VikingLink

nationalgrid | ENERGINET

Non-Technical Summary

For the TEN-E Regulations

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Contents

1 Introduction

The Viking Link Project

1.1.1 National Grid Viking Link Limited (NGVL) and Energinet are developing a proposal for a new high voltage Direct Current (DC) electricity interconnector between Great Britain and Denmark, connecting to the existing Danish and British electricity transmission systems – known as Viking Link.

1.1.2 Viking Link will enable more effective use of renewable energy, access to sustainable electricity generation and improved security of electricity supplies. Thus it will have socio-economic benefits for both Denmark and Great Britain and the wider European community.

1.1.3 Viking Link is in line with the European Commission's aim for an integrated energy market to ensure value for money for consumers and provides the opportunity to transport renewable energy to centres of consumption. Viking Link has therefore been included on the European Union List of Projects of Common Interest (PCI).

1.1.4 As a PCI, Regulation (EU) No 347/2013 on guidelines for trans-European energy infrastructure, referred to as the 'TEN-E Regulation' applies to Viking Link, and sits alongside other relevant legislation in each country.

1.1.5 The TEN-E Regulation has been developed to ensure the timely development and interoperability of energy networks in Europe and it sets out guidelines for streamlining the permitting processes for major energy infrastructure projects that contribute to European energy networks.

Project Partners

1.1.6 Viking Link is being jointly developed by National Grid Viking Link Limited (NGVL) and Energinet.

1.1.7 **National Grid Viking Link Limited** is a wholly owned subsidiary of National Grid Group and has been granted an interconnector licence by the energy regulator Ofgem. NGVL is legally separate from National Grid Electricity Transmission Plc. (NGET) which has the licence to own and operate the high voltage electricity transmission system in England and Wales.

1.1.8 **Energinet** is an independent public enterprise owned by the Danish Ministry of Energy, Utilities and Climate. The enterprise owns and operates Denmark's main electricity and natural gas grids.

Purpose of this Document

1.1.9 This document presents a non-technical explanation of the Viking Link project, including the offshore route and the onshore elements in Denmark and Great Britain. It outlines the potential impacts and mitigations and the permit granting process

1.1.10 It sets out the approach to public participation and public consultation and signposts where more detailed information can be found, along with contact details for stakeholders to provide comments or make further enquiries.

1.1.11 This document will be updated periodically as the project progresses.

2 About Viking Link

Project Overview

2.1.1 The Viking Link Project is a high voltage Direct Current (HVDC) electrical interconnector with an approximate capacity of 1400 megawatt (MW). It will allow the transfer of power between the high voltage electricity transmission systems of Denmark and Great Britain, crossing through the Exclusive Economic Zones (EEZ) of Great Britain, the Netherlands, Germany and Denmark.

2.1.2 The Project is configured so that power would be able to flow in either direction at different times, depending on the prevailing supply and demand conditions in each country.

2.1.3 The proposed cable route would run from Bicker Fen in Lincolnshire, UK to Revsing in Jutland, Denmark (see Figure 1). The total length of the interconnector is approximately 760km, with 620km of submarine cable and 65km and 75km of onshore cable in Great Britain and Denmark respectively.

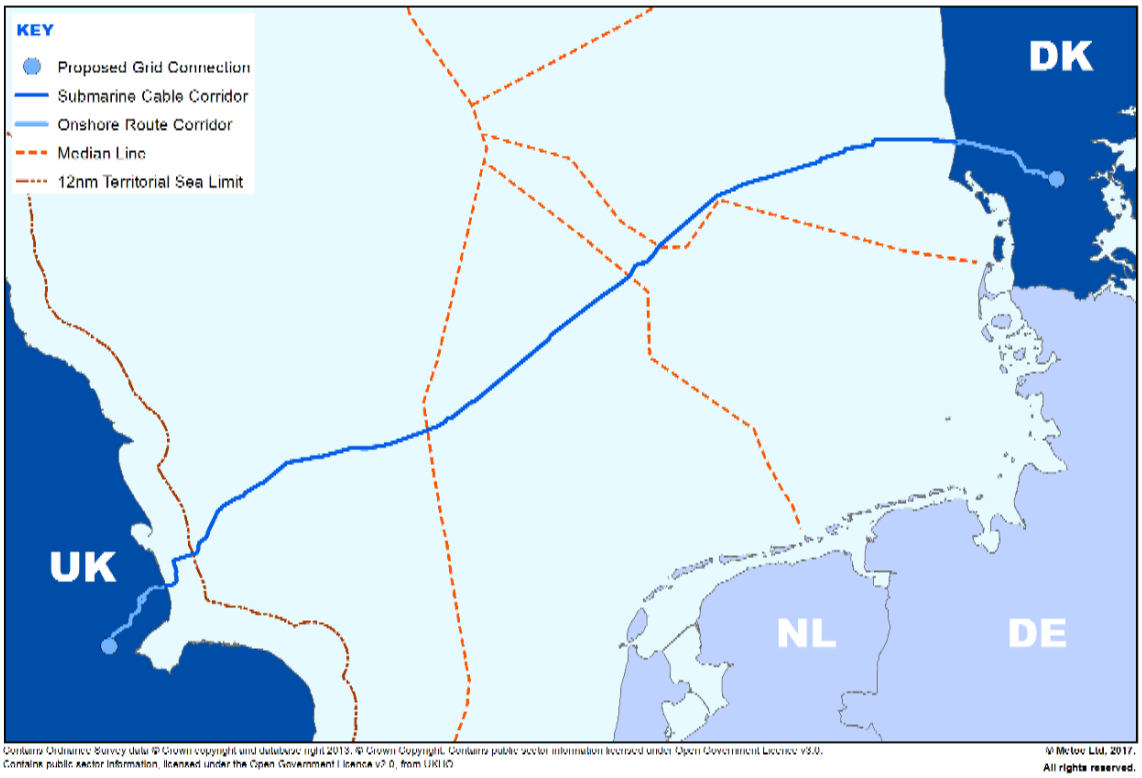

Figure 1 Proposed Cable Route

Technical Overview

2.1.4 The high voltage grid systems in Great Britain and Denmark operate using High Voltage Alternating Current (HVAC). To transport electricity from one country to the other, the HVAC power is converted to High Voltage Direct Current (HVDC) at a Converter Station located onshore and transmitted by means of HVDC cables to the other Converter Station, whereupon it

is converted back from HVDC to HVAC for integration into the high voltage work in the other country. A Fibre Optic Cable may be installed with the cables in the same trench.

2.1.5 A direct HVAC connection is not feasible due to the high electrical losses derived from a cable system of this length.

