

People's Republic of Bangladesh
Sustainable and Renewable Energy Development Authority (SREDA)
Power Division, Ministry of Power, Energy and Mineral Resources (MPEMR)
Infrastructure Development Company Limited (IDCOL)
Bangladesh Infrastructure Finance Fund Limited (BIFFL)

People's Republic of Bangladesh

Preparatory Survey for Energy Efficiency and Conservation Promotion Financing Project

Final Report
< ANNEXES >

February 2016

Japan International Cooperation Agency

Mitsubishi Research Institute, Inc.

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16-011

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Preparatory Survey for
Energy Efficiency and Conservation
Promotion Financing Project

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Japan International Cooperation Agency

 **MITSUBISHI RESEARCH INSTITUTE, INC.**

“PREPARATORY SURVEY FOR ENERGY EFFICIENCY AND CONSERVATION
PROMOTION FINANCING PROJECT”

<ANNEXES to the Final Report>

Prepared for:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
SUSTAINABLE AND RENEWABLE ENERGY DEVELOPMENT AUTHORITY
(SREDA)
POWER DIVISION, MINISTRY OF POWER, ENERGY AND MINERAL
RESOURCES (MPEMR)
INFRASTRUCTURE DEVELOPMENT COMPANY LIMITED (IDCOL)
BANGLADESH INFRASTRUCTURE FINANCE FUND LIMITED (BIFFL)

Prepared by:

 MITSUBISHI RESEARCH INSTITUTE, INC.

February 2016

Note: The contents herein are based on discussions in December 2015, and are liable to change in accordance with the items to be stipulated in the Loan Agreement or other relevant documents.

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1. Policies and Legal Documents related to EE&C

In Bangladesh, it is necessary to promote EE&C to meet the emerging energy demand in future. The following policies and legal documents have been or will be established to promote EE&C effectively.

(1) National Five Year Plan

“Sixth Five Year Plan FY 2011-2015” is the superior policy for EE&C promotion in Bangladesh. In “Seventh Five Year Plan FY 2016-2020”, EE&C promotion will be addressed as one of the most important issues.

(2) SREDA Act

Sustainable & Renewable Energy Development Authority (SREDA) Act was enacted in 2012. SREDA is defined as an executing and responsible governmental body to promote EE&C and renewable energy in Bangladesh

(3) Energy Efficiency and Conservation Master Plan up to 2030

SREDA has developed the “Energy Efficiency and Conservation Master Plan up to 2030” with the support from JICA. It shows the overall structure to promote EE&C effectively. And it will be authorized in FY 2015.

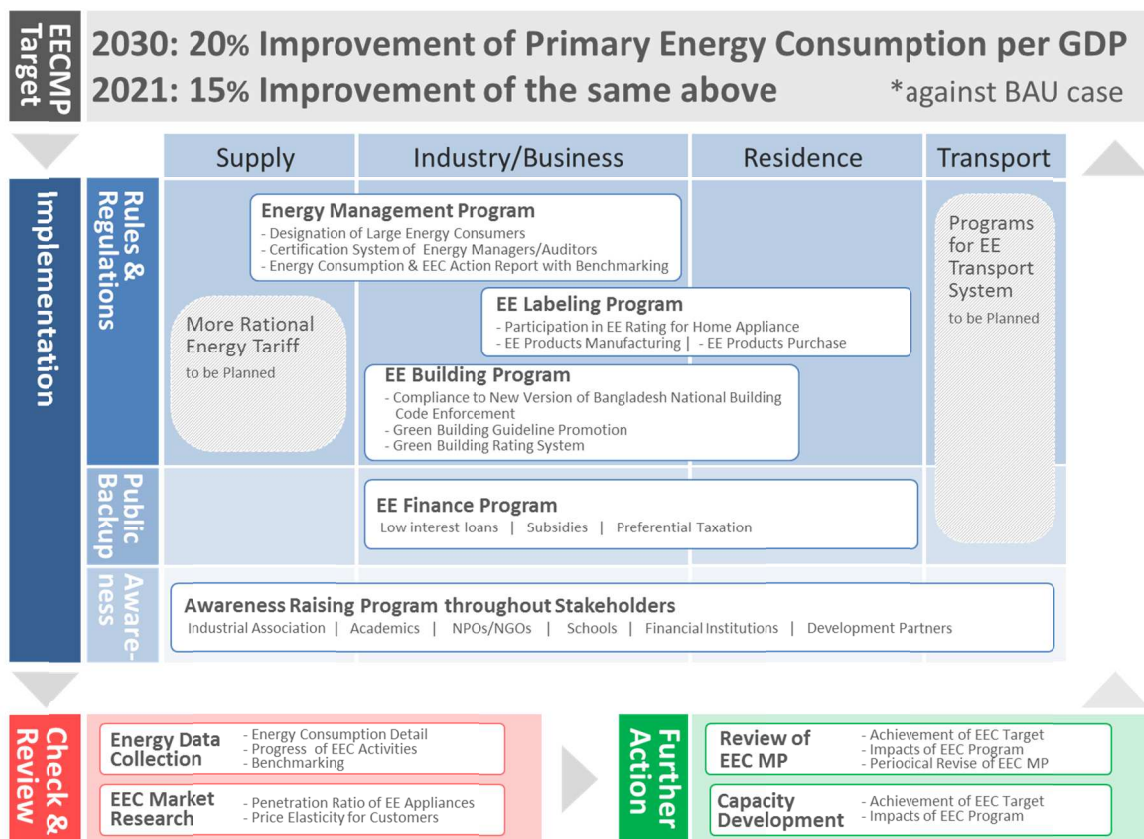


Figure 1 Structure of EE&C Master Plan



Figure 2 Time Frame of EE&C Policies (draft)

(4) EE&C Rules

EE&C Rules will be enacted in FY2015, will promote EE&C measures including establishment of Designated Large Energy Consumers (DCs) programme and implementation of home appliances EE&C labelling programme.

(5) Regulation for Energy Auditors and EE Labelling

SREDA will enact the “Regulation for Energy Auditors and EE Labelling” in FY2015. Regulation for Energy Auditors will be expected to promote EE&C in large energy consumers, besides Regulation for EE Labelling will be expected to contribute the EE&C promotion in residential sector.

(6) Green Building Rating System

SREDA will formulate Green Building Rating System in FY 2017, which can contribute the construction of green building (promoting EE&C in buildings)

(7) Amendment of National Building Code

Ministry of Housing and Public Works will add EE&C clause in the National Building Code in 2015. This amendment is also expected to promote EE&C in buildings.

(8) Financial incentive mechanism

JICA ODA loan to accelerate EE&C projects in Bangladesh will be implemented in the latter part of FY 2016

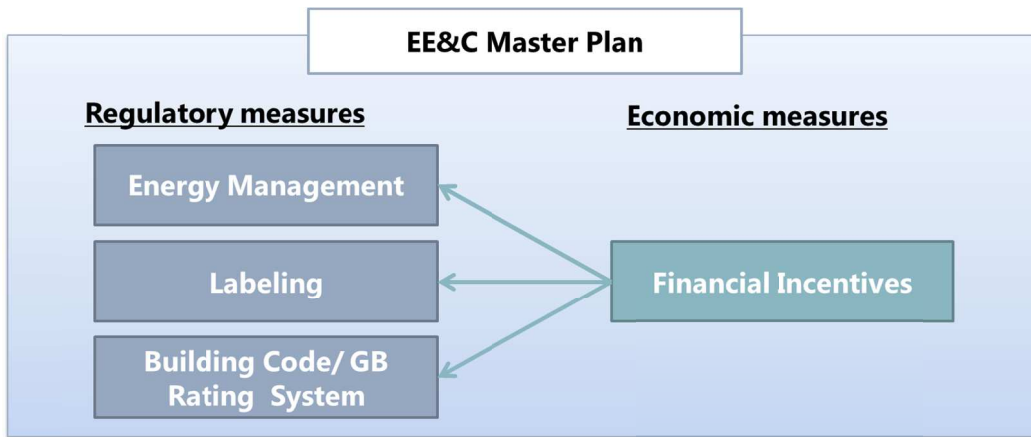


Figure 3 Relationship among EE&C Policies and Financial Incentive Mechanism

2. Financial Sector

Bangladesh Bank categorizes the financial sector into three groups, which are: (i) Formal, (ii) Semi-formal, and (iii) Informal sub-sectors. The formal sub-sector includes banks, insurance, stock brokerage and microfinance institutions. Semi-formal sub-sector includes housing finance corporations.

2.1. Formal Financial Sub-sector

There are four different supervisory institutions in the formal financial sector. These are (i) banks and non-bank financial institutions (NBFIs) under Bangladesh Bank, (ii) life insurance companies and non-life insurance companies under Financial Institutions under the supervision of Insurance Development & Regulatory Authority, (iii) stock brokerage and merchant banks under Securities & Exchange Commission, and (iv) microfinance institutions (MFIs) under Microcredit Regulatory Authority.

Table 1 Structure of the Financial Sector

Financial institutions under the supervision of Bangladesh Bank: Banks: (60) NBFIs: Non-Bank Financial Institutions: (31)
Financial Institutions under the supervision of Insurance Development & Regulatory Authority: Life Insurance Companies: (18) Non-life Insurance Companies: (44)
Financial Institutions under the supervision of Securities & Exchange Commission: Dealers and Brokerage Houses: (238 in DSE and 136 in CSE) Merchant Banks: (45) Asset Management Companies (AMCs): (15) Credit Information Companies (CICs): (5) Investment Corporation of Bangladesh (ICB): ICB Capital Management Ltd., ICB Asset Management Company Ltd., ICB Securities Trading Company Ltd.
Financial Institutions under the supervision of Microcredit Regulatory Authority: Microfinance Institutions (MFIs): (599)

Note: numbers in bracket indicates the number of existing institutions

Source: Compiled by the Survey Team based on Bangladesh Bank website information

2.2. Semi-formal Financial Sector

Financial institutions not under a specific supervision institution are categorized as semi-formal financial institutions. These are the specialized financial institutions, NGOs and governmental setup institutions.

- House Building Finance Corporation (HBFC);
- Palli Karma Sahayak Foundation (PKSF);

- Samabay Bank;
- Grameen Bank; etc.;
- Non-Governmental Organizations (NGO)s, and;
- Discrete government programs.

Among these informal financial institutions, Grameen Bank performs activities which are akin to microfinance. For this reason the bank is sometimes categorized as a MFI, although it is not under any specific supervising authority. Top ten MFIs and Grameen Bank together comprises approximately 87% of the microfinance deposit amount and 81% of the outstanding loan amount within the whole microfinance activities.

2.3. Banks

According to Bangladesh Bank website information (browsed 7 Feb 2015), banks consists of:

- 56 Scheduled Banks: The banks which get license to operate under Bank Company Act, 1991 (Amended in 2003) are termed as Scheduled Banks, and;
- 4 Non-Scheduled Banks: The banks which are established for special and definite objective and operate under the acts that are enacted for meeting up those objectives, are termed as Non-Scheduled Banks. These non-scheduled banks cannot perform all functions of scheduled banks.

Among 56 scheduled banks there are:

- 5 State Owned Commercial Banks (SOCBs): SOCBs are fully or majorly owned by the Government of Bangladesh.
- 3 Specialized Banks (SDBs): specialized banks were established for specific objectives like agricultural or industrial development. These banks are also fully or majorly owned by the Government of Bangladesh.
- 39 Private Commercial Banks (PCBs): Private commercial banks are majorly owned by the private entities. PCBs can be categorized into two groups:
 - 31 Conventional PCBs: conventional PCBs perform the banking functions in conventional fashion i.e interest based operations;
 - 8 Islami Shariah based PCBs: Islami Shariah based PCBs in Bangladesh execute banking activities according to Islami Shariah based principles i.e. Profit-Loss Sharing (PLS) mode.
- 9 Foreign Commercial Banks (FCBs): FCBs are operating in Bangladesh as the branches of the banks which are incorporated in abroad.

Table 2 List of Scheduled Banks

Organization	Web Link
AB Bank Limited	http://www.abbl.com
Agrani Bank Limited	http://www.agranibank.org
Al-Arafah Islami Bank Limited	http://www.al-arafahbank.com/
Bangladesh Commerce Bank Limited	http://www.bcbl-bd.com
Bangladesh Development Bank Limited	http://www.bdbl.com.bd
Bangladesh Krishi Bank	http://www.krishibank.org.bd

Bank Al-Falah Limited	http://www.bankalfalah.com
Bank Asia Limited	http://www.bankasia-bd.com
BASIC Bank Limited	http://www.basicbanklimited.com
BRAC Bank Limited	http://www.bracbank.com
Citibank N.A	http://www.citi.com/domain/index.htm
Commercial Bank of Ceylon Limited	http://www.combankbd.com
Dhaka Bank Limited	http://www.dhakabank.com.bd
Dutch-Bangla Bank Limited	http://www.dutchbanglabank.com
Eastern Bank Limited	http://www.ebl-bd.com
EXIM Bank Limited	http://www.eximbankbd.com
First Security Islami Bank Limited	http://www.fsblbd.com
Habib Bank Ltd.	http://www.habibbankltd.com
ICB Islamic Bank Ltd.	http://www.icbislamic-bd.com/
IFIC Bank Limited	http://www.ificbankbd.com
Islami Bank Bangladesh Ltd	http://www.islamibankbd.com
Jamuna Bank Ltd	http://www.jamunabankbd.com
Janata Bank Limited	http://www.janatabank-bd.com
Meghna Bank Limited	http://www.meghnabank.com.bd
Mercantile Bank Limited	http://www.mblbd.com
Midland Bank Limited	http://www.midlandbankbd.net/
Modhumoti Bank Ltd.	http://modhumotibankltd.com/
Mutual Trust Bank Limited	http://www.mutualtrustbank.com
National Bank Limited	http://www.nblbd.com
National Bank of Pakistan	http://www.nbp.com.pk
National Credit & Commerce Bank Ltd	http://www.nccbank.com.bd
NRB Bank Limited	http://www.nrbbankbd.com
NRB Commercial Bank Limited	http://www.nrbcommercialbank.com/
NRB Global Bank Limited	http://www.nrbglobalbank.com
One Bank Limited	http://www.onebankbd.com
Premier Bank Limited	http://www.premierbankltd.com
Prime Bank Ltd	http://www.prime-bank.com
Pubali Bank Limited	http://www.pubalibangla.com
Rajshahi Krishi Unnayan Bank	http://www.rakub.org.bd
Rupali Bank Limited	http://www.rupali-bank.com
Shahjalal Islami Bank Limited	http://www.shahjalalbank.com.bd
Social Islami Bank Ltd.	http://www.siblbd.com
Sonali Bank Limited	http://www.sonalibank.com.bd
South Bangla Agriculture & Commerce Bank Limited	http://www.sbacbank.com/
Southeast Bank Limited	http://www.sebankbd.com
Standard Bank Limited	http://www.standardbankbd.com
Standard Chartered Bank	http://www.standardchartered.com/bd
State Bank of India	http://www.statebankofindia.com
The City Bank Ltd.	http://www.thecitybank.com
The Farmers Bank Ltd	http://www.farmersbankbd.com
The Hong Kong and Shanghai Banking Corporation. Ltd.	http://www.hsbc.com.bd
Trust Bank Limited	http://www.trustbank.com.bd
Union Bank Limited	http://www.unionbank.com.bd/

United Commercial Bank Limited	http://www.ucbl.com
Uttara Bank Limited	http://www.uttarabank-bd.com
Woori Bank	http://www.wooribank.com

There are 4 non-scheduled banks in Bangladesh which are:

- Ansar VDP Unnayan Bank,
- Karmashangosthan Bank,
- Probashi Kollyan Bank,
- Jubilee Bank.

Source: Bangladesh Bank

2.4. Non-Bank Financial Institutions

Non-Bank Financial Institutions (NBFIs) are those types of financial institutions which are regulated under Financial Institution Act, 1993 and controlled by Bangladesh Bank. Out of the 31 NBFIs operating in Bangladesh, 2 is fully government owned, 1 is the subsidiary of a SOCB, 13 were initiated by private domestic initiative and 15 were initiated by joint venture initiative. Major sources of funds of NBFIs are Term Deposit (at least six months tenure), Credit Facility from Banks and other NBFIs, Call Money as well as Bond and Securitization.

The major difference between banks and NBFIs are as follows:

- FIs cannot issue cheques, pay-orders or demand drafts,
- FIs cannot receive demand deposits,
- FIs cannot be involved in foreign exchange financing,
- FIs can conduct their business operations with diversified financing modes like syndicated financing, bridge financing, lease financing, securitization instruments, private placement of equity etc.

Table 3 List of Non-Bank Financial Institutions (NBFIs)

Organization	Web Link
Agrani SME Financing Company Limited	
Bangladesh Finance & Investment Co. Ltd.	
Bangladesh Industrial Finance Company Limited (BIFC)	http://www.bifcol.com
Bangladesh Infrastructure Finance Fund Limited	http://www.biffl.org.bd/
Bay Leasing & Investment Limited	http://www.blilbd.com
Delta Brac Housing Finance Corporation Ltd. (DBH)	http://www.deltabrac.com
Fareast Finance & Investment Limited	http://www.ffilbd.com
FAS Finance & Investment Limited	http://www.fasbd.com
First Finance Limited	http://www.first-lease.com
GSP Finance Company (Bangladesh) Limited (GSPB)	http://www.gspfinanceco.com
Hajj Finance Company Limited	http://www.hajjfinance.net
IDLC Finance Limited	http://www.idlc.com

Industrial and Infrastructure Development Finance Company (IIDFC) Limited	http://www.iidfc.com
Industrial Promotion and Development Company of Bangladesh Limited (IPDC)	http://www.ipdcbd.com
Infrastructure Development Company Limited (IDCOL)	http://www.idcol.org
International Leasing and Financial Services Limited	http://www.ilfsl.com
Islamic Finance and Investment Limited	http://www.ifilbd.com
LankaBangla Finance Ltd.	http://www.lankabangla.com
MIDAS Financing Ltd. (MFL)	http://www.midasfl.com
National Finance Ltd	
National Housing Finance and Investments Limited	
People's Leasing and Financial Services Ltd	http://www.plfsbd.com
Phoenix Finance and Investments Limited	http://www.phoenixleasing.com.bd
Premier Leasing & Finance Limited	
Prime Finance & Investment Ltd	http://www.primefinancebd.com
Reliance Finance Limited	http://www.reflbd.com
Saudi-Bangladesh Industrial & Agricultural Investment Company Limited (SABINCO)	http://www.sabinco.com.bd
The UAE-Bangladesh Investment Co. Ltd	
Union Capital Limited	http://www.unicap-bd.com
United Finance Limited	http://www.ulc.com.bd
Uttara Finance and Investments Limited	http://www.uttarafinance.biz

Source: Bangladesh Bank

3. Component I Market Analysis

3.1. Macro-level Assessment of Market Scale for Energy Efficiency Equipment in Bangladesh

3.1.1. Objectives

The Survey aims to examine the overall scale for investment needs for energy efficiency equipment from the macro- and national-level perspectives. This will help assess the potential market size for energy efficiency.

3.1.2. Methodology of Analysis

The forecast of energy consumption have been made under the two scenarios in the below table. It estimated values of primary energy consumption per GDP (toe/million BDT) for both scenarios. The assumptions were made for EE&C realization rate for the economically feasible EE&C potential and expected EE&C amount by sector.

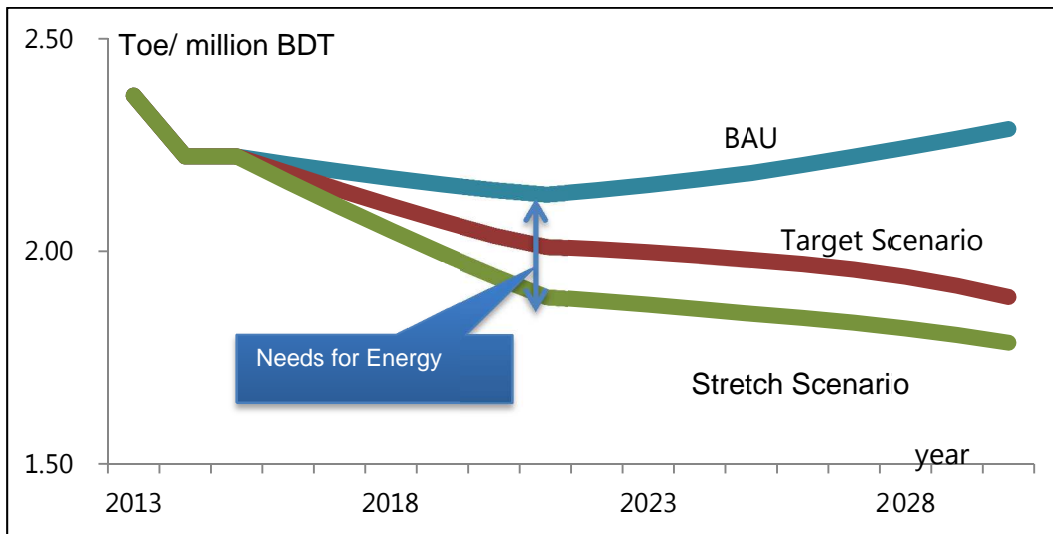
Table 4 Scenarios for Estimating Energy Efficiency

Scenario	Conditions
Target Scenario	In 2016, EE&C regulations will be enforced by the Government, and EE&C measures will be implemented gradually. In 2021 and 2030, primary energy intensity (toe/GDP) will be 15% and 20% less than that in 2013-14 basis, respectively. (EE&C realization rate for the EE&C potential is 20-30% and 60-80% in 2021 and 2030, respectively).
Stretch Scenario	In 2016, EE&C measures will be implemented gradually. EE&C realization rate for the EE&C potential is 50% and 100% in 2021 and 2030, respectively.

Source: JICA (2015) The Project for Development of Energy Efficiency and Conservation Master Plan in Bangladesh, Final Report

Energy consumption patterns will be identified under the two scenarios: (a) business-as-usual (BAU) and (b) the case with investment in energy efficiency equipment (Stretch Scenario). The target year has been set as calendar year 2021, when the proposed loan will close. The primary sources for energy are segregated and analyzed including electricity, natural gas, oil and coal. Each energy source is evaluated in physical terms such as kilo-watt hour, cubic meter, tonne and tonne of oil equivalent.

The below chart illustrates the total primary energy consumptions from 2013 to 2030 under the three scenarios: BAU, target scenario and stretch scenario.



Source: JICA (2015) The Project for Development of Energy Efficiency and Conservation Master Plan in Bangladesh, Final Report

Figure 4 Future Scenario of Energy Consumption by 2030

The differences of the above-mentioned two scenario results in the needs for energy efficiency improvement because the balance shows the potential needs for the energy saving to achieve the expected energy efficiency level. The needs for energy saving is converted to the needs for investment in monetary term by using the current unit price of energy and the typical expected investment figure for energy efficiency gain.

3.1.2.1. Data for Analysis

Basic analysis for the primary energy consumption was conducted in the Project for Development of Energy Efficiency and Conservation Master Plan in Bangladesh (2015). Data have been compiled by sector-wise energy consumption and resource-wise energy consumption as shown in the below tables as an example.

Table 5 Forecast of Primary Energy Consumption

Sector-wise Energy Consumption (Business as Usual (BAU) Scenario)

Sector	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Industry	kTOE	13,811	14,709	15,678	16,724	17,854	19,075	20,394	21,822	23,366	25,038	26,849	28,812	30,940	33,247	35,751	38,469	41,421	44,627
Residential	kTOE	8,008	8,380	8,772	9,187	9,625	10,088	10,577	11,094	11,640	12,218	12,829	13,475	14,158	14,881	15,646	16,456	17,313	18,219
Commercial	kTOE	1,253	1,378	1,516	1,667	1,834	2,017	2,219	2,441	2,685	2,954	3,249	3,574	3,931	4,324	4,757	5,232	5,756	6,331
Agriculture	kTOE	1,491	1,535	1,581	1,629	1,678	1,728	1,780	1,833	1,888	1,945	2,003	2,063	2,125	2,189	2,255	2,322	2,392	2,464
Total	kTOE	24,562	26,002	27,548	29,207	30,991	32,908	34,970	37,190	39,580	42,155	44,930	47,924	51,154	54,642	58,409	62,480	66,881	71,642
TOE/GDP (TOE/million BDT)		2.37	2.22	2.22	2.21	2.19	2.17	2.16	2.14	2.13	2.14	2.16	2.17	2.18	2.20	2.22	2.24	2.27	2.29
TOE/GDP Improvement (compared to 2013 base) %		0.0	6.1	6.0	6.8	7.5	8.2	8.8	9.4	9.9	9.4	8.9	8.3	7.7	6.9	6.1	5.2	4.3	3.3

Resource-wise Energy Consumption (Business As Usual (BAU) Scenario)

Resource	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Electricity	kTOE	10,271	11,037	11,864	12,759	13,727	14,774	15,908	17,135	18,464	19,904	21,465	23,157	24,993	26,984	29,145	31,491	34,038	36,805
Natural Gas	kTOE	12,096	12,691	13,327	14,006	14,733	15,510	16,342	17,234	18,190	19,215	20,316	21,498	22,769	24,136	25,608	27,192	28,899	30,739
Oil	kTOE	1,529	1,576	1,624	1,674	1,725	1,779	1,834	1,892	1,952	2,013	2,078	2,144	2,213	2,285	2,360	2,437	2,518	2,602
Coal	kTOE	666	698	733	768	806	845	886	929	975	1,022	1,072	1,124	1,179	1,237	1,297	1,360	1,426	1,496
Total	kTOE	24,562	26,002	27,548	29,207	30,991	32,908	34,970	37,190	39,580	42,155	44,930	47,924	51,154	54,642	58,409	62,480	66,881	71,642
TOE/GDP (TOE/million BDT)		2.37	2.22	2.22	2.21	2.19	2.17	2.16	2.14	2.13	2.14	2.16	2.17	2.18	2.20	2.22	2.24	2.27	2.29

Source: JICA (2015) The Project for Development of Energy Efficiency and Conservation Master Plan in Bangladesh, Final Report

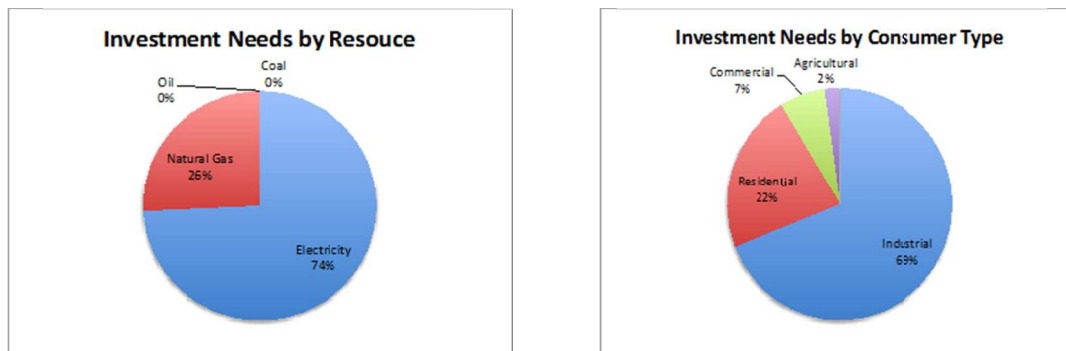
3.1.3. Analysis

The analysis for potential investment needs resulted in the below table.

Table 6 Result of Analysis for Investment Needs for Energy Efficiency

Investment Needs for Energy Efficiency (Annual Investment at 2016 constant price)				
(1) Electric (GWh)				
Sector	Energy Consumption (GWh)		Needs for Energy Saving (GWh)	Investment Needs (US\$ 000's)
	Business As Usual Case	w/ EE Investment Case		
Industrial	25,115	22,478	2,637	679,015
Residential	29,493	25,246	4,247	281,604
Commercial	7,623	7,242	381	85,556
Agricultural	2,170	1,953	217	31,516
TOTAL	64,402	56,919	7,482	1,077,691
(2) Natura (MMCM; million cubic meter)				
Sector	Energy Consumption (MMCM)		Needs for Energy Saving (MMCM)	Investment Needs (US\$ 000's)
	Business As Usual Case	w/ EE Investment Case		
Industrial	17,643	15,791	1,852	322,078
Residential	3,304	2,828	476	42,957
Commercial	540	513	27	7,909
Agricultural	29	26	3	508
TOTAL	21,516	19,158	2,358	373,453
(3) Oil (MMT; million tonne)				
Sector	Energy Consumption (MMT)		Needs for Energy Saving (MMT)	Investment Needs (US\$ 000's)
	Business As Usual Case	w/ EE Investment Case		
Industrial	277	248	29	45
Residential	393	337	57	44
Commercial	43	41	2	3
Agricultural	1,248	1,123	125	193
TOTAL	1,961	1,749	213	286
(4) Coal (1000 toe; 1000 tonne of oil equivalent)				
Sector	Energy Consumption (1000 toe)		Needs for Energy Saving (1000 toe)	Investment Needs (US\$ 000's)
	Business As Usual Case	w/ EE Investment Case		
Industrial	975	872	103	28
Residential	0	0	0	0
Commercial	0	0	0	0
Agricultural	0	0	0	0
TOTAL	975	872	103	28
(5) Total				
Sector	Investment Needs (US\$ 000's)			
Electricity	1,077,691			
Natural Gas	373,453			
Oil	286			
Coal	28			
TOTAL	1,451,457			

The total annual investment needs for improving energy efficiency is estimated to be approximately USD 1,451 million. It is noted that the figure indicates the potential investment needs for energy efficient equipment only and does not include the ordinary equipment. It is therefore expected that the actual market size for residential electric appliances would be much bigger than the figure in the table.



Source: Survey Team

Figure 5 Investment Needs

The investment needs can be summarized in the above charts. The needs are sorted out by the energy resource type and the consumer type. The efficiency can be gained mostly by saving electricity that accounts for 74% of the total investment. With respect to the consumer type, 69% of the total investment would be made by the industrial consumers.

3.1.4. Considerations and Implications

The analysis assumes that the energy efficiency level will be improved to reach the stretch scenario level under which EE&C realization rate for the EE&C potential is 50% in 2021. While the scenario anticipates the seemingly aggressive improvement in energy efficiency, it is still considered achievable. Thus the estimated amount of investment, approximately US\$1,500 million per year, would also be considered to be expected needs in capital.

On the other hand, given the current circumstances surrounding the energy efficiency market, it can be considered that the implementation of strong EE&C policy and the facilitation of aggressive penetration of EE&C products and technology would be critical to achieve the intended result.

3.2. Micro-level Market Estimation for EE&C Equipment in Component I

3.2.1. Demand for EE&C equipment

Through the interviews that the Survey Team conducted, the Team found that there is a significant demand for EE&C equipment in certain industry sub-sectors. For example, in the textile industry, there is a constant demand for renewing old spinning machines, which sometimes dates back to few decades. For those who are planning to acquire new spinning machines there will be a choice of machines that will save energy (for example, with the ring spinning, models employing permanent magnet motor will significantly minimise the energy consumption). Through the potential buyer interviews, approximately a half of the spinning mills showed their intention to shift to these energy efficient types. Under assumption that at least four spinning mills per year will be converting their existing machines to these energy efficient types, the minimum market size will be 12 units per year, adding up to BDT 531 million during four years of full operation of this Project.

With the small-sized once-through steam boiler, which is yet to be deployed in Bangladesh, the manufacturer/distributor aims to develop the market by establishing its own distribution channel. Within the company's target to have few hundreds sold in the coming few years, the Survey Team estimates that at least a half of that target will be well achieved. Under assumption that 5 orders will be received annually for the four years of the Projects full operation, the market size will be BDT 87.5 million.

The total market size for the EE&C Equipment for Component I was calculated through bottom-up approach, to reach approximately BDT 5.5 billion during the execution of this Project.

Table 7 EE&C Estimated Equipment Demand

Equipment	Quantity	Unit price	Demand
High efficient spinning machine	50	10,625,000	531,250,000
High efficient loom (weaving) and warper & sizer	150	3,812,500	571,875,000
High efficient sewing machine	36,000	75,000	2,700,000,000
High efficient stenter	1	93,750,000	93,750,000
Vertical rolling mill	1	18,750,000	18,750,000
High efficiency compressor / condensing /chilling unit	15	3,125,000	46,875,000
Lithium ion battery	150	562,500	84,375,000
Small sized once-through boiler	20	4,375,000	87,500,000
High efficiency A/C	1,500	375,000	562,500,000
LED	5,000	6,250	31,250,000
Waste heat recovery system	1	93,750,000	93,750,000
Cogeneration	1	687,500,000	687,500,000
Total			5,509,375,000

Source: Estimation by the Survey Team

3.3. Competitiveness Analysis of EE&C Equipment in Component I

3.3.1. Pricing of EE&C equipment

In general terms, EE&C equipment tends to be more expensive compared with the conventional type equipment. This is the common trend not only for the home appliances, but also with the industrial machineries. One factor that makes these EE&C equipment more costly is that these equipment are usually based on intensive research and development (R&D) knowledge and skills. Another factor is that additional functions to support the EE&C equipment such as inverters controllers for motors, sensors for boilers, heat recovery instruments for cogeneration, etc., are required, thus adding some cost compared with the conventional equipment.

The survey team conducted interviews with the dealers, manufacturers of the EE&C equipment for various kinds of equipment identified and listed in this Project's eligible equipment and product list. Interviews were also conducted to the potential buyers of these equipment.

With the example of a high efficiency spinning machine, the result showed that it can be priced at approximately USD 149,000 per unit, which is approximately 25% more expensive compared with the conventional type, which was found to be around USD 119,000 per unit. Another example with similar trend was the boiler. A set of small once-through boilers costing USD 60,750 was comparable to the equivalent type of a conventional boiler of the similar capacity, which could be priced at about USD 48,000 per unit.

3.3.2. Comparison of the Total Payment Amount

With the introduction of a low interest loan for EE&C equipment, the EE&C equipment which are approximately 25% more costly compared with the conventional ones may become comparable in terms of the total payment amount. Assuming that a buyer will acquire the equipment using a loan, the EE&C equipment, although expensive compared with the conventional ones, will benefit from the low interest loan while the conventional ones can only be bought using readily available ordinary commercial loans.

Payment amount was compared between the two cases, one for the energy efficient equipment and another for the conventional equipment. The down payment was uniquely set at 15% of the total amount, with the rest of 85% of the price to be paid with 7 years installment. For conventional loan, the interest rate was set at 12%, which is approximately the average corporate finance loan rate currently available from the banks. The result of the calculation comparison for the high efficiency spinning machine, the preferential interest rate that will make the total payment amount to become break even with that of the conventional equipment resulted to be 4.1%. Under this condition, the EE&C equipment will become equivalent to the conventional ones in terms of the total payment amount.

**Table 8 Break Even Condition Payment Conditions for EE&C Equipment
(High Efficiency Spinning Machine)**

Particular	Unit	Ordinary Financing	Component I Loan Financing
		Conventional Technology Spinning Machine	High Efficiency Spinning Machine
Price	USD	119,000	149,000
Interest Rate	%	12.0%	4.1%
Repayment Period	year	7	7
Total Payment	USD	172,550	172,583

Source: Calculation by the Survey Team

Similarly, calculation comparison for the small sized once-through steam boiler was done under the preferential interest rate that will make the total payment amount to become break even with that of the conventional steam boilers. To be break even with the conventional ones, the required interest rate for the energy efficient models resulted to be 3.9%. Under this condition, the EE&C equipment will become equivalent to the conventional ones in terms of the total payment amount.

**Table 9 Break Even Condition Payment Conditions for EE&C Equipment
(Small-sized Once-through Steam Boiler)**

Particular	Unit	Ordinary Financing	Component I Loan Financing
		Conventional Technology Steam Boiler	Small-sized Once-through Steam Boiler
Price	USD	48,000	60,750
Interest Rate	%	12.0%	3.9%
Repayment Period	year	7	7
Total Payment	USD	69,600	69,635

Source: Calculation by the Survey Team

3.3.3. Implications

To cover the initial cost difference between the EE&C and the conventional equipment, the payment simulation showed that approximately 4% loan will be required under the current financial climate. This trend was applicable to many other EE&C equipment.

Apart from the total payment amount, the users of EE&C equipment will enjoy the benefit of saving energy, thus paying less for their energy bills. As the result the lifecycle cost of the EE&C equipment will be much less compared with the conventional ones. However, the Survey Team interviews proved that the potential buyers are not inclined to compare the choice of equipment at lifecycle cost. The buyers will tend to take into account only the payment amount. It is therefore essential to make the total payment cost become break even with the conventional equipment for the EE&C equipment to be competitive in the market. The energy bill saving will come as a bonus for those who chose the EE&C equipment. Choosing EE&C equipment will then contribute to the buyers' business performance.

4. Component III Market Analysis

4.1. Ability to Pay for Component III Home Appliances through B-type Loan

4.1.1. Target home appliances

The target home appliances for Component III are: air conditioners (A/C) and refrigerators. These home appliances are selected as the primary target for Component III, for their energy intensive features among the home appliances in general. According to the interviews conducted by the Survey Team, strong demand for refrigerators was found among the high and middle income level households in electrified rural areas. On the other hand, demand for A/C was found in urban areas, notably among the high and middle income level households which are already in possession of refrigerators.

Table 10 Demand for Target Home Appliances by Market Segment

	Urban Area	On-grid Rural Area
High Income	<ul style="list-style-type: none">● Demand for <u>Air Conditioner</u> (by 1 year installment), except for the highest class.● Refrigerator is already commonly possessed	<ul style="list-style-type: none">● Demand for <u>refrigerator</u>no demand for A/C
Middle Income	<ul style="list-style-type: none">● Demand for <u>Air Conditioner</u> (by over 2 years installment)	<ul style="list-style-type: none">● Demand for <u>refrigerator</u>no demand for A/C
Low Income	<ul style="list-style-type: none">● Demand for <u>Refrigerator</u> and TV	<ul style="list-style-type: none">● Demand for only TV

Source: Survey Team interviews to home appliances distributors and financial institutions

4.1.2. Number of Household

The household data is the base for estimating the market size for the target home appliances. The data of electrified household is referred to the number of households with access to electricity in 2010.

Table 11 Household and Access to Electricity by Locality

		Urban	Rural	Total
Household (million)		24.7	7.5	32.2
Access to electricity (%)	2005	82.6	31.2	44.2
	2010	90.1	42.5	55.3
Household connected to electricity (million)		22.3	3.2	17.8

Source (household): Statistical Yearbook Bangladesh 2013 p61 (BBS; Bangladesh Bureau of Statistics); Origin: Population and housing census 2011 (BBS)

Source (access to electricity):

Statistical Yearbook Bangladesh 2013 p501 (BBS; Bangladesh Bureau of Statistics)

Origin: Household Income and Expenditure Survey 2010 (BBS)

4.1.3. Nominal Income of household

Average monthly household nominal income data are shown in the next table. Household nominal income has been on the rapid increase. Nominal income in 2015 was predicted through a simple regression analysis based on 2000, 2005 and 2010 data.

