



Financing Renewable Energy Initiatives in Bangladesh



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An Overview of IDCOL



- A fully government owned financial institution
- Started operation in 1997
- Largest financier in private sector infrastructure projects in Bangladesh
- Market leader in renewable energy sector
- Funded by the government and multiple development partners i.e. the World Bank, ADB, IDB, KFW, GIZ, GEF, GPOBA, SNV, JICA, etc.

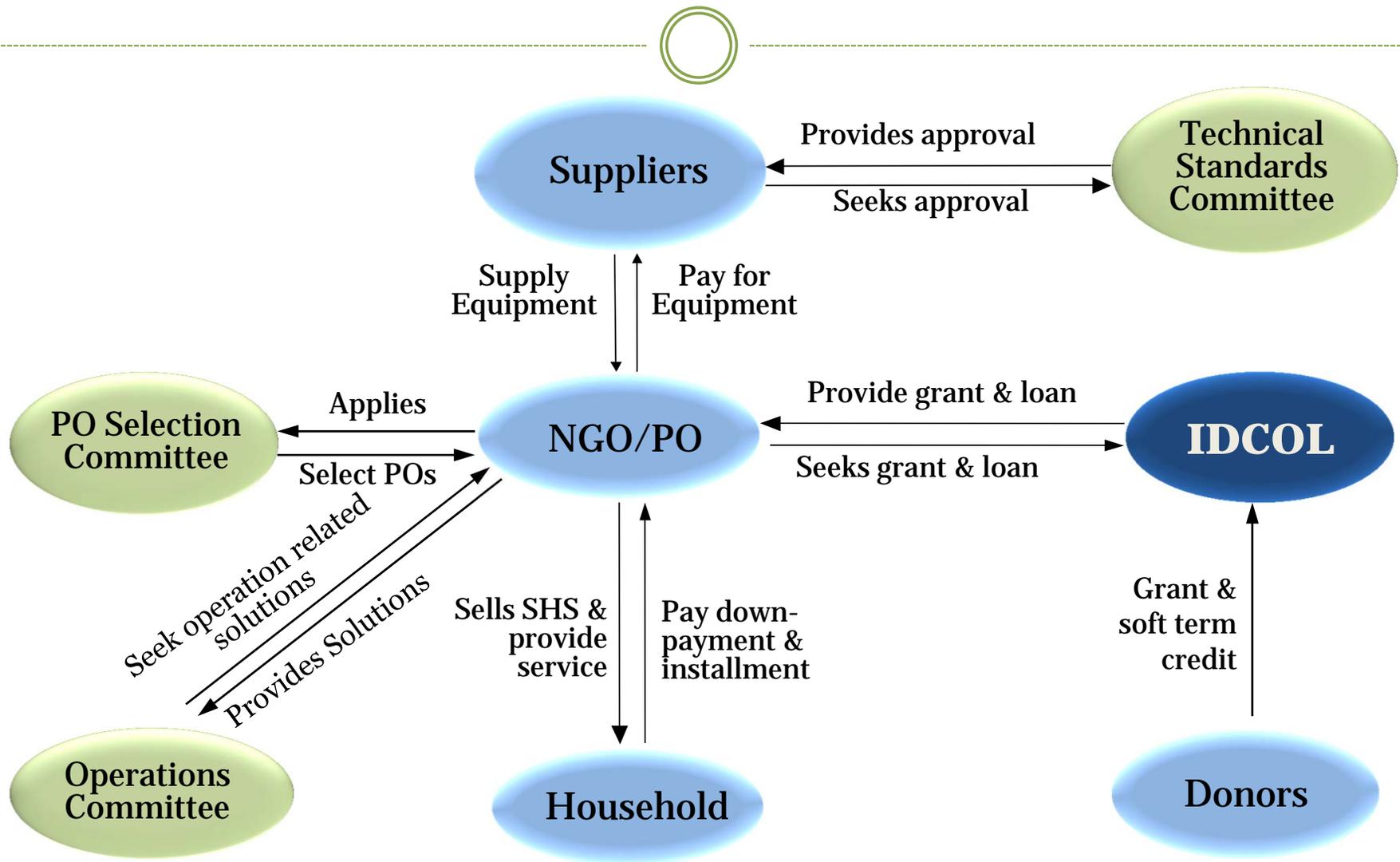


Snapshot of RE Initiatives

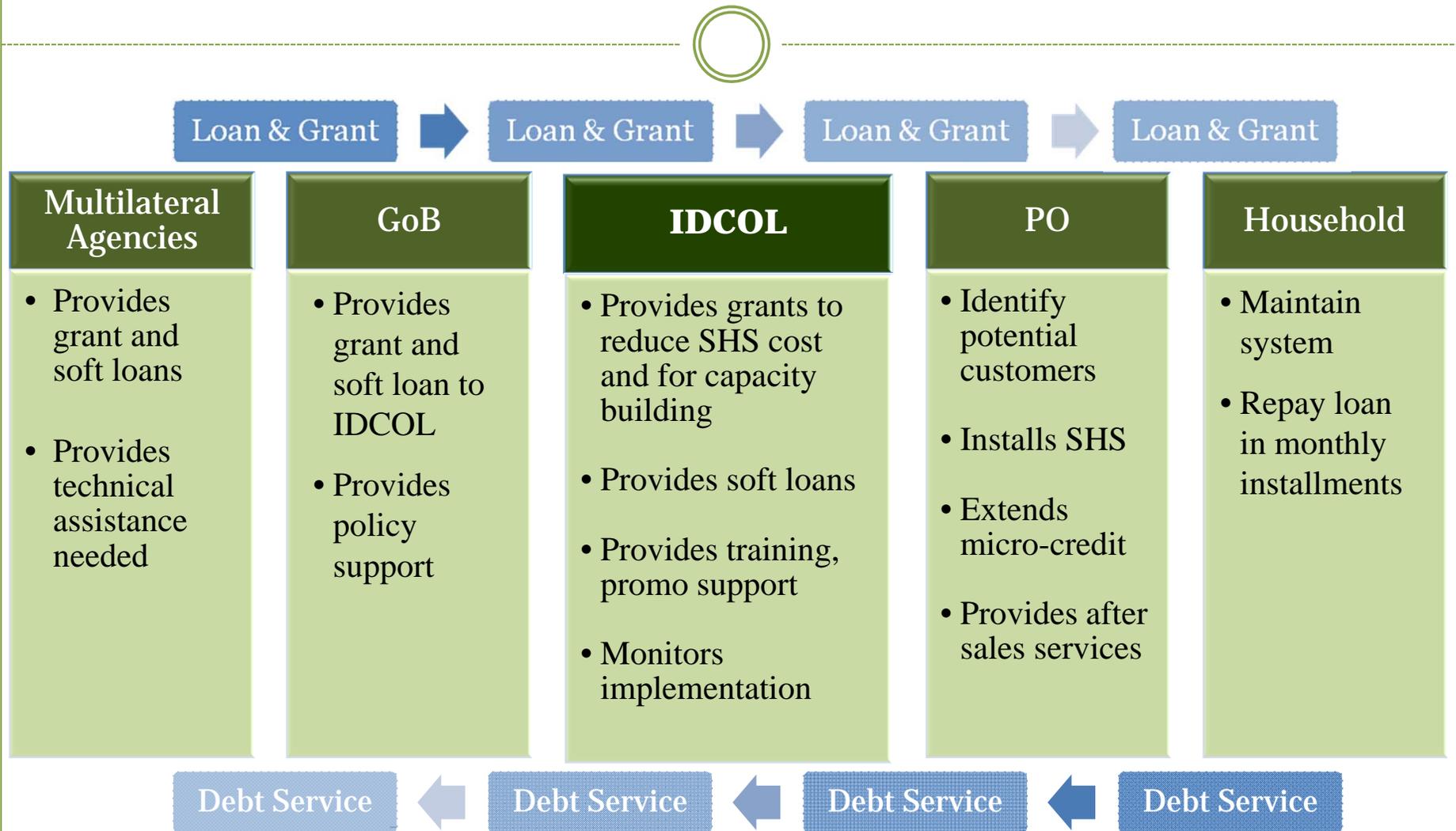


Project	Target	Achievement
SHS Program	4 million by 2015	2 million by Feb 2013
Domestic Biogas Program	100,000 by 2016	27,329 by 2012
Solar Irrigation Program	1,500 by 2016	41
Solar Mini Grid	50 by 2016	1
Solar Powered Telecom BTSs	As per demand	98
Biomass Gasification Project	50 by 2016	2
Biogas Based Electricity Project	50 by 2016	5
Improved Cook Stove Program	1,000,000 by 2017	Recently launched

Program Structure - SHS



Fund Flow and Role of Partners



Mode of Financing: an Example



(a) Market Price of 50 Wp SHS	USD 400
(b) Buy-down Grant (Grant A)	USD 25
(c) System Price for Household [(b)-(a)]	USD 375
(d) Down Payment from Household to PO [15% of (c)]	USD 56
(e) Loan Payable from Household to PO [(c)-(d)]	USD 319
Loan Tenor	3 years
Interest Rate	12-16% p.a.
Monthly Installment Amount	USD 8.5
(f) IDCOL Refinance [80% of (e)]	USD 255
Loan Tenor	5~7 years
Interest Rate	6~9% p.a.

