



CDM PROJECT CO-BENEFITS IN KOLAR DISTRICT, INDIA

Providing rural households with low-cost energy services

Project description

The Bagepalli CDM Biogas Project involves the construction of approximately 5,500 two-cubic-metre capacity biogas digesters in households in the area (“Taluk”) of Bagepalli and other nearby Taluks in the Kolar District, Karnataka, India.

The digesters, which utilise the dung of household cows, produce methane gas from the anaerobic breakdown of organic waste. The resulting methane is used as a cooking fuel in biogas stoves built in the dwellings. This replaces inefficient wood-burning mud stoves that were traditionally used for cooking and to produce hot water. It is a particularly critical technology for the area because of widespread deforestation due to firewood collection, and increasing shortages of wood for fuel in the area. An average dwelling has five occupants, meaning that nearly 30,000 people will benefit from the scheme.

Co-benefits

The project illustrates how the CDM can deliver a range of benefits for low income households in rural communities, by:

- Providing micro-finance support through exclusively CER forward funding for low-income households to allow them to transition to lower-cost, cleaner forms of energy production and use
- Reducing the time spent by women collecting firewood or travelling to purchase fuel
- Empowering women in households by passing further CDM revenues directly to them in the second and third crediting periods, following recovery of the project costs
- Improving indoor air quality in homes as the smoke-free combustion of biogas displaces the use of traditional fuels, generating health benefits for the community, especially for women who do most of the cooking
- Creating jobs and building capacity to support widespread replication of the technology

“The most critical factor for us was being able to afford the medicine to treat the most common problems such as burning eyes, breathing problems etc. Now we can afford a doctor because we save more and earn more, we don’t need him because there are no major health issues anymore.” (Parvathi Amma, biogas user)

KEY PROJECT BENEFIT

Free clean energy for rural communities, and empowering women in families

Once the investment costs have been paid back, remaining CDM revenues will be given directly to participating women

Coolie Sangha family: clean indoors with time to spend with the family
(Courtesy of Sudha Padmanabha, Fair Climate Network)





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CO-BENEFITS IN DETAIL

<p>Economic</p>	<ul style="list-style-type: none"> • Upfront support for investment, allowing free installation for households. The pre-selling of CERs raised EUR 1.1 million, which has allowed the construction of 5,485 domestic biogas digesters for 339 villages in the Chickballapur Taluk • Once the initial installation costs are paid back, which is anticipated in the first 7 years, all further CDM revenues will be directed to the women using the biogas digesters over the entire period of the project • Freeing-up women's time for more productive activities. Presently household members – usually women and children – in Bagepalli have to walk 3 – 5 km to find wood, if it is available at all. Cooking time is also reduced using the biogas system. This time is now available for more productive uses • Creating jobs and capacity-building through the training of 128 local masons in biogas digester design and construction, allowing for replication of the project in the region. The project has generated approximately 16,500 – 22,000 person-days of masonry work and 44,000 person-days of daily wage labour to excavate the pits and assist the masons
<p>Social</p>	<ul style="list-style-type: none"> • Improving health, especially for women and children, by reducing exposure to smoke and soot in properties. Prior to implementation, many suffered eyes, nasal and throat irritation and lung problems due to smoke from cooking with firewood • Improving manure management and other sanitation aspects.
<p>Empowerment</p>	<ul style="list-style-type: none"> • Empowering women who now have more time to spend on economically productive activities, social activities, and domestic matters (e.g. child rearing and educational activities) • Creating direct incomes for women users of the biogas digesters, empowering them to have more involvement in household financial matters • Promoting social activities because of the speed of preparing drinks and snacks, enhancing the dignity of women and their position in the household.

PROJECT FACTS

<p>Project title & number</p>	<p>Bagepalli CDM Biogas Programme – 121 Gold Standard – 410</p>	
<p>Project type & methodology</p>	<p>Methane avoidance – domestic manure AMS-I.C. – Thermal energy for the user with or without electricity</p>	 
<p>Location</p>	<p>Bagepalli, Kolar District, Karnataka, India Lat: 13° 45' 56" N Long: 77° 47' 30" E</p>	
<p>History & CERs</p>	<p>Registered: 10 December 2005 Project operational life: 21 years Expected CERs: 19,553 (tCO₂ eq/year) Expected total CERs: 41,0613 (tCO₂ eq) CERs issued to date: 11,761</p>	 <p>Construction of Deenabhandu (2 m³) biogas unit (Courtesy of Sudha Padmanabha, Fair Climate Network)</p>
<p>Project link</p>	<p>http://cdm.unfccc.int/Projects/DB/DNV-CUK1131002343.1/view</p>	
<p>Facts as at</p>	<p>November 2010</p>	

This factsheet has been compiled from information provided by project participants of the CDM project, either through the project design document, monitoring reports or subsequent correspondence with project participants. The information is not verified as part of the CDM registration or issuance processes. This factsheet is one of a series produced by the UNFCCC secretariat to highlight the types of co-benefits generated by the CDM.