

BIOMASS ENERGY FOR RURAL INDIA PROJECT
Bioelectricity for Rural India 24x365
Project status as on 31-03-2012

1.Introduction :

The Project is designed to overcome technological, technical, capacity & financial barriers in developing & establishing bio energy technology operational modules to reduce GHG emissions & promote a sustainable & participatory approach in meeting rural energy needs.

2.Project Period :

The Project is funded by GEF – UNDP, Indo Canadian Environment Facility (ICEF), GoI & GoK. The original project period was from April 2001 to December 2006. The project has undergone three extensions. January 2007 to December 2008 & thereafter to December 2010 & finally up to December 2012. The utilisation till date, of the project outlay is Rs.40.96 crores, as follows:

	Outlay	Utilisation (till Mar 2012) (in crore rupees)
GEF UNDP :	19.08	18.27
ICEF :	11.85	4.40
GoI :	1.50	0.37
GoK :	8.53	1.54

3. Project Components & Progress :

a. Establishing large capacity grid interactive biomass gasifier power plants, for producing Carbon negative bioelectricity using woody biomass. Construction of one megawatt capacity gasifiers power plant in three locations in Tumkur District is completed. 500 kw biomass power plant at Kabbigere is operational. 11,92,555 kwh of bio electricity has been generated till April 2012 resulting in a saving of 942.12 tonnes of Carbon emissions.

Kabbigere Village, Kortegere Taluk, Tumkur District:

100 kw capacity : Two gasifier systems are commissioned & are operational. These systems have generated 8,70, 550 kwh of bioelectricity till April 2012. These systems were commissioned & operationalised after terminating the turnkey contract for failure to perform as per agreement.

200 kw capacity: One gasifier system is commissioned & operational. This system has generated 322005 kwh of bioelectricity till April 2012. This system was commissioned & operationalised after terminating the turnkey contract for failure to perform as per agreement.

100 kw capacity: One gasifier system with dual fuel engine constructed. The engine is commissioned & is operated with diesel. The gasifier portion is yet to be

commissioned & made operational. Only 1362 kwh of electricity has been generated using diesel till April 2012. This work was done after terminating the turnkey contract.

Boregunte Village, Madhugiri Taluk, Tumkur District:

250 kw capacity: One gasifier system construction completed. To be commissioned & operationalised. The turnkey contract has been cancelled as the Contractor failed to fulfil the contractual obligations. For completing the pending works, rough estimates have been prepared. These have to be checked & approved by the technology provider, the Combustion Propulsion Gasification Laboratory of the Indian Institute of Science, Bangalore. Work will commence only after the technology provider scrutinises & clears the estimated details of the work & the costs & suggests an agency to execute the work.

Seebnayanapalya Village, Madhugiri Taluk, Tumkur District:

250 kw capacity: One gasifier system construction is completed. The plant is to be commissioned & operationalised. It is still under turnkey contract. The Contractor is not fulfilling his contractual obligations. This contract will be terminated as soon as the Boregunte System become operational.

b. 3000 hectares of forestry plantations have been established in the vicinity of the power plants, in the reserved forests, common lands & farm bunds / borders as energy plantations, for meeting the biomass requirement of the gasification power plants. These plantations are estimated to have sequestered nearly 12000 tonnes of Carbon. These plantations are estimated to yield 5000 tonnes of biomass per year as against the power plants requirement of 15000 tonnes per year.

c. 51 community based biogas plants for reducing the usage of wood & kerosene for domestic cooking have been established in 24 villages covering 175 households. The total biogas generated is estimated to be 95309 cubic metres & the savings in carbon emissions is estimated to be 148 tonnes.

d. 56 community bore wells with submersible pump sets & drip irrigation catering to 267 households in 24 villages have been established.

4. Activities Pending for Completion:

a. Repairs & Operationalisation of the 100 kw dual mode gasifier system at Kabbigere & operating it with producer gas & diesel/ bio diesel.

b. Operation & Maintenance of the 500 kw Kabbigere Gasifier Systems 24x365 & evacuating the load to the grid for 30 years of plant life.

c. Outsourcing the O&M of the Kabbigere Gasifier Systems, initially for one year, to private persons, for the development of Entrepreneurship in the O&M of biomass gasifier power plants & also to establish the comparative O&M efficiency & the costs

of the BERI PMU O&M with the Entrepreneurship. The Entrepreneur will be selected by tenders. The tender conditions are being prepared.

d. Repairs & Operationalisation of the 250 kw gasifier systems at Boregunte & Seebanayanapalaya & operating the plants 24x365 & evacuating the load to the grid for 30 years of plant life.

e. Implementing the Load Shift Mechanism at Kabbigere to give Tail End Support to BESCOM load during scheduled & unscheduled load shedding to enable all the connections in the cluster village to get BERI bioelectricity for 1.5 to 3.00 hours over & above BESCOM supply. This mechanism will be in place till plant life.

f. Implementing the Load Shift Mechanism at Boregunte to give Tail End Support to BESCOM load during scheduled & unscheduled load shedding to enable all connections in the cluster villages to get BERI bioelectricity, over & above BESCOM supply, in the duration of plant life, after conducting a detailed feasibility study.

g. Implementing the Load Shift Mechanism at Seebanayanapalya to give Tail End Support to BESCOM load during scheduled & unscheduled load shedding to enable all connections in the cluster villages to get BERI bioelectricity, over & above BESCOM supply, in the duration of plant life, after conducting a detailed feasibility study.

h. Building up capacity in the Gram Panchayats / GP level institutions with social engineering to administer, manage, operate & maintain the biomass power plants.

i. Leveraging the ability of the decentralised locally managed power plants to collect appropriate tariffs from IP set users, with social engineering.

j. Increasing the functioning & the of Biomass Energy for Rural India Society (BERI Society) in carrying forward the pending activities of the Project with the closure of GEF UNDP funding.

k. Replicating the BERI Model of generating & supplying bio electricity in other Gram Panchayats of the State, enabling the villages to get electricity 24x365, even during ESCOM load shedding. An Action Plan is indicated in the enclosed note titled Rural Energy from Biomass. How it is possible to give 24x365 electricity to villages is indicated in the enclosed note titled How Tail End Support to Grid Load Enables 25x365 Bioelectricity to Villages.

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**Dated : 09th May 2012
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