

Environmental and Social Data Sheet

Overview

Project Name: ENEL GREEN POWER PERU
Project Number: 2016-0848
Country: PERU
Project Description: The project comprises the implementation of two renewable energy plants:

- Wayra wind farm located in the Nazca region, around 400 km South of Lima with an installed power of 132.3 MW, comprising 42 turbines AWP125 3.15 MW. Interconnection to the grid will be performed via a power substation, located at the project site, and a 600 meters 220 kV aerial power lines;
- Rubí solar PV plant located in the region of Moquegua, ca. 1000 KM South of Lima, close to the border with Chile with an installed power at the solar field 180 MW, and 144 MW at the interconnection point. Interconnection to the grid requires a power substation and a 22 km 220 kV aerial power line.

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

Environmental Assessment

The Peruvian authorities are committed to increase the share of renewable energy in electricity supply, making energy supply, cheaper more secure and sustainable, and reducing greenhouse gas emissions. The project, as it provides renewable electricity capacity to replace the existing use of fossil-fuel based capacity, is also in line with EU objectives of sustainable development and climate change.

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 national legislation regarding environmental assessments is based on law 27446 (Sistema Nacional de Evaluación de Impacto Ambiental) and its Regulations (approved by Supreme Decree N° 019-2009-MINAM), under which there are several competent authorities (e.g. the Bureau of Energy and Environmental Affairs of the Ministry of Energy and Mines – DGAAE, the Bureau of Energy and Mines of the Regional Governments – DREM, the National Authority of Environmental Certification for Sustainable Investments – SENACE, the National Authority of Natural Protected Areas by the State – SERNANP) that oversee the compliance of the environmental and social legal framework, determine the need for undertaking different types of ESIA (detailed, semi-detailed or preliminary) based on a project's characteristics, size and locations, review the quality of the ESIA reports, issue environmental permits and set out environmental conditions for the energy sector.

The wind farm and its interconnection to the grid through the 220 kV transmission line would require ESIA (being classified as Annex 2 under EU EIA Directive 2011/92/EU and EIB requirements for the power plant and Annex 1 for transmission line, and category III under Peruvian legislation and therefore, subject of “a detailed environmental and social impact study” (estudio de impacto ambiental detallado) and therefore an ESIA was carried out. The ESIA of this component has been prepared by independent consultants based on the scoping report (términos de referencia) issued by the competent authority and was completed in 2014 when it was also submitted to the competent authority for its revision and approval. The process included public consultation held in 2015 and the environmental permit (licencia ambiental) was granted in February 2015.

The ESIA included the appropriate identification of the impacts (such as visual impacts, impacts on biodiversity and ecosystems – mainly collisions of avifauna, and impact on cultural and archaeological patrimony), the determination of their significance, as well as the measures to avoid, reduce, mitigate and compensate the impacts, if the case, grouped into the ESMP which is integral part of the ESIA. The ESIA was complemented by a detailed Archaeological Assessment/Survey Report (Proyecto de Evaluación Arqueológica) approved by the relevant competent authority in 2014 when the relevant permit was also granted (Certificado de Inexistencia de Restos Arqueológicos – CIRA).

It has to be noted that this component is located in the vicinity (crossing the buffer zone) of San Fernando national natural protected area that was designated as a protected area after the approval of the ESIA for the wind farm (President's Resolution N° 118 – 2015-SERNANP dated July 4 2015). Therefore, the project was not subject of a Compatibility Certification as required by the legal framework but the likely impact of the project on biodiversity and ecosystems were assessed as part of the ESIA, concluding that the project is not likely to have any negative impact on critical and/or protected habitats and species. However, as part of the approved ESMP (Plano de Manejo Ambiental), a number of monitoring and management environmental related sub-programmes were developed (covering the physical environment such as: monitoring of groundwater and the biological environment: avifauna, etc.).

The detailed design has identified changes of the project that required further amendments of both environmental and archaeological permits. Therefore, the environmental permit was revisited twice; the latest in 2016 when the opinion of the relevant competent authority responsible for the management of protected areas (SERNANP) was also granted and additional environmental conditions were introduced. The archaeological permit was also revisited in 2017 when additional surveys were carried out. The project is under implementation, with construction having started in the 3rdQ 2016.

