Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 04-Jan-2018 | Report No: PIDISDSA23524

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Bangladesh	P165400	Additional Financing II for Rural Electrification and Renewable Energy Development II	P131263
Parent Project Name	**Region**	**Estimated Appraisal Date**	**Estimated Board Date**
Rural Electrification and Renewable Energy Development II (RERED II) Project	SOUTH ASIA	02-Jan-2018	28-Feb-2018
Practice Area (Lead)	**Financing Instrument**	**Borrower(s)**	**Implementing Agency**
Energy & Extractives	Investment Project Financing	PEOPLE'S REPUBLIC OF BANGLADESH	Power Cell, Infrastructure Development Company Limited (IDCOL)

Proposed Development Objective(s) Parent

The proposed project development objectives are to increase access to clean energy in rural areas through renewable energy and promote more efficient energy consumption.

Components

Access to Electricity
Household Energy
Sector Technical Assistance

Financing (in US$, millions)

SUMMARY

Total Project Cost	179.00
Total Financing	179.00
Financing Gap	0.00

DETAILS

Total World Bank Group Financing	55.00

World Bank Lending	55.00
Total Government Contribution	104.00

Environmental Assessment Category

Partial Assessment (B)

Decision

The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Country Context

Bangladesh's economy has performed well over the past decade. The country's Gross Domestic Product (GDP) has grown at an average of 6 percent per annum since 2010. In Fiscal Year 2014 (FY 14), the country moved up to a lower-middle income country (LMIC) status as per capita Gross National Income (GNI) of US$1,080 crossed the LMIC threshold of US$1,046. The country's per capita income rose further to US$1,602 at the end of FY 17. This sustained growth was achieved despite the adverse impacts of the global recession, oil price increases, unrest in the Middle East and local natural disasters, and has largely been dependent on a reliable and affordable supply of electricity.

The Government of Bangladesh has targeted GDP growth of 7.4% per annum between 2016 and 2020 in its 7th Five Year Plan. Solid performance by the power sector is considered necessary to achieve this target. The current Power System Master Plan notes that if Bangladesh were to follow Thailand's growth trajectory (as desired by the Government) it would have to sustain a per-capita GDP growth rate of 5.2% per annum between 2016 and 2041. This would require the development of new export oriented industries and a significant increase in power generation capacity, along with a quadrupling of the total energy used.[1] The Government has also set itself the goal of ensuring universal access to electricity by 2021, when Bangladesh completes fifty years of independence.

Sectoral and Institutional Context

The power sector in Bangladesh has grown rapidly over the last decade – maximum generation increased from a little over 3,000 MW in 2009 to more than 9,000 MW in 2016 (not taking into account significant suppressed demand). Current installed generation capacity in Bangladesh is 15,000 mega-Watt (MW), but available capacity is only 9,000 MW. The highest demand served in the country until November 2016 was 9,036 MW. During the last eight years, the 81 power plants with generation capacity of 10,353 MW were

[1] The Power System Master Plan 2015. JICA/TEPCO. "PSMP2015 High-Level Discussion SUMMARY PART" April, 2016.

installed, while the Government's electrification efforts brought electricity access to 78 percent of the population. However, the per capita consumption of electricity in Bangladesh is only 407 kilo-Watt hour (kWh)/year, which is one of the lowest in the world and lower than other large South Asian countries (1,010 kWh for India, 2,600 kWh for China, and 13,246 kWh for the United States). Nevertheless, with about 13 percent of transmission and distribution losses, and accounts receivable of 2 months of sales equivalent, the operational and financial performance of Bangladesh's power sector compares favorably with that of its larger South Asian neighbors.

Recognizing the challenges, the Government of Bangladesh (GOB) has adopted a multi-pronged strategy in the energy sector covering energy conservation, load management, grid and off-grid electrification approaches, promotion of private sector investment in short and longer-term power supply measures, exploitation of alternative energy resources to diversify the fuel mix, power import from neighboring countries, and improved sector governance and efficiency. In Vision 2021, the GOB articulated its objectives: i) universal access by the year 2021 with improved reliability and quality; ii) stabilizing the sector's financial status and increasing its efficiency; and iii) operating the sector on commercial principles and increasing private sector participation.

