



CDM PROJECT CO-BENEFITS IN HUBEI PROVINCE, CHINA

Biogas digesters enhance the welfare of low-income rural communities

Project description

The region of Hubei is a rural, mountainous district in China where the main economic activity is agriculture. Households in the region are being given the opportunity to install biogas digesters that use animal waste to generate gas for use in domestic heating, lighting and cooking.

Over 33,000 households – or around 165,000 people – are benefitting from the installation of domestic digesters, displacing more carbon-intensive traditional domestic fuels such as firewood, coal, coke and crop residues.

Co-benefits

The project illustrates how the CDM can enhance people's health and quality of life, by:

- Reducing the time spent by women collecting firewood or travelling to purchase fuel
- Significantly reducing the amount of household income spent on fuel
- Building capacity in biogas systems, allowing for more widespread replication
- Improving indoor air quality in homes due to smoke-free combustion of biogas compared to traditional fuels, generating health benefits for the community, especially for women who do most of the cooking
- Enhancing sanitation services by improving swine manure handling techniques, as well as providing a connected latrine for households

"One interviewee reported that her asthma had disappeared since switching to biogas. Another said that the extra time she had now was spent on more productive things such as pig rearing, allowing the household to generate more income."

(World Bank Community Benefits Plan supervision team field visit, April 2009)

KEY PROJECT BENEFIT

Improving health and welfare, creating employment and enhancing incomes in rural communities

The elimination of fuel collection chores means that a woman has on average 3 additional hours a day

A biogas fed kitchen in the Hubei region (Courtesy of the World Bank)



CDM PROJECT CO-BENEFITS IN HUBEI PROVINCE, CHINA

Biogas digesters enhance the welfare of low-income rural communities

CO-BENEFITS IN DETAIL

Economic	<ul style="list-style-type: none"> Saving around RMB3000 per household on annual fuel expenditure (for the lowest income households, fuel costs can be up to 75 % of annual expenditure) Building capacity in the region for replication of the project, by training biogas installers and enhancing digester maintenance services
Social	<ul style="list-style-type: none"> Improving health by reducing exposure to smoke in properties, delivering reported reductions in asthma, eye infections and other respiratory problems, particularly among women Improving manure management and other sanitation aspects, in that the biogas digester is installed along with a domestic latrine
Empowerment	<ul style="list-style-type: none"> Empowering women who now have on average 3 hours per day more to spend on more economically productive activities, social activities, and other matters (e.g. child-rearing, education) Allowing low-income homes to further their children's education

PROJECT FACTS

Project title & number	Hubei Eco-Farming Biogas Project – 2221	
Project type & methodology	<p>Methane avoidance – domestic manure AMS-III.R. – Methane recovery in agricultural activities at household/small farm level and AMS-I.C. – Thermal energy for the user with or without electricity</p>	 
Location	<p>Hubei Province, China Lat: 30° 16' 13" N Long: 109° 28' 30" E</p>	
History & CERs	<p>Registered: 19 February 2009 Project operational life: 10 years Expected CERs: 58,444 (tCO₂ eq/year) Expected total CERs: 584,440 (tCO₂ eq) CERs issued to date: Request yet to be submitted</p>	 <p>Fitting a biogas cooker (Courtesy of the World Bank)</p>
Project link	<p>http://cdm.unfccc.int/Projects/DB/TUEV-SUED1218669721.67/view</p>	
Facts as at	November 2010	

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.