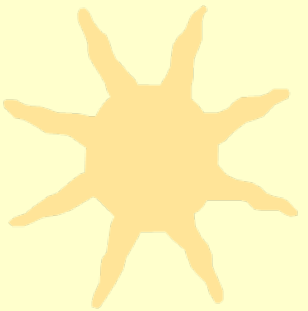
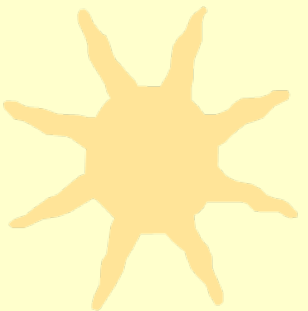




Achievement of IDCOL in Promoting RET in Bangladesh



S. M. Formanul Islam

Director, Legal and Company Secretary
Infrastructure Development Company Limited (IDCOL)

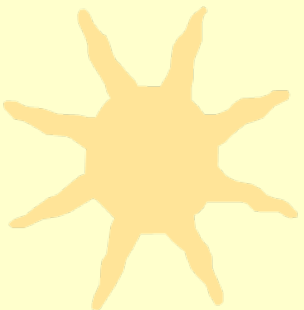
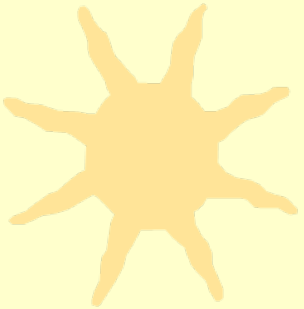
27 April 2008





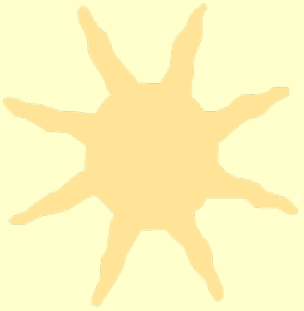
About IDCOL

- ☀ IDCOL is a financial institution owned by the government.
- ☀ IDCOL is mandated to provide long-term financing to private sector infrastructure projects
- ☀ Infrastructure sectors in the current priority list of IDCOL include: Power generation, Telecommunication, Information and Communication Technology, Ports, Gas and Gas related infrastructure, Water Supply, Toll Roads and Bridges, Urban Environmental Services and **Renewable Energy projects.**

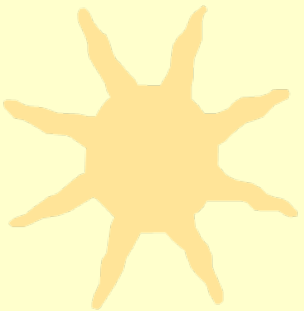




IDCOL's Objectives



☀ Catalyzing private sector participation in the infrastructure projects.



☀ Promoting renewable energy technology in Bangladesh

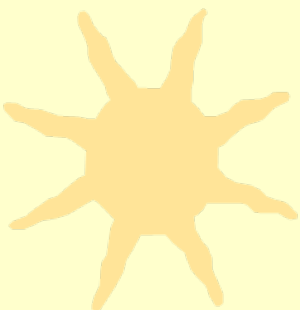
☀ Promoting renewable energy businesses in Bangladesh on commercial basis



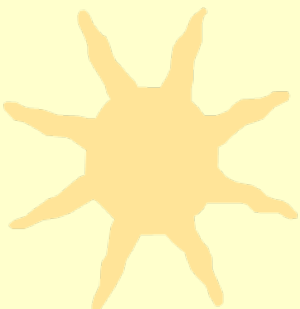
☀ Promoting eco-friendly projects



IDCOL Current Renewable Energy Programmes



☀ IDCOL Solar Home Systems Programme



☀ National Domestic Biogas and Manure Programme



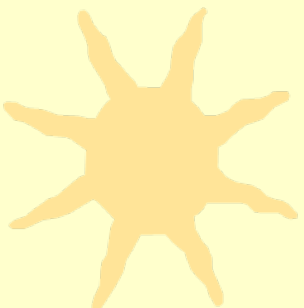
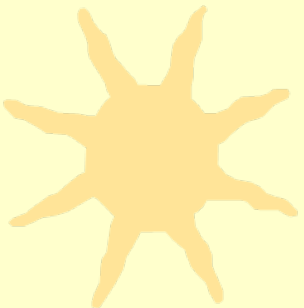
☀ Biomass gasification-based Power Plant