Table 12 Monthly Nominal Income

		Urban	Rural	Total
Nominal income (BDT/month)	2000	9,878	4,816	5,842
	2005	10,463	6,096	7,203
	2010	16,477	9,648	11,480
	2015*	18,872	11,685	13,813

*: predicted through regression analysis by the Survey Team

Source: Bangladesh Economic Review 2013 p226 (Economic Advisor's Wing, FD, MOF)

Origin: Household Income and Expenditure Survey 2010(BBS)

4.1.4. Decile Distribution of Income

The percentage shares of income by decile groups in 2010 are shown in the next table. The data of decile-1, 3, 4 in 2010 are approximately at the same level as those of 2005. Decile-2 and 10 are on decrease (data for 2005 was not available from the source).

Table 13 Decile Distribution of Income (%)

	Urban	Rural	Total
Decile 1	1.98	2.23	2.00
Decile 2	3.09	3.53	3.22
Decile 3	3.95	4.49	4.10
Decile 4	5.01	5.43	5.00
Decile 5	6.31	6.43	6.01
Decile 6	7.64	7.65	7.32
Decile 7	9.30	9.31	9.06
Decile 8	11.87	11.50	11.50
Decile 9	16.08	15.54	15.94
Decile 10	34.77	33.89	35.84

Source: Statistical Yearbook Bangladesh 2013 p507 (BBS; Bangladesh Bureau of Statistics)
 Bangladesh Economic Review 2013 (Economic Advisor's Wing, FD, MOF)
 Origin: Household Income and Expenditure Survey 2010 (BBS)

Calculating from the data 'average monthly nominal income' and 'decile distribution of income', the average monthly nominal income by decile is estimated as shown in the next table. Here, it can be seen that 20% of the monthly income could be spared for the additional monthly installment.

Table 14 Estimated Average Monthly Nominal Income by Decile (2015)

	Urban (BDT/moth)	Rural (BDT/moth)	Total (BDT/moth)
Decile 1	3,737	2,606	2,763
Decile 2	5,831	4,125	4,448
Decile 3	7,454	5,247	5,663
Decile 4	9,455	6,345	6,907
Decile 5	11,908	7,513	8,302
Decile 6	14,418	8,939	10,111
Decile 7	17,551	10,879	12,515
Decile 8	22,401	13,438	15,885
Decile 9	30,346	18,158	22,018
Decile 10	65,618	39,600	49,506

Source: calculation by the Survey Team
 Original data source: (household): Statistical Yearbook Bangladesh 2013 p61 (BBS; Bangladesh Bureau of Statistics), from: Population and housing census 2011(BBS)

4.2. Pricing of the Home Appliances in the Market

The pricing information for home appliances, both energy efficient and conventional (non-energy-efficient) types were collected through field surveys at retail shops mainly in the stadium market area during August 2015 in Dhaka. The result is analyzed separately for A/Cs and refrigerators.

4.2.1. Air Conditioner

The A/C market is divided into two segments: one is the low end segment for products mostly under Bangladesh or China brands, while the other is the high end segment for products under Japan or Korea brands. The overall price difference between the two groups was found to be approximately 80%.

Another segregation was made between energy efficient and conventional A/Cs. Here, the energy efficient AC is defined as those with inverter controls. The price difference between energy efficient and conventional A/C was approximately 30% to 40%.

Table 15 Pricing of A/C by Type, Brand and Capacity

Brand	Country of brand	without inverter			with inverter			source
		1t	1.5t	2t	1t	1.5t	2t	
Walton	Bangladesh	33,600	45,070	53,860				Web (http://dam.com.bd/)
Gree	China	35,000	50,000		50,000	65,000		Stadium Market
Haiko	China	38,000	48,000	58,000				
Daikin	Japan	55,000	75,000	88,000	80,000	125,000	165,000	
LG	Korea	58,000	72,000	80,500		86,500	96,600	
Panasonic	Japan	62,000	80,000	95,600	75,000	105,000	115,000	
Average price for imported from Japan or Korea		58,333	75,667	88,033	77,500	105,500	125,533	
Premium for inverter		-	-	-	132.9%	139.4%	142.6%	with/without

Source: Survey Team

4.2.2. Refrigerator

Refrigerators were also classified into two segments: low end Bangladesh and China brand segment and high end Japan and Korea brands. Price difference between the two segments in general was found to be over 50%.

Energy efficient feature of refrigerators was also assumed based on the existence of inverter controlling system, as with ACs. Under the current situation of Bangladesh refrigerator market, inverter is mounted only on refrigerators with relatively large capacity, over 300 litre, under Japanese or Korean brands (the standard size of refrigerator is around 200~300 litres). The price difference between refrigerator with inverter and without inverter was around 10% to 20%.

Table 16 Pricing of Refrigerators by Type, Brand and Capacity

Brand	Country of Brand	without inverter		with inverter						source
		~399 L		~399 L		400~499 L		500 L~		
		price	capacity	price	capacity	price	capacity	price	capacity	
Walton	Bangladesh	31,300	341							Web (http://dam.com.bd/)
Samsung	Korea			88,000	393			147,000	600	stadium market
LG	Korea	41,125	208	58,855	310	71,595	402	78,255	562	
Toshiba	Japan	56,900	382					155,000	860	
		44,900	226							
Panasonic	Japan	48,000	263	61,000	334	108,000	450			
Average price/l for imported appliances		176.9	-	200.4	-	210.8	-	188.1	-	-
Premium for inverter		-	-	113.3%	-	119.1%	-	106.3%	-	with/without

Source: Survey Team

Based on the market survey and analysis above, a set of model price of home appliances is set as in the following table.

Table 17 Model Price of Target Home Appliances

	Air Conditioner (capacity:1 ton)	Refrigerator (capacity:300 L)
Japanese or Korean product without inverter type	62,000	48,000
Japanese or Korean product with inverter type	75,000	61,000
note	Price of Panasonic product in the table of the market survey was adopted as Japanese or Korean brand	

4.3. Payment Simulation for Energy Efficient Home Appliances

Two cases of payment by installment are compared. One is the installment payment in the case of buying an energy efficient appliance with low interest rate loan (8%) and another is the case of conventional (non-energy-efficient) one with the commonly available interest rate (15%), based on the model price actually observed in the market. The interest amount has been calculated based on the common practice of flat rate interest calculation. To simplify the analysis, the down payment is set at 15% of the total cost, and the repayment period of 2 years.

In both cases of refrigerators and ACs, the monthly payment for energy efficient type with low interest rate loan is close to the monthly payment for conventional type with usually available interest rate, although the price of the energy efficient type of product is more than two times higher than the price of the conventional product.

Table 18 Comparison of Installment Payment Condition for a Refrigerator

		Refrigerator 300 L	
		Conventional type without inverter	Energy conserving type with inverter
Price		48,000	61,000
	Down payment (15%)	7,200	9,150
	Installment payment (85%)	40,800	51,850
monthly payment (24times)		2,210	2,506
interest rate		15%	8%

Table 19 Comparison of Installment Payment Condition for an A/C

		Air Conditioner 1T	
		Conventional type without inverter	Energy conserving type with inverter
price		62,000	75,000
	Down payment (15%)	9,300	11,250
	Installment payment (85%)	52,700	63,750
monthly payment (24times)		2,855	3,081
interest rate		15%	8%

4.4. Potential Market Size for A/C and Refrigerator

From the previous section of this document, it has now become clear that the amount of monthly payment have to be within 20% among the income generally. Based on this, the class of household which can buy the two kinds of home appliances with inverter by installment is shown in the next table.

Table 20 Estimated Average Monthly Nominal Income by Decile (2015)

	Urban	Rural	Total
Decile 1	3,737	2,606	2,763
Decile 2	5,831	4,125	4,448
Decile 3	7,454	5,247	5,663
Decile 4	9,455	6,345	6,907
Decile 5	11,908	7,513	8,302
Decile 6	14,418	8,939	10,111
Decile 7	17,551	10,879	12,515
Decile 8	22,401	13,438	15,885
Decile 9	30,346	18,158	22,018
Decile 10	65,618	39,600	49,506

Note: Blue coloured part indicates the class which may be able to afford a refrigerator.

Orange coloured part indicates the class which may be able to afford A/C.

Source: calculation by the Survey Team

Original data source: (household): Statistical Yearbook Bangladesh 2013 p61 (BBS; Bangladesh Bureau of Statistics), from: Population and housing census 2011 (BBS), (income) Report of the household income & expenditure survey 2010 (BBS)

The numbers of household of each decile 1 are 2.47 million in urban area and 0.75 million in rural area. Considering the access to electricity and percentage of the households receiving loans which is not eligible to buy the appliances, the potential market size is estimated to 6.79 million for A/C and 2.35 million for refrigerator.

Table 21 Potential Market for EE&C Home Appliances

	Air Conditioner	Refrigerator
Number of household in the decile which has enough income to buy an appliance(A)	9.88million unit (2.47*4)	4.72million unit (0.75*3+2.47)
Access to Electricity (2010)(B) *1	urban:90.1% Rural:42.5%	
Number of household who has access to electricity among A (B)	8.90million unit (2.47*4*0.901)	3.18million unit (0.75*3*0.425+2.47*0.901)
Receive Loans*2	urban:23.7% Rural:32.0%	
Number of household who do not has loans among B	6.79million unit (2.47*4*0.901*(1-0.237))	2.35million unit (0.75*3*0.425*(1-0.32)+2.47*0.901*(1-0.237))

Source: calculation by the Survey Team

Original data source: (household): Statistical Yearbook Bangladesh 2013 p61 (BBS; Bangladesh Bureau of Statistics), from: Population and housing census 2011(BBS), (income) Report of the household income & expenditure survey 2010(BBS)

4.5. Sales Probability by PDs

According to interview surveys conducted by the Survey Team, many POs in IDCOL's SHS Programme have shown strong interest to sell energy efficient home appliances by means of the Project's low interest loan. Some of them have shown rough estimates of the sales performance.

The result of the interviews is as shown in the next table. It should nevertheless be noted that the figures collected may include speculations of the interviewees. There are also many POs apart from those listed in the table, which have shown strong interest to sell the home appliances but could not come up with the sales prediction, being prudent to prefer to conduct a market research eventually. As the conclusion, the annual market of energy efficient A/C and refrigerator by low interest loan scheme is likely to be few times of those indicated in the table. Assuming that the actual market size of energy efficient home appliances is what is shown in the table, the total market size is approximately BDT 1.3 billion, among which BDT 0.12 billion is for A/C and BDT 1.17 billion is for refrigerator.

Table 22 Sales Estimate of EE&C Home Appliances by POs of SHS

SHS Programme POs	number of unit		sales amount(thousand BDT)	
	Refrigerator	Air Conditioner	Refrigerator	Air Conditioner
A	885	80	54,000	6,000
B	3,600	240	219,600	18,000
C	14,754	1,333	900,000	100,000
total	19,239	1,653	1,173,600	124,000

Note: The model price of AC is assumed as 75,000BDT, and the price of Refrigerator 61,000BDT.

The POs of A and C estimated the Sales amount by the amount of BDT and the PO of B by the number of unit.

Source: Estimate from interviews by the Survey Team

According to the interviews to the potential distributors and associations, the market share of Japanese brand products are assumed to be around 8% for refrigerator and around 20% for air conditioner. Under this condition the annual sales amount of the Japanese brand products is estimated to be around BDT 119 million ($1,173,600 \times 0.08 + 124,000 \times 0.2 = \text{BDT } 118,688,000$) and is JPY 190 million at the exchange rate of BDT = JPY 1.6.

5. Sensitivity Analysis on Borrowing Interest Rate

5.1. Equipment for Japanese ODA Loan

The Project has identified equipment eligible for Japanese ODA loan. Equipment can be categorized into three components; (i) industry/commercial sector, (ii) green building, an (iii) home appliances. For the component (i) and (ii), A-type loan will be applied where the implementing financial institutions will lend to the proponents such as industrial and commercial end-users. For component (iii), B-type loan will be applied where the end-users including small business and household will borrow from the distributors.

The draft equipment list is as shown in the previous section. The list would be revised in the course of the project implementation.

5.2. Assumptions for Financial Analysis

The analysis assumes the following conditions for evaluating the bankability of the introduction of the energy efficiency equipment.

Table 23 Assumptions

Item	Assumptions
a. Initial Investment for EE Equipment	Varies depending on equipment. Information from manufacturing companies. Estimates of industry experts.
b. Cost of Conventional Equipment	Information from manufacturing companies. Estimates of industry experts.
c. Financing Source	100% debt by Japanese ODA loan.
d. Currency	BDT
e. Debt Financing Cost to End-users	A-type loan; from 4%
	B-type loan; from 7%
f. Debt Amortization	A-type loan; up to 7 years
	B-type loan; up to 3 years
g. Annual O&M Cost	Analysis does not consider O&M cost
h. Energy Saving	Based on the actual measurement in other countries. Estimates by energy experts.
i. Equipment & Machinery	New purchase of equipment and machinery given the market situation

Source: Survey Team

The prices of equipment and machines were provided by the suppliers and manufacturers that produce the energy efficient equipment.

The energy efficiency gain was also obtained from the data on energy saving rates provided mostly by the suppliers and manufacturers. These data were used to estimate the financial gain along with the current energy price data in Bangladesh as of September 2015, which are as summarized in the following table.

Table 24 Energy Prices

Electricity Price (BDT per kWh)		Gas Price (BDT per cubic Metre)	
Slabs	Price	Clients	Price
1-75 units (life line)	3.33	Electricity producers	2.82
1-75 units	3.80	Captive power producers	8.36
76-200 units	5.14	Fertilizer factories	2.58
201-300 units	5.36	Industrial units	6.74
301-400 units	5.63	Tea producers	6.45
401-600 units	8.70	Commercial users	11.36
Above 600 units	9.98	CNG users	35.00
		Meter-based users	7.00
		Single burner (monthly)	600.00
		Double burner (monthly)	650.00

Source: The Bangladesh Energy Regulatory Commission (2015)

5.3. Calculations for Financial Viability for Energy Efficient Equipment

The following list of the equipment shows the typical equipment that represents the standard energy efficiency of the current technology. While there are some others listed in the candidate equipment, given the similarity of the energy efficiency in the mechanism, the prevailing view suggests that most of the equipment and machinery can be represented by the following items.

Table 25 Typical Energy Efficient Equipment

Component	Item	Loan Type	Remarks
I: industry/ commercial sector	(a) High Efficiency Spinning Machine	A-type	Typical mechanical equipment for textile industry
	(b) High Efficiency Compressor Unit		Typical compressor technology mostly for food and beverage industry
	(c) Cogeneration		Latest gas cogeneration technology for common use
II: Building sector	(d) Material and equipment for buildings	A-type	Recognized green building certification
III: Home Appliances	(e) Refrigerator	B-type	Widely applied inverter technology
	(f) Air-conditioner		Widely applied inverter technology

Source: Survey Team

The interest rate would be variable for each sub-project. The sensitivity analyses are conducted for the cases in the below. It is expected that the minimum interest rates for the loans to end-users would be 4% and 7% for A-type and B-type loans, respectively.

The maximum repayment periods would be set as 7 years and 3 years for A-type and B-type loans, respectively.

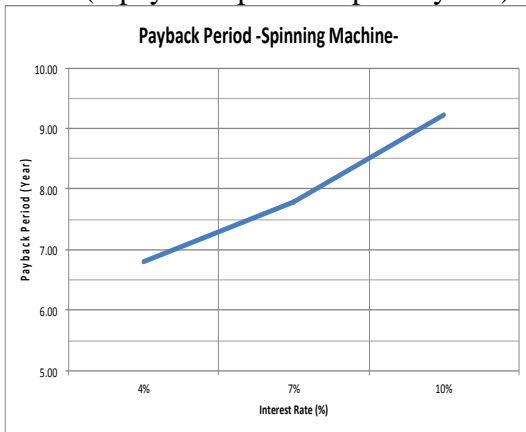
Table 26 Sensitivity Analysis

Component	Item	Cases for Interest Rate (%)		
I: industry/ commercial sector	(a) High Efficient Spinning Machine	Case 1: 4%	Case 2: 7%	Case 3: 10%
	(b) High Efficient Compressor Unit			
	(c) Cogeneration			
II: Building sector	(d) Material and equipment for buildings			
III: Home Appliances	(e) Refrigerator	Case 1: 7%	Case 2: 10%	Case 3: 13%
	(f) Air-conditioner			

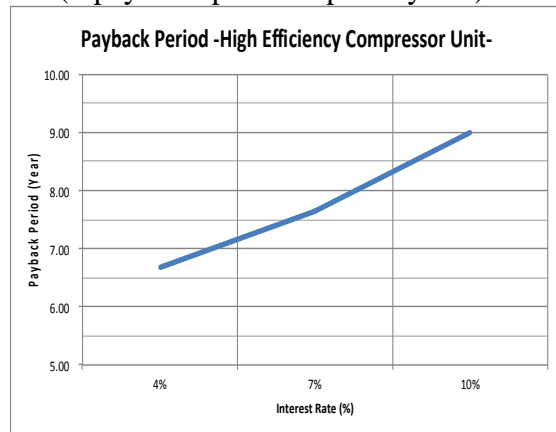
Source: Survey Team

The result of the financial analysis is evaluated by payback period in order to test the repayment prospect of the borrowing.

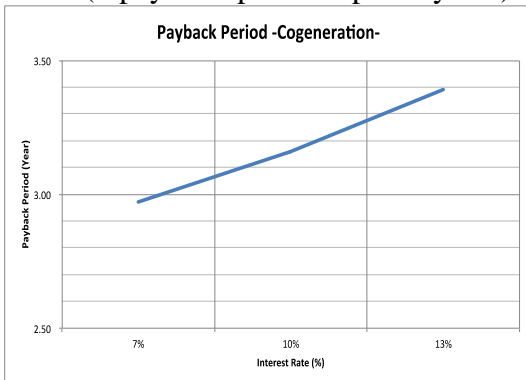
(a) High efficiency spinning machine
(repayment period: up to 7 years)



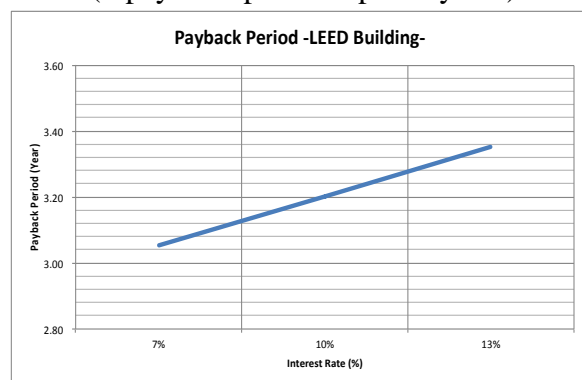
(b) High efficiency compressor unit
(repayment period: up to 7 years)



(c) Cogeneration
(repayment period: up to 7 years)

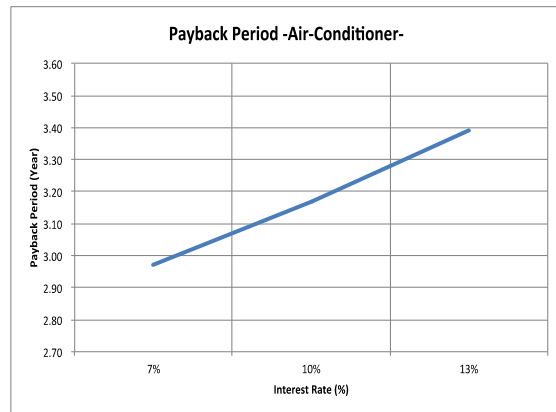
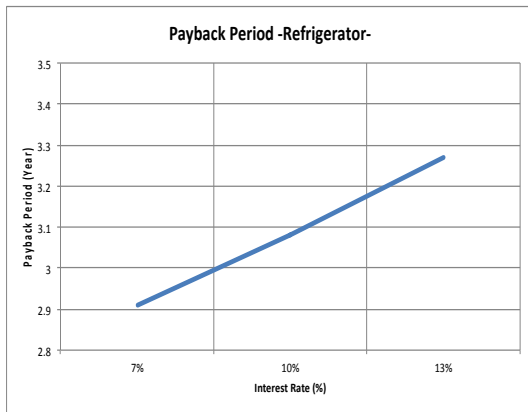


(d) LEED Certified Building
(repayment period: up to 7 years)



(e) Refrigerator
(repayment period: up to 3 years)

(f) Air-conditioner
(repayment period: up to 3 years)



Source: Survey Team

Figure 6 Result of Financial Analysis

The payback periods calculated in the analyses are summarized in the following table.

Table 27 Payback Period

Item for A-type Finance (Repayment period: 7 years)	Interest Rate (4%)	Interest Rate (7%)	Interest Rate (10%)
(a) High Efficient Spinning Machine	6.80	7.79	9.23
(b) High Efficient Compressor Unit	6.68	7.63	8.99
(c) Cogeneration	2.97	3.16	3.39
(d) Materials & equipment for Building	3.05	3.20	3.35
Item for B-type Finance (Repayment period: 3 years)	Interest Rate (7%)	Interest Rate (10%)	Interest Rate (13%)
(e) Refrigerator	2.91	3.08	3.27
(f) Air-conditioner	2.97	3.17	3.39

Source: Survey Team

The shaded areas in the above table show the cases that have less payback periods than the repayment period of expected loan conditions. Cogeneration and LEED certified building show the excellent return on investment due to the high-level energy efficiency. Other equipment would appear to require a most concessional loan term and condition.

5.4. Observations and Conclusions

The financing for the equipment will be able to generate the solid cash flow by the energy saving so that the payback will be complete by the end of the repayment period. This shows the bankability

The cost and efficiency data used in the analyses are based on the standard data as of 2015. It is therefore necessary to keep information updated during the implementation period. This is expected to be conducted by the Technical Advisory Committee.

6. General Roles and Responsibilities to be undertaken by the Parties Concerned

MPEMR is the head executing ministerial body for the Project. Other organizations who will play major roles are SREDA, IDCOL, and BIFFL, who are the Executing Agencies, while the testing institute, Advisory Committee and the Technical Advisory Committee will also provide essential functions for the implementation of the Project. Their functions and tasks are as follows:

	Function	Major tasks
MPEMR	Ministry of Power, Energy and Mineral Resources is the <u>head executing ministerial body</u> for the Project.	<ul style="list-style-type: none"> ● Report on the status of the Project to the Cabinet and Parliament when requested.
Steering Committee (SC)	Steering Committee will be formulated by Power Division, MPEMR who is the head executing ministerial body for the Project. The formulation timing is on the commencement of the Project, which is within 2 months from Loan Agreement. SREDA will provide secretarial service for the Committee. Steering Committee is responsible for the following tasks:	<ul style="list-style-type: none"> ● Convene Project review meetings annually inviting all the stakeholders to discuss on the status of the implementation and possible improvement in the Project; ● Find out the problem and bottlenecks and recommend necessary collection in policy level such as rules and regulations, taxes, etc. <p>Meetings:</p> <ul style="list-style-type: none"> ● Ordinary meetings (Annual reporting meetings) which are convened annually, within 3 months of the end of the fiscal year. The Chairperson will instruct the secretariat to arrange and call for the meetings. ● Extraordinary meetings may be arranged with short notice based on the consent of the members.
SREDA	Sustainable and Renewable Energy Development Authority (SREDA) bears responsibility for design, supervision and monitoring of the project. SREDA covers supervision of Component	<ul style="list-style-type: none"> ● Create necessary policies, rules and regulations in relation to the project ● Create and maintain favourable environment for the implementation of the Project ● Coordinate with the government entities (i.e. National Board of Revenue, MoF etc.) ● Conduct awareness raising activities

	<p>1, 2 and 3 of this Project in light of development policy of the government.</p>	<ul style="list-style-type: none"> ● Form Steering Committee (SC) and Technical Advisory Committee (TAC) of the Project. ● Coordinate with all the concerned agencies including IFIs. ● Issue and revise eligible technology / equipment list endorsed by JICA in accordance with recommendations from the Technical Advisory Committee ● Create an environment to enable fair testing of the concerned equipment including appointment of testing laboratories for the purpose of this Project ● Prepare an ICT environment whereby monitoring data from IFIs can be submitted online, in electronic format ● Monitor the progress and effect of the Project, based on data which will be reported from the IFIs ● Report the implementation status of the Project to the Power Division, including achieved energy saving and emissions reductions based on equipment installation and operation data, calculated by formula as specified for the Project ● Prepare and submit Quarterly Progress Reports (QPRs) to JICA by incorporating the reports submitted from the IFIs ● Recommend to IFIs on the necessity of technical appraisal capacity
IDCOL	<p>Infrastructure Development Company Limited (IDCOL), will act as an Implementing Agency responsible for the administration of Component 1,2 and 3 (Two Step Loan for Industry / commercial sector, Three Step Loans for Home Appliances) with aim to achieve the Project objective under</p>	<ul style="list-style-type: none"> ● Promote the Project by means of public relations and awareness raising activities ● Develop PDs screening procedures ● Develop appraisal manuals in consultation with SREDA, to be endorsed by JICA ● Extend loan to end users directly or through implementing institutions (PDs) ● Conduct appraisal when extending loan to the end users based on appraisal manuals

	Sub Loan Agreement (SLA) concluded between MOF and IDCOL prior to the effectuation of the Loan Agreement.	<ul style="list-style-type: none"> ● Financially approve/disapprove applications for PDs based on PDs screening procedures ● Conduct monitoring of sub-projects to be reported to SREDA/JICA periodically
BIFFL	Bangladesh Infrastructure Finance Fund Limited (BIFFL), will act as an Implementing Agency responsible for the administration of Component 1,2 and 3 (Two Step Loan for for Industry / commercial sector, Three Step Loans for Home Appliances) with aim to achieve the Project objective under Sub Loan Agreement (SLA) concluded between MOF and BIFFL prior to the effectuation of the Loan Agreement.	<ul style="list-style-type: none"> ● Promote the Project by means of public relations and awareness raising activities ● Develop PDs screening procedures ● Develop appraisal manuals in consultation with SREDA, to be endorsed by JICA ● Extend loan to end users directly or through implementing institutions (PDs) ● Conduct appraisal when extending loan to the end users based on appraisal manuals ● Financially approve/disapprove applications for PDs based on PDs screening procedures ● Conduct monitoring of sub-projects to be reported to SREDA/JICA periodically
Technical Advisory Committee	Technical Advisory Committee will be formulated by SREDA upon the commencement of the Project which is within 1 month after formulation of SC. SREDA will provide secretarial service for the Committee. Technical Advisory Committee is responsible for the following tasks:	<ul style="list-style-type: none"> ● To discuss the necessity of revising the existing EE&C equipment list and submit the proposed revision SREDA; ● To advise SREDA on the preparation and revision of EE&C equipment list; ● To give advice to the Executing Agencies, when requested, on the eligibility of the applications for sub-projects; ● To evaluate energy audit report relating to the sub-projects as needed in such cases as the regulation on energy audit is in place; ● To advise the Executing Agencies concerning any technical issues; ● To give advice to SREDA for improvement in technical aspect of the Project;

		<p>Meetings</p> <ul style="list-style-type: none"> ● Meetings are convened with the request of any comprising member to the Committee or the secretariat. The Chairperson will instruct the secretariat to arrange and call for the meetings. ● The secretariat will arrange and call for the meetings, at least a week in advance. Shorter notice may be accepted upon consent of the entire member.
PDs	PDs are selected based on the eligibility criteria.	<ul style="list-style-type: none"> ● PDs are able to sell the Energy Efficient Home appliances in the list of Eligible Technology and Equipment as in the main report which is determined by SREDA only in case of installments. PDs can request this loan to IDCOL or BIFFL when they sell Energy Efficient Home Appliances with payment on installment. ● After concluding the Participating Agreement with IDCOL or BIFFL, PDs need to procure the EE Home appliances by themselves because B-type loan is applying reimbursement system, and hold the evidences on procurement of Home appliances such as Invoices and Receipts from manufacturers of the home appliances if they would like to apply the IFI for the B-type loan. ● PDs shall install home appliances to the applicant/end users by themselves once they confirm the acceptance of the down payments from the applicant/end users, and fill Form of Installation and Acceptance of Home Appliance Schedule III of the Participating Agreement which confirms the installation of home appliance to the end user, and Form of Loan or Lease Agreement between the PDs and Households Schedule V of the Participating Agreement which confirms the selling of home appliance to the end user.

		<ul style="list-style-type: none">● Once a month, PD shall apply IDCOL or BIFFL for B-type loan with 1) filled Form of Disbursement Request as Schedule I of the Participating Agreement, 'Participating Agreement' with IFIs, 2) filled Form of Installation and Acceptance of Home Appliance Schedule III of the Participating Agreement which confirms the installation of home appliance to the end user, 3) filled Form of Loan or Lease Agreement between the PDs and Households Schedule V of the Participating Agreement which confirms the selling of home appliance to the end user, and 4) Copies of evidences on procurement of Home appliances such as Invoices and Receipts from manufacturers of the home appliances which confirm the procurement the appropriate home appliances.
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7. Composition of Steering Committee

The Committee will be comprised of the following members:

- Secretary, Power Division, MOPEMR (Chairperson);
- Chairman, SREDA;
- One Representative from External Relations Division, MOF as ministerial body for IDCOL(not below the rank of Joint Secretary);
- One Representative from Finance Division, MOF as ministerial body for BIFFL(not below the rank of Joint Secretary);
- Project Director of the PIU, SREDA (Secretary)
- CEO, IDCOL;
- CEO, BIFFL;
- One Representative from JICA;
- Any other person who may be appropriate.

8. Composition of Technical Advisory Committee

The Committee will be comprised of no more than 10 members. The members will be nominated from the following organizations:

- Chairman, SREDA, will be the chairperson of the TAC.
- One each will be nominated by the executing agencies (SREDA, IDCOL and BIFFL).
- One each expert member for the three components.
- Up to two to more, nominated by the chairperson, subject to the consent of all the Executing Agencies.

The nominees will be one of the followings:

- Academic experts from higher education organizations;
- Expert consultants on Energy Efficiency Improvement and Conservation (EE&C) field;
- Officials from the governmental organizations.

9. Project Implementation Units

9.1. SREDA

At SREDA, a PIU will be newly established. In the PIU, one Project Director has been nominated in December 2015. As the other members, one Deputy Director, one Assistant Director and one staff member are going to be recruited within 3 months of Loan Agreement signing. SREDA will coordinate with all the concerned agencies including the IFIs through the PIU.

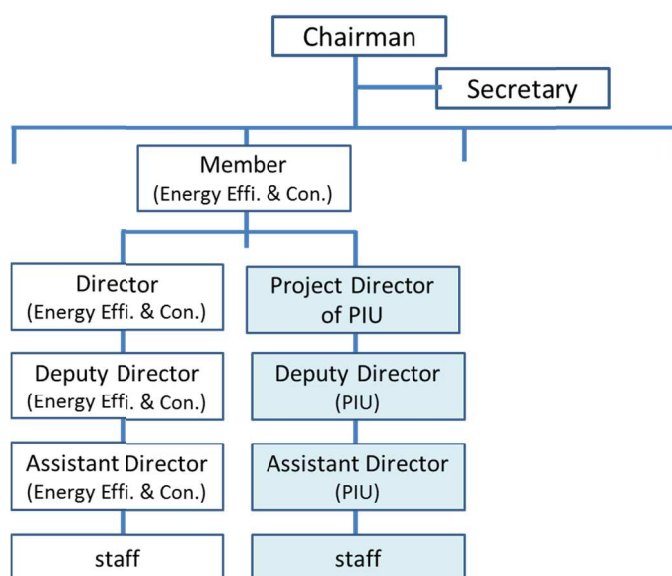


Figure 7 Organogramme of PIU in SREDA

Table 28 Composition of members of SREDA-PIU

Positions	Roles	Number of Staff Increase and Timing of Appointment				Proposed Qualification Requirement
		Dec. 2015	3 months from L/A	From 2019	Total	
Project Director	<ul style="list-style-type: none"> Coordinate with coordinate with all the concerned agencies including IFIs Monitor the progress and effect of the Project, based on data which will be reported from the IFIs; Prepare, compile the quarterly reports submitted by the IFIs and submit Quarterly Progress Reports (QPRs) to JICA ; Report the implementation status of the Project 	1	-	-	1	<ul style="list-style-type: none"> Bachelor or higher degree on energy, environment, engineering or relevant subject; Working experiences at a governmental organization preferred

	to the Power Division. <ul style="list-style-type: none"> Internal & external communications representing the Project Decision making and managerial tasks for the Project 					
Deputy Director	<ul style="list-style-type: none"> Secretariat for Technical Advisory Committee Responsible for sub-project eligibility checking task 	-	1	-	1	<ul style="list-style-type: none"> Bachelor or higher degree on energy, environment, engineering or relevant subject; Working experiences at a governmental organization preferred
Assistant Director	<ul style="list-style-type: none"> Communications with the applicants Updating institutional capacity on technical assessment 	-	1	1	2	<ul style="list-style-type: none"> Bachelor or higher degree on energy, environment, engineering or relevant subject; Working experiences at a governmental organization preferred
Support staff	<ul style="list-style-type: none"> Data management including ICT environment development Day to day administration including reporting 	-	1	1	2	<ul style="list-style-type: none"> According to SREDA's rules and regulations

Note: Numbers represent full time staff counts

9.2. IDCOL

In IDCOL, under the Executive Director & CEO as the Project Director, PIU is established. In PIU, the Investment Branch will take care of A-type covering Component 1 and 2 through the EE&C Program Unit for household, whereas the Renewable Energy Branch will work on component 3 with B-type through EE&C program Unit for industry & building.

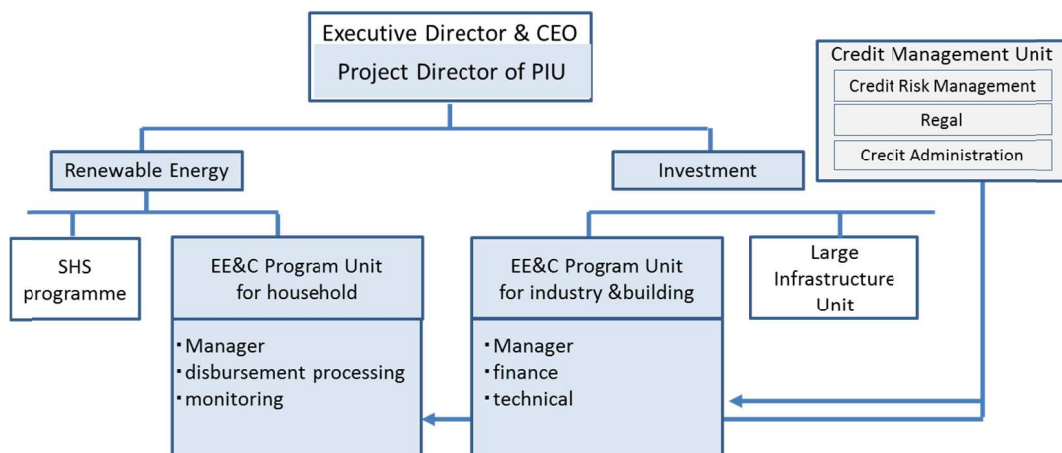


Figure 8 Organogramme of PIU in IDCOL

In EE&C Programme unit under the investment section, a manager, a finance and technical personnel are all present for A-type on industry & Building Sector. Then, by the year of 2019, one more technical personnel will be deployed.

On the other hand, for B-type for household home appliances which will be taken care of by in EE&C Programme Unit under the Renewable Energy section, while a manager is already in place, two (2) staff members for disbursement processing and two (2) staff members for Monitoring are required to be allocated within 3 months of Loan Agreement signing.

Table 29 Composition of members of IDCOL-PIU

Position	Role	Number of Staff Increase and Timing of Appointment				Proposed Qualification requirement
		Dec. 2015	3 months from L/A	From 2019	Total	
Project Director	<ul style="list-style-type: none"> Interface with JICA and other international and governmental organizations 	1	-	-	1	<ul style="list-style-type: none"> CEO will be assigned as the Project Director
For Component 1 and 2 : Industry/Commercial Facility and Building Sector						
Manager	<ul style="list-style-type: none"> Internal & external communications representing the Project Decision making and managerial tasks for the Project 	1	-	-	1	<ul style="list-style-type: none"> Bachelor or higher in finance / business related fields
Finance	<ul style="list-style-type: none"> Responsible for sub-project appraisal Fund management Preparation of reports 	2	-	-	2	<ul style="list-style-type: none"> Bachelor or higher in finance / business related fields
Technical	<ul style="list-style-type: none"> Responsible for technical aspect of sub-project appraisal Technical advisory committee representation Capacity development 	1	-	1	2	<ul style="list-style-type: none"> Bachelor or higher in engineering / science related fields
For Component 3: Home Appliances						
Manager	<ul style="list-style-type: none"> Internal & external communications representing the Project Decision making and managerial tasks for the Project 	1	-	-	1	<ul style="list-style-type: none"> Bachelor or higher in finance / business related fields
Disbursement processing	<ul style="list-style-type: none"> Responsible for communications with PDs for routine disbursement works Fund management Preparation of reports 	-	2	1	3	<ul style="list-style-type: none"> Bachelor or higher in finance / business related fields

Monitoring	<ul style="list-style-type: none"> Management of monitoring consultants Preparation of monitoring reports Conducting field survey and monitoring 	-	2	2	4	<ul style="list-style-type: none"> High school or higher
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9.3. BIFFL

In BIIFFL, the Leader of Green Financing Team will be the Project Director of PIU, who is only member at present for the expected PIU. In the team, there are the other three positions for the PIU –i.e. Environmental Specialist, Engineering Specialist and Financial Analyst, for which one (1) staff member will be assigned at the respective position within 3 months of Loan Agreement signing, and will be two (2) accordingly. Furthermore, the PIU in BIFFL is expected to gain the support from Technical and Legal wings, one staff from each wing although they are going to be engaged in the project as well as other tasks of BIFFL.

