Energy Sector Management Assistance Program :Solar Mini-grid

CAPACITY BUILDING/TRAINING Solar Mini-grid :Bangladesh Case Study

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AN OVERVIEW OF IDCOL

- A development financial institution owned by Bangladesh government
- Started operation in 1997
- Works to support the private sector
- Operates in infrastructure, energy efficiency and renewable energy sectors
- Largest financier of infrastructure and RE projects in Bangladesh
- Funded by development partners like the World Bank, ADB, JICA, IDB, KfW, GIZ, USAID, DFID, GEF
- Invested approx. USD 1,000 million in renewables

Infrastructure

Renewable Energy



Power





Telecommunications

Solar Mini-grid





Port

Solar irrigation Pump



IDCOL's Solar Initiatives



Financed 4.8 Million SHS



1,221 Solar Irrigation Pumps in Operation



107,032 Solar Street Lights Installed under Social Safetynet Program of GoB



23 Solar Mini grid Projects in Operation



Started Financing Solar Rooftop Projects, Target 300 MWp



An Overview of IDCOL Mini-grid Projects

- Size :100kWp to 250kWp project
- Location : Isolated off-grid islands
- Sponsor : Private companies/NGOs
- Financier : IDCOL
- Progress : 23 projects in operation
- Finance
- : Equity-20% Loan-30% Grant-50%
- Funding source:
 - Grant: GPOBA, USAID, UKAID, KfW
 - Loan: IDA, JICA





Key Challenges in the project areas

New Customer Acquisition	High connection fee
	Misconception about the tariff
Day load- Optimization	Unavailability of the efficient electric run appliances/machinery
	Inefficient cultivation practices
Entrepreneur Development	Lack of innovative ideas & technical know-how
	Absence of financial institution
Reporting & Documentation	Lack of proper documentation & reporting skills of plant staffs
Plant Performance Monitoring	Lack of proper skills for operation & maintenance
Usage of energy efficient appliances	Unavailability of energy efficient appliances at project sites
	Poor after sales services of the appliances



CUSTOMERS TRAINING INITIATIVES BY IDCOL

2017-2018

- Organized by Sponsors
- Conducted by IDCOL
- 11,597 participants (272 batches)
- 4,483 New customer acquisition
- Acquisition rate 38%

2018 (Dec)

- Assessment of effectiveness of the training program
- Restructuring of the training program
- Changes in collection modality of connection fee

2019 (Up to May)

- Organized by sponsors
- Potential customer identification, invitation and training conducted by IDCOL
- 2,210 participants (43 batches)
- 1,910 new customer acquisition
- Acquisition rate
 85%

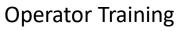


Capacity Building Activities



Farmer's Training







Management Training



Entrepreneur Development Training



Women Empowerment



Encourage women participation in the training

Focus on income generating activities

Special emphasis on safety & education



New Development in the Project Sites



Electric Auto-Rickshaw



Laundry



Refrigerator in Grocery Shop



Irrigation



Electric Workshop



Way Forward

New customer acquisition training

Training on productive load i.e. refrigerator, fan etc.

Special entrepreneur development training

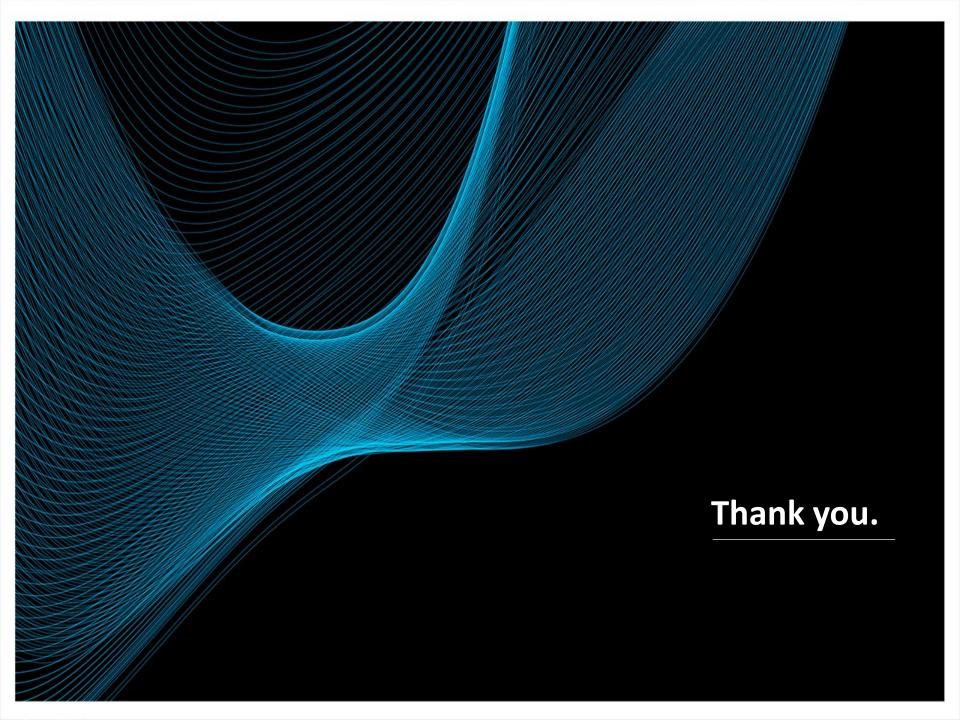
Business planning training with the existing workshops/saw mills etc.

Technical training for project staffs

Technicians training for the local technicians

Management training for the project sponsors





SMG Customer Training - Contents

- Concepts of Mini-grid
- Differences among Mini-grid, Solar Home Systems and National Grid
- Benefits of Solar Mini-grid & Tariff calculation
- Types of loads that may be used
- Safety aspects and desirable maintenance
- Optimization of electricity consumption and minimization of cost
- Awareness building about energy efficient appliances
- Experience sharing of existing mini-grid beneficiaries







