

Environmental and Social Data Sheet

Overview

Project Name:	MERMAID AND SEASTAR OFFSHORE WIND FARM
Project Number:	2017-0917
Country:	BELGIUM
Project Description:	<i>The project comprises the construction of two offshore wind farms about 38 and 50 km off the Belgian coast, with a total installed power of up to 488 MW depending on final design, and associated ancillary facilities, including inter-array cables, offshore substation and export cable to connect to an offshore connection point to the national Belgian grid.</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

The project comprises the construction of two offshore wind farms named Mermaid (236 MW) and Seastar (252 MW). Together the Project will have a capacity of 488 MW, comprising of 58 wind turbines with a unit capacity of 8.4 MW, and associated ancillary facilities, including inter-array cables, offshore substation and export cable to connect to the modular offshore grid (MOG). The MOG, including a high voltage offshore switchyard and subsea export cable(s) up to the connection at Zeebrugge, is being constructed by the Belgian grid operator.

Environmental Assessment

The windfarms are located in the Belgian Exclusive Economic Zone (EEZ) of the North Sea, inside a dedicated zone for offshore windfarms that already contains 4 operating windfarms (C-Power, Belwind, Northwind and Nobelwind) and two further projects under construction. The Government of Belgium launched a Strategic Environmental Assessment (SEA) in the form of a Marine Spatial Plan in March 2012, approving it in March 2014. This SEA was subject to a public consultation process and took into account different usages of the Belgian North Sea EEZ, including offshore wind energy production. The project's location is in-line with this Spatial Plan.

Wind farms fall under Annex II of Directive 2011/92/EU (amended 2014/52/EU). Under Belgian law, all offshore wind farms are screened in for EIA. They are also subject to the United Nations Convention on the Law of the Sea ("UNCLOS") and national regulations concerning installation activities in the sea.

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

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The EIAs, including Appropriate Assessments regarding the impact on neighbouring Natura 2000 sites² in Belgium and the Netherlands (at about 15 km distance to the project), cover the wind farms and the ancillary facilities up to the connections to the Modular Offshore Grid (MOG) that will be developed by the Belgian Transmission system Operator outside the scope of the Project. The environmental impacts of the MOG were covered in a separate EIA that was conducted in 2014 for a larger development scheme called the Belgian Offshore Grid (BOG).

The EIA studies of the offshore wind farms and for the grid were performed by a department of the Royal Belgian Institute for Natural Sciences – the Management Unit of the North Sea Mathematical Models (MUMM) – to evaluate potential impacts of the project on climate, noise (underwater and over water), safety, benthos and fish, sea mammals, avifauna, hydrodynamics, sedimentology electromagnetic fields, scenery and cultural heritage. The EIA studies concludes no significant negative impacts after mitigation and no significant impact of the integrity of Natura 2000 sites.

The main impacts relate to the piling activities and the consequent effect on seam mammals. This is mitigated by restricting piling in the breeding season and limiting underwater noise emission. Based on its analyses, MUMM, as the competent authority, concluded the review of the EIA in December 2015 with a positive opinion towards granting the environmental permit, subject to conditions including but not limited to:

- Prior agreement and approval by the competent authority of critical works, such as excavation and storage of excavated materials, cable laying or piling
- Noise mitigation measures to protect sea mammals (using bio sonar for orientation and foraging), such as an overall noise limit, the banning of piling activities from January to April (breeding season), acoustic deterrents and noise ramp-up procedures (“soft-start piling”)
- Conditions and procedures for stopping the turbines in the event of a large bird migration with increased risk of bird collision
- Obligation to collect all sunk material
- Complete decommissioning of plant after the end of its technical lifetime (which still needs to be defined)
- A strict monitoring program of all environmental relevant data (in addition to the monitoring and research activities by MUMM for the whole offshore zone)

The sponsors have a good understanding of regulatory and environmental monitoring requirements, as well as relevant experience in implementing mitigating measures during construction from its previous offshore wind farms in the same area. In light of this, the promoter’s environmental capacity is considered adequate.

EIB Carbon Footprint Exercise

The direct CO₂ emission of an offshore wind farm is deemed negligible.

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

² BEMNZ0001 (SAC, Vlaamse Banken), BEMNZ0002 (SPA, SBZ 1/ZPS 1), BEMNZ0003 (SPA, SBZ 2/ZPS 2), BEMNZ0004 (SPA, SBZ 3/ZPS 3), NL2008003 (SAC, Vlake van de Raan) and NL4000017 (SPA/SCI, Voordelta)

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power plants in Belgium (75% operating margin and 25% build margin) the total relative effect of the project is a net reduction in CO₂ equivalent emissions by 810 kt CO₂e/a.

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

Conclusions and Recommendations

The project is located in a sea area that is a preferred development zone for offshore wind as supported by an SEA. The EIAs and AAs for the various project elements conclude that with adequate precautionary measures, the impacts on fauna and flora, including on local and migrating birds, marine mammals, benthos and invertebrates were considered not significant. The environmental permit includes a comprehensive set of mitigation measures and monitoring obligations in line with the recommendations contained in the EIA. Major monitoring results will be shared with the Bank. In particular, the Bank will request from the promoter a copy of the piling plan with noise mitigation techniques when submitted to the competent authority for approval, as well as a copy of its approval, before starting installation works.

The project is considered acceptable for Bank financing from an environmental and social perspective.