

Luxembourg, 13th December 2023

Environmental and Social Data Sheet

Overview

Project Name:	<i>BRAZIL RENEWABLE PORTFOLIO PV (NEOENERGIA FL II)</i>
Project Number:	<i>2022-0089</i>
Country:	<i>Brazil</i>
Project Description:	<i>The project consists of a solar PV plant with an installed capacity of 149 MWp. The solar PV plant is in the State of Paraiba, in the northeast of Brazil. The operation consists of an allocation under Framework Loan Neoenergia Green Renewable Energy Generation FL (2021-0506).</i>

EIA required: yes

Project included in Carbon Footprint Exercise¹: yes

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

Environmental and Social Assessment

The Project is Luzia, a 149 MWp solar PV plant located in the State of Paraiba in the northeast of Brazil. The Project is split into two sub-projects of 74.5 MWp each, and includes the associated interconnection infrastructure such as substations and transmission lines at 138 kV level. Construction works at Luzia commenced in Q4 2021 and the project entered commercial operation between August and November 2022 (each sub-project respectively).

The Project’s aim is to provide competitive new renewable generation to the Brazilian electrical system and contributing to the reduction of electricity prices in the country. It will support Brazil’s renewable energy targets, as set in the national energy expansion plan (the PDE-2031). The Project also contributes to the achievements of Brazilian objectives, in the context of the country’s Intended Nationally Determined Contribution (INDC) agreed following the COP21, where a target of 43% reduction of CO₂ emissions by 2030 (versus the 2005 levels) has been defined.

The Promoter is Neoenergia, a Brazilian subsidiary of Iberdrola, an international utility in the renewable energy sector headquartered in Spain.

Environmental Assessment

Licensing process

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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If the Project was located in the EU, it would fall under Annex II of EIA Directive 2014/52/EU, requiring the environmental authority to screen the project and determine if it is subject to Environmental Impact Assessment based on Annex III.

While there is a wind-specific federal CONAMA resolution, a solar-specific one is yet to be drafted. According to the guidelines established in CONAMA Resolution No. 01 of 23 January 1986, an Environmental Impact Assessment (EIA) is required for solar PV projects above 10 MW. The subsequent CONAMA resolution 279/2001 specifies that alternative energy sources will be licensed through simplified environmental studies, however, solar PV is not explicitly mentioned. Based on the more conservative CONAMA Resolution No. 01 of 23 January 1986, Neoenergia submitted a full EIA for the two solar parks and one substation, which was a necessary requirement for obtaining the Preliminary License.

For the transmission line, Neoenergia had to present a Simplified Environmental Report (SER or 'RAS', by its acronym in Portuguese), as per the resolution CONAMA 279/2001, in order to attest to its environmental viability and obtain the Preliminary License. The simplified process is for transmission lines that do not affect protected areas, indigenous lands, public health, endangered species or historical heritage sites.

Based on the Bank's review, it can be established that the basic principles of the EIA Directive are present in the Brazilian environmental regulations, since projects likely to have significant effects on the environment are made subject to an environmental assessment prior to their approval or authorisation, including stakeholder participation and transparency. Projects which require standard EIA process are subject to publication of EIA report and public hearings. For the projects subject to simplified process, the environmental authority publishes issuance of the licences in the official journal and may decide to organise full public consultation on a case-by-case basis.

It is noted that permits conditions include provisions to decommission the projects at their end of life, dismantling all equipment to bring the land in its original state, in accordance with laws NBR 15,515 and CONAMA resolution 420/2009. Environmental permits (Licença Previa) were issued by SUDEMA on 2nd April 2019 for the entire project.

The following tables show the main characteristics of the solar parks and their associated facilities.

Table 1: Main characteristics of the solar parks

N°	Plant's name	Environmental study	Current stage	Approved total capacity
1	Luzia II	EIA	Operational	79.92 MWp (DC) 60.0 MW (AC)
2	Luzia III		Operational	79.92 MWp (DC) 60.0 MW (AC)
Total				159.84 MWp (DC) 120.0 MW (AC)

Source: EIA and field visit.

Luxembourg, 13th December 2023**Table 2: Main characteristics of the associated facilities**

N°	Associated facility	Km	KV	Current stage	Environmental Study
1	Luzia substation	NA	138	Operational	Included in the EIA Luzia II y III
2	Transmission Line	10	138	Operational	RAS

Source: EIA, RAS and field visit.