Solar Home Systems Programme

How it started

- ❖ With the help of International Development Association (IDA) and Global Environmental Facility (GEF), the Solar Program in Bangladesh started as a key component of the Rural Electrification and Renewable Energy Development Project (REREDP) of The World Bank.
- ❖ The Government of Bangladesh targeted Palli Biddut Samity (PBSs) and non-government organizations (NGOs) and micro-finance institutions (MFIs) as the implementing agencies
- ❖ Rural Electrification Board (REB) and IDCOL was selected as the coordinating agencies for the execution of the program.

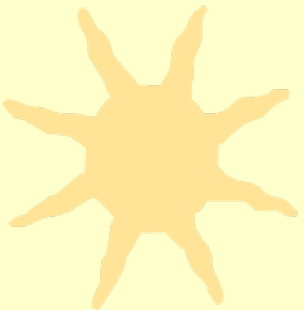
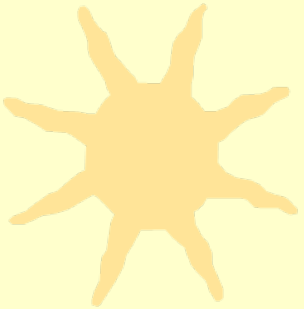




Solar Home Systems Programme

Implementation method

- ❖ Implemented through 15 Partner Organizations selected from NGOs, MFIs and Private Entities.
- ❖ IDCOL provides grants (currently EUR 34) and refinance (up to 80% of POs loan but not to exceed EUR176 per system)
- ❖ IDCOL sets technical standard for the equipment and ensures quality
- ❖ It ensuring that grant benefit reaches the target people
- ❖ It facilitates cooperation and coordination among the POs
- ❖ Provides training, publicity materials and logistic supports to the POs

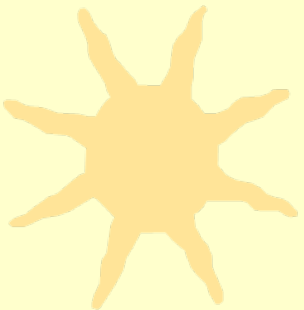
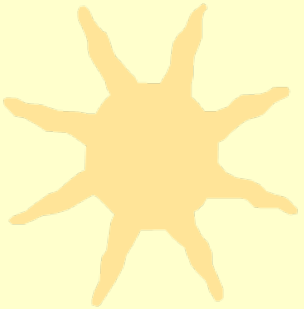




