INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Report No.: ISDSC2697

Date ISDS Prepared/Updated: 14-May-2013

Date ISDS Approved/Disclosed: 03-Jun-2013

I. BASIC INFORMATION

A. Basic Project Data

Country:	India	**Project ID:**	P144678
Project Name:	Prepare:Program toEstablish Pilots for Access through Renewable Energy (P144678)		
Task Team Leader:	Ashish Khanna		
Estimated Appraisal Date:	16-Jun-2014	**Estimated Board Date:**	14-Oct-2014
Managing Unit:	SASDE	**Lending Instrument:**	Specific Investment Loan
GEF Focal Area:	Multi-focal area		
Sector(s):	Other Renewable Energy (100%)		
Theme(s):	Rural services and infrastructure (100%)		

Financing (In USD Million)

Total Project Cost:	42.00	Total Bank Financing:	0.00
Total Cofinancing:		Financing Gap:	0.00

Financing Source	Amount
BORROWER/RECIPIENT	14.00
Global Environment Facility (GEF)	14.00
Foreign Private Commercial Sources (unidentified)	14.00
Total	42.00

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

B. Project Objectives

To demonstrate renewable energy based decentralised models of improving energy access in target states of UP & Bihar.

C. Project Description

The proposed project aims to improve the access to electricity in rural areas in the Bihar and Uttar Pradesh – the two most lagging states in the electrification space that together constitute 60 percent of total access deficit of 311 million in India. The proposed project is envisaged to be located in Bareilly and Kanauj districts in Uttar Pradesh and Nalanda district in Bihar. The villages include those that are deemed electrified by the grid rollout program RGGVY as well as those that are still un-electrified. Therefore, some of the target households have grid electricity at home and some don't. However, the supply of electricity is limited, unreliable and almost non-existent during the peak hours of the evenings, resulting in a continued use of kerosene of a similar pattern as the un-electrified households. Some of the households are also using lighting connections from a central diesel generator owned and operated by local entrepreneur. Usually a household is paying Rs. 60-75/ month for a single ~30W lighting connection from these diesel generator sets. Thus electricity access would replace the use of costly diesel which apart from leading to financial benefits to the consumer, would also lead to economic benefits due to a) lower diesel subsidy burden on the state b) lower environmental pollution. The women in Bareilly district villages also work on hand embroidery and access to electricity in the evening hours would also enable them to put more hours in their work thus generating more income. Few rural commercial centers also exist within the proposed project areas. Key elements: The proposed project addresses a number of challenges articulated earlier holding back the scale-up of off-grid potential. The principles of the project are to demonstrate large scale pilots of new innovative PPP mode and allow the access to finance for private developers. The key elements of this proposed project are:

PPP approach for project execution: The project would be developed through a public-private partnership, where project implementing unit (PIUs) will be set up under the state nodal agencies - Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) and Bihar Renewable Energy Development Agency (BREDA). These PIUs will play the role of a facilitator. The agency's role would be limited to setting policy and bidding out pre-identified project sites to private developers and will not be involved with project implementation.

Use of Micro-grids to ensure scalability: This project will promote micro-grids (as opposed to standalone solar home systems) supplying directly to consumers. Setting up of micro-grids will also help the developer to service commercial loads as well as rising residential load in the project areas.

Technology agnostic: The choice of technology would be left to the private developer. Possible technology options that could be deployed are solar PV and biomass.

Cluster based approach: The bids would be invited for the entire cluster of villages in the district with a target market segment of more than 10,000 households as well as a few anchor commercial load centers. However, the private developer (or successful bidder) would develop generation plants in a phased manner starting from one village or hamlet in a cluster and then moving to other villages/ hamlets within the same cluster.

Affordable tariff: The tariff charged to households would be fixed on a monthly basis and aligned with the affordability envelope of the low income households typical to the targeted hamlets. The monthly amounts payable would vary depending upon the connected load, the comparison metric would be the cost of kerosene, which is the primary alternate fuel being used by the households and serves as an opportunity cost. However, the developer would be allowed to charge any market determined tariff to the commercial/anchor consumers.

