



# COUNTRY PAPER – NEPAL

Public Private Partnerships for Community Electricity

Overview of the Electricity Sector in Relation to  
Public Private Partnerships in Nepal

*Presented by*  
*- Girish Kharel*

# History

- First hydro plant in Nepal – 1911
- Second – 1936
- Third – 1965
  
- Now 530 MW hydro + 56 MW thermal  
+ 13 MW micro hydro

# Rural Electrification Programmes

- Extension of grid
- Small hydro in district centers
- Subsidy for micro hydro
- “Electricity Co-op” model
- SHS/LED pico hydro promotion

# Country Statistics

- Population - 23.1 million
- Physical Area -147,181 sq. km.
- GNP Per Capita - USD 210
- Urban Population - 15%
- Rural Population - 85%
- Percentage Electrification of Households - 18
- Power Generation Installed Capacity - 585 MW
- Literacy Rate - 53.7
- Life Expectancy (years) - 59.7

# RE Developments

- Biogas

- 100,000 families use it for cooking

- 25,000 for lighting as well

- Subsidy provided

- Average cost USD 300 for 6 m<sup>3</sup> capacity

# Solar

- SHS promoted with subsidy

# Micro Hydro Electrification

- Over 13 MW installed
- Subsidy of USD 900 per installed kW
- Subsidy for transport to remote areas

# Mini Hydro (up to 10 MW)

- Mostly grid connected
- Mostly IPPs – generally most interested in electrification



# Efficient Cook Stoves

- No large scale promotion
- Limited success
- Popular due to “smoke free” environment rather than efficiency

# PPP Models

- Direct subsidy for micro hydro
- Public sector construction – Private sector operation
- IPP led electrification
- Private co. operating leased system
- Isolated small hydro leased to private sector
- Subsidy for SHS

# Pace Survey Results

- Mostly used for lighting – indoor & outdoor
- TV most common use after lighting
- Higher income people consider price more reasonable and willing to pay more for better service
- Business/Institutions consider price more reasonable than households
- Perceived impact highest in sanitation/health/education
- Continuity/Reliability of supply perceived as biggest problem

# Impact on Poverty

- Difficult to show direct link – impact mostly indirect
- Impact on poverty due mainly to increased number of business or better/cheaper services

# Issues, Lessons Learned & Way Forward

- How to increase access
  - Generation
  - Distribution
- Ownership/Investment/Cost
  - Who pays and how
- Affordability – for connection & energy cost
- Increasing economic activity/wealth using electricity