

**INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE**

Report No.: 92583

Date ISDS Prepared/Updated: 04-Nov-2014

I. BASIC INFORMATION

A. Basic Project Data

Country: India	Project ID: P147820	
Project Name: Program for Large Scale Solar in India (PROGRESS)		
Task Team Leader: Ashish Khanna		
Estimated Appraisal Date: July 23, 2015	Estimated Board Date: September 21, 2015	
Managing Unit: GEEDR	Lending Instrument: Investment Lending	
Sector: Other Renewal Energy (100%)		
Theme: Infrastructure services for private sector development (50%), Other Private Sector Development (25%), Other public sector governance (25%)		
IBRD Amount (US\$m.):	500	
Private Sector Amount (US\$m.):	440	
Borrower (US\$m.):	50	
Total:	990	
Environmental Category: B, Partial Assessment		
Simplified Processing	Simple <input checked="" type="checkbox"/>	Repeater <input type="checkbox"/>
Is this a transferred project	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

B. Project Objectives [from section 2 of PCN]:

The Project Development Objective is to support large-scale solar power generation in India.

C. Project Description [from section 3 of PCN]:

As the Government of India (GoI) plans to rapidly scale-up the solar installations in the country, the World Bank intends to partner with GoI and Solar Energy Corporation of India (SECI) across a long-term programmatic engagement, totaling to around US\$3-4 billion of World Bank financing, encompassing:

- (i) Developing 5,000 MW of mega-sized solar capacity (minimum size of each project at 500 MW) through solar parks
- (ii) Installing 1,000 MW of decentralized solar capacity
- (iii) A decade-long partnership with SECI for organizational strengthening and capacity building of SECI to successfully undertake the ambitious GoI program.

As part of the programmatic engagement, the World Bank intends to undertake the proposed

project as Phase-1. This would offer the requisite demonstration and learning for assisting Ministry of Non-Renewal Energy (MNRE) design the upcoming Phases and Batches of the Jawahar Lal Nehru National Solar Mission (JNNSM).

This proposed phase I of the project would consist of the following components:

Component 1: Setting-up 700-800 MW Solar Ultra Mega Power Plant (Solar UMPP): US\$400 million

As first phase of developing 5,000 MW of mega-sized solar installations, the World Bank is proposing to be engaged in developing the first solar 700 to 800 MW UMPP in the Rewa District in the state of Madhya Pradesh, India.

Two critical filters which need to be considered for any large scale solar installation, such as in for Solar UMPP, are: (i) availability of large tract of government-owned contiguous land with no alternate productive uses, and (ii) transmission and overall system stability. Specifically for the World Bank financed solar UMPP in Madhya Pradesh, firstly, the identified land for the project is almost all owned by the Government of Madhya Pradesh (GoMP). Around 1,350 hectares out of the total 1,500 hectares of land is government-owned with private land dispersed within. The private land is soon planned to be acquired to achieve a single contiguous piece of land. Secondly, the land is close to the 765 kV transmission network of Power Grid Corporation of India Limited, the Central Transmission Utility (CTU) of India, which has the capacity to transmit more than 20,000 MW of installed generation and this would result in minimizing grid variability.

It is proposed that the World Bank would finance around 50% of the total project to be financed by the World Bank and the remaining project funding would be raised through equity and commercial lending. The World Bank financing is proposed to flow to the private sector through SECI (a fully owned govt. company) or a Joint Venture company (JV formed between SECI and GoMP) following a transparent competitive bidding process. The objective is to strike the balance between swift project implementation and achieving PDO. The salient features of the JV are as follows: (i) The JV will have a 50:50 ownership between SECI and GoMP, (ii) Land will be acquired by the JV, and (iii) Government's subsidy for developing shared infrastructure will be passed on to the JV

The solar UMPP would be built by the competitively-selected private sector developer. This would be done through (i) direct on-lending of World Bank funds with ownership of assets with the private sector, or (ii) some mode of passing-on of World Bank funds without transferring the ownership with the private sector.

Within the above-mentioned two options, the project contract could be implemented through revenue-sharing or some other form of Public Private Partnership (PPP) models. The details of the structure would depend on (i) the legal and regulatory compliance to law of land and internal policy; and (ii) ensuring adequate risk allocation between public and private sector.

A joint World Bank-IFC team is working on possible models for implementation. IFC's Investment team has vast solar transaction experience from Phase I of JNNSM and the same

team is partnering on this project to assist in its design. IFC PPP Advisory's expertise could be leveraged for the project financial analysis, PPP structuring, legal due diligence, and private sector consultations. IFC's role could be explored to provide a bridge loan to the JV. IFC's Integrated Due Diligence (IDD) could be included at the bidding stage where developers could explore IFC project financing in addition to other commercial lenders

Component 2: Setting-up 100 MW of decentralized solar installations for single large consumers: US\$90 million

As a first step in developing 1,000 MW of decentralized solar installations, the World Bank is proposing to be engaged in setting-up 100 MW of solar installations primarily on rooftops of large consumers such as Railways and Airports, through the Renewable Energy Service Companies (RESCOs) model. This component would also finance some decentralized ground-mounted solar PV systems within the premises of airports and railways on un-used lands.