Given that, for administrative purposes, the Project obtained the environmental licensing through two separate environmental and social impact studies, the main gap is related to the lack of an area of influence at the complex level which includes the two solar parks and their associated facilities. This is being addressed by re-considering the area of influence, as detailed below. It is noted that an external Environmental and Social consultant visited the site and carried out a gap analysis on behalf of the EIB, and will monitor implementation of the mitigation measures by the Promoter.

Biodiversity

The location of the Project does not overlap with fragile ecosystems or areas of importance for biodiversity conservation, such as Ramsar or IBAs sites. However, they overlap with habitat of a large number of endemic species, in addition to some restricted areas in the vicinity of the transmission line's right-of-way. Therefore, it is necessary to assess the impact of the Project at the complex level with respect to each of these endemic species in order to rule out any significant negative impact on critical habitats.

Neoenergia has included, as part of the environmental impact management, a series of plans and programs describing actions aimed at mitigating impacts on biodiversity, however, these plans and programs need to include detailed descriptions of methodologies and indicators. Specific strategies should be included for impacts such as collisions of birds and bats with the interconnection infrastructure, and/or electrocution risks.

The Project requires a comprehensive Biodiversity Management Plan, which should include the different programs that are being carried out and those that are being planned, in addition to those proposed measures that will be based on the updated analysis of the impacts on biodiversity.

Environmental, Health and Safety

The main source of air pollution during construction is associated with (i) the emission of dust generated by vehicles and/or trucks on the internal and external access roads, and (ii) the emissions generated by the operation of the vehicles. Neoenergia developed a series of measures aimed at mitigating air pollution, including watering roads to minimise dust generation.

For the operation phase, Neoenergia may either use water from the wells authorized for the Project or use dry cleaning methods.

Experience from other renewable energy projects from the same Promoter suggests that their environmental management at the site in terms of wastewater management and recycling is satisfactory.

Neoenergia has an Occupational Health and Safety Policy, and a corporate Technical Specifications/EHS Requirements for Photovoltaic Power Plants. These documents are aimed at workers and contractor companies. Reportedly, no accidents have been recorded so far.



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EIB Carbon Footprint Exercise

Estimated emissions savings are 70900 tonnes of CO₂ equivalent per year. Project boundary has been defined in line with the Bank's methodology. Baseline for the calculation is the pre-construction status and country's energy mix.

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 cos

Social Assessment, where applicable

Land Acquisition

The Project is located in an uncultivated area with a dispersed rural population, at a distance of approximately one and a half kilometers in a straight line from Santa Luzia, the nearest urban center. There is no case of physical displacement. The main economic activities in the area are subsistence agriculture and medium-scale livestock farming.

The Project has affected a total of 23 properties, of which 3 (13%) are affected by solar panels and access roads, and 20 (87%) by the transmission line. All the negotiation processes have concluded with the signing of the contracts and the payments of the agreed price.

The properties affected by the solar parks have been compensated through rights of use contracts, while the properties affected by the transmission line through administrative easement contracts.

- The rights of use contracts have a duration of up to 47 years.
- The administrative easement contracts grant a permanent easement strip in favor of the Project after a one-off payment.

For both types of contracts, the Project compensated titled owners as well as possessors and inheritance beneficiaries. In order to verify the veracity of the possession of the latter two, the affected parties were asked to provide some kind of documentation to support the claim. The testimony of neighbours was also collected.

In addition to the amount compensated for the value of the area, the affected parties were compensated for pre-existing crops and infrastructure. The negotiation process with each affected party began based on the total compensation value (area plus crops and/or improvements). The compensation process is considered adequate and in line with EIB Environmental and Social Standard 6.

Neoenergia carried out an assessment to identify whether there were cases of economic displacement. No cases of economic displacement were found.

Indigenous and Quilombolas People

There is no quilombola or indigenous population in the Project's direct area of influence within a five kilometre radius. However, upon granting the Installation License, the 'Instituto Nacional de Colonização e Reforma Agrária' (INCRA), in charge of licensing activities that deal with afro-descendant populations, has requested Neoenergia to carry out a study of the quilombola component ('Estudo do Componente Quilombola' – ECQ) and draw up a basic quilombola



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environmental project ('Projeto Básico Ambiental Quilombola' – PBAQ). Neoenergia is complying with the PBAQ and meets EIB Environmental and Social Standard 7.

