

## Environmental and Social Data Sheet

### Overview

Project Name:	INDIA SOLAR POWER–MAHBUBNAGAR SOLAR ENERGY
Project Number:	2017-0293
Country:	India
Project Description:	The project is an allocation under the INDIA SOLAR POWER Framework Loan (2015-0931). The loan will contribute to the financing of a Solar PV plant (100 MW) located in the state of Telangana
EIA required:	Yes
Project included in Carbon Footprint Exercise <sup>1</sup> :	Yes

### Environmental and Social Assessment

#### Environmental Assessment

The PV plant is being realised at three sites at the villages of Balledupalle (34 MW), Addakal (12 MW) and Mutyalampalle (54 MW) in Mahbubnagar district of Telangana. The sites are located within an area of about 3 km x 6 km.

In total the plant consists of roughly 380,000 PV modules with a unit capacity of 315 Wp. The modules are interconnected to central inverters which again are grouped and connected to step-up transformers stations, which raise the voltage up to 33 kV. The power is then collected at two 33/220 kV pooling stations at Mutyalampalle and Balledupalle which are connected to the nearest grid substation at Veltloor through a shared overhead line constructed by another PV project.

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 and the transmission line have been produced by an external consultant and completed in February 2017. The study concludes that potential negative environmental and social impacts are reduced to minor or negligible through proposed mitigation measures.

The Bank's services carried out site visit to the project sites to make an assessment of the implementation of relevant measures and other E&S aspects associated with the construction.

It was found that the promoter had left all HSE activities at site in the responsibility of the EPC contractor, belonging to the same group, but had not yet implemented the ESMP (which was completed about a week before only).

<sup>1</sup> 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<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

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The EPC contractor is among the leading Indian companies for PV plant constructions with international activities as well. He applies established HSE policies and procedures and is considered capable of implementing the Bank's E&S standards.

The PV plant is not located in forest area and 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. Telangana State does not require Non Objection Certificate from Gram Panchayat.

There is no eco-sensitive or protected area in the surrounding of the project. 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 ensured through authorised tankers from nearby villages. For PV module cleaning during the operation phase, the Promoter has received the permission to drill bore wells and to extract a specified amount of water. Pure water is used for the cleaning 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.

### **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 163.4 kt of CO<sub>2</sub> equivalent per year compared to a baseline comprising the current fleet of thermal power plants, new coal power plants, and new renewable energy installations.

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 Solar farm has neither involuntary resettlement nor indigenous people's issues. There are no reported archaeological or heritage site in the project areas.

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.

Local people/enterprises are contracted for works and services that do not require specialist skills.

The EPC contractor has established proper site facilities and several HSE measures at site such as obligatory safety training, incident reporting system, inspection requirements or on-site ambulance. During the site visit it was observed that the employed workers were wearing personal protective equipment (PPE), however, unskilled staff of local subcontractors for supportive civil works like fencing or road construction were not equipped.

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Although few grievances have apparently been properly addressed during the construction, so far there is no standard formal grievance redress mechanism established by the promoter

### **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 irregular basis to capture their concerns and issues about the project. More intensive stakeholder meetings took place and have been documented in the framework of the ESIA study.

The promoter has already provided some support to the villages, but he has not yet started a more systematic need analyse to identify appropriate CSR activities in close cooperation with the villagers.

### **Other Environmental and Social Aspects**

## **Conclusions and Recommendations**

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

- Promotor to implement the grievance redressal mechanisms
- Promotor to improve stakeholder engagement and identify, prepare and implement Corporate Social Responsibility (CSR) measures in consultation with the local people over project lifetime
- Promoter should monitor all sub-contractors compliance with environmental, health and social standards.
- Promotor to fully implement the measures proposed in the ESMP
- Promoter to fulfil the Bank's project-specific E&S information and reporting requirements.