Use of Viability gap funding (VGF): The private developer would be selected on the basis of a bidding based on Viability Gap Funding (VGF) to cover the below cost recovery tariffs charged to residential consumers. As the MNRE in-principle has agreed to provide 30 percent subsidy to the project developer (as per its existing policy, the issue discussed in more detail in institutional arrangements), the VGF would be provided after the subsidy amount.

Financial intermediation for single window financing: To enable a better administration of finance and to relieve the nodal agency from the duties of project execution, it has been proposed that the funds (World Bank, MNRE, and Government of Bihar/UP) be housed with a financial institution (FI). This FI would be the disbursement agency for the VGF and would also provide a line of credit to the developer.

Flexible load categories: Based on the consumer profile assessment (through pre -feasibility studies) in the project areas, there exists a demand for higher loads. The project developer would therefore provide customized products with two or three different wattage level connections starting from 40W to 120W per household priced differently and the consumer can choose based on their needs and affordability threshold.

Measures to ensure sustainability: Collections from households and O&M would be the responsibility of the private developer and they can take various routes to streamline collection operations from engaging a local entrepreneur with a social standing within the area or involving communities to ensure high collection efficiency.
The possibility of involving community level institutions could be higher in Bihar, due to the presence of rural livelihood group Jeevika which can be employed to collect the payment and maintain the plant. Among the districts of Bihar that would be chosen for project implementation (in subsequent phases apart from the ones already identified), preference would be given to districts where Jeevika is present.

Phased disbursement on achievement of milestone and role of Independent verification consultant: The VGF would be disbursed in phases based on outcomes including the number of households connected as well as service delivery levels rather than as one-time capital subsidy. The project envisages an important role for an Independent Verification Consultant (IVC) to develop a monitoring system starting with the baseline data, monitoring the progress overtime, and to verify the achievement of milestones. These milestones will be the tool for disbursement of VGF.

Bidding based on feasibility study rather than DPRs: No detailed project report (DPR) would be prepared at the bidding stage as the actual technical design of the project (including number of plants to be set up, load capacity of each plant, design specs of mini-grid) would be left to the private developer. Only a feasibility report identifying the estimated demand from domestic consumers, probable anchor/commercial loads and land for setting up of generation plant would be provided along with the bidding documents.

Exit strategy (if any): During various stakeholder consultations, a need was identified to have an exit strategy for the private developer, in a scenario when the grid reaches the un-electrified village/ hamlet or when the power supply from the grid becomes reliable during the peak hours in semi-electrified villages. The options for the project developer could be to either exit or get the first right of refusal for becoming the input based franchisee.
Financing framework: The project would be funded by the developer's own equity, MNRE's on-going subsidy scheme as well as GEF grant through VGF. MNRE has an on-going scheme of rural

electrification that gives out 30 percent subsidy (on the basis of estimated cost as per approved DPRs) for off-grid projects. The ministry has in-principle agreed to provide this subsidy to the proposed project as well. Thus, the developer will be provided the VGF from Bank's fund only if successful bid asks for capital assistance beyond 30 percent. More discussions with GoI are needed to figure out how to give 30 percent MNRE subsidy as a VGF in a phased manner based on outcomes. In addition, the private developer would also be required to put in a certain amount of money as equity. Finally, the GEF grant may be used as VGF or debt. A part of it may be used as VGF, another portion would be earmarked for debt financing of the projects. The loan terms could be made favorable by lowering interest rates or increasing loan tenors.

Component 1: Viability Gap Funding for DDG project in Bihar and UP (US$ 10 million)
This component will include investments through VGF and debt facility for setting up of distributed generation and supply projects including generation plants and mini-grids in the identified un-electrified/semi-electrified villages and hamlets in UP and Bihar. The project will disburse against achievement of results. This component would be executed through PPP approach using financial intermediaries.