Solar Home Systems Programme

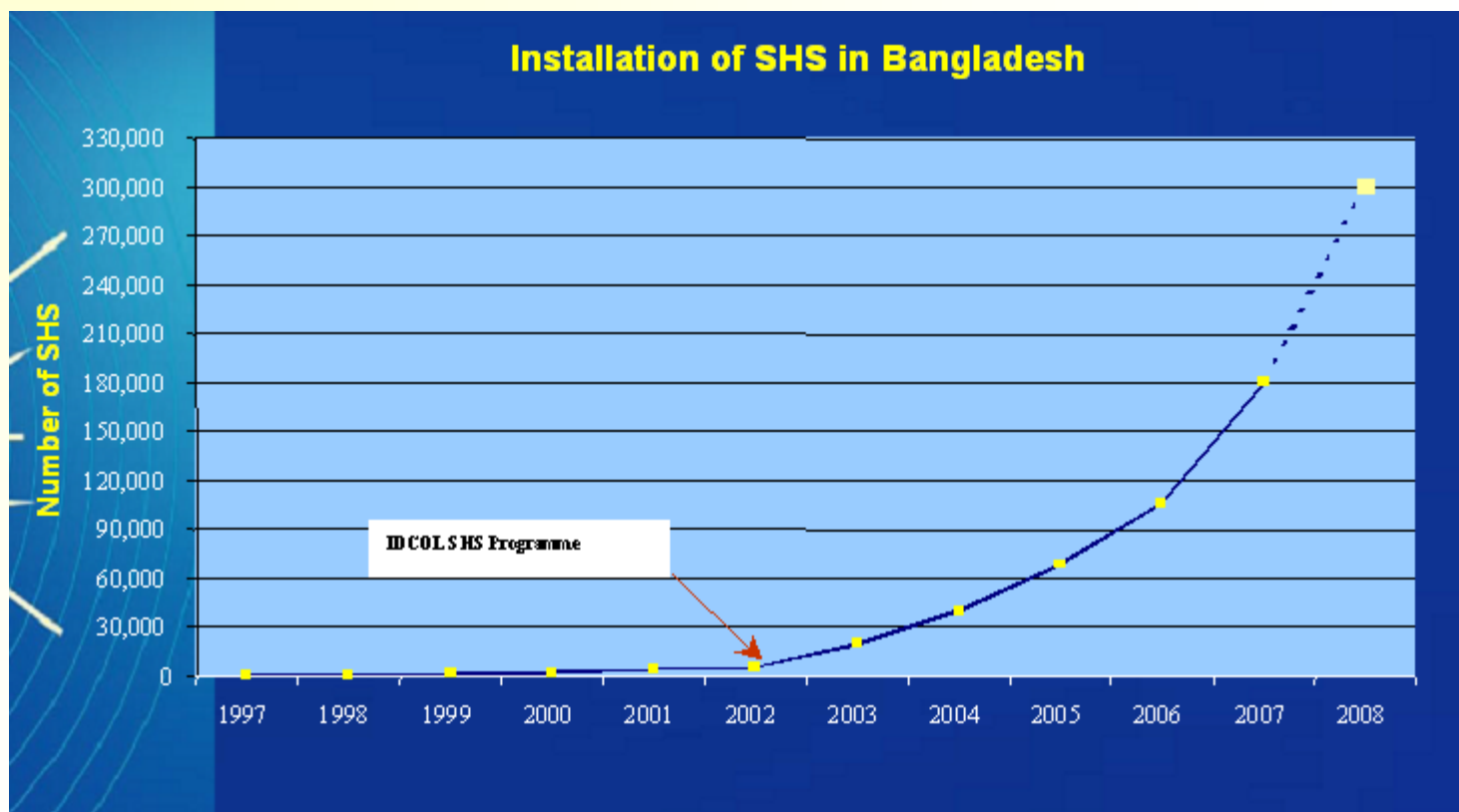
Current status

- ☀ Started in January 2003, IDCOL initially targeted to finance 50,000 SHSs by the end of June 2008.
- ☀ Target was achieved in September 2005, 3 years ahead of schedule and US\$ 2.0 million below estimated project cost.
- ☀ Revised target is to finance 228,000 SHSs by 2009 with additional support from World Bank, KFW and GTZ.
- ☀ Till February 2008 a total of 180,000 SHSs have been installed under the programme.
- ☀ IDCOL's Solar Program is one of the fastest growing renewable energy programs in the world





Progress of the Project



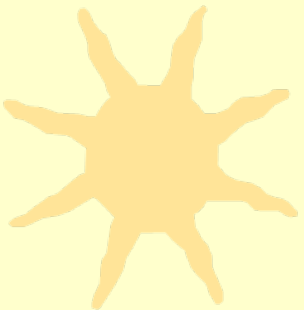
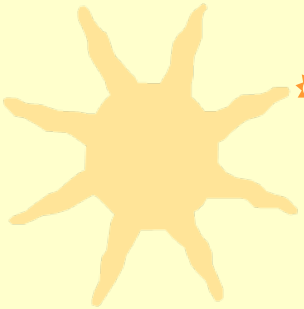
Monthly average SHS installation : 6,500 SHSs/month in average





