European Investment Bank

Luxembourg, 15th of December 2023

Environmental and Social Data Sheet

Overview

Project Name:	RWE THOR OFFSHORE WIND FARM GREEN LOAN
Project Number:	2023-0078
Country:	Denmark
Project Description:	Design, implementation and operation of a 1000 MW offshore wind farm including offshore substation and export cable, located in the North Sea west of Nissum Fjord, min. 20 km from the shore of Jutland, Denmark.

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 Thor offshore wind farm will occupy an area of about 220 km² located within a preselected area of about 440 km² in the North Sea, west of Nissum Fjord, between 20 and 50 km off the coastline. It will consist of 72 wind turbines of 14 MW unit size, each with hub height of 145 m above mean sea level and rotor diameter of 236 m, resulting in a total height of 260 m. The turbines will be mounted on monopile foundations in a water depth between 27 m and 35 m. The project further includes the inter-array submarine cable, an offshore substation, two submarine export cables and landfall, about 5 km of onshore cabling at 275kV, a new transformer substation and the connection at 220 kV to an adjacent, new TSO (transmission system operator) substation. From there, the TSO is responsible for a ca. 33 km cable connection (at 220 kV) to the existing national grid.

The wind farm is part of the Danish Marine Spatial Plan covering the territorial waters and the exclusive economic zone.

Offshore wind farms fall under Annex II of EIA Directive 2011/92/EU, amended by Directive 2014/52/EU. The Danish Energy Agency is the competent EIA authority for the offshore part of the project, whilst the Danish Environmental Protection Agency is the competent authority for the EIA of the onshore part of the project.

The project's environmental assessment process is separated into:

- **Strategic environmental assessment (SEA) and other preliminary investigations**

The SEA of the plan for the Thor offshore wind farm was prepared under the responsibility of the Danish Energy Agency (in cooperation with the TSO), covering all offshore and onshore installations. On the basis of the SEA report and the related consultations, the planning area has been confirmed and recommendations were made on the scope of subsequent project-level environmental assessments, mitigation measures, and monitoring measures. The SEA

[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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report includes several specific investigations, covering for example birds, sea mammals, benthic flora and fauna, fish population, Natura 2000 sites and visual impact.

- **Additional environmental surveys**

A number of specific detailed studies were conducted under the responsibility of the Danish Energy Agency, including initial geotechnical, geophysical or MetOcean investigations or biodiversity (birds and sea mammals) survey, to be used for the subsequent EIA and further detailed planning of the project.

- **Environmental assessment of the specific project (EIA) - onshore**

A full EIA for the overall onshore installation was conducted by experts on behalf of the TSO, covering the onshore section to be built by the promoter as well as the further grid connection under the responsibility of the TSO. The corresponding EIA report was approved and the construction permit was issued by the Danish Environmental Protection Agency in June 2022. The conditions defined in the permit mainly relate to good workmanship and measures to avoid harming animals during the construction phases.

Due to the proximity of the project's onshore connection to Natura 2000 sites incl. SCI and SPA Nissum Fjord (DK00CX160 and DK00CX038, distance to cable corridor ca. 0.3 km), SCI Idom Å og Ormstrup Hede (DK00CX286, ca 2.5 km), and SCI Flynder Å og heder i Klosterhede Plantage, (DK00CX285, ca. 2.7 km), an Appropriate Assessment in line with 6.3 of the Habitats Directive was conducted. The study as integrated into the EIA Report covers the impact of the project's onshore installations on the protected habitats and species within the mentioned areas, including for example white stork, otter, beaver, birch mouse, salmon, lamprey, moor frog, bats, field lizard or green club-tailed dragonfly. Impacts have been assessed as either insignificant or low, local and temporary (related to the construction only). With adequate mitigation measures in place, the onshore installation of the project is not expected to have any adverse effects on the integrity of Natura 2000 sites, neither by itself nor in combination with other projects. Mitigation measures are mainly related to the construction works and the restoration of vegetation removed during construction works.

