Luxembourg, 15.03.2018

Environmental and Social Data Sheet

Overview

Project Name:	*MEXICO FIRST RENEWABLE ENERGY AUCTIONS*
Project Number:	*2016-0289*
Country:	*Mexico*
Project Description:	The Project consists of three solar PV plants in Mexico, located in Coahuila (Villanueva I&III) and Guanajuato (Don José), with a total combined capacity of 993 MWp, including the ancillary interconnection facilities.

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 Mexican authorities are committed to increasing the share of renewable energy in the electricity supply, making energy supply cheaper, more secure and sustainable, and reducing greenhouse gas emissions. The operation is also in line with the EU objectives of sustainable development and climate change, as the plants will provide renewable electricity capacity to replace the existing use of fossil-fuel based capacity.

The project consists of three solar photovoltaic (PV) plants in Mexico, awarded with PPAs by the Mexican government in the first long-term renewable energy auction, carried out in March 2015. Villanueva I&III are located in Coahuila, South East of Torreon, in the municipality of Viesca, have an installed power of 428 + 326 MWp and an interconnection comprised of two substations and a 9 km 400 kV aerial power line. Don José (237 MWp), located in the state of Guanajuato, North West of San Luis de la Paz, adjacent to the villages of La Gardenia and Los Pirules, has 237 MWp of installed capacity and an interconnection comprised of two substations and a 4.5 km 230 kV aerial power line.

In the case of Villanueva I&III the land is typical of the Northern Mexican arid desert, with limited presence of fauna and flora, although some of them protected. Similarly, Don José is located in Central Mexico, over a mostly agricultural area, with the presence of protected fauna and flora in adjacent plots.

If the plants were located in the EU, they would fall under Annex II of the EIA Directive, requiring the competent national authority to determine the need for an EIA, based on the screening criteria specified in Annex III of the same directive.

[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 CO_2e/year absolute (gross) or 20,000 tons CO_2e/year relative (net) – both increases and savings.

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In the case of Mexico, the main social and environmental principles laid down in the EU legislation, such as screening, scoping, independent review, public participation, disclosure and monitoring, are also present in national legislation, specifically in the environmental law ("Ley General de Equilibrio Ecológico y la Protección al Ambiente – LGEEPA").

Following the Mexican law, all plants were subject to mandatory EIA processes, which include the interconnection facilities. For Don José the process started on 12th September 2016 with the submission of the Environmental Impacts Manifest and EIA report; it was subject to public information, consisting in publication in the Mexican environmental journal and a regional newspaper (09/15/2016), and a hard copy of it was made available at the regional office of the environmental authority, for a period of 10 days, after which no complaints, requests of manifests by any stakeholder were received; and finished on 28th February 2017, when the environmental license was granted by the competent authority. In the case of Villanueva I&III, the process started on 1st January 2017, with the submission of the Environmental Impacts Manifest and EIA report (equivalent to Environmental Impact Study); it was subject to public information, consisting in publication in the Mexican environmental journal and a regional newspaper (01/19/2017), and a hard copy of it was made available at the regional office of the environmental authority, for a period of 10 days, after which no complaints, requests of manifests by any stakeholder were received; and finished on 13th March 2017, when the environmental license was granted by the competent authority.

The environmental licenses include a specific set of conditions for each plant, defined based on the Environmental Impact Studies and the Environmental Management Plans carried out by the promoter.
The most significant one is the need to restore the natural habitats used by the project, relocating individuals of fauna and flora, with special care on protected species; and the implementation of monitoring plans for all project activities (construction and operation). The most significant impacts are typical of big-scale solar PV plants. During the construction phase these are the ones associated with the loss of habitat and construction works (dust, noise, disturbance for the presence of heavy machinery, etc.). During the operational phase impacts are normally minor, the most relevant one being the use of water for the cleaning of the modules. Within the Projects, there were identified the presence of six flora species listed under the category of "Endangered" (species Glandulicactus uncinatus, in the Villanueva I&III) and of "Special Protection" or of slow growing (LCDR) (species Echinocactus horizonthalonius, Ferocactus hamatacanthus, Mammillaria lasiacantha, and Mammillaria pottsii, in the VN I&III SPV, and species Ferocactus histrix, in the Don José), as well as ten fauna species under the "Threatened" (Pituophis deppei, in the Don José), "Endemic" and "Special Protection" (species of Uma Exsul, in Villanueva I&III, and Sceloporus grammicus, Kinostemon integrum and Crotalus molossus, in the Don José) categories. The removal of any flora or fauna species will be carried out in accordance with site specific flora and fauna relocation plans. In both cases each plan was developed and executed by an experienced and authorised national service provider.