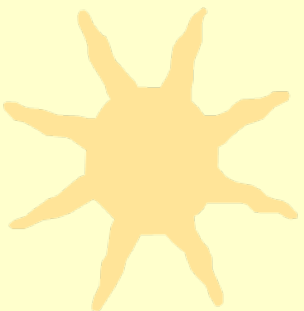
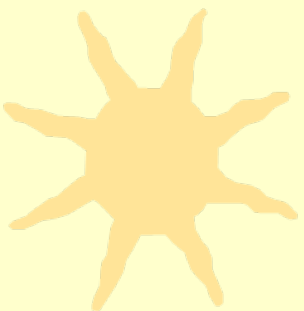
Grant Facility

- ☀ Two kinds of grants are provided under this program:
 - Capital Buy-down Grant
 - Provided to household to purchase SHS so that the cost of the system is reduced and the down-payment and installment payment become affordable.
 - Institutional Development Grant
 - Given to POs for extending credit to the households
- ❖ Since the objective of the project is to commercialize SHS, IDCOL has adopted a policy of reducing grant with progress of the project





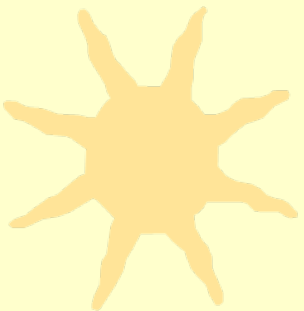
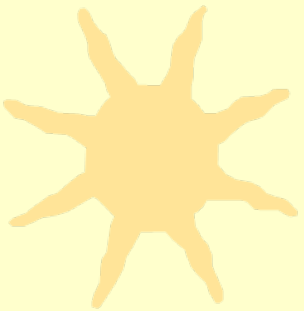
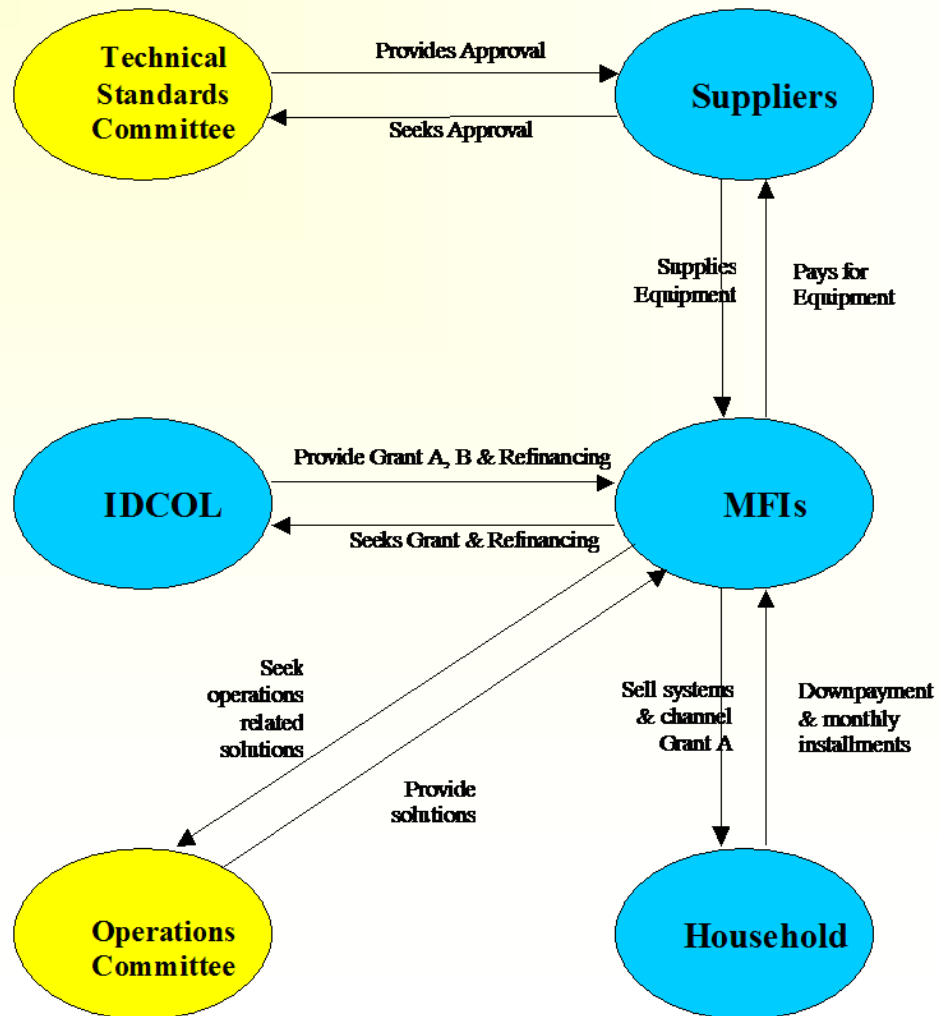
Phased Reduction of Grants