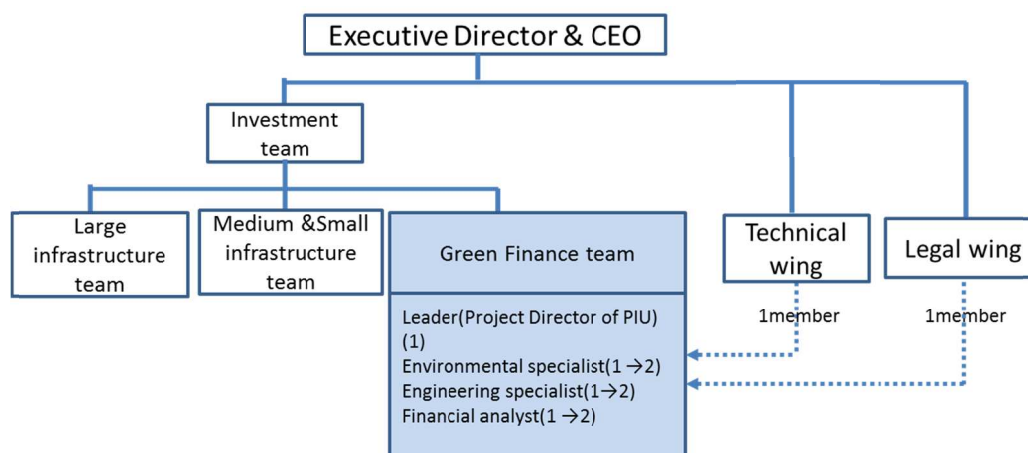


Figure 9 BIFFL Organogramme and Personnel

Table 30 Composition of members of BIFFL-PIU

Position	Role	Number of Staff Increase and Timing of Appointment				Proposed Qualification requirement
		Dec. 2015	3 months from L/A	From 2019	Total	
Project Director	<ul style="list-style-type: none"> Internal & external communications representing the Project Decision making and managerial tasks for the Project 	1	-	-	1	<ul style="list-style-type: none"> Head of the Green Finance Team will be assigned as Project Director
Environmental Specialist	<ul style="list-style-type: none"> Environmental and social assessment of sub-project applications Preparation of reports 	-	1	1	2	<ul style="list-style-type: none"> Bachelor or higher in environment / science related fields

Engineering Specialist	<ul style="list-style-type: none"> ● Technical assessment of sub-project applications ● Representation in Technical Advisory Committee ● Capacity development 	-	1	1	2	<ul style="list-style-type: none"> ● Bachelor or higher in engineering / science related fields
Financial Analyst	<ul style="list-style-type: none"> ● Financial appraisal of sub-project applications ● Fund management ● Preparation of reports 	-	1	1	2	<ul style="list-style-type: none"> ● Bachelor or higher in finance / business related fields
Technical	<ul style="list-style-type: none"> ● Responsible for technical aspect of sub-project appraisal ● Technical advisory committee representation ● Capacity development 	-	1*	-	1*	<ul style="list-style-type: none"> ● Bachelor or higher in engineering / science related fields
Legal	<ul style="list-style-type: none"> ● Compliance officer for the Project. ● Ensuring green aspect of the sub-projects 	-	1*	-	1*	<ul style="list-style-type: none"> ● Bachelor or higher in law

Note : * the Staff member is engaged in the project as well as other tasks of BIFFL.

10. Loan Structure and Conditions

10.1. A-type Loan for Industry/Commercial Sectors (Component I) and Building Sector (Component II)

This A-type component is for IDCOL and BIFFL to provide concessional loans for the dissemination of EE&C equipment. There are two types of loan, which are A-type where implementing financial institutions (IFIs) directly extends the money to the borrower (industry / commercial businesses) as the end users. A-type will be utilized for (i) industry / commercial sector component and (ii) Building Sector component. The terms and conditions of each lending scheme under the Project are detailed as follows.

Terms and Conditions of the On Lending Loan Agreement (OLA)

1) Eligible On-lending Loan Borrower (End Users)

Eligible end users (applicants) to the said loans can be any owners and/or enterprises in industry / commercial sector who plan to install EE&C equipment or plans to construct Building Sectors in Bangladesh.

2) Eligible Equipment to be financed by the OLA

Eligible Equipment to be financed under the On Lending Loan Agreement (OLA) needs to be the equipment and/or products which are in accordance with the sub-sector and items with specification/production capacity in the eligible technologies and products specified in the Eligible Technology and Equipment List in the main report.

3) Screening Process of End Users

Based on the financial appraisal manual as specified in the A-type On-lending Loan Appraisal Manual, IDCOL and BIFFL will identify the appropriate end users.

4) Ineligible Investment Activities

The end users shall assure that the loan activity is pursuant to Bangladesh law and “JICA Guidelines for Environmental and Social Considerations” (April 2010). The sub loans shall not be used for any sub project categorized as Category A under this JICA Guidelines.

5) Currency

Bangladesh Taka (BDT)

6) Credit Risk

IDCOL and BIFFL will bear the credit risk of the end users.

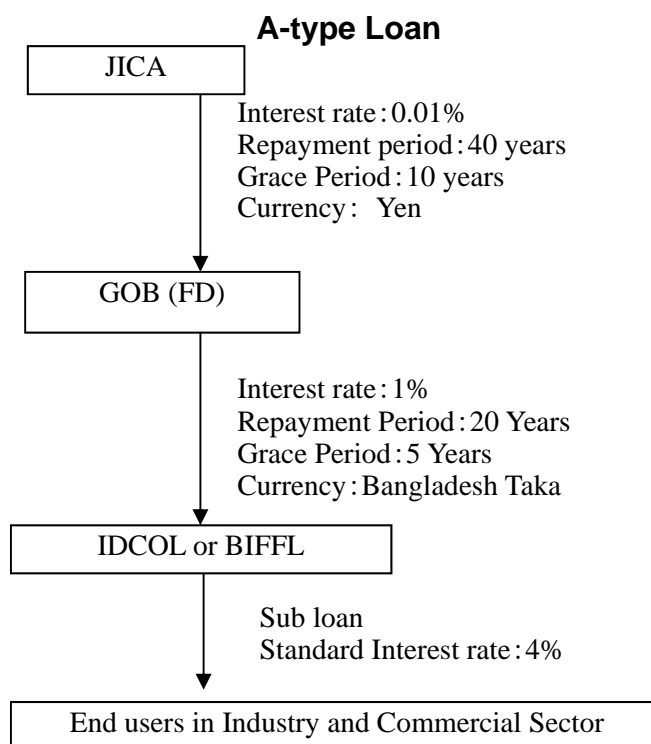
7) Size of Sub Loans under OLA

The size of sub loans will be determined by IDCOL/BIFFL in compliance with the rules and regulations prevailing in Bangladesh as well as the A-type On-lending Loan Appraisal Manual of the Project.

8) Interest Rate

The standard interest rate applicable to OLA between IDCOL/BIFFL and End Users

shall be the rate of 4%.



9) Maturity

The maturity will be determined by IDCOL/BIFFL in compliance with the rules and regulations prevailing in Bangladesh as well as the A-type On-lending Loan Appraisal Manual of the Project.

10) Collateral

The collateral will be determined by IDCOL/BIFFL in compliance with the rules and regulations prevailing in Bangladesh as well as the A-type On-lending Loan Appraisal Manual of the Project.

10.2. B-type Loan for Home Appliances Component (Component III)

B-type loan will be utilized for home appliances component. B-type loan will be extended through participating distributors (PDs) from IDCOL/BIFFL to the end user (households and small businesses).

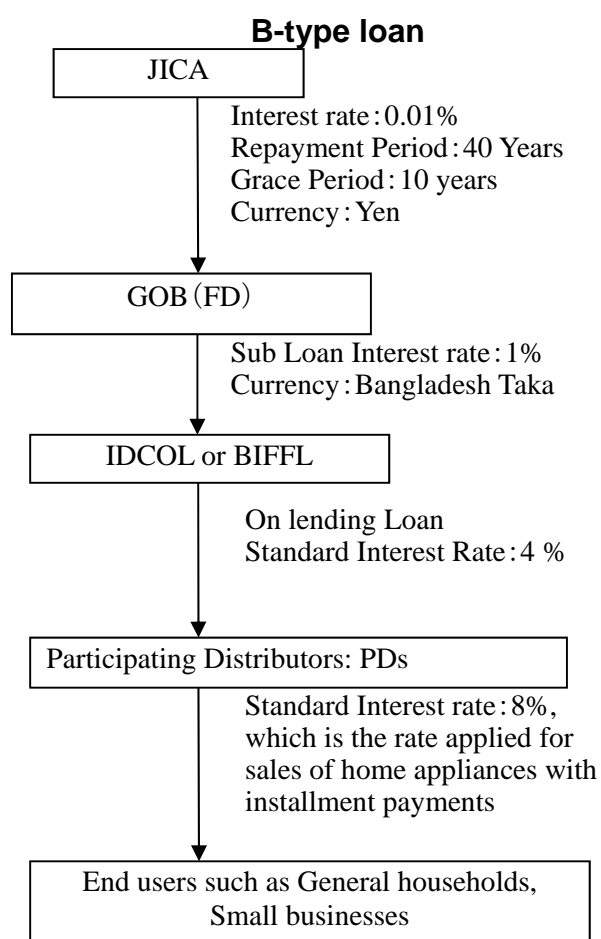
Terms and Conditions of the Participating Agreement (PA)

1) The eligible PDs will be screened in accordance with the Eligibility Criteria for PDs as specified in Annex 14.1.

2) Currency
Bangladesh Taka (BDT)

3) Size of Sub Loans under Participating Agreement (PA)
The size of sub loan under PA will be determined based on the size of sub-loans between the participating distributor (PD) and end users.

4) Interest Rate
The standard interest rate applicable under the Participating Agreement (PA) from IDCOL/BIFFL to participating distributors (PDs) shall the rate of 4%.



5) Maturity
The maturity will be determined by IDCOL/BIFFL in compliance with the rules and regulations prevailing in Bangladesh.

6) Collateral
The collateral will be determined by IDCOL/BIFFL in compliance with the rules and regulations prevailing in Bangladesh.

7) Financing Method under Participating Agreement (PA)
Reimbursing procedure and Advance procedure will be used for the disbursement. In this regard, Advance procedure will be the principal financing method.

Extending Loans to End users through installment selling

Terms and Conditions of the End User Agreement for Refinancing Loans

From here, PDs can sell Energy Efficient home appliances which must be stipulated in the Eligible technology and Equipment List in the main report, with installments. In doing so, the PD may use own marketing tools. Monitoring shall be essential in an appropriate manner as in 11) below.

1) Eligible Refinancing loan Borrower (End Users)

Eligible end users (applicants) to the said loans can be any households and/or small businesses that plan to purchase EE&C appliances in Bangladesh.

2) Eligible Equipment to be financed by the Refinancing loans with installment purchase

Eligible equipment to be financed by the refinancing loans under the End User Loan Agreement (c.f. Annex14.4) needs to be the equipment and/or products which are in accordance with the sub-sector and items with specification/ production capacity in the Eligible Technology and Equipment List as appears in the main report.

3) Screening process of Refinancing loan borrowers (End users)

Based on the End-user Screening Sheet for B-type loan as specified in Annex 14.3, the participating distributors (PDs) will identify the appropriate end users.

4) Ineligible Investment Activities

The end users shall assure that the loan activity is pursuant to Bangladesh law and “JICA Guidelines for Environmental and Social Considerations” (April 2010). The sub loans shall not be used for any sub project categorized as Category A under this JICA Guidelines.

5) Currency

Bangladesh Taka (BDT)

6) Credit Risk

PDs will bear the credit risk of the end users.

7) Size of Sub loans

The size of sub loans will be determined by PDs in compliance with the rules and regulations prevailing in Bangladesh.

8) Interest Rate

The end user of B-type loan can purchase the EE&C equipment with installments which only includes 8% as the total standard interest rate.

9) Maturity

The maturity will be determined by PD in compliance with the rules and regulations prevailing in Bangladesh.

10) Collateral

The collateral will be determined by PD in compliance with the rules and regulations prevailing in Bangladesh.

11) Monitoring System

So that IFIs can make sure the appropriate use of the loan fund, IFIs will take the following steps in case of reimbursement procedure:

- IFIs will verify the eligible equipment list from Proforma Invoices at the time of opening L/Cs of energy efficient appliances;
- Random physical inspections will be carried out by the IFIs at the warehouse of the PDs upon arrival of the EE appliances;
- Each month, the PDs will submit the list of end users with who availed EE appliances along with their contact numbers and IFIs will randomly call the end users to verify installation of such appliances;
- IFIs, with support from PDs, will conduct physical inspection of the installed EE appliances based on annual random sample survey.

In case of Advance Payment Procedure, before the advance payment is disbursed, the IFIs need to check PDs' past performances including the experience of Reimbursement Procedure and the business plan for the next three months. Or, PD may be allowed to apply the Advance Payment Procedure if the PD is given trainings and/or orientations on the B-type loan and Advance Payment procedure (Annex 22.7).

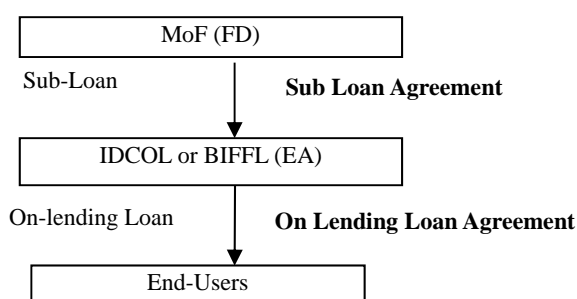
Applying PDs' own marketing tools

In order to further promote the EE&C equipment, considering the market situation, PDs may also apply own marketing tools (special discount, additional goods and services, etc.) to sell the EE&C equipment in installments under component III.

11. Structure Elements

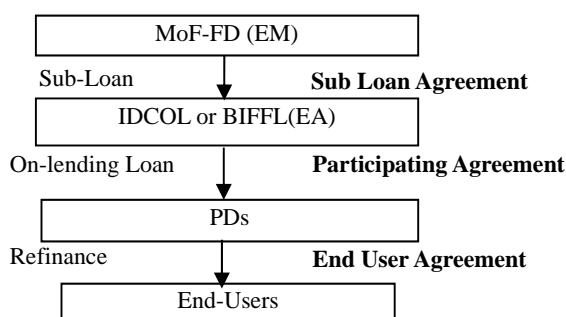
11.1. Legal Structure of the Components I and II

The legal structure for Component I (Industry and Commercial Sectors) and Component 2 (Building Sector) of this Project is as shown below. Under the loan agreement, FD shall sign the Sub-Loan Agreement with IDCOL and BIFFL, and authorize IDCOL and BIFFL as Implementing Agencies of the Project. IDCOL and BIFFL will sign the On-Lending Loan Agreement with End users who are eligible to receive On-Lending Loans under the Project. End users will purchase EE&C equipment and repay in accordance with On-Lending Loan Agreement.



11.2. Legal Structure of the Component III

The legal structure for Component 3 (Home Appliances) of this Project is as shown below. Under the loan agreement, MOF-FD shall sign the Sub-Loan Agreement with IDCOL and BIFFL, and authorize IDCOL and BIFFL as Executing Agencies of the Project. IDCOL and BIFFL will sign the Participating Agreement with PDs who are eligible to receive On-Lending Loans under the Project. PDs will sign the Refinance Agreement with End-Users who are eligible to receive the funds under the Project.



11.3. Agreements

11.3.1. Sub Loan Agreement

Sub Loan Agreement will be signed between FD and IDCOL/BIFFL as follows;

- (a) Comply with the eligibility criteria at all times unless the IDCOL and BIFFL are at the remedial stage and is so allowed by FD,

-
- (b) Comply with all the terms and conditions of Sub loan as specified in the Agreement;
 - (c) Supervise and monitor the implementation of sub-projects by end-borrowers;
 - (d) Submit the Annual Performance Review (including OLL registered, repaid, the Annual Report of the IDCOL and BIFFL (including the balance sheet, the profit and loss statement, and the auditor's report, etc.), and IDCOL and BIFFL's Sub-Loan Statement of Expenditures report (Annex 17.3);
 - (e) Allow FD to suspend, terminate or withdraw OLL when violations are observed, as stipulated in the Operating Guidelines;
 - (f) Ensure the compliance of Environmental Social Management System (ESMS) and "JICA Guidelines for Environmental and Social Considerations"(April 2010);
 - (g) Allow FD, SREDA and JICA to review the EE&C equipment and conduct the inspection;
 - (h) Disclose or submit all information required by FD and JICA, including but not limited to audited financial statements and reports required by FD for the implementation and monitoring of the project.
 - (i) Enable FD, SREDA or JICA to inspect IDCOL and BIFFL or any sub-projects and review any relevant records and documents maintained by IDCOL and/or BIFFL, if FD, SREDA or JICA so requests;

11.3.2. On lending Loan Agreement

- (a) For component I and II, On Lending Loan Agreement will be signed between IDCOL or BIFFL and End users.
- (b) The interest rate between IDCOL or BIFFL and End users is discussed towards appraisal mission.
- (c) The terms and conditions of On Lending Loan Agreement are based on the ones of IDCOL and BIFFL.

11.3.3. Participating Agreement

For Component 3, the Participating Agreement (PA) will be signed between IDCOL or BIFFL and accredited PDs. The outline of the PA is as follows;

- (a) Comply with the eligibility criteria at all times unless the PDs is at the remedial stage and is so allowed by IDCOL or BIFFL,
- (b) Comply with all the terms and conditions of Refinancing Loan as specified in the Agreement;
- (c) Supervise and monitor the implementation of sub-projects by end-borrowers;
- (d) Submit the Annual Performance Review (including OLL registered, repaid, the Annual Report of the PDs (including the balance sheet, the profit and loss statement, and the auditor's report, etc.), and PD's Refinance Statement of Expenditures report (Annex 17.3);
- (e) Allow BB to suspend, terminate or withdraw OLA when violations are observed, as stipulated in the Operating Guidelines;
- (f) Ensure the compliance of Environmental Social Management System (ESMS) and "JICA Guidelines for Environmental and Social Considerations"(April 2010);
- (g) Allow FD, SREDA, BIFFL or IDCOL and JICA to review the designs of the buildings and conduct the intermediate and completion inspection;

-
- (h) Disclose or submit all information required by IDCOL or BIFFL, including but not limited to audited financial statements and reports required by BB for the implementation and monitoring of the project.
 - (i) Enable SREDA, BIFFL or IDCOL and JICA to inspect PDs or any sub-projects and review any relevant records and documents maintained by PDs, if SREDA, BIFFL, IDCOL or JICA so requests;
 - (j) The format of the PA is as in Annex 14.2.

11.3.4. End User Agreement

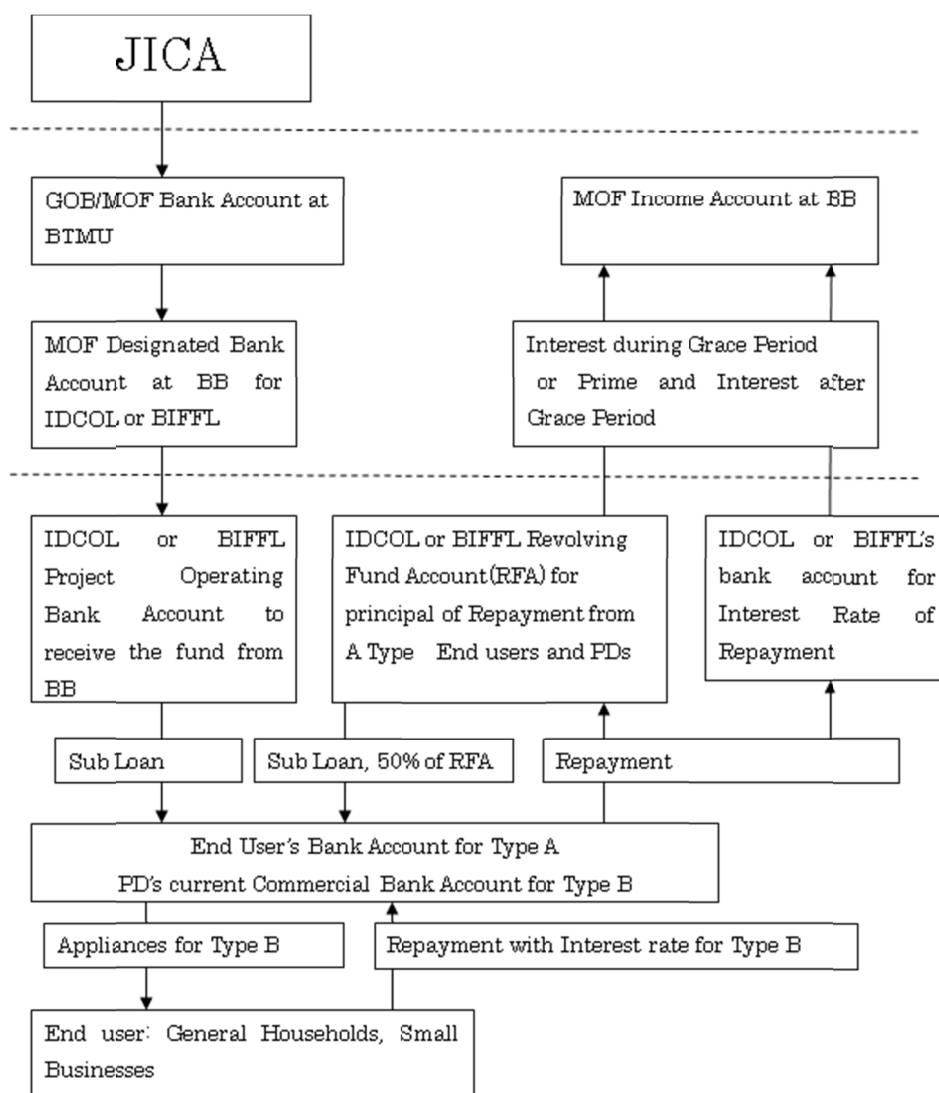
An end user agreement will be signed between PDs and the end user to refinance the end user for purchasing the EE&C Home appliances. The outline of the end user agreement whose sample is as Annex 14.4 is as follows:

- (a) End user shall use Sub loan exclusively for the purpose of the sub project which only includes eligible items as specified in the EE&C equipment list;
- (b) End user shall enable SREDA, IDCOL, BIFFL or JICA to review the seismic and fire safety design of the buildings
- (c) End user shall enable SREDA, IDCOL, BIFFL or JICA to inspect the sub-project, if SREDA, IDCOL, BIFFL or JICA so request;
- (d) End user shall follow all the environmental regulations established by GOB as well as the “JICA Guidelines for Environmental and Social Considerations”(April 2010);
- (e) End user shall allow IDCOL, BIFFL and/or JICA to suspend, terminate or withdraw the Sub loan when violations are observed.

11.4. Fund Flow

Structure of Fund flow under Components I, II and III can be illustrated in the following figure.

Figure 10 Provision of Fund to End Users



- BB will open and maintain a Loan Account on behalf of GOB under the Project's name to receive disbursement from JICA.
- Furthermore, Designated Accounts will be opened and maintained at BB on behalf of IDCOL and BIFFL respectively to receive transfers from the Loan Account for disbursement.
- Then, upon request from IDCOL and BIFFL, the fund money would be transferred to the Project Operating Account maintained by IDCOL and BIFFL.
- For Component 1 and 2, upon request from End users for application for the On-lending loan, the requested amount would be transferred to the End user's Account maintained in End user's Agent Bank.

-
- (e) For Component 3, upon request from PDs for application for the On-lending loan, the requested amount would be transferred to the PD's Account maintained in PD's Agent Bank.
 - (f) The principal portion of the repayments from PD's Account or End user's Account maintained with their Agent Banks would be pooled into the Revolving Fund.
 - (g) The IDCOL and/or BIFFL will submit annual reports on the statement of the Designated Bank Account and the revolving of the proceeds of the Loan, to JICA until 50 % of the principal of the original loan amount are used for the second and successive generations of the loans to End users of Component 1 and 2/ PDs of Component III.

12. Subsidiary Loan Agreement

12.1. Sample Subsidiary Loan Agreement Format for IDCOL

SUBSIDIARY LOAN AGREEMENT

This Subsidiary Loan Agreement (SLA) is made on this [] day of [] 2015

BETWEEN

The Government of the People's Republic of Bangladesh, represented by the Finance Division of the Ministry of Finance (hereinafter referred to as the Lender)

AND

Infrastructure Development Company Limited, a public limited company duly registered under the laws of Bangladesh and having license from Bangladesh Bank as NBFI, with its registered office at UTC Building (16th floor) 8 Panthapath, Kawranbazar, Dhaka-1215, Bangladesh, (hereinafter referred to as IDCOL, which expression shall include its successors in interest and legal representatives) represented by its Executive Director and CEO.

WHEREAS

- a) By an ODA Loan Agreement No. BD-XX dated DD MM YYYY (hereinafter referred to as the "Loan Agreement") between the JAPAN INTERNATIONAL COOPERATION AGENCY (here called "JICA") and the Lender, JICA has agreed to make available to the Lender from its loan an amount of XXXX Japanese Yen (JPY XXXX), (hereinafter called the "Loan"), for the purposes of implementation of Energy Efficiency and Conservation Promotion Financing Project (hereinafter called the Project) on the terms and conditions set-forth therein;
- b) Under the terms of the Loan Agreement, the Lender has agreed to make available to IDCOL part of the proceeds of the Loan under terms and conditions acceptable to the JICA;
- c) By a Project Memorandum entered into between the JICA and Lender on DD MM YYYY (hereinafter called the "Project Agreement"), IDCOL has undertaken certain obligations to the JICA in connection with its use of the proceeds of the said loan and the implementation of the Project; and
- d) In view of the foregoing, parties hereto have agreed to enter into this Agreement which is the SLA referred to in Section 4(4), Article III of the Loan Agreement.

NOW THEREFORE the Parties hereto have entered into this SLA on the terms and conditions set forth below:

Article 1

Definitions

1.01 Wherever used in this SLA, unless the context shall otherwise require, the terms defined in the Loan Agreement shall have the respective meanings set forth therein.

Article 2

Subsidiary Loan

- 2.01 a) Unless otherwise agreed to by and between JICA and the Lender, the Lender hereby agrees to extend to IDCOL the subsidiary loan in an amount not exceeding Taka XXXX (Equivalent to JPY XXXX as per exchange rate of JPY = XXXX BDT as on DD MM YYYY) subject to and upon the terms and conditions set-forth in the Loan Agreement and this Agreement for the purpose of carrying out the Project. Unless and until expressly revoked by the Lender at its sole discretion, the Lender hereby appoints IDCOL as its agent for the purpose of taking actions or entering into agreements required or permitted under section 4.01 and section 5.04 of loan agreements.
- b) The Lender shall open a Designated Account on its books in the name of IDCOL. Each part of the Subsidiary Loan shall be deemed to be withdrawn by IDCOL from such Designated Account from the date given in the official payment advice of the JICA in the amount and in the equivalent in Taka of amount of the corresponding withdrawals from the Loan Account.
- 2.02 a) IDCOL shall pay to the Lender interest on the principal of the Subsidiary Loan outstanding from time to time, at the rate of 1% per annum. Interest on the Subsidiary Loan shall accrue from the respective value dates as given in the official payment advice of the JICA and shall be computed on the basis of a 360-day Year of twelve 30-day months. The principal loan amount shall be repaid by IDCOL to the Lender in fifteen (15) years in annual installments after five (5) years of the grace period in accordance with the amortization schedule in local currency equivalent determined at official exchange rate mentioned in Section 2.01 a). Repayment date shall be DD MM in each year. The interest accrued during grace period shall be payable at a time along with the first installment of principal.
- b) Foreign exchange risk relating to the Loan and any other obligation shall bear by Lender.
- c) Grace period will commence on the date of the first withdrawal of proceeds from Subsidiary Loan.
- 2.03 IDCOL may repay to the Lender in advance of maturity any part or the entire principal amount of the Subsidiary Loan with the interest accrued thereon to the date of such repayment, without premium of penalty, any such repayment shall be applied pro-rata to the remaining outstanding installments.
- 2.04 IDCOL shall (a) maintain or cause to be maintained records and accounts adequate to reflect, in accordance with consistently maintained sound accounting principles, the expenditures financed out of the Subsidiary Loan, and (b) have such records and accounts audited for each fiscal year, in accordance with appropriate auditing principles.

Article 3
Conditions for Withdrawal and Procurement Procedures

3.01 The conditions for withdrawal of funds and procurement procedures applicable under the Loan Agreement apply to the proceeds of the Subsidiary Loan and procurements utilizing such funds.

Article 4
Execution of the Project

4.01 IDCOL shall perform all of its obligations under the Project Agreement and, to the extent applicable to it, under the Loan Agreement and carry out the Project with due diligence, efficiency and in conformity with sound administration, financial, engineering and public utility practices.

4.02 IDCOL shall not utilize any part of the proceeds of the Subsidiary Loan or any goods and services financed out of the proceeds of the Subsidiary Loan for any purpose what so ever other than exclusively for the carrying out of the Project.

4.03 The Lender shall facilitate the availability of the facilities, services, land and other resources required by IDCOL, in addition to the Subsidiary Loan proceeds for carrying out of the Project in accordance with the Project Agreement.

4.04 The Lender shall take all action which shall be necessary on its part to enable IDCOL to perform its obligations under the Project Memorandum and Loan Agreement, and shall not take any action which would impair the performance of such obligations.

4.05 IDCOL shall take all action as shall be necessary on its part to enable the Lender to comply with its obligations under the Loan Agreement in respect of the Project.

4.06 IDCOL shall not assign any rights or obligations under this Agreement without the prior written concurrence of the Lender and JICA.

Article 5
Remedies of the Government

5.01 If any of the following events shall occur and shall continue for the period specified below, than at any subsequent time during the continuance thereof, the Lender, at its option, may by notice to IDCOL declare the principal of the Subsidiary Loan then outstanding to be due and payable immediately together with the interest and other charges thereon and upon any such declaration the principal, together with the interest and other charges thereon, shall become due and payable immediately.

- a) a default shall occur in the payment of principal or interest or any other payment required under this Agreement and such default shall continue for a period of thirty (30) days;
- b) a default shall occur in the performance of any other obligation on the part of IDCOL under this Agreement, and such default shall continue for a period of sixty (60) days after notice thereof shall have been given by the Lender to IDCOL.

Article 6

Effectiveness and Termination

6.01 This SLA shall come into force and effect on the date of signature between IDCOL and Lender.

6.02 This SLA and all obligations of the parties hereunder shall terminate on the earlier of the following two dates: (i) when the entire principal amount of the subsidiary loan and all interest/service charge thereon and any other payments required by IDCOL under this SLA shall have been paid to and received by the Lender in accordance with the provisions of this SLA and (ii) when all obligations of IDCOL under this SLA shall have been fulfilled.

Article 7 General Provisions and Miscellaneous

7.01 Any notice or request required or permitted to be given or made under this SLA and any agreement between the parties contemplated by this SLA shall be in writing. Such notice or request shall be deemed to have been duly given or made when it shall be delivered by hand or by mail, telegram, cable, telex, e-mail or radiogram to the party to which it is required or permitted to be given or made at its address hereinafter specified, or at such other address as such party shall have designated by notice to the party giving such notice or making such request. The addresses so specified are;

- a. In the case of the Lender to-
The Senior Secretary
Finance Division
Ministry of Finance
Bangladesh Secretariat
Ramna, Dhaka-1000
Bangladesh
Email: XXXXXXXXXXXXX
Facsimile:+880-2-XXXXXX
Telephone:+880-2-XXXXXX
- b. In the case of IDCOL to-
Executive Director & CEO
Infrastructure Development Company Limited
UTC Building (16th floor)
8 Pnthapath, Kawranbazar,
Dhaka-1215, Bangladesh
Email: XXXXXXXXXXXXX
Facsimile:+880-2-XXXXXX
Telephone:+880-2-XXXXXX

7.02 No delay in exercising, or omission to exercise, any right, power or remedy accruing to either party under this Agreement upon any default shall impair any such right, power or remedy or be construed to be a waiver thereof or an acquiescence in such default; nor shall be action or such party in respect of any default, or any acquiescence in any default, affect or impair any right, power of remedy of such party in respect of any other or subsequent default.

7.03 Any amendments made to the Loan Agreement shall have immediate effect on

this SLA, as appropriate, and the SLA shall be considered to have been so amended.

7.04 Notwithstanding Article 11.04, the parties shall formally amend this SLA as soon as possible following any amendments to the Loan Agreement.

7.05 Any matter not expressly covered in the SLA shall be governed by the provisions of the Loan Agreement if applicable. In the event of any conflict between the provisions of this SLA and the Loan Agreement, the provisions of the Loan Agreement shall prevail.

7.06 This SLA shall be governed by the laws of Bangladesh.

IN WITNESS whereof these presents have been executed the day and year hereinbefore written:

For and on behalf of <u>Government of the People’s Republic of Bangladesh</u> By..... Authorized Representative Date:	Witness:
	Witness:
For and on behalf of <u>Infrastructure Development Company Limited</u> By..... Authorized Representative Date:	Witness:
	Witness:

12.2. Sample Subsidiary Loan Agreement Format for BIFFL

SUBSIDIARY LOAN AGREEMENT

This Subsidiary Loan Agreement (SLA) is made on this [] day of [] 2015

BETWEEN

The Government of the People's Republic of Bangladesh, represented by the Finance Division of the Ministry of Finance (hereinafter referred to as the Lender)

AND

Bangladesh Infrastructure Finance Fund Limited, a public limited company duly registered under the laws of Bangladesh and having license from Bangladesh Bank as NBFI, with its registered office at 4, Anjuman Mufidul Islam Road, Kakrail, Dhaka, Bangladesh, (hereinafter referred to as BIFFL, which expression shall include its successors in interest and legal representatives) represented by its Executive Director and CEO.

WHEREAS

- a) By an ODA Loan Agreement No. BD-XX dated DD MM YYYY (hereinafter referred to as the "Loan Agreement") between the JAPAN INTERNATIONAL COOPERATION AGENCY (here called "JICA") and the Lender, JICA has agreed to make available to the Lender from its loan an amount of XXXX Japanese Yen (JPY XXXX), (hereinafter called the "Loan"), for the purposes of implementation of Energy Efficiency and Conservation Promotion Financing Project (hereinafter called the Project) on the terms and conditions set-forth therein;
- b) Under the terms of the Loan Agreement, the Lender has agreed to make available to BIFFL part of the proceeds of the Loan under terms and conditions acceptable to the JICA;
- c) By a Project Memorandum entered into between the JICA and Lender on DD MM YYYY (hereinafter called the "Project Agreement"), BIFFL has undertaken certain obligations to the JICA in connection with its use of the proceeds of the said loan and the implementation of the Project; and
- d) In view of the foregoing, parties hereto have agreed to enter into this Agreement which is the SLA referred to in Section 4(4), Article III of the Loan Agreement.

NOW THEREFORE the Parties hereto have entered into this SLA on the terms and conditions set forth below:

Article 1 Definitions

1.02 Wherever used in this SLA, unless the context shall otherwise require, the terms defined in the Loan Agreement shall have the respective meanings set forth therein.

Article 2
Subsidiary Loan

- 2.01 a) Unless otherwise agreed to by and between JICA and the Lender, the Lender hereby agrees to extend to BIFFL the subsidiary loan in an amount not exceeding Taka XXXX (Equivalent to JPY XXXX as per exchange rate of JPY = XXXX BDT as on DD MM YYYY) subject to and upon the terms and conditions set-forth in the Loan Agreement and this Agreement for the purpose of carrying out the Project. Unless and until expressly revoked by the Lender at its sole discretion, the Lender hereby appoints BIFFL as its agent for the purpose of taking actions or entering into agreements required or permitted under section 4.01 and section 5.04 of loan agreements.
- b) The Lender shall open a Designated Account on its books in the name of BIFFL. Each part of the Subsidiary Loan shall be deemed to be withdrawn by BIFFL from such Designated Account from the date given in the official payment advice of the JICA in the amount and in the equivalent in Taka of amount of the corresponding withdrawals from the Loan Account.
- 2.02 a) BIFFL shall pay to the Lender interest on the principal of the Subsidiary Loan outstanding from time to time, at the rate of 1% per annum. Interest on the Subsidiary Loan shall accrue from the respective value dates as given in the official payment advice of the JICA and shall be computed on the basis of a 360-day Year of twelve 30-day months. The principal loan amount shall be repaid by BIFFL to the Lender in fifteen (15) years in annual installments after five (5) years of the grace period in accordance with the amortization schedule in local currency equivalent determined at official exchange rate mentioned in Section 2.01 a). Repayment date shall be DD MM in each year. The interest accrued during grace period shall be payable at a time along with the first installment of principal.
- b) Foreign exchange risk relating to the Loan and any other obligation shall bear by Lender.
- c) Grace period will commence on the date of the first withdrawal of proceeds from Subsidiary Loan.
- 2.03 BIFFL may repay to the Lender in advance of maturity any part or the entire principal amount of the Subsidiary Loan with the interest accrued thereon to the date of such repayment, without premium or penalty, any such repayment shall be applied pro-rata to the remaining outstanding installments.
- 2.04 BIFFL shall (a) maintain or cause to be maintained records and accounts adequate to reflect, in accordance with consistently maintained sound accounting principles, the expenditures financed out of the Subsidiary Loan, and (b) have such records and accounts audited for each fiscal year, in accordance with appropriate auditing principles.

Article 3
Conditions for Withdrawal and Procurement Procedures

- 3.01 The conditions for withdrawal of funds and procurement procedures applicable

under the Loan Agreement apply to the proceeds of the Subsidiary Loan and procurements utilizing such funds.

Article 4

Execution of the Project

4.01 BIFFL shall perform all of its obligations under the Project Agreement and, to the extent applicable to it, under the Loan Agreement and carry out the Project with due diligence, efficiency and in conformity with sound administration, financial, engineering and public utility practices.

4.02 BIFFL shall not utilize any part of the proceeds of the Subsidiary Loan or any goods and services financed out of the proceeds of the Subsidiary Loan for any purpose what so ever other than exclusively for the carrying out of the Project.

4.03 The Lender shall facilitate the availability of the facilities, services, land and other resources required by BIFFL, in addition to the Subsidiary Loan proceeds for carrying out of the Project in accordance with the Project Agreement.

4.04 The Lender shall take all action which shall be necessary on its part to enable BIFFL to perform its obligations under the Project Memorandum and Loan Agreement, and shall not take any action which would impair the performance of such obligations.

4.05 BIFFL shall take all action as shall be necessary on its part to enable the Lender to comply with its obligations under the Loan Agreement in respect of the Project.

4.06 BIFFL shall not assign any rights or obligations under this Agreement without the prior written concurrence of the Lender and JICA.

Article 5

Remedies of the Government

5.01 If any of the following events shall occur and shall continue for the period specified below, than at any subsequent time during the continuance thereof, the Lender, at its option, may by notice to BIFFL declare the principal of the Subsidiary Loan then outstanding to be due and payable immediately together with the interest and other charges thereon and upon any such declaration the principal, together with the interest and other charges thereon, shall become due and payable immediately.

- a) a default shall occur in the payment of principal or interest or any other payment required under this Agreement and such default shall continue for a period of thirty (30) days;
- b) a default shall occur in the performance of any other obligation on the part of BIFFL under this Agreement, and such default shall continue for a period of sixty (60) days after notice thereof shall have been given by the Lender to BIFFL.