This component would be built by a competitively-selected private sector developer. In line with component 1 (solar UMPP), the implementing structures for the project would be similar: (i) direct on-lending of World Bank funds with ownership of assets with the private sector, or (ii) some mode of passing-on of World Bank funds without transferring the ownership with the private sector. Within these two options, the project contract could be implemented through revenue-sharing or some other form of Public Private Partnership (PPP) models.

For this component, SECI will have partnership arrangements (through formal agreements) with consumers, which would be government departments starting with Railways and Airports Authority.

Even though the JNNSM and state solar policies have given the initial push for the development of solar power projects in India, the rooftop solar segment in India remains in a poor state as compared to other countries such as Germany, the US and Japan.

SECI has been the key implementation agency for MNRE's "Grid Connected Rooftop and Small Solar Power" schemes and has already implemented solar roof-tops projects in four phases bidding out a total of 75 MW. However, role of SECI under these schemes has been two-fold (a) as a bidding agency to run a transparent bidding process, and (b) agency to provide GoI's subsidy assistance.

A joint World Bank-IFC team is working on possible models for implementation because of IFC Advisory team's prior experience in solar roof tops projects. The discussion is already underway with SECI to sign a mandate of bid transaction advisory. The coordination with public sector departments will be facilitated by the World Bank. Further, to ensure that the timeline for the Bank's appraisal is maintained, coordination between the activities of the World Bank and IFC will be ensured.

Component 3: Organizational Strengthening and Capacity Building for SECI: US\$10 million

Phase-1 of this component aims to assist SECI to conduct institutional assessments and prepare a strategic business plan. It will focus on the key business processes, human resources

requirement, and financial requirements needed by SECI to achieve its vision. This expression of interest for the preparation of Strategic business plan has already been received. As seen in the past engagements the assessment of the organization helps in the identification of key areas that require capacity building. These capacity building activities will be undertaken under Phase-2 of this component.

D. Project location and salient physical characteristics relevant to the analysis of environmental and social risks and impacts (if known):

The project site is in Rewa district of Madhya Pradesh in Central India. Rewa lies between 24° 18' and 25° 12' north latitudes and 81° 2' and 82° 18'. [1] The district is bounded on the north by Uttar Pradesh, on the east and southeast by Sidhi, on the south by Shahdol, and on the west by Satna. It is part of Rewa Division and has an area of 6,240 square km. According to the 2011 census, Rewa District has a population of 2,363,744, of which over 100,000 are indigenous. Though land is one of the most contentious issues as far as large solar projects are concerned, this does not apply to the proposed project as GoMP owns the majority of the identified land for solar UMPP. As per the information furnished by the client and site visit, the potential site covers around 1,500 hectares (for around 750 MW) across two adjacent locations, with pockets of scattered privately-owned land. During the site visit, no visible encroachment was found on the project site. Agricultural activities were also scarce. Building of the solar UMPP will positively affect the area in terms of infrastructure development and local employment being created.

For component 2, the area for the rooftop and/or for the ground mounted solar installations is already available with the bulk consumers, who are being selected on their willingness and ability to move fast on this component. These consumers however will be consulted prior to the installation of solar panels and agreement will be signed.

Though the alignment of transmission line for evacuation of power is not known, the facility may entail adverse social and environmental impact issues which include loss of land and other immovable assets; crops, livelihood or source of livelihood; adverse impact on environmental hotspots; etc. Environmental and social assessment will be carried out to assess adverse impacts and mitigation measures will be finalized in line with POWERGRID's environmental and social process and procedure (ESPP).

E. Borrower's Institutional Capacity for Effective SEMS:

The primary responsibility of coordinating work related to social and environmental safeguards will rest with the Government. Since, Solar Energy Corporation of India (SECI) or Joint venture is executing work of UMPP implementation and managing environmental and social issues, the project will establish an Environmental and Social Management Unit (ESMU). The ESMU will be staffed with specialized social and environment professionals either hired from the market or on deputation from other government department with relevant experience for the project. An Environmental and Social Specialist each will be posted at the project site to monitor the implementation of environmental and social safeguards mitigation measures. The specialists will be responsible for generating monthly progress reports as per the format devised during environmental and social assessment of the project. The midterm and end term evaluation of implementation process will be carried out by an independent agency. Once private sector is

identified, the environmental and social system of the entity will be reviewed. In case any gap is identified, an action plan will be prepared and agreed upon.

Social and environmental issues pertaining to the evacuation infrastructure will be addressed in line with POWERGRID’s environmental and social process and procedure (ESPP), which is already approved by the Bank under the Use of Borrowers’ System pilot.