It should be noted that the plants are outside and do not affect any protected area (federal or national), region ("Región Terrestre Prioritaria - RTP") or dedicated to the protection of birds ("Area de Interés para la Conservación de las Aves - AICA").

EIB Carbon Footprint Exercise

The three solar PV plants are expected to produce an average of ca. 2337 GWh/year, and will not generate any absolute CO_2 emissions. Overall, the project will result in relative emissions of minus 1500 kt CO_2-e/year (i.e. savings of 1500 kt CO_2-e/year).

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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.

Social Assessment, where applicable

In the particular case of these plants, the electricity law ("Ley de la Industria Eléctrica" - LIE) requires a mandatory Social Impact Assessment Study ("Evaluación de Impacto Social – EVIS") as part of the project permitting.

The promoter, who carried out such studies in line with the legal requirements, concluded that no indigenous communities would be affected by any of the plants, directly or indirectly; and for the other affected communities proposed Social Action Plans to be implemented during the different project activities.

After the mentioned public information periods during the EIA process, no complaints were received. All lands required for the implementation of the plants and ancillary facilities are private or communal, and for all, voluntary lease agreements have been signed. No physical resettlement is required.

However, most of the lands had some, although limited, agricultural use. Land owners (private individuals or collectives) have voluntarily decided to reduce that activity, in exchange of the lease rent. The compensation has been adequate, but there is still limited risk of negative impact on the seasonal workers, who will be affected by the reduction of agricultural activity due to the lower availability of water for irrigation.

The water, required for the cleaning of the modules, is present in the area in limited amounts, and the projects can displace other uses, such as domestic consumption or agriculture, and certain pieces of agricultural lands may be abandoned for that use. Similarly, solar PV projects require exclusive use of the land, and there are no other compatible uses in general. Both elements impact on the employment availability and may eventually force workers to abandon the area, in search of other employments. This will be addressed at Stage 2 appraisal, but it is already indicated that the promoter will develop a Stakeholder Engagement Plan (SEP), Water Management Plan and Creating Shared Value (CSV) programme.

It should be noted that Mexico has subscribed most of the International Labour Organisation (ILO) Conventions and all core conventions have been ratified, in particular ILO 169, concerning Indigenous and Tribal Peoples in Independent Countries. The country has a comprehensive system of occupational health and safety legislation, reinforced by the promoter's internal policies, in line with OSHAS standards.

Public Consultation and Stakeholder Engagement

As it was mentioned before, the plants were subject to mandatory public information processes, in line with the environmental law, as part of the respective EIAs, after which no complaints were received.

However, the public information process is limited in the Mexican regulations (less than 10 days). In that sense, it has been confirmed by the promoter that the local community was consulted at the development phase and is consulted regularly during construction, as part of the promoter's CSR policy, structured through a CSV programme. However, as is detailed

within the EVIS, there is a commitment to completing a Social Management Plan (SMP) which should detail the process for community engagement. Therefore, it will be required that this CSV programme is developed in addition to a comprehensive SEP to include ongoing benefit to the community during the operational phase of the Project and that a formal mechanism is also implemented for recording community grievances.

Conclusions and Recommendations

The main social and environmental principles laid down in the EU legislation are also present in the current legislation in Mexico.

Social and environmental impacts and mitigation measures have been assessed individually, and in accordance with the information reviewed, the project is deemed to have limited social and environmental effects.

The promoter's capacity to manage environmental and social aspects, with the mitigants set for that purpose, is deemed satisfactory.

As a condition for disbursement, the promoter should submit, to the satisfaction to the Bank, an updated Environmental and Social Action Plan (ESAP), designed to fill the gaps with the EIB's Environmental and Social standards, including specifically a Stakeholder Engagement Plan and a Water Management Plan.

The Stakeholder Engagement Plan should incorporate at least the following: i) Identification of all stakeholders and affected communities that may be interested in the Project; ii) Differentiated measures to allow the effective participation of disadvantaged or vulnerable groups; iii) Ensuring that community representatives represent the views of affected communities; (iv) Detailing how information is disclosed to stakeholders; v) Detailing the engagement process between affected communities; and vi) Addressing the effects of potential economic displacement.

The Water Management Plan will assess the water needs for the project, and its impact on the water cycle in the vicinity of the plants, especially the potential to displace other economic or domestic uses.

Additional conditions and / or mitigants will be defined at Stage 2 appraisal.

Under these conditions, it is considered that this operation appropriately addresses environmental and social issues and meets the Bank's requirements.

PJ/SQM/ECSO 24.01.18