Article 6

Effectiveness and Termination

6.01 This SLA shall come into force and effect on the date of signature between BIFFL and Lender.

6.02 This SLA and all obligations of the parties hereunder shall terminate on the

earlier of the following two dates: (i) when the entire principal amount of the subsidiary loan and all interest/service charge thereon and any other payments required by BIFFL under this SLA shall have been paid to and received by the Lender in accordance with the provisions of this SLA and (ii) when all obligations of BIFFL under this SLA shall have been fulfilled.

Article 7
General Provisions and Miscellaneous

7.01 Any notice or request required or permitted to be given or made under this SLA and any agreement between the parties contemplated by this SLA shall be in writing. Such notice or request shall be deemed to have been duly given or made when it shall be delivered by hand or by mail, telegram, cable, telex, e-mail or radiogram to the party to which it is required or permitted to be given or made at its address hereinafter specified, or at such other address as such party shall have designated by notice to the party giving such notice or making such request. The addresses so specified are;

- a. In the case of the Lender to-
The Senior Secretary
Finance Division
Ministry of Finance
Bangladesh Secretariat
Ramna, Dhaka-1000
Bangladesh
Email: XXXXXXXXXXXX
Facsimile:+880-2-XXXXXX
Telephone:+880-2-XXXXXX
- b. In the case of BIFFL to-
Executive Director & CEO
Bangladesh Infrastructure Finance Fund Limited
4, Anjuman Mufidul Islam Road, Kakrail
Dhaka 1000, Bangladesh
Email: XXXXXXXXXXXX
Facsimile:+880-2-XXXXXX
Telephone:+880-2-XXXXXX

7.02 No delay in exercising, or omission to exercise, any right, power or remedy accruing to either party under this Agreement upon any default shall impair any such right, power or remedy or be construed to be a waiver thereof or an acquiescence in such default; nor shall be action or such party in respect of any default, or any acquiescence in any default, affect or impair any right, power of remedy of such party in respect of any other or subsequent default.

7.03 Any amendments made to the Loan Agreement shall have immediate effect on this SLA, as appropriate, and the SLA shall be considered to have been so amended.

7.04 Notwithstanding Article 11.04, the parties shall formally amend this SLA as soon as possible following any amendments to the Loan Agreement.

7.05 Any matter not expressly covered in the SLA shall be governed by the provisions of the Loan Agreement if applicable. In the event of any conflict between the provisions of this SLA and the Loan Agreement, the provisions of the Loan Agreement

shall prevail.

7.06 This SLA shall be governed by the laws of Bangladesh.

IN WITNESS whereof these presents have been executed the day and year hereinbefore written:

For and on behalf of <u>Government of the People's Republic of Bangladesh</u> By..... Authorized Representative Date:	Witness:
	Witness:
For and on behalf of <u>Bangladesh Infrastructure Finance Fund Limited</u> By..... Authorized Representative Date:	Witness:
	Witness:

13. A-type Loan Appraisal Manuals and Formats

13.1. A-type On-lending Loan Appraisal Manual

(1) Technical Pre-screening

Form NN

The IFI will forward the Form NN to SREDA for certification. Form NN will include the following information:

- (1) Company name of the sub-project proponent
- (2) Category of equipment (to be selected from SREDA's eligible equipment list)
- (3) Energy consumption (monthly) by fuel type for the past six months
- (4) Timetable for equipment installation
- (5) Investment amount, financing plan including simple pay-back simulation

Receipt of a Certificate

The IFI will receive from SREDA, either a non-objection certificate (NOC) or a rejection letter basically within seven (7) working days after the submission of the documents.

Forwarding of the certificate

The IFI will forward the certificate / letter to the proponent, after which: (i) a due diligence will start / (ii) the application document will be returned.

(2) Preliminary Selection

The preliminary selection is conducted using CIB (Credit Information Report), Credit Rating Report (if available), Financial Statements and the application form including the project proposal. If all check points are cleared, the proposal then goes to the technical and financial appraisal stage.

	Check Point
CIB Report	(a) No Classification (b) No Any other problem
Credit Rating Report	Equivalent to BB or BB+ or higher as the rating could vary from one credit rating company to another
Financial Statement	(a) The business results should show a profit for last 2 years at least. (b) If the above condition (a) is not fulfilled, there should be a promising prospect of business profitability for the coming years.

Loan approval (including preliminary approval) will be decided by the following bodies.

(a) IDCOL

Loan amount	Approving body
Up to 100 million BDT	Management (CEO)
In excess of 100 million BDT	Board of Directors

If the total amount approved by the Management (CEO) for consecutive 3 months exceeds 500 Million BDT, any additional loans need authorization by the Board.

(b) BIFFL

Loan amount	Approving body
Up to 500 million BDT	Executive Committee
In excess of 500 million BDT	Board of Directors

(3) Due Diligence

Types of Due Diligence

There are two types of due diligence: simple type and general type. The type of due diligence will be determined based on the following criteria. However, IDCOL/BIFFL management reserves the right to change the type of due diligence by their own discretion.

	Simple	General
Loan Amount	Up to 100 million BDT	In excess of 100 million BDT

Documents Required for Due Diligence

The following documents are required for due diligence. Additional documents may be required to submit if there are deemed to be necessary.

- (1) History of business, Certified copy of the Articles of Association, Certificate of Incorporation, License for business and other qualifications/certificates such as ISO (if any).
- (2) List of directors, organogram
- (3) List of main products, processing chart, marketing channels
- (4) Sales amount of each product for the past 3 years,
-Sales amount to each client for the past 3 years
- (5) Financial Statements, Cash Flow Statement and Cost Accounting Statement for 3 years
- (6) Debt exposure of the company with any bank or financial institution
- (7) Plan for investment [investing amount, fund raising plan (debt, equity), subjects for investment (plant and/or machinery), purpose, quotation for the planned plant and/or machinery]
- (8) Business plan (projected turnover, profit, effect of investment, cash flow)
- (9) Security related documents

(4) Credit Report Elements

General Due Diligence

A credit report for general due diligence will contain the following items:

- (1) Introduction;
 - History of business and change of the senior executives (and ownerships);
- (2) Management Analysis;
 - Senior executives (or owners/sponsors) and their strengths and weaknesses
- (3) Product and Industry Analysis;
 - Main products and the situation of the relevant industry
 - Position in the industry and the changing nature of the industry (if any)
 - Special characteristics of the applicant's products
- (4) Production and marketing Analysis;
 - Compliance situation to the statutory regulations concerning the existing plants and equipment and also planned plants and equipment
 - The subject technology for introduction and its technical stability
 - Special characteristics and advantages of the product value chain from production to marketing
 - Production efficiency and pending issues (human productivity, yield of raw materials and machine productivity)
 - Production cost reducing measures
 - Strengths and weaknesses of the products in the market and with individual customers
 - Competition situation
- (5) Profitability Analysis;
 - Profitability analysis of last 3 years Profit and Loss Statements
 - Changes of turnover and profit and the factors of change
 - Changes of gross profit margin and net profit before depreciation and tax and their reasons
 - Comparison with the industry average
- (6) Soundness and Sustainability Analysis;
 - Analysis of last 3 years Balance Sheets
 - Change in shareholder's equity and debt and their reasons
 - Financial indicator analysis: Debt to equity ratio and Debt Service Coverage Ratio
 - Analysis of last 3 years Cash Flow Statements
 - Quality fund raising capability
- (7) Repayment Capacity Analysis;
 - Evaluation of the income and profit plan
 - Profits from the existing businesses
 - Income generation effect from the planned investment
 - Evaluation of the planned cash flow
 - Substance of repayment capacity during the repayment period
 - Risk matrix analysis and measurement to cope with risks
 - Prospect of the Debt Service Coverage Ratio enhancement and FIRR
 - Value of collateral and the coverage ratio against the loan amount

Simple Due Diligence

A credit report for simple due diligence will contain the following items:

- (1) Management Analysis;
 - Senior executives (or owners/sponsors) and their strengths and weaknesses
- (2) Product and Industry Analysis;
 - Main products and the situation of the relevant industry
 - Special characteristics of the applicant's products
- (3) Production and marketing Analysis;
 - Compliance situation to the statutory regulations concerning the existing plants and equipment and also planned plants and equipment
 - The subject technology for introduction and its technical stability
 - Strengths and weaknesses of the products in the market and with individual customers
- (4) Profitability Analysis;
 - Analysis of last 3 years Profit and Loss Statement
 - Changes of turnover and profit and the factors of changes
 - Changes of gross profit margin and net profit before depreciation and tax and their reasons
- (5) Soundness and sustainability Analysis;
 - Analysis of last 3 years Balance Sheets
 - Change in shareholder's equity and debt and their reasons
 - Financial indicator analysis: Debt to equity ratio and Debt Service Coverage Ratio
 - Analysis of last 3 years Cash Flow Statements
 - Quality fund raising capability
- (6) Repayment Capacity Analysis;
 - Evaluation of the income and profit plan
 - Profits from the existing businesses
 - Income generation effect from the planned investment
 - Prospect of the Debt Service Coverage Ratio enhancement and FIRR
 - Value of collateral and the coverage ratio against the loan amount

(5) Loan Approval Criteria

The elements to be considered to approve a loan and their respective approval criteria are listed below:

No	Elements	Criteria
1	History and change of business	<ul style="list-style-type: none">-No records of past default-No classification into the possible bad debt category by banks-Positive changes of the overall business performance and products
2	Senior executives (or owners/sponsors) and their strength and weaknesses	<ul style="list-style-type: none">-Satisfactory business management ability-Stable relation among senior executives (or owners/sponsors)

3	Main products and the industry	-Possesses some superior products in the industry -Positive prospect of the industry
4	Production and Marketing	-Satisfactory production and marketing strategies -Rational production process -Sufficient production capacity for each product -High productivity level regarding Output per worker Yield of raw materials Output per principal machine -Satisfactory worker attendance rate -Satisfactory understanding of the need for energy saving and willingness to improve energy efficiency -High energy saving efficiency of the planned project
5	Compliance to statutory regulations and nature of the subject technology for introduction	-Compliance of the existing and planned facilities and equipment to the relevant national laws and regulations including environmental rules -Use of an established technology by the planned equipment for introduction
6	Profitability	-Stable profitability for the past 3 years -Higher levels of profitability than the industry average - Awareness of pending profit-related issues and implementation of suitable measures to solve them
7	Soundness and durability	-The debt to equity ratio for the past 3 years should be equal to or more than 2.33. -The debt service ratio for the past 3 years should be equal to or more than 1.25. -Cash flow from operating activities for the past 3 years is positive. -Fund raising for the past 3 years is steady.
8	Capability to repay	-The expected debt service ratio during the repayment period should be equal to or more than 1.25. -FIRR during the repayment period should be more than a weighted average of capital cost. -The capacity to offer collateral and personal guarantee is adequate.

If the applicant fails to meet the financial indicators listed above, the following condition, excluding conditions required in security documents, might be imposed:

(a) Additional interest risk premium

(6) Documents required for Application

Technical Pre-screening Application Forms

Form NN:

<p>(1) Company name of the sub-project proponent;</p> <p>Previous record of access to the project fund: Yes / No</p> <p>Production volume/value by product for past six months</p> <p>Operation hours per year</p>
<p>(2) Category of equipment (to be selected from SREDA's eligible equipment list);</p> <p>Name and Description</p> <p>Drawings (schematics within the production line: Graphical description of the equipment to be installed within the production line should be attached)</p> <p>Number of Equipment to be installed</p>
<p>(3) Energy consumption (monthly) by fuel type for the past six months</p>
<p>(4) Timetable for equipment installation</p>
<p>(5) Investment amount, financing plan including simple pay-back simulation</p>

Documents for financial Pre-screening

- (a) Application form for financial appraisal
- (b) Project Proposal
- (c) Financial Statements for last 3 years
- (d) Credit Rating Report if available

Financial Pre-screening Application Forms

(a) Applicant Detail

a.1 Name of the company															
a.2 Address of Main Office															
a.3 Telephone, Fax, E-mail															
a.4 Year of incorporation															
a.5 Authorized Capital and Paid Up Capital															
a.6 Number of Employees															
a.7 A brief description of company's lines of business															
a.8 List below names of Owners, Directors as well as amounts of each contribution to paid-up capital <table border="1"><thead><tr><th>Names of Owners</th><th>Amount of contributions</th></tr></thead><tbody><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></tbody></table> <table border="1"><thead><tr><th>Names of Directors</th><th>In charge</th><th>Amount of contributions</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	Names of Owners	Amount of contributions					Names of Directors	In charge	Amount of contributions						
Names of Owners	Amount of contributions														
Names of Directors	In charge	Amount of contributions													
a.9 If the sub-project proponent is publicly traded, list stock exchanges on which shares are traded. Stock Exchange (s)															
a.10 List all affiliated companies <table border="1"><thead><tr><th>Names of Companies</th><th>Address</th><th>Lines of Businesses</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>	Names of Companies	Address	Lines of Businesses												
Names of Companies	Address	Lines of Businesses													
a.11 Auditor's Information Name Address															

a.12 Lawsuit (Please provide information of legal actions pending for or against any of the owners/Directors/Management officer of the applicant company or its affiliates)

(b) Detail of Project Proposal

b.1 Project Cost

Components	Area/Number of Unit	Amount
Plant		
Machinery		
Equipment		
Installation		

b.2 Fund Raising Plan

Resource of Fund	Amount
Debt	
Company's own fund	
Others	
Total	

b.3 Debt Plan

Name of Bank/FIs	Amount	Tenor(Years)	Interest rate (%)
IDCOL/BIFFL			
Bank			
FIs			
Total			

Documents Required for Due Diligence

Documents are designated based on requirements from IDCOL/BIFFL.

13.2. Terms and Conditions of the On-lending Loan

[A-type Loan]

(1) Eligible On-lending Loan Borrower (Proponents)

Eligible applicants to the said loans can be any owners and/or enterprises in industry/commercial sector who plan to install EE&C equipment or plans to install EE&C equipment in buildings in Bangladesh.

(2) Eligible Equipment to be Financed by the On-lending Loan

To be determined by SREDA. SREDA will issue eligible technology / equipment list based on the recommendation from Technical Advisory Committee.

(3) Screening Process of End Users

Based on the A-type Loan Appraisal Manual, the IFIs will identify the appropriate sub-project proponents.

(4) Ineligible Investment Activities

The end users shall assure that the loan activity is pursuant to Bangladesh law and “JICA Guidelines for Environmental and Social Considerations” (April 2010). The on-lending loan will exclude Category A of these JICA Guidelines.

(5) Currency

Bangladesh Taka (BDT)

(6) Credit Risk

IFIs will bear the credit risk of the proponents.

(7) Size of Sub loans

Determined by IFIs in compliance with the rules and regulations prevailing in Bangladesh as well as the A-type Loan Appraisal Manual.

(8) Interest Rate

Determined by IFIs in compliance with the rules and regulations prevailing in Bangladesh as well as the A-type Loan Appraisal Manual.

(9) Maturity

Determined by IFIs in compliance with the rules and regulations prevailing in Bangladesh as well as the A-type Loan Appraisal Manual.

(10) Collateral

Determined by IFIs in compliance with the rules and regulations prevailing in Bangladesh as well as the A-type Loan Appraisal Manual.

14. B-type Loan Appraisal Manuals and Formats

14.1. Eligibility Criteria for PDs

[Criteria for All PDs]

(1) Organization

- (a) The organization is appropriately structured to implementing its business plan, with the presence of responsible business teams capable of performing elaborated tasks and functions identified and assigned to.
- (b) The organization has a sufficient capacity to explain, evaluate, market and finance products to its customers, and also to subsequently carry out follow-up services, monitoring and loan recovery.

(2) Sound financial position

- (a) Particulars of the operational and financial results for at least the past two (2) consecutive years are deemed to be sound based on an accountable audit reports.
- (b) Business results should show profits for at least the past two (2) consecutive years.
Prospect / potential for profitable business operations in the future should also be considered as elements to assess the potential profitability of the organization in question.
- (c) The organization has a well-established, well-maintained, sound and transparent accounting system, a management information system (MIS) and an internal audit system.

(3) Financial criteria

The organization should provide a proof that its financial performance is in conformity with the applicable financial criteria.

- (a) Minimum equity required is BDT 10,000,000.
- (b) In the case of an NGO or retailer, the ratio of after-tax profit to equity (ROE) should be equivalent to or more than 15 % p.a.
- (c) Even when above criterion (a) is not met, the criterion in question may be deemed to be met if the organization's prospective business profitability is considered to be promising, and its financial result is at least break even after deducting operational expenses and debt service.
- (d) However, in such case, the organization's continued eligibility will depend on its being able to consistently meet the ratio of after-tax profit to equity criterion of 15 % p.a.
- (e) The minimum debt service coverage ratio is 1.25.
- (f) In case of an NGO or retailer, the debt to equity ratio should not exceed 4.0.

(4) Consistency of financial criteria

- (a) After meeting the eligibility criteria for program entry, the organization should continue to meet the eligibility criteria mentioned above and its status should be monitored annually.

-
- (b) If the organization fails at any time to satisfy the criteria specified above, the organization will be suspended from enjoying its PD authorization status under the project until the organization has taken specific steps to address its problem(s) in a satisfactory manner.
- (5) Existence of an electrified area(s) inside the business area
The organization already has a branch(es) inside the electrified area(s) to conduct its business operations.
- (6) Adequate business plan for the EE&C loan program
- (a) The organization should submit business plan describing the expected sale amount by appliance and by area, profit before tax, and debt service coverage ratio on each year for the period of five (5) years.
 - (b) The business plan should include a proposal to make people aware of the need to increase the use of EE&C appliances.
 - (c) The organization should maintain the minimum 85% collection ratio of principal and interest on a rolling twelve month basis.
- (7) Debt Service Reserve Account (DSRA)
The organization should keep an amount equivalent to double repayments as well as interests in DSRA.

[Eligibility Criteria for MFIs]

- (1) General Eligibility Criteria
- (a) An eligible MFI must have registered with an appropriate registration authority to conduct microfinance services.
 - (b) An eligible MFI must be currently conducting microfinance services with soft loan funds from:
 - PKSF as a PO;
 - Bank of Small Industries and Commerce Limited; and
 - Any other similar national or international funding source.
 - (c) An eligible MFI must be conducting microfinance operations in electrified areas.
 - (d) An eligible MFI must have 20,000 beneficiaries or more.
- (2) Specific Financial Criteria
- (a) Minimum equity required is BDT 10,000,000.
 - (b) The debt to equity ratio must not exceed 9.0.
 - (c) The ratio of after-tax profit to equity (ROE) should be equivalent to or more than 15 % p.a.
 - (d) Even when above criterion (a) is not met, the criterion in question may be deemed to be met if the MFI's prospective business profitability is considered to be promising, and its financial result is at least break even after deducting operational expenses and debt service.
 - (e) However, in such case, the organization's continued eligibility will depend on its being able to consistently meet the ratio of after-tax profit to equity criterion of 15 % p.a.

14.2. Sample of Participating Agreement

PARTICIPATION AGREEMENT
(IDCOL Energy Efficient and Conservation Promotion Financing project)

between

and

INFRASTRUCTURE DEVELOPMENT COMPANY LIMITED

Date: -----,

PARTICIPATION AGREEMENT

This **AGREEMENT** is made on this the -----, 2016 between _____, registered as a society under _____, (hereafter the **Participating Distributor** or "**PD**") having its registered _____ and **INFRASTRUCTURE DEVELOPMENT COMPANY LIMITED**, ("**IDCOL**") having its registered Head Office at UTC Building, 16th Floor, 8 Kawran Bazar, Dhaka - 1215.

WHEREAS:

- (A) by a Loan Agreement No. BD- P** between GOB and Japan International Cooperation Agency (JICA) dated ** ***** 2016 and pursuant to Section with reference to Schedule of this Loan Agreement, IDCOL has received a loan to use the same for implementation of Energy Efficiency and conservation Promotion Financing Project;
- (B) the above credit and grant supports under agreement ("**Credit Agreement**") are meant for implementation of IDCOL's Energy Efficiency and Conservation Promotion Financing Project;
- (C) the PD was selected as a new Supplier Participating Distributor under the Sub-project and the PD has completed its target of installation of Home Appliances as stated in clause 6 of the Participation Agreement between the PD and IDCOL dated ***;
- (D) upon the satisfactory performance of the PD, IDCOL has selected the PD as its Lender and Supplier Participating Distributor. Pursuant to being selected as Lender and Supplier Participating Distributor, the PD has undertaken the Sub-project Activities and requested IDCOL to Refinance the loans extended by the PD to the home appliance Purchasers (the "Households") for the purchase, installation and maintenance of home appliances within the Sub-project Areas, and IDCOL has agreed to provide the Refinance as aforesaid, on the basis of foregoing and in accordance with the terms and conditions set forth in this Agreement.

ARTICLE I

Definitions and Interpretations

Section 1.01. Definitions. Unless the context otherwise requires, in this Agreement-

- (a) "Accounting Principles" means the accounting principles, which are generally accepted in the People's Republic of Bangladesh and applied on a consistent basis;
- (b) "Approved Home Appliance " means equipment for Approved Home Appliances approved by SREDA;

-
- (c) “Authorized Representative” means any person designated by the PD or IDCOL as its representative;
 - (d) “Availability Period” means the period that will be available from the date of this Agreement to the date falling 30 months thereafter for IDCOL’s Refinance under Section 3.04, unless otherwise agreed by IDCOL in writing;
 - (e) “Business Days” means days during which Banks are open in Dhaka;
 - (f) “Cure Period” means the period as referred to in Section 8.03;
 - (g) “Disbursement” means any amount of the Refinance, which is disbursed from time to time by IDCOL to the PD under this Agreement;
 - (h) “Events of Default” means the events specified or referred to under Article VIII of this Agreement;
 - (i) “Notice of Event of Default” means notice specified under Section 8.03(a);
 - (j) “Finance Documents” means this Agreement, PA, Security Documents, Escrow Account Agreement and any other documents which IDCOL and the PD determines to be a Finance Document;
 - (k) “First Service Charge/Interest Payment Date” means the date falling after six months of the first disbursement;
 - (l) “First Repayment Date” means the Service Charge/Interest Payment Date of each disbursement as mentioned in Section 4.05 and Section 4.07 to the PA.
 - (m) “Fiscal Year” means the accounting year of the PD commencing each year on January 1 and ending on the following December 31, or such other accounting period of the PD as it may, with IDCOL’s consent, from time to time designate as the Fiscal Year of the PD;
 - (n) “Grace Period” means grace period as mentioned in the Section 4.05 during which principal refinance will not be repaid as per Section 4.08 while the Service Charge/Interest as per Section 4.05 will be payable;
 - (o) “Home Appliance” means air conditioner, refrigerator and other equipment listed in the “Eligible Equipment and Product List” approved by SREDA for the Project, as per agreed with JICA;

-
- (p) “Households” include households, small businesses, commercial or industrial buildings and other private, community or public establishments in the Sub-project Areas;
- (q) “Household Installment Payment” means installment payment scheduled under loan or lease agreement between the PD and Household;
- (r) “Lender and Supplier PD” means the PD defined in Section 2.02 below;
- (s) “Service Charge/Interest” means Service Charge/Interest as stated under Section 4.05 of this Agreement;
- (t) “Service Charge/Interest Payment Date” means 15 March, 15 June, 15 September and 15 December in each year during the term of the Refinance, provided that if such date falls on a day, which is not a business day, the Service Charge/Interest Payment Date shall be the immediately succeeding Business Day;
- (u) “Loans to Households” means the Total Capital Cost of the Home Appliance minus Household Down-payment under Section 3.03;
- (v) “Participating Distributors or PDs” includes a Micro Finance Institution, Non-Governmental Organization, Supplier/Dealer of Approved Home Appliance , Commercial Bank, Merchant Bank, Leasing Companies, or other Private Entities that is a party to this Agreement;
- (w) “Proceeds Account” means a Service Charge/Interest-bearing Bangladesh Taka account to be opened by the PD in its name with any scheduled commercial reputable bank or financial institution acceptable to IDCOL, to which all IDCOL Refinance under this Agreement; all Households down-payment and Installment Payments; PD’s investment proceeds; and any other receivables under this agreement or Transaction Documents shall be deposited from time to time;
- (x) “Refinance” means the Refinance referred to in Section 3.06 and sourced out of the JICA Credit, to be made by IDCOL to the PD;
- (y) “Release Date” means the date on which all monies payable under this Agreement shall have been fully paid in accordance with the provisions hereof;
- (z) “Repayment Date” means each of the First Repayment Date and each quarterly Date falling thereafter until outstanding reduces to zero;
- (aa) “Sub-project/Sub-project Activities” includes sale, supply, lease, purchase, micro-finance and income generation activities; and installation, operation, and maintenance of Approved Home Appliance in the Sub-project Areas;

-
- (bb) “SREDA” is the Sustainable and Renewable Energy Development Authority established under Sustainable and Renewable Energy Development Authority Act, 2012;
 - (cc) “Supplier Participating Distributor” means the PD defined in Section 2.01 below;
 - (dd) “Suspension or Cancellation Notice” means notice specified under Section 4.12;
 - (ee) “Taka” means lawful currency of Bangladesh;
 - (ff) “Total Capital Cost of the Home Appliance ” means total costs of the Approved Home Appliance ;
 - (gg) “Transaction Documents” means this Agreement, sales agreements or credit finance agreements, or other agreements relating to the lease or sale of Home Appliances between the PD and Households; and between the PD and suppliers, manufacturers, dealers or distributors of Approved Home Appliances.
 - (hh) “UIISC Personnel” mean the personnel of Union Information and Service Centers under Access to Information Project of the Government of Bangladesh who are engaged by IDCOL to conduct physical verification of Home Appliances installed under the Sub-project.

Section 1.02. *Interpretation.* In this Participation Agreement, unless the context otherwise requires -

- (a) headings are for convenience only and do not affect the interpretation of this Agreement;
- (b) words importing the singular include the plural and vice versa;
- (c) a reference to a natural person includes any company, trust, joint venture, association, corporation or other body corporate and any authority;
- (d) a reference to a Section, Article, party or Schedule is a reference to that Section, Article, party or Schedule to this Agreement;
- (e) a reference to a document includes an amendment or supplement to, or replacement or novation of, that document but disregarding any amendment, supplement, replacement or novation made in breach of this Agreement; and
- (f) a reference to a party to a document includes that party’s successors and

permitted assigns.

ARTICLE II

Participating Distributors

Section 2.01. *Supplier and Lender PD.* A PD that supplies Approved Home Appliance and extends Loans or micro-credit to Households in the Sub-project Areas under Section 3.01.

ARTICLE III

Loans to Households

Section 3.01. *Loans to Households.* The PD referred to in 2.01 will extend loan to Households for the purchase of Approved Home Appliance.

Section 3.02. *Terms of Loans to Households.*

- (a) IDCOL and the PD will agree upon the Service Charge/Interest rate and tenor of Loans or micro-credit to Households under Section 3.01 in a way that it renders the installment payments of such loan affordable to Households.
- (b) The PD shall use the format of loan or lease agreement attached hereto as Schedule V or substantially in the form acceptable to IDCOL, while making loan or micro-credit to the Households under Section 3.01

Section 3.03. *Households' Down Payment.* Prior to each application of the Households for the Loans to the PD, as per Section 3.01, the Household will make a down payment equal to minimum 7.5% of the Total Capital Cost of each Home Appliance .

Section 3.04. *Refinance.* Without prejudice to Section 4.01(a), if the PD referred to in section 2.01 extends Loans to Households as per Section 3.01, it will receive 85% Refinance of Total Capital Cost to Households.

Section 3.05. *PD Investment.* After IDCOL Refinance under Section 3.04, the remaining PD Loans to Households under Section 3.01 will be considered as PD's investment in each Home Appliance.

ARTICLE IV

IDCOL Refinance

Section 4.01. *IDCOL Refinance.*

- (a) On the basis of approved business plan of the PD, and without prejudice to sections, 3.04 and the provision hereunder, IDCOL agrees to provide

Refinance as per Section 3.04 to the PD during the Availability Period and the PD agrees to receive Refinance amount in accordance with the terms and conditions of this Agreement.

- (b) The Refinancing amount will be revised based on the availability of fund and annual review by IDCOL of the PD's performance in terms of meeting the target projected by the PD in its business plan. IDCOL, at its sole discretion, could reallocate the Refinance amount among the PDs based on their performance and utilisation of the Refinance amount.
- (c) IDCOL Refinance amount are meant for the purposes specified in Sections 3.04 as applicable.
- (d) Unless otherwise agreed by IDCOL in writing, IDCOL's Refinance commitment, as applicable, may be cancelled by IDCOL by serving notice in writing to the PD, if the PD fails to draw its first disbursement upon satisfying the relevant Conditions Precedent within 60 days from the date of this Agreement.

Section 4.02. Eligibility Criteria for PD referred to in Section 2.01. Without prejudice to Conditions Precedent for Disbursement set forth under Section 5.01 (a), the PD shall have to satisfy the following criteria to be eligible for IDCOL Refinance, as applicable, under Sections 3.04, namely,

- (a) it is validly existing in Bangladesh for at least two years with proven experience in Sub-project activities; and
- (b) it has a minimum equity (including capital fund) of Taka 10,000,000.
- (c) it complies with all criteria under Section 4.02;
- (d) its business plan has been approved by IDCOL;
- (e) it segregates its operating activities for Energy Efficiency and Conservation Promotion Financing Project into a Special Project Vehicle ("SPV"), the operating result of which are detailed in audited financial Statement;
- (f) its overall loan recovery rate is at least 85%; and
- (g) it maintains a debt : equity ratio which under no circumstance will exceed 4.0, to be certified annually by auditor.

Section 4.03. Targets. Subject to the approved business plan of the PD referred to in Section 4.02 and annual review by IDCOL, the PD will sell or lease, supply, finance, as applicable, and install and maintain Home Appliance, as may be approved by the SREDA.

- (a) Following the annual review by IDCOL as referred to in Section 4.03 above the target may be revised taking into consideration the performance of the PD and the target provided in its business plan, which the PD will achieve in a period of 24 months from the signing of this Agreement.

-
- (b) IDCOL, in consultation with the PD, will revise each subsequent year's target for the PD.

Section 4.04. Disbursements.

- (a) The PD may request disbursements of the Refinance, as applicable, under Sections 3.04 by delivering to IDCOL, at least twenty one (21) Business Days' prior to the proposed date of disbursement, a Disbursement Request in form attached hereto as Schedule I, and a receipt substantially in the form attached hereto as Schedule II.
- (b) Upon submission of the Disbursement Request by the PD referred to in Section 2.01, IDCOL will disburse the Refinance amount as per Sections 3.04, in the Proceeds Account on fulfilment of Conditions Precedent set forth in Section 5.01(a) and requirements under Section 9.05.
- (c) The number of Disbursements shall not be more than 12 in a year.

Section 4.05. Loan Terms Loan terms including Service Charge/Interest rate on Refinance amount will be as follows:

Interest Rate (on outstanding balance)	Loan Tenor including Grace Period	Grace Period
4% p.a.	Up to 5 years	0.5 year

Section 4.06. Accounts. At least thirty (30) days prior to first disbursement date, the PD will open and maintain following bank accounts (**Sub-project Accounts**) with a bank acceptable to IDCOL (**Account Bank**):

- (a) **Proceeds Account.**
- (i) A proceeds account to which all IDCOL Refinance, PD investment, Households' down-payment and Household Installment Payment proceeds, and all other receivables under this Agreement or Transaction Documents including Performance Liquidated Damages (PLDs), Delay Liquidated Damages (DLDs) and insurance proceeds will be deposited.
- (ii) Subject to the terms and conditions of this Agreement, all proceeds deposited in the proceeds account will be used, to -
- (A) refinance Loans to Households under Section 3.01;
- (B) make payments to the supplier of Approved Home Appliance;
- (C) meet operating expenses of the PD including its institutional development; and
- (D) make repayments as per Section 4.07.
- (iii) The PD will be required to have its cheques countersigned by IDCOL before making any withdrawal from the proceeds account, if IDCOL delivers to the PD -

-
- (A) any Events of Default Notice; or
 - (B) any Suspension or Cancellation Notice.

Provided that IDCOL may waive this right if the PD delivers adequate guarantee to the satisfaction of IDCOL regarding smooth operation of the PD and scheduled debt service under this Agreement.

(b) ***Debt Service Reserve Account.***

- (i) A Debt Service Reserve Account (“**DSRA**”) in a scheduled commercial designated bank (the “**Account Bank**”) shall be opened by the PD as per instruction of IDCOL which will be funded by the PD up to its required balance equal to two quarterly repayment installments under this Agreement, as shall be determined by IDCOL, one month prior to First Repayment Date.
- (ii) A tripartite Escrow Account Agreement among IDCOL, the PD and the Account Bank in this regard will be executed. The Escrow Account Agreement will provide for provisions relating to the deposit to, utilization, withdrawal and operation of the said account;

Section 4.07. ***Repayments.***

- (a) The PD will make quarterly repayment of each principal Refinance amount referred to in Section 3.04 including accrued Service Charge/Interest on each Interest Payment Date including the First Repayment Date :
- (b) All repayments of principal Refinanced amounts and Service Charge/Interest accrued thereon as per Section 4.05 under this Agreement shall be made by the transfer of immediately available funds in Taka to IDCOL’s bank account mentioned below or any other accounts as assigned by IDCOL from time to time.-

Account Number: 36000667
Infrastructure Development Company Limited
Janata Bank, Sher-e-Bangla Nagar Branch,
Dhaka - 1207

Section 4.08. ***Prepayments.***

- (a) The PD giving not less than thirty (30) days’ prior notice to IDCOL may prepay the IDCOL Refinance amount under Section 3.04 on an Service Charge/Interest Payment Date in whole or in part (but, if in part, in a minimum aggregate of Tk. 200,000 (Taka two hundred thousand) and integral multiple of Tk 50,000 (Taka fifty thousand)).
- (b) The PD shall prepay IDCOL Refinance amount by PLDs, DLDs, and insurance proceeds receivable or received under this Agreement or any Transaction Documents.

Provided subject to the approval by IDCOL of any restoration plan

submitted by the PD, the insurance proceeds receivable or received under any Transaction Documents may be used for restoration of the damaged appliances under the Sub-project.

- (c) The amount prepaid shall be applied against the Repayment Installments under Section 4.07 in inverse order of maturity.

Section 4.09. Late Payment. Without prejudice to remedies available to IDCOL under Section 8.02 or otherwise, if the PD fails to make any payment of principal Refinance or Service Charge/Interest, on or before the due date as specified in this Agreement, or if not so specified, as notified by IDCOL to the PD, the PD shall pay a late payment charge which shall be at the rate of 2% per annum over and above the applicable Service Charge/Interest rate specified in Section 4.05 on any overdue amount of Service Charge/Interest and principal Refinance; and in each case from the date any such payment became due until the date of actual payment.

Section 4.10. Suspension or cancellation of Refinance, as applicable, by IDCOL. IDCOL may at any time suspend the undrawn amounts of all Refinance under this Agreement, if -

- (a) the Credits, as referred to in the preamble to this Agreement, are suspended or cancelled for whatever reasons;
- (b) it becomes unlawful for IDCOL to give effect to any of its obligations under this Agreement;
- (c) a right of suspension or cancellation arises under Section 8.02 (a);
- (d) the GOB suspends or terminates the right of the PD to use the proceeds of the Refinance, as applicable, upon the failure by the PD to perform any of its obligations under this Agreement;
- (e) IDCOL evaluates PD's performance, as referred to in Section 9.06, to be unsatisfactory and negative.

Section 4.11. Notice of Suspension or Cancellation. IDCOL will provide to the PD a notice ("**Suspension or Cancellation Notice**") in writing within 15 days of occurrence of any events described in Section 4.10.

Section 4.12. Effect of Suspension or Cancellation by IDCOL.

- (a) Notwithstanding any suspension or cancellation by IDCOL under Section 4.10, all the provisions of this Agreement shall continue in force and effect except the right of the PD to receive Disbursement in respect of the amount so suspended or cancelled.
- (b) All outstanding amounts under this Agreement will become immediately payable by the PD to IDCOL if IDCOL suspends or cancels Refinance under this Agreement.

Section 4.13. Termination of Agreement.

- (a) Termination by the PD. - The PD may, by not less than thirty (30) days'

prior notice in writing to IDCOL, terminate this Agreement, provided that it will immediately pay all outstanding amount under this Agreement.

- (b) *Termination by IDCOL.* - Without prejudice to any provisions in this Agreement IDCOL may, by not less than fifteen (15) days' prior notice ("**Termination Notice**") in writing to the PD, terminate this Agreement.
- (c) All outstanding amounts under this Agreement will become immediately payable by the PD to IDCOL on delivery of Termination Notice under paragraph (b) above.

Section 4.14. *Taxes.* All payments by the PD under this Agreement shall be made without any deduction and free and clear of any taxes except to the extent that the PD is required by law to make payments subject to any taxes. If any amount in respect of taxes must be deducted from any amount payable by the PD to IDCOL, the PD shall pay such additional amount as may be necessary to ensure that IDCOL receives a net amount, which it would have received had payments subject to taxes not been made.

Section 4.15. *Computation of Service Charge/Interest.* Service Charge/Interest on the Refinance amounts and other charges, if any, shall be computed on the basis of actual number of days elapsed and three hundred and sixty (360) days a year.

Article V

Conditions Precedent to Disbursement

Section 5.01. *Conditions Precedent to First Disbursement.* The obligation of IDCOL to make first disbursement to the PD is subject to the fulfilment of following preconditions, namely,

- (a) for the PD referred to in Section 2.01 requesting for Refinance, under Sections 3.04:
 - (i) copy of Memorandum of Association, or Charter, of the PD with a Board of Directors, or Trustee Board, resolution enabling the PD to carry out the business of selling, purchasing, installing, maintaining and financing SHSs; enter into this Agreement; and receive Refinance from IDCOL hereunder shall have been furnished;
 - (ii) all governmental approvals, licenses or consents required for the carrying out of the business of the PD shall have been obtained and are in force; or arrangements, to the satisfaction of IDCOL, shall have been made for their procurement;
 - (iii) legal opinion in form attached hereto as Schedule IV is obtained;
 - (iv) Request for Disbursement under Section 4.05 shall have been made attaching the Certificate of Installation and Acceptance of the Home

-
- Appliance in the form attached hereto as Schedule III.
- (v) copy of the bank receipts, supported by current bank statement, regarding deposit of the Households' Down Payment as per Section 3.03 shall have been furnished;
 - (vi) copy of loan or lease Agreement between the PD and Households under Section 3.01 in form, or substantially in form, attached hereto as Schedule V shall have been furnished;
 - (vii) creation of effective and continuing lien on the Sub-project Accounts referred to in Section 4.06 in favour of IDCOL which is acknowledged by the Account Bank.

