Lessons Learned on Decentralised Rural Energy Supply - Jatropha Power in Chhattisgarh

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Winrock International India

- An independent, not for profit research organization established in 1998
- Mission - To develop and implement solutions which balance the need for food, income and environmental quality
- Energy & Environment; Natural Resource Management & Climate Change
- Staffed by more than 60 professionals drawn from diverse disciplines
- Affiliated to Winrock International, US

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Introduction - What we did

Set up a sustainable decentralized village electrification plants based on Diesel Generating sets running on straight Jatropha oil

Location
Village Ranidehra, Bodla Block, Kabirdham district, Chhattisgarh

Partners
Swiss Agency for Development and Cooperation, British High Commission, Ministry of New and Renewable Energy, CREDA, P M Diesels, Castrol India, local government, village community

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Introduction - How we did it

- Firstly, identified 50 villages and then shortlisted the village of Ranidehra
- Detailed need assessment
- System design, engine trials, power plant set-up and distribution network
- Community buy-in at all stages
- Plantation of Jatropha saplings
- Set up a rice de-husking mill for additional income generation

Present status

- Engines running with zero downtime since April 2007
- Villagers pay for electricity services regularly
- Increase in usage of household sockets
- Increase in the number of households with single and triple connections
- Increase in demand for electricity beyond the scheduled hours for social functions

Miscellaneous Activities

- Organizing computer classes
- Organizing movie shows
- Encouraging inter-loaning activities beyond SHGs

SHG meeting in progress

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Lesson's learnt

- Irrigation is a priority than lighting
- Feedstock – a big concern
- Plantation packages were not available – as a result yield was low
- Difficulty in seed collection
- Simplicity in engine design
- Commercial usage of press cake (by-product)
- Training and capacity building at all levels
- Community involvement and support from local government
- Need to link income generation opportunities that would benefit the community

Tremendous potential

- More than 5,000 remote villages in India itself without access to electricity – many more with unreliable access
- Is considered the most viable DDG option after hydro energy
- Will provide access to energy to the rural communities and provide income generation opportunities


Thank You