2.1.6 More specifically the Project comprises the following:

- In Denmark:
  - New equipment within the existing Revsing 400 kilo Volt (kV) substation and Alternating Current (AC) cables (Gas Insulated Lines) to connect the existing high voltage electricity transmission network to a new converter station;
  - New converter station to change electricity between AC and DC or vice versa depending on direction of operation; and
  - Onshore high voltage DC cables from a converter station to the coast in western Denmark.
- In the North Sea (Danish, German, Dutch and UK EEZs:
  - Approximately 620 km of submarine high voltage DC cables buried in the seabed for as much of their length as practicable.
- In Great Britain
  - Onshore high voltage DC cables from the Lincolnshire coast to a new converter station;
  - New converter station to change electricity between DC and AC or vice versa depending on direction of power flow; and
  - AC cables from the converter station to new equipment within the existing 400 kV Bicker Fen Substation which connects to the existing high voltage electricity transmission network.

2.1.7 Figure 2 presents a schematic representation of this configuration.

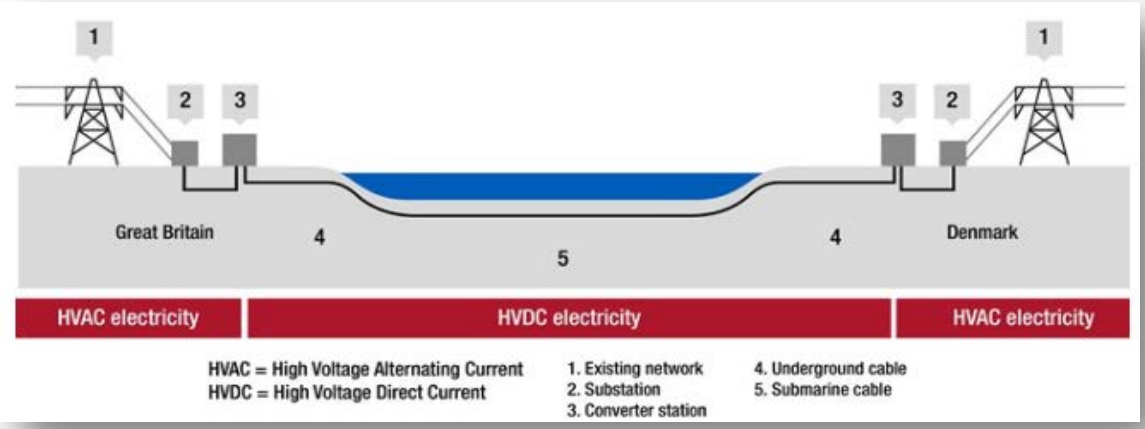

Figure 2 Schematic Overview of Viking Link

Converter Stations

2.1.8 Viking Link will involve the construction of two converter stations, sited in Great Britain and Denmark. It is expected the Converter Stations will occupy a footprint each of approximately four to five hectares of land for the operational area and additional land for landscape treatment to help minimise the visual impact. Additional land may be required for access and any environmental mitigation that may be required.

2.1.9 There will also be some additional temporary land requirements during the construction period for laydown and contractor facilities.

2.1.10 A typical converter station includes a range of technical equipment some of which must be located indoors in a series of large buildings, potentially up to 24m tall. A typical converter station includes:

- Control Room
- Converter power electronics and associated DC equipment
- Alternating Current (AC) switchgear
- Transformers and other associated AC equipment
- Ancillary equipment and spares buildings

2.1.11 The design of the converter station buildings and site layout is expected to be finalised once construction contracts have been awarded in 2018 and will take into account conditions attached to any consents granted in Denmark and Great Britain respectively. Figure 3 below presents a typical schematic of a converter station.

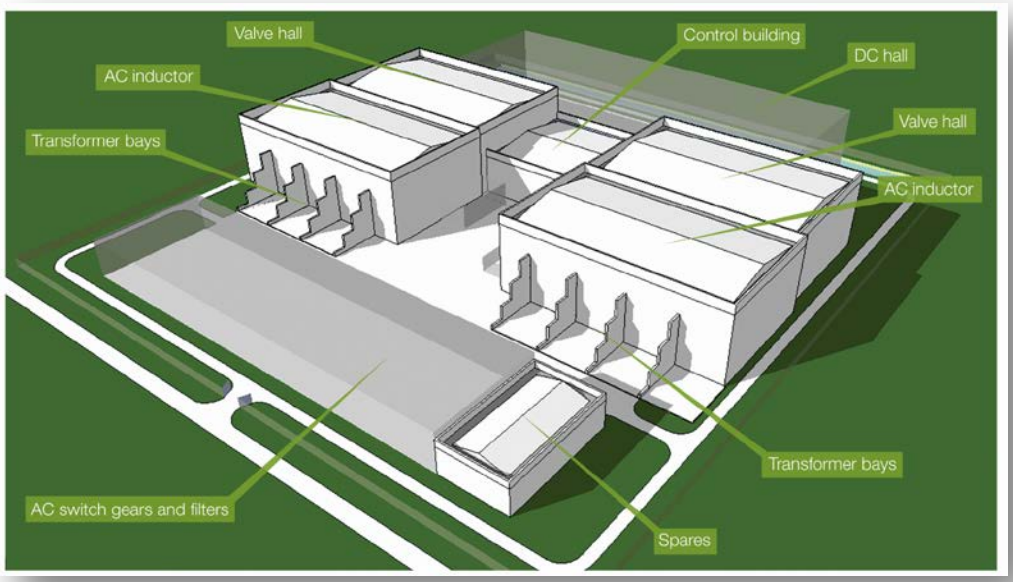

Figure 3 Schematic of Typical Converter Station

Onshore Cabling

2.1.12 The onshore cables will be laid in one trench of approximately 1.5m width, and the area will be re-established after construction. The working width in Great Britain is up to 30m width and up to 18m in Denmark.

2.1.13 The exact methods for cable installation will depend on the final cable route and constraints which are present. Typically cable installation will involve the following activities:

- Open cut/direct lay: this is where a trench is excavated by a mechanical excavator and the underground cables laid directly into the trench. The trench would then be backfilled using a combination of excavated soils and Cement Bound Sand (CBS) and the land reinstated.
- Open cut and duct: this is where a trench is excavated by a mechanical excavator and ducting is placed into the trench, in preparation for the cable to be pulled through the ducts. The trench would be backfilled as soon as the ducting had been installed using a combination of excavated soils and Cement Bound Sand (CBS) and the land reinstated. Locations along the route would remain open in order to access the ducts to pull and joint the cables.
- Trenchless methods such as horizontal directional drilling (HDD) or pipe jacking: these are used where obstacles are encountered such as watercourses, railways or roads. HDD involves the use of a drill to bore a route below the ground through which ducts will be pulled and cables installed.
- Cable jointing: joint bays are required between each cable section to join them together. The exact number of joint bays will depend on the cable route and constraints present.

