THE ARB APEX BANK GHANA MODEL OF FINANCING SOLAR PV SYSTEMS FOR OFF-GRID RURAL PEOPLE – CHALLENGES AND LESSONS LEARNED

BY

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PRESENTATION OUTLINE

- Brief on ARB Apex Bank Model
- Goal & Target of project
- Components/Funding sources
- Project Financing plan
- Achievements to date
- Challenges and their solutions
- Lessons learnt
- Conclusions
Brief on the ARB Apex Bank Solar Project under GEDAP

- Started implementation in 2009
- Works in collaboration with Ministry of Energy, Energy Commission and Association of Ghana Solar companies
- The systems are paid for by the rural people through a 10% initial cash contribution, loan from rural bank (IDA funding) and a grant support from GPOBA (Global Partnership for Output Based Aid).
- Accredited Solar companies market, install and maintain their pre-approved products in the target communities.
- The project is implemented in 11 districts, targeting communities that are most unlikely to be connected to the grid in five to ten years.
GOAL & TARGET OF PROJECT

• The overall goal of the project is to enable the off grid rural dweller/business to have access to electricity using solar PV systems.

• The target of the project is 15,000 systems to serve over 90,000 rural people.
COMPONENTS/FUNDING SOURCES

1. Capacity Building (funds from GEF) for participating rural and community banks and Marketing to target populations.

2. Credit line (funds from IDA) to support rural off-grid dwellers to purchase solar PV systems.

3. Partial grants (funds from GPOBA) to provide appropriate incentives for solar PV systems and making loans affordable.
BASIS: At present, costs of Solar Home Systems are considered to be generally beyond the reach of potential users in the relatively remote, poor areas being targeted.

PROJECT FINANCING PLAN

- Installation and 3 year maintenance cost (A)
  Example: $1000

- 10% (A-B)
  Example: $60

- Grant (subsidy) between 30% - 50%
  Example: $400

- Customer contribution of 10% of amount less grant
  Example: $60

- Loan component of 90% of amount less grant
  Example: $540 (made up of $432 from IDA and $108 from Bank)
Achievements to date

- 9038 systems have been installed to date and we expect to achieve our target of 15,000 systems by end of December 2013.
### CHALLENGES ALONG THE WAY AND WHAT WE HAVE DONE TO SOLVE THEM

<table>
<thead>
<tr>
<th>Challenge</th>
<th>What has been done to solve them</th>
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<tbody>
<tr>
<td>Lack of adequate well trained solar installers to cater for the increased installation rates of the participating companies</td>
<td>The Deng Solar Training Centre has been engaged under the project to train more solar installers to cater for the up surge in rate of installations</td>
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<td>Political interference</td>
<td>Try and eliminate all political interference by working directly with the people as a private bank</td>
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<td>Failure of earlier installed systems and projects</td>
<td>Install Demo systems to show them that solar works</td>
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<td>Lack of full time staff with knowledge on solar products at the financial institutions</td>
<td>Hire full time solar project officers at each participating bank branch</td>
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<tr>
<td>Challenge</td>
<td>What has been done to solve them</td>
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<td>The perceived inferiority of solar systems compared to the grid due to usage limitations</td>
<td>Offering varied products to satisfy different users especially the small business community in this rural areas.</td>
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<tr>
<td>Relative high price of solar products due to the fact that we do not produce any component in Ghana today</td>
<td>Continue to interact with Solar dealers to find a common ground on achieving this by supporting the production of solar components in Ghana and removing all barriers to its profitability</td>
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<td>High transportation cost of accessing target markets</td>
<td>Train rural staff and start rural production of components)</td>
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<td>Customers tampering with systems</td>
<td>Education of customers and design of systems that prevent tampering.</td>
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<td>Solar Companies delays in responding to system faults and supply requests</td>
<td>Institute penalties including delayed payments of up to 60 days</td>
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LESSONS LEARNT

- Rural off grid people need more than just lighting.
- No need to re-invent the wheel. We should learn from each other and use consultants who have tried similar activities to reduce project failures.
- Quality after sales service is key to the success of the project.
- Beyond education, products must be designed to prevent tampering.
- Re-payment plans must be well designed to meet the cash flow pattern of the target people.
- Eliminate Direct donor and Government interference.
- Work with solar companies that are prepared to be close to the target communities.
MORE LESSONS LEARNT

• Capital support should be sourced for participating solar companies and payment to the companies should be fast.
• To ensure quality installations, on field independent inspectors should be engaged
• Full time staff for the banks are required.
Conclusions

• Installation of Solar Systems are a viable way to provide electricity to rural off-grid businesses.

• The collaboration between microfinance and private sector solar companies is possible.

• Lets work together and use the experience that is already available to create successful projects all over the world.
It is not easy to run off-grid solar projects due to the many challenges but little by little it is achievable.
THANK YOU

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