The GOB's Renewable Energy Policy (2008) targets meeting 5% of total power demand from renewable energy sources by 2015 and 10% by 2020. The Remote Area Power Supply Systems (RAPSS) guideline of 2007 allows for private sector participation in development, operation, and maintenance of electricity generation system and distribution networks in remote rural areas including isolated islands to supplement GOB efforts at achieving universal access by 2020. However, there has not been much progress in implementing the RAPSS schemes. Despite the short and long-term efforts at increasing power generation, in addition to demand side management, it will take years to fully close the demand-supply gap. Consequently, relying on the grid alone will not achieve the GOB vision of universal access by 2021. Furthermore, the dispersed nature of rural settlements and the numerous rivers that crisscross the country make grid electrification in many areas difficult and expensive.

In this context, the additional financing is required to scale up the RERED II Access to Electricity component to support the installation of 1,000 solar irrigation pumps (SIP) and 30 solar mini-grids (SMG), and the Household Energy component to support an additional 4 million Improved Cook Stoves (ICS) in rural areas of Bangladesh. Of the proposed additional IDA credit, US$35 million would be allocated for the Access to Electricity component for investments in private sector SIPs that displace diesel irrigation pumps, and in SMGs installed primarily on islands that will not be connected to the national grid to offset diesel-powered mini-grids. The proposed US$40 million additional financing (IDA credit of US$20 million and GCF of US$20 million) to the Household Energy component is primarily aimed at supporting the continued growth of the ICS program which has emerged as a viable model for increasing efficiency of fuel use for cooking. It will reduce indoor air pollution and improve health, cut GHG emissions, and lower households' cost of cooking.

C. Proposed Development Objective(s)

Original PDO

The proposed project development objectives are to increase access to clean energy in rural areas through renewable energy and promote more efficient energy consumption.

Current PDO

Increase access to clean energy through renewable energy in rural areas.

Key Results

Number of households, farmers, and businesses having access to clean energy services
Unit of Measure: Number
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	0.00	2,152,989.00	6,085,082.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2021	

Generation Capacity of Renewable Energy (other than hydropower) constructed
Unit of Measure: Megawatt
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	0.00	49.00	56.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2018	

Generation Capacity of Renewable Energy constructed-Solar
Unit of Measure: Megawatt
Indicator Type: Custom Breakdown

	Baseline	Actual (Current)	End Target	Action
Value	0.00	49.00	88.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2021	

Direct project beneficiaries
Unit of Measure: Number
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	0.00	6,370,000.00	9,800,000.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2021	

Female beneficiaries
Unit of Measure: Percentage
Indicator Type: Custom Supplement

	Baseline	Actual (Current)	End Target	Action
Value	0.00	58.00	76.00	Revised

People provided with new or improved electricity service
Unit of Measure: Number
Indicator Type: Core

	Baseline	Actual (Current)	End Target	Action
Value	0.00	5,420,000.00	4,790,000.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2021	

Ppl provided wth elec. by hhold conn.–Offgrid/minigrid–Only renewable sources
Unit of Measure: Number
Indicator Type: Custom Breakdown

	Baseline	Actual (Current)	End Target	Action
Value	0.00	5,420,000.00	4,790,000.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2021	

People that gained access to more energy-efficient cooking and/or heating facilities
Unit of Measure: Number
Indicator Type: Custom

	Baseline	Actual (Current)	End Target	Action
Value	0.00	1,010,657.00	5,000,000.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2021	

People that gained access only through switching of cooking and/or heating systems
Unit of Measure: Number
Indicator Type: Custom Breakdown

	Baseline	Actual (Current)	End Target	Action
Value	0.00	1,010,657.00	5,000,000.00	Revised
Date	31-Dec-2012	30-Sep-2017	31-Dec-2021	

