Renewable Energy for Rural Economic Development Project

Jayantha Nagendran
Senior Vice President (Project Management)
DFCC Bank

17 February 2003
Presentation Outline

• Support for renewables: ESD and RERED Projects

• Financing - credit and grant

• Implementation arrangements

• Credit terms
World Bank Assisted Projects

• Energy Services Delivery (ESD) Project (1997-2002)
  - Credit Programme (private sector)
  - Pilot Wind Farm (CEB)
  - Capacity building (CEB)

# ESD Credit Programme Achievements

<table>
<thead>
<tr>
<th></th>
<th>Plan</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-conn. Mini Hydros</td>
<td>21 MW</td>
<td>31 MW</td>
</tr>
<tr>
<td>Off-grid Village Hydros</td>
<td>20 projects</td>
<td>84 projects</td>
</tr>
<tr>
<td></td>
<td>2,000 homes</td>
<td>4,174 homes</td>
</tr>
<tr>
<td></td>
<td>200 kW</td>
<td>879 kW</td>
</tr>
<tr>
<td>Solar Home Systems</td>
<td>15,000 homes (revised)</td>
<td>19,200 homes</td>
</tr>
<tr>
<td>Disbursements</td>
<td></td>
<td>100%</td>
</tr>
</tbody>
</table>
RERED Project Vision

To promote private sector and community participation in providing electricity services using renewable resources for

– Rural economic development

– Capacity addition to the grid
Primary Targets

- Electricity access to 100,000 homes through solar home systems and independent mini-grids
- Electrification of 1,000 small enterprises and institutions through renewable energy resources
- Addition of 85 MW capacity to the grid
Financing under RERED Project

IDA Credit  
US$ 75 m

GEF Grant  
US$ 8 m  
US$ 83 m

Grant - Cofinancing (off-grid)
- Project preparation (off-grid)
- Technical assistance
IDA Credit

Interest Rates

...... Standard IDA service charge

...... AWDR

80% refinance, max $8m

...... AWDR+ x
Participating Credit Institutions
as on 31 Jan 2003

• Licensed specialised banks
  DFCC Bank, National Development Bank, Sanasa Development Bank

• Licensed commercial banks
  Commercial Bank, Hatton National Bank, Seylan Bank

• Leasing companies & merchant banks
  Ceylinco Leasing Corporation

• Micro finance institutions
  Sarvodaya Economic Enterprises Development Services
Other Non-RERED Sources of Funds

Credit
• Regional Development Banks
• Micro finance institutions

Grant
• Provincial Councils
• Donors
1. Grid-connected Investments

Credit
Term loans for mini hydros, wind, biomass projects

Technical Assistance
Cost shared and full cost for wind and biomass: training, resource analysis, feasibility studies, business plans, standardised biomass supply contracts etc
2. Solar PV Investments

Credit
Term loans to solar companies for infrastructure development and permanent incremental working capital;
Term loans to micro finance providers for consumer financing

Grant
Cofinancing grant (US$40-70 per SHS, with limits)

Technical Assistance
Cost shared and full cost: market testing, new applications, reduction of transaction costs etc.
3. Independent Grid Systems

Credit
Term loans for off-grid village hydros, wind and biomass

Grant
Cofinancing grant ($400 per kW, max. $20,000 per subproject)
Project preparation assistance (max. $6,000 plus max. $2,000 for setting up economic development activities)

Technical Assistance
Cost shared and full cost: training, business model development, technology assessment, new applications etc.
4. Energy Efficiency and Conservation

Credit
Term loans for ESCOs and end-users

Technical Assistance
- Energy Efficiency Building Codes: demonstration
- Industrial benchmarking: standards for sectors such as textiles, tea
- Energy labelling programme: refrigerator test facility
- Capacity building for banks to appraise EE projects
5. Cross-sectoral Energy Applications

Goal
Support rural economic development and facilities in the health, education and water sectors through access to energy services

Technical Assistance

*Public institutions*  
- Policy development  
- Specification of standard energy packages  
- Implementation support

*Commercial*  
- Implementation of innovative ideas
6. Other Technical Assistance

- Post-RERED sustainability issues
- Monitoring and evaluation
- National Rural Electrification Subsidy Mechanism
- Assistance to regulatory body
- Implementation of CDM
Loans from PCIs

PCI in agreement with client determines
- Interest rate (typically AWDR+x, repricing semi-annually)
- Tenure (max 10 years including max 2 years grace)
- Debt/equity ratio (usually around 60:40)
- Security (usually project assets and cash flow)

Max. refinance: $8.0m per subproject

Investment enterprise: pvt firm, NGO, co-op, indiv.

Credit risk on subproject borne by PCI

Forex risk on credit line borne by GOSL
Environment

Environmental/social assessment requirements:

- As per RERED Environmental and Social Assessment Framework

- IDA prior review for:
  - all biomass
  - mini hydro > 5 MW
  - wind > 10 MW
  - projects involving land acquisition/resettlement
World Bank procurement guidelines:

- International Competitive Bidding for
  - goods > $2m
  - works > $3m and
  - turnkey contracts > $5m

- Established commercial practices for lesser amounts (three representative quotations)
Other Off-grid Features

Compliance with technical specifications
- Solar home systems, solar lanterns
- Off-grid village hydro schemes
- Prior review of specs for other off-grid systems

Consumer protection
- Warranty arrangements
- Consumer complaint investigation

Quarterly stakeholder review meetings
Contact Details

Administrative Unit - RERED Project
DFCC Bank
73/5, Galle Road, Colombo 3

Telephone: 440366

Fax: 440376

E-mail: info@dfccbank.com

Web: www.energyservices.lk