

Solar Power Brings Light to Quake-Darkened Haiti

Milton Rowe National Geographic

In the aftermath of the earthquake that devastated his country on January 12, Haitian businessman Alex Georges recalls both the darkness and the light.

From the Port-au-Prince house where he had been meeting with his business partner, Georges remembers stumbling into chaos: human suffering and a cloud of dust so thick that he could not see across the street.

But he also saw that at night, even though the shaken city had no electricity, there were bright islands of light—beneath the solar-powered street lamps that his company had installed at two sports fields. People were drawn to the glow and began to set up camps there.

Georges believes that solar energy can do more than provide temporary refuge for Haitians; he thinks it can be a permanent boon to the impoverished Caribbean nation.

As the co-founder of ENERSA (Energies Renouvelables S.A.), a three-year-old Port-au-Prince business that has manufactured and sold more than 500 LED solar streetlights with battery storage in 58 towns and villages throughout the island, Georges is one of a group of advocates and entrepreneurs pushing for greater use of solar, renewable, and other small-scale energy in the rebuilding of Haiti.

With a crucial [meeting](#) of representatives of more than a hundred countries taking place at the United Nations today to organize commitments for the rebuilding, renewable energy advocates have been urging relief organizations to direct aid toward more than simply rebuilding Haiti's old power delivery system.

Energy Access

Before the earthquake, Haiti had one of the lowest rates of electricity access in the world, with only 12.5 percent of its population of nine million connected to the grid. Those who had money relied on small diesel fuel generators for electricity. The cost of diesel spiked after the earthquake, putting that form of power generation even further out of reach for most Haitians.

“Why saddle people with the variable costs and operating costs of diesel fuel?” asks Jigar Shah, chief executive of the [Carbon War Room](#), the climate change advocacy organization founded by Virgin Atlantic billionaire Richard Branson. His group has calculated that solar and other small power systems could be installed throughout Haiti at a cost of \$400 million, a fraction of the \$11.5 billion in rebuilding funds that United Nations Secretary General Ban Ki-Moon has called for over the next decade.

Vijay Modi, an energy systems expert at Columbia University’s [Earth Institute](#), which works to advance sustainable development, says that renewables can, indeed, play an

immediate role in meeting the electricity needs of Haiti. But Haiti also has urgent energy needs for cooking, in addition to the lighting and cell phone charging solutions that solar can provide.

When it comes to household cooking needs, Modi believes that in the short term, people would be more helped by distribution of kerosene or propane. In the longer term, he believes, there should be a focus on more sustainable land management practices to provide the wood and charcoal traditionally used for cooking in Haiti—fuels that can be renewable when well managed.

Renewable energy advocates working on the ground in Haiti agree that more efficient use of wood and charcoal will continue to be used in the short term for cooking, although biochar (charcoal from agricultural waste) could be a more environmentally friendly solution. They also worry about the use of kerosene for lighting in the short term for a reason more immediate than its impact on the climate—in addition to the harmful fumes, the fire hazard is acute in the tent camps where so many Haitians are now living.

Security Need

The tent camps, in fact, have turned to solar energy for yet another pressing need—security. Soon after the quake, renewable energy access specialist Richenda Van Leeuwen, of Washington, D.C., organized a donation by the [Good Energies Foundation](#) of 6,500 solar light systems that can be used now in tents—and later transferred to new homes.

Van Leeuwen, now working on relief in Haiti, says that the lighting has been vital in addressing the issue of assaults. Only last week, Amnesty International reported that sexual violence against women and girls was widespread in the camps, and called for more action from emergency responders and authorities. At least 35,000 solar lamp systems have been distributed to improve lighting in the camps so far, and Van Leeuwen says the [International Organization for Migration](#) is ordering 30,000 more to help with protection of women and girls in particular.

With Haiti's infrastructure in tatters, and funds being raised around the world, many believe it is an ideal time to deploy new power for Haiti. For example, last summer, the nonprofit [Partners In Health](#) successfully had a solar system installed in its clinic in Boucan Carré, Haiti.

Although the clinic maintains its diesel generator system as backup and to ensure reliable power in its operating room and for the higher energy needs of its x-ray machine, its diesel fuel expenses have been slashed. After the quake, in fact, Partners asked the Washington, D.C.-based [Solar Electric Light Fund](#) (SELF), which was supported in part by the Good Energies Foundation on the Boucan Carré project, to accelerate a plan to install solar in five of its other clinics in Haiti.

"It's very low maintenance, there's no local pollution, no carbon dioxide, no noise," says Bob Freling, executive director of SELF. "We have not completely dispensed with diesel, but reduced their reliance. It really empowers people."

There have been other solar donations with an eye on empowerment. Texas-based [FTL Solar](#) has donated three large solar tents to be used by charities; these provide not only light but a source of income, since the charities will be able to earn money by setting up stations where people can pay to have their cell phones or batteries recharged.

Renewable energy activist and film producer Nicole Hansen, president of [Green Galaxy Enterprises](#), helped coordinate the donation, remembering that she saw the solar tents in action at the site of films under production around Hollywood.

Job Creation

But Georges, of ENERSA, and company co-founder Jean-Ronel Noel, believe that what Haiti needs beyond donations of finished solar products is the money to build up its own capacity to make and install solar systems. The pair, after studying engineering, business administration, and solar fabrication in Canada, have trained 18 young men as solar technicians and are training a group of 10 more in hope of expanding their work force.

ENERSA workers have not only manufactured solar panels, lamps, charging stations, and streetlights, they've taken them to villages so remote that the equipment had to be hauled by donkey. "It is life-changing for people who did not have electricity whatsoever" to have the access to solar light, says Georges. "Children can study, and parents can meet and just socialize after dark. You can change the life of the community, instantly."

ENERSA's factory, which was damaged in the earthquake, is set to resume manufacturing this week.