2.1.14 Figure 4 below shows the process of cable installation onshore.

Figure 4 Onshore Cable Installation (Photo: Energinet)

Submarine Cabling

2.1.15 Electricity will be transmitted using HVDC submarine cable technology. There are currently two types of HVDC submarine cable available. These will be of either Extruded or Mass Impregnated

Non-Draining (MIND) insulation technology (see Figure 5). Typically, these cables are 150mm diameter and will operate at a voltage of +/- 525kV. The basic design of the cables is similar with the main difference being the type of insulation used.

Figure 5 Indicative Submarine HVDC Cable Options

2.1.16 The submarine cable lay configurations proposed for each jurisdiction are presented below in Table 1.

Table 1 : Submarine Cable configuration for each jurisdiction

Term	UK Sector	NL Sector	DE Sector	DK Sector
HVDC Submarine Cable Installation	Either laid as single operation or separately. Cables either within same trench or up to 50m apart.	Either laid as single operation or separately but in same trench	Either laid as single operation or separately but in same trench	Either laid as single operation or separately. Cables either within same trench or up to 50m apart.
Fibre Optic Cable Installation	May be installed at same time as HVDC bundled cables	May be installed at same time as HVDC bundled cables	May be installed at same time as HVDC bundled cables	May be installed at same time as HVDC bundled cables
Cable Joints	Between 12 and 30 submarine cable joints along entire submarine route			
Repeater for the Fibre Optic Cable	To be placed along the cable route approximately every 150 km next to a cable joint in order to extend optical signal (not in Klaver Bank)			

2.1.17 The cable lay operation will be performed on a 24-hour basis to ensure minimal navigational impact on other users and to maximise efficient use of suitable weather conditions and vessel and equipment time. Notifications will be issued in accordance with statutory procedures to

ensure navigational and operational safety. In addition to the installation vessel(s), additional vessels (i.e. guard vessels) may be involved with the operation.

2.1.18 Typical vessels used in the installation are shown below in Figure 6.

Figure 6 Typical cable lay vessels

2.1.19 The cables are laid and buried at the same time, or an additional vessel is used to bury the cable as shown below in Figure 7.

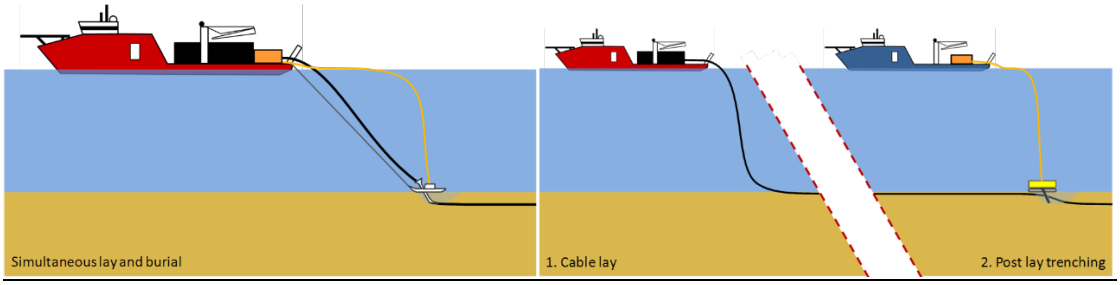

Figure 7 Submarine Cable Laying Options

3 Onshore Elements in Denmark

Landfall Blaabjerg

3.1.1 The location of the Danish landfall for the submarine cable system is near Blaabjerg at the beach Houstrup Strand north of the summerhouse area Henne in Varde.

3.1.2 West of Houstrup Strand is an open beach and high dunes shaped by wind and weather and which continue to be shaped by the dynamic coastal processes such as deposition and clay formation. Behind the dunes is a larger area of heath and Blaabjerg plantation with light-open areas with especially moor vegetation.

3.1.3 The submarine cables would be pulled from the cable lay vessel and onto the beach where the transition joint will be made prior to the further horizontal directional drilling (HDD) to pass the protected sand dunes. The transition joint is proposed to be located approximately 100 meters onto the shore.

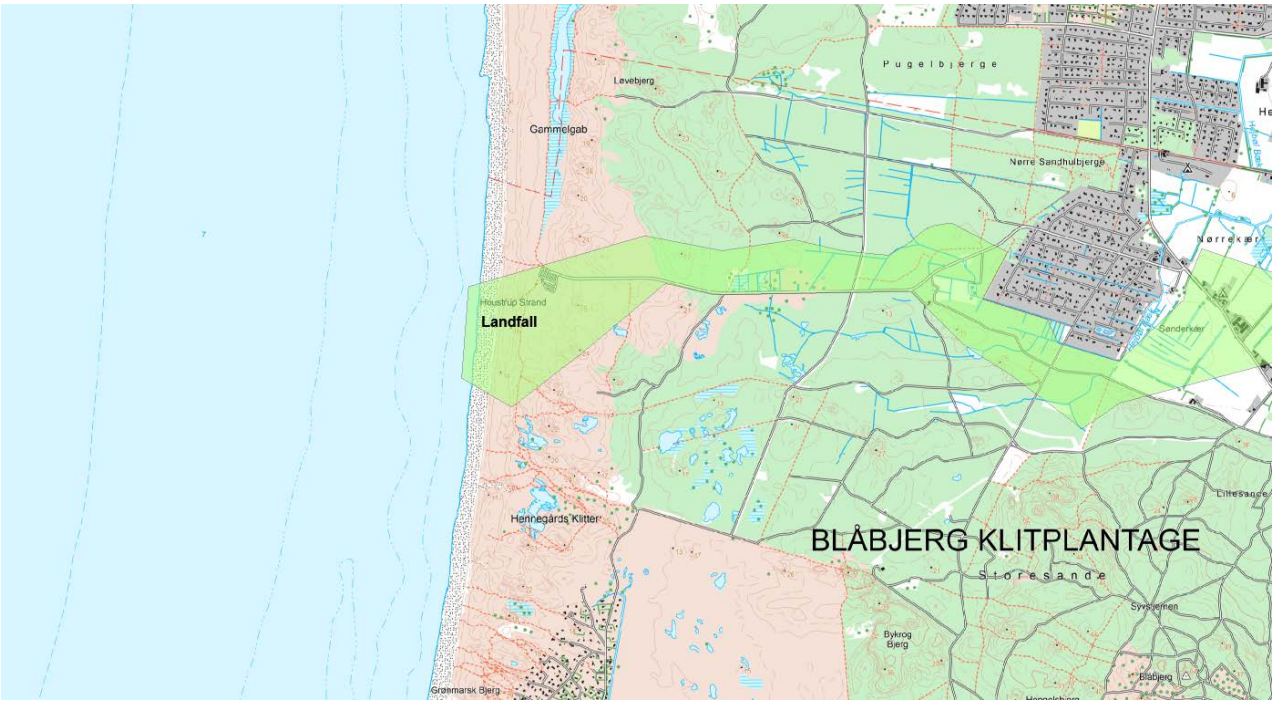

Figure 8 Landfall in Denmark at Blaabjerg

Cable corridor in Denmark

3.1.4 The onshore elements in Denmark have been developed through consideration of potential impacts to the environment and local communities as well as technical considerations. The aim of this approach is to balance consideration of these factors and identify preferred sites for a landfall and converter station, which is technically feasible and economically viable and which could be brought forward for public consultation.

