Luxembourg, 16 December, 2019

Environmental and Social Data Sheet

Overview

Project Name:	INDIA SOLAR POWER – FORTUM SOLAR ENERGY
Project Number:	2017-0302
Country:	India
Project Description:	The project is an allocation under the INDIA SOLAR POWER Framework Loan (2015-0931). The project concerns the construction and operation of a solar PV plant with a capacity of 250 MWac in the Indian State of Karnataka.
EIA required:	Yes
Project included in Carbon Footprint Exercise[1]:	Yes

Environmental and Social Assessment

Environmental Assessment

The project is part of the 2000 MW Pavgada Solar Park, which was planned and prepared by the Government of Karnataka, through Karnataka Solar Power Development Corporation Ltd (KSPDCL), as the dedicated undertaking. The park is located in Pavgada Tuluk (sub district), in Tumkur District, Karnataka State. It consists of a total of 40 individual PV plants (called Blocks) and a shared infrastructure for power evacuation and access. The realisation of the individual plants is allotted to private investors.

The present project comprises five of such Blocks with a power output of 50 MWac each. They are connected to the Solar Park infrastructure at a KSPDCL owned pooling substation where the power is transformed to 220 kV and further connected to the national grid at a 220/400 kV substation, which is operated by Power Grid Corporation of India and located within the Solar Park area. The PV plants are constructed within pre-defined irregular plots with an area of roughly 110 ha each.

The project has all the necessary permits and approvals from various regulatory bodies. A PV power plant does not require any environment clearance from Ministry of Environment, Forest & Climate Change (MoEF&CC) and no Environmental Impact Assessment (EIA) study needs to be carried out as per the EIA notification act of 14th Sept 2006. However, the Bank has required as a condition for funding solar projects under the framework loan that promoters carry out an Environmental and Social Impact Assessment (ESIA) study. Such study including a draft Environmental and Social Management Plan (ESMP) has been produced (largely in accordance with the IFC performance standards) by an external consultant and completed mid of 2019. In total the ESIA study concludes that potential adverse environmental and social impacts are, site-specific largely reversible and readily addressed through mitigation measures, but refers to the five individual PV plants only.

[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 Solar Park infrastructure, which was (co-)financed by the Worldbank, was subject to a separate EIA. A related Environmental and Social Management Framework had been developed. The selection of the area for the whole Pavgada Solar Park was already focusing on minimising the impact by avoiding forest or protected areas, and searching for barren land or land with low value for agriculture. There is no eco-sensitive area within a distance of 10 km to the Solar Park. The nearest forested area is about 3 km from the site.

Major impact is expected during the construction period leading to increased noise and dust emission and production of waste and wastewater. The EPC contractor is contractually required to develop an EHS management plan and to report on it on a weekly basis. This includes inter alia traffic management, waste management, investigation of incidents, grievances and related redresses mechanisms, training, protective equipment, labour standards, health facilities and workers camp requirements.

Promotor's and EPC contractor's standards and procedures applied during the implementation largely comply with EIB standards

For water supply during the construction period, one bore well per block was permitted. No water will be used for cleaning of the modules during operation, the promoter applies a robotic dry cleaning system.

EIB Carbon Footprint Exercise

The operation of the solar farm has no direct greenhouse gas (GHG) emissions. Estimated GHG emissions savings in a standard year of operation are 377.4 kt of CO_2 equivalent per year compared to a baseline comprising the current fleet of thermal power plants and the expected technology for new installations. The calculation assumed that 50% of generated electricity is replacing power generation in existing fossil fuel-based power plants (operating margin) whilst 50% of generated electricity is replacing power generation in a new gas-fired combined cycle power plant.

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

The PV plant is not associated with involuntary resettlement or indigenous people's issues. There are no reported archaeological or heritage site in the project areas.

The land was leased by the Government of Karnataka from local land-owners, who were willing to lease out the land (which was hardly allowing them to generate sufficient revenues) and sub leased to the investors.

Local people are employed, during construction phase and for works and services that do not require specialist skills. Intensive safety and security training and medical check-ups were provided for all employees. Safety and security facilities, first aid facilities, sheds, restrooms, drinking water, training rooms and other facilities were available at several areas within the

project sites. The EHS site report (up to July 2019) indicates one Near Miss and one Lost Work Day Case only.

Public Consultation and Stakeholder Engagement

According to the GoI Environmental regulations, PV projects would not have to undertake public consultations, however, consultations were held in the concerned villages in the framework of the ESIA study. It should be mentioned that the comments and results may refer to the Solar Park as a whole, as the population is likely not fully aware of the works and responsibilities of the individual developers. Local people were aware of the project and in general positive to it. They were willing to lease their land to the project, because the revenues farming did not provide sufficient revenues, due to missing rain. Further typical issues were the negative impact during construction (heavy traffic and increase of commodity prices in the villages due to the large amount of workers) and the need for improvement of the infrastructure in the villages (water, health, education). A major concern was that the Solar Park is not providing the amount of jobs as expected (or even promised). The present project employs about 200 local unskilled or semiskilled workers on a permanent basis throughout the operational period of the plant, this is higher than in comparable projects.

The project shall contribute 1 % of the project cost to the Local Area Development. Suitable measures needs to be developed in close cooperation with the stakeholders and the local administration; they will mainly focus on improving, education, health, water supply or community infrastructure.

Conclusions and Recommendations

The project is deemed acceptable for the Bank financing under the following conditions:

- Promotor to fully implement the measures proposed in the ESMP
- Promoter to fulfil the Bank's project-specific E&S information and reporting requirements.