



## Mobile solar device ridding water of radiation, contaminants

Apr 15, 2011

By Chris Meehan



Nuclear water, yeah, there's a solar fix for that. Solar is again rising to the challenge of disaster relief, this time in Japan. Among the most important resources to have in the wake of a disaster is access to clean, safe drinking water.

To help victims of the twin disasters of the earthquake and [nuclear contamination in Japan](#), WorldWater & Solar Technologies, Inc. and Gamesa of Spain partnered to donate two of WorldWater's solar-powered Mobile MaxPure water purifying pumps to people in villages near Fukushima Daiichi Nuclear Plant. The value of the donation is roughly \$254,600, not including the costs of shipping the devices by air.

One pump will decontaminate irradiated water using reverse osmosis, said WorldWater CEO Quentin Kelly.

"The reverse osmosis screen will only allow pure water to go through according to the sizing of the molecules. The salt water molecule is too large to pass through the screen, the radiation molecule is larger than the salt molecule," he said.

As such, the irradiated water will be desalinated, decontaminated and purified.

This is the first time the mobile pumps will be used to treat irradiated water, Kelly said.

"Up to now, radiation hasn't really been a problem. Only when things broke down in Japan could it become useful," he said.

The reverse osmosis pump can produce roughly 3,000 gallons of drinkable water per day. The other device will pump and purify 30,000 gallons of biologically polluted water per day.

Each device has battery storage and a 15 foot by 17 foot, 3.3-kilowatt solar array that folds up above the unit.

"[Both will operate] 24 hours a day, seven days a week," Kelly said.

CleanEnergyAuthority.com by Chris Meehan, April 15, 2011, Mobile solar device ridding water of radiation, contaminants

While it's the first time the Mobile MaxPure pumps are being used to treat nuclear-contaminated water, the company has over 60 of the devices in use across the world.

There are 37 of them in Iraqi villages, eight in both Darfur and Afghanistan and 6 in Haiti, among other locations.

They've also been used in other recovery efforts following the Haiti earthquake.

"We were the only source of clean water in Port-Au-Prince. One of the initial prototypes of this MobileMax Pure we shipped for Katrina, to Waveland, Mississippi," Kelly said.

The devices are popular. "Most places, once they get them, they don't want to let them go," Kelly said.

The company is working with the U.S. military, non-governmental organizations, private organizations and other groups to deploy the technology to more places where it's needed, according to Kelly.

While WorldWater has developed this unique mobile device, it's also using [solar power to pump water](#) for other purposes, like irrigation.

For instance, the company has a project in Egypt where it is replacing diesel generator-powered water pumps with its solar-powered pumps.

"We can drive irrigation pumps up 1,000 horsepower," Kelly said.

*Pictured: The WorldWater pump in Haiti.*