Section 5.02. Conditions Precedent to All Disbursements. The obligation of IDCOL to make any disbursement under this Agreement is subject to the fulfilment of following preconditions, namely,

- (a) for the PD referred to in Section 2.01 requesting for Refinance, as applicable, under Sections 3.04:
 - (i) section 5.01 (a) is complied with;
 - (ii) no Event of Default has occurred, is continuing or likely to occur;
 - (iii) Representations and Warranties made under Article VI of this Agreement are true on and as of the date of the relevant Disbursement;
 - (iv) no change in the condition of the PD has occurred which is likely to materially or adversely affect the operation of the Sub-project; and
 - (v) no litigation or other proceedings has been current, or is likely to be instituted, which if adversely determined would materially affect the operation of the Sub-project

ARTICLE VI

Representations and Warranties

Section 6.01. - The PD represents and warrants as follows:

- (a) Status. it is a company duly incorporated and validly existing under the laws of the People's Republic of Bangladesh;
- (b) Corporate Power. it has the corporate power to own its assets, carry on its business as it is being conducted and to enter into, and perform its obligations under this Agreement;
- (c) Corporate Authority. it has the power to enter into and perform, and has taken all necessary action to authorize the entering into, performance and delivery of, this Agreement;
- (d) Dedicated Staff. it has adequate and trained dedicated staff to operate the Sub-project successfully;
- (e) Validity. this Agreement constitutes, or when executed in accordance with its terms, will constitute, its legal, valid and binding obligation

enforceable against the PD in accordance with its terms and, so far the PD is aware, is in full force and effect;

- (f) No Conflict. the execution, delivery and performance by it of this Agreement will not violate or conflict with –
 - (i) any law, rule or regulation or governmental approval or judicial order to which it is subject in any material respect;
 - (ii) the constitutional documents of the PD;
- (g) Authorizations and Approvals. all material authorizations required in connection with entering into, performance and validity and enforceability of this Agreement have been obtained and are in full force and effect so far as the PD is aware and no steps have been taken to revoke or cancel any such authorizations obtained or effected;
- (h) Immunity. the PD, its properties and assets do not enjoy any right of immunity from set-off, suit or execution in respect of its obligations under this Agreement;
- (i) Proceedings. no litigation, arbitration or administrative or other proceedings are current, or to its knowledge, pending or threatened which, if adversely determined, would have a material adverse effect on the Sub-project;
- (j) Accounting Principles. it maintains accounting principles as described under Section 1.01(a);
- (k) Environmental Compliance. it has been in compliance with all Bangladesh environmental laws and regulations relevant for the operation of the Sub-project as well as the Environmental and Social Management Framework as adopted by IDCOL; and
- (l) Funding by others: it has not received any funding from any other donors or funding agencies to carry out the Sub-project Activities.

ARTICLE VII

Undertakings

Section 7.01 Record Keeping. - The PD undertakes that it,

- (a) will maintain proper record of accounts using the Accounting Principles as described in Section 1.01(a);
- (b) shall procure that IDCOL be allowed access to inspect the accounting books, records and other data related to the Sub-project which are in the possession or control of the PD;

-
- (c) shall procure that GOB be allowed access to inspect by itself, or jointly with JICA under the Project the Sub-project sites, Sub-project activities and any relevant records and documents;

Section 7.02 *Furnishing of Information.* - The PD undertakes that,

- (a) it will furnish to IDCOL:
 - (i) audited account of its Energy Saving and Conservation Promotion Financing project for each financial year within ninety (90) days of the end of financial year and audited account of its all activities (highlighting Energy Saving and Conservation Promotion Financing project) for each financial year within one hundred and twenty (120) days of the end of financial year;
 - (ii) its monthly financial statements along with a letter signed by the managing director, certifying that the covenants made under this Agreement have been met;
 - (iii) all of its half yearly financial statements using the format approved by IDCOL showing performance against budget as referred to in Section 7.04;
 - (iv) notice of any Events of Default that has occurred or is likely to occur.
- (b) it, if so requested by the GOB, shall furnish to the GOB any information regarding the administration, operation and financial condition of the PD.

Section 7.03 *Financial Undertakings.* The PD will maintain a ratio of operating revenues to operating expenses (including debt service) of at least 1.25. This ratio is to be calculated, on an aggregate basis, in each semi-annual period.

Section 7.04 *Operation and Maintenance.* – the PD further undertakes that it,

- (a) shall diligently maintain and operate the Sub-project in a safe, efficient and business-like manner;
- (b) shall, between 120 to 90 days before the start of each year with effect from the first disbursement, provide to IDCOL a draft annual operating budget of the Sub-project showing the likely expansion of Sub-project activities for approval; provided that -
 - (i) if IDCOL does not reject the draft operating annual budget in writing to the PD within 30 days of its receipt, that draft annual operating budget as referred to in paragraph (b) above shall become the operating budget for that year;
 - (ii) acting reasonably, if IDCOL rejects the draft annual operating budget and IDCOL and PD do not reach an agreement on such budget, the operating budget of that year will be compiled using items in the previous year's operating budget;

-
- (c) shall not change its business during the tenor of the Refinance;
 - (d) will always comply with Section 6.01 (g);
 - (e) will comply with all law and regulations in respect of payment of taxes or other payment required by the government or any lawful authority;
 - (f) will comply with Section 6.01(d);
 - (g) shall provide warranty, satisfactory to IDCOL, to all Approved Home Appliance sold, leased or supplied to the Households;
 - (h) will provide after sale maintenance support to Households for at least five years, and will not charge any extra fees or cost from the Households except as may be stipulated in the warranty documents for any subsequent repair or replacement of the Approved Home Appliance during the warranty period;
 - (i) will not incur any indebtedness except the permitted refinancing by IDCOL;
 - (j) will comply with Section 4.07;
 - (k) will not enter into any contract with third party which might have material and adverse effect on the security of IDCOL;
 - (l) will always comply with Section 6.01(k);
 - (m) will forthwith inform IDCOL whenever the Households shift the Home Appliances from the place of original installation;
 - (n) will not change its shareholding structure or management without obtaining prior written approval of IDCOL;
 - (o) will not abandon the Sub-project; and
 - (p) will not claim CDM Credit for all Home Appliances installed or to be installed by them under IDCOL Energy Saving and Conservation Promotion Financing project. IDCOL will arrange it on behalf of the PD and share with the PD under a mutual agreement.

Section 7.05. *Distributions*. If an Event of Default shall occur and IDCOL delivers a notice thereof to the PD, the PD will have to have its bank cheques countersigned by IDCOL before making any transfer or distribution of money from the Secured Accounts.

-
- Section 7.06. *Negative Pledge*. No further encumbrances over Sub-project Accounts will be allowed unless approved by IDCOL in writing.
- Section 7.07. *Funding by others*: The PD shall not claim or receive any funding from any other donors or funding agencies, except IDCOL, to carry out the Sub-project Activities.
- Section 7.08. *Geographic location of Home Appliance*. The PD will provide the data related to the location of the Home Appliance installed using Global Positioning System, as required by IDCOL, along with the disbursement request.
- Section 7.09. The PD shall extend full cooperation to IDCOL officials, SREDA officials, Collection Efficiency Inspectors, UISC Personnel while conducting monitoring, inspection and random verification as provided under Section 9.05 below.

ARTICLE VIII

Events of Default

- Section 8.01. – It shall be an event of default on the part of the PD, if,
- (a) *Non-payment*. it fails to make repayment in accordance with Section 4.07;
 - (b) *Breach of Representations and Warranties*. it commits breach of any Representations and Warranties under Article VI that IDCOL determines to have material and adverse effect on the Sub-project;
 - (c) *Breach of Undertakings*. it commits breach of any undertakings under Article VII that IDCOL determines to have material and adverse effect on the Sub-project;
 - (d) *Government Action*. government takes any action to nationalize, expropriate or confiscate the PD and/or its assets;
 - (e) *Failure to Achieve Target*. it fails to comply with Section 4.03 and to provide an explanation acceptable to IDCOL for such non-compliance;
 - (f) *Declaration of Insolvency by Court*. it is declared insolvent by any court;
 - (g) *Insolvency proceedings by the PD*. any insolvency, bankruptcy or reorganization proceedings is undertaken by the PD that has not been discharged within thirty (30) days of its institution; and
 - (h) *Insolvency proceedings by the Creditor*. any insolvency proceeding is undertaken against the PD by any creditor of the PD that has not been

discharged within thirty (30) days of its institution.

- Section 8.02 Remedies upon an Event of Default. If IDCOL becomes aware, or is notified by the PD, of occurrence or likelihood of any Events of Default, it may,
- (a) suspend or cancel its commitment to provide any undisbursed Grants and Refinance under this Agreement;
 - (b) declare all amounts outstanding due and immediately payable;
 - (c) require the PD to have its cheques countersigned by IDCOL before making any withdrawal from Sub-project Accounts.

- Section 8.03. Cure Period.
- (a) If IDCOL becomes aware, or is notified by the PD, of occurrence or likelihood of any Events of Default that IDCOL determines to be curable, it will send to the PD a notice in writing (“Notice of Events of Default”) requiring the latter to cure the relevant default within 30 days of its occurrence.
 - (b) If the PD fails to cure the default referred to in paragraph (a) above within the Cure Period, IDCOL may exercise remedies under Section 8.02 or any other available remedies.

- Section 8.04. Savings of Rights. No course of dealing and no delay in exercising, or omission to exercise any right, power or remedy accruing to IDCOL upon any Events of Default of the PD, shall impair any such right, power or remedy or be construed to be a waiver thereof, or any acquiescence therein, nor shall the action of IDCOL in respect of any Event of Default, or any acquiescence therein, affect or impair any of its right, power or remedy in respect of other Events of Default.

ARTICLE IX

Miscellaneous Provisions

- Section 9.01. Governing Law and Jurisdiction. This agreement is governed by and shall be construed with the laws of the People’s Republic of Bangladesh.

- Section 9.02. Dispute Resolution.
- (a) Negotiation. Any dispute that may arise between the PD and IDCOL in connection with or under this Agreement shall be tried to be amicably resolved through mutual negotiation of both parties.
 - (b) Mediation. If any dispute referred to in paragraph (a) above arises and cannot be resolved through negotiation, it will be referred to a third party mediator selected by both parties for a mediated resolution; and the cost of such mediation will be shared jointly by both parties.

-
- (c) *Arbitration*. In case a dispute is not resolved through methods as per paragraphs (a) and (b) above, it shall be referred to arbitration under the Arbitration Act 2001 (the “Act”) of Bangladesh as the last resort; the arbitral award thereon shall be final and binding; and the cost of such arbitration shall be shared jointly by the parties or as may otherwise be determined under the Act.

Section 9.03. *Successors and Assigns*. This Agreement shall bind, and inure to the benefit of, the respective successors and permitted assignees of the parties. IDCOL shall give the PD at least fifteen (15) days’ written notice before making any such assignment.

Section 9.04. *Consultancy, training*, Home Appliance tools and publicity materials.

- (a) Subject to availability of fund, IDCOL will provide consultancy, training, Home Appliance tools and publicity materials to the PD.
- (b) IDCOL will bear 80% of the costs related to the activities mentioned in paragraph (a) above, whereas the PD will have to bear the rest 20% of such costs.
- (c) IDCOL and the PD will reach prior agreement about the scale, cost etc. of activities mentioned in paragraph (a) above.

Section 9.05. *Monitoring and Random Verification by IDCOL*. IDCOL will monitor the PD and make random verification of its performance statements including visiting Households to ensure that:

- (a) the PD is using IDCOL Refinance for the purposes intended under this Agreement;
- (b) the PD referred to in Section 2.01 is providing after sale services of the Home Appliances;
- (c) Households are satisfied with their Home Appliances ; and
- (d) the Approved Home Appliance installed is performing according to the warranty provided.

Section 9.05 (i) The PD will provide all necessary support and cooperation at all times to IDCOL officials and verification inspectors including UISC Personnel engaged by IDCOL for Home Appliance inspection in order to ensure proper inspection of Home Appliance installed and to check the books of accounts of PD’s offices at different level. The PD will take necessary immediate action against its staffs showing non-cooperation to IDCOL officials and verification inspectors as well as UISC Personnel, to the satisfaction of IDCOL.

-
- Section 9.06. Evaluation of Performance of PD. IDCOL will annually evaluate the performance of the PD, and, based upon the evaluation, decide whether to continue or suspend or cancel its line of Credits to the PD.
- Section 9.07. Amendment and waiver.
- (a) Any provision of this Agreement may be amended by mutual agreement of the parties in writing.
 - (b) Any waiver of any right under this agreement must be in writing and signed by the parties.
- Section 9.08. Confidentiality. IDCOL undertakes to keep all information referred to under Section 7.02 confidential and not to disclose to any third party unless such disclosure is:
- (a) incidental to or in connection with this Agreement;
 - (b) required by an order of a court of competent jurisdiction whether in pursuance of any procedure for discovering documents or otherwise;
 - (c) made to its officers and employees, or other professional advisors;
 - (d) required to be made before any banking, taxation, or other governmental or regulatory authority who is lawfully entitled to that disclosure.
- Section 9.09 Set-off. IDCOL may set-off any matured obligation owed by the PD under this Agreement against any obligation (whether or not matured) owed by IDCOL to the PD, regardless of the place of payment.
- Section 9.10 Indemnity. The PD shall, on demand, forthwith indemnify IDCOL against any loss or liability, which IDCOL incurs as a consequence of any late payment by the PD under Section 4.09.
- Section 9.11 Authorized Signatories.
- (a) The PD shall furnish to IDCOL, in form and substance satisfactory to IDCOL, evidence of the authority of the person or persons who will, on behalf of the PD, sign the Disbursement Request and Certificates under this Agreement, or take any action or execute any document required or permitted to be taken or executed by the PD under this Agreement.
 - (b) The PD shall furnish to IDCOL the authenticated specimen signature of each such person under paragraph (a) above.
- Section 9.12 Survival of Agreement. This Agreement shall continue in force in accordance with the terms and conditions hereof until the Release Date.
- Section 9.13 Subrogation. If the PD referred to in Section 2.01 becomes insolvent, bankrupt, incapable to continue its business, or is expropriated /

nationalized / confiscated by the government, or ceases to exist; and IDCOL decides to exercise remedies under Section 8.02, all rights of the PD pursuant to loan agreement between the PD and Households as per Section 3.01 and 3.02(b) will be subrogated to IDCOL.

Section 9.14 *Extension of the Availability Period:* IDCOL, after completion of the Availability Period or subsequently on an annual basis, will evaluate the performance of the PD, and, based upon the evaluation, decide whether to revise the PD target under Section 4.03 and to continue or suspend or cancel its Refinance amounts under Section 4.01 or re-fix the Availability Period

Section 9.15 *Project Security:* The PD will provide the securities described in Schedule VIII to this Agreement in favour of IDCOL, to the satisfaction of IDCOL.

Section 9.16 *Default indemnity and expenses*

- (a) The PD shall fully indemnify the IDCOL from and against any actual or threatened expense, loss, damage or liability (as to the amount of which the certificate of the IDCOL shall, save for manifest error, be conclusive and binding upon the parties hereto) which any of them may incur as a consequence of breach of the terms of the Finance Documents. Without prejudice to its generality, the foregoing indemnity shall extend to any interests, fees or other sums whatsoever paid or payable on account of any moneys borrowed in order to fund any unpaid amount and to any loss (including loss of profit), premium, penalty or expense which may be incurred in liquidating or employing deposits from third parties acquired to make, maintain or fund the Refinance (or any part thereof) or any other amount due or to become due under this Agreement.
- (b) The PD shall pay on demand, in each case on the basis of a full indemnity:
 - (i) to the IDCOL all expenses (including legal expenses) incurred in connection with any variation consent or approval relating to this Agreement or in connection with the preservation, enforcement or the attempted preservation or enforcement of any of their rights under this agreement; and
 - (ii) any stamp, documentary and other duties and taxes to which this Agreement may be subject or give rise and shall fully indemnify the IDCOL from and against any losses or liabilities which IDCOL may incur as a result of any delay or omission by the PD to pay any such duties or taxes.

Section 9.17 *CDM Claim:* The PD will not claim or sell CDM Credit deriving from any or all Home Appliances installed or to be installed by them under the Sub-project. If there is an opportunity, IDCOL, on behalf of the PD,

will arrange CDM Credit for Home Appliances installed by PD and share the revenue with the PD under a mutual agreement.

Section 9.18 Change of Management: The PD shall not change its shareholding structure or management without obtaining prior written approval of IDCOL.

Section 9.19 If during Monitoring and Random Verification under Section 9.05, any IDCOL official, SREDA official, verification inspector or UISC Personnel identifies any false Home Appliance installation claim or do not find Home Appliance in reported place or there exists any evidence of fraud from the PD's part with an attempt to duplicate claims for Home Appliance, the PD will be charged a penalty of Tk. 5,000 for each such Home Appliance and PD will bear the transportation expense of IDCOL official, SREDA official, verification inspector or UISC Personnel related to such inspection.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed in their respective names on the date first above written.

The common seal of
INFRASTRUCTURE DEVELOPMENT COMPANY LIMITED
Was affixed in the presence of:

)
)

Name:
Title:

The common seal of:

)
)

Name:
Title:

Schedule I: Form of Disbursement Request

(Refer to Section 4.04(a))

[PD LETTERHEAD/LOGO]

[Address]

[Date]

Executive Director and CEO
Infrastructure Development Company Limited (IDCOL)
UTC Building (16th Floor)
8 Panthapath, Kawranbazar
Dhaka - 1215, Bangladesh

Dear Sir:

Participation Agreement No. []

Request for Disbursement No. []

Please refer to the Participation Agreement dated [] (the "Participation Agreement") between [] (the "PD") and IDCOL.

All terms defined in the Participation Agreement shall bear the same meanings herein.

The PD hereby requests the Disbursements, on or before [], of the following amount, in accordance with the provisions of Sections 3.04:

Item	Amount (Taka)
Refinancing	

The PD requests that such amount be paid to the Proceeds Account (referred to in Section 4.06) of the PD No. ... at the [Name and Address of local commercial bank].

IDCOL has heretofore disbursed the requested amount under the IDCOL Participation Agreement with the PD.

For the purposes of Section 4.04 of the Participation Agreement, the PD hereby certifies as follows:

(a) For the PD as referred to in Section 2.02, requesting Grants and Refinancing under Sections 3.04

1. Section 5.01(a) is complied with;
2. No Event of Default as described under Article VIII of this Participation Agreement has occurred, is continuing or likely to occur;
3. Representations and Warranties made under Article VI of this Participation Agreement true on and as of the date of the relevant Disbursement;
4. No change in the Condition of the PD has occurred which is likely to materially or adversely affect the carrying out of the Sub-project;
5. No litigation or other proceedings has been current, or is likely to be instituted, which if adversely determined, would materially affect the operation of the Sub-project; and
6. We have not received, or will not claim, any grant, subsidy, or financing from any funding agency, donor or other third party, except IDCOL, for the solar home systems for which grant and/or refinancing have been requested under this Disbursement Request.
7. We have not received, or will not claim, any grant, subsidy, or financing for Home appliance installed in the existing grid area nor shall we claim any grant or refinancing from IDCOL for such Home appliances.

The certifications above are effective as of the date of this request and will continue to be effective as of the date of disbursement. If any of these certifications is no longer valid as of or prior to the date of the disbursement hereby requested, the PD will immediately notify IDCOL and will repay the amount disbursed upon demand by IDCOL if disbursement is made prior to the receipt of such notice.

Yours faithfully,

By

Authorized Representative

Schedule II: Form of Disbursement Receipt

(Refer to Section 4.04(a))

[PD LETTERHEAD/LOGO]

[Address]

[Date]

Executive Director and CEO
Infrastructure Development Company Limited (IDCOL)
UTC Building (16th Floor)
8 Panthapath, Kawranbazar
Dhaka - 1215, Bangladesh

Dear Sir:

Participation Agreement No. []

Request for Disbursement No. []

We, [Name of the PD], hereby acknowledge receipt of the sum of Taka [] disbursed to us by Infrastructure Development Company Limited (IDCOL) under the Participation Agreement dated [] signed between ourselves and IDCOL.

Yours faithfully,

By

Authorized Representative

Schedule III: Form of Installation and Acceptance of Home Appliance
(Refer to Section 5.01(a)(iv))

[PD LETTERHEAD/LOGO]

[Address]

[Date]

Executive Director and CEO
Infrastructure Development Company Limited (IDCOL)
UTC Building (16th Floor)
8 Panthapath, Kawranbazar
Dhaka - 1215, Bangladesh

Dear Sir:

Participation Agreement No. []

Request for Disbursement No. []

We, [Name of the PD], hereby certify the installation of Home appliance of following particulars:

Name of the Households and Address	Model and Serial No.	appliance Cost (Taka)	Household Down Payment (Taka)	PD Loans (Taka)	Global positioning information of Home Appliance

Yours faithfully,

By:

Authorized Representative

Schedule IV: Form of Legal Opinion

Refer to Section 5.01(a)(iii))

[To be typed on the Letterhead of counsel acceptable to IDCOL]

[Address]

[Date]

Executive Director and CEO
Infrastructure Development Company Limited (IDCOL)
UTC Building (16th Floor)
8 Panthapath, Kawranbazar
Dhaka - 1215, Bangladesh

Dear Sir:

IDCOL Participation Agreement No. [] with [Name of the PD]

At your request, we have acted as Counsel for [name of the PD] in connection to the Participation Agreement dated [] between [Name of the PD] and IDCOL.

Expressions defined in the Participation Agreement bear the same meanings herein.

In connection with the foregoing and in our capacity as Counsel for [Name of the PD], we have examined the following documents:

- (a) The Participation Agreement;
- (b) The [Charter and Other Constitutional Documents] of [Name of the PD];
- (c) The resolutions of the [Name of the PD]'s Shareholders Meetings or Board of Directors authorizing:
 - (i.) [Name of the PD] to enter into the Participation Agreement;
 - (ii.) A person or persons to sign the Participation Agreement;
 - (iii.) A person or persons to sign the requests for disbursements and all other notices required to be given by the [name of the PD] under the Participation Agreement; and

(iv.) [Other relevant resolutions]

- (d) [All relevant governmental consents and authorizations]
- (e) Such other records and documents as we have deemed necessary or appropriate for the purposes of this opinion.

Based on the foregoing, we are of the opinion that:

- (a) [name of the PD] is duly [incorporated/authorized], validly existing and in good standing under the laws of Bangladesh.
- (b) the Charter is in compliance with the laws of Bangladesh and does not contain any provision which contradicts or impairs the participation Agreement;
- (c) [Name of the PD] has good title to all of its long term assets;
- (d) [Name of the PD] has obtained all governmental, corporate, creditors', shareholders' and other necessary licenses, approvals, or consents for:
- (i.) the Release of Refinance by IDCOL under the Participation Agreement;
 - (ii.) the carrying out of Sub-project Activities in accordance with Section []; and
 - (iii.) the remittance to IDCOL of all monies payable in respect of the Participation Agreement.
- (e) The Participation Agreement has been duly authorized, executed and delivered by [Name of the PD]; and
- (f) [Name of the PD] is current on its tax obligations; or [the PD is a tax-exempt entity].

This opinion is limited to laws of Bangladesh and is given in the premise that the Participation Agreement will be governed by and construed in accordance with Bangladeshi laws.

Yours faithfully,

By

Signature of the Counsel

Schedule V: Form of Loan or Lease Agreements between the PD and Households
(Refer to Section 3.02(b) and Section 5.01(a)(ii))

Loan or Lease Agreements between the PD and Household

1. This agreement has been signed on between: _

the first party and

Name: _____ Father/Husband _____, Village: __
_____ Post Office: _____ Union: _____
Upazila: _____
District: _____ Mobile No.: _____, the second party

2. The second party having customer no. _____ has acquired the Home Appliance of as a leasing product from the first party which has been installed by the first party in the above mentioned address. Description of this system is as follows:

Description	No.	Serial No.	Model	Size/Capacity (Litre / Ton)
Refrigerator				
Air Conditioner				

3. Terms and conditions to lease out the above mentioned home appliance is as follows:

- a. The home appliance will comprise of above-mentioned electronic equipment as per the agreement.
- b. The selling price (package) of the home appliance is _____ Taka (in words _____ Taka)
- c. The second party has paid _____ Taka (in words _____ Taka) to the first party as _____% down-payment.
- d. The remaining _____ Taka (in words _____ Taka) including ___4___ % service charge totalling _____ taka will be repaid in _____ equal monthly installments of _____ Taka (in words _____ Taka) each.
- e. The last date of full repayment for the second party is _____.
- f. The second party has to pay monthly installment by _____ of each month.

-
4. If the second party fails to pay installments on due time, the first party retains the right to impute extra service charge (6% - 15%) or seize the home appliance, if necessary.
 5. The first party provides guarantee paper of the home appliance to the second party. Guarantee remains valid subject to proper following of user manual by the second party. User manual provided by the first party will be treated as a part of this agreement.
 6. The first party has the right to take legal action if the second party fails to repay the installations on due time or violates any of the terms and conditions of this agreement. In that case, the guarantee will become invalid.
 7. Representatives of the first party can terminate the guarantee if the second party does not follow the user manual properly.
 8. The second party shall inform and take help from the first party to relocate the system or to make any kind of modification, addition or deduction in home appliance. Otherwise, the guarantee will be treated invalid.
 9. The first party will not embrace the ownership of the home appliance until full repayment of the home appliance price has been made. After repayment of the entire amount, the second party will be entitled as the owner of the home appliance and _____ will provide certificate of ownership to the second party stating that all the payments have been disbursed successfully.
 10. The second party will make the repayments at banks assigned by the first party or to the representatives of first party.
 11. If the subscriber wants to return the home appliance voluntarily or the first party wants to dismantle the system, depreciation will be calculated in the following way which will be adjusted with the system price.
 - a. 25% of the system price will be taken as depreciation for the first year.
 - b. 25% of the remaining payment will be taken as depreciation for the second year.
 - c. 20% of the remaining payment will be taken as depreciation for the third year.
 - d. 20% of the remaining payment will be taken as depreciation for the fourth year.
 - e. For the fifth year, 20% of the remaining payment will be taken as depreciation.
 12. The subscriber will ensure the receipt of cash memo while paying installments or down payment to any representative or office of the first party.
 13. The first party will not be responsible for theft or breach or any damage caused by cyclone or any natural calamities to the home appliance.
 14. The first party will look after home appliance during the period of after sales service stated in the guarantee papers. The subscriber will maintain or bear the cost of electricity.

On failure to repay the above mentioned installments
I will return the home appliance as per agreement or repay

the installments

The Second Party: Buyers Signature

Name, Address and Signature of the guarantor

On behalf of the First Party –

Signature:

Branch Manager: Signature:

1.Name: _____

Name: _____

Father/ Husband: _____

Mobile No: _____

Village: _____ P.O: _____

Seal: _____

Union: _____ Mobile No: _____

Assigned C.P.: Signature: _____

Upazila: _____ District: _____

Name: _____

Mobile No: _____

Seal: _____

Witness: _____

Signature:

Accountant/ Assistant Manager

2.Name: _____

Signature: _____

Father/ Husband: _____

Name: _____

Village: _____ P.O: _____

Mobile No: _____

Union: _____ Mobile No: _____

Seal: _____

Schedule VI

(Refer to Section 9.15)

Sl. No	Security	Instrument
1.	<p>To secure 20% of the outstanding Refinance amount, any one of the following securities or a combination of both has to be provided by the PD on or before 15 December of each year:</p> <p>(a) Legal mortgage of land measuring _____ (_____) decimals in the name of IDCOL along with an irrevocable general power of attorney to sell the said land;</p> <p>(b) Bank Guarantee</p> <p>Amount of security will increase with the increase of Refinance amount.</p>	<p>(a) Deed of Mortgage executed/to be executed by the PD in favour of IDCOL registered with the Sub-Registrar of Lands, and the Registrar, Joint Stock Companies and Firms (as applicable).</p> <p>An Irrevocable General Power of Attorney executed/to be executed by _____ empowering IDCOL to sell the mortgaged land.</p> <p>(b) Bank Guarantee has to be provided for 2 years period.</p>
2.	<p>A first priority fixed charge by way of hypothecation over all fixed assets of the PD including but not limited to plant and machinery, equipment of the Project in favour of IDCOL;</p>	<p>A Letter of Hypothecation by way of fixed charge executed/to be executed by the PD in favour of IDCOL and registered with the office of the Registrar, Joint Stock of Companies and Firms, securing the Facilities along with interest and charges.</p> <p>An Irrevocable General Power of Attorney executed/to be executed by the PD empowering IDCOL to sell the hypothecated assets, duly notarized/to be notarized.</p>
3.	<p>A first priority floating charge by way of hypothecation over all floating assets of the PD including but not limited to spare parts, inventories, plant and machinery, equipment of the Project in favour of the PD;</p>	<p>A Letter of Hypothecation by way of floating charge executed/to be executed by the PD in favour of the PDs and registered with the office of the Registrar, Joint Stock of Companies and Firms, securing the Facilities along with interest and charges.</p> <p>An Irrevocable General Power of Attorney executed/to be executed by the PD</p>

		empowering IDCOL to sell the hypothecated assets, duly notarized/to be notarized.
4.	A guarantee by the Directors of the PD undertaking repayment of the debt obligation of the PD under the Participation Agreement	Personal guarantees to be executed by the following persons in favour of the PDs: (a) (b) (c)
5.	Charge documents	Demand Promissory Note and Letter of Continuity executed by the PD in favour of IDCOL from time to time.
6.	Corporate Guarantee by any Sister Concern or any other Company or Letter of Comfort from the Governing Board and PD	Corporate guarantees to be executed by the following companies in favour of the PD: (a) (b) (c) Or the Governing Board will execute a Letter of Comfort in favour of IDCOL.
7.	Creating lien on projects accounts in favour of IDCOL.	A letter of lien and set-off will be executed by the PD creating lien on all Project Accounts in favour of IDCOL which shall be duly acknowledged by the Account Bank.

14.3. End-user Screening Sheet for B-type Loan

Processing Procedure

- (a) As PD takes a full risk for default and delayed payment, it takes the sole responsibility for the loan processing and approval.
- (b) All potential consumers hoping to purchase an eligible household electrical appliance under the program should approach PD directly with their request.

Consumer Selection

- (a) PD takes the sole responsibility for consumer selection.
- (b) PD sells appliances in electrified areas.
- (c) PD handles enquiries resulting from its outreach and promotional activities by providing additional information and explanation on the requirements.
- (d) PD explains the energy saving features of appliances to potential consumers in the targeted electrified areas who call at PD offices or PD's shops.
- (d) PD interviews with these potential consumers and explains the benefits of the financial services available under the project.
- (e) Before selecting consumers, PD should be satisfied that potential consumers meet the requirements and conditions under the project and that they are committed to purchase.

Loan Amount

- (a) Loan amount should be based on the consumer's ability to repay as assessed by PD and shall be tied to the price of a specific appliance.
- (b) Based on this, the loan amount may include the price and installation cost of the appliance to be purchased.

Terms and Conditions

- (a) The lending period should be from 1 month to 36month.
- (b) The interest rate may vary depending on the credibility and lending period but 8% should be the upper limit.
- (c) The minimum down payment should be 7.5% of the price of appliance to be purchased.

Loan Appraisal

PD should carry out a loan appraisal based on both quantitative and qualitative assessments of the consumer's ability to repay the loan. In evaluating risks and possible collateral, PD shall take into consideration the buy-back value of the used appliance as set forth in the Participating Agreement.

Loan Approval

The loan should be approved by the designated approving body of PD. The approval should presume the consumer's ability to make a down payment of 7.5% or more of the price of appliance to be purchased.

(END)

14.4. Sample Form End User Loan Agreement between PDs and Households

Form of Loan Agreements between the PD and Households (Refer to Section 3.02(b) and Section 5.01(a)(ii) of Participating Agreement)

1. This agreement has been signed on between: the first party and

Name: _____ Father/Husband _____, Village: _____
_____ Post Office: _____ Union: _____
Upazila: _____
District: _____ Mobile No.: _____, the second party

2. The second party having customer no. _____ has acquired the Home Appliance of as a leasing product from the first party which has been installed by the first party in the above mentioned address. Description of this system is as follows:

Description	No.	Serial No.	Model	Size/Capacity (Liter / Ton)
Refrigerator				
Air Conditioner				

3. Terms and conditions to lease out the above mentioned home appliance is as follows:
- The home appliance will comprise of above-mentioned electronic equipment as per the agreement.
 - The selling price (package) of the home appliance is _____ Taka (in words _____ Taka)
 - The second party has paid _____ Taka (in words _____ Taka) to the first party as _____% down-payment.
 - The remaining _____ Taka (in words _____ Taka) including ___4___ % service charge totaling _____ taka will be repaid in _____ equal monthly installments of _____ Taka (in words _____ Taka) each.
- The last date of full repayment for the second party is _____.
- The second party has to pay monthly installment by _____ of each month.
4. If the second party fails to pay installments on due time, the first party retains the right to impute extra service charge (6% - 15%) or seize the home appliance, if necessary.
5. The first party provides guarantee paper of the home appliance to the second party. Guarantee remains valid subject to proper following of user manual by the second

party. User manual provided by the first party will be treated as a part of this agreement.

6. The first party has the right to take legal action if the second party fails to repay the installations on due time or violates any of the terms and conditions of this agreement. In that case, the guarantee will become invalid.
7. Representatives of the first party can terminate the guarantee if the second party does not follow the user manual properly.
8. The second party shall inform and take help from the first party to relocate the system or to make any kind of modification, addition or deduction in home appliance. Otherwise, the guarantee will be treated invalid.
9. The first party will not embrace the ownership of the home appliance until full repayment of the home appliance price has been made. After repayment of the entire amount, the second party will be entitled as the owner of the home appliance and will provide certificate of ownership to the second party stating that all the payments have been disbursed successfully.
10. The second party will make the repayments at banks assigned by the first party or to the representatives of first party.
11. If the subscriber wants to return the home appliance voluntarily or the first party wants to dismantle the system, depreciation will be calculated in the following way which will be adjusted with the system price.
 - a. 25% of the system price will be taken as depreciation for the first year.
 - b. 25% of the remaining payment will be taken as depreciation for the second year.
 - c. 20% of the remaining payment will be taken as depreciation for the third year.
 - d. 20% of the remaining payment will be taken as depreciation for the fourth year.
 - e. For the fifth year, 20% of the remaining payment will be taken as depreciation.
12. The subscriber will ensure the receipt of cash memo while paying installments or down payment to any representative or office of the first party.
13. The first party will not be responsible for theft or breach or any damage caused by cyclone or any natural calamities to the home appliance.
14. The first party will look after home appliance during the period of after sales service stated in the guarantee papers. The subscriber will maintain or bear the cost of electricity.

On failure to repay the above mentioned installments
I will return the home appliance as per agreement or repay
the installments

The Second Party: Buyers Signature

Name, Address and Signature of the guarantor

On behalf of the First Party –

Signature: _____

Branch Manager: Signature: _____

Name: _____

Name: _____

Father/ Husband: _____

Mobile No: _____

Village: _____ P.O: _____

Seal: _____

Union: _____ Mobile No: _____

Assigned C.P.: Signature: _____

Upazila: _____ District: _____

Name: _____

Mobile No: _____

Seal: _____

Witness: _____

Signature: _____

Accountant/ Assistant Manager

Name: _____

Signature: _____

Father/ Husband: _____

Village: _____ P.O: _____

Name: _____

Union: _____ Mobile No: _____

Mobile No: _____

Seal: _____

14.5. Tentative List of PD Candidates

PD Name	Organization Type	Remarks
SolarEn Foundation	Retailer (NGO)	
HAMCO Corporation	Retailer (Company)	
TMSS	Micro Finance Institution	
Bright Green Energy Foundation	Retailer (NGO)	
Saif Powertec LTD.	Retailer (Company)	Listed Company
Ingen Technology LTD.	Retailer (Company)	
Rimso Foundation	Retailer (organization under society act)	
Bengal Renewable Energy Limited	Retailer (Company)	A subsidiary of listed company

15. Technical Implementation Support the Project

15.1. Terms of Reference on JICA Advisors (Experts) for Project Implementation (2016-2017; 2 years)

1. Objectives

The objectives of the advisory are: to assist the efficient and effective implementation particularly in the beginning stage of the Project through the following tasks:

- (a) Facilitate the implementation, including planning and management;
- (b) Conduct monitoring of the Project, including support for appraisal of all the Components of sub-projects by engineers and technical experts;
- (c) Extend support for review and improvement of the Project implementation, and;
- (d) Provide opportunities for capacity development of the stakeholders including providing opportunities to familiarize themselves with the latest EE&C technologies and practices.

The advisors will be procured and provided by JICA.

2. Scope of Services

The main target for the assistance will be SREDA. IFIs, including IDCOL and BIFFL will also be the counterparts of the advisors' activities of conducting technical due diligence of sub-projects. In particular, members of PIU would be provided technical assistance and capacity building on how to conduct walk through as well as investment grade energy audit.

(1) Facilitating Implementation

The advisors shall support SREDA in:

- (i) Preparing the operating guidelines for the Project implementation and revising it, when necessary;
- (ii) Establishing and operating the Project Implementation Unit (PIU), Technical Advisory Committee (TAC) and Advisory Committee (AC);
- (iii) Preparing the Technical Project Proposal (TPP);
- (iv) Overseeing the IFIs' administration and financial management in line with JICA's operation policies and guidelines;
- (vi) Coordinating with the other initiatives by JICA that are related with the Project;
- (vii) Developing a project implementation plan for the subsequent year and prepare a project implementation report on annual cycle, and;
- (viii) Assist in the technical appraisals for loan applications and issuing of the Non Objection Certificates (NOCs).

Until the Consulting Services for IDCOL and BIFFL are in place, the Experts shall support IDCOL and BIFFL in:

- (i) Establishing and operating the Project Implementation Units (PIU)
- (ii) Prepare the implementation plan format
- (iii) Support IDCOL and BIFFL to fill up the implantation plan and submit it to JICA in a timely manner.

(2) Monitoring

The advisors shall support SREDA in:

- (i) Conducting regular monitoring as stipulated in the monitoring framework. Such shall include confirming the progress, appropriateness and effects of the project implementation;
- (ii) Collecting implementation status from IFIs;
- (iii) Collecting energy usage and operation information from the sub-project proponents;
- (iii) Conduct site visits to all component 1 sub-projects, selected Component 2 and Component 3 sub-projects, IFIs and PDs to gather further information on the project status;
- (v) Enabling SREDA to monitor the Project implementation status utilizing online system such as Project management information system (MIS), including the support for development of the online monitoring system such as MIS (hosting a simple database server to be accessible from IFIs, PDs and Proponents for uploading necessary information via public internet under encrypted communication environment);
- (iv) Reporting the monitoring results to JICA (including the preparation of QPRs) and to other related organizations as required, and;
- (v) Monitoring of the implementation status of the Environment and Social Management System (ESMS) of IDCOL, BIFFL and SREDA, and the preparation of reports of the three executing agencies (through outsourcing to local consultants).

