

Public

Environmental and Social Data Sheet

Overview

Project Name:	<i>BORSSELE 1 AND 2 OFFSHORE WIND FARM</i>
Project Number:	<i>2019-0715</i>
Country:	<i>The Netherlands</i>
Project Description:	<i>Construction of an offshore windfarm with capacity of 752MW, located 20 km off the coast of the Netherlands in the Borssele wind farm zone.</i>
EIA required:	yes
Project included in Carbon Footprint Exercise ¹ :	yes
(details for projects included are provided in section: "EIB Carbon Footprint Exercise")	

Environmental and Social Assessment

Environmental Assessment

By virtue of its technical characteristics this project would fall under Annex II of Directive 2011/92/EU (amended 2014/52/EU). Under Dutch law, an EIA including full public consultation is mandatory and was duly conducted in 2011. This windfarm will consist of 94 wind turbines with 8MW unit capacity, 116m hub height above sea level and a turbine rotor with a diameter of 167m. Turbines are built on steel monopile foundations in 14-40m water depths.

The windfarm is located in the Dutch Exclusive Economic Zone (EEZ) of the North Sea, bordering on the Belgian EEZ where a dedicated zone for offshore windfarms already contains several operating or licenced windfarms. A Strategic Environmental Assessment (SEA) has been undertaken and approved in May 2016. This SEA was subject to a public consultation process and took into account different usages of the Dutch North Sea EEZ, including offshore wind energy production. Dutch authorities are also maintaining and regularly updating a Framework for Assessing Ecological and Cumulative Effects. It focuses on possible cumulative effects on the populations of species to be protected during the construction and operation of offshore wind farms in the period leading up to 2030.

The final Wind Farm Site Decision, integrating all environmental and maritime consents, was taken in April 2016 following an EIA process that included an Appropriate Assessment (AA) of the impacts on neighbouring Natura 2000 sites Vlakte van de Raan (SCI) 9 km and Voordelta

¹ Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO₂e/year absolute (gross) or 20,000 tonnes CO₂e/year relative (net) – both increases and savings.

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(SPI)10 km from the wind farm. The AA shows that significant impact on the conservation objectives of Natura 2000 areas can be ruled out.

The offshore grid, outside the scope of this operation, that connects the Project and a neighbouring wind farm to the onshore grid at the existing substation at Borssele has been subject to a separate EIA permitting process, including an AA, with approval by the Competitive Authority in June 2016. The EIA analyses alternative cable routings and recommends the one with the smallest overall impact. While the selected routing crosses three Natura2000 sites (Voordelta, Vlakte va de Raan and Westerschelde&Saeftinghe) the Competent Authority concludes that no significant impact on the conservation objectives of are caused.

The project was developed by the Netherlands Enterprise Agency (RVO), who conducted a number of background studies including the EIA, before the project was tendered out to prospective investors. The Wind Farm Decision, that includes the environmental consent, was also taken by RVO as a contact authority, after internal consultation with other respective authorities. The process is governed by the Dutch Offshore Wind Act (of July 2015) and given that the functions of development and permitting are separated in RVO and that as well the EIAs as the AAs, for the windfarm and the offshore grid, are approved by the Dutch Independent Environmental Impact Assessments Committee, the process can be considered as impartial and diligent.

Not knowing the final design of the wind farm, EIA and AA use a bandwidth allowing for flexibility in turbine type, foundation technology, installation method, exact location etc. but define a range that must be adhered to. The underlying impact assessments further account for cumulative effects with nearby existing and planned offshore wind farms, including those in Belgium. The consent covers various technical designs of the project, leaving flexibility to the final design, and mandates mitigating measures for the protection of birds and marine mammals. The competent authority concluded that the project would not have significant effects in regards with the integrity of these sites, if the proposed mitigating measures are duly put in place.

The wind farm's EIA evaluate potential impacts of the project on climate, soil, noise (underwater and over water), safety, benthos and fish; sea mammals; avifauna; electromagnetic fields, socio-economic impacts, visual disturbance; cultural heritage; transboundary impacts (for Belgium) and monitoring.

With adequate precautionary measures in place and subject to the outcomes of the ongoing update studies, the impacts on fauna and flora, including on local and migrating birds, marine mammals, benthos and invertebrates are considered to be minor and acceptable.

Precautionary measures include inter alia appropriate working procedures, minimum distance from shipping routes, planning of piling works outside the spring season with higher presence of sensitive marine mammals, appropriate piling methods and noise monitoring, and fitting of the turbines with visual signs and radar to prevent bird collision and ship safety hazards. The existing EIA studies and the permit approval identified some gaps in knowledge related to the behaviour of local and migrating bird species and sea mammals as well as underwater noise, which will be subject of a monitoring programme during construction and operations.

In particular, during the construction phase, the increased underwater noise may represent a risk to benthos fish and particularly sea mammals. Moreover, increased water turbidity may also represent a significant risk to benthos and fish. A range of mitigation measures have been included in the permit, including more stringent noise emission levels during marine

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mammals's breeding season; acoustic deterrents and noise ramp-up procedures ("soft-start piling"). The promoter has provided a piling plan, with noise mitigation solutions proposed, that was approved by the competent authority and piling noise is continuously monitored and reported during installation.

There is a potential collision/disturbance risk for avifauna, although the uncertainty in several factors is recognised. The licence contains inter alia conditions for i) stopping the turbines in the event of a large bird migration with heightened risk of bird collision and ii) an increased cut-in wind speed at dusk during relevant seasons to protect bats. A specific requirement is that the system to record actual bird migration is coupled to the control system of the wind turbines.

The promoter is a world leading developer and operator of offshore wind farms and has sound environmental management capability, good understanding of regulatory and environmental monitoring requirements, as well as experience in the mitigating measures to be performed during construction. The promoter has its own guideline documents for promoting biodiversity and is participating in international scientific fora, where the environmental impacts of offshore wind are studied and general understanding of effects and mitigation are improved. In view of this, the promoter's environmental capacity is considered good.

EIB Carbon Footprint Exercise

Wind power as such is carbon-free generation and as such produce no direct CO₂-emissions. In accordance with the Bank's current Carbon Footprint methodology it is calculated that based on the avoidance of electricity generation from a combination of existing and new power plants in The Netherlands (75% operating margin and 25% build margin), the total relative effect of the project is a net reduction in CO₂ equivalent emissions by 903 kt CO₂e/yr. For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Other Environmental and Social Aspects

As part of improving biodiversity, an artificial underwater reef will be constructed in association with the windfarm, to improve the conditions for marine life, Atlantic Cod in particular.

The Ministry of Economic Affairs is creating an environmental monitoring and evaluation programme to follow the effects of all Dutch wind energy development and will publish data arising from. The promoter is required to provide access and data for this programme.

Conclusions and Recommendations

The wind farm's EIA concluded that with adequate precautionary measures, the impacts on fauna and flora, including on local and migrating birds, marine mammals, benthos and invertebrates were considered to be acceptable. Ministerial approval for the offshore windfarm and the associated cabling was given in 2016. This includes a comprehensive set of mitigation measures and monitoring obligations in line with the recommendations contained in the EIA studies.

With these measures in place, the overall environmental impact and management of the project is considered to be acceptable to the Bank.