

News from IEI's Asian Regional Initiative in Bangalore (India) – March 2013

“Powering a village sustainably: generating electricity from waste-based biogas”

In our endeavour to bring about sustainable access to improved energy services in rural areas, we at IEI-Asia have been working on an “energy-development” model. This **integrates cleaner and more efficient energy services with economically-feasible activities that enable income and employment generation, thereby enabling even the poor to participate.**

Through our dairy-electricity project, in Ramanagara district of Karnataka state, we have been demonstrating a case of sustainable rural access to energy-services through a community enterprise that generates electricity from the waste of an integrated income-generation activity.

The energy-development enterprise comprises a dairy, a biogas plant that is fuelled with waste from this dairy, a 20kVA engine-generator fuelled completely by biogas (chiefly methane) from the linked plant, the extension of the electricity distribution system to un-electrified homes, and through these, daily electricity supply to the households and other consumers in the village.

The dairy provides employment and income. Farmlands nearby provide crop residues for cattle-feed. Dung serves as sustainable fuel-supply for biogas-generation. The biogas-digester effluents are used as manure.

The provision of electricity through the biogas-fuelled system is continuing as intended. Electricity supply enables lighting and other electricity-enabled services in homes as well as community needs such as street-lighting and pumping water for domestic use, when the regional utility Bangalore Electricity Supply Company (BESCOM) service is not available. Electricity is usually supplied for an hour in the mornings for water pumping and for two-three hours in the evenings. The service has been particularly useful during the past months when both water and electricity were in short supply.

The implementation of the project was funded by the Wuppertal Institute for Climate, Environment and Energy, through the 6th round of their Sustainable Energy Project Support (SEPS) programme.

