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INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Report No.: ISDSC8815

Date ISDS Prepared/Updated: 13-May-2014

Date ISDS Approved/Disclosed: 22-May-2014

I. BASIC INFORMATION

A. Basic Project Data

Country:	Nepal	**Project ID:**	P146344
Project Name:	Nepal: Grid Solar and Energy Efficiency (P146344)		
Task Team Leader:	Jie Tang		
Estimated Appraisal Date:	29-May-2014	**Estimated Board Date:**	23-Sep-2014
Managing Unit:	SASDE	**Lending Instrument:**	Investment Project Financing
Sector(s):	Other Renewable Energy (70%), Energy efficiency in Heat and Power (15%), Transmission and Distribution of Electricity (15%)		
Theme(s):	Infrastructure services for private sector development (100%)		

Financing (In USD Million)

Total Project Cost:	83.00	Total Bank Financing:	80.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	3.00
International Development Association (IDA)	80.00
Total	83.00

Environmental Category:	B - Partial Assessment
Is this a Repeater project?	No

B. Project Objectives

The proposed project development objectives are to: (i) increase grid power supply through installation of solar power generation facility; and (ii) support NEA to prepare actions for financial performance improvement through distribution system loss reduction and financial restructuring.

C. Project Description

The proposed project consists of two components: (a) Grid-connected Solar Farm Development, and

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(b) Distribution System Planning and Loss Reduction. The total cost estimated for the proposed project is US$83 million.

Grid-connected Solar Farm Development (US$50 million): This component will support design, construction, commissioning, and operation and maintenance (O&M) of a grid connected 20 MW solar farm (without having electricity storage facility) nearby Kathmandu valley to supply electricity directly to NEA's distribution network. It will include supply, installation, and commissioning of solar power generation equipment and associated 11kV medium voltage (MV) line connecting to the existing substations. Land owned by NEA has been selected for the solar farm and no private land will be involved. NEA has conducted initial load flow and system stability studies, fault level analysis, connection concept design, facility protection design, optimal site selection, environmental and social impact assessments, and bid documents preparation. Technical assistance will be provided to NEA to finalize these technical studies and the bidding document for design, supply, installation and commissioning of the solar farm. O&M services for 5 years from the date of commission, including supply of spare parts, preparation of an O&M manual and training of NEA's engineers will also be included. An Owner's Engineer (or individual consultants) will be hired by NEA to assist in construction supervision, acceptance test, commissioning, and reviewing the O&M Manuals.

Distribution System Planning and Loss Reduction (US$33 million): This component will support: (a) preparing the Distribution Master Plan (DMP); (b) preparing the Distribution Loss Reduction Master Plan (DLRMP); (c) preparation and implementation of pilot loss reduction projects in selected distribution areas of NEA; and (d) capacity building for distribution system planning at both NEA's distribution center and corporate levels. The component will help redress the high system losses in the country and enhancing NEA's capacity in distribution system planning and management.

Following recommendations of the DLRMP, investment for system loss reduction will be piloted in two selected distribution areas of the NEA, which may include: (i) replacing conductors of distribution feeders or build new distributions lines to reduce line losses; (ii) adding or replacing distribution transformers to maintain voltage levels and reduce transformer losses; and (iii) adding capacitor banks to compensate reactive power to manage voltage levels.

The capacity building programs may include: (i) provision of instruments and proven software and training for distribution system loss identification and reduction planning; and (ii) development of a Geographic Information System (GIS) database with information/data of locations and details regarding the NEA's existing generation, transmission, and distribution facilities (including specifications); grid connected customers (households, industries, commercials, institutional customers, etc.); potential customers in grid-covered areas; potential demands in not grid-covered areas; among others, for distribution system planning. The GIS database is critical for on- and off-grid rural electrification planning, loss reduction planning, and distribution system and customer management.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

This component is to construct a grid-connected 20MW solar farm (without having electricity storage facility) in the Kathmandu valley. The solar farms will be built on identified unused land owned by NEA.

The grid connected solar project involves little civil works, such as leveling of ground, construction

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of control buildings, and installation of solar panels and electro-mechanical equipment. A joint field visit of the Bank and NEA teams identified sites for solar farms from unused land owned by NEA, mostly at existing power plants and close to substations of NEA. Potential environmental and social risks identified initially are listed below. These risks and impacts will be further assessed and mitigation measures will be incorporated during the project preparation.

