



Luxembourg, 18 October 2024

Environmental and Social Data Sheet

Overview

Project Name: CABO VERDE WIND POWER EXPANSION
 Project Number: 2023-0065
 Country: Cabo Verde
 Project Description: Expansion of an existing windfarm in Santiago island with the addition of 13.5 MW and installation of four Battery Energy Storage Systems (BESS) with a total capacity of 26MW in Cabo Verde.

EIA required: no

Project included in Carbon Footprint Exercise¹: yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Environmental and Social Assessment

Environmental Assessment

The Project comprises two main components:

- a 13.5 MW expansion of the Santiago wind farm with three wind turbines (3X4.5MW) generating 55.6 GWh/y net @P75;
- Four Battery Energy Storage System (BESS), to provide system services and time-shifting of renewable generation:
 - approx. 6 MW / 6 MWh on the Santiago Island;
 - approx. 6 MW / 6 MWh on Sal Island.
 - approx. 8 MW / 8 MWh Sao Vicente, and
 - approx. 6 MW / 6 MWh in Boa Vista.

The scope of the project includes the development, design, engineering, financing, licensing, insurance, procurement, manufacture, transport to site, assembly, construction, commissioning, testing, ownership, and operation of maintenance.

The project contributes to Cabo Verde's National Electricity Masterplan (2018-2040) and the country's commitment to reach 50% of energy consumption from renewable sources by 2030.

The project, if located in the EU, would fall under Annex II of the EIA-Directive 2011/92/EU, (as amended by Directive 2014/52/EU), requiring the competent authorities to determine whether an EIA is required or not. In line with the national legislation, the promoter submitted to the competent authority the required information. Based on the submission of a national screening report covering the wind farm expansion in Santiago and the BESS in Santiago and Sal (the Expansion project), the National EIA Authority, Direção Nacional do Ambiente, determined that the Expansion project does not require a full ESIA under the national legislation (screened-out

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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decision), being less than 10 aerogenerators located closer than 2 km from other similar wind farms and included in plans that were subject to a Strategic Environmental Assessment, but does require a report that proposes mitigation measures for the Expansion project as per the applicable legislation.

According to Cabo Verde legislation, the BESS in Sao Vicente and Boa Vista were designated as Category B by the National Directorate for the Environment (Direção Nacional do Ambiente, DNA), requiring Simplified Environmental Studies (Estudo Ambiental Simplificado (EAS)) and not Environmental Impact Assessments (Estudo de Impacte Ambiental (EIA)). The corresponding processes are ongoing.

In line with EIB Standard 1, the promoter prepared comprehensive documents (in the form of simplified environmental and social impact studies) covering the different components, containing the information specified in Annex 1b of the EIB Standard 1 as well as mitigation measures. Based on the criteria specified in Annex 1a of the EIB Standard 1, the promoter also determined, with due justification, that the Project would not require an ESIA.

The Project will have overall limited levels of environmental impacts for which the implementation of mitigation measures will reduce all impacts to an acceptable level and no significant residual impacts is expected to remain. The main environmental impacts per project phase, are summarized below.

Pre-construction and Construction Phases

Main environmental impacts during this phase include for the different components:

- Direct removal or damage to vegetation within the construction sites.
- Impacts on fauna due to habitat loss (e.g., changing features that shelter fauna and/or directly disturbing nests and burrows) and disturbance to fauna during construction activities (e.g., noise, dust, light pollution, or direct injury due to vehicle movements).
- Soil loss, compaction, and potential impacts on soil, surface and groundwater quality in case of inappropriate waste management practices, or leaks during vehicle/equipment maintenance.
- Decreased air quality and increased noise levels during site construction activities, as well as transport of materials, personnel, and equipment.

Vegetation on sites is a mixture of native and alien species with low vegetation cover. However, fauna potentially present include endemic reptile species -that could potentially be present and affected during site preparation activities and endemic bird species - although with no ecological conditions to nest or feed on site. Before the start of construction works, Cabeolica and its contractors will ensure that the maximum number of reptiles and ground nesting birds are removed, if identified, before initiating activities and relocated in another area with similar conditions to the original location.

