section required within sensitive environmental features and protected sites
- Design of cable crossings to minimise the requirement for rock placement and risk of scour;
- Selection of cable installation methods and seabed intervention measures that minimise the effects on the seabed and suspension of sediment in the water column
- Horizontal directional drilling (HDD) to install cables below sensitive environmental features at the surface, including at shore crossings, road/rail/canal crossings and major watergang crossings
- Incorporation of a range of good international industry practices into construction activities, including for noise control, site lighting, traffic management, temporary construction laydown, soil storage, control of hazardous substances and waste management
- High standards of architectural design and landscaping, including colour and finish of buildings compatible with the surrounding environment;

Monitoring of the environment will be carried out before and after cable installation/ construction works to identify any changes caused by implementation of the project, and chance find procedures will be prepared in case of discovery of archaeological heritage, wrecks or Unexploded Ordnance (UXO).

Fishing liaison and engagement with navigation authorities, environmental authorities and interest groups has been initiated at an early stage and will be continued throughout construction to ensure good communications with stakeholders are maintained.

PROJECT OF COMMON INTEREST

GridLink has been awarded the status of Project of Common Interest (PCI) by the European Commission in April 2018.

A PCI is a key cross border infrastructure project that links the energy systems of EU countries.

They are intended to help the EU achieve its energy policy and climate objectives: affordable, secure and sustainable energy for all citizens, and the long-term de-carbonisation of the economy.

The URL link to the European Commission's PCI infrastructure transparency platform is provided below:

https://ec.europa.eu/energy/topics/infrastructure/projects-common-interest_en

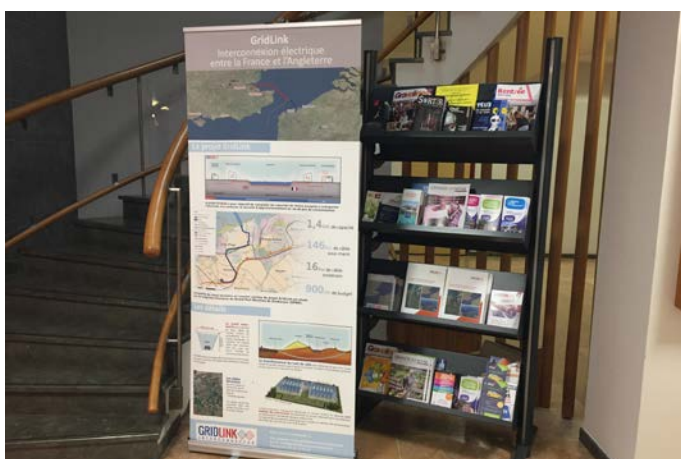
STAKEHOLDER ENGAGEMENT

GridLink intends to positively engage with local communities, local businesses, interest groups and all statutory and non-statutory stakeholders in relation to the development, construction and operation of the GridLink interconnector project.

Public consultations include public meetings, thematic meetings with interest groups, web-site, and information points at local community centres.



Public meeting held in Bourbourg, near Dunkerque



Information Point at Loon Plage, near Dunkerque

PRELIMINARY TIMETABLE

August 2019: Announcement of tenders for Engineering, Procurement and Construction contracts

October 2020: Applications for development consents and permits (UK and France)

December 2020: Marine License granted (UK)

January 2021: Outline Planning Permission granted (UK)

July 2021: Engineering, Procurement and Construction contracts awarded for HVDC cable system and converter stations

September 2021: Maritime public area utilization rights granted and building permit granted (France)

November 2021: Approval of regulatory scheme by national regulatory authorities (UK and France)

January 2022: Start of construction

June 2024: Commissioning

January 2025: Commercial Operations Date

WHO ARE WE?

The GridLink Interconnector Project is owned by GridLink Interconnector Ltd. The company has been established to develop, construct and operate the new interconnector.

GridLink Interconnector Ltd is wholly owned by iCON Infrastructure LLP. iCON is a respected, independent investment company who invests the capital of pension funds, insurance companies and other asset managers into long term, infrastructure investments.

GRIDLINK 
INTERCONNECTOR

icon infrastructure

FURTHER INFORMATION

Please visit our web-site for further information:
www.gridlinkinterconnector.com