3.1.5 The preferred cable route corridor, as shown in Figure 9, between the landfall and converter station in Denmark has been identified by analysing a wide range of constraints including the location of residential areas and spatial planning. The Viking Link team has discussed the options with representatives from local authorities and statutory bodies, and the route corridor has been taken to public consultation in 2016. The overall width of the corridor is approximately 300 m, but may in some areas be both narrower and wider due to constraints. The corridor between Blaabjerg and Revsing is about 75 km long.

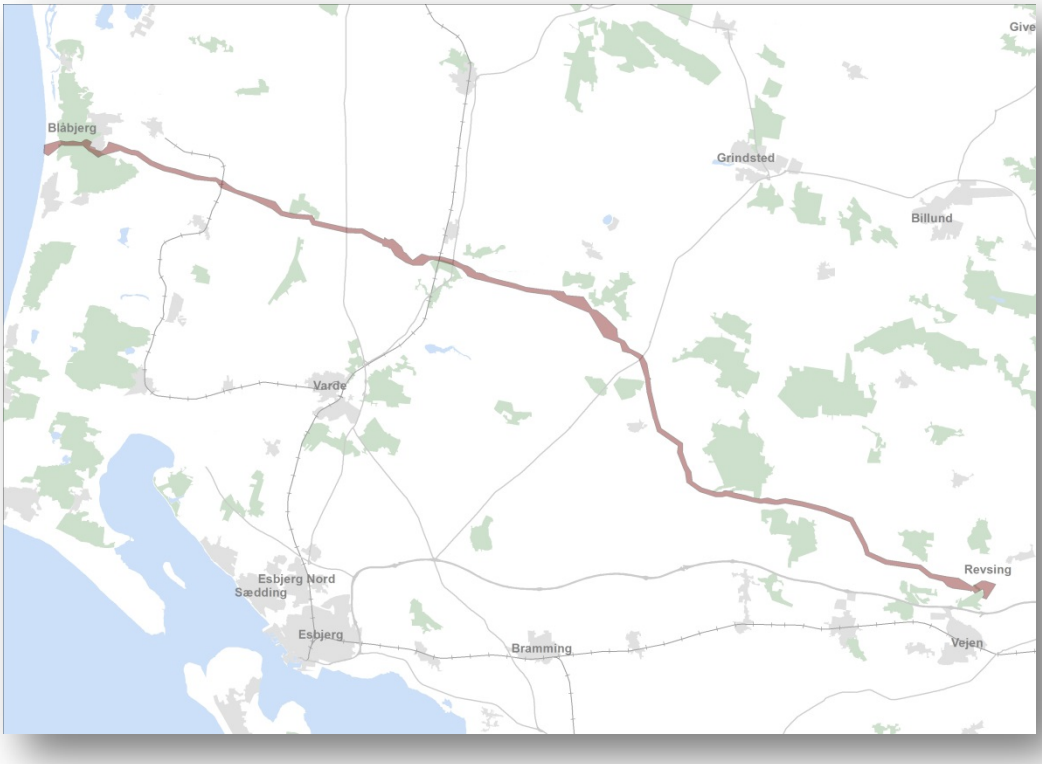

Figure 9 Onshore underground cable corridor in Denmark for Viking Link.

Converter station at Revsing

3.1.6 At Revsing the project area for the converter station includes land area east of the existing substations which today is agricultural land. The proposal includes both space for the converter

station and additional land for use during the construction period for laydown and contractor facilities. The additional land will be used for access and any environmental mitigation that may be required.

3.1.7 Buried HVAC cables will connect the converter station to the existing transmission network sub-stations. The HVAC connection will be achieved via Gas Insulated Lines within the secured fenced area at the existing substation at Revsing.

3.1.8 The technical elements for the converter station in total are estimated to cover an area of 250 x 250 m. The maximum height of some parts of buildings will be up to 24 m above ground. The mast for the overhead lines at the side of the station can be up to 30m above ground.

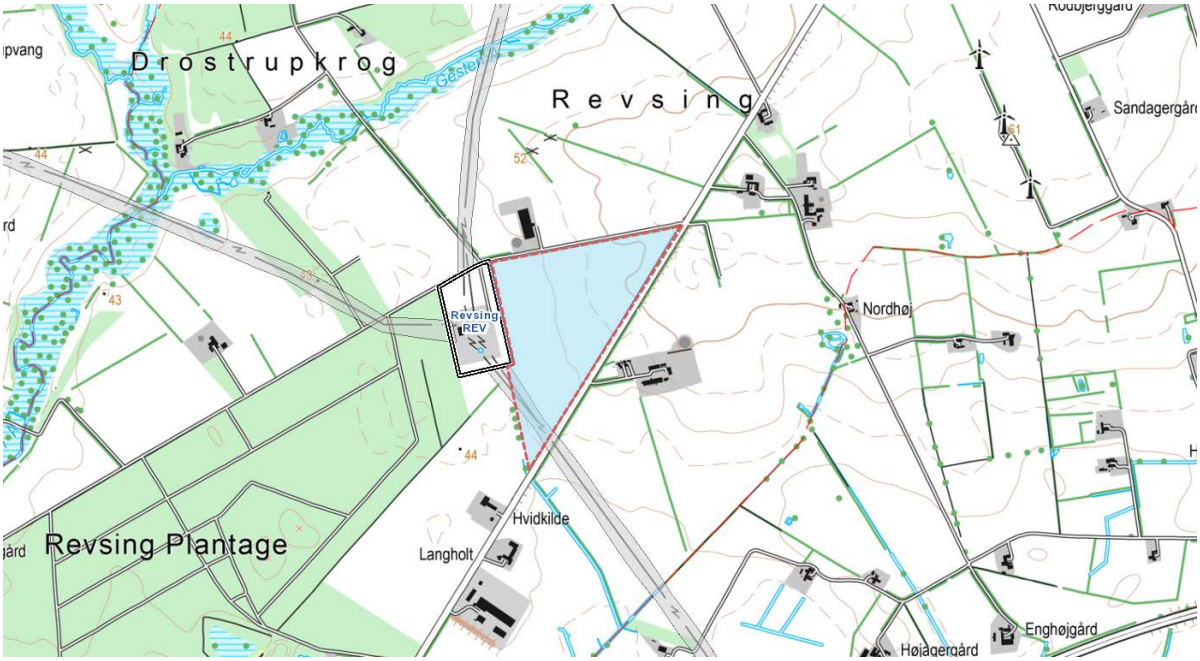

Figure10 Existing substation (left side) and the new converter site at Revsing (right side red marking).