D. Project Description

Proposed Components for the additional financing are as follows:

a. **Component A.2: Remote Area Power Supply Systems (US$30 million from IDA)**. This will provide support for an additional 1,000 SIPs and 30 SMGs. The funds will be used for financing SIPs and SMG goods.

b. **Component A.3: Technical Assistance for Component A.2 Implementation (US$5 million from IDA)**. It will support quality assurance, training and outreach, studies and planning; and program management for IDCOL.

c. **Component B: Household Energy (US$20 million from IDA and US$20 million from GCF secured by the World Bank).** This will provide support for installation of additional 4,000,000 ICS. The proposed additional financing includes support for scaling ICS program, including quality assurance, training and outreach, studies and planning, program management and goods. Together with support from IDCOL reflows and other funding sources, the target of the Project is 4,000,000 ICS under the household energy component.

E. Implementation

Institutional and Implementation Arrangements

The main components of the Project (Remote Area Power Supply Systems and Household Energy) would be implemented by the Infrastructure Development Company Limited, a government owned infrastructure finance company. Power Cell will be implementing the technical assistance to the sector.

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F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The proposed AF-2 will not be introducing any new type of activities. It is planned to be implemented nationwide, and will support improved cook stoves (ICS), solar irrigation pumps (SIP) and solar PV based mini grid projects (MG), as same as the parent project. No significant and/or irreversible adverse environmental and social impacts are anticipated. The AF-2 is designated as environmental Category B according to the WB safeguard policy; OP 4.01 and OP 4.10 have been triggered as they were for the parent project. The AF-2 will follow the revised ESMF, which has been updated and disclosed on January 4, 2018, which is in application for the ongoing project since overall safeguard requirements are assessed to be satisfactorily complied with. A Tribal Peoples Framework (TPF) was prepared under the original AF to address social, cultural, language and inclusion issues in areas where indigenous people live. Since al services are provided on a purely commercial basis in all project areas, it is in the interest of the services providers to reach out to as many people as possible, including in tribal areas. The strategy incorporated in the TPF ensures that proper screening takes place, all consultations and information dissemination is done using local languages and following social and cultural norms. Follow up activities such as repair and maintenance incorporate the same principles. The Grievance Redress Mechanism incorporates local

structures that exist at the community level. No complaints have been received and compliance on the social safeguards issues has been satisfactory. A Gender Assessment was carried out for the project, with particular focus on the cook stoves component; the report showed very good outcomes and positive outcomes for overall wellbeing of women using the stoves. The current ESMF adequately addresses the anticipated negative environmental impacts of improper disposal and recycling of lead batteries and improper disposal of PV panel. Accordingly, the required recommendation and mitigation measures are incorporated in the ESMF. Also, IDCOL will engage a consultant to prepare the procedure for proper recycling and disposal of PV panels. The ESMF has been updated and disclosed again (January 4, 2018) based on the compliance assessment and lessons learnt.

G. Environmental and Social Safeguards Specialists on the Team

Sabah Moyeen, Social Safeguards Specialist
Iqbal Ahmed, Environmental Safeguards Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The additional financing is classified as a Category 'B' project given the nature of sub-projects to be financed is remain unchanged as the parent project. Safeguard policy OP/BP 4.01 has been triggered to ensure that the sub project design and implementation are focused on reducing adverse impacts and enhancing positive impacts. The ESMF has been updated based on the compliance assessment and lessons learnt. Following the updating ESMF, the sub-project specific environment and social screening/assessments along with mitigation plans will be undertaken for AF by the respective proponents. IDCOL will review each screening/assessment and will regularly monitor the implementation of environment and social management plan.
Natural Habitats OP/BP 4.04	No	The project does not involve any conversion or degradation of critical natural habitats.
Forests OP/BP 4.36	No	The main object is to increased access to electricity at houses in rural areas through solar home systems.

