SESSION II: FINANCING INITIATIVES AND BUSINESS PLANS THAT WORK
Unlocking Domestic Finance

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Subsidy: Successful DELIVERY to the targeted beneficiaries

Credit: Successful DELIVERY & RECOVERY
Rational on RE Financing

- High upfront cost
- Subsidy covers only part of the cost
- Reduces the hassles related to upfront equity
- Timely Financial Closure
- Strong Ownership & Management
- Gradual shift from subsidy to credit (market mechanism)
- Opens up rural market for BFIs
- Contributes to meet BFIs’ lending obligation
RE Financing Initiatives in Nepal

- Household RE Systems [Biogas, Solar Home System and Metallic Improved Cooking Stove]
  - Credit facility from 550 BFIs/LFIs/cooperatives
  - ~ USD 10 million credit invested for 45,000 biogas, 20,000 SHS (off-grid) and few MICS
  - Local cooperatives/MFIs take credit risk
  - High repayment
  - Capacity building and regular monitoring

BFIs highly interested to finance household/individual owned RE Systems
RE Financing Initiatives in Nepal

• **Community RE System: Total 40 MHPs financed**
  – Two Partner Banks (HBL and NMB) financed for 27 MHPs worth of USD 525,000 under MHDF
  – Tourism Development bank financed 5 MHPs worth of USD 180,000 under CREF Credit Fund
  – Kumari, Prabhu, HBL and Nabil banks financed for 8 MHPs worth of USD 200,000 under ESAP phase

**Lessons**

– Most projects have fallen behind in repayment
– Project shutdown/long down time due to earthquake, technical problems, management conflicts, extension of national grid etc.
– Lack of post installation and project management support
Community MHP: Issues and Challenges

• Very High Upfront Capital Cost
  - Long Time for Financial Closure
  - Low Quality Work (Community Contribution)

• High Transaction Costs
  - Remoteness
  - Collective Action Problems

• Limited Operation & Management Skills
  - Unattractive Remuneration
  - High Turn Over of Trained Human Resources
  - Poor Record Keeping & Lack of Financial Transparency
Community MHP: Issues and Challenges

- Low Revenue Generation
  - Low Tariff Rates – Flat Rates
  - Limited Productive Uses - Plant Load Factor about 30%
  - Lack of Maintenance Fund
- Natural calamities - High Cost for Plant Insurance
- Deprived sector lending ceiling only NPR 10 million/project

BFIs Reluctant to Lend to Community Owned & Managed RE Systems in Remote Locations
Tools for Unlocking Domestic Finance

Not all RE Projects will be financed by BFIs

• Bankable Projects
  – Technically Good sites
  – Special Purpose Vehicle/Energy Service Companies
  – Accessible w/ Communication Facilities
  – Revenue generation for O&M & loan repayment – Appropriate tariff, Prepaid Metering & Productive energy uses
  – Upfront Community Equity

• Timely Completion & Quality Work

• Construction initiation only after financial closure
Tools for Unlocking Domestic Finance

Incentives for BFIs

• Establishment of risk sharing mechanisms
  – First Loss Guarantee Scheme
  – Viability Gap Funding
  – RE Challenge Fund
  – Credit Guarantee Scheme
  – Project and Debt Insurance
  – Provision of Concessional Loan/Interest Subsidy etc.
  – Administrative Costs

• Technical Assistance
Potential Financiers for RE Financing

• Central Renewable Energy Fund (CREF)
• Commercial and development banks
  – CREF partner bank and other BFIs
• Development partners
  – GIZ, KfW, World Bank, ADB, UNDP, UNCDF, GCF
• Microfinance institutions and cooperatives
• RE equipment suppliers
• Private equity investors
AEPC/RERL Initiatives

Support for Central Renewable Energy Fund

• Technical Support
  – Preparation of Business Plan
  – Preparation of Vendor Financing Manual

• Financial Support
  – Credit Financing for RE Projects – Solar PV, Mini/Micro Hydro
    • BFI to LFI to Beneficiary (Stand-alone systems)
    • BFI to RE Projects (Community-based systems)
  – Establishment of Credit Guarantee Mechanism – Mini Hydro & Small Solar Pumps
AEPC/RERL Initiatives

– Vendor financing
  • Vendor to LFI to Beneficiaries – Solar Pumps
  • Rent-to-own model – Large Solar Pumps
  • SPV/ESCO model – Mini Grids
– Interest subsidy (in process)

Before, During & After Installation support to BFIs & project developers (Community/SPV/ESCO)
Case Study I – Vendor Financing for PVPS

- Started with 5 PVPS and only USD 6,000 RERL support
  - 50% subsidy, 50% credit guarantee
- Vendor Promoted 36 PVPS
- Excellent repayment and no use of credit guarantee
- RERL support for 150 PVPS
- 3 vendors investing in partnership with BFIs and LFIs

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<thead>
<tr>
<th>Financing Mix</th>
<th>NPR</th>
<th>%</th>
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<tbody>
<tr>
<td>Subsidy</td>
<td>24,000</td>
<td>26.09%</td>
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<tr>
<td>Upfront Equity</td>
<td>20,000</td>
<td>21.74%</td>
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<tr>
<td>Vendor's Credit with 24 EMI</td>
<td>48,000</td>
<td>52.17%</td>
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Case Study II – 18 kWp Baidi Solar Micro Grid Project

- 7 year investment tenure with 15% RoI
- The revenue generated from monthly tariff is sufficient to repay bank loan and manage operational expenses

Monthly tariff packages:
- Below poverty line: NPR 250/M
- Package A (Lighting): NPR 400/M
- Package B (Lighting + TV): NPR 700/M
- Package C (Commercial): NPR 1,000/M

**Learning**
- Rural households can pay ~ NPR 250/M tariff which makes 95% MHPs financially viable
- Communities need reliable electricity rather than their stake on the project management
- Private sector participation for project management and operation is required
- Required strong ESCO-community coordination
Way Forward: CREF Institutionalization

Government of Nepal and Development Partners
NRREP Programme Steering Committee

CREF Institutionalization:
- NRREP Compliance Unit
- System Audits - Compliance Audits - Capacity Development

AEPC
Development and Promotion of Renewable and Alternative Energy Technologies

CREF Handling Bank
- Subsidy Fund Management
- Investment Management
- Wholesale Lending

Prequalified Partner Banks
Commercial banks – development banks – LFIs

End users
Households – communities – manufactures – distributors – installers
Thank you