(3) Review and Improvement

The advisors shall extend advisory service for:

- (i) Revising eligible technology / equipment list;
- (ii) Improving and updating appraisal manuals in consultation with the IFIs;
- (iii) Support SREDA and encourage the IFIs to promote awareness-raising of stakeholders and public in general in relation to EE&C.

(4) Capacity Development

The Advisors shall:

- (i) Facilitate the Project stakeholders (executing agencies, equipment suppliers, borrowers, etc.) to acquire knowledge on EE&C technologies and measures through meetings and other means;

Until the Consulting Services for IDCOL and BIFFL are in place, the Experts shall support IDCOL and BIFFL in:

- (ii) Supporting the IFIs' appraisal skills on corporate finance and to extend advisory service as required.

3. Deliverables

The advisors will submit the following reports to JICA and PIU of SREDA to report the implementation progress, the issues analysis, and the recommendations for the project. The language of the reports will be in English.

Table 31 Reporting Requirements for Consulting Services

Report	Timing	# of Copies	Remarks
Implementation Plan	On commencement	10	To be revised on rolling basis
Operation Guidelines	Within 3 month of commencement	10	To be further revised as necessary
Quarterly Progress Report	Every three months	10	Quarterly update
Completion Report	End of contract	10	Report on advisory service activity

The progress reports, which are explained in Annex I Project Status Report in details, should also include those matters associated with the Project implementation including but not limited to the followings:

- (i) Disbursement/ fund transaction
- (ii) Monitoring of accounts, physical inspection, and other activities
- (iii) Assistance in energy management and audit
- (iv) Assistance for Technical Advisory Committee
- (v) Matters reported to relevant organizations
- (vi) Recommendations for project implementation
- (vii) Others

4. Time Schedule

The time schedule for the advisory task is as shown in the following table:

Table 32 Expected Time Schedule for Advisory Task

Milestone	Date
Commencement of Activity	Mar 2016
Completion of Activity	Feb 2018

5. Advisory Team

(1) List of Professionals

The expectation for the advisors to be engaged in the assignment is as described in the table below:

Table 33 List of Advisors

Experts	Qualification		
	Education	Professional Experience	Language
Project Management	Master's Degree or above in Science and engineering fields	<ul style="list-style-type: none"> • More than 20 years' of professional consulting experiences. • Experience of sustainable energy projects in developed countries; • Experiences of ODA Two-step loan projects; 	Proficient in writing and speaking
Energy Efficiency and Conservation	Master's Degree or above in related fields	<ul style="list-style-type: none"> • More than 20 years' professional experiences in energy field • More than 10 years' experience in energy efficiency projects 	Proficient in writing and speaking
Finance and Business Development	Bachelor's degree or above in economics or relevant fields	<ul style="list-style-type: none"> • More than 20 years' professional experiences in finance • Experience in business development 	Proficient in writing and speaking

Capacity Development in EE&C	Master's Degree or above in related fields	<ul style="list-style-type: none"> • More than 15 years' professional working experiences; • Experience of sustainable energy projects in Bangladesh; • Experiences of ODA Two-step loan projects; 	Proficient in writing and speaking
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(2) Roles

The expected roles for the advisor team members are as described in the table below:

Table 34 Roles of Advisors

	Project mgt	EE&C	Fin & business	Capacity Dev't
1. Facilitating Implementation				
Operating guidelines	✓		✓	
PIU, TAC and AC	✓			✓
TPP	✓		✓	
Admin & financial overseeing			✓	
Other JICA activities	✓			
Project implementation plan	✓	✓	✓	✓
Technical appraisal, NOC		✓		
Corporate finance skill			✓	
2. Monitoring				
Appropriateness, effect	✓			✓
IFIs information			✓	
Proponent information		✓		
Site visits		✓	✓	
MIS	✓			✓
QPR	✓			
ESMS				✓
3. Review and Improvement				
Eligible list		✓		
Appraisal manuals		✓	✓	
Business development			✓	
4. Capacity Development				
Technology familiarization	✓			✓

15.2. Terms of Reference on Consulting Services for SREDA (2018-2021; 4 years)

1. Objectives

The objectives of the technical cooperation project are: to assist in the efficient and effective implementation of the Project through the following tasks:

- (a) Facilitate the implementation, including planning and management,
- (b) Conduct monitoring of the Project, including appraisal of Component I and II sub-projects by engineers and technical experts;
- (c) Support for review and improvement of the Project implementation, and;
- (d) Assistance for the development of energy management practice.

The consultancy services will be provided by an international consulting firm in association with the local consultants, procured under the JICA operation rules for employment of consultant.

2. Scope of Services

The main client will be SREDA. The services will nevertheless need to coordinate with IDCOL and BIFFL.

(1) Facilitating Implementation

- Support for the overall Project administration

The Consultant shall:

- (i) Review and revise, when necessary, the operating guideline for project implementation;
- (ii) Assist the Project Implementation Unit (PIU) in the executing agencies, including SREDA, IDCOL and BIFFL, in the administration and financial management in line with JICA's operation policies and guidelines;
- (iii) Assist SREDA PIU in managing the reporting requirements to JICA;
- (iv) Coordinate with the other initiatives by JICA that are related with the Project;
- (v) Develop a project implementation plan for the subsequent year and prepare a project implementation report based on the advance procedure. The work will be done on annual cycle;
- (vi) Assist in the technical appraisals for loan applications and the issuance of the Non Objection Certificate (NOC); and
- (vii) Assist in the operation by Technical Advisory Committee (TAC) and Advisory Committee (AC).

(2) Monitoring

- Overall monitoring

The Consultants shall:

- (i) Prepare an overall monitoring framework and propose to SREDA PIU;
- (ii) Conduct regular monitoring as stipulated in the monitoring framework. Such shall include confirming the progress, appropriateness and effects of the project implementation;

- (iii) Collect implementation status information from IFIs on regular basis. The Consultants will also conduct an energy audit if necessary for potential sub-projects;
- (iv) Conduct site visits to every Component I sub-projects and selected Component II sub-projects to gather information on the business operation and energy saving status;
- (v) Enable SRERA/IDCOL/BIFFL to monitor the Project implementation status through a Project management information system (MIS).
- (vi) Assist SREDA in reporting the monitoring results to JICA (including the preparation of QPRs) and to other related organizations as required.
- (vii) Assist SREDA, IDCOL and BIFFL in the monitoring of the implementation status of the Environment and Social Management System (ESMS) and the preparation of reports.

(3) Reviewing and improvement

- Support for Technical Advisory Committee
The Consultant shall extend support to the Technical Advisory Committee in:
 - (i) Revising the list of Eligible Technology and Equipment List;
 - (ii) Providing technical inputs and guidance for improvement and update of the technical appraisal manuals in consultation with the IFIs.

(4) Capacity Development and Promotion of EE&C

Consultants shall;

- (i) Facilitate the meeting for SREDA with manufacturers of energy efficient equipment so that SREDA may deepen its knowledge on the latest EE equipment and technology;
- (ii) Facilitate the manufacturers and potential end-users to meet and exchange the information on the energy efficient equipment based on the coordination with IDCOL and BIFFL.

3. Deliverables

The Consultant shall submit the following reports to PIU to report the implementation progress, the issues analysis, and the recommendations for the project. The language of the reports is English.

Table 35 Reporting Requirements for Consulting Services

Report	Timing	# of Copies	Remarks
Inception Report	At commencement	10	Including the detailed work plan
Quarterly Progress Report	Every three month	10	Quarterly update
Final Report	End of contract	10	Reporting on Project Completion

The monthly progress reports should include those matters associated with the Project implementation including but not limited to the followings:

- (i) Disbursement/ fund transaction
- (ii) Monitoring of accounts, physical inspection, and other activities
- (iii) Assistance in energy management and audit

- (iv) Assistance for Technical Advisory Committee
- (v) Matters reported to relevant organizations
- (vi) Recommendations for project implementation
- (vii) Others

4. Time Schedule

The time schedule for the project can be shown in the following table.

Table 36 Expected Time Schedule for Consulting Services

Milestone	Date
Commencement of Project	Mar 2018
Termination of Project	Feb 2022

5. List of Professionals

The expectation for the experts to be engaged in the assignment can be described in the below table.

Table 37 List of Professionals

Experts	Qualification			
	Education	Professional Experience	Language	Regional Experience
<International Professionals>				
Team Leader / Project Management	A Doctorate or at least two Master's Degree with at least one being in Engineering. Verifiable Project management qualification.	<ul style="list-style-type: none"> • More than 25 years' of professional working experiences as a consultant; • Experience of project management in sustainable energy equipment installation projects; • At least 2 experience of ICT system development projects; • At least 1 experience of ODA Two-step loan projects consulting; 	Proficient in writing and speaking in verifiable form	At least 3 experiences of sustainable energy development consulting in Bangladesh
Investment and Financial Expert	Bachelor's Degree or above in related fields	<ul style="list-style-type: none"> • More than 10 years' experiences in finance sector • At least 1 experiences of ODA Two-step loan project consulting; 	Ditto	Experiences of sustainable energy development consulting in Bangladesh
Industry Sector Expert	Ditto	<ul style="list-style-type: none"> • More than 5 years' experiences in industry sector consulting 	Ditto	N/A
Expert on Energy Audit	Ditto	<ul style="list-style-type: none"> • More than 10 years' experiences in energy efficiency sector • At least 1 experiences of ODA Two-step loan project consulting; 	Ditto	Experiences of sustainable energy development consulting in Bangladesh
Expert on Capacity Development	Ditto	<ul style="list-style-type: none"> • More than 5 years' experiences in consulting 	Ditto	N/A

<National Professionals>				
Project Administrator	Master's Degree or above in related fields	<ul style="list-style-type: none"> • More than 5 years' experiences in consulting 	Proficient in writing and speaking	N/A
Expert on Energy Audit	Ditto	<ul style="list-style-type: none"> • More than 5 years' experiences in energy efficiency sector 	Ditto	N/A
Expert on Information Management	Ditto	<ul style="list-style-type: none"> • More than 3 years' experiences in information technology sector 	Ditto	N/A
Expert on Public Relations	Ditto	<ul style="list-style-type: none"> • More than 1 year experience in consulting 	Ditto	N/A
Expert on Environmental and Social Considerations	Ditto	<ul style="list-style-type: none"> • More than 1 year experience in environmental / social consulting 	Ditto	N/A

15.3. Terms of Reference on Consulting Services for IFIs (2016-2021; 5 years)

1. Objectives

The objectives of the employment of consultant are: to assist in the efficient and effective implementation of the Project through the following tasks:

- (a) Facilitate the implementation, including planning and management, and
- (b) Conduct monitoring of the Project, including appraisal of Component I and II sub-projects by engineers and technical experts;

The services will be provided by a national consulting firm, procured under the JICA operation rules for employment of consultant.

2. Scope of Services

The main clients of the services will be IDCOL and BIFFL.

(1) Facilitating Implementation

<For both IDCOL and BIFFL>

- Support for IFIs' loan management and administration
The Consultant shall:
 - (i) Assist the establishment of Project Implementation Unit (PIU) and its pursuing of financial administration and management in line with JICA's operation policies and guidelines;
 - (ii) Assist the fund planning arrangement for the future operation.
 - (iii) Assist the technical appraisal procedure of sub-project by despatching engineers and technical experts as required;
 - (iv) Assist the financial appraisal procedure of sub-project; (*)
 - (v) Coordinate with the related organizations in sub-project appraisal; and
 - (vi) Assist the establishment and encourage the capacity development of the organization for managing the environment and social considerations.
- Promotion and public relations of the Project to encourage the application for the loan
The Consultant shall:
 - (i) Prepare draft promotion strategy and plan for sub-projects
 - (ii) Assist the PIUs in launching the promotion activities
 - (iii) Communicate with the relevant organizations in public relations

<For BIFFL>

- The Consultant shall assist BIFFL to develop the capacity on corporate finance appraisal method.

(2) Monitoring

< For both IDCOL and BIFFL>

- Implementation monitoring
The Consultant shall:

- (i) Assist IFIs in establishing the monitoring framework for financial management including the report forms;
- (ii) Assist IFIs in monitoring and reporting the overall activities on the Project including the SOP;
- (iii) Assist IFIs in ensuring that the activities of the PDs and PFIs are compliant with the Project requirements;
- (iv) Confirming the technical soundness and appropriateness of the sub-projects. The Consultants will also provide the training on how to conduct walk through and investment grade energy audit;
- (v) Support IDCOL and BIFFL respectively to conduct site visit/ physical verifications to at least 25% of the total number of the sub-projects for A-type Loan and random physical inspection for B-type, to gather information on the installation, operation and maintenance status and appropriate use of the fund;
- (vi) Identify issues and propose countermeasures addressing to these issues;
- (vii) Suggest the effective project management system including monitoring and reporting on the Project (e.g. status of sales/ installation of equipment, status of disbursement, status of operation).

(3) Review and Improvement

- (i) Encourage the IFIs to make use of the profit out of the Project for further promotion of EE&C measures, by means of relevant business development, Research and Development (R&D), awareness raising and any other activities.

3. Deliverables

The Consultant shall submit the following reports to IDCOL and BIFFL to report the implementation progress, the issues analysis, and the recommendations for the project. The language of the reports is English.

Table 38 Reporting Requirements for Consulting Services

Report	Timing	# of Copies	Remarks
Inception Report	At commencement	10	Including the detailed work plan
Quarterly Progress Report	Every three month	10	Quarterly update
Final Report	End of contract	10	Reporting on Project Completion

The Consultant shall report those matter associated with the project implementation including but not limited to the following:

- (i) Disbursement/ Fund transaction
- (ii) Capacity development activities
- (iii) Monitoring of accounts, physical inspection, and other activities
- (iv) Assistance in energy management and audit
- (v) Assistance for Technical Advisory Committee
- (vi) Reporting matters to JICA
- (vii) Recommendations for project implementation
- (viii) Others

4. Time Schedule

The time schedule for the services can be shown in the following table.

Table 39 Expected Time Schedule for Consulting Services

Milestone	Date
Commencement of Services	Sep 2016
Termination of Services	Aug 2022

5. List of Professionals

The expectation for the experts to be engaged in the assignment can be described in the below table.

Table 40 List of Professionals

Experts	Qualification			
	Education	Professional Experience	Language	Regional Experience
<International Professionals>				
Team Leader / Project Management	Master's Degree or above in related fields	<ul style="list-style-type: none"> More than 5 years' experiences in consulting / project management 	Proficient in writing and speaking	At least 3 experiences of energy or finance related projects in the Region
Financial Management Expert	Bachelor's Degree or above in related fields	<ul style="list-style-type: none"> More than 3 years' experiences in financial management 	Ditto	At least 1 experience of finance related project in the Region.
Industry Expert	Bachelor's Degree or above in related fields	<ul style="list-style-type: none"> More than 3 years' experiences in industrial production 	Ditto	At least 1 experience of industry related project in the Region.
<National Professionals>				
Project Administration	Ditto	<ul style="list-style-type: none"> More than 1 year experience in consulting 	Ditto	
Public Relations	Ditto	<ul style="list-style-type: none"> More than 1 year experience in consulting 	Ditto	

16. Project Cost Estimation

16.1. Overall Project Cost Breakdown

Breakdown of Cost	Foreign Currency Portion (million JPY)			Local Currency Portion (million JPY)			Total (million JPY)		
	Total	JICA Portion	Others	Total	JICA Portion	Others	Total	JICA Portion	Others
Component I	0	0	0	8,540	8,540	0	8,540	8,540	0
Component II	0	0	0	349	349	0	349	349	0
Component III	0	0	0	1,090	1,090	0	1,090	1,090	0
	0	0	0	0	0	0	0	0	0
Price Escalation	0	0	0	0	0	0	0	0	0
Physical Contingency	0	0	0	0	0	0	0	0	0
Consulting Services -SREDA	637	637	0	224	224	0	861	861	0
Consulting Services -IDCOL	307	307	0	267	267	0	574	574	0
Consulting Services -BIFFL	307	307	0	267	267	0	574	574	0
Land Acquisition	0	0	0	0	0	0	0	0	0
Administration Cost	0	0	0	599	0	599	599	0	599
VAT	0	0	0	301	0	301	301	0	301
Import Tax	0	0	0	0	0	0	0	0	0
Income Tax	0	0	0	201	0	201	201	0	201
Interest during construction	0	0	0	0	0	0	0	0	0
Front End Fee	0	0	0	0	0	0	0	0	0
Total	1,376	1,251	0	11,839	10,737	1,102	13,089	11,988	1,102

Note: Exchange rate
 USD = JPY 120.2
 BDT = JPY 1.55

16.2. Annual Fund Requirement

Item	Total			2016			2017			2018			2019			2020			2021			2022			
	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	
A. ELIGIBLE PORTION																									
I)	Procurement / Construction	0	6,438	9,978	0	131	204	0	1,577	2,444	0	1,577	2,444	0	1,577	2,444	0	1,577	2,444	0	0	0	0	0	0
	Component I	0	5,509	8,540	0	112	174	0	1,349	2,091	0	1,349	2,091	0	1,349	2,091	0	1,349	2,091	0	0	0	0	0	0
	Component II	0	225	349	0	5	7	0	55	85	0	55	85	0	55	85	0	55	85	0	0	0	0	0	0
	Component III	0	703	1,090	0	14	22	0	172	267	0	172	267	0	172	267	0	172	267	0	0	0	0	0	0
				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Base cost for JICA financing	0	6,438	9,978	0	131	204	0	1,577	2,444	0	1,577	2,444	0	1,577	2,444	0	1,577	2,444	0	0	0	0	0	0
	Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II)	Consulting services	1,251	489	2,010	33	16	58	178	73	291	240	88	376	232	87	368	247	88	384	230	85	361	92	52	172
	Consulting Services -SREDA	637	145	861	0	0	0	67	12	85	136	28	180	133	28	176	142	29	187	126	25	165	33	23	68
	Base cost	637	145	861	0	0	0	67	12	85	136	28	180	133	28	176	142	29	187	126	25	165	33	23	68
	Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consulting Services -IDCOL	307	172	574	16	8	29	55	30	102	52	30	98	52	30	98	52	30	98	52	30	98	29	15	52
	Base cost	307	172	574	16	8	29	55	30	102	52	30	98	52	30	98	52	30	98	52	30	98	29	15	52
	Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Consulting Services -BIFFL	307	172	574	17	8	29	56	30	103	52	30	99	48	30	94	52	30	99	52	30	99	30	15	52
	Base cost	307	172	574	17	8	29	55.8	30.5	103.1	52	30	99	48	30	94	52	30	99	52	30	99	30	15	52
	Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total (I + II)	1,251	6,927	11,988	33	148	262	178	1,650	2,734	240	1,664	2,820	232	1,664	2,811	247	1,665	2,827	230	85	361	92	52	172
B. NON ELIGIBLE PORTION																									

Item		Total			2016			2017			2018			2019			2020			2021			2022		
		FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total
a	Procurement / Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Base cost for JICA financing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b	Land Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Base cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	Administration cost	0	387	599	0	8	13	0	88	137	0	91	141	0	91	141	0	91	141	0	12	18	0	6	9
d	VAT	0	194	301		6	9		28	44		36	56		36	55		37	58		35	54		17	26
e	Import Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
f	Corporate Tax	0	130	201	0	4	5	0	18	27	0	24	37	0	23	36	0	24	37	0	22	35	0	15	23
	Total (a+b+c+d+e+f)	0	711	1,102	0	18	27	0	134	208	0	151	234	0	150	232	0	152	236	0	69	107	0	37	58
	TOTAL (A+B)	1,251	7,638	13,089	33	165	289	178	1,784	2,942	240	1,815	3,054	232	1,814	3,043	247	1,817	3,063	230	154	468	92	89	230
	C. Interest during Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Interest during Construction(Const.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Interest during Construction (Consul.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	D. Front End Fee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	GRAND TOTAL (A+B+C+D)	1,251	7,638	13,089	33	165	289	178	1,784	2,942	240	1,815	3,054	232	1,814	3,043	247	1,817	3,063	230	154	468	92	89	230
	E. JICA finance portion incl. IDC (A + C + D)	1,251	6,927	11,988	33	148	262	178	1,650	2,734	240	1,664	2,820	232	1,664	2,811	247	1,665	2,827	230	85	361	92	52	172

16.3. Consulting Services Costs

(1) SREDA

	Unit	Qty.	Foreign Portion		Local Portion		Combined Total	
			(JPY)		BDT			
			Rate	Amount ('000)	Rate	Amount ('000)	('000) JPY	
A	Remuneration							
1	Professional (A)	M/M	136	3,049,000	414,664	0	0	414,664
2	Professional (B)	M/M	205	610,000	125,050	0	0	125,050
3	Supporting Staffs (C)	M/M	108	0	0	130,000	14,040	21,762
	Subtotal of A				539,714		14,040	561,476
B	Direct Cost							
1	International Airfare	trips	181	456,000	82,536	0	0	82,536
2	Domestic Airfare	trips	54	0	0	15,000	810	1,256
3	Domestic Travel	days	270	0	0	12,000	3,240	5,022
3	Accommodation Allowance	Month	136	0	0	220,000	29,920	46,376
4	Vehicle Rental	Month	68	0	0	810,000	55,080	85,374
5	Office Rental	Month	54	0	0	280,000	15,120	23,436
6	International Communications	Month	54	0	0	30,000	1,620	2,511
7	Domestic Communications	Month	54	0	0	100,000	5,400	8,370
8	Office Supply	Month	54	0	0	20,000	1,080	1,674
9	Office Furniture and Equipment	unit	1	0	0	2,000,000	2,000	3,100
10	Report Preparation	Month	14	0	0	20,000	280	434
11	Exposure Visit	times	4	3,620,000	14,480	0	0	14,480
12	Misc. (TAC support)	Month	54	0	0	300,000	16,200	25,110
	Subtotal of B				97,016		130,750	299,679
	Total				636,730		144,790	861,155

Income Tax

0		55,558	86,115
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Note: Exchange rate
 USD = JPY 120.2
 BDT = JPY 1.55

(2) IDCOL

	Unit	Qty.	Foreign Portion		Local Portion		Combined Total	
			(JPY)		BDT			
			Rate	Amount ('000)	Rate	Amount ('000)	('000) JPY	
A	Remuneration							
1	Professional (A)	M/M	72	3,049,000	219,528	0	0	219,528
2	Professional (B)	M/M	69	610,000	42,090	0	0	42,090
3	Supporting Staffs (C)	M/M	544	0	0	130,000	70,720	109,616
	Subtotal of A				261,618		70,720	371,234
B	Direct Cost							
1	International Airfare	trips	60	456,000	27,360	0	0	27,360
2	Domestic Airfare	trips	15	0	0	15,000	225	349
3	Domestic Travel	days	75	0	0	12,000	900	1,395
3	Accommodation Allowance	Month	72	0	0	220,000	15,840	24,552
4	Vehicle Rental	Month	68	0	0	810,000	55,080	85,374
5	Office Rental	Month	68	0	0	270,000	18,360	28,458
6	International Communications	Month	68	0	0	25,000	1,700	2,635
7	Domestic Communications	Month	68	0	0	100,000	6,800	10,540
8	Office Supply	Month	68	0	0	20,000	1,360	2,108
9	Office Furniture and Equipment	unit	1	0	0	1,000,000	1,000	1,550
10	Report Preparation	Month	17	0	0	20,000	340	527
11	Exposure Visit	times	5	3,620,000	18,100	0	0	18,100
12	Misc.	unit		0	0	0	0	0
	Subtotal of B				45,460		101,605	202,948
	Total				307,078		172,325	574,182

Income Tax

0	37,044	57,418
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Note: Exchange rate
 USD = JPY 120.2
 BDT = JPY 1.55

(3) BIFFL

	Unit	Qty.	Foreign Portion		Local Portion		Combined Total	
			(JPY)		BDT			
			Rate	Amount ('000)	Rate	Amount ('000)	('000) JPY	
A	Remuneration							
1	Professional (A)	M/M	72	3,049,000	219,528	0	0	219,528
2	Professional (B)	M/M	69	610,000	42,090	0	0	42,090
3	Supporting Staffs (C)	M/M	544	0	0	130,000	70,720	109,616
	Subtotal of A				261,618		70,720	371,234
B	Direct Cost							
1	International Airfare	trips	60	456,000	27,360	0	0	27,360
2	Domestic Airfare	trips	15	0	0	15,000	225	349
3	Domestic Travel	days	75	0	0	12,000	900	1,395
3	Accommodation Allowance	Month	72	0	0	220,000	15,840	24,552
4	Vehicle Rental	Month	68	0	0	810,000	55,080	85,374
5	Office Rental	Month	68	0	0	270,000	18,360	28,458
6	International Communications	Month	68	0	0	25,000	1,700	2,635
7	Domestic Communications	Month	68	0	0	100,000	6,800	10,540
8	Office Supply	Month	68	0	0	20,000	1,360	2,108
9	Office Furniture and Equipment	unit	1	0	0	1,000,000	1,000	1,550
10	Report Preparation	Month	17	0	0	20,000	340	527
11	Exposure Visit	times	5	3,620,000	18,100	0	0	18,100
12	Misc.	unit		0	0	0	0	0
	Subtotal of B				45,460		101,605	202,948
	Total				307,078		172,325	574,182

Income Tax

0	37,044	57,418
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Note: Exchange rate
 USD = JPY 120.2
 BDT = JPY 1.55

17. Reporting Requirements, Formats for Monitoring

17.1. Project Monitoring and Reporting

SREDA needs to compile the reports from IDCOL and BIFFL to prepare and submit Quarterly Progress Report (QPR) and PSR as Annual Report to JICA.

IDCOL and BIFFL need to submit SREDA implementation status reports quarterly mainly for informing the status of component-wise approval process to find the steps where the bottleneck is for financing. The format of abovementioned report is in Annex 17.4.

IDCOL and BIFFL also need to conduct on site physical verifications at least more than 25% of the number of total loan cases of A-type Loan, and submit SREDA On Site Physical Verification Report quarterly, with the format as in Annex 17.6.

Concerning B-type loan, IFIs agreed that they will take necessary measures to prevent the 'Moral Hazard'. For Reimbursement procedure, IFIs may take the following steps: 1) IFIs will verify the eligible equipment list from Proforma Invoices at the time of opening L/Cs of energy efficient appliances; 2) Random physical inspections will be carried out by the IFIs at the warehouse of the PDs upon arrival of the EE appliances; 3) Each month, the PDs will submit the the list of end users with who availed EE appliances along with their contact numbers(Annex 17.6 can be used) and IFIs will randomly call the end users to verify installation of such appliances; 4) IFIs, with support from PDs, will conduct physical inspection of the installed EE appliances based on annual random sample survey.

In case of Advance Payment procedure of B-type loan, before the advance payment procedure, first and foremost PD needs to have an experience with reimbursement procedure in the Project. Or, PD needs appropriate trainings and/or orientations beforehand to apply for Advance Payment Procedure. Also, IFIs will check performances of the PDs in the past months (3-6 months) and business plan for the next three months and judge if the particular PD may go with such an Advance Procedure.

Then, for instance, IFIs may take the following steps as monitoring :1) IFIs will verify the eligible equipment list from Proforma invoice at the timing of opening L/C by PD; 2) IFIs will also check Letter from the bank to the PD informing the arrival of shipping documents, and confirm shipping documents based on which IFI will disburse the remaining L/C payment as Advance Payment; 3) Random physical inspections will be carried out by the IFIs at the warehouse of the PDs upon arrival of the EE appliances; 4) Each month, the PDs will submit the the list of end users with who availed EE appliances along with their contact numbers (Annex 17.6 can be used) and IFIs will randomly call the end users to verify installation of such appliances; 5) IFIs, with support from PDs, will conduct physical inspection of the installed EE appliances based on annual random sample survey.

Whereas the abovementioned sub-lending procedures-i.e. Reimbursement and Advance Payment procedures are examples, IFIs shall consult with and seek the concurrence from JICA if the institutions would like to apply other procedures.

For Physical Inspection of B-type loan IFIs may use the format as in Annex 17.6 if it is applicable.

Furthermore, IDCOL and BIFFL shall prepare IFI financial report on A-type loan end user and B-type PD, according to Annex 17.5 in each PSR.

End users of A-type are required to submit SREDA the EE&C equipment data with Annex 17.8 immediately after the installation of the energy efficient equipment and quarterly. The end users of A-type loan are also required to submit the Documents and evidences on purchasing and installing EE&C equipment to IFIs as in Annex 17.7.

SREDA, apart from periodical reporting obligations, shall share the implementation status information to JICA, whenever requested.

17.2. Reporting on Environmental and Social Aspect of the Project

The Project is categorized FI because the Project is designed to provide financing to financial intermediaries. Sub-projects cannot be specified prior to JICA's approval for financing and they may have environmental impacts under JICA Guidelines for Environmental and Social Considerations (April 2010) (hereinafter called 'the JICA Guidelines').

The Environmental and Social Management System (ESMS) of IDCOL and BIFFL is adequate although BIFFL is requested to establish ESMS Unit according to ESMS Checklist (Annex 20.1).

IDCOL and BIFFL shall implement the above ESMS Checklist.

The selections of the sub-projects are made based on the Eligible Technologies and Equipment (the EE&C Equipment) List which may be revised during the project implementation and no sub-project under JICA ODA loan would be categorized as A.

SREDA will consider environmental and social aspects of the project in accordance with JICA's guidelines for environmental and social considerations when it renews eligible technologies and products list in consultation with Technical Advisory Committee (TAC).

SREDA, IDCOL and BIFFL will refer to JICA's Definition of Environmental Categorization (Annex 20.2) for reviewing the sub-projects.

IDCOL and BIFFL shall quarterly and annually submit to JICA the monitoring form (Annex 20.3) regarding its ESMS implementation.

In case of the ESMS does not function adequately, a modification plan shall be planned and agreed between IDCOL and BIFFL and JICA.

JICA may disclose (a part of) monitoring results at JICA Web Page and may disclose further information, when third parties request.

IDCOL and BIFFL, according to the above ESMS Checklist, will have a unit respectively which is responsible for the Environmental and Social Considerations of the Project.

17.2.1. Establishment of Units/Assignment of personnel for Environmental and Social aspect of the sub-projects

IDCOL and BIFFL shall assign adequate number of personnel and/or establish a unit that is responsible for ensuring the Environmental and Social aspect of the sub-projects respectively as indicated in ESMS Checklist (Annex 20.1).

17.2.2. Environmental and Social Management Systems (ESMS) Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental and Social Management Systems (ESMS) Checklist attached as Annex 20.1. In case of major changes, this must be informed to JICA by the executing agencies by revising it in a timely manner.

17.2.3. Environmental and Social Performance Report (ESPR)

During the project implementation phase, environmental monitoring will be conducted by contractors under supervision of consultant, and the results will be submitted to PIU through consultant. PIU shall submit the monitoring report to the executing agencies, and the executing agencies shall submit it to Department of Environment and other related organizations, if any. Upon receipt of the monitoring results of the Project, the executing agencies will submit the results to JICA via PIU on a quarterly basis by filling in the ESPR (Annex 20.3) as an attachment to Quarterly Progress Report (QPR), and yearly submit it with the Annual Report. Items to be monitored, frequency and monitoring sites are described in the Form.

17.3. Statement of Expenditure from SREDA to JICA

Project Energy Efficiency and Conservation Promotion Financing Project

L/A No. BD-PXX

● Category: On-lending loans to sub-project proponent for Components I and II

1	2	4	5	6	7	8	9	10	11	12		13
Sub-Loan No.	Proponent	Location	Phone No.	Component (I ~ II)	Equipment category	Amount of IFI's on-lending loan agreement (BDT)	Disbursed amount of on-lending loan (BDT)	Amount of IFI's sub-loan (BDT)	Disbursed Amount of IFI's sub-loan (BDT)	Exchange Date	Exchange Rate	Amount for IFI Financing (JPY)
Total												

● Category: On-lending Loans to the PDs for Component III

1	2	4	5	9	10	11	12		13
Sub-Loan No.	PD	Location	Phone No.	Disbursed Amount of PD's Refinance loan (BDT)	Amount of IFI's sub-loan (BDT)	Disbursed Amount of IFI's sub-loan (BDT)	Exchange Date	Exchange Rate	Amount for IFI Financing (JPY)
Total									

The undersigned certifies that the sub-project proponents, PDs, and the purposes and amount of disbursement stated above are eligible under the Loan Agreement.

Notes : 1. The components in No.6 are as follows;
 Component I Industry and commercial
 Component II Green Building

For (the name of the Borrower)

 (Authorized Signature)

17.4. Quarterly Reporting Format for financial data from IFIs to SREDA

A-type Loan

ID	Proponent	Outstanding (at the beginning of the quarter)	Loan Disbursement	Repayment	Outstanding (at the end of the quarter)	Overdue Outstanding (at the beginning of the quarter)	Overdue Accrued	Overdue Recovered	Overdue Outstanding (at the end of the quarter)
total									

B-type Loan

ID	PD	Outstanding (at the beginning of the quarter)	Loan Disbursement	Repayment	Outstanding (at the end of the quarter)	Overdue Outstanding (at the beginning of the quarter)	Overdue Accrued	Overdue Recovered	Overdue Outstanding (at the end of the quarter)
total									

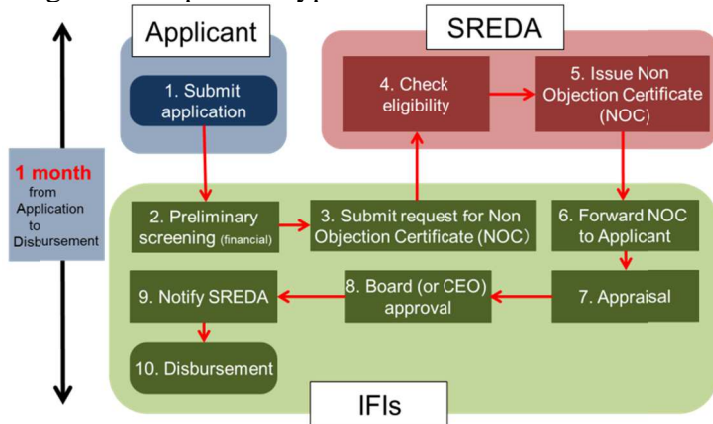
17.5. IFIs Quarterly Implementation Status Report Format

Implementing Financial Institutions (IFIs) are requested to record the appraisal status and submit the following information to SREDA as routine reporting procedure quarterly.

(1) A-type loan Appraisal

ID	Applicant	Application Received date	Credit Risk Rating	Equipment	Status (Step No. of the Figure 1 below & Date)	Disbursement Date & Amount	Interest Rate (%) to End user	Remarks
DCxxxxx	Northwood Textiles Ltd	24/09/2016						
BFxxxxx	Delta Foods Ltd	05/10/2016						

Figure 1: Steps of A-type loan



(2) B-type loan Appraisal Process

PD	Applicant/ End user name	Application Received date	EE Appliance (A/C or Refrigerator)	Amount	Status	Final Interest rate (%) to End user	Remarks
Bengal Trading Ltd	Local Development Foundation	24/09/2016					
Bengal Trading Ltd	Home Facilities Ltd	05/10/2016					

Figure : Example of Steps for B-type Loan, Reimbursement Procedure

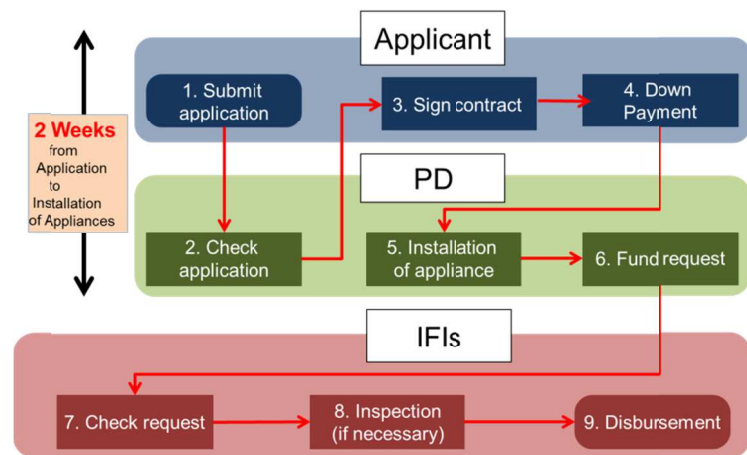
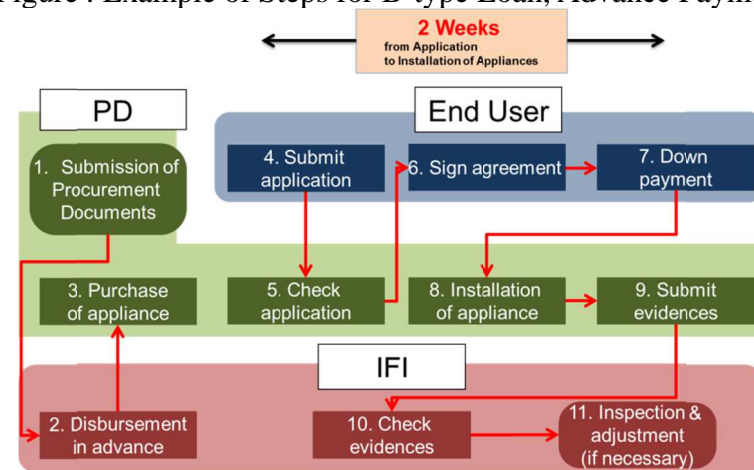


Figure : Example of Steps for B-type Loan, Advance Payment Procedure



17.6. Physical Verification Report Format to be used by the IFIs

(1) A-type Loan Sub-project Inspection Report (Quarterly)

No	Name of proponent	Documents Check Date	Money Transfer Check Date	Installation Check Date
	ABC Co.,	DD/MM/YYYY	DD/MM/YYYY	DD/MM/YYYY
	XYZ Co.,	DD/MM/YYYY	DD/MM/YYYY	N/A

- Note: 1. IFI shall check documents on purchase and money transfer of all proponents.
 2. IFI shall conduct random physical inspection on machine or facility installation of at least 25 % of applicants.
 3. Inspection Report shall be submit 6 months after loan disbursement.

(2) B-type Loan Sub-projects Installation Verification Report (Quarterly)

No	Name of End-user	Installation Check Date
		DD/MM/YYYY

- Note: 1 B/A should be equal to or more than 25%.
 2 Verification will be conducted within 21 days followed by disbursement request from PDs.

Whereas:

Number of Requested Disbursements = A
 Number of Installation Check Date = B
 % B/A

17.7. A-type Loan Sub-Project Proponent Equipment Installation Report

A-type loan sub-project proponents are required to submit the form together with evidences on purchasing and installing EE&C equipment.