4 Onshore Elements in Great Britain

Landfall

4.1.1 The preferred location of the UK landfall for the submarine cable system is at Boygrift drain, south of the village of Sandilands in Lincolnshire. The preferred location has come from a number of options along the coast, for details please see UK Onshore Scheme – Preferred Sites Report hosted on the Project website.

4.1.2 Along this section of the coastline, 'hard' sea defences have been constructed. According to the Lincolnshire Shoreline Management Plan, these include concrete seawalls, some with either rock armour or concrete units as toe protection, and revetments.

4.1.3 This section of the coastline is subject to annual beach nourishment which involves pumping sand onto an eroding shoreline to raise existing beach levels from an external source. The proposed nourishment will be carried out initially up to 2020 ('the Lincshore Scheme'), to continue to reduce flood risk to people and property in the area and is managed by the Environment Agency (EA). The EA has been carrying out beach re-nourishment along this frontage since 1994. Recent approval for a continuation of the re-nourishment has been obtained for the period 2016 - 2020.

4.1.4 The submarine cables will be located into pre-installed inter-tidal ducts which will extend from the Transition Joint Pint (TJP) (precise position subject to survey), underneath Sandilands Golf Course and the sea defences, to a location between high tide and low tide.

4.1.5 Four ducts will be installed - one for each power cable, the fibre optic cable and a fourth duct to act as a spare.

Figure 11 UK Landfall at Boygrift

Cable Corridor

4.1.6 Based on the results of environmental and technical assessments, and taking into account feedback received from local consultation, the Purple Route Corridor was identified as the preferred route corridor, subject to survey. It best balances the potential impacts on the environment and local communities alongside technical and engineering factors. Specifically the preferred route corridor, which is presented in Figure 12:

- Reduces the potential impact of construction on local communities including air, noise and dust impacts by avoiding larger settlements and also reduces the potential for cumulative impacts with the Triton Knoll project.
- Avoids or provides scope to avoid the majority of statutory and non-statutory ecological designated sites and other areas of habitat value when finalising the detailed route alignment.
- Avoids or provides scope to avoid designated archaeological or heritage assets when finalising the detailed route alignment. The number of distribution of non-designated assets means that not all of these can be avoided and alternative or additional forms of mitigation will be required.
- Reduces the total number of crossings required, in particular reducing the number of watercourse and drain crossings by routeing through more elevated land where fewer watercourses and land drains are present.
- Provides scope to micro-route within the Lincolnshire Wolds AONB and avoid the key features which contribute to its designation. Whilst some temporary impacts would occur, long term impacts can be avoided when finalising the detailed route alignment.
- Avoids the lower lying coastal areas where a higher water table and a significant number of watercourses and drains are present and which in combination would require increased temporary water management including drainage works and dewatering.
- Avoids areas of poorer ground conditions including pockets of peat around Toynton which are considered to present an engineering constraint during the construction and operation of the cable.
- Avoids agricultural land in the low lying fenlands which is considered to be more sensitive to construction works and reinstatement due to the nature of the soils and extensive land drainage.
- Benefits from more opportunities for direct access from existing roads and reduces the potential requirements to use the local road network which is generally considered to be in poorer condition.

For further details please see UK Onshore Scheme – Preferred Route Corridor Report (December)

Figure 12 UK Onshore Cable Corridor

Converter Station

4.1.7 Of the options considered Converter Station CS1 at North Ing Drove in South Holland was selected as the preferred converter station site, subject to survey. Of the shortlisted sites being considered, it was concluded that on balance CS1 meets the requirements of NGVL and, importantly, also provides opportunities to mitigate the potential impacts of the converter station on the environment and the local community (including addressing issues raised in the Phase 1 Consultation) through the planning and design of the converter station.

4.1.8 The preferred location has come from a number of options in the area, for details please see UK Onshore Scheme – Preferred Sites Report hosted on the Project website.

4.1.9 The environmental assessment of this option is in progress.

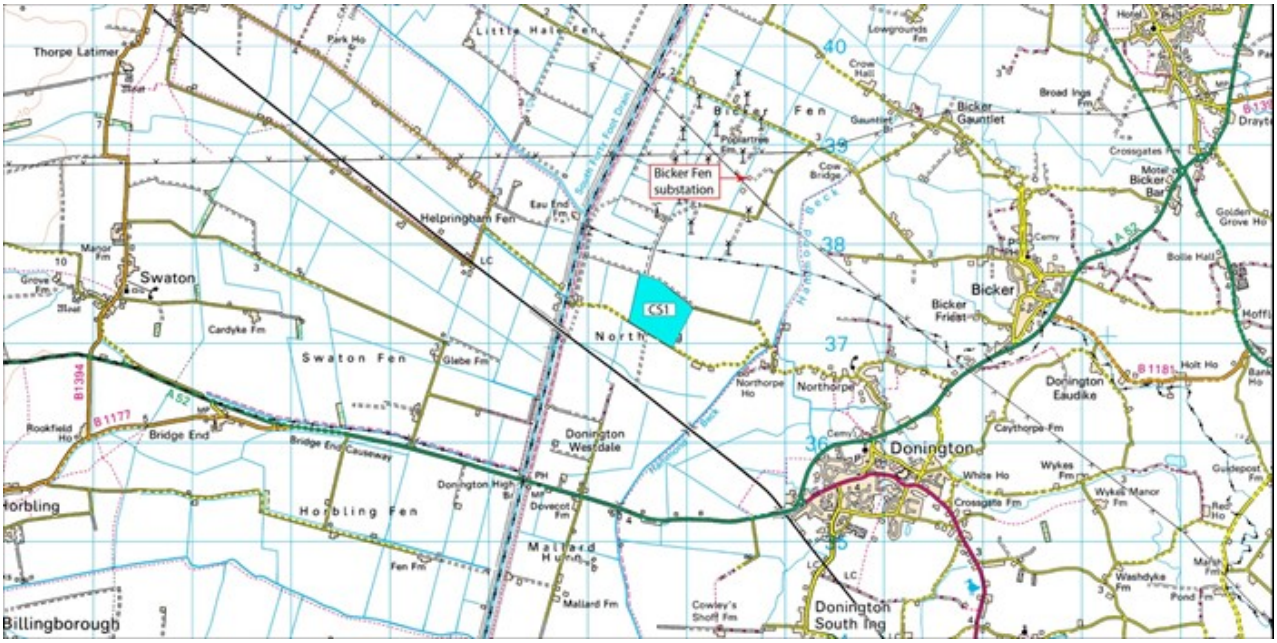

Figure 13 UK Converter Station Location

5 Submarine Cable Corridor

Route Overview

5.1.1 The route derived from preliminary cable route engineering and survey is shown in Figure 14. Kilometre points (KPs) have been assigned to the route running from 0 at the Danish coast. The total length and width of the submarine cable corridor within each territory is shown below in Table 2.

