IVORY COAST: Promoting renewable energy through solar electrification of schools

Background

Modeste is a small village of no more than 3,000 inhabitants, located in the community of Grand Bassam, in the southern region of Côte d’Ivoire, 25 miles away from Abidjan. The village has one primary school with only 6 classrooms.

With no electricity available in this village, people need to resort to alternative solutions for energy, such as firewood and oil lamp. The project aims to promote the use of renewable energy by providing electricity for the school, a multi-purpose room and housing for teachers through solar energy.

Project Objectives and Key Activities

The key objective of the project is to promote the use of solar energy, raise awareness and contribute to the reduction of carbon dioxide (CO2) emissions, mainly caused by the use of fuel wood and kerosene as the main sources of lighting. As secondary benefits, the project will improve educational outcomes and improve the overall environment for teachers and students living in the village of Modeste. This project is nearing completion and will be officially inaugurated this year on 5th May 2012.

The project involved a number of key activities to enhance the capacity of the community:
- Awareness raising of the inhabitants of “Modeste” about the benefits of using renewable energy as a way to increase their participation and ownership of the project and its achievements;
- Acquisition and installation of solar panel equipment;
- Training of grantee partners in the maintenance and management of the solar panel equipment. For this purpose, a local committee was created to ensure proper management and the sustainable use of equipment funded by the GEF/SGP.
Environmental Impact
Based on SGP’s experience in past projects relating to solar energy, it is estimated that one solar panel of 50 WC can replace at least 100 litres of kerosene per year. For the panel installed, the project can save more than 400 liters of kerosene per year.

Socio-Economic Impact
This project successfully extended electricity to three houses, three classrooms, and the principal's office by employing solar panels. Furthermore, one multi-purpose room has been electrified and equipped with one TV for the use of all members of the “Modeste” village. Since project inception, teachers have started agreeing to stay and work in the village and pupils are now allowed to learn in learning-friendly environments. Two members of the villages have been trained for equipment-maintenance. Beyond the objective of maintaining good equipment functionality, this training is also a way to enable the stakeholders to earn additional income.

Policy Impact
The SGP’s successful experiences in extending solar panels to primary schools, rural health centres, and community multi-purpose centres have produced a good impact on Government projects. The Ministry of Energy is now developing several projects related to promoting the use of solar energy.

Gender Mainstreaming
Extending electricity to rural areas facilitates rural women’s education. Women can now learn to read and write without much inconvenience from the lack of physical infrastructure that is conducive to learning.

Replication and up scaling
This project itself is a replication of a widespread solar panel project implemented by SGP a decade ago in Côte d’Ivoire.

Lessons learned
Most of lessons learned have been gathered in a book produced by SGP Côte d’Ivoire NC in 2006 and widely distributed (including CPMT). One lesson to highlight is that: it is a key issue to combine small social businesses and income-generating activities when implementing solar panel extension.