

**INTEGRATED SAFEGUARDS DATASHEET
APPRAISAL STAGE**

I. Basic Information

Date prepared/updated: 07/27/2011

Report No.: AC6399

1. Basic Project Data

Original Project ID: P071794	Original Project Name: Rural Electrification and Renewable Energy Development	
Country: Bangladesh	Project ID: P126724	
Project Name: Additional Financing II for Rural Electrification and Renewable Energy Development Project		
Task Team Leader: Zubair K.M. Sadeque		
Estimated Appraisal Date: June 6, 2011	Estimated Board Date: August 23, 2011	
Managing Unit: SASDE	Lending Instrument: Financial Intermediary Loan	
Sector: Other Renewable Energy (100%)		
Theme: Rural services and infrastructure (100%)		
IBRD Amount (US\$m.):	0.00	
IDA Amount (US\$m.):	172.00	
GEF Amount (US\$m.):	0.00	
PCF Amount (US\$m.):	0.00	
Other financing amounts by source:		
BORROWER/RECIPIENT	0.00	
Asian Development Bank	2.00	
Global Partnership on Output-based Aid	6.70	
GERMANY: KREDITANSTALT FUR WIEDERAUFBAU (KFW)	0.60	
LOCAL: BENEFICIARIES	22.80	
<u>Non-Government Organization (NGO) of Borrowing Country</u>	<u>51.00</u>	
	83.10	
Environmental Category: B - Partial Assessment		
Repeater <input type="checkbox"/>		
Is this project processed under OP 8.50 (Emergency Recovery) or OP 8.00 (Rapid Response to Crises and Emergencies)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

2. Project Objectives

The project development objective is to increase access to electricity in rural areas of Bangladesh and help promote more efficient energy consumption.

3. Project Description

The proposed additional credit would help finance the costs associated with further scale-up of the successful Solar Home Systems (SHS) program in remote rural areas by the eligible Participating Organizations (POs) under a micro-credit scheme implemented by the Infrastructure Development Company Limited (IDCOL).

Proposed Components of the additional financing are as follows:

a. Component 1: Scale up the renewable energy component (US\$166 million). This includes loan financing (US\$157 million) and grant support (US\$9 million) for installation of approximately 630,000 SHS of various sizes, and several mini-grid projects. As this is a market driven program, customer demand will drive the types of systems purchased. The indicative portfolio of mini-grids comprises 60 solar PV irrigation systems, 5 biogas power projects (20KW each) and 1 biomass gasification plant (200 KW). The actual number of sub-projects will vary based on demand. Feasibility studies and appraisals of several of these projects have been completed.

b. Component 2: Technical assistance (US\$6 million) for quality assurance, training and outreach, and environmental management. The principle TA activities are the following:

i. Services:

(a) Quality Assurance: Establishing capacities for PV systems testing, support to the Technical Standards Committee for quality improvement, expanded technical SHS inspection program, collection efficiency inspections, and field and laboratory SHS performance testing.

(b) Training & Outreach: Customer education and outreach, PO staff training, technician accreditation program design, technicians accreditation, training and exposure visits, market spoilage avoidance information dissemination, and consumer response survey for newly emerging high efficiency advanced white Lighting Emitting Diode (LED) lamps.

(c) Environment Improvement: Battery recycling and CFL recycling support

ii. Goods:

Procurement of training manuals, customer training leaflets, inspection forms, toolkits, and laptop computers. Procurement and set up of PV Testing Lab Equipment.

In addition, the current project to which this additional financing credit is proposed, is also supporting the government's demand side management program of replacement of incandescent lamps with energy efficient compact fluorescent lamps (CFLs) to reduce peak electricity demand in the country. The first phase deployment of 10 million CFLs has been completed under the first additional financing credit. The second phase deployment of another 17.5 million CFLs will be carried out through a reallocation of proceeds from the on-going additional financing of the project.

4. Project Location and salient physical characteristics relevant to the safeguard analysis

The SHS and mini-grid projects supported by the additional financing credit will be implemented in the rural areas of Bangladesh where grid electricity is not economically viable or will take long time to reach.