There are no protected areas in Santiago and Sal. In Sao Vicente, the closest environmental protected area is the Natural Park of Monte Verde at 8 km from the site. In Boa Vista, two designated protected areas are close to the BESS site: the Natural Reserve Boa Esperança, 1.4 km north of the site, and the Natural Reserve Morro de Arena, 2 km south of the site. Impacts on protected areas are not expected during implementation of the Project.

Commissioning, Operation and Maintenance Phase

Main environmental impacts during this phase include for the different components:

- Impact on avifauna and bats due to potential collision,
- Disturbance to fauna during operation activities (noise, dust, injury due to vehicles movement).

Among the 17 avifauna species observed during the April and July 2023 surveys, only one was a bird of prey (*Falco tinnunculus alexandri*), and the preferred habitats of the avifauna are forest (83% to 96%, depending on the season). Nocturnal species were not identified during nocturnal



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surveys. Based on the assessment of key species and the lack of evidence of bird and bat collisions during Santiago windfarm operation, the importance of this impact on avifauna and bats is considered low before the implementation of the mitigation measures.

Limited number of workers and vehicle movement will be required during commissioning, operation, and maintenance activities of the new windfarm components. Routine activities and movements of vehicles and workers will be limited to roads and areas designed for operation and maintenance, no impacts on reptiles or other mammals are anticipated during wind park operation.

BESS are mostly self-contained systems that rarely involve significant emissions to air, water or soil during normal operating conditions and do not require the permanent presence of operators. Their presence is not expected to be permanent and will be resourced from the existing windfarm operation and maintenance activities.

Positive impacts expected during this phase include the reduction in CO₂ emissions. The Project will contribute to fuel savings and improved decarbonization factors.

The promoter's simplified environmental and social impact studies include an adequate identification of the individual and cumulative impacts of the Project, the determination of their significance, as well as the measures to mitigate the potential impacts.

Some of the mitigation measures, but not limited to, include:

- Avoidance of areas, to the extent possible, where evidence of important fauna concentrations has been observed during field surveys,
- Maintain the original condition of surface soils and vegetation cover to the extent practical during pre-construction and construction activities,
- Promote environmental awareness of biodiversity by placing outdoor posters of flora and fauna on the outside of windfarm buildings.

EIB Carbon Footprint Exercise

The wind farm will not generate any absolute 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 Cabo Verde (combined margin for intermittent generation), the total relative effect of the project is a net annual reduction in CO₂ equivalent emissions of 36.7 kilotons.

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.

Social Assessment, where applicable

The Expansion project is located in a Zonas de Desenvolvimento de Energias Renováveis (ZDER). The ZDER is an uninhabited area dedicated for the implementation of Renewable Energy project. In Santiago, the land area foreseen for the expansion and the BESS is currently used for the Santiago windfarm according to the Sectorial Strategic Plan for Renewable Energies (PESER). The land is also used as pasture for cattle and goats, which feed on several plant species in the area. In Sal, there is some human activities, apart from the windfarm, but agriculture is not conducted within the area of the BESS. The Government of Cabo Verde selected and acquired the sites for the implementation of the BESS in Boa Vista and Sao Vicente. The Boa Vista site has no human occupation and has a surface cover of light shrub. It is categorized as an area with no specific use by the Territorial Model Plan, and as Non-Constructable Area by the Municipal Master Plan. In Sao Vicente, The BESS site has no human occupation and is categorized as a "New Industrial Area" by the EROT-SV Territorial Model



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Plan for São Vicente Island and as Zone C (areas with urban environment or characterized by large infrastructures and facilities).

Current activities will continue to be carried out in the different project components sites with the normal precautionary measures in place and will not be affected by the project. Therefore, the implementation of the project is not expected to lead to any involuntary physical nor economic displacement.

Social impacts and risks anticipated to occur during the construction phase may include:

- Impacts on local communities due to noise and generated dust and air pollution.
- Effects on local infrastructure due to increased traffic.
- Impacts on landscape during construction activities.
- Impacts on local communities due to influx of construction workers and job seekers.

