



Delivering Quality, Performance, Reliability, Security and Savings

Reliable Renewables: Solar PV Solutions

PMRE14 SOLAR PV PROJECT

Republic of Mali, West Africa

Customer: Government of Mali through its Ministry of Energy, Mines and Water

Production: 24 solar direct drive photovoltaic pumps for 73.5 kWp, 13 generators totalling 230 kVA, 13 automated injection systems of chlorine

Commissioned: April 2010



PMRE14 Solar PV Project, Republic of Mali

Solar Direct Pumps Deliver Energy and Cost Savings for Mali

Mali faces major difficulties in terms of access to clean drinking water, particularly in the most isolated areas. In this context, solar energy, widely available in Sahel countries, can be efficiently used for solar PV direct drive pumping systems. These systems fulfill their basic needs, withstand the harsh conditions and constraints of isolated sites and provide drinkable water that would otherwise be too difficult and costly to transport.

A Photovoltaic Systems Approach – Investing in Solar Pumping Solutions

The Programme for the Mobilisation of Water Resources (“Programme de Mobilisation des Ressources en Eau”) has been spread out over a number of years and several phases, resulting in approximately 100 installations. One of the specificities of this project is the technical choice of a hybrid solar/thermal pumping technology and a water chlorination unit before the distribution tank: a unique and modern approach for drinking water supply networks. PHOTALIA's patented full hybrid Universal Pumping Inverter (UPI) represented the perfect solution: extremely robust and highly reliable, the UPI converts and feeds the energy collected by the PV array to the submersible pump. It is also the system controller collecting information from the PV array, the pump, the water levels in the borehole and the water tower, ensuring the system's reliability and performance. The UPI is designed to optimise energy sources assuring as pure solar or hybrid (solar-genset or solar-grid) operation using solar PV energy as the primary source and the second as supplementary or backup power.

The Programme for the Mobilisation of Water Resources project encompassed renewable solutions by a group of companies including Apex BP Solar – Sinergie SA, and Vergnet's PHOTALIA, who managed the project, the engineering of the systems and the global coordination of its implementation.

It took 12 months to implement the project in Mali, with Vergnet's PHOTALIA managing the entire process, from commissioning of the sites to final delivery of the project and integrating the training of the technicians and users. As well as the 14 centres of this phase, PHOTALIA has also supplied 11 other sites installed by the group VERGNET HYDRO.

Making a Difference in Mali

“Vergnet was delighted to be part of the team that delivered a clean, reliable drinking water system to an area in need. We are delighted with the results and the support that Vergnet is continually providing for the population of Mali. As a global renewable energy solutions provider, Vergnet provides adaptable renewable energy solutions that help to reduce and secure energy costs for people, communities, businesses and economies like Mali and around the world. This innovative project utilised a clean renewable energy source, available in abundance in the region, coupled with smart design solutions to meet the needs of this isolated site.” **Marc Rivard, Vergnet’s Sales Director**

Reliable Renewables with PHOTALIA

PHOTALIA was created by the VERGNET GROUP to add a solar PV business for isolated sites which would share the Group's values of involvement in and respect for the environment. PHOTALIA is committed to sustainable development as it proposes practical solutions to meet the vital needs in water and energy.

PHOTALIA, VERGNET’s subsidiary, is specialised in photovoltaic solutions for water pumping, electro-chlorination, off-grid and hybrid power solutions for commercial and industrial applications.



The project included the installation of 24 solar direct drive photovoltaic pumps in Mali

PHOTALIA was created in 2007 by a specialized team experienced in photovoltaic applications. PHOTALIA covers a large range of activities including solar pumping, commercial and industrial off-grid and hybrid applications in the most difficult regions, proving its technical and logistical capabilities. The team responds appropriately with effective management and respecting contractual obligations. PHOTALIA proposes solutions which have been specially conceived for the constraints of isolated sites and zones in needs of electricity.

The strength of PHOTALIA lies in the 12 year long experience of its staff, knowledge of the field and knowledge of the products. PHOTALIA is already present in over 20 countries through its strong technical and commercial partnerships covering a wide geographic area.

Developing adaptable and affordable solutions that cut energy costs is at the heart of everything we do.