Innovative Approaches of Partnership

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Nepal: Energy Consumption Pattern

Energy Consumption by Fuel Type: 77% contribution from traditional sources

Energy Consumption by Economic Sectors: 80% consumption in residential sector
Nepal: Energy Consumption Pattern

Total no. of HHs: 5.423 million

Households by source of lighting

- Electricity: 67.3%
- Kerosene: 18.3%
- Others: 6.1%
- Not stated: 0.6%
- Biogas: 0.3%
- Solar: 7.4%

Households by cooking fuel

- LP Gas: 21.0%
- Firewood: 64.0%
- Cow Dung: 10.4%
- Kerosene: 1.0%
- Others: 0.4%
- Not Stated: 0.6%
Electricity: 76.3% of population have access
Access to electricity, historical trend

- Rural
  - 1990: 12
  - 2000: 17.4
  - 2010: 71.6
  - 2012: 71.56

- Urban
  - 1990: 100
  - 2000: 100
  - 2010: 99.82
  - 2012: 97
## Electricity Generation

<table>
<thead>
<tr>
<th>Source</th>
<th>Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Hydro</td>
<td>762.03</td>
</tr>
<tr>
<td>Mini &amp; Micro Hydro (&lt; 1MW)</td>
<td>37.78</td>
</tr>
<tr>
<td>Thermal plants</td>
<td>53</td>
</tr>
<tr>
<td>Solar PV systems</td>
<td>7.45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>860.26</strong></td>
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</tbody>
</table>

~15% of rural population has electricity access from RETs (26.3 MW from >1,000 MHPs & 700,000 SHS)
SUCCESSFUL MODEL FOR RURAL ENERGY

◆ Grassroots : Community organized and involved in planning, fund management, implementation, management of Micro Hydro and End-uses.

◆ District : - Institutionalization in District Development Committee
  • Decentralized Energy Planning
  • Coordination and collaboration
  • Resource Mobilization and Allocation
  • Technical Assistance and Monitoring

◆ Central : - Alternative Energy Promotion Centre
  • Planning & Policy
  • Coordination
  • Resource mobilization & Subsidy
  • Programme implementation
Community Organization

Participation & Transparency

Inclusion & Consensus Decision

Partnership
Functional Group

Community Organization

Households
PHASE I
Community Mobilization and Partner Selection Important

1. Demand from Community
2. Project Conceptualization
3. Selection of Partner

PHASE II
Realization of Tariff and Tariff Setting are critical

4. Review and Validation of concept and design from Partner
5. Development of Business Model

PHASE III
Management Structure and Operational Instruments are important at this juncture

6. SPV formation and Project Implementation
7. SPV formation and Project Implementation
8. Strengthening of Productive End Use and Value Chain Promotion
9. Evaluation and Project Scalability

RESULT
Realization of Investment Structure and Tariff Rate

- Community (5% in-kind)
- Private Sector (15%)

SPV (Joint ownership & investment)

AEPC takes lead in these steps and initiates community mobilization

Monitoring and Supervision from AEPC and supports community through community mobilization

AEPC provides matching fund for comparative socio-economic benefit and return

Brings innovation and gets ROI and business expansion opportunity

AEPC also provides community mobilization and PEU support

Government/Funding Agencies (Grant and policy oversight)

Alternative Energy Promotion Center (AEPC)
(A nodal government agency for the promotion and implementation of RE projects)

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PRIVATE PARTNER INVOLVEMENT

Government/Funding Agencies (Grant and policy oversight)

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Implementation Approach

Energy utility 60% owned by the private sector and 40% owned by the community
Private sector investment
Ownership equity and investment amount are not linked - creating a greater incentive for private investment and financial sustainability
Community engagement mechanism established
Responsible for managing community returns on investment

Revenues are used by the community mechanism for community development activities and/or to further subsidize the tariff rates

HOW IT WORKS

UN ESCAP
- Grant funding & policy oversight
  
GOVERNMENT
- Government grant purchases utility shares on the community’s behalf
  - Policy support

COMMUNITY MOBILIZER/NGO
- Ensure community interests and collaborate with the private sector

ELECTRIC UTILITY COMPANY ESTABLISHED

PRIVATE SECTOR
- Equity investment
- Services provisions
- Co-ownership & ROI

COMMUNITY
- In-kind contribution
- Community employment
- Co-ownership & ROI

* Return on Investment
Renewable Energy & Livelihood
Transportation of a Generator
Information Sharing
Public Hearing
Construction of Micro Hydropower Plant
Micro Hydropower Plant
Thank you