Guidelines For Widening Access To Electricity Through Public-private Partnerships

ETHIOPIA
Overview

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<table>
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<tbody>
<tr>
<td>Population</td>
<td>70.1 m</td>
</tr>
<tr>
<td>Population growth rate</td>
<td>2.92</td>
</tr>
<tr>
<td>Urban/ rural mix</td>
<td>15%/ 85%</td>
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<tr>
<td>GNP per capita</td>
<td>US$110</td>
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<tr>
<td>Inflation rate</td>
<td>4.8%</td>
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<tr>
<td>Literacy rate</td>
<td>32.8%</td>
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## Status of Electricity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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<tbody>
<tr>
<td>Power generation installed capacity</td>
<td>521 MW</td>
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<tr>
<td>Percentage of Elect. connection</td>
<td>5%</td>
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<tr>
<td>Percentage of Access to Electricity</td>
<td>13.4%</td>
</tr>
<tr>
<td>No. households connected</td>
<td>534,106</td>
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<tr>
<td>Total number of customers</td>
<td>680,325</td>
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<tr>
<td>Rural Access to Electricity</td>
<td>&lt;1%</td>
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<tr>
<td>Electricity per capita consumption</td>
<td>25kWh</td>
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...Livelihood Impact

- Case study 1 – Yaye town
  - Powered by 170kVA microhydro power unit
  - 24 hour service
  - Partnership includes: Community, local development association, private sector
  - Benefits - Health
    - Improved health service with use of electrical diagnostic machines
    - Service extended 24 hours
    - Number of nurses and health officers increased (town became attractive to live)
...Livelihood Impact

- Benefits – Education
  - Evening school opened
  - Teachers turnover stopped (town became attractive to live)
  - Library facilities and study rooms (with light) available at night
  - Distance education possible through TV
  - Student get better education in their town (boys used to travel to neighboring towns for better education)
  - Positive gender outcome as girls too can get better education
...Livelihood Impact

Benefits –
Job opportunities

- One metal workshop and three wood workshops opened
  - Carpenters get their products semi processed
- 4 grain mills installed
…Livelihood Impact

- Benefits – Entertainment and Access to information
  - News and entertainment through TV and satellite TV in local bars and restaurants
  - Cold drinks

- Benefits – Security
  - Street lights
  - Security lights at home
Livelihood Impact

Case study 2 & 3
- Bonosha town power by 115kVA diesel genset
- Bona town power by 12 kVA diesel genset
- Both are highly improvised and precarious
- No PPP in any form
...Livelihood Impact

- **Benefits**
  - Lighting for domestic and commercial use
  - Extended service hours
  - Children can study at night
  - Make towns relatively attractive than the neighboring once
    - Attract local merchants
  - In one of them the clinic uses the power for refrigeration of medicines
Livelihood Impact of Electricity

- Experiences from case studies
  - Livelihood studies were carried out in three recently electrified rural towns
  - Diesel units powered two of the schemes
    - Service was only in the evening
    - Ownership:
      - one was purely private
      - the other municipality
  - Micro-hydro power provides 24 hr service in one of the towns surveyed.
...Livelihood Impact

- Wider access characterized by
  - Significant livelihood Impact
  - Pro-poor consideration

- Limited access
  - Benefits: extending of working hours and evening study, but no income or social access developments
  - No benefit from indirect access
Public-Private Partnership

- Experience from case studies show that successful electrification schemes do have a good balance of PPP.
- Local experiences show that attitudes toward partnership with the private sector is being seen in suspicion yet.
- Partnership with the private sector is improving – works and service type of contracts are becoming common.
- PPP is at a very lower stage of its development in Ethiopia.
Current Opportunities

- Govt. Twin-track Strategy for RE
  - Grid based rural electrification
  - Private sector involvement in off-grid electrification
    - Incentives (rural electrification fund)
    - Interest free loans
    - TA and capacity building

- Market Potential
  - <5% electrified
  - More than 500 towns unelectrified yet
  - Off grid consumers are paying up to (200%) for alternative sources
  - Many off-grid consumers are able and willing to pay for electricity service (7 to 8 times more on kWh basis)
Challenges and Constraints

- Lack of Stakeholder Engagement and Co-operation
  - Understanding roles

- Lack of “Project Packagers” to implement projects
  - Assessment of community needs
  - Sectoral coordination and encouragement for maximizing livelihood benefits and pro-poor consideration
  - Resource mobilization (consultation with community, private sector, public, etc)
  - Information source
  - Feasibility studies and business plan preparation
  - Make projects bankable and attractive for developers
…Challenges and Constraints

- Adequate regulatory framework and enabling environment
- Awareness among communities and consumers
- Flexible and innovative financing mechanisms
- Adequate technical skill and experience (particularly in microhydro)
Recommendations

- Widening access to electricity needs a well focused and continuous donors consideration as opposed to sporadic inputs practices hitherto.
- NGOs should play project packaging roles so that community/ off-grid electrifications become feasible.
- Technical skill development and experience sharing for microhydro power development is highly needed.