- **Environmental assessment of the specific project (EIA) - offshore**

The promoter is responsible to prepare the EIA report for the project's offshore installations. Based on the EIA report and the consultation process, the competent authority (Danish Energy Agency) issues the construction permit consisting of (a) the reasoned conclusion, (b) the description of the most important mitigation measures and (c) the conditions of the permit.

At the time of appraisal, the promoter submitted a revised draft EIA report to DEA, which incorporates improvements following comments received from DEA on a prior draft version. The promoter deems this version of the EIA Report as largely complete whilst an update on bats (a third party's bat counts survey data from an adjacent offshore region is still pending) and minor updates due to consultation responses from other authorities as well as updates in the legislative basis, still need to be incorporated.

The Bank has reviewed the promoter's revised draft EIA report, which does not indicate any significant residual environmental risk. Given the fact that the relevant authorities have been involved in the process since the beginning of the project (SEA, additional surveys, initial public consultation, scoping and review of draft EIA report for offshore infrastructure), the Bank concluded its E&S appraisal on the basis of the current version of the EIA report, as made available by the promoter. Once the final report is available and public consultation has commenced, it will be shared with the EIB and published on EIB's website. The effectiveness of the finance contract signature will be conditional upon the receipt of the final EIA report as well as upon commencement of the corresponding public consultation.

In a next step, the promoter will submit to DEA the final EIA report. DEA is expected to issue its official approval of the final EIA report, which, together with the draft construction license, would then undergo public consultation. On the basis of this consultation, the competent

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authority will reach its decision. The competent authority's decision (Summarising Statement) will be made public and shall, amongst others, contain information on the content of the decision and the reasoning for it (the Danish equivalent of the reasoned conclusion). The promoter expects DEA to issue the offshore construction license in H1 2024. An electricity production license is expected to issued by the DEA post project completion when compliance with the construction license is confirmed.

The revised draft EIA report covers all relevant aspects during construction, operation and dismantling including but not limited to, physical environment (air, water, climate, submarine), natural environment (flora and fauna), protected areas, visual impact, socio-economic environment, fishery, traffic or radiocommunication, taking into account also the cumulative impacts together with nearby infrastructure or neighbouring plants. In general, applicable guidelines by DEA have been respected and the impacts post mitigation have been assessed as non-significant. Visual impacts cannot be fully mitigated, as the offshore wind turbines will be visible from various shipping routes, fishing vessels and pleasure boats in the area aswell as from some onshore locations during periods of good visibility.

Regarding protected sea mammals, the assessment concentrates on Harbour porpoise (Phocoena phocoena), Grey Seal (Halichoerus grypus, Common Seal (Phoca vitulina), which are the species sporadically using the project site as feeding or foraging area. The project is not expected to affect the sea mammals during operation. During construction, however, noise related to the piling of the foundation could cause temporary or permanent hearing damage to the sea mammals and in particular to porpoises and needs to be mitigated. In addition to the application of acoustic deterrent devices and the slow ramp up of the piling energy, the revised draft EIA report concludes that noise mitigation corresponding to the use of a single bubble curtain will be sufficient to mitigate the impact from noise emission and prevent significant impact on marine mammals.

Out of the Natura 2000 sites[2] in the surrounding of the project's offshore installations, SCI Sandbanker ud for Thyborøn (DK00VA340) and Agger Tange, Nissum Bredning, Skibsted fjord og Agerø (DK00EY133) have been screened in to conduct an Appropriate Assessment in line with 6.3 of the Habitats Directive (ca. 29 km and 30 km from turbine array, respectively). Both areas are designated for (amongst others) marine mammals. The Appropriate Assessment as integrated in the revised draft EIA report concludes that by implementing the proposed mitigation measures, neither the project's offshore installations in itself, nor in combination with other projects, have any adverse effects on the integrity of Natura 2000 sites.

