European Investment Bank

Luxembourg, 04/02/2026

Environmental and Social Data Sheet

Overview

Project Name:	BORKUM RIFFGRUND 3 OFFSHORE WIND FARM
Project Number:	2023-0138
Country:	Germany
Project Description:	Design, implementation and operation of a 913 MW fixed-bottom offshore wind farm located in the North Sea, within the German Exclusive Economic Zone.

E&S Risk Categorisation:	High risk
Project included in Carbon Footprint Exercise:	Yes

Environmental and Social Assessment

As the project required the preparation of an EIA under national law, the project is categorised as 'High Risk' as per the EIB's Environmental and Social Policy (paragraph 4.18).

Environmental Assessment

This project is an allocation under the framework loan 2022-0926 OERSTED - RE-POWER EU FRAMEWORK LOAN.

The project comprises the construction and operation of a 913 MW fixed-bottom offshore wind farm located in the German North Sea. Its grid connection solution is provided through 'DolWin5', which comprises the offshore converter platform DolWin Epsilon, a 320 kV HVDC underground cable (100 km offshore and 30 km onshore), and the onshore converter station in Emden, Germany, linking the wind farm to the transmission grid. The project will cover an area of approximately 75 km². The turbines will be installed on monopile foundations in water depths of 28 to 34 m.

The scope of the Bank's financing covers all components of the offshore wind farm up to the metering point at the offshore substation. The interconnection infrastructure 'Dolwin5' is developed, owned, and operated by the Transmission System Operator (TSO) TenneT. These components are considered associated facilities and fall outside the scope of the Bank's financing.

The project is located approximately 72 km off the coast of Lower Saxony in the German North Sea. More specifically in an area called the German Bight and within the German North Sea Exclusive Economic Zone (EEZ). The project lies within the DolWin wind farm zone. All onshore infrastructure is located in the region of Lower Saxony.

Wind farms fall under Annex II of the EIA-Directive 2011/92/EU as amended by the Directive 2014/52/EU, thereby leaving it to the competent authority to determine if an Environmental Impact

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Assessment (EIA) is required. In Germany, all offshore wind farms, regardless of their size, are subject to a mandatory EIA under the Environmental Impact Assessment Act (UVPG) in conjunction with the Offshore Wind Energy Act (WindSeeG). Consequently, for this project an EIA was required and carried out under national legislation. The EIA covers the offshore wind farm itself, excluding the offshore substation and associated interconnection infrastructure. The formal approval for the Borkum Riffgrund 3 wind farm was granted through the Plan Approval Decision (Planfeststellungsbeschluss) issued on 13 October 2021 by the Federal Maritime and Hydrographic Agency (BSH), the competent permitting authority under the Offshore Wind Energy Act (WindSeeG). This decision constitutes the project's environmental permit and legally authorises the construction and operation of the wind farm. The approval process included an EIA and Appropriate Assessment in accordance with the Environmental Impact Assessment Directive 2011/92/EU as amended by Directive 2014/52/EU, Birds Directive 2009/147/EC and Habitats Directive 92/43/EEC.

The interconnection infrastructure does not fall under either Annex I or Annex II of the European EIA Directive. Also under German legislation, a formal EIA under the UVPG or the WindSeeG was not required, as these components are not listed in Annex 1 of the UVPG. Nevertheless, an environmental review was conducted and incorporated into the Plan Approval Decision, issued on 22 March 2023 by the BSH. This plan approval sets legally binding conditions for the construction, operation, and decommissioning of both offshore and onshore infrastructure, including environmental mitigation and monitoring measures for marine habitats, navigation, seabed protection, and other relevant ecological and operational aspects.

The project site lies within a designated offshore wind zone identified in the German Federal Spatial Plan for Offshore Wind Energy (Bundesraumordnungsplan Offshore Windenergie - 2021) and the Offshore Grid Development Plan (Netzentwicklungsplan Offshore - 2022). Both plans were accompanied by Strategic Environmental Assessments (SEAs), which evaluated the environmental suitability of the zone and confirmed its appropriateness for offshore wind development, considering ecological, spatial, and maritime factors.

The wind farm site does not overlap with any Natura 2000 sites. The nearest protected area is the Borkum-Riffgrund site (SAC DE2104301), located adjacent to the project boundary. The environmental permit concludes that the wind farm will not cause significant adverse effects on the conservation objectives of this or any other Natura 2000 site, nor on the marine environment in general, provided that the prescribed measures and construction standards included in the permit are complied with. The Dolwin5 export cable crosses Natura2000 sites SAC Nationalpark Niedersächsisches Wattenmeer (DE2306301) and SPA Niedersächsisches Wattenmeer und angrenzendes Küstenmeer (DE2210401). Directional drilling was used to mitigate impacts on these protected habitats. Directional drilling works have already been completed.

The EIA for the Borkum Riffgrund 3 offshore wind farm has assessed potential impacts by the project on various environmental receptors, such as habitats, marine biodiversity (plankton, fish, marine mammals, benthos organisms), birds and bats, water and air quality, climate, landscape, cultural heritage and human health. Following the assessment it can be concluded that potential impacts by the project are minimal.

Potential impacts during the construction phase of the project can be summarized as follows:

- Marine mammals: High-intensity, short-term underwater noise from pile driving may cause behavioural changes and potential temporary hearing effects. Monitoring and noise mitigation measures are required.

- Fish, plankton, benthic communities: Localized sediment disturbance and resuspension may temporarily affect habitats, with impacts mostly small-scale and short-term.

