

Project Summary

Projekt Background

The agricultural sector plays a significant role in the Tunisian economy, employing 26 % of the workforce. Only about 8% of the cultivated area is irrigated. This situation could be improved by the employment of decentralized water pumps using solar and/or wind energy. In this way, the amount of irrigated land and thus agricultural productivity can increase. Hybrid systems using wind and solar energy for the electrification of farms can also be used for lighting, electrical office equipment and for processing of agricultural products.

Project Objectives

In the framework of the national programme for the energy economy, which spans the period from 2008 to 2011, the following goals in the field of renewable energy should be reached:

- Increase the share of renewable energy sources in the overall energy generation to 4 % by 2011;
- Strengthened use of renewable energy in agriculture;
- Development of scientific research in the field of "renewable energy".

For this purpose the following measures are planned for the agricultural sector:

- Equip 200 agricultural operations which are not connected to the national grid, with pumping systems for irrigation, which are driven by solar and wind energy;
- Electrification of 100 agricultural operations and small rural projects, which are not connected to the national grid, with solar and wind energy;
- Granting of an investment subsidy of 40 % up to maximum 20,000 Dinar.

In order to successfully implement the above mentioned measures, the ANME (National Agency for Energy Conservation) has requested consulting services. The objective is therefore to support ANME in the implementation of 200 irrigation water pumping systems and 100 electricity systems utilising solar and wind energy.

Project Activities

- Evaluation of the results of the previous ANME pilot projects for the use of renewable energy in hybrid technology;
- Creation of a dossier with technical specifications for models, which could be implemented in Tunisia;
- Creation of programme documents (technical specifications, operating instructions ...);
- Capacity building of ANME in the use of hybrid systems;
- Leading the implementation of demonstration projects with hybrid systems;
- Monitoring and evaluation of the demonstration projects;
- Creation of documents for sensibilisation measures;
- Development of financing and subsidy concepts for the use of renewable energy and the respective implementation mechanisms;
- Suggestions for information campaigns for the target groups concerned and planning of an education and training programme for installation and maintenance.

Services Provided

- Provision of five wind measurement stations, collection and evaluation of wind data from five sites
- Hybrid, wind and solar energy demonstration projects for irrigation and electricity generation including monitoring and evaluation
- Support the ANME in the implementation of 200 irrigation water pumping systems and 100 electricity systems utilising solar and wind energy
- Financing and subsidy concepts for the use of renewable energy
- Project management

Tunisia

Electrification by wind/solar hybrid systems

Client

German Agency for Technical Cooperation (GTZ)

Duration

11/2008 - 11/2009

Personnel

- 3 internat. STE
- 2 national STE

