Regional Meeting On Sustainable Energy

Session 2: Financing Initiatives & Business Plans That Work

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Initiatives that have worked well be scaled up and replicated

At the Beginning
50% down payment to install the system and remaining 50% in 6 monthly installments.

After few years of Experience
25% down payment to install the system and remaining 75% in 24 monthly installments.

Present Situation
15% down payment to install the system and remaining 85% in 12/24/36 monthly installments.

Back in 1996, I have introduced an innovative monthly installment based financial model at the price of kerosene which has opened the door for Solar Home System (SHS).

By following the path of this financial model, over 4.5 million SHS has been installed all over Bangladesh till now. The monthly installment based financial model was adopted by World Bank later JICA, ADB, KfW, Islamic Development Bank (IDB), UNDP, DFID, GIZ started supporting the Solar Program in Bangladesh.

This financial model with the help of government policy support can be replicated in any developing country where energy demand is high and environment is in threat.
The innovative financial model has led the Solar Home System (SHS) Program to experience a rapid expansion in Bangladesh.

The best practices from blended finance projects for off grid solutions are:

<table>
<thead>
<tr>
<th>Solar PV</th>
<th>Number/Size</th>
<th>Power (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar Home System</td>
<td>Over 4.5 Million</td>
<td>186.87 MW</td>
</tr>
<tr>
<td>Solar Irrigation Pump</td>
<td>455 Pumps</td>
<td>14.5 MW (approx.)</td>
</tr>
<tr>
<td>Solar Mini Grids</td>
<td>8 Approx.</td>
<td>1.62 MW</td>
</tr>
<tr>
<td>Rooftop Urban PV</td>
<td></td>
<td>10 MW (approx.)</td>
</tr>
<tr>
<td>Street Lighting and other</td>
<td></td>
<td>5 MW (approx.)</td>
</tr>
</tbody>
</table>

Source: SREDA
Enhancing local & regional capital markets

• National Policy Guide Line
• Involvement from international donor agencies
• National financial model through national bank
  - Low or no interest
  - Grant or Subsidy incentive
  - Long payback period
  - Local commercial / schedule bank support
• Entrepreneur training and awareness program
• Manpower training program
• Technical support at the doorstep with active network
• Availability of accessories

School children can study better by Solar powered Light than Kerosene lantern.
Energy Share around the World

78.3% Fossil Fuel
19.2% All Renewable
2.5% Nuclear Power

8.9% Modern Renewable
10.3% Traditional Biomass

4.2% Biomass Geothermal Solar Heat
1.4% Wind/Solar/Biomass/Geothermal Power
3.9% Hydro Power
0.8% Bio Fuel

Estimated Renewable Energy (RE) Share of global Final energy consumption

Ref: Global Status Report-2016 published from ren21
Main challenges for accessing finance to improve access to sustainable energy

• **Attractive financial model to benefit both end users and investors.**
  
  Clean & Sustainable Energy policy and regulatory processes  
  Financial sector policy and regulation  
  Institutional arrangements and capacity building & awareness training

• **Financial policy Guideline and involvement of National Banks**
  
  Clean & Sustainable Energy policy and regulatory processes  
  Financial sector policy and regulation  
  Institutional arrangements and capacity building training

• **Awareness among the local schedule banks about clean energy**

• **Platforms for enhanced participation:** Need platforms for enhanced participation in policy, regulatory, and energy planning processes.
Bangladesh Success

- Solar Home System (SHS)
- Solar Irrigation Pump (SIP)
- Bio Gas Plant
Solar Powered Arsenic Treatment Water Plant

The project will ensure arsenic free pure water among the rural school located at an off grid area of Bangladesh. Over 200 families live surrounding the project area.

Blend of Technology: Solar Energy + In Situ Technology

Benefits:
1. Arsenicosis risk free (Health)
2. School Children and villagers around the project will have Arsenic free pure water for their daily use
3. Prevent disability caused by arsenic diseases and better working ability
4. Men and Women can have a better social life and better future
5. No carbon emission
6. The use of the pure water will create awareness

Location: **Hosnabad Government Primary School Comilla, Bangladesh.** (150 KM from Capital City Dhaka)

In Bangladesh over 20 million people are directly affected by arsenic. Each year, estimated **43,000** people die from arsenic poisoning.
Recommendations:

• Interest rate need to be **affordable** for the sustainable energy projects to attract private sector to improve access to Sustainable Energy.

• Need to ensure **proper financial model implementation** for sustainability of this technology.

• Need to establish **attractive incentive based financial packages** such as green bonds, security, and easy soft loan to bridge the financing gap.

• **Proper national policy** to ensure investment return to encourage more project implementers.

• To expand sustainable projects such as Solar Irrigation Pump project in Bangladesh **small entrepreneurship based method** should be encouraged rather than staff based method. To encourage the entrepreneurship based method training session can be arranged for the interested people who would like become entrepreneurs in the future.
Recommendations:

- PAY-AS-YOU-GO (PAYG) solution is a good modern technology to collect the money from the customers but still it needs to be more cost effective to become more popular among the sustainable project implementers.

- Regular monitor and evaluate technology used for better and energy efficient solution (R&D).

- Need to avail loan and grant facilities not only for Solar program but also extend financial to promote Sustainable Energy, such as:
  - Solar Irrigation Pump
  - Solar Roof Top Systems
  - Solar Mini Grid Project
  - Grid tie Megawatt solar projects
  - Waste to electricity
  - Large size Bio Gas Plants for Gas and organic fertilizer
  - Agricultural waste to biofuel and animal feed
To promote Sustainable Energy

**Financing:**
- Active private sector investors
- Financial package for larger projects
- Long Investment periods with low interest rate
- Agreed exit strategy

**Support**
- Policy Framework
- Developing Partners
- Financial Model
- Environmental & Social Governance
- Collaboration with local authorities

**Strategic Planning:**
- Sustainable Model
- Proper implementation strategy
- Logistic and Support
- Network of service providers
- Trainings and awareness

**Involvement:**
- Private & Public
- Local Government
- Commercial Banks
- Local entrepreneurs
Challenges & barriers for enhancing the role of private sector partnerships in promoting sustainable energy initiatives in LDCs

• Lack of National policies to promote sustainable energy.

• Financial gap between the private sector and the financial institutions is one of the most faced challenges for promoting sustainable energy in LDCs.

• Political instability creates bad impact on the LDCs to promote sustainable energy.

• Lack of infrastructures (proper policy guideline, social & economic strategy) in the sector is an obstacle for the sector development.

• Proper implementation of financial model to promote sustainable energy.
Thank you for your Attention