Sirona Cares Rural Electricity Program
Supplying Electricity to One Million Haitians Through Sustainable Businesses
The IEEE and Sirona Cares Developed a Program to Put Basic Electricity into the Homes of 1 Million Haitian People Using a Sustainable Business Model
Program Centers on Small Battery Kits Rented to Home Customers – Lighting for 10’ by 16’ home
The Community Entrepreneur Based Reliable Electricity Generation in Rural Haiti Program is the result of a cooperative effort among both private companies and non-profits. The effort was launched in 2008 as part of the Humanitarian Technology Challenge (HTC), a joint partnership between the IEEE and the United Nations Foundation, co-sponsored by the Vodafone Foundation. Now known as the Community Solutions Initiative, it continues to be supported by the HTC and is now part of the IEEE’s Power and Energy Society.

The term “IEEE” (the Institute for Electrical and Electronics Engineers) is representative of the many subgroups and organizations within the IEEE and working with the IEEE that have participated in bringing the project to Haiti. These include the HTC (Humanitarian Technology Challenge), the PES (Power and Energy Society), the NPSS (Nuclear Plasma Sciences Society), the IEEE Canada, IEEE Region 9, Vodaphone, the UN Foundation, John Lorts Engineering and Nextek Power Systems as a sponsor as well as the dedicated employees who devoted much time and energy to helping this program succeed. The term “Sirona” encompasses all donors, supporters and in-country partners who have helped to bring light to people in Haiti.
Program Centers on Small Battery Kits Rented to Home Customers

Kits Include:
- One Battery with 9 Usable Amp-Hours
- Two DC Power Outlets
- Two 4 Watt LED Lights and Bases
- 30’ Wiring for Lights
- Flashlight
- Volt Meter
- Sturdy Plastic Case
Program Centers on Small Battery Kits Rented to Home Customers

On One Charge, the Batteries can:
- Run 1 Light for 31 Hours;
- Run all 3 Lights for 9 Hours;
- Charge 9 cell phones;
- Charge a laptop battery 1.5 times; or
- Run a Small Radio for two days
Program Centers on Small Battery Kits Rented to Home Customers

For 80 HTD per Month, Customers can rent the battery kits and recharge the battery as often as needed (up to once per day)

Batteries are recharged in 3 hours
Batteries Are Recharged At Central Charging Stations

Self-Contained, Solar-powered 1.5 kW battery charging stations are located in each community to charge in-home batteries.
Batteries Are Recharged At Central Charging Stations

Station Operators are responsible for:
- building the market for the in-home battery kits;
- collecting payments from customers;
- operating the generating station; and
- ensuring Sirona is informed of maintenance and operating issues.
Sharp Solar Panels

6 - 245 watt, 30.4 Vmp
Two strings of three panels

Array power = 1470 watts
Array voltage = 91.2 Vmp
Array current = 16 Imp

Array area = ~100 ft²
Weight w/o mounting = 264 lbs