

All-in-one clean water solution

As part of our innovation series, where we look at solutions for the future, this week we examine the [Zero Mass Water](#) SOURCE hydropanels providing clean water. Founder and chief executive, Cody Friesen – a professor at Arizona State University (ASU) and material scientist – states that what [Zero Mass](#) does is harvest drinking water out of thin air, using a combination of materials science, solar power, and predictive data. The goal is to use this technology to go from a position of “water scarcity to water abundance”. The company is backed by a one billion fund led by Bill Gates and Jeff Bezos and provides a scalable real-time water generation solution dependent on sun and moisture availability.

The SOURCE uses sunlight to harvest water at [20,000 times](#) the concentration of vapor in the air. The harvested vapor is then sterilized and turned to liquid, which is stored in a reservoir that connects to your home water supply. A standard [panel](#) delivers about 2 to 5 liters of water daily at a cost of around \$2500 installed. Inbuilt sensors collect data on a daily basis, thus monitoring the quality and safety of the drinking water at the point of delivery. SOURCE collected water is pH balanced, mineralized with calcium and magnesium for great taste and ability to [produce water](#) even in low to medium sun and humidity. Since being launched in 2015, units have been installed in over 30 countries worldwide including low-infrastructure areas of Mexico, Jordan, and the Philippines, with further panels donated to Puerto Rico during Hurricane Maria in 2017.

The system is completely off-grid and self-contained, creating drinking water from just sunlight and air. The SOURCE hydropanels are built to last 20 years (15-year warranty included) and avoid the need for acquisition, transportation, and storage of multiple – environmentally unfriendly – plastic storage containers. Since companies are not required to report the quality of their bottled drinking water, the public is reminded to exercise common sense when it comes to determining the safety of tap and bottled water. This makes the SOURCE solution very safe as it bypasses the issue of removing toxins like lead and arsenic from traditional piped-in water supplies altogether.

The United Nations (UN) estimates that [2.1 billion people](#) live without safe drinking water in their homes with just under [a billion people](#) living without electricity. According to the [United Nations](#), water scarcity affects 40% of the

world's population. A [World Health Organization](#) (WHO) report shows that there are over half a million diarrheal deaths caused each year by contaminated drinking water. Waterborne diseases [are estimated by the World Health Organization](#) to be responsible for about 1.8 million deaths per year, 88% (or 1.6 million deaths) of which are attributable to the lack of safe clean drinking water, sanitation, and hygiene.