The project has been assessed for Paris alignment and is deemed aligned both against low carbon and resilience goals against the policies set out in the Climate Bank Roadmap and the Bank's Energy Lending Policy.

EIB Carbon Footprint Exercise

The direct CO_2 emissions of an offshore wind farm are 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 power plants in Germany the total relative effect of the project is a net reduction in CO2 equivalent emissions by 1,407 kt CO_2e/a.

[2] SCI Sandbanker ud for Thyborøn (DK00VA340), SCI Sandbanker ud for Thorsminde (DK00VA341), SCI and SPA Nissum Fjord (DK00CX160, DK00CX038), SCI and SPA Stadil Fjord og Vest Stadil Fjord (DK00CX161), SPA Harboøre Tange, Plet Enge og Gjeller Sø (DK00CY039), SPA Agger Tange (DK00EX023), SCI Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø (DK00EY133), SPA Nissum Bredning (DK00CX028), SPA Glomstrup Vig, Agerø, Munkholm og Katholm Odde, Lindholm og Rotholme (DK00EY027), SPA Ringkøbing Fjord (DK00CX043), SCI Ringkøbing Fjord og Nymindestrømmen (DK00CY163), SCI and SPA Sydlige Nordsø (DK00VA347).

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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.

EIB Paris Alignment for Counterparties (PATH) Framework

The counterparty, RWE AG, is in scope and screened in the PATH framework, because it is considered high emitting and of high vulnerability.

The counterparty already meets the requirements of the EIB PATH framework with its existing alignment plan(s).

Public Consultation and Stakeholder Engagement

In accordance with the Environmental Assessment Act, for an SEA as well as for an EIA, two different rounds of public consultation are being held. The first one serves for general information, collecting ideas and defining the detailed scope of the investigations. In the second consultation round, the SEA reports, the EIA reports and the draft permits are presented to the public and concerned authorities to seek their views, prior to final approval. Whilst public consultation is completed at the time of appraisal at SEA level and for the EIA covering onshore installations of the project, it is not yet completed for the EIA covering offshore installations of the project.

Other Environmental and Social Aspects

The promoter, RWE, is a German multinational energy company with significant experience in the offshore wind sector.

The Bank has financed other projects with the promoter and its E&S management capacity is deemed satisfactory.

By the means of audits and supervision, the promoter ensures compliance of operational procedures with the statutory environmental requirements as well as with its internal environmental policy.

The promoter's consenting team will ensure that the environmental requirements in the onshore EIA permit and in the offshore EIA permit, respectively, are complied with during construction and operation.

The promoter has strict requirements for all contractors with respect to HSE, for ensuring a high level of health, safety, and environmental performance. This is ensured by checking the relevant procedures of the contractors and by carrying out audits and supervision of the works at the sites. Further, suppliers are bound by the promoter's Code of Conduct. By entering into agreements, suppliers pledge to observe the promoter's ethical and environmental principals and to put them into practice in their supply chains.

The project will use green (CO_2 reduced) steel towers for half of the turbines. The production of green steel entails increased use of scrap steel, less energy-intensive steel manufacturing processes, and an increased use of renewable energy sources. As a further novelty, recyclable blades will be applied in 40 wind turbines of the project.

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Conclusions and Recommendations

The project is deemed acceptable for Bank financing under environmental and social aspects, subject to the below loan conditions:

- Prior to finance contract signature becoming effective, final EIA report (offshore) and evidence of official approval of the final EIA report (offshore) by DEA to be provided to the Bank.
- Prior to finance contract signature becoming effective, evidence to be provided to the Bank that the competent authority has launched public consultation incl. publication of final EIA report (offshore).
- Prior to the first disbursement, the competent authority's decision post public consultation (offshore) to be provided to the Bank (Summarising statement).
- The promoter undertakes not to start the offshore installation works prior to receipt of corresponding construction license.
- The promoter undertakes to share with the bank the construction license.
- The promoter to confirm submission of construction monitoring reports to DEA and status of approval by DEA (as available), as part of its progress and completion reporting.