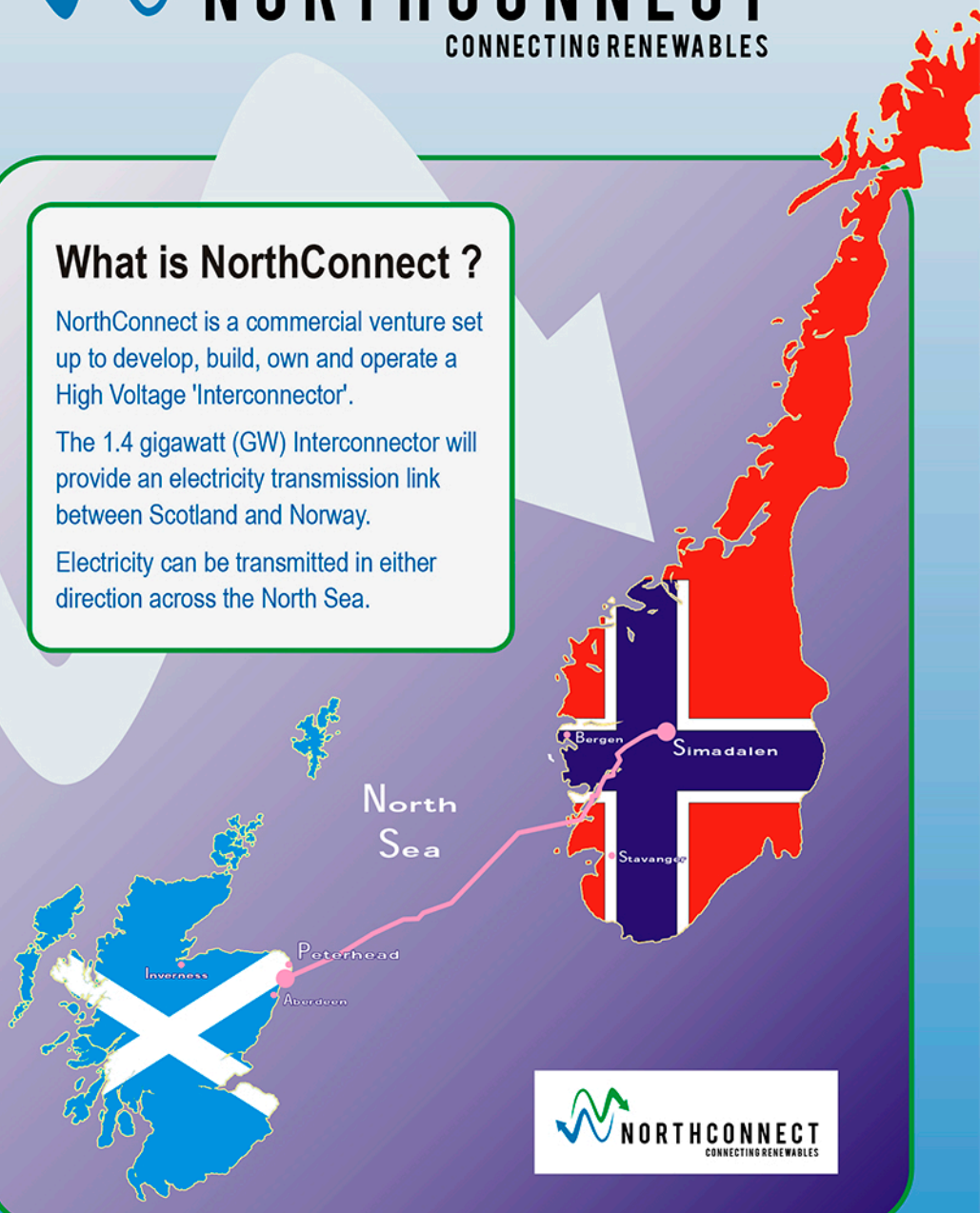
NORTHCONNECT
CONNECTING RENEWABLES

What is NorthConnect ?

NorthConnect is a commercial venture set up to develop, build, own and operate a High Voltage 'Interconnector'.

The 1.4 gigawatt (GW) Interconnector will provide an electricity transmission link between Scotland and Norway.

Electricity can be transmitted in either direction across the North Sea.



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Project Need

The European Union has set a target for 20% of Europe's energy requirements being met by renewable resources by 2020. The Scottish Government goes further and aims to exceed this target by supplying 100% of Scottish demand from renewable sources by the same date.

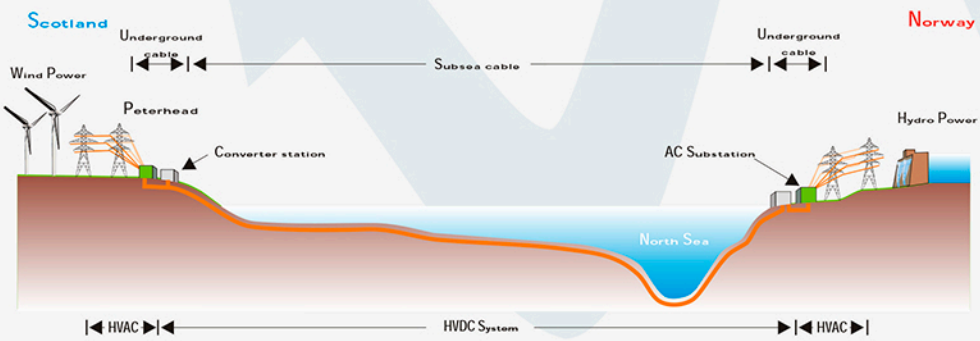
The Scottish government published its' Electricity Generation Policy in 2013 and stated that:

> *'Scotland's renewables potential is considerable. Figures published on the UK Department of Energy and Climate Change website in May 2013 estimated that, between April 2010 and January 2013, the industry announced projects amounting to over 9,000 jobs and £13 billion investment in Scotland. We know that our renewables potential will be capable of generating much more than enough to meet domestic demand for electricity. The remainder could be exported to the rest of the UK and continental Europe to assist other countries in meeting their binding renewable electricity and decarbonisation targets'.*

The policy identifies that a key requirement will be increased interconnection and transmission upgrades to deliver this potential.

