



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 31st 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 m³ of biogas/day
- 4,900 m³ 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