Due to its size and technical characteristics, the solar PV and its interconnection to the grid through the 220 kV transmission line would also require an ESIA (falling under Annex 2 under EU EIA Directive 2011/92/EU and EIB requirements for the power plant and Annex 1 for transmission line, and being classified as category 1 under Peruvian legislation and therefore, subject of “preliminary environmental and social impact assessment” (declaración de impacto

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ambiental) and therefore, therefore a preliminary ESIA was carried out, including the appropriate identification of impacts, the determination of their significance, as well as the measures to avoid, reduce, mitigate and compensate the impacts, if the case, grouped into the ESMP which is integral part of the preliminary ESIA. The ESIA of this component has been prepared by independent consultants in 2015 and approved by the relevant competent authority through the issuance of the environmental permit (licencia ambiental) in June 2016. The process has included public consultation (Participación Ciudadana), held in 2015-2016. The ESIA was complemented by a detailed Archaeological Assessment /Survey Report (Proyecto de Evaluación Arqueológica) approved by the relevant competent authority in 2015 when the CIRA permit was granted.

The detailed design has introduced changes to the project which were notified to the competent authority. According to the national legislation, the competent authority has determined that the changes are not likely to have significant environmental and social impact and therefore, no additional impact assessment was required. However, an updated environmental permit was granted in 2017 and additional environmental conditions were introduced. Updated CIRA permit supplemented by for new CIRA permits for access roads and transmission line were also issued in 2016-2017.

The Rubi solar PV (including the substation and the 22km 220kV aerial power line) is located in a remote arid area, but it is directly adjacent to a rural agricultural community. According to the preliminary environmental and social impact assessment (ESIA), the project is likely to have an impact on biodiversity and ecosystems, archaeological patrimony as well as community health and safety. In addition, whereas the solar PV plant will be entirely located on barren public land and will not lead to any physical or economic displacement, the 22-km transmission line will result in impacts on a limited number of privately-owned agricultural plots. The project is also under implementation, with construction having started in the 3rdQ 2016. The ESIA assessed a large number of impacts, suggested mitigating measures that were included in a detailed ESMP (that is also under implementation) approved by the Peruvian competent authorities, and concluded that the power plant can be constructed in an environmentally and socially acceptable manner. Being located in a water-scarce region and in direct proximity to a rural agricultural community, an integrated water management scheme is under preparation analysing different options and justifying a preferred option that balances the water demand with the available water resources to ensure the project's long-term sustainability but also aimed at allowing access to good quality water in sufficient quantity to the adjacent rural community. The integrated water management scheme is expected to cover the full water use range (domestic/industrial/fire fighter, etc.) and cycle, from consumption to final discharge.

EIB Carbon Footprint Exercise

The wind farm and solar PV plant are expected to have an aggregate electricity production of ca. 1011 GWh/year, and 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 Peru (50% operating margin and 50% build margin), the total relative effect of the project is a net reduction in CO₂ equivalent emissions by 548 kt CO₂-e/year. 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

Both the Wayra and Rubí projects present certain similarities in terms of social risks and impacts that are typical for their nature and the remoteness of their locations. These are outlined further below, after the overview of social risks and impacts specific to the Rubí project. The Wayra wind farm project, which is located entirely on public land and is not expected to lead to any involuntary resettlement, is 8 km away from the closest community (Justo Pastor). As such, other than typical community health, safety and security risks, as outlined further below, the Wayra wind farm is not expected to give rise to other, more specific social risks. The social risks and impacts specific to the Rubí solar PV project are tied to the presence of an agricultural community directly next to the solar plant site and to mostly temporary impacts on a limited number of agricultural plots along the transmission line route.

The Rubí solar plant, which is located on 510 ha of public barren land, is adjacent to the Pampa Clemesí community, whose residents are members of the “Clemesí Irrigation Association” that settled in the arid area about 40 years ago to establish an agricultural community. Due to the lack of a sustainable water-provision solution however, despite the Association having approximately 650 members, only about 60 members (20 households) currently reside in Pampa Clemesí permanently. The rest, who can return occasionally to Pampa, live for the most part where they find work in the Moquegua region. With the project prioritising local employment and having made a 20-year financial commitment to Pampa Clemesí, more members are expected to return to the community over time. Accordingly, the project has developed and is implementing a long-term corporate social responsibility programme. As mentioned above, it is further considering an integrated water management scheme, which is expected to include a sustainable water-provision solution for the community. These measures, coupled with continuous stakeholder engagement, are expected to contribute to the project’s positive, long-term relationship with Pampa Clemesí.