Table 2 : Submarine cable corridor length and width by jurisdiction

Territory	Submarine Cable Corridor Length (Km)	Submarine Cable Corridor Width (m)
Danish Sector	210 km	450 m
German Sector	30 km	450 m
Dutch Sector	170 km	450 m
UK Sector	220 km	450m increasing to: 900m between KP474 – KP476.5; 1130m between KP567.5 – KP572.5; and 575m between KP615.6 and MHWS.

5.1.2 It should be noted that although the submarine cable corridor (for within which consent for installation of the submarine cables will be applied for) is generally 450m wide (1130m at widest point in UK sector between KP 567.5 and 572.5), the final cable configuration will need only a small part of this width for installation.

5.1.3 It is proposed to finalise the precise position of the submarine cables within the corridor after permits are granted but before installation has commenced. This will allow for optimisation of the final laid submarine cables to minimise engineering and environmental challenges, including such factors as avoiding:

- Unexploded ordnance (UXO)
- Boulders
- Undulations as troughs and ridges
- Mobile seabed features as sand waves
- Areas of hard soils, gravels
- Steep slopes
- Any debris not be removed prior to installation
- Abandoned well heads and spudcan (inverted cones mounted at the base of oil and gas drilling platforms) indentations
- Other magnetic anomalies.

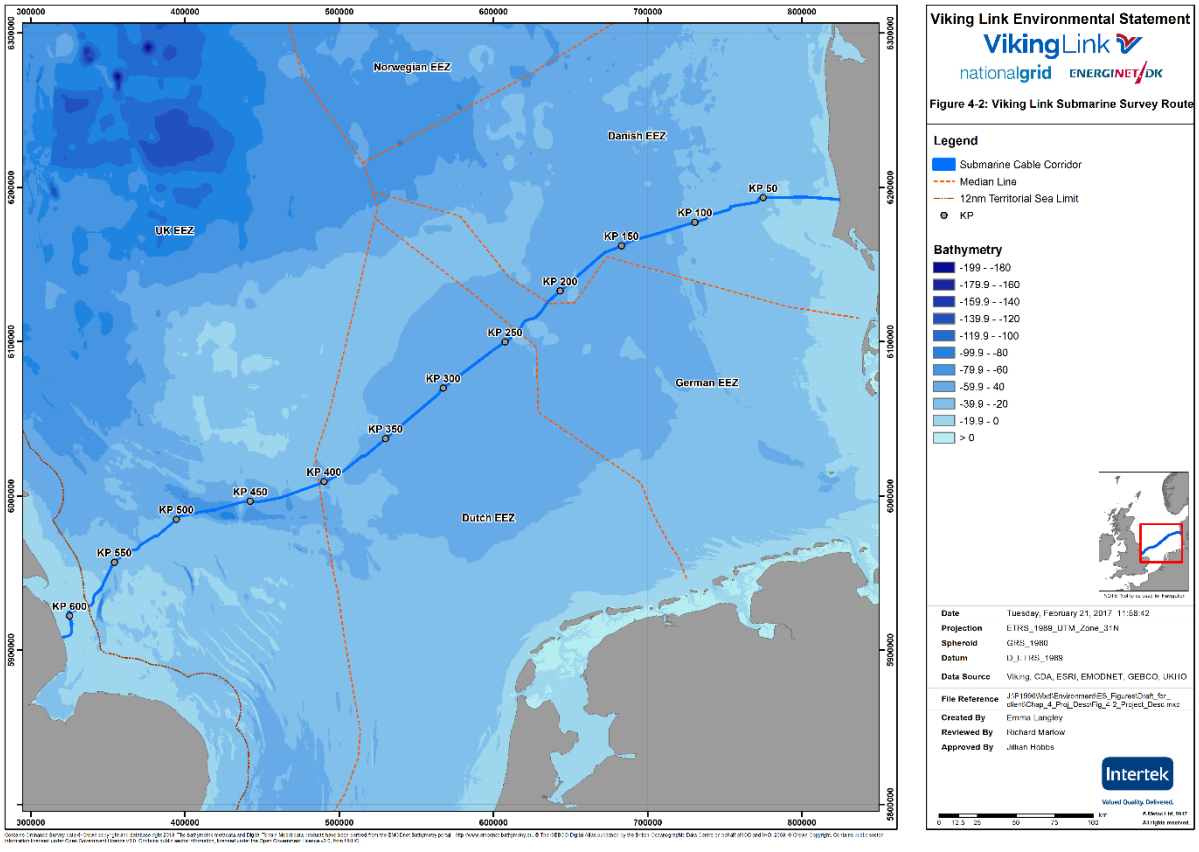

Figure 14 Submarine Cable Corridor

6 Consultation and Engagement

Approach to Consultation

6.1.1 NGVL and Energinet are committed to engaging with stakeholders throughout the development of the project and will seek consultation feedback to help inform project decisions.

6.1.2 All engagement and consultation activity undertaken takes into account NGVL's and Energinet's approaches to community engagement. These require public involvement activity to include:

- Explaining the project
- Explaining the options and why here, and why now
- Linking the project to the community
- Explaining the benefits
- Listening to feedback

Public Participation and TEN-E Regulation

6.1.3 Under the TEN-E Regulation, developers are required to consult with all stakeholders and provide an opportunity for them to attend meetings, comment on proposals and discuss any concerns they may have on the project. NGVL and Energinet have to carry out at least one public event in each member state and the consultation has to take place within no more than two months from the commencement date of the first public event. These events have been held over the summer in 2016 in Denmark, Germany, Netherlands and Great Britain.

Concept of Public Participation

6.1.4 Viking Link has issued a Concept for Public Participation to cover each of the four Member States (GB / NL / DE / DK). A consultation report has been produced for each jurisdiction to document how any input from public and stakeholder engagement has influence decisions when developing the project. The consultation reports are issued with the applications for each jurisdiction.

