Luxembourg, 14 November, 2017

Environmental and Social Data Sheet

Overview

Project Name:	INDIA SOLAR POWER – TELANGANA SOLAR ENERGY
Project Number:	2017-0065
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 143 MWac in the Indian State of Telangana.
EIA required:	Yes
Project included in Carbon Footprint Exercise[1]:	Yes

Environmental and Social Assessment

Environmental Assessment

The PV plant is realised in three main irregular patches located within and area of about 5 km x 8 km. Thus the plant extends over the villages of Ramanathaputram district of Telangana State.

It consists of about 540,000 PV Modules with a unit capacity of 315 Wp. The PV plant is subdivided into sub-plots at the low voltage levels. Each sub- plot output is stepped up to 33 kV voltage level and connected to the 33kV/230 kV pooling substation. From there power is evacuated via a 32 km 230 kV line to the nearest grid substation at Dichipally.

Despite not being required by law, 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. An ESIA study including Environmental and Social Management Plan (ESMP) for the PV plant including transmission line have been produced by an external consultant and completed in October 2016. The study concludes that potential adverse environmental and social impacts are, site-specific largely reversible and readily addressed through mitigation measures.

The Bank's services carried out a site visit to the PV plant site to make an assessment of the implementation status of ESMP and other E&S aspects associated with the project sites. The promoter is considered capable of implementing the Bank's E&S standards.

The major observations and recommendations are summarised below:

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. Only a short part of the

[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.

transmission is passing forest land and thus required clearance from the Forest Department, no other part involves forest land. (As per March 2017 the promoter had applied for the clearance and was confident to receive it in due time).

The nearest eco-sensitive area is the Pocharam Wildlife Sanctuary with a minimum distance of about 7 to 8 km to the boundary of the protected area. The ESIA study does not expect that any flora and fauna that are rare, endangered, endemic or threatened will be affected.

The water supply for the construction of the plant is ensured through authorised tankers from nearby villages.

The Promoter has applied for the permission to drill bore wells and to extract water for PV module cleaning during the operation phase. Pure water is used for the cleaning of the PV modules hence the discharged water does not include any chemical or hazardous material and can be released into the soil below the panels.

Waste is being disposed in a dedicated waste disposal area through the authorised/registered recyclers in line with ESMP. The records of disposed waste shall be maintained at site and shared with management through regular environmental report.

Substation transformers are located within secure and impervious areas and a provision of oil collection pit was found in place in event of any oil spillage from substation transformers.

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 279.4 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). 50% of generated electricity is replacing power generation in a mix of new power plants (75%) and new RE capacity (25%).

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.

Local people are employed during construction phase and for works and services that do not require specialist skills.

Promoter has stated that no workers aged below 18 years were employed.

The project land comprises barren land and private agriculture land. During the discussions with the promoter it was confirmed that the land is procured through land aggregator on "willing buyer / willing seller" at rates exceeding the government circle rates.

During the site visit it was observed that workers are wearing personal protective equipment (PPE). The promoter has established several HSE measures at site such as an incident reporting system, inspection requirements for machineries and vehicles, on-site ambulance and fire fighters.

The site EHS officer of the promoter is responsible to ensure the E&S implementation also at contractors' side. Daily "toolbox" meetings are held with sub-contractors representatives. Monitoring of sub-contractors full compliance with E&S obligations should be improved.

The Promoter has developed and implemented an appropriate grievance redress mechanism to handle internal and external grievances; a grievance register is well maintained at site.

Public Consultation and Stakeholder Engagement

Interaction between promoter and the village people e.g. Panchayats (village council) or land owners is not formally required during project development. However interactions happen on regular basis to capture their concerns and issues about the project. In addition the ESIA team has held pre-construction consultations with various stakeholder groups. They concluded that the local communities are in favour of the project.

The promoter is presently analysing the needs in cooperation with the local villages and preparing the CSR activities once the PV plant is fully operational, he expects to spend 2.8 mil Rs. (40,000 EUR) in the first year of operation.

Other Environmental and Social Aspects

The promoter who is EPC contractor has the relevant IMS (Integrated Management System) certifications including Quality Management (ISO 9001) Environmental Management (ISO 14001) and Occupational Health and Safety Management (OHSAS 18001)

Conclusions and Recommendations

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

- Promotor to implement Corporate Social Responsibility (CSR) measures in the project region over loan lifetime on a best effort basis and in consultation with the local people.
- Promotor to fully implement the measures proposed in the ESMP
- Promoter to monitor the subcontractors compliance with environmental and social standards
- Promoter to fulfil the Bank's project-specific E&S information and reporting requirements.