Concerning the 22-km Rubí transmission line, the land acquisition for the tower foundations and the restrictions on use within the right-of-way will not lead to any physical displacement, but will result in localised impacts on privately-owned agricultural plots, principally during construction. A Land Acquisition and Resettlement Action Plan (LARAP), which will address the land acquisition and easement impacts along the transmission line route, will be developed and implemented prior to the start of transmission line works.

Finally, for both Wayra and Rubí, the nature and remote locations of the projects, together with their proximity to relatively isolated communities (i.e. Justo Pastor and Pampa Clemesí. Justo Pastor currently accounts for 23 households living without access to basic services along one of the main roads leading to the wind farm site), give rise to typical occupational and community health, safety and security risks and impacts. Community health, safety and security risks are primarily linked to traffic, dust and noise nuisances, the presence of security personnel and the influx of labour force during construction. The main mitigation and monitoring measures to address these risks and impacts have been included in the respective ESMPs and will be further elaborated upon the finalisation of the detailed designs.

Public Consultation and Stakeholder Engagement

For both project components, the public consultation was carried out under the EIA process. The detailed ESIA for Wayra wind farm and the preliminary ESIA for Rubi solar PV were made available to the public with information provided in the national and local newspapers, at the offices of the local and regional municipalities. The process included consultation meetings with project-affected people. The public consultation meetings results indicated generally acceptance of the project.

The promoter will further implement comprehensive Stakeholders Engagement Plans, including grievance channels, for the entire duration of the wind farm and solar PV projects

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(including for their interconnections to the grid: substations and transmission lines), ensuring in particular the continuous engagement with the Justo Pastor and Pampa Clemesi communities.

Other Environmental and Social Aspects

ENEL Green Power has a strong commitment to sustainable development highlighted in its new Environmental and Social Policy approved in 2016 that requires the implementation of an integrated management system in all activities and operations carried out by the group. The proper implementation of its own E&S Policy and the relevant managements systems put in place are recognised and audited by relevant external bodies and therefore, the group is certified ISO 9001, ISO 14001 and ISO 18001.

Conclusions and Recommendations

For both power plants, the main negative residual impacts have been evaluated to be minimal and will mainly be concentrated during construction. These will be comparable to any large civil construction site and will be mitigated with detailed project control mechanisms. In both cases, adequate environmental and social mitigation and compensation programmes were put in place as part of the ESMP developed and included in the ESIA, including measures to avoid, reduce and mitigate the impact, as well as monitoring indicators. The ESIA processes and their results are acceptable to the Bank.

Environmental and social conditions prior to the first disbursement:

- The promoter shall provide the final Environmental and Social Management Plans for the wind farm and solar PV plant (including for their interconnections to the grid: substations and transmission lines) to the satisfaction of the Bank. The ESMPs shall inter alia contain the labour, occupational and community health, safety and security standards and measures applicable during the construction and operational phases. For Wayra wind farm, the ESMP shall provide a detailed flora and fauna monitoring plan (including a detailed Birds Monitoring Plan) for the operational phase;
- The promoter shall provide the Stakeholders Engagement Plans for the wind farm and solar PV plant (including for their interconnections to the grid: substations and transmission lines) to the satisfaction of the Bank;
- The promoter shall provide the detailed integrated water management scheme to be implemented for the Rubi solar PV plant (including all relevant permits granted by the relevant Peruvian competent authorities) to the satisfaction of the Bank;
- The promoter shall provide the Land Acquisition and Resettlement Action Plan (LARAP) for the 22-km transmission line that will connect the Rubi solar PV plant to the grid to the satisfaction of the Bank and prior to the start of any works along the transmission line route;

Undertakings:

The construction or clearance works shall not start on any line section where the line route right-of-way acquisitions have not been reported to and accepted by the Bank.