The increase of wind power in the energy mix is increasing the demand for reserve generation capacity to store excess energy produced during windy periods, and to meet periods of high demand. Hydro-power is one reserve power option, however, Scotland does not have sufficient hydro capacity, whereas Norway on the other hand does.

In parallel with this, there is emerging international cooperation in the European energy sector and the clear political goal of linking the European power systems closer together. NorthConnect will connect the two complementary and previously disconnected power systems of Scotland and Norway, helping both to balance the grid between the two countries, and allowing wider trading across Europe. This will ensure security of supply and stabilise electricity prices for consumers.



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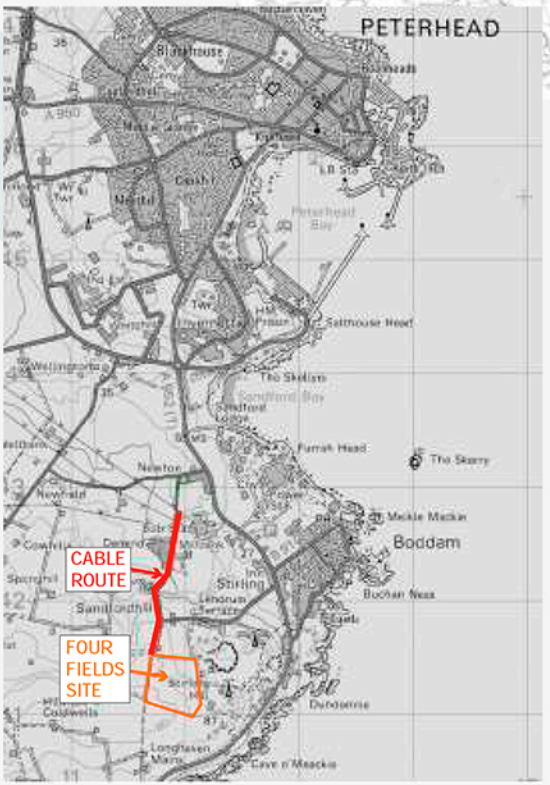
Location

The Norwegian converter station will be located in Simadalen, at the end of the Hardangerfjord to the east of the city of Bergen.

The DC cables across the North Sea will come ashore near Longhaven, then travel underground to the converter station proposed for the 'Fourfields' site, West of Stirling Hill Quarry.

The AC cables will then also be buried underground to connect to a new extension proposed for the Peterhead Sub-Station site near to the Power Station.



Components

The subsea cables are High Voltage Direct Current (HVDC). Direct Current (DC) is utilised as it has lower transmission losses when using buried cables. The National Grid systems utilise Alternating Current (AC) technology. Interconnector converter stations are therefore required at each end of the HVDC cable to convert the DC electricity to AC and vice versa to allow connection to substations on the National Grid.

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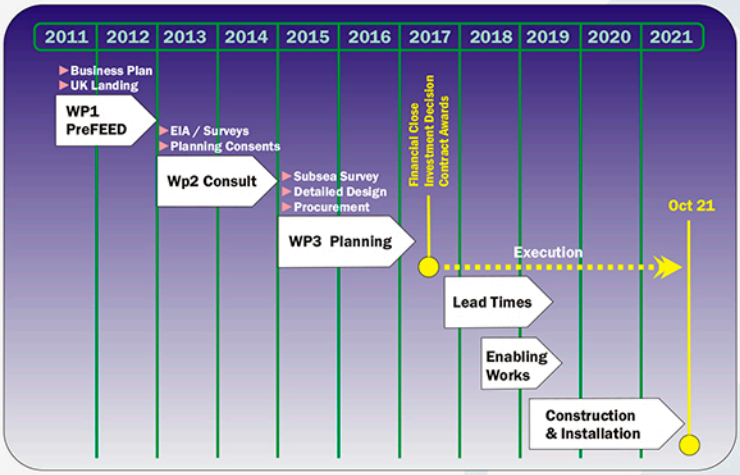
Project Status

NorthConnect are starting the planning process for the Interconnector Converter Station and the AC cable route. As part of this process we are completing a programme of public consultation and an Environmental Impact Assessment. The DC Cable route will be subject to a second planning application and marine licence. This will be assessed and consulted upon separately at a later date.



Get Involved

The Converter Station requires a large area of ground and the main building may be 190m long by 60m wide by 23m high. The Fourfields site was selected because the local topography will minimise where the buildings can be seen from. It also provides additional space that can be landscaped to improve the area for both ecology and the local community.

We wish to work with the local community to understand what you value and how you would like the area around the converter station to be landscaped. We would also be interested in hearing your views on the aesthetic design of the converter station itself.

Have your say by completing a questionnaire.

* Paper copies can be returned in the Freepost envelope supplied or
* Complete online at www.northconnect.no

We will be running a workshop on the 4th of November at the Buchan Braes Hotel. If you would like to be involved then please email fiona.henderson@northconnect.no, call Fiona on 07773 353399 or complete the relevant section on the Questionnaire and return by the 31st of October 2014.