5. Environmental and Social Safeguards Specialists

Mr Shakil Ahmed Ferdausi (SASDI)

Ms Sabah Moyeen (SASDS)

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

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts: There are no significant and/or irreversible adverse environmental and social issues in the sub-projects financed under the project. The renewable energy component yields net positive environmental impacts. SHS and other renewable energy technologies will result in the replacement of kerosene and other biomass fuels that are currently used for lighting.

The major environmental concern in SHS is the improper disposal/ recycling of lead-acid storage battery used in SHS. If not properly disposed/ recycled, the lead sulphate can contaminate the surrounding lands and water bodies. Lead sulfate is a water soluble substance that could contaminate groundwater and can be transferred up the food chain. Also, the unsafe practices of dismantling of used batteries and lack of standard procedures are major occupational health and safety concerns for the workers at the recycling facilities. With proper recycling processes and practices, environmental impacts can be mitigated.

The renewable energy based mini-grid sub-projects to be financed under the proposed additional financing credit may have localized and temporal environmental impact. The extent and exact locations of these sub-projects are not known at this stage. Sub-project specific environmental assessment will be carried out as part of appraisal of these sub-projects and appropriate mitigation measures adopted before financing could be considered for these sub-projects under the proposed additional financing credit.

The CFL component of the ongoing project will help reduce peak demand in the country and thus contribute to less emission from power generation. In general, CFLs use 75% less energy than incandescent bulbs.

The technical specifications of the CFLs supported under the project required the mercury content to be no more than 5 milligrams per unit (which is 1/100th of the amount of mercury used in a mercury thermometer). Given the large number of CFLs supported

under the project (10.5 million already procured and another 17.5 million under procurement) can have a collective impact on the environment during disposal. However, the CFLs can be recycled, with virtually all the components (metal end caps, glass tubing, mercury, and phosphor) can all be separated and re-used. The metallic portions can be sold as scrap metal, recycled glasses can be remanufactured into other glass products, and mercury can be re-used in other products.

Considering the nature and magnitude of potential environmental impacts from relatively limited scale physical interventions and mostly environmental friendly works, the proposed additional financing credit is classified as category B.

No land acquisition or displacement (physical and/or economic) of people will be allowed under the project. Adequate screening mechanisms will be used to ensure this.

The project may extend services/benefits/products to the Indigenous Peoples (IPs), but the IPs are free to avail these on a purely voluntary basis, as paying customers. Where necessary, the Partner Organizations (POs) will carry out adequate consultations (customer training, information on maintenance and proper usage) in relevant local languages, adhering to local customs and practices (as has been the practice in the on-going phase of the project). A brief social-screening questionnaire is included in the Environment and Social Management Framework (ESMF) to ensure that land acquisition and/or displacement of people does not occur. The questionnaire will also assess if the sub-project(s) operate in IP areas, so that the Partner Organizations (POs) can take adequate steps to ensure relevant consultations.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

The project uses renewable energy technology, and hence there are no irreversible indirect and/or long term impact anticipated in the project area.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

Earlier studies have identified off-grid renewable energy technology as the cost-effective and environment-friendly technology for the millions of people in the remote areas of the country. The renewable energy based mini-grid sub-projects will be assessed based on defined indicators including environmental parameters and alternative locations or options before they are considered for financing under the proposed additional financing credit.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described. IDCOL developed a policy guideline for disposal of warranty expired batteries in June 2005 that spelled out the roles and responsibilities of the Partner Organizations (POs) and battery manufacturers for proper collection of used batteries and proper recycling. An Environment Management Framework (EMF) was adopted by IDCOL during the first additional financing in 2009 which required the battery manufacturers to adopt ISO 14001-2204 (Environment Management Standard) and OHSAS 18001:1999

(Occupational Health & Safety Management Systems) certifications by June 2011. Most of the battery manufacturers by now have introduced several measures to improve the environmental and safety condition in battery recycling process and are in the process of adopting the certifications. It is expected that all the battery manufacturers will complete ISO and OHSAS certifications by December 2011. However, the risk remains that the used batteries will be recycled by informal "backyard smelters" in an environmentally harmful manner. The participation agreements with the POs have been amended and a new reporting mechanism introduced to ensure that used batteries are returned to compliant recycling centers, and are not sold to #backyard smelters#. Under the technical assistance component, studies will be carried out to understand the dynamics of the battery recycling in the informal sector, identify the potential to improve the percentage of lead recovery and occupational health and safety practices. In addition, the project will consider opening a new credit line to support the users in purchasing the second new battery. An annual environmental audit by an independent third party will be carried out to check that the used batteries in the SHS program are returned to compliant recycling centers and are not sold to backyard smelters. The audit will cover an assessment of the adequacy of the relevant clauses in the participation agreement with the POs in ensuring appropriate recycling of batteries.