As described above for environmental impacts, equipment and transport requirements for the Project are not expected to be significant given that pre-construction and construction works will be limited to the transport of the equipment as well as works required for the chosen locations. Therefore, impact on local communities due to noise and dust generation, effects on local infrastructure and impacts on landscape are not expected to be significant.

Given the low number of workers and the expected duration of pre-construction and construction activities, social risks related to the influx of workers and job seekers are not expected to be significant in any of the individual sites.

The Expansion project area is an arid zone with no sensitive receptors close-by as the nearest municipalities are Lajedo dos Espargos (4,5 km) and Murdeira (5 km). The shadow flickering study indicates limited effect on the nearby receptors. The result of the noise modelling indicate that noise levels will be lower at the sensitive receptor locations, than the night-time noise limit (45 dB (A)). Therefore, the importance of increased noise levels during the operation of the Santiago windfarm turbines are considered low. In the case of the BESS, sensitive receptors were not identified within 200 m from both sites. BESS are not anticipated to emit significant noise levels during operation.

No cultural heritage features have been identified on the project site nor will be impacted by the project and no significant effects have been determined.

Public Consultation and Stakeholder Engagement

A Stakeholder Engagement Plan including a Grievance Mechanism is being prepared by Cabeólica following best practices to ensure compliance with EIB requirements, AfDB principles and Cabo Verdean legislation requirements. It defines technically and culturally appropriate approaches to consultation and disclosure in the various phases of the project.

Other Environmental and Social Aspects

Major accidental events and natural disasters

Non-routine events can include major accidents, natural disasters, abnormal operations, or emergency situations. These events are not planned but have a non-negligible probability of occurring. Although the probability is low, the resulting impacts could be relevant and were assessed to determine the need for prevention and mitigation measures. The identified scenarios that could have environmental and consequences are summarized below:

- Fire and explosion accidents
- Accidents / Collision of vehicles
- Leaks and spills of hazardous substances and waste
- Occurrence of flash floods



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Lithium-ion batteries contain flammable electrolytes, which can create hazards when the battery cell becomes compromised and enters thermal runaway. The typical consequence is cell rupture and the release of large amounts of flammable and potentially toxic gases, which can lead to fire and explosions.

Preventive measures considered in the simplified environmental and social impact studies to mitigate BESS hazards include the elaboration of a Hazard Mitigation Analysis (HMA) and the implementation of the following systems: smoke and fire detection; fire control and suppression; explosion control; gas detection; thermal runaway protection; size and separation requirements; water supply; explosion prevention systems; and deflagration venting.

Environmental and Social Management Plan (ESMP)

An Environmental and Social Management Plan (ESMP) is being developed for the Project with appropriate management measures, including preventive mitigation measures as well as monitoring.

This ESMP provides the framework for implementing measures to eliminate, reduce and mitigate negative impacts that have been identified for the Expansion Project to acceptable levels and to promote and enhance positive impacts.

The implementation of the ESMP is the responsibility of the promoter, who will be required to report regularly on compliance and major incidents relevant to the ESMP during implementation.

Conclusions and Recommendations

The main negative impacts of all project components have been evaluated to be minimal and will mainly be concentrated during construction. They will be mitigated with the help of detailed project control mechanisms, as defined in the environmental documents.

The promoter will have to demonstrate that the environmental and social mitigation and compensation programmes, as part of the ESMP developed and included in the environmental and social studies, including measures to avoid, reduce and mitigate the impact, as well as monitoring indicators, were put in place.

The promoter will further develop a Stakeholder Engagement Plan (SEP) including Grievance Mechanism to the satisfaction of the Bank prior to first disbursement.

The promoter will undertake to provide to the Bank, prior to first disbursement, the environmental impact statements (Declaração de impacto Ambiental (DIA)) following the approval of the environmental and social impact study studies for the BESS in Sao Vicente and Boa Vista.

With the mentioned conditions in place, the EIA processes and their results are acceptable to the Bank.