ID		
Proponent		
Name of Equipment		
Specification		
Model Number		
Supplier		
Manufacturer		
Unit price		
Number of introduced		
total investment amount		
Verification (to be checked)	estimate	
	invoice	
	receipt	
	Catalogue	
	Photos of installation	
Record of On-site inspection		
Record of Incident		

17.8. Quarterly Report on Energy Efficiency Related Data from A-type Loan Sub-Project Proponents to SREDA

Sub-project ID	DCxxxxxx
Site name	Oriental Paper Mills Chittagong Factory II
Month of reporting	December 2016
Site operation hours	_____ hours
Site production value / volume	_____ (*)
Site electricity consumption	_____ kWh
Site gas consumption	_____ m ³
Equipment electricity consumption (when available)	_____ kWh
Equipment gas consumption (when available)	_____ m ³

Note:

* Proponent may select either value or volume of production. Appropriate unit should be specified in accordance with the choice.

Above information may be submitted online to SREDA website once the environment is developed

Other events if any (incidents, overhaul, etc.)

17.9. Financial Data Reporting Form from PDs to IFIs

ID	User Name	Phone Number	Outstanding (at the beginning of the quarter)	Loan Disbursement	Repayment	Outstanding (at the end of the quarter)	Overdue Outstanding (at the beginning of the quarter)	Overdue Accrued	Overdue Recovered	Overdue Outstanding (at the end of the quarter)
total										

Note: This format can be used by PDs to report status of the B-type loans to IFIs monthly and quarterly.

18. JICA Reporting Templates

18.1. Anti-corruption measures monitoring sheet

Note: This sheet shall be used for procurement of Consultants.

Subject	Agreed Actions	Responsible Agency	Target Date	Measures to achieve
(a) Participation in the Proposal Evaluation Committee (PEC)	To invite one representative from JICA as an observer in evaluation process of EOI, RFP and Tender.	SREDA/IDCOL/BIFFL/JICA		JICA is invited to PEC as an observer
(b) Fraud and Corruption Hotline	To include the contact information on the fraud and corruption hotline in the bidding documents	SREDA/IDCOL/BIFFL		
(c) Internal Audit	To appoint a chartered accountant firm for internal audit and to submit the annual internal audit report to JICA within 6 months after the end of each fiscal year.	SREDA/IDCOL/BIFFL		
(d) Special Training Program	To organize three-day special training course on procurement procedure and financial management for each staff involved in procurement for the Project in cooperation with the training unit of each agency.	SREDA/IDCOL/BIFFL with training units		SREDA/IDCOL/BIFFL will arrange trainings and seminars
(e) Bid Opening Committee (BOC)	To set up the BOC under the Project with the participation of representatives from SREDA/IDCOL/BIFFL. To invite one representative from JICA as an observer.	SREDA/IDCOL/BIFFL /JICA		Through procurement process
(f) Disclosure of Procurement	To publish the procurement plan in its respective website and update twice a year. In addition, to post the information about contract within two weeks of contract awarding.	SREDA/IDCOL/BIFFL		Through publishing in website
(g) Complaint mechanism	To set up a complaint box	SREDA/IDCOL/BIFFL		

Subject	Agreed Actions	Responsible Agency	Target Date	Measures to achieve
(h) Monitoring and inspection of irregularities	To detect and take a disciplinary action against those concerned in a possible corrupt or unethical practice, in accordance with the service rules of the GOB and to publish a summary of the disciplinary action taken by the authority in the annual report.	SREDA/IDCOL/BIFFL	If necessity arises	Through official letter, website

18.2. Statements of Designated Account, Sub Account and Revolving Fund Account

Statements of Designated Account, Sub Account and Revolving Fund Account for
BD-PXX
(Covering Period: From DD/MM/YYYY To DD/MM/YYYY)
(million Taka, unless otherwise specified)

No.	Category	Amount
Designated Account		
1	Opening Balance	
2	Disbursement from JICA (million JPY)	
3	Disbursement from JICA (million Taka)	
4	Total Revenue (2+3)	
5	Transfer to the Sub Account	
6	Total Expenditure	
7	Closing Balance	
Sub Account		
8	Opening Balance	
9	Transfer from the Designated Account	
10	Total Revenue	
11	1st-generation On-lending Loan Disbursement to A-type sub-project proponents and PDs	
12	Total Expenditure	
13	Closing Balance	
Revolving Fund Account		
14	Opening Balance	
15	Principal Repayment from the A-type sub-project proponents and PDs on the 1st-generation On-lending Loans	
16	Principal Repayment from the A-type sub-project proponents and PDs on the On-lending Loans from the Revolving Fund (2nd- and succeeding generation)	
17	Total Revenue (15+16)	
18	Disbursement to the A-type sub-project proponents and PDs for the 2nd and succeeding generation of on-lending loans to the proponents and PDs from the Revolving Fund	

19	Total Expenditure	
20	Closing Balance	
Interest Repayment Account		
21	Opening Balance	
22	Interest repayment from the A-type sub-project proponents and PDs on the On-lending Loans	
23	Total Revenue	
24	Total Expenditure	
25	Interest repayment to the MoF-FD after deduction of Administration Fee from Bangladesh Bank	

18.3. Current Repayment and Overdue Status Report

Current Repayment and Overdue Status Report
(As of DD/MM/YYYY)
(in BDT million)

1. On-lending Loans from the Sub Account (1st generation)

Duration of arrears	Number of the On-lending Loans with arrears	Total amount of arrears	Total loan amount of the On-lending Loans with arrears	Total repaid amount from the On-lending Loans identified in each category
3 to 6 months				
6 months to 1 year				
1 to 2 years				
Over 2 years				

2. On-lending Loans from the Revolving Fund Account (2nd- and succeeding-generation)

Duration of arrears	Number of the On-lending Loans with arrears	Total amount of arrears	Total loan amount of the On-lending Loans with arrears	Total repaid amount from the On-lending Loans identified in each category
3 to 6 months				
6 months to 1 year				
1 to 2 years				
Over 2 years				

3. Sub-Loans from the Sub Account (1st generation)

Duration of arrears	Number of the Sub-Loans with arrears	Total amount of arrears	Total loan amount of the Sub-Loans with arrears	Total repaid amount from the Sub-Loans identified in each category
3 to 6 months				
6 months to 1 year				
1 to 2 years				
Over 2 years				

4. Sub-Loans from the Revolving Fund Account (2nd- and succeeding-generation)

Duration of arrears	Number of the Sub-Loans with arrears	Total amount of arrears	Total loan amount of the Sub-Loans with arrears	Total repaid amount from the Sub-Loans identified in each category
3 to 6 months				
6 months to 1 year				
1 to 2 years				
Over 2 years				

Note: This report only covers the On-lending Loans whose principals are in arrear.

18.4. Audit Report on the Statements of the Designated Account, Sub Account and the Revolving Fund Account

[Standard Form] Audit Report on the Statements of the Designated Account, Sub Account and the Revolving Fund Account

To: Bangladesh Bank

Date: []

We have audited the accompanying Statements of the Designated Account, Sub Account and the Revolving Fund Account relating to the Small and Marginal Sized Farmers Agricultural Productivity Improvement Project financed under Loan Agreement No. BD-[] for the year(s) []. The said Statements are the responsibility of Bangladesh Bank's management. Our responsibility is to express an opinion on the said Statements based on our audit.

We conducted our audit in accordance with Generally Accepted Auditing Standards [or relevant national standards or practices], and accordingly, included such tests of the accounting records, and other auditing procedures necessary to confirm that:

- (a) the proceed of the Loan are used for the purpose of the Project;
- (b) the claims to the Designated Account, Sub Account and the Revolving Fund Account are made only for expenditures on eligible items under the Loan; and
- (c) the Statements of the Designated Account, Sub Account and the Revolving Fund Account are correct.

During the course of the audit referred to above, the said Statements and the concerned documents, together with the procedures and internal controls involved in their preparation, were examined, and they can be relied upon to support the related disbursement under the aforesaid Loan Agreement.

On the basis of the information and explanations that have been obtained as required and according to the best of our information as a result of the test audit, it is certified that the Statements of the Designated Account, Sub Account and the Revolving Fund Account read with the observations set out below represent a true and fair view of the implementation of the Project for the year.

[Name of the Auditor]
[Title of the Auditor]
[Name and Address of Audit Firm]
[Completion Date of Audit]

18.5. On-going Sub-Project Summary Report

(Covering Period: From DD/MM/YYYY To DD/MM/YYYY)

Note: This Report will be filled on quarterly bases by IDCOL and BIFFL respectively and attached to QPR to JICA

No.	Account (Designated or Revolving)	Loan to A-type End user/B-type PDs									Social & Environment	
		Loan type A or B	Name of sub-project proponent (A-type) or PD (B-type)	Name of Equipment	Interest Rate (%)	Maturity (months)	Disbursed Date (dd/mm/yy)	Disbursed Amount (BDT)	Repaid Date (dd/mm/yy)	Repaid Amount (BDT)	Category (A/B/C/FI)	Negative Impact, if any

19. TOR of Internal Audit

Outline

1. A chartered accountant firm will be hired for internal audit of the concerned project, apart from external audit by the Auditor General. The firm will carry out internal audit once a year during the project implementation. The internal audit report should be submitted within 5 months after the end of the fiscal year to the head of the executing agency with a copy to JICA.

Objectives

2. The objective of the independent internal audit is (a) to review adequacy of internal control environment and system and tools, their compliance and effectiveness, (b) to assure that all funds are used for the project purposes, properly accounted for and provide value for money, and (c) assure that the organization's risks are being adequately managed and that controls are operated as intended, advising on improvements as needed.

3. The internal audit should cover all transactions related to the Project, covering assets and all sources and application of funds. The following aspects would be included:

- Verification of all funds used in accordance with the conditions of the Loan Agreement and relevant other agreements with JICA
- Confirmation on whether procurement and expenditure is duly authorized by competent authority without any irregularities
- Verification of the appropriateness and accuracy of claims by contractors
- Verification of financial statement against the entries in the primary books of account in conjunction with records and vouchers, contracts, purchase orders and other original documents
- Adequacy and effectiveness of accounting, financial and operational controls
- Level of compliance with established policies, plans and procedures
- Methods of remedying weak controls or creating them where there are none
- Verification of assets and liabilities relevant to the Project
- Integrity of the computerized system and effectiveness of the controls over security and operation of the computerized system

20. Environmental and Social Considerations

20.1. Environmental and Social Management System (ESMS) Checklist

Sustainable and Renewable Energy Development Authority (SREDA) is also an executing agency of the project which is responsible for technical aspects of the project. However, SREDA is not involved in the loan so it is not included into this check list. SREDA will consider environmental and social aspects in accordance with JICA's guidelines for environmental and social considerations when it renews eligible technologies and products list. The equipment targeted by the loan scheme of the project. must be amongst the list.

No.	Questions (English)	Answer	Improvement Plan
1. Policy			
(1)	Does the executing agency have any formal environmental policy or procedures? If yes, please describe them and provide appropriate documentation. If no, does the financial intermediary/executing agency have any plan to set such policy or procedures?	<p>IDCOL (Executing Agency): IDCOL has “Environmental and Social Safeguards Framework (ESSF)” for large scale infrastructure projects and “Environmental and Social Management Framework (ESMF)” for small or medium scale energy projects as environmental frameworks.</p> <p>BIFFL (Executing Agency): BIFFL has “Environmental Social Monitoring Framework (ESMF)” as an environmental framework.</p>	<p>IDOCL: -</p> <p>BIFFL: -</p>
(2)	Are there any types of projects in which the financial intermediary/executing agency will not take part due to the environmental risks? (e.g., projects involving handling of hazardous wastes or endangered plants or animals).	Most of the activities will be limited in factories or buildings, considerable negative impacts are unlikely to occur.	-

2. Procedures			
(3)	Does the executing agency have any environmental procedures such as screening, categorization and environmental review? If yes, please describe.	<p>IDCOL: ESSF and ESMF regulate environmental procedures for various development projects. ESSF and ESMF mention the categorization according to Bangladesh Environment Conservation Rules. ESMF provides environmental screening forms.</p> <p>BIFFL: ESMF regulate environmental procedures for various development projects. ESMF mention the categorization according to Bangladesh Environment Conservation Rules and component of preliminary screening.</p>	<p>IDOCL: -</p> <p>BIFFL: -</p>
(4)	Please describe how you ensure that your subproject companies and their subprojects are operated in compliance with the national laws and regulations and applicable JICA's requirements.	<p>IDCOL: Subprojects are operated in compliance with the national laws and regulations according to ESSF and ESMF. However JICA EEPF Project (herein after called 'the Project') is not included in existing ESSF and ESMF.</p> <p>BIFFL: Subprojects are operated in compliance with the national laws and regulations according to ESMF. However the Project is not included in existing ESMF.</p>	<p>IDCOL and BIFFL: IDCOL and BIFFL check the environmental clearance certificate, explanations to the public, complaints from local residents and solid waste management concerning the proposed subprojects. The following additional text to cover the Project will be added to the existing ESMFs.</p> <ol style="list-style-type: none"> 1. Outline of the Project 2. Outline of JICA Guidelines 3. Check items
3. Organization and Staff			
(7)	Please provide us with the organization chart of the financial intermediary/executing agency's Environmental and Social Management System (ESMS).	<p>IDCOL: IDCOL has Environmental and Social Safeguard Unit. (see Figure 4)</p> <p>BIFFL: BIFFL has not set up an</p>	<p>IDCOL: -</p> <p>BIFFL: BIFFL employs at least</p>

		environmental management section yet. (see Figure 5)	one environmental specialist and establish an environmental unit in advance of The Project.
(8)	Who is responsible for environmental and social management within the financial intermediary/executing agency? (name/role and title)	<p>IDCOL: IDCOL employs two fulltime environmental specialists that one (Mr. Raihan Uddin Ahmed) take charge of renewable energy projects and the other (Dr. Ahmedul Hye Chowdhury) take charge of infrastructure projects.</p> <p>BIFFL: BIFFL has no environmental specialists. An officer (Mr. Saddam Hossain) of renewable energy holds the additional post of environmental management. BIFFL will employ at least one environmental specialist as to extension of the business in the near future.</p>	<p>IDCOL and BIFFL: Because the environmental and social management for the Project has no any difficulties, the present human resources will be able to implement the management.</p>
(9)	Are there any staff with training for environmental and social considerations in the financial intermediary/executing agency? If so, describe.	<p>IDCOL: IDCOL has two fulltime environmental specialists with training for environmental and social considerations.</p> <p>BIFFL: BIFFL has no environmental specialists.</p>	<p>IDCOL: -</p> <p>BIFFL: -</p>
(10)	Are there any technical staff with an engineering/industry background responsible for technical analysis of credit proposals?	<p>IDCOL: IDCOL has technical staffs with an engineering/industry background.</p> <p>BIFFL: BIFFL has technical staffs with an engineering/industry background.</p>	<p>IDCOL: -</p> <p>BIFFL: -</p>

(11)	What experience, if any, does the financial intermediary/executing agency have of hiring or dealing with environmental consultants?	<p>IDCOL: IDCOL has abundant experience of hiring or dealing with environmental consultants in various development projects.</p> <p>BIFFL: BIFFL has experience of hiring or dealing with environmental consultants to prepare the ESMF.</p>	<p>IDCOL and BIFFL: Because the environmental and social management for the Project will be included in the routine works, the present human resources will be able to implement the management.</p>
(12)	What was the budget allocated to the ESMS and its implementation during a year? Please provide budget details including staff costs and training as well as any actual costs.	<p>IDCOL: IDCOL has the budget for two fulltime environmental specialists.</p> <p>BIFFL: IDCOL had the budget for preparing the ESMF.</p>	<p>IDCOL and BIFFL: Because the environmental and social management for the Project will be included in the routine works, the additional budget only for the ESMS in The Project will not be required.</p>
4. Monitoring and Reporting			
(13)	Do you receive environmental and social monitoring reports from subproject companies that you finance?	<p>IDCOL: IDCOL has abundant experience to receive environmental and social monitoring reports in various development projects including Solar Home System sub-project.</p> <p>BIFFL: BIFFL has no experience to receive environmental and social monitoring reports.</p>	<p>IDCOL and BIFFL: IDCOL and BIFFL monitor waste disposal of scraped facilities and equipment in the Project if needed.</p>
(14)	Please describe how you monitor the subproject company and their subprojects' social and environmental performance.	<p>IDCOL: Two environmental specialists or hired environmental consultants conduct environmental monitoring.</p> <p>BIFFL: BIFFL has no experience of environmental monitoring.</p>	<p>IDCOL and BIFFL: IDCOL and BIFFL monitor waste disposal of scraped facilities and equipment in the Project if needed.</p>
(15)	Is there an internal process to report on social and environmental issues to	<p>IDCOL: IDCOL has set up the internal process to report</p>	<p>IDCOL: -</p>

	senior management?	on social and environmental issues. BIFFL: BIFFL has set up the internal process to report on social and environmental issues.	BIFFL: -
(16)	Do you prepare any social and environmental reports: - For other multilateral agencies or other stakeholders - E&S reporting in the Annual Report	IDCOL: IDCOL has prepared many kinds of social and environmental reports for other multilateral agencies. BIFFL: BIFFL does not prepare any social and environmental reports.	IDCOL and BIFFL: IDCOL and BIFFL prepare periodical social and environmental reports in the Project.
5. Experience			
(17)	Has the executing agency signed any national or international agreements or declarations concerning environmental issues?	IDCOL and BIFFL have not signed any national or international agreements or declarations concerning environmental issues. Bangladesh has signed “Basel Convention on the Control of Trans boundary Movements Wastes and Their Disposal”	IDCOL and BIFFL: IDCOL and BIFFL confirm the waste disposal from a viewpoint of “Basel Convention”.
(18)	Has the executing agency ever received any criticism of its environmental record? If so, what was the criticism?	IDCOL and BIFFL have not received any criticism of its environmental record.	-
(19)	Does the executing agency carry out environmental audits of its properties to analyze health and safety issues, waste disposal, etc.?	IDCOL: IDCOL carries out environmental audits. BIFFL: BIFFL does not carry out environmental audits.	IDCOL and BIFFL: The specified environmental audits only for the Project will not be required unless DOE directs to do it.
(20)	Please state any difficulties and/or constraints related to the implementation of the ESMS.	Because potential impacts of the Project on environment and society are likely to be minimal or little adverse, there are no difficulties to the implementation of the ESMS.	IDCOL and BIFFL: Because the environmental and social management for the Project will be included in the routine works, the present human resources will be able to implement the ESMS. -

6. Need of Capacity Development and Improvement Plan

Potential impacts of the Project on environment and society are likely to be minimal or little adverse. However, because BIFFL has not set up an environmental management section and policy yet, capacity development of BIFFL will be required to ensure environmental and social safeguards in The Project. Furthermore, SREDA which is not directory involved in the final selection and approval of sub projects does not have an environmental management section and policy either. Based on the support of JICA experts or Consulting Service, SREDA will consider environmental and social aspects of the project in accordance with JICA's guidelines for environmental and social considerations when it renews eligible technologies and products list.

20.2. Environmental and Social Categorization: Definition of Categorization

(Excerpt from JICA Guidelines for Environmental and Social Considerations (April 2010))

JICA classifies projects into four categories according to the extent of environmental and social impacts, taking into account an outline of project, scale, site condition, etc.

1. Category A:

Proposed projects are classified as Category A if they are likely to have significant adverse impacts on the environment and society. Projects with complicated or unprecedented impacts that are difficult to assess, or projects with a wide range of impacts or irreversible impacts, are also classified as Category A. These impacts may affect an area broader than the sites or facilities subject to physical construction. Category A, in principle, includes projects in sensitive sectors, projects that have characteristics that are liable to cause adverse environmental impacts, and projects located in or near sensitive areas. An illustrative list of sensitive sectors, characteristics, and areas is provided in Appendix 3 below.

2. Category B:

Proposed projects are classified as Category B if their potential adverse impacts on the environment and society are less adverse than those of Category A projects. Generally, they are site-specific; few if any are irreversible; and in most cases, normal mitigation measures can be designed more readily.

3. Category C:

Proposed projects are classified as Category C if they are likely to have minimal or little adverse impact on the environment and society and also if they satisfy all of the following criteria:

- (1) Not to be applied to the sensitive sectors, characteristics, and areas shown in Appendix 3.
- (2) No land acquisition
- (3) Little environmental and social influence during civil works even in restoration of existing buildings (e.g. restoration of schools, public health care center, vocational training center; rehabilitation of existing distribution network and substations, procurement of well digging equipment for water supply etc.)

Appendix 3. Illustrative List of Sensitive Sectors, Characteristics, and Areas

The project of sensitive sectors, characteristics, and areas shown in this illustrative list are those that will likely have a significant adverse impact on the environment and society. Each individual project is categorized in accordance with the standards for “Category A” indicated in the categorization section of the guidelines, depending on the impacts of the individual projects. Consequently, projects that are likely to have a significant adverse impact on the environment and society are categorized as “Category A” even if they are not included in the sectors, characteristic, or areas on the list.

1. Sensitive Sectors

Large-scale projects in the following sectors:

- (1) Mining, including oil and natural gas development
- (2) Oil and gas pipelines
- (3) Industrial development
- (4) Thermal power, including geothermal power
- (5) Hydropower, dams, and reservoirs
- (6) Power transmission and distribution lines involving large-scale involuntary resettlement, large-scale logging, or submarine electrical cables
- (7) River/erosion control
- (8) Roads, railways, and bridges
- (9) Airports
- (10) Ports and harbors
- (11) Water supply, sewage, and wastewater treatment that have sensitive characteristics or that are located in sensitive areas or in their vicinity
- (12) Waste management and disposal
- (13) Agriculture involving large-scale land clearing or irrigation

2. Sensitive Characteristics

- (1) Large-scale involuntary resettlement
- (2) Large-scale groundwater pumping
- (3) Large-scale land reclamation, land development, and land clearing
- (4) Large-scale logging

3. Sensitive Areas

Projects in the following areas or their vicinity:

- (1) National parks, nationally-designated protected areas (coastal areas, wetlands, areas for ethnic minorities or indigenous peoples and cultural heritage, etc. designated by national governments)
- (2) Areas that are thought to require careful consideration by the country or locality

Natural Environment

- a) Primary forests or natural forests in tropical areas
- b) Habitats with important ecological value (coral reefs, mangrove wetlands, tidal flats, etc.)
- c) Habitats of rare species that require protection under domestic legislation, international treaties, etc.
- d) Areas in danger of large-scale salt accumulation or soil erosion
- e) Areas with a remarkable tendency towards desertification

Social Environment

- a) Areas with unique archaeological, historical, or cultural value
- b) Areas inhabited by ethnic minorities, indigenous peoples, or nomadic peoples with traditional ways of life, and other areas with special social value

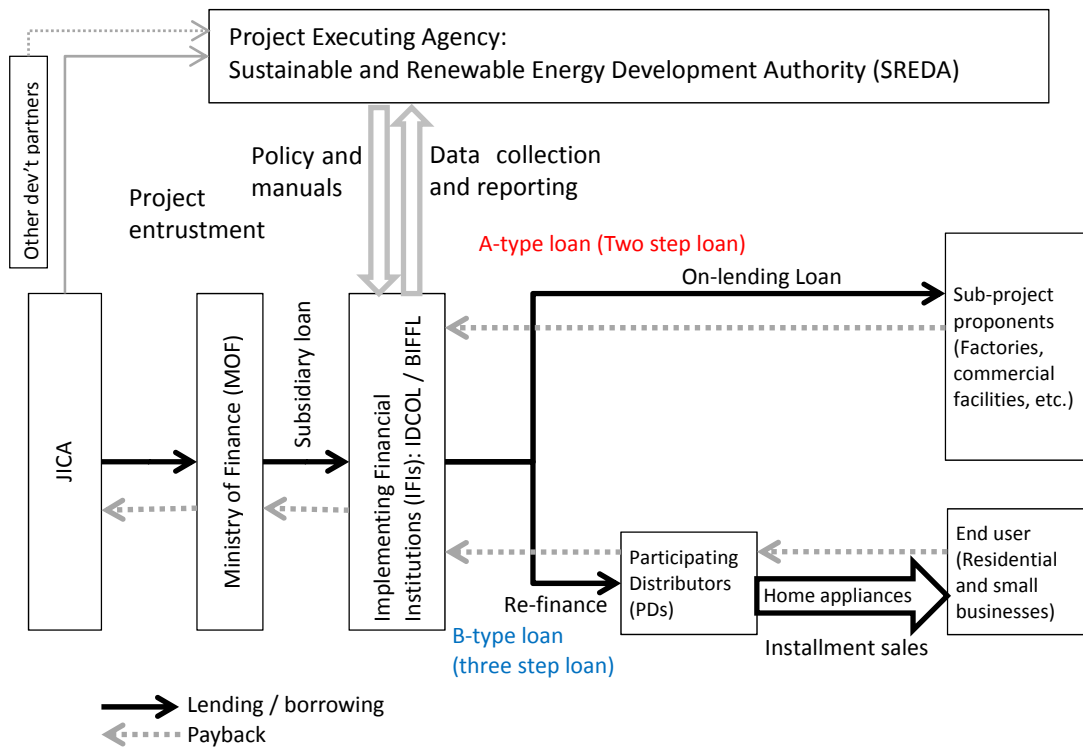


Figure 11 Project Scheme and Stakeholders

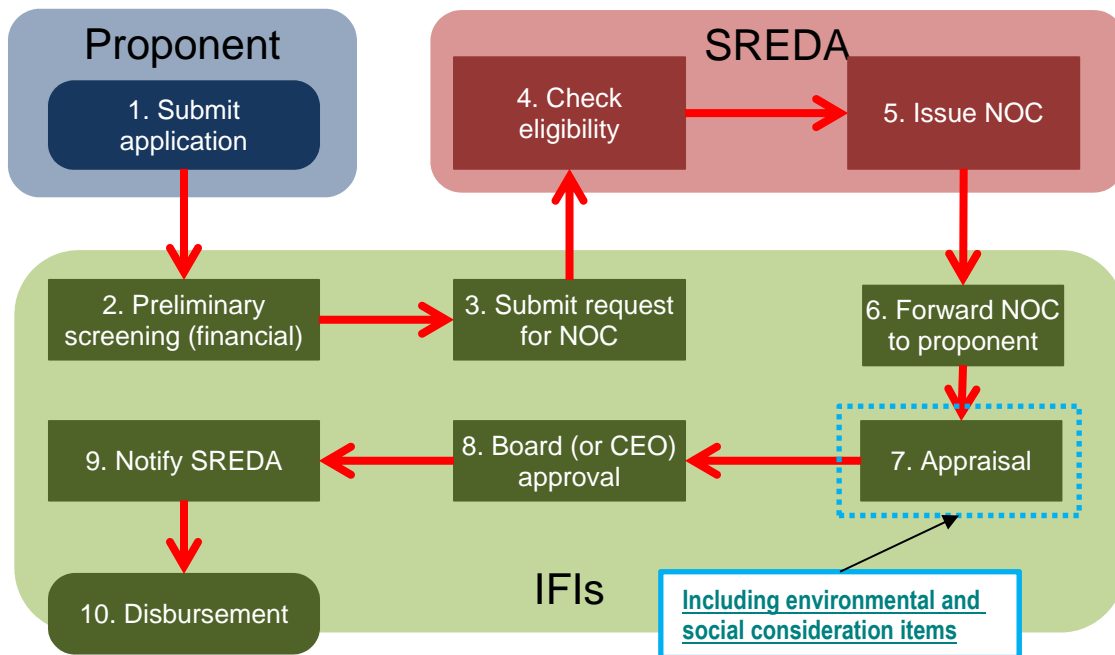


Figure 12 Appraisal Flow Chart of A-type Loans

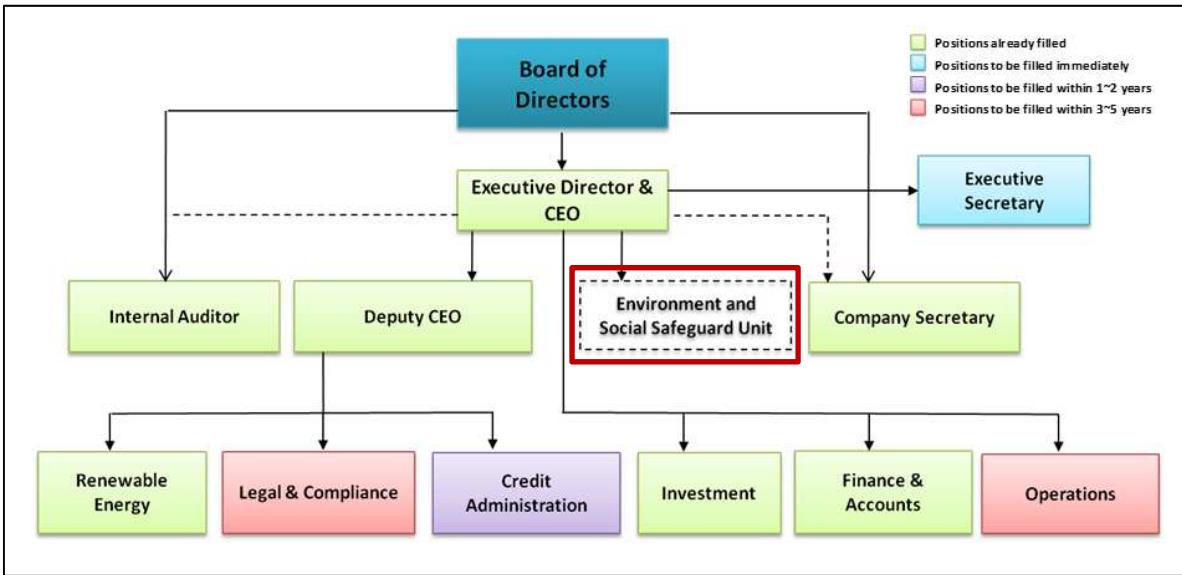


Figure 13 Organization of IDCOL

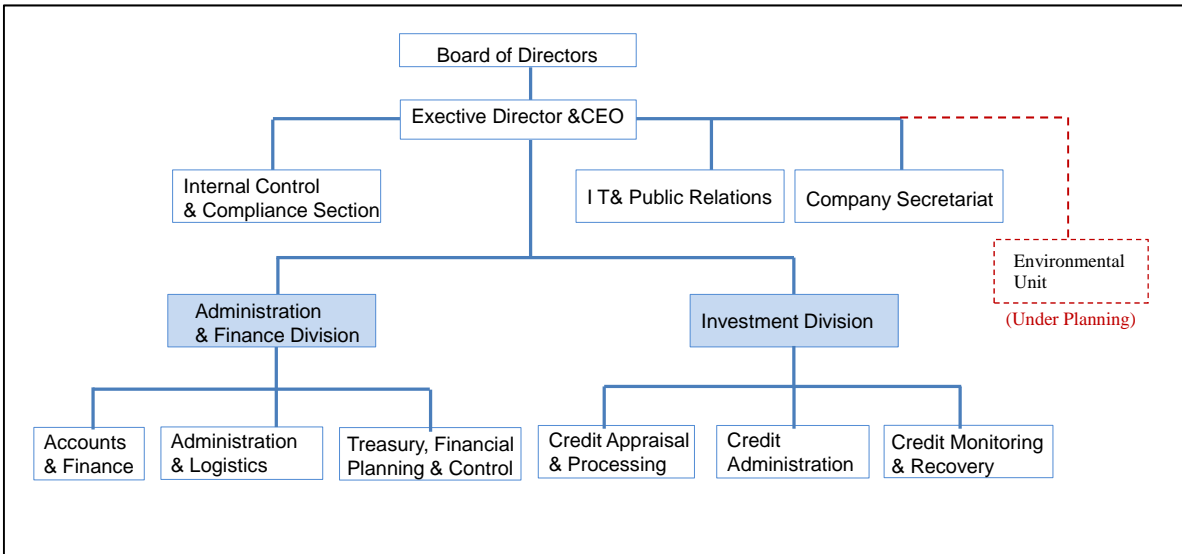


Figure 14 Organization of BIFFL

20.3. Environmental and Social Performance Report to JICA

1. Basic Information

Name of Organization:

Completed by (Name):

Position in Organization:

Reporting Period: From: To:

Completed in (MM/YY)

2. Subprojects using JICA Funds during the Reporting Period

Name of Subproject approved during the reporting period	Sub-sector and items	Project Scope	Project Cost (JPY)	Approval Date	Environmental Category*	Reason of Categorization	Documents made(e.g. IEE EIA, RAP)	Any outstanding environmental and social issues

* Please refer Environmental and Social Categorization: Definition or II. 2.2. of JICA Guidelines for Environmental and Social Considerations (April 2010). e.g.

- Subproject is likely to generate condonable solid waste of scraped facilities and equipment. : Category B

- Subproject is likely to have minimal or little adverse impact on the environment and society. : Category C

3. Subprojects using JICA Funds to be Approved in the Next FY

Name of Subproject approved during the reporting period	Sub-sector and items	Project Scope	Project Cost (JPY)	Approval Date	Environmental Category*	Reason of Categorization	Documents made(e.g. IEE EIA, RAP)	Any outstanding environmental and social issues

4. Environmental and Social Management System (ESMS)

Please describe if ESMS of your organization has changed in any way (e.g. establishment of a new division for environmental and social management) since JICA's appraisal.

20.4. Additional Text for ESMF

1. Outline of JICA Energy Efficiency and Conservation Promotion Financing Project (JICA-EEF Project)

1.1 Objective of the Project

The objective of the Project is to promote Energy Efficiency and Conservation (EE&C) measures in Bangladesh, by extending low interest loan: (i) to the industry and commercial sectors when purchasing EE&C equipment (to be supported further by introduction of energy management and energy audit activities in future); (ii) to the users of certified green buildings; and (iii) to households and small businesses when purchasing energy efficient home appliances (to be supported by energy star labelling in whenever available).

The low interest loan will be made available from the local financial institutions, implementing financial institutions (IFIs), in the case of two step loan: 2SL), or participating distributors (PDs) in the case of three step loan (3SL), who will procure concessional loan extended from the Japanese ODA Loan (concessional loan). The concessional loan will be provided from the Ministry of Finance (MOF) of Bangladesh, first of all to the IFIs, to be utilized for 2ST, as well as to be further extended to the PDs in the case of 3SL.

The Project, by promoting EE&C measures, is expected to contribute to narrowing the power supply – demand gap, resulting in sustainable provision of energy, as well as to mitigation of climate change effects.

1.2 Scope of the Project

Concessional loan for the purpose of promoting EE&C measures will be extended from the Government of Japan to MOF of Bangladesh. The loan will be extended to the IFIs based on sub-loan agreement (SLA) between MOF and the IFIs. IFIs will be determined under the authorization capacity of the executing agency, SREDA. In this Survey, two non-bank financial institutions (NBFIs) are assumed to be the candidates for the IFIs.

The subject of the concessional loans will be three components, which are (i) industry / commercial sector component (Component I); (ii) green building component (Component II), and; (iii) home appliances component (Component III). These components were identified as the priority areas as the subject of low interest loan in the M/P, from the viewpoints of effectiveness and feasibility.

Table 41 Three Project Components

Component	User	Subject of loan	Supporting mechanism
(Component I) Industry / commercial sector component	Companies and other organizations	Energy efficient “listed” equipment at factory, office, commercial facility, etc.	Energy management and auditing
(Component II) Green building component	Companies and other organizations	Office space in “accredited” green buildings	Green building accreditation
(Component III) Home appliances component	Households and small businesses	Energy efficient “energy star labelled” home appliances	Energy star labelling

1.3 Project Structure

The proposed overall structure of the project is as illustrated in the following figure. SREDA is the executing agency overseeing and monitoring the Project with the aim to pursue its function, to promote EE&C measures. SREDA collaborate with IFIs for the Project. SREDA will provide policy and manuals for the IFIs to be able to extend loans in accordance with the aim of the Project.

There will be two types of loan, one being A-type loan: 2SL where IFIs directly extends the money to the borrower (industry / commercial businesses) as the end users, while another being B-type loan: 3SL which will be extended through PDs as the intermediate between IFIs and the end user (households and small businesses) as the secondary borrower. A-type loan will be utilized for (i) industry / commercial sector component (Component I) and (ii) green building component (Component II), while B-type loan will be utilized for (iii) home appliances component (Component III). These are compared as in the following table:

Table 42 Two Types of Concessional Loan Provision Channels

	A-type loan (for industrial and commercial equipment)	B-type (for home appliances)
Purpose	To promote relatively larger scale EE&C equipment introduction at factories and commercial facilities.	To promote small scale EE&C home appliances purchase at residential and small businesses.
Borrower	Companies of other organizations owning factories and commercial facilities who acquire the EE&C equipment.	PDs that provide EE&C home appliances. Secondary loan will be provided from the PDs to the end users.
Fund flowing channel	Fund will be paid from IFIs’ account into (i) the borrower’s or (ii) equipment suppliers’ account.	Fund will be paid from IFIs’ account into the PDs’ account. The fund will be utilized by the PDs when laying-in the stocks of the EE&C home appliances.
Payback	Borrower companies / organizations will pay back to the IFIs.	End users will pay back to the PDs. PDs will then pay back to IFIs.
Approval procedure	IFIs will conduct appraisal for each application against A-type loan appraisal manual.	PDs will conduct screening of each end user against B-type loan re-financing manual.