The institutional capacity of IDCOL for environmental and social management has been strengthened by appointing a full-time environment and social safeguards specialist. The specialist will be strengthening IDCOL's monitoring of battery recycling to promote recycling at approved centers (and not by backyard smelters). The specialist will also seek to ensure that the environment and social aspects are adequately addressed in the mini-grids that are proposed to be financed under the second additional financing.

A national guideline for collection of waste CFLs and an appropriate recycling method will be developed by IDCOL. The collected incandescent lamps are being destructed in consultation with the Department of Environment. An annual environment audit will be carried out that will assess the effectiveness of re-use and recycling practices of CFLs, including its components, such as metal end caps, glass tubing, mercury and phosphorus.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people. The SHS are sold to the households under a micro-credit system. If the households do not want it, they don't buy the systems. During installation of the SHS, customers are given training for regular repair and maintenance. There is a telephone hotline at IDCOL to which any customer can report a problem directly if the complaints/problems are not addressed by the POs in time.

To ensure social safeguards particularly in the mini-grid projects to be financed under the proposed additional financing, the existing Environment Management Framework (EMF) of the project has been revised as an Environment and Social Management Framework (ESMF) that includes, among others, the following requirements: i) feasibility studies/appraisal reports of the mini-grid projects to certify that the lands are not acquisitioned, are free of encumbrances, and will not impact negatively on the

livelihood of any vulnerable groups and that any sub-project that is found to displace people would not be considered by IDCOL for financing; ii) all land transactions for the sub-projects will be done on a willing-buyer willing-seller basis where the seller has the option of refusing to sell. Where the project operates in areas where IPs live, all required consultations, awareness-raising etc will be carried out in local languages adhering to local cultures and traditions.

B. Disclosure Requirements Date

Environmental Assessment/Audit/Management Plan/Other:

Was the document disclosed prior to appraisal?	Yes
Date of receipt by the Bank	07/21/2011
Date of "in-country" disclosure	07/25/2011
Date of submission to InfoShop	07/27/2011
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	

Resettlement Action Plan/Framework/Policy Process:

Was the document disclosed prior to appraisal?
Date of receipt by the Bank
Date of "in-country" disclosure
Date of submission to InfoShop

Indigenous Peoples Plan/Planning Framework:

Was the document disclosed prior to appraisal?
Date of receipt by the Bank
Date of "in-country" disclosure
Date of submission to InfoShop

Pest Management Plan:

Was the document disclosed prior to appraisal?
Date of receipt by the Bank
Date of "in-country" disclosure
Date of submission to InfoShop

*** If the project triggers the Pest Management and/or Physical Cultural Resources, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.**

If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?	Yes
If yes, then did the Regional Environment Unit or Sector Manager (SM)	Yes

review and approve the EA report?
 Are the cost and the accountabilities for the EMP incorporated in the credit/loan? Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank's Infoshop? Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs? Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies? Yes

Have costs related to safeguard policy measures been included in the project cost? Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies? N/A

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents? Yes

D. Approvals

<i>Signed and submitted by:</i>	<i>Name</i>	<i>Date</i>
Task Team Leader:	Mr Zubair K.M. Sadeque	07/25/2011
Environmental Specialist:	Mr Shakil Ahmed Ferdausi	07/25/2011
Social Development Specialist Additional Environmental and/or Social Development Specialist(s):	Ms Sabah Moyeen	07/25/2011
<i>Approved by:</i>		
Regional Safeguards Coordinator:	Mr Sanjay Srivastava	07/25/2011
Comments: cleared. See email of 07/20 for details.		
Sector Manager:	Mr Malcolm Cosgrove-Davies	07/27/2011
Comments: cleared as Acting Sector Manager		