Labour Conditions

Neoenergia has a Human Resources Policy and a Human Rights Policy in place. In addition, the contracts with contractors and suppliers include labour clauses that require compliance with national legislation. Therefore, workers are hired under the Consolidation of Labour Laws regime (CLT – 'Consolidação das Leis do Trabalho'), which guarantees (i) freedom of association, (ii) prohibition of child and forced labor, (iii) conditions for layoffs, among other core labour rights.

Neoenergia provides non-discriminatory and equal opportunities to workers regardless of race, national or social origin, birth, religion, disability, gender, sexual orientation, union membership, political opinions and promote equal opportunities.

Public Consultation and Stakeholder Engagement

Due to Covid-19, public audiences could not be held. However, since the beginning of the construction phase the Project has been carrying out various communication activities and has implemented a Community Grievance Mechanism (CGM).

Communication activities were carried out in the following fashion: (i) daily visits to the locations in the area of influence by community liaison personnel, (ii) meetings with local leaders, and (iii) the use of a car as a mobile communication unit that disseminates Project's information on a daily basis. However, dissemination of Project information could have been reinforced by using written media, e.g. newsletters. All engagement activities were conducted following Covid-19 security protocols.

Although in practice Neoenergia has been conducting several engagement activities, the Project does not have a written or documented Stakeholder Engagement Plan (SEP).

Other Environmental and Social Aspects

The promoter's capacity to implement the projects in compliance with the EIB's Environmental and Social Standards is deemed acceptable. All issues related to the gaps identified in order to comply with the Bank's E&S Standards are being addressed by the Promoter, as detailed below within the Conclusions and Recommendations section.

Recent reports are pointing out the possibility of use of forced labour in the supply chain of solar PV panels. The promoter as well as the panels supplier have a Human Rights Policy in place, rejecting the use of any form of forced or compulsory labour. The policy extends to their suppliers, i.e. any supplier needs to have in place similar policies. The panels supplier also provided information about the origin of the panels used for the project, confirming that in the supply chain down to polysilicon there is no silica-based component coming from a region with high risk of forced or compulsory labour. The project will have to comply with the EIB E&S Standards, which foresees a zero tolerance for the use of forced labour, and requires the promoter to make reasonable effort to assess and address the labour risks associated with the solar PV panels used in the project, including throughout the supply chain.

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Conclusions and Recommendations

The finance documentation (allocation letter) will include a number of environmental and social conditions that will provide the subsequent measures and actions required in line with the Bank's Environmental and Social Standards. Progress monitoring on compliance with such environmental and social conditions will further be included as a requirement in the allocation letter.

The Project is expected to have limited social and environmental impact, provided that all mitigation measures, defined in the allocation letter, are implemented. The following loan undertakings are proposed:

- The promoter shall redefine the area of influence at the level of the solar complex, including interconnection facilities, and based on the cumulative impact analysis and the identification of sensitive social receptors (dwellings).
- The promoter shall carry out a critical habitat analysis following the EIB Environmental and Social Standard 4 criteria and the related guidance note², which should include recommendations for mitigation and/or compensation of residual impacts on natural or critical habitats to the satisfaction of the Bank. This analysis should be carried out considering the species recorded both during the environmental baseline study for the EIA and RAS, and those recorded during the species removal and rescue activities. The results should be integrated into the Biodiversity Management Plan.
- The promoter shall update environmental, social, health and safety impact and risk assessment matrices, considering the following items:
 - Including the specific effects on biodiversity according to the type of activity to be carried out
 - Identification of health and safety, social and labour impacts, and risks, for the operation phase
 - Including the risks related to the impacts of climate change on biodiversity throughout the operation phase
- The Promoter shall provide a Stakeholders Engagement Plan (SEP), to the satisfaction of the Bank.
- The Promoter shall prepare an Environmental and Social Management Plan (ESMP), including a Biodiversity Management Plan, Waste Management Plan, Occupational Health and safety (OHS) Plan, Emergency Response Plan, among others.

Provided the implementation of the recommendation above, the operation is deemed acceptable for the Bank under environmental and social aspects.

² <https://www.eib.org/en/publications/guidance-note-on-biodiversity-and-ecosystems>