

# Light from a water bottle could brighten millions of poor homes (w/ video)

September 16 2011, by Lisa Zyga



Screenshot of a solar bottle bulb from the video below. Image credit: Isang Litrong Liwanag

As simple as it sounds, a one-liter plastic bottle filled with purified water and some bleach could serve as a light bulb for some of the millions of people who live without electricity. Originally developed by MIT students, the "solar bottle bulb" is now being distributed by the MyShelter Foundation to homes throughout the Philippines. The foundation's goal is to use this alternative source of daylight to brighten one million homes in the country by 2012.

In order to make the water bottles "[light](#) up," holes are cut in the metal roofs of homes and a bottle is placed and sealed into each hole so that its lower half emerges from the ceiling. The clear [water](#) disperses the light in all directions through refraction, which can provide a luminosity that is equivalent to a 55-watt electric [light bulb](#), according to the MyShelter

Foundation. The bleach prevents mold growth so that the bulbs can last for up to five years.

Although the solar bottle bulb only works during the day, it can meet the needs of many of the people in Manila, Philippines, and other cities, where the homes are so close together that very little sunlight can enter through the windows. As a result, the homes are dark even during the day.

The solar bottle bulbs' advantages include sustainability and safety; compared with candles or faulty electrical connections, they aren't a fire hazard. The bulbs are also inexpensive to make and install, and of course have no operating costs while in use.

The MyShelter Foundation is promoting the solar bottle bulbs as the Isang Litrong Liwanag ("A Liter of Light") project. In Manila, the city government paid for the bulbs while the foundation is training residents on how to make and install them.

**More information:** <http://isanglitrongliwanag.org>  
via: [Treehugger](#)

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