

Promoting Renewable Energy Based Mini-Grids for Rural Electrification and Productive Uses

Background

The lack of access to electricity and its exorbitant cost in far flung rural areas is still a major constraint for national development in the country. Chad lags behind most sub-Saharan countries in this respect.

In the absence of viable alternatives, the current national plan is considering the establishment of decentralized grids powered by fossil fuels. This is not taking 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.

This approach is all the more promising since the country is well endowed with renewable energy resources. Chad has solar irradiation values of 2,200-2,800 kWh/m²/year. There is also considerable potential for small-hydropower and biomass power (the latter on the basis of the agricultural residues available in the country), which has not been systematically exploited so far.

The project will lead to the avoidance of GHG emissions while meeting the energy needs of Chad's rural areas through renewable energy systems.



Objective

To promote selected renewable energy technologies for mini-grid connected rural electrification in Chad, and thereby reduce greenhouse gas emissions.



The Republic of Chad

GEF Strategic Programme on Energy in West Africa UNIDO ENERGY PROJECT

Project Components

- Reduce policy barriers for the creation of grid connected renewable energy systems with the creation of a market-oriented institutional, financial, policy, and regulatory framework.
- Develop a package of investment incentives, standardised PPAs, tariffs, pricing mechanisms, risk management instruments, and business models to support scaling up RE mini-grids.
- Map renewable energy resources (biomass, solar and small-hydropower) and assist private developers to create detailed energy feasibility studies for potential project sites.
- Implement two PV solar based mini-grids on selected sites, with a total of .25 MW capacity.
- Establish around 250 electricity connections per site by 2013, powering approximately 1250 households and local businesses and a total of approximately 6250 persons.
- Train a team of local authority officers and interested private sector service providers-to-be on the operation, maintenance, and management of RE based mini-grid systems.

Executing Partners/Agencies at National Level

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

Project Budget

GEF – US\$ 2 million (including PPG and agency fees); Co-financing – US\$ 1.8 million

Progress

- The competitive bid process for the selection of a contractor for construction and commissioning of Solar Photovoltaic mini-grid is ongoing.
- Preparation of the inception workshop is in progress.

Activities	Timeframe	
CEO Endorsement/Approval	April	2012
Implementation Start	May	2012
Midterm Evaluation	July	2013
Project Closing Date	November	2014

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