

Promoting Renewable Energy-based Grids in Rural Communities for Productive Uses

Background

The lack of access to electricity and its exorbitant cost in far flung rural areas of Côte d'Ivoire is still a major constraint for national development. In rural areas, electricity is considered a luxury. The access rate is only 14% in rural households, compared to 77% in urban areas. In those regions not serviced by electricity, charcoal, fuel wood and kerosene are the most important sources of energy.

In the absence of viable alternatives, the current national plan is considering the establishment of decentralized grids powered by fossil fuels. This plan does not take into account the environmental impacts of this option: an expansion of such fossil fuel based grids will contribute to increasing the country's GHG emissions. The solution is to establish mini-grids powered by the most suitable renewable energy system locally available. Based on life cycle calculations, the use of these renewable resources in decentralized grids will be the most economically and financially viable option to providing access to "cleaner" energy and triggering economic activities in off-grid areas.

This approach is all the more promising since the country is well endowed with renewable energy resources. Solar photovoltaic (PV) technology could be particularly promising, as Côte d'Ivoire has solar irradiation values of 2,200-2,800 kWh/m²/year, and an irradiation duration of 6 hours per day.

The project aims at promoting solar photovoltaic based mini-grids in order to increase the rate of modern energy access of the rural populations to replacing the presently used fossil energies. This is through an integrated approach that combines substantial capacity building and learning-by-doing with technical assistance interventions at the policy and demonstration project level.



Objective

The overall goal of the project is to develop a market-based approach for improving the access to PV based mini-grids in rural areas.

Project Components

- Raise awareness of technical and socio-economic issues for government and private market players to promote capacity building.
- Design an effective, market-oriented policy and regulatory framework to stimulate investment in renewable energy, including the formulation of a model public-private partnership.
- Organize 3 seminars to train and familiarize policy makers, financial institution staff, and private sector representatives regarding roles and responsibilities in promoting RE mini-grids.
- Identify viable RE project sites and conduct pre-feasibility studies for 10 most promising sites.
- Design and install 7 photovoltaic (PV) based mini grids for productive uses, totalling 350 kW of installed capacity.
- Establish approx. 1750 new electricity connections, with approx. 8750 persons served.
- Disseminate technical and policy information for promoting investments in renewable energy in rural areas, as well as the evaluation of pilot projects.

Executing Partners/Agencies at National Level

The executing partner/agency in this project is the Ministry of Mines and Energy.

Project Budget

GEF – US\$ 1 million (including PPG and agency fees); Co-financing – US\$ 3.9 million

Progress

- The TF agreement has been submitted to the government for signature.
- The government request to BOAD to co-finance the project for USD \$3 million is pending.

Activities	Timeframe	
CEO Endorsement/Approval	April	2012
Implementation Start	May	2012
Project Closing Date	February	2014

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