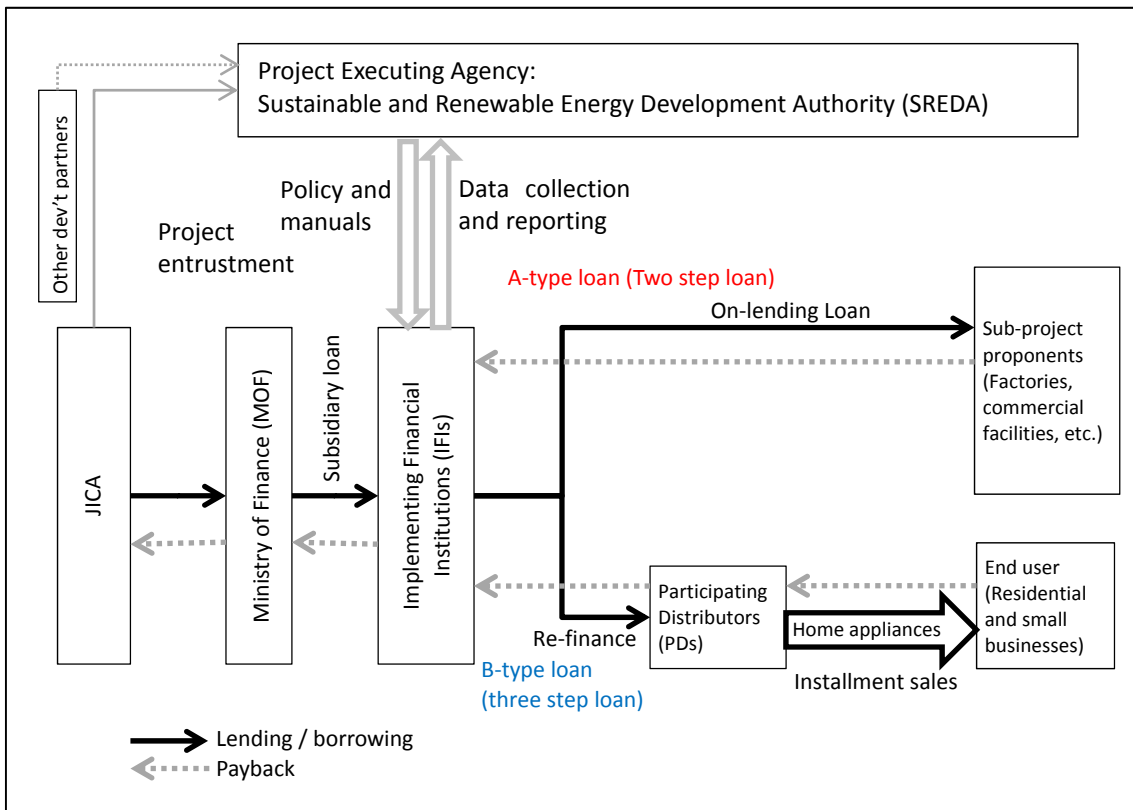


Figure 15 Project Scheme and Stakeholders

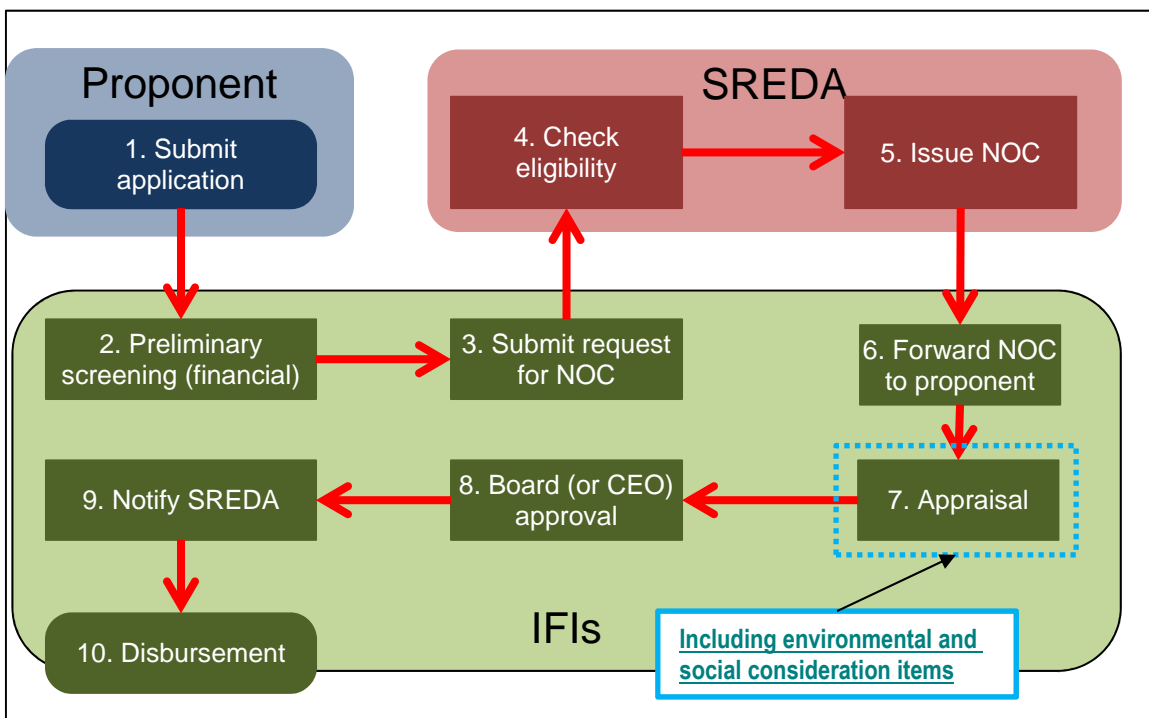


Figure 16 Appraisal Flow Chart of A-type Loans

2. JICA Guidelines

JICA has prepared “Guidelines for Environmental and Social Considerations, April 2010” as the referential guidelines for environmental and social considerations. The objectives of the guidelines are to encourage Project proponents etc. to have appropriate consideration for environmental and social impacts, as well as to ensure that JICA’s support for and examination of environmental and social considerations are conducted accordingly. The guidelines outline JICA’s responsibilities and procedures, along with its requirements for project proponents etc., in order to facilitate the achievement of these objectives. In doing so, JICA endeavors to ensure transparency, predictability, and accountability in its support for and examination of environmental and social considerations.

According to the guidelines, JICA classifies development projects into four categories with regards to the extent of environmental and social impacts, and taking into account the outlines, scale, site and other conditions. The four categories are as follows:

Category A: Proposed projects are likely to have significant adverse impacts on the environment and society.

Category B: Proposed projects are classified as Category B if their potential adverse impacts on the environment and society are less adverse than those of Category A projects.

Category C: Proposed projects are classified as Category C if they are likely to have minimal or little adverse impact on the environment and society.

Category FI: A proposed project is classified as Category FI if it satisfies all of the followings:

- JICA’s funding of projects is provided to a financial intermediary or executing agency;
- The selection and appraisal of the sub-projects is substantially undertaken by such an institution only after JICA’s approval of the funding, so that the sub-projects cannot be specified prior to JICA’s approval of funding (or project appraisal); and
- Those sub-projects are expected to have a potential impact on the environment

JICA-EEF Project is classified as “Category FI”.

Over a certain period of time, JICA confirms with project proponents etc. the results of monitoring the items that have significant environmental impacts. This is done in order to confirm that project proponents etc. are undertaking environmental and social considerations for projects that fall under Categories A, B, and FI.

21. Report on Training Programme in Japan

21.1. Overview of the Training Programme

Title: “Training Programme on Energy Efficiency and Conservation (EE&C) in Japan”

Period: 21/July/2015 to 30/July/2015

Number of Participants: 11

21.2. Content of the Training Programme

The objective of the training programme is to invite the stakeholders of the Preparatory Survey Team for Energy Efficiency & Conservation (EE&C) Promotion Financing Project to Japan and to support them to acquire knowledge and experience of EE&C.

Date		Curriculum	Venue
22 Wed /Jul/2 015	6:55	Arrival at Haneda airport	Tokyo Dome Hotel
	9:00	Hotel check-in	
	13:00-15:00	Lunch & Briefing and Programme orientation <i>the Survey Team</i>	Conference room A (7 th floor, Tokyo Dome Hotel)
	15:00-16:30	Lec. Electricity demand side management <i>the Survey Team</i>	
	17:15-18:00	Courtesy visit to JICA	JICA HQ (Conf Room 203)
23 Thu	Japanese EE&C policies and measures		
	09:15-10:15 (1hr)	Lec.1: EE&C policy and measures <i>Lecturer: The Energy Conservation Center, Japan</i>	Conference room: “Horai” (5 th floor, Tokyo Dome Hotel)
	10:30-12:30 (2hr)	Lec.2: Financial support system for EE&C <i>Lecturer: Japan Finance Corporation</i>	
	13:30-15:00 (1hr30)	Lec.3: Japanese EE&C technologies: Refrigeration field <i>Lecturer: Expert from a chiller manufacturing company</i>	
	15:30-18:00 (2hr30)	Meeting (JICA, industry)	JICA Tokyo (Nishihara)
24 Fri	Japanese EE&C technologies		
	10:00-12:00 (2hr)	Site visit and Lec.: EE&C technology for Building “Exhibition room of heat reflective glass” <i>Lecturer: Expert from a glass manufacturing company</i>	(Kyobashi)
	14:15-14:45	<i>Ebina Mosque (Optional)</i>	(Ebina city)
	15:00-17:00 (2hr)	Site visit and Lec.: Laboratories for testing <i>Air conditioning and refrigeration testing laboratory</i>	(Atsugi city)

Date		Curriculum	Venue
25 Sat	AM	Transfer to Nagoya	
	14:00-17:00	Site visit: Textile Machinery (<i>Exhibition</i>) <i>A commemorative museum of industry and technology, Nagoya City</i>	(Nagoya city)
	18:30	Transfer to Osaka	Hotel New Hankyu Osaka
26 Sun		Holiday	Hotel New Hankyu Osaka
27 Mon	9:00-10:30 (1hr30)	Interim discussion (participants)	Conference room: AP Chayamachi
	10:30-12:00 (1hr30)	Site visit: a home appliances shop	near Umeda station
	Japanese EE&C technologies		
	15:30-17:00 (1hr30)	Lec: EE&C equipment: Energy efficient steam systems <i>Lecturer: Expert from a boiler manufacturer</i>	Conference room: AP Chayamachi
28 Tue	Japanese EE&C technologies and measures		
	9:00-12:00 (3hr, incl break)	Lec.: EE&C measures in textile industry <i>Lecturer: A textile professional engineer</i>	Conference room: AP Chayamachi
	14:00-16:30 (2hr30)	Site visit and Lec.: EE&C technology (air conditioning-related products for commercial use) <i>An air conditioner factory, Sakai City</i>	(Sakai city)
29 Wed	9:00-11:00 (2hr)	Wrap up & evaluation (participants)	Conference room: AP Chayamachi
	13:00-14:30 (1hr30)	Site visit and Lec.: EE&C technology (co-generation facility) <i>A co-generation facility, Osaka city</i>	(Osaka city)
	21:00	Departure at Hotel	
30 Thu	00:30	Departure from Kansai airport	

21.3. Findings from lectures and site visits

21.3.1. Lecture “Electricity demand side management”

Lecturer:	Mr. Kimio Yoshida (Global Act - the Survey Team)
Venue:	Korakuen Dome Hotel Conference Room A
Date & Time:	13:00pm – 15:00pm, 22/July
Text:	Presentation (power point)

Main contents of the lecture were as follows:

- Countermeasure for Electricity Deficit
- Concept of Efficient Power Plant
- Energy Efficiency Improvement for Supply Side
- Electricity Tariff Mechanism for Load Leveling (Time-of-Use)
- Reduction of Distribution Loss
- Fuel Cost Adjustment System
- Japan’s Target Setting to Save Electricity & Avoid Black Out in Summer
- Promotion Activities on Energy Conservation by Electric Power Company

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Overview of Japanese power sector
- Electricity price (regional difference, FIT price)
- Barriers in promoting EE&C measures in Bangladesh

21.3.2. Lecture “EE&C policy and measures”

Lecturer:	Mr. Yoshihiro Kawaguchi (General Manager, International Cooperation Division, The Energy Conservation Center, Japan)
Venue:	Korakuen Dome Hotel Conference Room “Horai”
Date & Time:	9:15am – 10:15am, 23/July
Text:	Presentation (power point)

Main contents of the lecture were as follows:

- Energy Supply and Demand (Trends, Supply Structure, Electricity Price, Energy Policy History)
- Energy Efficiency & Conservation (Policy History, EE&C Technologies, Top Runner Programme, Labelling Programmes)

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Energy supply stricture
- Perspectives on nuclear power

21.3.3. Lecture “Financial support system for EE&C”

Lecturer:	Mr. Akira Shibusawa (Japan Finance Corporation) Mr. Seigou Itoh (Japan Finance Corporation)
Venue:	Korakuen Dome Hotel Conference Room “Horai”
Date & Time:	1030am – 12:30pm, 23/July
Text:	Presentation (power point)

Main contents of the lecture were as follows:

- Role of JFC-Micro (JFC-Micro Business and Individual Unit)
- Business Loan Programmes (incl. Environment & Energy Measure Loans)
- Role of JFC-SME (JFC-Small and Medium Enterprise Unit)
- Loan Programmes (incl. Environment & Energy Measure Loans), Credit Insurance Programmes, International Development

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Level of energy audit required for Environment & Energy Measure Loans
- Logics behind interest rate and loan period
- Specific technologies targeted by Environment & Energy Measure Loans

21.3.4. Lecture “Japanese EE&C technologies: Refrigeration field”

Lecturer:	Advisor, Global Refrigeration Business Division, Global Project Sales Group Energy Dept, Sales & Engineer Parts Service Center, Logistics Dept
Venue:	Korakuen Dome Hotel Conference Room “Horai”
Date & Time:	13:30pm – 15:00pm, 23/July
Text:	Presentation (power point), Company brochure, Video clip

Main contents of the lecture were as follows:

- Refrigeration technologies (Technology, Market, Energy-saving Effects)
- Case Studies of EE&C technologies (Incl. Improved refrigeration cycle efficiency, Next generation screw compressor, Exhaust heat recovery)
- Company’s video

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Applicability to Bangladesh
- Success factors of technological development

21.3.5. Site visit and Lecture: EE&C technology for Building “Exhibition room of heat reflective glass”

Lecturer:	Senior Manager, Environmental Management Promotion Team Leader, Corporate Planning Group, Office of the President Marketing manager, Strategy group, Japan/Asia Pacific Division
Venue:	A glass product studio (Kyobashi, Tokyo)
Date & Time:	10:00am – 12:00am, 24/July
Text:	Presentation (power point), Company brochure

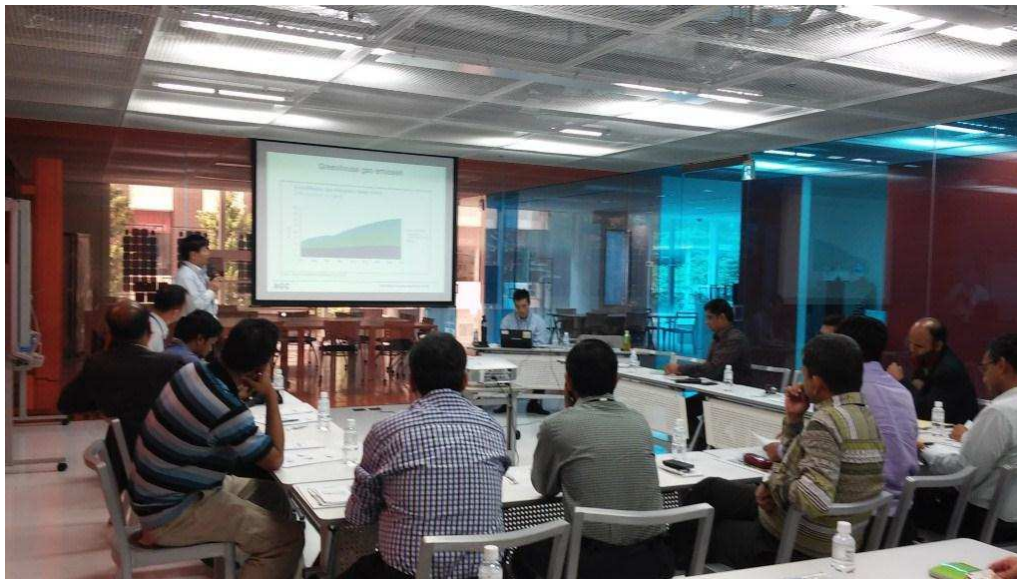
Main contents of the lecture were as follows:

- Energy Consumption in Office Buildings
- Energy Saving Regulation in Japan & India
- Multiple Solution for “Energy Saving” & “Comfort”
- Actual Glass Application

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Price of glass
- Applicability of low E glass to existing buildings

Site tour was taken place in the glass studio, which is a showroom of different types of glass products including heat reflective glass.



21.3.6. Site visit and Lecture: Laboratories for testing

Lecturer:	Head, Air Conditioning and Refrigeration Testing Laboratory Supervisor, Engineering Department Senior Manager, Engineering Department, Testing Department
Venue:	Testing laboratory (Atsugi-city, Kanagawa)
Date & Time:	15:00pm – 17:00pm, 24/July
Text:	Presentation (power point for projection only)

Main contents of the lecture were as follows:

- Overview of testing mechanism
- Testing procedures and equipment of air conditioning and refrigeration facilities
- Training Programme

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Appeals by uncertified products
- Fees of training programme
- Possibility of further cooperation in establishing laboratories in Bangladesh

Site tour was taken place in JATL laboratory.

21.3.7. Site visit: Textile Machinery

Facilitator:	Assistant Manager, Textile Plant Group, Energy Infrastructure Project Department 2
Venue:	A commemorative museum of industry and technology (Nagoya, Aichi)
Date & Time:	14:00pm – 17:00pm, 25/July
Text:	Museum brochure

Site tour was taken place in the Commemorative Museum of Industry and Technology.

Site tour was followed by Q&A and discussion. The main issues covered were as follows:

- Competitiveness of the Japanese companies that were mentioned in the lecture (The participants wanted the list of the companies are the leading suppliers for spinning / weaving and finishing processes machineries).
- Environment protection aspects of the textile machineries; the participants recognized that there is not compromise on environment even when pursuing energy efficiency.
- Possibility of the Japanese machines being widely introduced to Bangladesh; some of the Japanese-make equipment are already sold in Bangladesh. Many of the machineries for mass production are only sold to China.



21.3.8. Site visit: electric appliances shops

Lecturer:	Mr. Yoshihiko Kato (Mitsubishi Research Institute- the Survey Team) Ms. Mari Iwata (Mitsubishi Research Institute- the Survey Team)
Venue:	Home appliances shop, Umeda
Date & Time:	10:30pm – 12:00pm, 27/July
Text:	None

Site tour was taken place in a large scale retail electric store and the followings were observed and discussed.

- Labelling Programmes in Japan; The participants observed how the suppliers and even the retailers are disclosing information on energy efficiency of their products.
- Price difference among conventional products and energy efficient products
- Incentives / motivations of customers to buy energy efficient products



21.3.9. Lecture “EE&C equipment: Energy efficient steam systems”

Lecturer:	Director, Asia Business Headquarters Deputy General Manager, International Division
Venue:	Conference room H: AP Chayamachi
Date & Time:	15:30pm – 17:00pm, 27/July
Text:	Presentation (power point)

Main contents of the lecture were as follows:

- Boiler market in Japan
- Structure of Boilers
- Advantages and Developments of Once-Through Boilers
- Energy-saving Diagnosis

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Mechanisms of Once-Through Boilers
- Possibility of using oil and gas
- Applicability of Once-Through Boilers to paper mills, power generation and industrial complex

21.3.10. Lecture “EE&C measures in textile industry”

Lecturer:	Director, a textile consultants Center
Venue:	Conference room H: AP Chayamachi
Date & Time:	9:00am – 12:00am, 28/July
Text:	Presentation (power point)

Main contents of the lecture were as follows:

- Energy Conservation in Textile Industry (Wet process in continuous & batch system, Drying, heat setting & Compacting process)
- Boiler, Compressor and other utilities
- Heat recovery, Insulation, Hot water saving

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Functions of Hydrometer
- Treatment of chemically contaminated waste water
- Advantages of installing inverter system

21.3.11. Site visit and Lecture: EE&C technology (air conditioning-related products for commercial use)

Lecturer:	Manager, Public Relations Dept. Tokyo Office
Venue:	An air conditioner factory (Sakai City, Osaka)
Date & Time:	14:00pm – 16:30pm, 28/July
Text:	Presentation (power point for projection only), Company brochure

Main contents of the lecture were as follows:

- Production system at the factory (Mixed Single Unit Flow Production System)
- R&D efforts
- Characteristics of Variable Refrigerant Flows (VRFs)

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Effects on energy savings
- Availability of products for tropical areas (cooling function only)

Site tour was taken place in factory and showroom.

21.3.12. Site visit and Lecture: EE&C technology (co-generation facility)

Lecturer:	President Head, Energy Center Deputy General Manager, Sales Section2, International Sales Department, Energy Solution Division
Venue:	A co-generation facility (Osaka City, Osaka)
Date & Time:	13:00pm – 14:30pm, 29/July
Text:	Presentation (power point for projection only), Company brochure, Video clip

Main contents of the lecture were as follows:

- Energy saving measures at Osaka Amenity Park
- Specifications and daily operation of co-generation facility
- Company video

Lecture was followed by Q&A and discussion. The main issues covered were as follows:

- Effects on energy savings

Site tour was taken place in machine room (incl.co-generation facility).



21.4. Participants

21.4.1. Qualifications

Participants consisted of various stakeholders who were engaged in JICA's Energy Efficiency & Conservation (EE&C) Promotion Financing Project;

- Government
 - ✧ Power Division, Ministry of Power, Energy and Mineral Resources
 - ✧ Sustainable and Renewable Energy Development Authority, Ministry of Power, Energy and Mineral Resources
 - ✧ Finance Division, Ministry of Finance
- Standardization and Testing Institution
 - ✧ Bangladesh Standards & Testing Institution
- Financial Institution
 - ✧ Infrastructure Development Company Ltd.
- Academia
 - ✧ Bangladesh University of Engineering & Technology
- Industry
 - ✧ Bangladesh Garments Manufacturers & Exports Association

21.4.2. Attitudes

It was remarkable that all the participants actively participated in the entire training programme. Especially they were very active in Q&A session and discussion. The final reports submitted by the participants showed that they were highly satisfied with the contents of the programme and willing to share the findings with their colleagues.

21.5. Outcomes

21.5.1. Outcomes of the training programmes

Outcomes of the training programmes were discussed twice in interim discussion session (9:00-10:30am, 27/Jul) and wrap up & evaluation session (9:00-11:00am, 29/Jul). Outcomes are summarized as follows:

(a) Technologies

- Among energy efficient technologies that were introduced and discussed in the training, those which need to be prioritized in Bangladesh were identified; i.e. air conditioners, domestic refrigeration system, boiler, industrial furnace, building glazing, lightening system (especially in garment sector), and compressed air system (especially in textile sector).
- Challenges that Bangladesh faces in installing these technologies are lack of domestic suppliers and high initial costs. Some technologies need to be adjusted to fit into Bangladeshi usage environment.

(b) Testing

- Labelling programmes are in progress in Bangladesh.
- Problem of testing facilities is that they are not unified. They are scattered around the country (in BUET, BSTI, etc) and are mal-coordinated.

(c) Financial Mechanism

- In Japan, incentive programmes to promote EE&C measures have been in place for long time, while in Bangladesh there is very limited number of programmes.
- Financial institutions should be responsible for providing information and for raising awareness of customers.

(d) Market

- In Energy Efficiency Master Plan, sectors that should promote EE&C measures were identified.
- Demand is especially high in industrial sector such as textile.

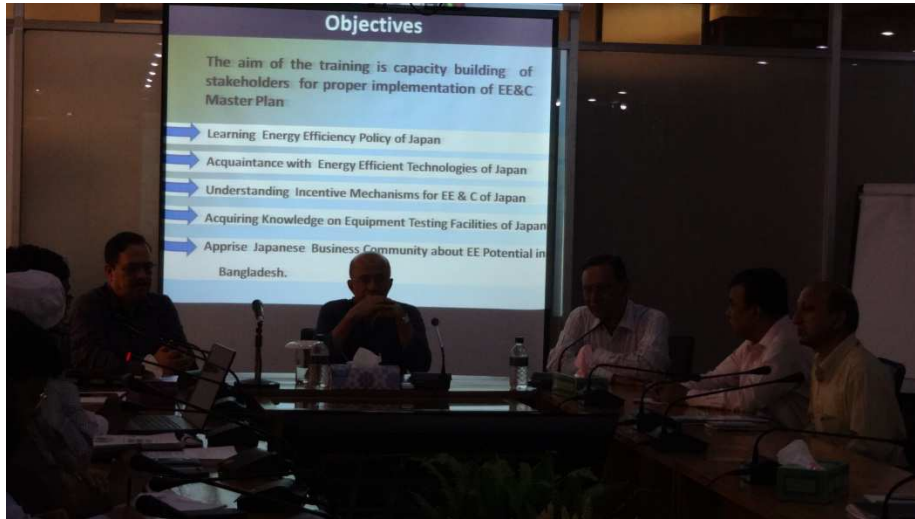
(e) Awareness

- Japan has a long history to raise people's awareness on EE&C.
- In Bangladesh, a strong political commitment is necessary. With help of JICA and other donor agencies, the Ministry of Power, Energy and Mineral Resources will formulate and implement solid EE&C policies.

21.5.2. Sharing the outcomes

SREDA organized a debriefing session in 31st/Aug attended by Dr. Tawfiq-e-Elahi Chowdhury, Honourable Advisor to the Prime Minister as Chief Guest. The training participants shared their findings followed by Q&A and discussion sessions.

At BGMEA, it is also planned to have a meeting or a seminar for their members (6,500 Ready Made Garment Owners).



21.6. Appendix

(a) Training Curriculum

Date		Curriculum	Venue
22 Wed /July 2015	6:55	Arrival at Haneda airport	Tokyo Dome Hotel
	9:00	Hotel check-in	
	13:00-15:00	Lunch & Briefing and Programme orientation <i>the Survey Team</i>	Conference room A (7 th floor, Tokyo Dome Hotel)
	15:00-16:30	Lec. Electricity demand side management <i>the Survey Team</i>	
17:15-18:00	Courtesy visit to JICA	JICA HQ (Conf Room 203)	
23 Thu	Japanese EE&C policies and measures		
	09:15-10:15 (1hr)	Lec.1: EE&C policy and measures <i>Lecturer: The Energy Conservation Center, Japan</i>	Conference room: "Horai" (5 th floor, Tokyo Dome Hotel)
	10:30-12:30 (2hr)	Lec.2: Financial support system for EE&C <i>Lecturer: Japan Finance Corporation</i>	
	13:30-15:00 (1hr30)	Lec.3: Japanese EE&C technologies: Refrigeration field <i>Lecturer: Expert from a chiller manufacturing company)</i>	
	15:30-18:00 (2hr30)	Meeting (JICA, industry)	JICA Tokyo (Nishihara)
24 Fri	Japanese EE&C technologies		
	10:00-12:00 (2hr)	Site visit and Lec.: EE&C technology for Building "Exhibition room of heat reflective glass" <i>Lecturer: Expert from a glass company, Kyobashi</i>	(Kyobashi)
	14:15-14:45	<i>Ebina Mosque (Optional)</i>	(Ebina city)
	15:00-17:00 (2hr)	Site visit and Lec.: Laboratories for testing <i>An air conditioning and refrigeration testing laboratory, Atsugi City</i>	(Atsugi city)
25 Sat	AM	Transfer to Nagoya	
	14:00-17:00	Site visit: Textile Machinery (<i>Exhibition</i>) <i>A commemorative museum of industry and technology, Nagoya City</i>	(Nagoya city)
	18:30	Transfer to Osaka	Hotel New Hankyu Osaka
26 Sun		Holiday	Hotel New Hankyu Osaka
27 Mon	9:00-10:30 (1hr30)	Interim discussion (participants)	Conference room: AP Chayamachi
	10:30-12:00	Site visit: Electric shop	near Umeda station

Date	Curriculum	Venue
(1hr30)		
	Japanese EE&C technologies	
15:30-17:00 (1hr30)	Lec: EE&C equipment: Energy efficient steam systems <i>Lecturer: Expert from a chiller company</i>	Conference room: AP Chayamachi
28 Tue	Japanese EE&C technologies and measures	
9:00-12:00 (3hr, incl break)	Lec.: EE&C measures in textile industry <i>Lecturer: A textile professional Engineer</i>	Conference room: AP Chayamachi
14:00-16:30 (2hr30)	Site visit and Lec.: EE&C technology (air conditioning-related products for commercial use) <i>An air conditioner factory, Sakai City</i>	(Sakai city)
29 Wed	9:00-11:00 (2hr)	Wrap up & evaluation (participants) Conference room: AP Chayamachi
13:00-14:30 (1hr30)	Site visit and Lec.: EE&C technology (co-generation facility) <i>A co-generation facility, Osaka city</i>	(Osaka city)
21:00	Departure at Hotel	
30 Thu	00:30	Departure from Kansai airport

(b) List of Participants

No.	Name	Title	Organization
1	Mohammad Alauddin	Joint Secretary	Power Division, Ministry of Power, Energy and Mineral Resources
2	Sheikh Faezul Amin	Member (Joint Secretary)	Sustainable and Renewable Energy Development Authority
3	Professor Dr. Md. Zahurul Haq	Head, Department of Mechanical Engineering	Bangladesh University of Engineering & Technology
4	Shirajun Noor Chowdhury	Deputy Secretary	Finance Division, Ministry of Finance
5	Md. Abdur Rouf Miah	Director (Sustainable Energy)	Power Cell
6	Shah Zulfiqar Haider	Director	Sustainable and Renewable Energy Development Authority
7	Md. Nafizur Rahman	Deputy Director	Sustainable and Renewable Energy Development Authority
8	Prodip Chandra Sarker	Assistant Director (Finance)	Sustainable and Renewable Energy Development Authority
9	Md Mehedi Hasan	Senior Investment Officer	Infrastructure Development Company Ltd.
10	Md. Shahadat Hossain	Assistant Director (Power)	Bangladesh Standards & Testing Institution
11	Md. Shamsul Haque	Additional Secretary	Bangladesh Garments Manufacturers & Exports Association



(c) Feedback from Participants

No.	Name	Evaluation
1	Mohammad Alauddin	
2	Sheikh Faezul Amin	
3	Professor Dr. Md. Zahurul Haq	<ul style="list-style-type: none">• Actively participated in discussion from mainly technical aspects.• Willing to provoke discussions on EE&C in Bangladesh.
4	Shirajun Noor Chowdhury	<ul style="list-style-type: none">• Had good understanding on EE&C technologies.• A lecture on basic overview on energy economy might have helped him to understand better.
5	Md. Abdur Rouf Miah	<ul style="list-style-type: none">• Actively participated in discussion from mainly policy aspects.• Eager to apply the findings to policy making.
6	Shah Zulfiqar Haider	
7	Md. Nafizur Rahman	<ul style="list-style-type: none">• Had good understanding on EE&C technologies.• Deepened understanding on EE'C measures in buildings.
8	Prodip Chandra Sarker	<ul style="list-style-type: none">•
9	Md Mehedi Hasan	<ul style="list-style-type: none">• Understood well about financial support measures in Japan.• Willing to influence and motivate consumers in Bangladesh to install EE products.
10	Md. Shahadat Hossain	<ul style="list-style-type: none">• Actively participated in discussion from mainly technical aspects (standardization and testing).• Willing to further collaborate with JATL.
11	Md. Shamsul Haque	<ul style="list-style-type: none">• Well understood about various advantages brought by EE&C measures.• Willing to encourage garment sector to take EE&C measures.

22. Other Points to be noted

22.1. Operational Guideline

In order to administer the Concessional Loan scheme in a timely manner, SREDA shall prepare the Operating Guidelines and other relevant documents and submit it to JICA to obtain JICA's approval after the signing of L/A. Any changes or editions to the Operating Guidelines require review and concurrence, as well as approval of JICA.

22.2. Long-term Engagement of Core Staff

Frequent transfer or replacement of SREDA, IDCOL and BIFFL staff may hinder smooth project implementation and cause unnecessary delays and inconsistency in the quality of works. In order to ensure smooth implementation of the Project, it is important to keep the qualified and experienced core staff in the same or related positions. SREDA, IDCOL and BIFFL will not transfer or replace the core staff during the project implementation, except for the case with unavoidable reasons: such core staff includes Project Manager, Deputy Director, staff members who are in charge of investment and appraisal, and accountants.

22.3. Counterpart Fund

- (a) For smooth implementation of the Project and sustainable operation of the facilities constructed under the Project, GOB including the executing agencies will take all necessary measures to secure the counterpart funds for non-eligible cost under JICA financing such as (i) the administration costs of GOB including the executing agencies, (ii) taxes and duties incurred (e.g. income tax and VAT on the contracts of consulting services and construction works, custom duties), (iii) purchase of land and other real property, (iv) compensation, and (v) other indirect items, and to secure the sufficient funds for adequate operation and maintenance.
- (b) When Reimbursement Procedure is applied for the disbursement, GOB including the executing agencies has to secure the sufficient RPA (Reimbursable Project Aid) budget in the ADP for the Project and authorize it in a timely manner (especially 1st and 3rd Quarter of each fiscal year) throughout the project implementation.
- (c) GOB including the executing agencies will mobilize additional financial resources in case the actual project cost exceeds the original cost estimate and JICA's contribution reaches the loan amount.

22.4. Procedures for Consultant Selection

- (a) There may be three consulting services for each executing agencies respectively. Whereas the Consulting services for the financial institutions are installed from the commencement of the Project, the one for SREDA is get started at the end of the deployment of the experts as mentioned above. The tentative Terms of Reference (TOR) of the Consulting Services are as in the Annex 15.2 for SREDA and Annex 15.3 for the IFIs respectively.
- (b) SREDA, IDCOL and BIFFL will select consultants in accordance with the latest "Guidelines for the Employment of Consultant under Japanese ODA Loans".

-
- (c) SREDA, IDCOL and BIFFL will prepare the Request for Proposal (RFP) document in accordance with the latest “Standard Request for Proposals under Japanese ODA Loan” at the time of finalization of the document.
 - (d) Quality-Based Selection (QBS) is a method based on evaluating only the quality of the technical proposals and the subsequent negotiation of the financial terms and the contract with the highest ranked consultant. QBS method will be applied to the Project as TOR of the consultant includes assignments where “the downstream impact is so large that the quality of the service is of overriding importance for the outcome of the Project” as referred to in “Guidelines for the Employment of Consultant under Japanese ODA Loans”.
 - (e) For the case of QBS, Executing Agencies are expected to indicate “Estimated M/M” for both international and local consultants in the Request for Proposal for selection of consultants (Note 2 of Section 3.05 of the “Guidelines for the Employment of Consultants under Japanese ODA Loans (April 2012)” and Section 2: Data Sheet of the “Standard Request for Proposal under Japanese ODA Loans – Selection of Consultants (October 2012)”). The reason for setting “Estimated M/M” is that, it gives the candidates an indication on the required quantities of services, thus ensuring a sound and appropriate competition.

22.5. Accountability and Integrity Measures

- (a) Participation in the Tender Evaluation Committee (TEC):
JICA staff, or its representative including the consultant employed by JICA’s assistance if nominated by JICA, can participate in all the meetings of the Tender Evaluation Committee (TEC) as an observer to ensure transparency in the procurement process of the Project. The executing agencies will issue invitation to JICA.
- (b) Fraud and Corruption Hotline:
The executing agencies will include the following contact information on the fraud and corruption hotline in the bidding documents.

For JICA

In Japanese: <https://www2.jica.go.jp/ja/odainfo/index.php>

In English: <https://www2.jica.go.jp/en/opinion/index.php>

For GOB in case of SREDA

Central Procurement Technical Unit, Implementation Monitoring and Evaluation Division (IMED), Ministry of Planning

Block-12 (2nd Floor), Sher-e-Bangla Nagar, Dhaka 1207

Phone: 880-2-9144252, 53

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- (c) Internal Audit:
The executing agencies, IDCOL and BIFFL, will employ a chartered accountant firm for internal audit of the Project in accordance with the draft TOR as shown in Annex 19. The cost of its employment should be borne by the executing agencies. The executing agencies will submit the annual internal audit report to JICA within 9 months after the end of each fiscal year.

(d) Independent Procurement Audit:

An ex-post procurement audit may be carried out during/after the implementation stage by independent auditors, who will be designated by JICA, in order to ensure the fairness and competitiveness of procurement process, in case JICA considers it necessary. The cost of employment of the auditors will be borne by JICA. GOB including the executing agencies will take necessary measures to enable and facilitate the audit.

22.6. Disbursement Period and Procedure

- (a) No disbursement shall be made for the Project later than the same day and month nine (9) years after the effective date of the Loan Agreement, unless otherwise agreed between JICA and the Borrower, although it will be determined at the L/A negotiation stage.
- (b) GOB including SREDA, IDCOL and BIFFL agreed that Advance Procedure for the Provision of Fund to End users and Transfer Procedure or Commitment Procedure for the Consulting Services (mainly Transfer Procedure) may be applicable for the disbursement procedure, although the details of the procedure will be explained in subsequent JICA missions and selection will be made at the L/A negotiation stage. Also, GOB including SREDA, BIFFL and IDCOL agreed that all L/C (Letter of Credit) and banking charges, local banking charges, if any, should be paid by the administration cost of GOB, SREDA, BIFFL and/or IDCOL.

(cf. http://www.jica.go.jp/english/operations/schemes/oda_loans/oda_op_info/procedure/)

22.7. Administration of the Bank Accounts under the Advance Payment Procedure

For the Category 1: Provision of Fund to End users, GOB, BIFFL and IDCOL need to do the following procedure:

- (a) Designated Special Bank Account
- Two Designated Bank Accounts will be opened and maintained at Bangladesh Bank in the name of IDCOL and BIFFL respectively to receive disbursement from JICA under the Advance Payment Procedure;
 - The disbursed amount will be transferred to the Project Operating Accounts of IDCOL and BIFFL respectively maintained at each IFI's Agent Bank on behalf of GOB under the Project's name and be administered by IDCOL and/ or BIFFL; and
 - The disbursement from IDCOL or BIFFL to End users of Component 1 and 2 / PDs of Component 3 will be directed from those Project Operating Accounts of IDCOL and/or BIFFL, and all necessary procedures will be undertaken by IDCOL and/or BIFFL.
- (b) Statement of Expenditures (SOE) Method:
- Under the SOE method, records and accounts related to expenditures financed from JICA Loan shall be audited annually by an independent auditor to be appointed and employed by IDCOL and/or BIFFL at its own cost and the audit report needs to be furnished to JICA annually within 9 months after the end of each fiscal year. IDCOL and BIFFL will submit an auditor engagement letter to JICA.

22.8. JICA's Review Requirement

IDCOL/BIFFL will get JICA's review of the first two sub-projects in each components respectively (In total, 12 sub-projects shall be reviewed by JICA from two IFIs). If necessary, IDCOL/BIFFL will get JICA's review for sub-projects beyond the first six. The appraisal documents will be reviewed by JICA at first, based on operating guideline, appraisal manual and other relevant documents. After the review, the appraisal documents will be sent to JICA for its review. JICA will continuously monitor the appraisal documents to review reliability of information on the report and check the consistency with appraisal manual and other relevant documents.

22.9. Revolving Fund Account

In order to ensure that the second and successive generations of the loan from JICA will be utilized for the Project's objective, IDCOL and/or BIFFL shall open and maintain the Revolving Fund Account at a scheduled commercial bank which will administer the second and succeeding generations of loans to End users of Components I, II and III. IDCOL and/or BIFFL will submit annual reports on the statement of the Designated Bank Account and the revolving of the proceeds of the Loan, to JICA until 50 % of the principal of the original loan amount are used for the second and successive generations of the loans to End users of Components I, II and III.

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