		There is no possibility for affecting forest consists of either closed forest formations or open forest.
Pest Management OP 4.09	No	The activities of the project will not involve any pesticide application and no environmental and health risks are anticipated from the project.
Physical Cultural Resources OP/BP 4.11	No	There is no possibility of any adverse impacts on archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural resources resulting from project activities.
Indigenous Peoples OP/BP 4.10	Yes	The sub-projects will be reaching areas where Indigenous People (IP) live and therefore OP/BP4.10 has now been triggered. Availing of the services from the sub-projects will be purely on willing-buyer willing seller basis. The project has a screening process for IPs and has implemented a consultation and communication process in those areas that is consistent with OP 4.10. Project proponents and partner organizations are committed to be as inclusive as possible as this increases their customer base and raises their commercial viability.
Involuntary Resettlement OP/BP 4.12	No	The Project does not allow any type of land acquisition, involuntary resettlement or adverse impacts to Indigenous People (IP).
Safety of Dams OP/BP 4.37	No	The project does not finance any new dams, the Policy Safety on Dams requires that experienced and competent professionals design and supervise construction.
Projects on International Waterways OP/BP 7.50	No	The project activities do not disturb any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states or any bay, gulf, strait, or channel bounded by two or more states.
Projects in Disputed Areas OP/BP 7.60	No	The subprojects will not fall into any disputed area.

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:

The proposed additional financing-2 to the Rural Electrification and Renewable Energy Development II (RERED II-P131263) is targeted to further promote scaling-up the ICS and other options for increasing access to clean energy. No changes of the activities are envisaged in the scope of proposed financing. The project yields net positive

environmental impacts. The project is designated as environmental Category B (partial assessment) according to OP/BP of the Bank and only environmental safeguard policies OP 4.01 and OP 4.10 have been triggered. No significant and/or irreversible adverse environmental and social issues are expected in the sub-projects financed under the project.

The ICS is significantly reducing the emission comparing the conventional stove. Also, solar irrigation pump reducing emission comparing diesel engine piloted irrigation system. It is assumed that mini/micro-grid (Solar based system) does not associate with air or water pollution during operation phase. The project components mainly deal with the solar panels and batteries. The improper disposal/ recycling of lead-acid storage battery and improper disposal of PV panel of solar system and slurry for biogas are identified as key anticipated negative impacts and appropriate safeguards have been put in place.

No public land will be used for the Project, and no land acquisition will be financed under the Project. Land required for the RAPSS sub-projects will be private lands made available by the sub-project sponsors via direct purchase or by leasing. IDCOL requires that the land for the sub-projects is free of disputes and encumbrances. All land for Project use, whether made available via direct purchase or leasing, will be screened to ensure that no physical or economic displacement of communities/persons will take place, and lands which are disputed or have encroachments on them (informal settlers, non-titled entities) will not be used for the Project. It may be mentioned that such encumbrances are very rare in rural areas.

The Project may extend facilities in areas where indigenous people (IPs) live and therefore Indigenous Peoples Policy (OP/BP4.10) has been triggered. Availing the facilities/services/products under the components of the Project is purely on a voluntary basis for all paying customers (including IPs). No negative impacts are anticipated towards IPs. In cases of project activities in the IP areas like Chittagong Hill Tracts, the POs are well-versed in IP languages to offer adequate consultation on maintenance of products, proper usage of facilities offered, awareness raising, and training.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
The major environmental concerns of the original project were: (i) improper disposal/ recycling of lead-acid storage battery used in SHS. (ii) PV panel disposal after its life cycle. A PV panel disposal guideline will be prepared by IDCOL. The implementing agencies will take measures to ensure appropriate collection and recycling of lead-acid batteries following the World Bank Group Occupational Health and safety Guidelines.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.
No alternative analysis was carried out at this stage. However, alternative options will be explored during the sub-project identification and design phase for mini depending on the environmental and social impact assessments. The purpose of this Framework is to identify the likely environmental and social impacts, propose suitable alternatives and mitigation measures for mini-grids, biogas and biomass based captive plants, and solar irrigation pumps.

