
Department of Energy

Solar Cookers to Bring Hope to Earthquake Victims

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January's devastating earthquake made Haiti's previous power infrastructure problems even worse. According to the World Bank, Haitians meet about 70 percent of their power needs by burning firewood or charcoal. Since the island has been heavily deforested, Haitians must travel long distances to gather firewood for daily cooking. Charcoal is an option, but in the Western Hemisphere's poorest nation, its cost can eat away at a family's budget. After the earthquake, resources of all kinds were harder to get and more expensive.

That's when Sacramento, Calif. nonprofit [Solar Cookers International](#) got involved. The organization promotes and teaches solar cooking, which catches sunlight behind a "greenhouse" of clear plastic or glass to heat food. Not only does this bypass the need for fuel to burn, but it's inexpensive and safer than fire. Haiti, with its abundant sunlight and limited access to traditional fuels, was a great fit.

"Haiti is one of the countries that has the most need in terms of cooking fuel options," says Kevin Porter, Education Resources Director for Solar Cookers International. "We're

far enough out [now] that people are desperately looking for ways to cook the food they do have access to.”

Solar Cookers International partnered with another solar cooking organization, [Sun Ovens International](#), which is directing efforts in Haiti. They have sent some solar cookers with other aid supplies to Haiti, and have already distributed some others. The Solar Cookers International kits also contain water pasteurization indicators, which make water safe to drink by heating it to levels that kill harmful microbes, like E. coli and the hepatitis A virus. This fights a major problem after any disaster: reliance on contaminated drinking water that can trigger widespread disease.

Practical concerns and the start of Haiti’s two-month rainy season means the solar cookers likely won’t be distributed until May, Porter said. But he said the delay may be better, because it’s easier to learn a new technology under relatively settled circumstances. “[There’s] more time to take a breath and accept the new technology and have the time to experiment with it.”

The technology used in solar cookers is simple. The type of cooker distributed by Solar Cookers International consists of two parts: a heat-resistant plastic bag placed around a dark-colored cooking pot. When sunlight passes through the bag and hits the pot, it’s converted into heat energy. The heat energy can’t get out of the plastic bag as easily as the light got in, which traps the heat inside. This allows cookers to reach temperatures around 250 degrees Fahrenheit, high enough to boil water. Other types of solar cookers can reach up to 350 degrees, enough for cooking staples like rice and beans and baking.

How does it work?

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