Quality Control Mechanisms



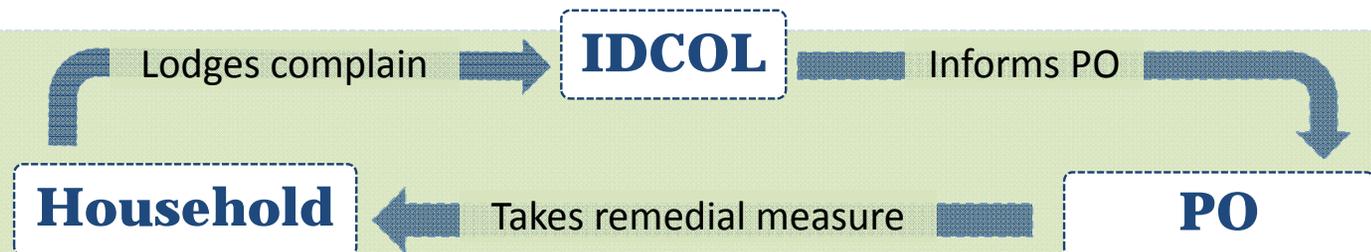
Physical Inspection

- Physical inspection by technical inspectors
- Verification of collection efficiency by collection efficiency inspectors
- Independent technical and financial audit

Training Programs

- Training for trainers
- PO Staff / customer training
- Supplier consultation

Call Centre



Challenges and Mitigations

Challenges	Mitigation
Lack of a business model	<ul style="list-style-type: none">▪ A social enterprise model with an ultimate goal of commercialization;▪ Presence of multiple POs which ensures healthy competition▪ Phase-reduction nature of grant
Lack of institutional capacity	<ul style="list-style-type: none">▪ Institutional development grant (Grant-B)▪ Long-term concessionary credit facility▪ Staff training provided by IDCOL
High cost of SHS equipments	<ul style="list-style-type: none">▪ Capital buy-down grant (Grant-A)▪ Concessionary credit facility
Lack of awareness	<ul style="list-style-type: none">▪ The extensive network of the POs▪ Customer training provided by POs
Lack of quality assurance	<ul style="list-style-type: none">▪ Technical Standard Committee▪ After sales services are provided by the POs▪ Quality control mechanisms by IDCOL
Absence of local support industries	<ul style="list-style-type: none">▪ IDCOL has financed two solar PV assembling plants in Bangladesh▪ IDCOL provides support for developing other SHS components

Benefits and Impacts

Household Level

- Living conditions of households have generally improved.
- Health hazards of kerosene lamps have reduced.
- Household safety and security has improved.
- Study hours of children have substantially increased.
- Working hours of women have substantially increased for income generating activities.



Business Level

- Business hours have increased resulting in increased income.
- A number of petty businesses (hotels, tea stalls, tailor shops, barber shops) have benefited in increased income per day,
- A number of cottage industries / small enterprises have benefited in expansion and employment generation,
- A number of jobs are created in rural areas for both skilled and unskilled people.



Community Level

- Several mosques, churches and other community places have benefited from the SHSs,
- Clinics, schools, government offices, and other public facilities have also benefited from installation of SHSs.



Key Success Factors



Policy Level

- The Government outlined a clear vision and policy (2002 Power Sector Reform and 2008 Renewable Energy Policy) about bringing energy to off-grid areas.
- The Government created enabling environment to support the above mentioned policies (lifting the import duty on solar panel)
- The Government extended full support for the program and various donors have continued to extend financing for the program.

Institution Level

- Institutional, financial and technological models of the SHS Program were carefully designed
- Government's choice of IDCOL as executing agency has played a key role in making the SHS Program a success.
- IDCOL successfully applied a number of checks and balances (technical, financial, and operational) to ensure quality installation and operation of the SHSs as well as effective management of the Partner Organizations (POs).
- Presence and outreach of various NGOs at grass-root level in Bangladesh played a key role in making the SHS Program a success.
- Business model of SHS program, subsidy provided by IDCOL for POs and households, and growingly low cost of SHS have played key role in increasing the demand.

Financing Level

- Incentivization of IDCOL for other stakeholders (such as solar panel assemblers) also played an important role in opening up the private sector.
- Availability of microcredit facility for the poor to purchase the SHS greatly facilitated its dissemination. Wealth of experience of NGOs in microfinance helped them implement the Program successfully.
- Capacity building of NGOs and other market players resulted in more awareness, know-how, and technical capacity facilitating relatively easy adaptation of solar technology.

Technology Level

- Capacity building of NGOs and other market players resulted in more awareness, know-how, and technical capacity facilitating relatively easy adaptation of solar technology.
- Private sector is on the move in solar energy and its dynamism is resulting in technological innovation and intense market competition leading to low cost and greater product quality, user friendliness, customer service.

Way Forward



- **IDCOL has developed the platform for commercialization of SHS market in Bangladesh.**
- **Given this objective of market development, IDCOL has taken a phased reduction approach for grants and concessionary refinancing support.**
- **IDCOL expects that once it steps out of this market, the natural market mechanisms will be automatically developed and thus SHSs installation will continue afterward.**

Thank You

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