



Sun Powers Fallujah Water Purification Units

Regimental Combat Team 1 and PRT Help Bring Drinking Water to Rural Iraq

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The hot, dusty air erupts with shouts and laughter as a young Iraqi man holds a bottle to capture the water splashing from a hose connected to a strange-looking device. They're cheering in this village just east of Fallujah because that small stream means these villagers, for the first time in more than three years, will have clean, accessible, inexpensive drinking water.

Clean water is a critical need throughout Iraq. Now Iraqis in the Fallujah District of Al Anbar Province are one step closer to attaining that goal with the installation of solar powered water purification units.

Potable (drinking) water is, arguably, Iraq's most precious and scarce resource. And this water, flowing from a newly installed unit, means the difference between health and disease for thousands of Fallujans.



Marines and members of the Zobai Tribe set up solar powered water unit near Fallujah.

"Clean drinking water is enormously important to our people," said Fallujah District Council Chairman Hamid Ahmed Hashim Al-Alwani.

Most people receive drinking water from wells or directly from the Euphrates River, which is contaminated. The solar powered water purification units will be crucial in preventing diseases like cholera and bilharzia (a parasitic disease that causes diarrhea) that strike vulnerable population groups, especially children, Hamid said.

Water-borne disease is a significant problem throughout Al Anbar province. "We have received letters from the Ministry of Health related to water-borne diseases," said Fallujah District Council spokesman Sheikh Salam Halbusi, "these units will manage the problem."

How it works

The system is a point distribution system and does not require a water distribution network. People come to the site for water drawn from a storage tank or directly from the unit. Some sites are considering means by which clean water can be delivered from the site to homes via tankers to extend the reach of this potable water source.

The physical requirements are simple--A water source (canal or well), open space for sunlight to hit the solar panels, water storage for the treated water, and security.

The system uses solar panels to generate electricity to power the pump that draws source water through a series of filters and ultraviolet lights and into a holding tank for distribution. The end result is potable (drinking) water. And all this without fuel gulping generator-driven power (obviating the need for fuel) and chlorine.

The units were donated by an anonymous donor based on an ePRT Fallujah's Weekly Report citing the shortage of potable water in the area. About \$1.3 million in equipment and shipping costs were donated.

Location, location, location

Where these units are placed is critical, from both a practical and political standpoint. The sites must be physically suitable, secure and within reach of the population in that area. Politically, to ensure placement of the units is both equitable and addresses the clean water shortage in areas where the needs were greatest, the ePRT worked closely with the Fallujah District Council, the membership of which is drawn from the municipal and tribal leadership of the major Fallujah sub-districts.

To date, seven units have been installed by the ePRT and Marines of Regimental Combat Team One throughout the Fallujah District. More evaluation is required as well as consultation with District leaders, but the goal is to have the remaining five units installed by the end of June.

"Many children are taken to the hospital every day from illness caused by unclean water, now hospital visits are down," Salam said.

The Zobai tribal representative to Fallujah District Council Sheikh Hamid Zobai spoke for his tribe, "Our bodies used to be the filters, but now you've given us filters."