Enhancing Connectivity and Productivity: Khotang/Okhaldhunga Rural Microgrid

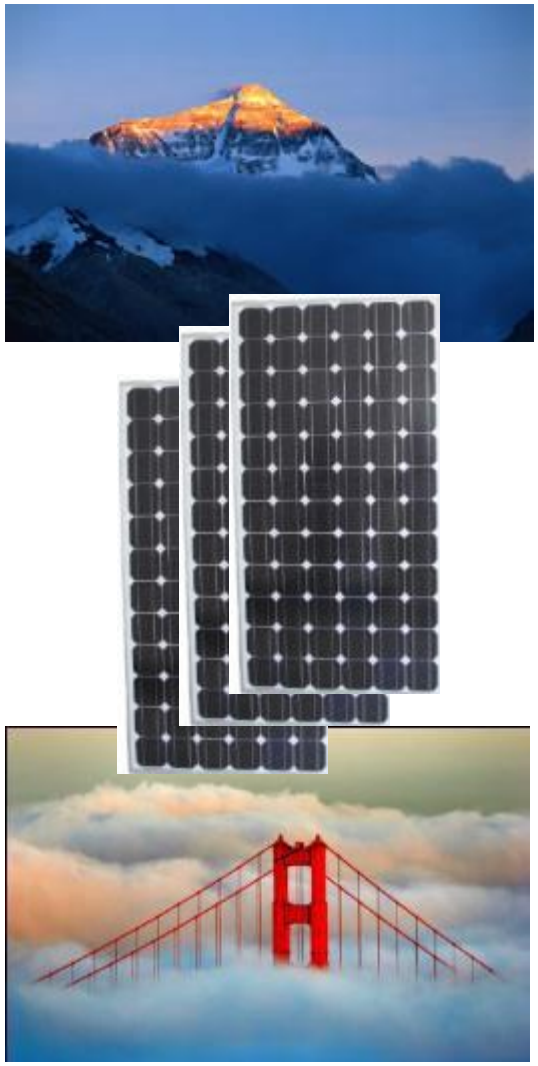


Kishor Rimal
AGM, Gham Power

Gham Power

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Gham Power: Solar Project Developer, Social Enterprise



- Started in 2010
  - Provide Solar PV systems at costs below diesel
  - Focus on businesses and productive use
- 685 kw installed; 668 Projects:
  - Possible Health Bayalpata Hospital (12 KW)
  - Maiti Nepal Shelter for Trafficked Girls (8 KW)
  - EVK2 Lab @ Mt Everest base camp (10 KW)
  - US Embassy for Nepal (23 KW)
  - UNICEF (42 KW)
- 2015 target pipeline: 12 mW
  (5 mW under LOI)

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Rural Solar Microgrids in Khotang & Okhaldhunga

- Rural Microgrid projects in 3 remote villages

- Phase 1: 35 kW
  - Powers 25 businesses, 83 households
  - Total installation costs: $239k
  - Funded by Local Community Investors, ADB, & DOEN
  - Installation underway, to be completed in September 2015

- Phase 2: Add 37 kW to power mobile towers + add'l load
  - 2 mobile towers + ~146 households + ~20 businesses
  - Partnership with NCell (Nepal's leading private telecom)
  - GSMA M4D Grant award

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Benefits to Local Communities

- Mobile signal to 5 VDCs* with above 20,000 population (no/poor mobile connection today)
- Enable mobile Pay-as-you-go (PAYG) option for electricity (and other services) through eSewa (first time in Nepal)
- Mobile connectivity enables new businesses (recharge cards, mobile banking, etc.) and connects markets

*Village Development Committee

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Benefits to Telecom

- Access rural market with lower operational costs
- Fixed PPA + Service Level Agreement (SLA) more desirable compared to owning/maintaining power backup options (solar + diesel)
- Electricity at homes to charge mobile phones
- People will use mobile data to access Internet

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Benefits to Microgrid

- Fixed monthly PPA with Ncell provides financial stability to Microgrid ("Anchor Client")
- Telecom more "bankable" off taker to raise project financing
- Enable mobile payment option for electricity (and other services) through eSewa

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Thanks!



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AGM, Gham Power
kishor@ghampower.com

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