Item	Amount of Grant Available per SHS		
	Total	Buy-down Grant	Institutional Development Grant
First 20,000 systems	\$90	\$70	\$20
Next 20,000 systems	\$70	\$55	\$15
Next 30,000 systems	\$50	\$40	\$10
Next 28,000 systems	€ 38	€ 30	€ 8
Next 30,000 systems	€ 38	€ 30	€ 8
Next 35,000 systems	€ 36	€ 30	€ 6
Next 35,000 systems	€ 34	€ 30	€ 4



Project Snapshot





Lending Terms

IDCOL Refinancing: **80% of MFI loan to Household**
Max. Refinancing per system: **US\$ 230 / EUR 176**
Household Down payment: **Minimum 10% of system cost**

IDCOL Loan Terms to MFIs:

Tenor: **10 years**

Grace: **2 years**

Interest rate: **6% calculated on the outstanding balance**

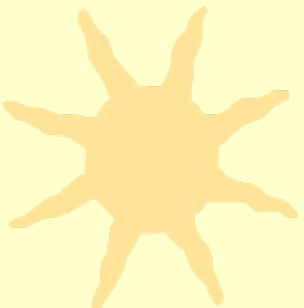
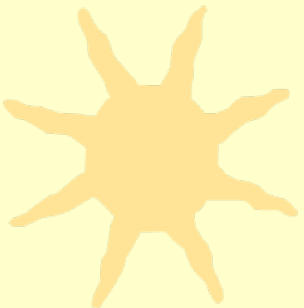
Repayment : **Semi-annual (total 16 equal installment)**



Financing Method

PO's Loan to Households

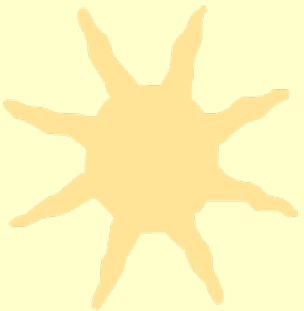
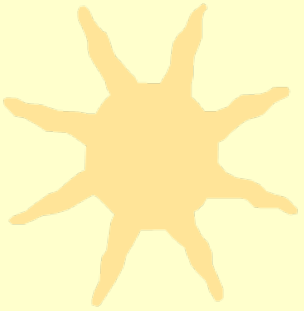
- ✓ Different POs extend credit on different terms and conditions.
- ✓ Loan tenor varies from 1 to 5 years.
- ✓ Interest rate varies:
 - 8% to 15% per annum on declining balance method
 - or
 - 10% to 15% per annum on equal principal payment method





