

**Public**

## Environmental and Social Data Sheet

### Overview

Project Name: *YES BANK REWA DISTRICT SOLAR POWER*  
Project Number: *2018-0547*  
Country: *India*  
Project Description: *The project is an allocation under the operation YES BANK (INDIA) CLIMATE ACTION FL (2016-0527). It is a 250 MW solar PV energy project in the state of Madhya Pradesh.*

EIA required: *yes*

Project included in Carbon Footprint Exercise<sup>1</sup>: *yes*

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

### Environmental and Social Assessment

#### Environmental Assessment

The project concerns the implementation and operation of a 250 MW solar photovoltaic (PV) power plant in Guzrh Tehsil, Rewa District, Madhya Pradesh, India. The project is co-financed by the IFC (World Bank Group).

The project is in line with the Indian government's national action plan, which has set itself the ambitious target of increasing its Renewable Energy capacity up to 175 GW by the end of the 13th Five-Year Plan (2022).

The project is part of a 750 MW Solar Park that is developed by Rewa Ultra Mega Solar Ltd (RUMSL), a joint venture between two public sector companies. Following an international competitive bidding process run by RUMSL, three different private entities were selected for the implementation of one 250 MW sub-project (unit) each. The allocation concerns unit I (the project) of this Solar Park.

The owner and promoter of the project is a Special Purpose Vehicle (SPV) that is ultimately owned by an industrial group and leading solar EPC services company in India. The promoter has an integrated management system (IMS) covering quality, environment and health & safety aspects, is certified to ISO/OHSAS standards, and has sufficient capacity to implement

---

<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.

Luxembourg, 22<sup>nd</sup> May 2019

the project in line with the Bank's E&S standards. A comprehensive environmental and social management system is being put in place, both at corporate and site level.

The Solar Park's shared infrastructure is provided by RUMSL. It comprises for all three units access roads, water supply and drainage, pooling stations at 33/220 kV level and transmission lines (1.5 km for unit I) to an external 220/400 kV substation. The shared infrastructure is not co-financed by the Bank but considered in its assessment as associated infrastructure.

The project, if located inside the EU, would fall under Annex II of the EIA Directive leaving to the competent authority the decision as to whether an environmental impact assessment (EIA) is required or not. According to the applicable Indian law, PV power projects do not require an EIA. However, under the conditions of the related Framework Loan, an Environmental and Social impact Assessment (ESIA) is required.

RUMSL commissioned an initial E&S baseline assessment in April 2015 for the entire Solar Park including shared infrastructure, which also comprises the project itself. A supplementary ESIA process for the Solar Park was undertaken by a third party consultant between December 2015 and May 2016 on the basis of World Bank Operational Policies, IFC's Performance Standards and World Bank's Environment Health and Safety (EHS) Guidelines. The ESIA concludes that no significant environmental risks and impacts are associated with the Solar Park development post mitigation. The proposed Environmental and Social Management Plan (ESMP) describes necessary mitigation measures and monitoring requirements.

These findings are supported by the IFC, as documented in its publicly available appraisal documentation. Per IFC's Sustainability Policy, this is a Category B project. The E&S impacts associated with the project are deemed to be limited, generally site-specific and could be addressed through the implementation of standard good international industry practices. Loan conditions are in place to ensure compliance with the IFC's E&S standards.

The project is located on rocky plateau lands that feature low floral diversity. No forest land is impacted. The nearest protected area is a Reserve Forest situated about 2 km south of the study area. There is no Important Bird Area or Ramsar Site within 10 km of the study area. The ESIA concludes that no rare, endangered, endemic or threatened flora or fauna will be significantly affected by the project.

The project is located on a land parcel crossed by a seasonally existing river, dividing the site in two parts during Monsoon season. Recurring flood events on the greater project region in the past indicate a generally high flooding risk. The project is deemed adequately designed to mitigate flooding risks.

Sector-typical risks during construction will be mitigated through standard pollution prevention and control measures. The ESMP contains corresponding measures, including those to protect the quality of soil, surface and ground water.

