



AfDB and Climate Change

Ain Beni Mathar, Morocco Solar Thermal Power Station Project

The Kingdom of Morocco is preparing a major solar power project on five sites — Laayoune (Sahara), Boujdour (Western Sahara), Tarfaya (south of Agadir), Ain Beni Mathar (center) and Ouarzazate — with state of the art solar facilities

working in partnership with the Global Environment Facility and Morocco's National Electric Authority, ONE; the Bank is financing approximately two-thirds of the cost of the plant, or about 187.85 million Euros.



Parabolic trough with mirrors to collect solar energy

composed of photovoltaic and solar thermal energy mechanisms. The sites will cover 10 000 hectares and should produce up to 2 000 megawatts of electricity, "an annual saving of one million tons of oil," according to Minister of Energy, Amina Benkhadra. Renewable forms of energy are attractive as Morocco depends virtually entirely on imported energy.

Ain Beni Mathar enjoys abundant sunshine and has enough water to cool the power station and clean the solar mirrors. It is close to both the Maghreb-Europe Gas Pipeline and the high voltage grid that will help move the power it generates.

For the African Development Bank, broadening the supply of low-cost environmentally clean energy to more people and developing renewable forms of energy to diversify the sources for generating electric power are major priorities. The Ain Beni Mathar Integrated Solar Thermal Combined Cycle Power Station is the Bank's first experience in solar power. It is

This plant combines solar power and thermal power. It enables ONE to diversify its energy sources, increase its production capacity from 200 to 250 MW by 2012 and to supply the interconnected system with nearly 1590 GWh per year, of which 55 GWh will come from solar, and save on fuel costs.

Many people will benefit from this project. For example, approximately 500 workers will be employed by the project; local SMEs providing support services will be employed by the project, which will help develop regional industrial activities. The project includes building a road and two bridges over the Charef and Tabouda wadis, which will benefit the



Ain Beni Mathar Solar Thermal Power Station

local populations. The national fuel bill should drop and reduced greenhouse gas emissions will benefit the environment. The use of solar energy is also expected to generate other solar research programs.