Biogas Project Overview: Bhutan

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Outline

• Project Evolution
• Objective
• Salient Features
• Incentives & Supports
• BBP Progress
Evolution of Bhutan Biogas Project (BBP)

1. Keen interest of RGoB (DoE and DoL)

1. Feasibility Study by SNV/ADB in 2008

1. Successful pilot demonstration plants 2009 (2 each by DoE and DoL-with support from BSP Nepal)

4. Detailed Market Study by SNV/ADB in 2009

5. ADB included Biogas under its Rural Renewable Energy Development Programme

6. BBP implementation agreement signed on 14th May 2014
Major Objectives of BBP:

1. To contribute to national aim of reducing poverty levels by improving livelihoods & quality of life of rural farmers.

2. To reduce impact of biomass resource depletion.

3. To support national goals of food production and livestock development.
BBP: Salient Features

- Executing Agency: Department of Renewable Energy (DRE), Ministry of Economic Affairs
- Implementing Agency: Department of Livestock (DoL), Ministry of Agriculture and Forests
- Funding Agency: Asian Development Bank (ADB)
- Technical Assistance: SNV Netherlands Development Organization
- Subsidy and Credit Channeling: Bhutan Development Bank Ltd. (BDBL)
BBP: Salient Features contd……..

• Project Duration: 2011-2016 (Six Years)

• Project Coverage: 16 Districts out of 20

• Target: 3,600 Family Sized Biogas Plants benefiting about 15,400 people directly

• Project Budget: US$ 3.3 Million

• Main Impact Areas: Energy, Agricultural Production, Family Health and Sanitation, Employment Generation, Environmental Protection
Incentives/Supports

- Subsidy – Flat rate – Nu. 11,700/plant
- Credit through banks – Nu. 20,000/plant
- Technical Back-stopping
  - Routine visits
  - Repair and maintenance (problem solving)
- Guarantee and After-Sale-Services
  - Guarantee on biodigester
  - Quality enforcement in after-sale-services
- Research and Development
- Quality Control
  - Quality control of under-construction biodigester
  - Quality control of completed biodigester
  - Quality control of After-sale-services
- Training and capacity building
  - User’s training – instruction booklet
  - Training on Effective utilisation of bio-slurry
BBP Progress

- Total Constructed plants as of 31\textsuperscript{st} March 2016 – 2852 plants
- Under Construction – 232 plants
- Under Process – 437 plants
- Cumulative Total – 3521 plants
Use of Biogas
Use of Bio slurry
Impacts

• 15,000+ people directly benefitted

• 3,102 biodigesters are producing 4,900 m$^3$ of biogas/day

• 4,900 m$^3$ of biogas is equivalent to 2,205 kg of LPG (158 cylinder of LPG)/day, or, 57,573 cylinder/year

• The saving is Nu. 31.4 millions per year

• Saving of 9,900 tons of firewood per year

• 5000+ CO2 equivalent GHG reduced
Construction
Promotion: Awareness Meetings
THANK YOU