The project consumes water during both, construction and operating phase. The latter is more significant in volume and estimated at 125 m<sup>3</sup>/day for the project. Water consumption during operations is dominated by water use for solar panel cleaning and depending on the panel cleaning frequency. Being a rocky terrain, dust removal is deemed essential but seasonal differences exist. Following detailed analyses of water resources and water requirements by the Solar Park it is concluded that no significant negative impacts are expected on local water resources, even when taking cumulative impacts of the Solar Park into consideration. For unit

Luxembourg, 22<sup>nd</sup> May 2019

I (the project) there is expected to be sufficient ground water available. If and where required, the project could also source water from tankers or through harvesting of rain water as practiced during construction. The ESMP comprises mitigation and monitoring measures aiming at an efficient use of water resources. A loan condition is proposed that relates to the residual risk of competition for water resources between the project and local people.

The promoter requires the EPC contractor / O&M team to implement pollution prevention measures to mitigate the risk of any pollution. The promoter undertakes ambient environment monitoring to assess the background environmental quality and effectiveness of pollution control measures.

### **EIB Carbon Footprint Exercise**

The operation of the solar power plant has no direct greenhouse gas (GHG) emissions. Estimated GHG emissions savings in a standard year of operation are 408 kt of CO<sub>2</sub> equivalent per year compared to a baseline comprising the current fleet of thermal power plants and the expected technology for new installations. The calculation assumes 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 coal 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 available E&S studies confirm that neither the PV plant nor its shared infrastructure are associated with significant negative social impacts. The project does not result in any involuntary resettlement, neither physical nor economic. There are no reported archaeological or heritage sites in the project area.

The nearest village is about 5 km away from the project boundary.

The entire Solar Park is proposed on 1500 hectares of land, with one third of land being attributed to the project (unit I). RUMSL along with district administration had identified around 80% of government land and ca. 20% of private land, avoiding farm lands under use and physical structures. As per land use records, the purchased lands are classified as barren rocky, scrub and fallow lands. Private lands owned by farmers were purchased by RUMSL on a willing buyer-willing-seller basis. The land sellers were not critically dependent on the lands purchased as the rocky surface did not yield notable harvest and were monsoon fed.

The Solar Park does not fall within a Scheduled Area (Indigenous Peoples or IP lands). Among the 462 farmers who sold their lands for the Solar Park, 5 IP community farmers from Scheduled Tribe category were identified as land sellers. From the census survey undertaken during the ESIA process it was assessed that IP community members are neither economically or physically displaced, nor adversely impacted by the project. The 5 IPs provided their land voluntarily after giving consent in writing to government authorities and received compensation amounts like other land sellers. The Solar Park ESIA has recorded that adequate consultation and engagement was undertaken with the 5 IP farmers regarding

Luxembourg, 22<sup>nd</sup> May 2019

the project plans, extent of land required and compensation amount details prior to obtaining their consent.

The Solar Park provides employment opportunities. As regards unskilled labour, priority and preference is given by the promoter and its contractors to land sellers and vulnerable members among the local community. In addition, the project envisages a requirement of skilled workers from outside of the immediate project area especially during construction phase. To this end, worker accommodation in the form of a dedicated camp with a capacity to house 200 workers has been constructed within the project boundaries and will be maintained until the completion of construction phase.

As part of the ESMP, the promoter is required to apply minimum worker welfare, health & safety, and environmental standards, to ensure appropriate management of the worker camp. Promoter will also have to institute a grievance redress mechanism for camp related complaints workers may have. The ESMP also prescribes promoter to apply (international) labour standards and standards in relation to community health and safety, with a specific focus on IP and other vulnerable members in the local community. Finally, the grievance redress mechanism needs to be accessible to the workforce and impacted communities.

Until 2002, the project area used to be an army gunnery training site. Concerns regarding unexploded ammunitions were reported during local community consultation process. Though the safety risk is reportedly minor, occupational health and safety management systems are adjusted accordingly to include risk mitigation measures to address unexploded ammunitions encountered if any during site clearing and foundation work.

The entire perimeter of the project site is fenced. Access to the project site will be regulated. The project will engage unarmed, private security personnel through a third party security service provider.

