



CMES experience of the rural  
home electrification through Solar PV  
within a microcredit arrangement

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# Areas of electrification

*Districts:*

Dinajpur

Sirajgonj

Rangpur

Tangail

Lalmonirhat

Gazipur

Chapai-Nowabgonj

Patuakhali

Rajshahi

Borguna

Jhalokathi



## Sizes of the systems

Total systems installed:

1689

<u>Systems</u>	<u>Percentage</u>	<u>Type of customers</u>
50 pW	60%	Well to do service holders or businesspersons.
40 pW	32%	Solvent service holders or businesspersons.
30 pW	4%	Relatively lower income section of the villagers.
65 pW	2%	Mostly families of service-holders in cities and foreign countries.



# The Technical Package

65 pW	5 tube lights (10 w), 1 B/W TV, 1 Mobile phone charging point
50 pW	4 tube lights, 1 B/W TV, phone charging point.
40 pW	3 tube lights, 1 phone charging point.
30 pW	2 tube light. ● Experimental LEDs.

## The economic package

System (pW)	Price (Tk.)	Down Payment (Tk.)	Loan amount (Tk)	Monthly Installment (Tk.)		
				1yr	2yr	3yr
65	36,600	7,320	29,280	2684	1464	1058
50	29,500	5,900	23,600	2164	1180	853
40	23,000	4,600	18,400	1687	920	665
30	19,000	3,800	15,200	1394	760	549



# Recovery Rate

- Low (80%) compared to mainstream microcredit of CMES (99%)
- Usual Reason for overdue given by customers
  - System failures, non-availability of power
  - Temporary bad income or bad harvest
  - Person responsible payment not available
- Unauthorized by-passing of charge controllers as well as genuine maintenance problems



# Major Challenges

- Overdue recovery
- Sparse density of the systems
- System failures: battery, balance of system.
- High overhead cost
- Difficult procurement of panels
- Increasing panel prices
- Logistics for repairs & maintenance.
- Uncertainty in prices and procurements being major impediment in extension.



# CMES strategies

- Attractive dissemination
- Adaptive R&D
- Maximum decentralization through
  - training local young personnels and engaging them
  - decentralized manufacture of BOS.



Thank you