- Birds (resting and migratory) and bats: Visual disturbance, light emissions, and small-scale collision risk during construction, with minor, localized habitat displacement.

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- Sediment, water, and habitats: Temporary disturbance of seabed and resuspension of sediments; long-term effects limited to the footprint of foundations and scour protection.

- Human health and air: Negligible effects due to low area usage; minor localized emissions from vessels and machinery.

Potential impacts during the operational phase of the project can be summarized as follows:

- Birds and bats: Risk of collision with rotor blades; visual and barrier effects considered minor to moderate.

- Marine mammals, fish, benthic habitats: Minor, localized, and long-term impacts from the presence of turbines, cabling, and minor electromagnetic fields.

- Sediment, water, and biotopes: Permanent structures occupy minimal seabed area; cable installation effects remain negligible.

- Air, climate, and human health: Negligible operational emissions..

- Landscape and cultural heritage: No significant visibility due to the large distance from shore and no interference with cultural assets.

Cumulative impacts with other projects have also been assessed in the EIA. The selection of projects for the cumulative assessment was specific to each environmental receptor, reflecting the varying spatial ranges of potential effects. For example, projects within 5 nautical miles were considered for benthos organisms, within 9 nautical miles for fish and marine mammals, within 15 nautical miles for resting birds, and within 30 nautical miles for landscape. For migratory birds, only offshore wind farms located along the main migration routes were included.

The EIA and the environmental permit for the offshore wind farm include a set of measures to avoid or minimize adverse environmental effects.

General measures include optimizing turbine layout to reduce spatial footprint, consolidating cable routes, selecting low-noise turbine components, using environmentally compatible materials, and implementing corrosion protection to limit metal emissions. Environmental management plans cover waste, fuels, unexploded ordnance, and decommissioning procedures.

For marine mammals, the environmental permit for the offshore wind farm requires noise mitigation measures during pile driving, including noise attenuation systems and exclusion zones. For protected habitats, turbine positions are relocated to avoid sensitive biotopes. Measures for birds—including resting and migratory species—focus on minimizing barrier effects and collision risk through turbine clustering, need-based night lighting, diffuse illumination, temporary shutdowns during mass migration, and visual and acoustic marking of turbines.

The environmental permit for the wind farm requires environmental monitoring during construction and operational phases, to ensure that mitigation measures are effective and to identify any unforeseen impacts. This involves continuous monitoring of noise levels and marine mammals to evaluate the effects of noise mitigation strategies, regular assessments of protected habitats to confirm that turbine operations do not negatively affect sensitive biotopes, and ongoing observation of bird species-especially during migration periods-to assess collision risks and the effectiveness of measures such as temporary shutdowns and visual or acoustic marking of turbines.

The potential environmental impacts associated with the interconnection infrastructure, and the mitigation measures required under its Plan Approval Decision, are largely similar to those for the offshore wind farm itself, addressing, among other items, underwater noise, sediment disturbance, and protection of marine fauna and Natura 2000 sites.

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Climate Assessment

Climate change mitigation:

The project substantially contributes to the climate change mitigation objective.

Climate change adaptation:

The project entails a LOW residual Physical Climate Risk, as indicated the CRA form, and is thus Paris aligned.

Paris Alignment of projects:

The project has been assessed for Paris alignment and is considered to be 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 Paris Alignment for Counterparties (PATH) Framework

PATH assessments have a validity of three years. The promoter was assessed in May 2023 at framework loan level[1]. The counterparty was screened in based on the PATH procedures for corporates, both for high emitting and high vulnerability. The counterparty meets the PATH framework requirements and therefore no further action is needed.

EIB Carbon Footprint Exercise

Estimated annual emissions related to the project:

- 0 ktonnes of CO2 equivalent per year for absolute emissions.
- -1690 ktonnes of CO2 equivalent per year for relative emissions.

The direct CO_2 equivalent emissions of offshore wind farms are 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 (combined margin for intermittent electricity generation), the total relative effect of the project is a net reduction in CO2 equivalent emissions by 1837 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.

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Social Assessment

The project is located offshore and does not affect vulnerable groups. Labour standards are expected to be upheld by the promoter, which has a strong track record in offshore wind development.

Occupational health and safety measures are in place for offshore construction activities. No gender-related risks have been identified.

A positive social impact is the creation of long-term employment during the construction and operation of the wind farm.

[1] 2022-0926 OERSTED - RE-POWER EU FRAMEWORK LOAN

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Public Consultation and Stakeholder Engagement

The EIA process for the Borkum Riffgrund 3 offshore wind farm was subject to public consultation, with documents made publicly available via the German Federal Environmental Impact Assessment Portal and the BSH website. Similarly, the interconnection infrastructure underwent a mandatory public consultation. Stakeholders had the opportunity to review the documents and submit comments, which were considered by the BSH before issuing the binding Plan approval Decision.

Other Environmental and Social Aspects

The promoter has demonstrated strong environmental management capacity, with ISO-certified systems and extensive experience in offshore wind. Environmental monitoring and mitigation plans are in place and aligned with BSH standards.

Conclusions and Recommendations

The Bank reviewed the environmental and social aspects of the project, as well as the capacity of the promoter to implement the project in line with EIB's requirements and considers them acceptable.

The environmental permitting processes are completed, and the relevant documentation only identifies limited residual environmental risk, subject to the implementation of the measures envisaged in the permits.

The promoter shall store and keep up to date all documents relevant for the project supporting the compliance with the provisions of EU environmental legislation, permits and environmental approvals, and shall promptly upon request deliver such documents to the EIB.