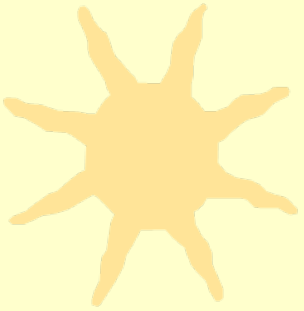
Biomass Power Plant

- ☀ The capacity of Biomass fuelled Power Plant is 250 kW
- ☀ The plant uses locally available agricultural residues i.e. rice husk as fuel for power generation
- ☀ Being located in an un-electrified area, the plant is supplying grid quality power to 300 households and commercial entities of the area of Kapasia, Gazipur
- ☀ The Plant has been developed by a local private entity Dreams Power Ltd.





Biomass Power Plant



Total Project Cost : BDT 2.5 crore

Debt Equity ratio : 80%-20%

Grants : BDT 1.5 crore provided by World Bank

Term Loan : BDT 50 lac provided by IDCOL

Tenor of term loan : 7 years

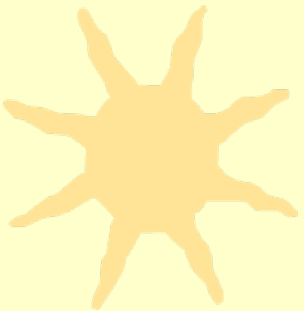
Grace period : **1 year**

Interest Rate: 9.5%

Repayment : Quarterly

Fuel Cost : Rice Husk- 1.4 Tk/kWhr, Diesel- 3.3 tk/ kWhr (Producer gas to diesel ratio : 70%-30%)

Tariff : 7.11 Tk/ kWhr

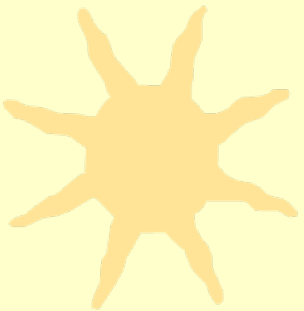
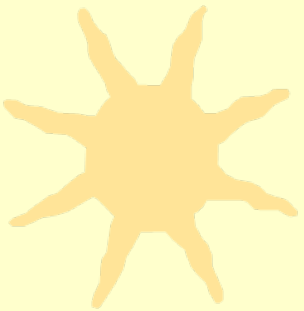




National Domestic Biogas and Manure Program (NDBMP)

Overview

- ☀ Being implemented with financial assistance from SNV Netherlands Development Organization and KfW
- ☀ Under the project, a total of 60,000 domestic sized biogas plants will be constructed by 2010
- ☀ Beginning in June 2006, IDCOL has awarded construction approval to 4,823 plants up to February 2008 of which 3,200 have been completed





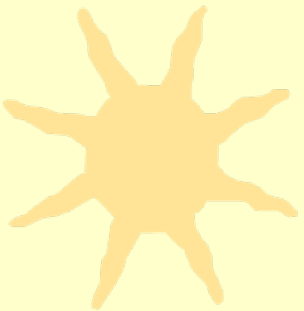
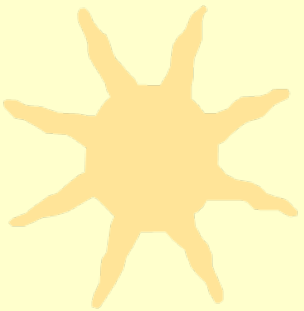
Domestic Biogas Plant

Method of Implementation

IDCOL is implementing this program through 20 partner organizations (PO)

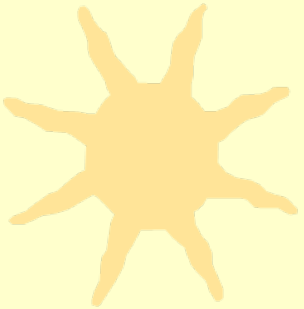
There are 4 types of POs:

- (a) Construction Partner Organizations (CPOs),
- (b) Lending Partner Organizations (LPOs),
- (c) Lending and Construction partner Organizations (LCPOs) and
- (d) Manufacturing Partner Organization (MPOs)





