



Case Study : Subsea HVDC cable interconnector

Cathie performs Cable Burial Risk Assessment (CBRA) and Cable Protection Analysis from Longhaven Bay, UK to Simadalen, Norway for NorthConnect KD





NorthConnect KS is a commercial joint venture set up to develop, build, own and operate a high voltage ‘interconnector’ between the UK and Norway. It is projected to have a capacity of 1,400MW, with a subsea length of approximately 665 km and will be routed from Simadalen in Norway, across the North Sea to Long Haven Bay, just south of Peterhead in Scotland. The intention is for the HVDC interconnector to be operational by 2023.

The subsea cables will come ashore at Long haven Bay and connect to a converter station at Fourfields near Boddam, Peterhead, where the electricity will be converted from High Voltage Direct Current (HVDC) to High Voltage Alternating Current (HVAC).

An HVAC cable will connect the converter station to the National Grid network at Peter head substation. Similar infrastructure is proposed at the Norwegian landfallSima at the end of Hardangerfjord, with a converter station in Simadalen.

Challenge

NorthConnect KS wanted a Cable Burial Risk Assessment (CBRA) and Cable Protection Analysis Report, covering the whole offshore route survey corridor from Longhaven Bay, UK to Simadalen, Norway. This had to be performed in line with NorthConnect KS’s Cable Protection Strategy for the identified hazards.

NorthConnect KS wanted to have a clear understanding of the risks and likely protection measures to inform the marine consenting and marine contractor tendering processes.

Solution

Cathie was advisor for NorthConnect KS, providing offshore client Representation during part of the survey campaign and developing a detailed CBRA and Cable Protection Analysis Report for the NorthConnect interconnector.

We considered relevant aspects of seabed conditions, hazards, main cable protection methods and design requirements while creating the report.

We also performed a detailed Burial Assessment Study of the UK 12 nautical mile zone and helped develop a conceptual installation corridor for this section of the offshore route.

A dedicated representative from Cathie assisted in completing the assessment within the expected time lines.

Impact

We delivered well-researched reports amid stringent deadlines for the purpose of enabling cost-efficient mitigation of risks, thereby assisting the client to develop the NorthConnect interconnector project in a timely manner.



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