Project Website

6.1.5 As well as attending public events, a project website in all four languages (www.viking-link.com, www.viking-link.nl, www.viking-link.de, www.viking-link.dk) has been available since project inception, and serves as a source of information for the project.

Consultation in Great Britain

6.1.6 Stakeholder engagement with key parties including Local Planning Authorities (LPAs), statutory bodies and stakeholder organisations as well as parish councils has been a key consideration.

6.1.7 The development of the project in UK has been undertaken in two stages. To compliment this, a phased approach to consultation has been adopted to allow feedback from stakeholders to be fed into the decision-making process at points where it could influence the development.

6.1.8 Phase 1 Consultation was held over a six-week period in April and May 2016, during which statutory and non-statutory consultees, landowners and members of the public were asked for their view on the selection of landfall and converter station sites.

6.1.9 During July and August 2016, NGVL held a series of events to introduce the project to the local resident's landowners and stakeholders across the cable route search area. In addition, throughout June, July and August 2016, NGVL held a series of meetings and workshops with statutory stakeholders and LPA officers, and briefings with LPA members to inform routeing.

6.1.10 Phase 2 Consultation took place over a six-week period from September to October 2016, during which statutory and non-statutory consultees, landowners and members of the public were asked for their view on the selection of a cable route corridor and design styles for the converter station.

Consultation in The Netherlands

6.1.11 Consultation in The Netherlands has focussed on marine stakeholders, as the entire route is in the outer reaches of the Dutch EEZ.

6.1.12 Consultation with maritime authorities, owners of offshore infrastructure (cables, pipelines) and fisheries organisations have been undertaken.

6.1.13 In addition, a public information event was held in Den Haag in July 2016 to provide information on the project to organisations and members of the public.

Consultation in Germany

6.1.14 Consultation in Germany has focussed on marine stakeholders, as the entire route is in the outer reaches of the German EEZ.

6.1.15 Consultation with maritime authorities, owners of offshore infrastructure (cables, pipelines) and fisheries organisations have been undertaken.

6.1.16 In addition, a public information event was held in Hamburg in July 2016 to provide information on the project to organisations and members of the public.

Consultation in Denmark

6.1.17 Stakeholder engagement with the relevant stakeholders has been a key consideration and the engagement has included the local planning authorities; Vejen and Varde municipalities as well statutory bodies as the Energy Agency and Environmental Protection Agency among others.

6.1.18 The first public consultation phase for the EIA process in Denmark ran in the period 30 May -28 June 2016. During this period public meetings were held in Vejen on 13 June 2016 and in Varde on 14 June 2016.

6.1.19 In relation to the first public consultation ideas and proposals for adjustments to the project and contributions to the consent process were received. A total of 25 consultation responses from citizens and authorities were received. The incoming consultation responses have resulted in minor adjustments to the corridor to the cable.

6.1.20 Based on the consultation responses, the project area of the cable was expanded and new citizens could be affected by the project. Therefore, a supplementary consultation of new identified stakeholders was carried out within the additional cable corridor between 9 September and 26 September 2016. Six consultation responses were received, which will be considered in the Environmental Statement for the onshore elements in Denmark.

6.1.21 In addition to this the EIA authority (the Nature Protection Agency) decided to carry out a supplementary consultation of the citizens around the new station due to technical changes to the project. This consultation was held between 25 November and 12 December 2016. Ten pieces of feedback was received which will be taken into consideration in the Environmental Statement.

7 Potential Impacts

Environmental Assessments

7.1.1 Various studies have been undertaken to inform the development of the submarine and onshore cable routes as well as the landfall and converter station sites. Environmental considerations and consultation have informed this process.

7.1.2 For the British, Danish onshore elements and Dutch sectors an Environment Impact Assessment (EIA) has been undertaken. For the German territory and the offshore Danish elements the authorities have advised that a full EIA is not required and an Environmental Report has been prepared as part of the applications to the Authorities.

7.1.3 All assessments consider potential impacts on all relevant physical, biological and human receptors, and will seek to mitigate any potential adverse effects wherever practicable which the proposals may have on the surroundings.

7.1.4 Factors to assess include:

- Ecology
- Noise & vibration
- Archeological and historic items
- Visual impact (converter station)
- Electrical and Magnetic Field (EMF)
- Spatial planning and use of recreational areas
- Health and Safety

7.1.5 Potential cumulative impacts including cross-boundary impacts have been assessed for each set of permit applications.

7.1.6 A separate document, the Bridging document, describing the project from end-to-end (in preparation) will describe the environmental impacts of the project as a whole, including potential cross-boundary and cumulative impacts.

Potential Marine Impacts

7.1.7 The construction phase for the offshore elements will have potential adverse impacts on the environment in terms of sediment discharge, noise, disturbance to birds and marine mammals, but none of these impacts has been assessed as Significant under the EIA Regulations as impacts in general will either be localised, temporary or over a short period.

7.1.8 Impacts during operation of the submarine cables are restricted to EMF emissions, cable heating and compass deviation. None of these impacts has been assessed as Significant under the EIA Regulations in each Member State.

7.1.9 Viking Link has an expected life of 40 years. It is difficult therefore to predict the legislative frameworks that will apply to the decommissioning of offshore infrastructure. In most circumstances the impacts from the activities for the decommissioning will be comparable to the impacts from the construction phase and will be assessed at the time of decommissioning, and appropriate mitigation will be implemented where required.

Potential Terrestrial Impacts

7.1.10 The construction phase has for the onshore elements in the UK and Denmark the potential for adverse impacts on the environment over a 2 to 3 year period. Although the impacts will be temporary Viking Link has undertaken an assessment and will include measures to either avoid or mitigate any adverse impacts.

7.1.11 Potential impacts from the installation of the cables through environmental areas, such as Natura 2000 onshore areas in Denmark, have been assessed in close collaboration with the consenting bodies and appropriate mitigation measures will be proposed.

7.1.12 Several parts of the onshore elements could potentially affect wildlife protected by local legislation. By identifying appropriate mitigation measures regards to these, any impacts will be minimised.

7.1.13 Potential impacts from the onshore construction phase may also include impacts on the general public and local communities from traffic and construction noise in the area where the work is undertaken at the time.

7.1.14 The Environmental Impact Assessment (EIA) assesses such impacts and proposes mitigation measures where appropriate.

7.1.15 While the design of high voltage DC onshore cables removes any external electric fields, electromagnetic fields are produced wherever electricity is used or transmitted.

7.1.16 NGVL and Energinet, in collaboration with consenting authorities, will ensure the safe operation of all the assets by complying with all appropriate independent safety standards such as the exposure guidelines recommended by the European Union. The magnetic field produced by the DC cables will be similar in magnitude to the natural magnetic field produced by the earth.