Domestic Biogas Plant



Total Project Cost is estimated as EUR 23.61 million

Interest rate: 6% to LPOs and LCPOs to households

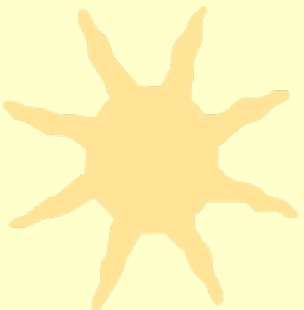
Loan tenure : 7 years

Grace Period : 1 year

Repayment Profile : Quarterly

Subsidy: 7,000 Tk/Plant provided by SNV to customer

Credit facility : IDCOL, KfW up to 80% of the LPOs and LCPOs loan to households





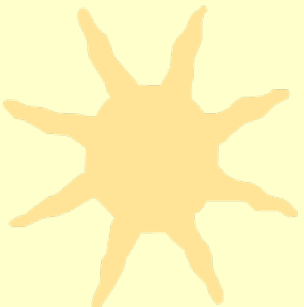
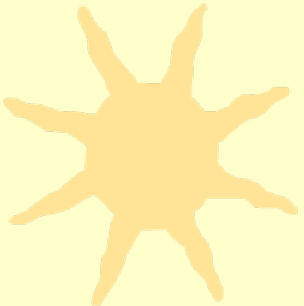
Financing Method

Cash Sale

- Customer bears all costs.
- IDCOL provides Tk. 7,000 as subsidy to the customer through PO upon completion of the plant.

Credit Sale

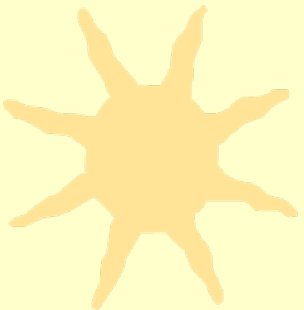
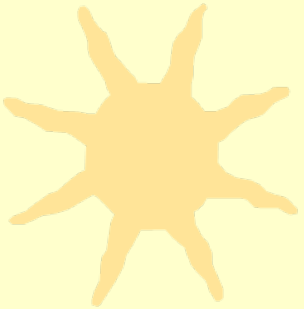
- Down payment : Minimum 15% of the plant cost
- Loan = plant cost- subsidy- down payment
- Refinance : 80% of the loan by IDCOL to LPOs/LCPOs (EUR 147)
- CPO/LCPO contribution : 20%

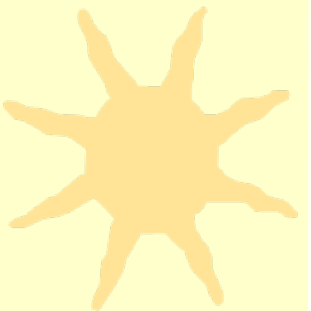
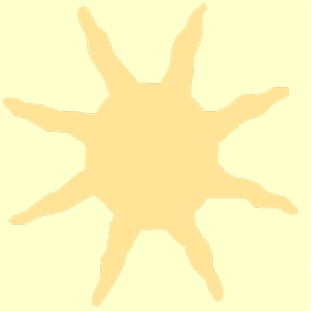




The Way Forward.....

- ☀ Installing more Biomass based Power Plant: 10 in 2008 and 20 in 2009
- ☀ Establishing Solar Panel Assembling Plant with 1-2 MW capacity
- ☀ Installing community based solar power system in urban/rural areas.
- ☀ Promoting usage of solar water heater, solar pumping
- ☀ Financing of solar energy powered BTSs of mobile operators
- ☀ Undertaking other renewable energy programmes:
 - Biogas based Electricity Generation (up to 500 kW),
 - Large Biogas Plant (10 m³ and above),
 - Electricity Generation from Urban Waste,
 - Production of Bio-diesel.





THANK YOU