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.
Legislative bases for Environmental Impact Assessment (EIA) in Bangladesh are the Environmental Conservation Act 1995 (ECA'95) and the Environmental Conservation Rules 1997 (ECR'97). Department of Environment (DOE), under the Ministry of Environment and Forest (MOEF), is the regulatory body responsible for enforcing the ECA'95 and ECR'97. Other law of Bangladesh like Renewable Energy Policy of Bangladesh (2008), Bangladesh Labor Law (2006), etc. will be obliged for the project. The ESMF will also be guided by the World Bank's Safeguards (Relevant Policies) mainly OP

4.01.

The following are the major progress achieved under the ongoing REREDII and AF-1 (and the predecessor RERED) projects:

- All the battery suppliers in IDCOL in SHS program have fully completed the ISO 14001:2004 (Environmental Management Standard) and OHSAS 18001:2007 (Occupational Health Safety Standard) certification process. And also 5 suppliers have their own recycling plants while the rest have entered into arrangements with the existing 5 recycling plants to use their facilities.
- a national guideline for the proper disposal of lamps and ensure safe collection of waste CFL bulbs was prepared and power ministry adopted it.
- An environment audit was undertaken to assess the adequacy of the current mechanism for ensuring proper recycling of batteries.
- No complaints have been received under the GRM (or otherwise) and compliance on the social safeguards issues has been satisfactory. A Gender Assessment was carried out for the project, with particular focus on the cook stoves component; the report showed very good outcomes and positive outcomes for overall wellbeing of women using the stoves.

The implementing agency IIDCOL has already gained considerable experience in complying with the environmental and social safeguards requirements of the World Bank and various other development partners and also that of the Department of Environment (DOE). IDCOL has already established the Environment and Social Safeguards Management Unit (ESMMU) to institutionalize the environmental and social management in its operation. IDCOL has two full-time environment staff who are working with POs and battery manufacturers/suppliers to raise awareness about the importance of environmental and social safeguards and to discuss the environmental impacts of improper disposal or recycle of lead-acid batteries. Visits are made by the staff to all battery recycling plants on half-yearly basis for ensuring environment compliance. Environmental consultants appointed by the sub-project sponsors guide the sponsors in preparing and reviewing the environmental assessment/screening for subprojects. All the documents are regularly disclosed in their websites.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

An environmental and social management framework (ESMF) was adopted under the original RERED project. The ESMF was reviewed and revised for the first Additional Financing which included an assessment of the progress on the compliance of the activities undertaken in the existing ESMF. The updated ESMF along with its Bangla version was disclosed in IDCOL website on April 18, 2014 and in World Bank Infoshop on the same date. A revised ESMF has now been prepared, which incorporates the lessons learnt in the project and will be applicable for the current AF-2. The revised ESMF has been re-disclosed by IDCOL and World Bank on January 4, 2018. The environmental screening/assessment for different sub-projects will include mandatory consultations in the field level and also will be disclosed in the websites along with necessary Tribal Peoples Plans and EMPs as and when applicable.

B. Disclosure Requirements (N.B. The sections below appear only if corresponding safeguard policy is triggered)

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
28-Dec-2017	04-Jan-2018	

"In country" Disclosure

Bangladesh
04-Jan-2018

Comments

The ESMF was revised and disclosed.

Indigenous Peoples Development Plan/Framework

Date of receipt by the Bank	Date of submission for disclosure
28-Dec-2017	04-Jan-2018

"In country" Disclosure

Bangladesh
04-Jan-2018

Comments

The ESMF was revised and disclosed.

If the project triggers the Pest Management and/or Physical Cultural Resources policies, 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) (N.B. The sections below appear only if corresponding safeguard policy is triggered)

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 Practice Manager (PM) review and approve the EA report?
Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?
Yes

OP/BP 4.10 - Indigenous Peoples

Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?
Yes
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes
If the whole project is designed to benefit IP, has the design been reviewed and approved by the Regional Social Development Unit or Practice Manager?
Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?
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?
Yes
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?
Yes

CONTACT POINT

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Energy Specialist

Borrower/Client/Recipient

PEOPLE'S REPUBLIC OF BANGLADESH
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APPROVAL

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