F. Environmental and Social Safeguards Specialists on the Team:

Pyush Dogra, GENDR
 Gaurav D Josh, GENDR
 Parthapriya Ghosh, GURDR

II. PERFORMANCE STANDARDS THAT MIGHT APPLY

Performance Standards <i>(please explain why)</i>	Yes	No	TBD
PS 1: Assessment and Management of Environmental and Social Risks and Impacts	X		
Proposed conversion to solar energy to produce electricity will reduce the fossil fuel-based power generation, hence no adverse environmental impacts are expected. The likely negative environmental impacts are expected to be localized in nature and arise only during the construction and future decommissioning of the systems at the end of their lifetime. The preparation of the site-specific ESIA/EMPs/ESMS will follow the requirements of OP 4.01 in regard to any public sector components and PS 1 in regard to private sector investments. As part of project preparation an environmental and social management framework will be prepared which will include procedures and standards to develop an appropriate Environmental and Social Management System (ESMS) for private sector investments			
PS 2: Labor and Working Conditions	X		
This PS is applicable for the private sector investment activities. It will ensure ESMS incorporates rights of the workers, promote safe and healthy working conditions, including temporary stay facilities, and be in compliance with national employment and labor laws.			
PS 3: Resource Efficiency and Pollution Prevention	X		
The choice of technology, i.e. use of Solar PV to harness solar energy is contributing positively in the reduction of GHG emissions. In addition, setting up and operationalizing solar systems will have no adverse impacts to the human health and environment. However, disposal of used batteries, and solar PV cells after decommissioning can contribute to pollution. The ESIA will be required to pay attention to the requirement of disposal of decommissioned parts including the institutional responsibilities so it will not contribute to risk of pollution after the project implementation is completed			
PS 4: Community Health, Safety, and Security	X		
While the development of the park will require some ground levelling through cut and/or fill, there will likely be only small impact on the communities nearby during site preparation. The installation of the solar panel is a straightforward activity. During operation, cleaning would require water and would need to be properly discharged. The selected Concessionaire’s ESMS would need to have the necessary provisions			
PS 5: Land Acquisition and Involuntary Resettlement	X		
Though on a smaller scale, there will be private land acquisition of land leading to loss of livelihood or sources of livelihood. <i>Hence the OP 4.12 has also been triggered</i> as land will be acquired by the			

Performance Standards <i>(please explain why)</i>	Yes	No	TBD
government entity. Since the site is known, a resettlement action plan (RAP) will be prepared as per OP 4.12 on involuntary resettlement as well as RTFCLARR Act 2013 and state government's policies relevant to the project. As part of project preparation, an Environmental and Social Management Framework (ESMF) will be prepared based on operational policy 4.03. The ESMF will include procedures and standards to develop an appropriate Environmental and Social Management System (ESMS) for private sector investments. <i>The preparation of the site-specific SIA/ RAPs will follow the requirements of OP 4.12 if planned and executed by government and PS 5 if planned and executed by private sector.</i>			
PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources			X
This will be confirmed once baseline confirms if any habitat or species are to be affected or there is potential for restoration of habitat if the area is degraded.			
PS 7: Indigenous Peoples			X
Rewa has more than 10,000 persons of <i>Kaul</i> tribal group. If screening results shows presence of tribal households in the project area, an IPDP will be prepared based on social assessment and consultations with the indigenous people			
PS 8: Cultural Heritage	X		
As construction activities such as ground leveling will be conducted, there are chance find possibilities at the proposed fields. Chance find procedures for the SECI and/or JV would be an important aspect of the pre-bid items that need to be incorporated into the site development works contract. In addition, these also need to be integrated into the ESMS of the successful Concessionaire			

III. SAFEGUARD PREPARATION PLAN

- A. Target date for the Quality Enhancement Review (QER), at which time the ESRS would be disclosed and the PAD-stage ISDS would be prepared: **June 30, 2015**
- B. For Category C or Category FI projects that do not require an ESRS, the target date for preparing the PAD-stage ISDS:

- C. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS:

The safeguards preparation for the project comprises carrying out an Environmental and Social base line as well as Impact Assessment of the proposed investments, to identify critical safeguard issues and recommend strategies for compliance with the Bank, GoMP's and GOI's environmental and social policies. The environmental and social baseline will be initiated by October 15, 2014. The consultants are in the process of being hired. Once the baseline exercise is completed, the joint venture will hire consultants for environmental and social impact assessment and for preparation of EMP and RAP / IPDP. The environmental

¹ Reminder: The Bank's Access to Information Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in-country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.

and social issues including land acquisition and tribal population, if any will be managed by the JV prior to the private sector engagement. Hence, OP4.01 is triggered to develop an ESMF. The ESMF and site specific RAP/EMP/IPDP will be completed by March 2014. This ESMF will be prepared by SECI prior to appraisal indicating how the Performance Standards would be applied during implementation by the private sector entities and identify key E&S risks. The Bank will undertake E&S due diligence during implementation when the private entities are selected through the review and clearance of the private sector developed ESIAs/ESMPs, and ESMS. The Bank will prepare the Environmental and Social Review Summary (ESRS) based on this due diligence and will disclose this along the relevant assessments.

IV. APPROVALS

<i>Signed and submitted by:</i>		
Task Team Leader:	Name: Ashish Khanna	Date: 10/21/14
<i>Approved by:</i>		
Regional Safeguards Coordinator:	Name: Francis V Fragano	Date: 10/23/14
Comments:		
Sector Manager:	Name: Julia Bucknall	Date: 11/06/14
Comments:		