

## **A first in Africa : Socomec supplies a hybrid power plant for the Total Foundation in Malawi**

Benfeld, 19 March 2014

***The Total Foundation has recently set up Malawi's first hybrid power plant in a remote location of the country. The plant features a solution developed by Socomec for off-grid sites, i.e. sites that have zero or only limited coverage by the public grid.***

As a member of the Alliance for Rural Electrification\*, Socomec has developed a powerful and innovative Hybrid Power System to meet the power supply requirements of sites that have little or no access to a public grid. Under the brand name 'Sunsys HPS', this solution can help, for example, to provide an electrical supply to a remote health centre.

With power ratings of 40 to 200 kVA, the Sunsys HPS uses PV electricity as its main source, which is then stored in a specially designed battery system. A three-phase input allows for the use of a back-up energy source (electrical power grid or stand-by generator, depending on the case).

In the context of the notoriously inadequate rural electrification in sub-Saharan Africa, Socomec has contributed to the installation of several hybrid power plant projects in countries such as Benin and the Congo. Guaranteeing the continuity and quality of the electricity supply in vast rural areas is one of today's pressing challenges, especially where the public power grid is inexistent or frequently compromised. The challenge is compounded by the costs involved in the purchase and transport of diesel for gensets that have continued to rise over the last few years.

### **Energy essential for combating AIDS**

Malawi's first hybrid power plant was inaugurated last December. The system was provided by Socomec for the Total Foundation, and has been designed to supply a healthcare clinic in Mthengo wa Nthenga.

The clinic is part of a vast international programme to combat AIDS called DREAM\*\* and houses a molecular biology laboratory. The computerization of the clinic and its associated lab equipment require the presence and maintenance of complex electronic systems that have to function even in case of power outage.

At the Mthengo wa Nthenga site, 140 solar panels produce 35 kW of electrical energy that is used either directly or stored in the 32 special batteries of the Sunsys HPS system, with a total power output capacity of 100 kWh. When there is not enough sunlight for the solar panels, or during the night, the batteries convert the energy stored in them. Should this energy be itself insufficient, the Sunsys HPS offers two automatic alternatives : either connection to the public grid (if available) or start up of the stand-by generator.

### **A green and economic solution**

Apart from helping to protect the environment and reduce dependency on fossil fuels, the use of renewable energies provides concrete cost savings as well as offering a sure alternative to unreliable public grids.

As managers of the DREAM\*\* site confirm, "Socomec has developed a very powerful and innovative HPS hybrid power system that is especially suited to requirements in Africa and other such sites that are not electrified or subject to unreliable grids. From now on, we'll be depending a lot less on the stand-by generator that used to run for hours. Our operating costs are going to be slashed and the DREAM centre will significantly reduce its carbon footprint".

Total, the project's sponsor, has signed a partnership agreement with representatives from the Ministry of Health and the DREAM programme in Malawi to extend the experiment to other DREAM clinics in the country.

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#### \* Alliance for Rural Electrification (ARE)

The Alliance for Rural Electrification is the only international business association in the world focusing on the promotion and development of off-grid stand-alone and mini-grid renewable energy solutions for rural electrification in developing countries. ARE serves as a platform for sharing knowledge and best-practices and is a privileged partner of stakeholders in the energy field who want to engage the private sector (<http://www.ruralelec.org/>).

#### \*\* DREAM

Launched in February 2002 by the Community of Sant'Egidio, DREAM (short for "Drug Resource Enhancement against AIDS and Malnutrition") is a holistic\*\*\* therapy programme for the treatment of AIDS in Africa. At the time of writing, the programme covers Mozambique, Malawi, Tanzania, Kenya, Guinea, Guinea-Bissau, Nigeria, Angola, the Congo and Cameroon.

(<http://dream.santegidio.org/>)

\*\*\* A holistic approach is one where the patient is treated as a whole rather than focusing medical intervention on a specific organ or disease.

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### **ABOUT SOCOMEC**

Founded in 1922, SOCOMEC is an industrial group with a workforce of over 3000 people around the world in 21 subsidiaries. Our core business: the availability, control and safety of low voltage electrical networks... with increased focus on our customers' power performance. In 2013, SOCOMEC posted turnover of 437 million euros.



### **FOR MORE INFORMATION**

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