



**Partners
In Health**

25 years of health and social justice



A FIRST FOR HAITI

The solar energy system that will power the Mirebalais National Teaching Hospital, just 30 miles north of Port-au-Prince, Haiti, is among the most ambitious solar projects ever undertaken in a developing country.

CLEAN, COST-EFFECTIVE POWER

Estimated Annual Costs of Energy Sources

Solar	\$270,000
Electricity	\$512,000
Generator	\$1,020,500

Estimated after initial costs



BY THE NUMBERS

Mirebalais Hospital square footage: **200,000**
 Inpatient capacity: **320 beds**
 Haiti's standard electric rate per kW hour: **35¢**
 New England standard rate per kWh: **5.5¢**
 Hours of daily blackout in Mirebalais: **3**
 Solar panels: **1,800**
 Solar panel capacity in kilowatts: **400**
 Cost of solar installation: **\$2.5 million**
 Years for solar energy to pay for itself: **3-5**

Powered by Solar

Mirebalais National Teaching Hospital

An Unprecedented Undertaking in Haiti

The Mirebalais National Teaching Hospital, to open late 2012, will be a first for Haiti in many ways. The 320-bed, 200,000-square-foot facility will offer an unprecedented level of patient care and medical education at a public institution in Haiti, representing a major investment in building back better after the 2010 earthquake. Also unprecedented is its comprehensive solar energy system—likely the largest in Haiti and among the largest in the developing world.

On most sunny days, the system will generate more electricity than the hospital consumes, allowing the surplus energy to feed back into the grid—the first agreement of its kind with Électricité d'Haïti, Haiti's national electrical utility. This arrangement will reduce the cost of powering the hospital and ensure that the facility contributes to Haiti's electricity supply rather than depleting it.

Cost-Effective, Reliable, and Clean

The town of Mirebalais, 30 miles north of Port-au-Prince, Haiti, experiences daily blackouts and brownouts and is regularly threatened by tropical storms that damage the electrical grid. Diesel-powered generators, costly emitters of greenhouse gases, typically are the main backup to this unreliable public system. In Haiti, the environment has paid a high price for energy needs through a vicious cycle of poverty and deforestation for charcoal production. And the human cost of energy needs is embedded in the history of Partners In Health in Haiti—the founders of PIH established the first clinic in response to the desperate needs of a squatter community driven off their land after the Péligré Hydroelectric Dam flooded their farms. The dam still produces the majority of Haiti's electricity.

Working with the Haitian Ministry of Health, Partners In Health chose solar power for the Mirebalais Hospital as a cost-effective, reliable, and environmentally responsible way to power the facility. With PIH's longstanding commitment to green energy, the solar system at Mirebalais Hospital draws on lessons learned at our facilities in Rwanda, Lesotho, and other sites in Haiti.

Comprehensive Solar Capacity

The solar capacity at Mirebalais Hospital capitalizes on one of Haiti's greatest natural resources: sunlight. The Mirebalais Hospital solar capacity includes 400 kW of photovoltaic roof-mounted solar collectors that feed into the electrical system; high efficiency solar street lights to illuminate the hospital campus; and 50 high efficiency solar flood lights that recharge with only a few hours of sunlight, improving safety at night on the 14-acre hospital campus.



Solar panels on the roof and on street lamps capture sunlight for electricity and lighting.

Conserving Scarce Energy

In addition to solar power, the hospital minimizes energy needs through green technology such as specially designed, high-efficiency, extra-long life fluorescent light fixtures; motion-sensors for lights that will save up to 60% in energy usage; and natural ventilation that lessens the spread of infection and the need for air conditioning. On the roof, reflective white coating keeps the building cooler and makes the solar panels up to 15% more efficient.



The hospital's open-air design will keep cooling costs down while preventing the spread of infection.



Former President Bill Clinton talks with Drs. David Walton and Paul Farmer at the Mirebalais National Teaching Hospital.

A Presidential Visit

Former President Bill Clinton visited the Mirebalais Hospital in March 2012. The Clinton Foundation has invested heavily in solar projects in Haiti with partners such as energy company NRG and the Solar Electric Light Fund, which has installed solar capacity at several other Partners In Health facilities in Haiti. "These projects all show the power solar energy has to transform the lives of thousands of Haitians," Clinton said. "They provide better opportunities for students to learn, entrepreneurs to create jobs, doctors to care for the sick, lower the cost of electricity and improve the environment. I am proud that my Foundation's partners have committed to provide even more solar power to the people of Haiti, and I am so glad that I had the opportunity to see this work in action."

ABOUT PARTNERS IN HEALTH

PIH is a 501(c)(3) global healthcare organization based in Boston that works in 10 countries to deliver high-quality health care to people and communities devastated by the joint burdens of poverty and disease. From the accompaniment model for treating patients with burdensome diseases to hospital designs that minimize the spread of infection, PIH is committed to developing, documenting, and sharing poverty-fighting innovations.