## **Public Consultation and Stakeholder Engagement**

As part of the Solar Park ESIA process, stakeholder engagement and consultations were undertaken between November 2015 and February 2016 through in-depth interviews with key informants, focus group discussions with local community and individual consultations covering all project-affected villages. RUMSL obtained non-objection certificates from the local panchayat (local tier of Government) leaders for the Solar Park development.

As per available information, landowners and local population do not seem to have any concerns about the project. They expect that employment opportunities in the area would increase now with the proximity of the project to their area of residence. They also expressed that welfare activities for the development of the communities should be rolled out by the project proponent so that the entire community would benefit. The promoter has a corporate social responsibility (CSR) policy in place, which supports the employment of local unskilled work force and funds community development activities. An information requirement concerning CSR activities in the project region has been put in place.

A project-specific (unit I) assessment was carried out in 2017 by independent experts on behalf of the promoter. This study comprised site visits and consultations with potentially affected people and workers. One Focus Group Discussion was conducted with a village women's group to understand their perceptions, opinions, beliefs, and attitudes towards skill development training. The study identifies additional mitigation measures that could be applied in order to minimise potential environmental and social impacts and maximise

Luxembourg, 22<sup>nd</sup> May 2019

potential benefits of the project. This also comprises measures to support young girls and women in particular. A loan condition is proposed to support the implementation of these recommendations.

As Solar Park owner, RUMSL will be responsible for implementing and maintaining external communications and addressing any community grievances. However, the promoter will also institute its own community engagement and grievance mechanism procedure. The grievance redress cell at project site will co-operate and co-ordinate with RUMSL in addressing any community grievances related to the project.

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

The project's shared infrastructure, as implemented by RUMSL, is co-funded through an intermediated loan of the World Bank group ("The Shared Infrastructure for Solar Parks Project"). The World Bank's operation not only provides funding but also technical assistance, amongst others, to the implementing agencies of Solar Parks, to build their capacity in monitoring and implementing E&S safeguards.

The Solar Park is connected to an external 220/400 kV substation. The substation is connected at 400 kV level to the national/state grid via a 60 km overhead line. This infrastructure has been implemented by Power Grid Corporation of India (PGCIL), specifically for the Solar Park. If located inside the EU, such infrastructure would require a full EIA process during permitting.

Publicly available information confirms that PGCIL carried out an impact assessment including public consultation prior to implementing this associated infrastructure. The corresponding Initial Environment Assessment Report (IEAR) is publicly available. The IEAR covers all key risks and concludes that this transmission project has no significant environmental and social impacts post mitigation.

The transmission line passes mostly through agricultural fields. The line routing does not require any resettlement of villagers. Protected areas like wildlife sanctuary, national parks, biosphere reserves etc. have been completely avoided. However, the line still passes through some forest area (1.8 km out of 60 km). To mitigate losses to existing forests, clearing of the transmission line is done under supervision of forest department, and some low canopy seed trees and shrubs may be kept intact if they do not interfere with tower erection and line installation. Compensations for right-of-way are determined in-line with applicable national regulation.

The IEAR demonstrates that PGCIL has an adequate E&S management system in place.

## **Conclusions and Recommendations**

The project's residual environmental and social risks are deemed low provided that all anticipated mitigation measures are implemented. The project and part of its associated infrastructure is co-financed through IFC and World Bank and benefitting from corresponding due diligence, loan conditions and monitoring obligations.



Luxembourg, 22<sup>nd</sup> May 2019

The project (unit I of the Solar Park) is deemed compliant with the Bank's E&S standards, conditional to the following undertakings:

- Promoter to fully implement the Solar Park's Environmental and Social Management Plan (ESMP) on project level.
- Financial intermediary to provide the Bank with electronic copies of all E&S monitoring reports from the promoter to IFC.
- Promoter to implement, on a best effort basis, the environmental and social recommendations made in the promoter's supplementary biodiversity and needs assessment from 2017.
- Promoter to provide details about CSR activities in the project region.
- Promoter to inform the Bank in case of any third party grievance or complaint against the project concerning the use of water, providing details about the complaint and measures taken by the promoter.

PJ/SQM/ECSO 04/03/2019