

Solar salvation for Haiti?

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The Haitian Project

A volunteer washes the dust from last week's earthquake in Haiti off a solar array at Louverture Cleary School, north of Port-au-Prince, to maximize power production.

Donors are gearing up to send cell phones, streetlights, water purification systems and even audio Bibles to [earthquake-hit Haiti](#). The bad news is that the country's power infrastructure is on the ropes, but the good news is that these particular gadgets are solar-powered. Haiti happens to be one of the countries in the world best-suited for solar power.

In the long run, that just might help the country survive. But in the short run, even solar power isn't immune to earthquakes. Over the past week, the people and the pieces of equipment that make the technology work have literally been pulled out of the rubble in Port-au-Prince and its environs.

Sometimes the news is terrible. [Paul Munsen](#), president of [Sun Ovens International](#), is struggling to get hundreds of stand-alone solar-powered ovens from the company's factory in northern Haiti to Port-au-Prince.

"Unfortunately, the people we were working with [in Port-au-Prince] are trapped in the rubble and presumed dead," Munsen told me. "Some of the infrastructure we had in place that would have been ideal for us to get the ovens into people's hands is severely damaged."

Sometimes the news is more hopeful.

"It's been quite an emotional roller coaster over the last few days," said Mickey Ingles, the vice president of operations for New Jersey-based [Worldwater & Solar Technologies](#) as well as the solar-power consultant for the nonprofit [Haitian Project](#). The project operates Louverture Cleary School, a Catholic boarding school for more than 350 Haitians in a poverty-stricken suburb of Port-au-Prince known as Croix-des-Bouquets.

The quake caused structural damage on campus. Several students were injured. But today, the school's 22-kilowatt solar-power array is back in working order, and classes have resumed. Louverture Cleary can supply all its own power needs and is even serving as an aid center for the devastated neighborhood. "We have opened up our school to let neighbors in for food, shelter and water," said Tim Scordato, the Haitian Project's office manager in Rockford, Ill.

A solar-powered mobile water purification system, donated last year by the Haitian Project, was pulled from the rubble and put into service at a Red Cross aid station. Every day, the Mobile MaxPure rig is turning 30,000 gallons of contaminated city water into drinkable water, Ingles said.

"There are many water purification systems there, but they operate on diesel," Ingles told me. "Right now, diesel is in extremely short supply."

Diesel vs. sunshine

By some accounts, Port-au-Prince currently has only a two-day supply of fuel for generators. "The fuel situation is pretty dire right now," Caroline Hurford, a spokeswoman for the World Food Program, [told Reuters](#). Every gallon of fuel that is saved through solar power can be put to good use elsewhere.

Haiti's latest troubles may make it seem as if the country has been cursed, [just like Pat Robertson said](#). It's the Western Hemisphere's poorest country, crippled by decades of deforestation and soil erosion as well as [economic mismanagement](#) and natural disasters. But the country is blessed with sunshine - so much so that it's been on [Solar Cookers International's](#) global list of [solar-power prospects](#) for years.



Sun Ovens International

Solar cookers provide a low-cost alternative to charcoal for Haitian families. The devices are basically insulated boxes equipped with reflective aluminum panels.

Sun Ovens International is gearing up for a leading role in the solar-powered relief effort. The company makes [solar cookers](#) that are basically insulated boxes, surrounded by strategically placed panels of highly polished aluminum. The ovens get hot enough to boil, steam, roast or bake dishes at temperatures of up to 360 degrees Fahrenheit (182 degrees Celsius).

A \$40 donation buys a complete cooking kit for a Haitian family. One commercial-sized oven, capable of making 1,200 meals during an eight-hour workday, is already in Haiti - and two more are on the way. Munsen and his colleagues are just waiting for camps to be established for the homeless (who are known more formally as internally displaced people or IDPs). "Our goal will be to provide the ovens in IDP camps," Munsen said.

"The first two weeks are always totally relief, and then you get into the real development," he explained. "Until it gets into more of a development phase, there's not any sort of infrastructure for putting these technologies in place."

In the long run, the idea is to get Haitians using solar power instead of charcoal for cooking. "We find that people realize they have money to buy their kids shoes because they're not buying as much charcoal," Munsen said.

"Even prior to this, in Port-au-Prince, the majority of families spent 55 percent of their income just buying charcoal," he explained. "So the issue of having fuel to cook with has been a major problem for Haiti for years before this earthquake. I can't imagine what it's like now. We think that using the sun is going to make a great deal of sense."

Here comes the sun

Other solar-powered gadgetry could have a similar impact, during the crisis and in the years to come:

- Dutch companies and aid organizations have set up an effort to send [1,000 solar-powered mobile phones](#) to Haiti, to be distributed by [Fonkoze Financial Services](#). "Good communication is an absolute necessity in disaster relief, but Haiti currently has a tremendous power problem, which impedes charging mobile phones," Paul Naastepad, chief executive officer of the Intivation solar-power company, said in a [statement](#). "The mobile network itself still functions in many instances due to backup generators, or it can be repaired much quicker than the electrical grid." [Check out this report](#) from msnbc.com's Bill Dedman to see how critical an issue cell-phone recharging has become.
- Florida-based [Sol Inc.](#) is contributing more than 100 [solar-powered streetlights](#) to the Haitian relief effort. These lights are designed to be installed in less than an hour, stay lit all night and stand up to hurricane-force winds. In the wake of the earthquake, such lights can be used to improve nighttime security in the streets of Port-au-Prince, or provide extra light for outdoor emergency clinics. The big issue is how to get the lights to the right people in a timely fashion. The first shipment went down today with [Missionary Flights International](#).
- New Mexico-based [Faith Comes by Hearing](#) is sending Haitian churches 600 ["Proclaimers"](#) - portable, solar-powered audio players that have been loaded with the books of the Bible. The players "will be given to local pastors so people can hear God's word in their own language - Haitian Creole," spokesman Jon Wilke said. Each Proclaimer can be turned up loud enough to be heard by up to 300 people, in a country where [more than a third of adults are illiterate](#). Wilke said "there is an immediate need for another 3,000 Proclaimers."