

New Canadian water treatment technologies are making a difference

by Staff Writer

A lack of clean drinking water is one of the most serious challenges in many parts of the world. It has been estimated that up to 1.4 billion people worldwide struggle daily to find access to clean, safe water. There are a number of available technologies that can treat and purify polluted water but many of these are too expensive to operate, or too energy intensive to enable widespread deployment in remote areas where the need is the greatest. However, emerging Canadian water treatment companies have developed environmentally sustainable processes that are now being deployed to the market in the hope that they may generate large volumes of clean water, even for smaller communities.

Quest Water Solutions Inc. has developed proprietary technology to package water treatment and processing in self-contained modules that can operate in the field using solar power. The company has established a partnership with a manufacturer in Baja, Mexico to assist with fabrication and assembly of the modules. Quest is now in the midst of a product rollout to set up functioning treatment units in several countries.

One system, the AQUAtap Community Drinking Water Station, is able to deliver up to 100,000 litres per day, using membrane technology and ultraviolet purification to remove pathogens, in tandem with a set of pre-filters to remove particulate and organic matter. The system operates independently using solar power with minimal maintenance requirements over a twenty year service life. This makes it

ideal for providing clean water to smaller communities in remote areas.

Angola is one country that has made the commitment to utilize this technology, mandated by its 'Water for All' policy to ensure clean drinking water is available. Angola is an oil producing nation that earns income from exports and thus has the funding available to contract with Quest. A partnership with an Angolan company has been formed to enable the marketing and distribution of the treatment units throughout the country. They expect to install at least 150 treatment units in the country within five years under this arrangement.

Quest has also come up with an innovative way to secure clean water by capturing water vapor from atmospheric humidity. The WEPS atmospheric water production technology also uses a multi-stage purification process which can bottle the water output for distribution. As part of the partnership in Angola, construction of several WEPS plants are planned to work in tandem with the AQUAtap units in the field.

The development of low maintenance, high technology applications with low sustaining costs have made it possible to operate these units in remote areas to deliver the same high-quality, clean water that was formerly only available in large cities with extensive infrastructure. The functioning treatment plants contribute to much lower pollution levels. It is also good for business. As the demand for clean water continues to increase, the growth opportunities for these small companies to establish new markets is impressive.

Imagine the upside of access to safe water in small communities for the first time. As more of these small scale water treatment stations are established, the quality of life will dramatically improve for many people. This is a good news story that will get even better.