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News

Plugging into the sun for clean, fresh water

By **MATHEW MURPHY**

A SMALL Victorian company reckons it has found a way to prevent 3.5 million deaths a year from water-borne diseases while also cutting emissions of the greenhouse gas carbon dioxide.

F CUBED, based in Somerton, has been working on its solar-powered desalination system for about six years and started selling the units commercially in November.

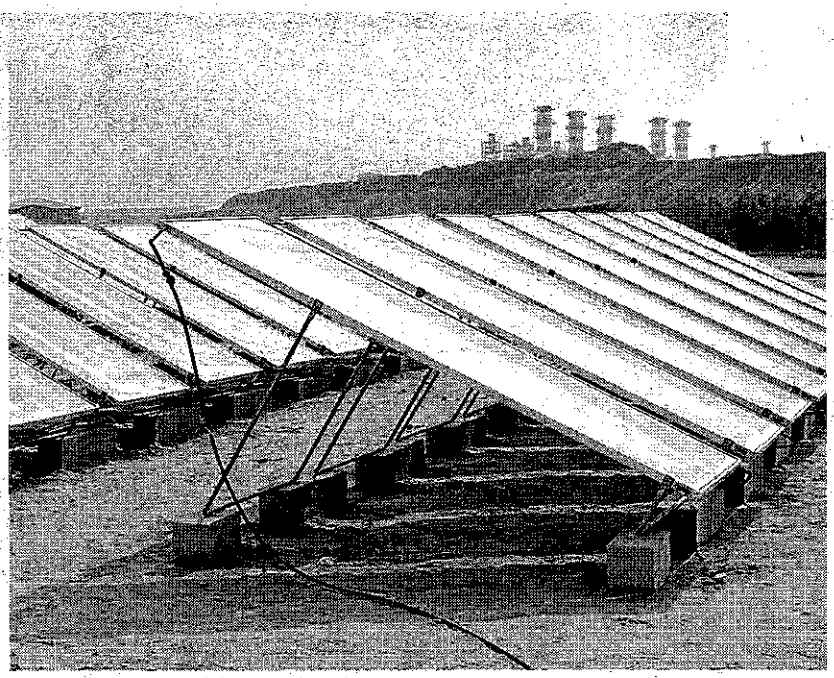
Earlier this month, F CUBED was recognised internationally and invited to join the Clinton Global Initiative, which aims to partner companies with technologies that may provide solutions to key environmental challenges.

The modular unit, which retails for $362.50 plus GST and freight, works by running saltwater through a gravity-fed pipe at the top.

The water disperses evenly as it runs down the solar collector evaporator. The solar power heats the water, which vaporises and then condenses on the inside of the plastic panel enclosure. The distilled water runs to the bottom of the unit where it is collected.

In the process, disease-causing pathogens, as well as heavy metals, are removed.

Peter Johnstone, the chief executive and founder of F CUBED, said there was enormous potential to work with developing countries to provide clean drinking water.



Solar technology can help cut the emissions produced by boiling drinking water.

"There is a clear connection between the world's poorest people boiling water for drinking and greenhouse gas emissions," he said. "An average family boiling 20 litres a day will need 20 kilos of fuel, which is usually wood, and that is producing 40 kilos of carbon dioxide a day. That is 15 tonnes a year of carbon dioxide and when you times that by 300 million families it is enormous."

The company has signed an $11 million memorandum of understanding with the South Australian town of Ceduna to supply 13,000 of the Carocell panels.

"The beauty of us is that we don't waste anything," Mr Johnstone said. "We are going to sell about 6000 tonnes of salt from it. At $100 a tonne, that is $60,000 in salt sales."

F CUBED will have another revenue stream if it is successful in its application to be part of the Clean Development Mechanism under the Kyoto Protocol. The instrument allows signatories to Kyoto in developed countries to establish programs in developing countries and then sell the carbon credits.

"That would pay for the panels for the poor people, which means we can give them away for nothing," Mr Johnstone said. "It also means they won't be cutting down trees any more."

While the application will take another two years to gain approval, F CUBED has received country approval from Bangladesh and is working with a not-for-profit group, WaterAid, to provide clean drinking water.

The company is also believed to be in talks with large miners, such as Rio Tinto and one of the Queensland coal-seam gas proponents, to provide desalinated water.