The environmental and social impacts would not be significant and are mostly restricted to the project area and its immediate surroundings. There will be no land acquisition and no impacts on the present land use, including natural habitats. Social screening however will be carried out in the project sites to identify any adverse social impact and presence of indigenous community. A Resettlement Action Plan (RAP) and /or Vulnerable Community Development Plan (VCDP) will be prepared as appropriate. The project construction will generate noise, dust, and exhaust gases and small quantities of construction waste, solid waste, and sewage. However, these impacts will not be significant as the construction and erection works involves a small number of construction workers. Potential environmental concerns of the solar farms during the operational stage are related to management wastes that may contain glasses, chips and photo-voltaic cells. These impacts will be mitigated/offset by good housekeeping measures, a site specific environment management plan (EMP) that contains clearly defined, contractually agreed mitigation measures and implementation arrangements, linked with construction supervisions are deemed sufficient to address these construction related impacts.

A large scale solar farm could be a visual obstacle, and thus this aspect will be considered during preparation of detailed site plan of the solar farm. The candidate project site are neither in visual impact sensitive areas nor overlooked by significantly populated area.

E. Borrowers Institutional Capacity for Safeguard Policies

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The primary responsibility of coordinating work related to social and environmental safeguards will rest with the Project assisted by the Environment and Social Studies Department (ESSD). 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 marked or on deputation from ESSD. ESSD is staffed with subject specialists and ESSD also hire specialist from market as per the need. ESSD, though, operates from central office; it establishes field offices at every project site headed by senior professional as part of ESMU. ESMU model will be followed as this functioned well for the effective implementation of safeguard measures. ESSD over a period of time has acquired skill and experience to address social and environmental safeguard issues. Currently ESSD is working on several Bank funded projects. An Environmental and Social Specialist each from ESSD 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. The midterm and end term evaluation of implementation process will be carried out by an independent agency.

Proposed Rehabilitation project will support orientation/training to the site staff.

F. Environmental and Social Safeguards Specialists on the Team

Drona Raj Ghimire (SASDI)

Parthapriya Ghosh (SASDS)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

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Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/ BP 4.01	Yes	Potential concerns during operation include management wastes (e.g. glass, chips, photo-voltaic cells from solar farm), as well as visual intrusion. Each activity will be subjected to environmental screening and site specific EMP prepared to address the relevant environmental impacts.
Natural Habitats OP/BP 4.04	TBD	This policy remains TBD until the site locations of the project (including the transmission line) are more fully determined.
Forests OP/BP 4.36	TBD	This policy remains TBD until the site locations of the project (including the transmission line) are more fully determined.
Pest Management OP 4.09	No	Project does not envisage use of pesticide.
Physical Cultural Resources OP/ BP 4.11	TBD	This policy remains TBD until the site locations of the project (including the transmission line) are more fully determined.
Indigenous Peoples OP/BP 4.10	TBD	Social screening will be carried out to identify presence of indigenous community around the project site.
Involuntary Resettlement OP/BP 4.12	TBD	The project will use NEA premises and social screening will be carried out for each of the identified sites. The sites however are not known yet. If screening identifies loss of livelihood or displacement due to project intervention, social impact assessment willbe carried out and resettlement plan will be prepared.
Safety of Dams OP/BP 4.37	No	Project neither support dam construction, nor depend on existing dam.
Projects on International Waterways OP/BP 7.50	No	Project does not affect quantity and quality of international water body.
Projects in Disputed Areas OP/BP 7.60	No	Project is not located in disputed area.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 28-May-2014

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing[1] should be specified in the PAD-stage ISDS:

The solar farms will be built on the unused land of NEA so there will be no fresh land acquisition. The project, however, will conduct social screening in all the identified candidate sites to (i) identify encroachment and other encumbrances; (ii) identify presence of indigenous community

[1] Reminder: The Bank's Disclosure 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.

around the project area. In case of encroachment, resettlement plan will be prepared and implemented and incase of presence of indigenous community an IPP will be prepared.

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IV. APPROVALS

Task Team Leader:	Name: Jie Tang	
Approved By:		
Regional Safeguards Coordinator:	Name: Francis V. Fragano (RSA)	Date: 20-May-2014
Sector Manager:	Name: Julia Bucknall (SM)	Date: 22-May-2014

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