7.1.17 The Project understands that the size and visual impact of the converter stations may be a concern for many. Viking Link will work with appropriate authorities to agree building design and materials and any local environmental mitigation that may be required.

8 Mitigation Measures

Best Practice and Mitigation

8.1.1 The environmental assessment process has identified Best Practice and project specific mitigation measures to be implemented during each phase of the project to avoid potentially adverse effects as well as reduce the significance of potential effects.

8.1.2 Mitigation Schedules have been prepared for each jurisdiction to support the permitting processes, and each schedule forms a list of measures the project will undertake to reduce impacts.

9 Permit Granting Process

Project Permits

9.1.1 Permits are required for both onshore and offshore works in Great Britain and Denmark, and for offshore works in The Netherlands and Germany. The statutory permits include the following:

- Great Britain
  - Planning Permission under the Town and Country Planning Act 1990 for all elements above mean low water (i.e. above low tide)
  - Marine Licence under Marine and Coastal Access Act 2009 for all elements below Mean High Water Springs to the UK/NL median line
- The Netherlands
  - Water Permit (Watervergunning)
  - Permit under the Act on Nature Conservation 2017 (Wet natuurbescherming)
- Germany
  - Federal Mining Act (Bundesberggesetz) - Authorisation for the laying of a submarine cable in accordance with paragraph 133 Section 1 Nr. 1 and 2 about underwater cables and transit pipelines
  - Federal Act for the Protection of Nature - Exception or exemption in the context of the legal biotope protection and the species protection in accordance with § 30(3), § 45(7), § 67
  -
- Denmark
  - Planning Permission under the Planning Act 2015 for the Converter station (district plan and addendum municipality spatial plan)
  - EIA permit under the Planning Act 2015 and EIA legislation for the onshore elements
  - Offshore Installation permit under the Act of Energinet 2011

Permit Granting Schedule

9.1.2 The PCI process is co-ordinated within each Member State by a National Competent Authority (NCA) and the NCA for each country is as follows:

- UK – Marine Management Organisation (MMO) upon delegation from the Secretary of State for Energy
- Netherlands – Ministry of Economic Affairs
- Germany – Federal Network Agency (Bundesnetzagentur)
- Denmark – Energy Agency (Energistyrelsen)

Each NCA is required to provide the project with a Permit Granting Schedule which accords to its obligations under the TEN-E Regulation.

10 Project Status, July 2017

Overall Status

10.1.1 At the time of writing (June 2017), the project has the following status.

Great Britain - Status

10.1.2 The Draft Application File for the Marine Licence application under the Marine and Coastal Access Act 2009 has been submitted to the Marine Management Organisation, and is awaiting feedback.

10.1.3 The environmental assessment process for onshore works is ongoing, with applications under Town and Country Planning Act 1990 due to be submitted in summer 2017.

Netherlands - Status

10.1.4 The draft applications for marine permits were submitted in March 2017, and the application pack was approved by the Minister of Economic Affairs in late April. Subsequently the applications have been formally submitted and the project is awaiting feedback from the authorities

Germany - Status

10.1.5 The Application files have been submitted to Landesamt für Bergbau, Energie und Geologie (LBEG) in March 2017 and the application has been accepted for review and determination.

10.1.6 The Application files have been submitted to Bundesamt für Seeschifffahrt und Hydrographie BSH in March 2017. Feedback has been provided and updated files have been provided for application acceptance. The application has been accepted for review and determination.

Denmark - Status

10.1.7 The Draft Application File for the Offshore Installation permit application under the Act of Energinet 2011 has been submitted to the Energy Agency, and is awaiting feedback from statutory consultees.

10.1.8 The Environmental Statement for onshore elements has been submitted in draft to the EIA authority The Environmental Protection Agency and is awaiting feedback before it can be made publicly available.

10.1.9 Planning documents (district plan and addendum to the municipality spatial plan) are being prepared by the Municipality of Vejen also to be made publicly available at the same time as the Environmental Statement.

Project Timeline

10.1.10 The anticipated project timeline is presented below in Figure 15:

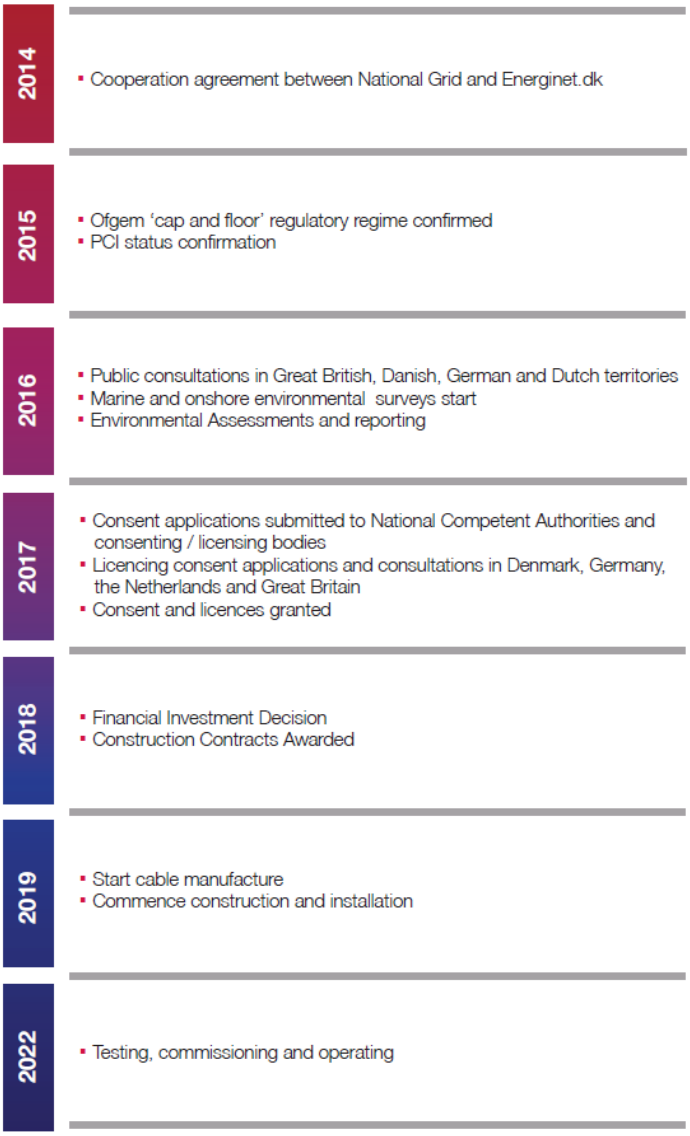

Figure 15 Project Timeline Overview

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