



Case Study: Hôpital de Port-à-Piment

OutBack Grid/Hybrid Power System Installation



Overview

Founded in 1990, the Solar Electric Light Fund (SELF) is a nonprofit organization with the mission to **design and implement solar energy solutions to help people living in "energy poverty."** Based in Washington, D.C., SELF has completed projects in more than 20 countries including Haiti, Rwanda and Benin.

SELF recently installed a solar energy system for a hospital in southwestern Haiti. The Hôpital de Port-à-Piment is a small facility providing a wide variety of health care services: surgeries, newborn deliveries, and basic diagnostic lab work, all of which previously relied on expensive diesel fuel generators and an unreliable local electricity grid prone to frequent power outages. Without around-the-clock power, vaccines and medicines could not remain cold, incubators could not stay warm, and surgeries would have to be performed with sub-standard lighting, greatly increasing patient risk.



System Specifications

Location: Republic of Haiti

System Power: 6.0kW PV/Solar System

System Components: FLEXpower TWO (2 FX Inverter/Chargers, FLEXmax Charge Controller and MATE3 System Display and Controller)



A doctor cannot be expected to perform life-saving surgeries at night without lights or power for medical equipment. Now, through the provision of reliable solar electrical power, doctors at the Hôpital de Port-à-Piment can treat, diagnose and vaccinate patients in need at any time, all while saving the hospital money by virtually eliminating the need for diesel fuel. This would not have been possible without OutBack Power."

Bob Freling

Executive Director, Solar Electric Light Fund (SELF)

On April 10, 2012, we welcomed the greatly dynamic SELF team for the renovation of our energy supply at the Hôpital de Port-à-Piment. Five days later the incredible turned true, when the hospital lit like a beacon. This time, we didn't need to run the generator or buy expensive diesel fuel, as all of the energy used comes from our Caribbean sun."

Dr. Jean-Richard Vital

Director, Hôpital de Port-à-Piment



Objectives

- Provide a reliable energy solution to mitigate frequent power outages
- Enable the hospital staff to deliver reliable medical treatment to the community 24/7
- Reduce the facility's emissions and associated costs from using expensive diesel fuel
- Improve staff and patient environment by eliminating the fumes and noise caused by diesel generators

Solution

SELF installed an 11.7kW photovoltaic (PV) array with an OutBack Power 6,000W FLEXpower inverter system to provide the hospital with continuous electricity to better serve the 16,000 Haitians in the region. The new solution is essential for the hospital as it provides significant fuel savings and a reliable source of electricity, as well as an improved patient and worker environment that is free from the diesel fumes and noise produced by a generator. This solution optimizes generator run-time, making the entire system more efficient.

Benefits

- Solar energy provides more than 90 percent of the hospital's electricity
- The system reduces the hospital's need for expensive diesel fuel
- Solar energy reliably powers critical electrical loads around the clock, even in the event of a power disruption or during harsh weather conditions
- The quieter, lower emission system gives the doctors and staff a healthier work environment, free from generator noise and diesel fumes