Component 2: Technical Assistance (US$ 2.844 million)
Capacity Building

- Funding of Skill building exercises across the value chain of decentralized generation: Government of Bihar and UP have expressed interest in introducing the skill building courses and tool kits at state Industrial Training Institute (ITIs) for training people from the local villages who could be used by the project developer as operations and maintenance staff. Further this component would also be used to conduct training for the UPNEDA and BREDA officials focusing on key technology and financing issues.
- State level PIU set-up and assistance for staffing: Due to the lack of institutional capacity at state nodal agencies, it is proposed that a PIU would be set up within the s tate nodal agencies in Bihar and UP. The PIU would be also be staffed with professional staff hired on contractual basis. The component would fund this PIU assisting in its regular functioning and staffing.
- Independent Verification Consultant (IVC): The independent verification consultant will be hired for baseline data collection and impact evaluation. This impact evaluation would also be used for release of outcome based VGF to the developer.

Consulting Services for Market Development

- Technical assistance for solar based pump-set scheme: A market potential exists for solar based pump sets replacing the diesel based pump sets. However, in order to develop a market for the solar pump-sets, there are a) some key policy and design issues, including greater co-ordination between GoI and the states, use of FIs for providing better loan terms to individual farmers, effective use of existing technology in monitoring etc, have to be resolved and b) more innovative business solutions need to be looked into to counter technology issues. This TA will delve into these issues in detail and propose an action plan.
- Technical assistance for telecom towers as anchor customers: There is a large scope to hybrid solar technology with diesel in running the telecom towers in rural areas. It is proposed a survey will be carried out to understand the market potential for this model.

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

The project activities are being envisaged in two districts of Uttar Pradesh – Bareilly and Kannnauj and one in Bihar – Biharsharif (also known as Nalanda). All these are located in the Gangetic plain and have little forest cover – less than 2 % land area in each. The Lakh Bahosi Bird Sanctuary is

located in Kannauj district. It is one of India's larger bird sanctuaries, covering 80 sq .km including a large lake, and also a stretch of the Upper Ganga canal. Rajgir sanctuary is located in Nalanda district. Since the project is proposed to be technologically agnostic, discharge of wash water from gasifiers into near by water bodies, if that technology is selected, has the potential to become important consideration. In case of Solar Photo Voltaic based systems, the safe disposal of spent/ retired/disused batteries will have to take into account availability/proximity of and access to a safe disposal site. In case of public lands already under some current productive use, there can be concerns with respect to access.

E. Borrowers Institutional Capacity for Safeguard Policies

The implementing agencies have no prior experience of working with Bank safeguards policies. Some of the developers of projects may have the experience of working on development of plants with capacity of 5MW or more, in which case, the Environmental Clearance from the state level EIA authority would have been obtained if these were installed after 2006. If a private sector financial intermediary is to be selected, an assessment of the selected institution will determine their capacity to manage safeguards oversight.

F. Environmental and Social Safeguards Specialists on the Team

Srihari Gopalaswamy (SASDU)

Gaurav D. Joshi (SASDI)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/ BP 4.01	Yes	
Natural Habitats OP/BP 4.04	TBD	
Forests OP/BP 4.36	TBD	
Pest Management OP 4.09	No	
Physical Cultural Resources OP/ BP 4.11	TBD	
Indigenous Peoples OP/BP 4.10	TBD	
Involuntary Resettlement OP/BP 4.12	TBD	
Safety of Dams OP/BP 4.37	No	
Projects on International Waterways OP/BP 7.50	No	
Projects in Disputed Areas OP/BP 7.60	No	

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 01-Dec-2013

B.

[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.

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

The Terms of Reference for preparation of a framework to manage environmental and social issues are being drawn up and it is expected that the Assessment itself will be completed in 2 months from the date of award of that contract.

IV. APPROVALS

Task Team Leader:	Name: Ashish Khanna	
Approved By:		
Regional Safeguards Coordinator:	Name:	Date:
Sector Manager:	Name: Jyoti Shukla (SM)	Date: 03-Jun-2013