Private Public Partnerships in Rural Electrification

Sri Lanka

Presented by

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Country Background

- 19 million people
- 4 million households
- Rural/urban mix – 75/25
- Agribased economy but moving towards export of labour and manufacturing
- GDP – US $ 1,000 per capita
- 20% living below poverty line
- Literacy rate – 95%

Energy Situation

- Ceylon Electricity Board is the government owned utility
- Generation capacity – 1,700 MW (60% Hydro)
- 10% annum demand growth for electricity
- Grid Electricity – 54% of households
- Off-Grid Electricity – 28,000 households (25,000 Solar PV Systems, 3,000 Micro Hydro) – Private Sector and CBO driven

More on Energy Situation

- 500,000 automotive batteries used for lighting and entertainment (TV/radio)
- 90% of rural households use biomass for cooking
- Off-grid households spend on average over 40% of their income on energy (for kerosene, dry cell batteries, battery charging etc.) as opposed to less than 10% in urban areas.

Government Initiatives on Off-Grid Energy

- Government has played a pivotal role in introducing technologies such as solar PV, wind power, biogas and efficient cookstoves
- This enabled private sector and NGOs (with micro financing) to drive the commercial solar PV market in rural areas, for instance
- Sri Lankan government, World Bank, GEF project – Energy Services Delivery Project has catalyzed off-grid and renewable energy developments from 1997 (US $ 53 million)

Energy Services Delivery Project (1997-2002)

- Provide financing through private banks to companies marketing solar PV systems, developers of off-grid micro hydro systems and grid connected mini hydro
- Off-grid projects have a GEF grant of US $ 60 per solar PV system and US $ 400 per kW for micro hydro project
- Has catalyzed private public partnerships in rural electrification –
- New project Renewable Energy for Rural Economic Development (RERED) commenced in July 2002

Community Electrification Programmes

- Micro Hydro (also known as Village Hydro) programme was initiated by ITDG by mobilizing village community and introducing simple technology
- Over 130 such projects exists operated through an Electricity Consumer Society (ECS)
- Last 20 projects have been commercially funded through the ESD project

Micro (Village) Hydro Projects

- These are essentially private/public/community partnerships
- Project is owned by the community (ECS), funded by the commercial banks, subsidized by government (provincial council), supported by a private consulting company (technical, business feasibilities and bankable proposals), approvals from district/divisional secretariats (for land use, environmental clearances)

Solar PV System Projects

- New initiative from Uva Provincial Council to subsidize solar PV systems for off-grid homes in the province with Rs. 10,000 (GBP 69)
- Subsidy is given to the vendor once proof of sale (with the discount) and installation is provided to the provincial government
- This partnership is complemented by NGOs providing micro financing

Barriers to Development

Ten years of off-grid energy market development has created much awareness of the role of technologies such as solar PV and micro hydro…..However:

- There are yet some general barriers at the government level where off-grid energy is not incorporated into mainstream energy policy, which only focuses on large scale generation and grid extension – Politicians yet offer grid extension for votes

Barriers continued….

- The Electricity Act allows only the CEB to generate and sell electricity to consumers. As such, the micro hydro projects are not legal. They operate as independent cooperatives and charge a membership fee from consumers.
- Standards for technical equipment, safety cannot be enforced within the law for these projects

Barriers continued….

- Funding will be a problem once the World Bank projects end (The ESD and the new RERED project has technical assistance funds for a project facilitator to assist the community from the start to commissioning)
- The ECS's have to spend large sums of funds for maintenance and replacement of parts once project is operational

PACE project initiatives

- Stakeholder meetings held and surveys carried out (50 homes) in 2 Micro (village) hydro projects to look at the Sustainable Livelihood issues as well as public-private partnerships
- Meetings held and survey conducted on 50 solar PV users in the Uva province

PACE project meeting/survey highlights

- Micro hydro projects require the establishment of approval criteria for the Divisional Secretariat to approve and monitor projects. This will also help the provincial council when they are funding projects. (Need to ensure that this requirement will not be a bottleneck for project approvals).
- Energy Forum has been a catalyst in the process creating the Federation of Electricity Consumer Societies as well as linking provincial councils and divisional secretariats.

PACE project meeting/survey outcomes

- The partnership between Uva Provincial Council, solar PV vendors and micro financing institutions is resulting in off-grid households getting electricity at a subsidized cost as well excellent service as there is a monitoring system in place
- On the livelihoods area, electricity is used for lighting and entertainment resulting in an intangible increase in quality of life

PACE project survey/meeting outcomes

- There is a long term benefit from education for the future of children as well as health and well being benefits from eliminating kerosene lamps.
- There does not seem a direct correlation between electricity and income generation
- Electricity is deemed a high priority requirement according to most respondents (that is consistent with other studies)

Critical Issues

- Off-grid rural electrification require coherent policies incorporating these into the country's energy mix. This should also identify and roles of the private sector, NGO's, MFIs, government (central, provincial and district), banks, donors and regulatory bodies.
- There is a need to assess the income generation and economic development capability through rural electrification – sustainable livelihoods
- How do we link energy and poverty alleviation ?