



PRESS RELEASE

Hyperlight Energy® Employs Novel Evaporation Prevention Technology in Continued Water Conservation Effort

After Four Consecutive Years of Drought in California Every Drop Counts

San Diego, California, March 11, 2015 – Since it's founding, Hyperlight Energy® has continuously sought new methods of resource conservation. The company provides energy and monetary savings through their low-cost, commercial-scale solar thermal technology, which also relieves stress on the environment, advancing critical environmental preservation efforts.

However, a key component to this technology, and one that drives manufacturing cost down, is water. Of particular concern is water loss due to evaporation in the hot, arid environments most suitable for system deployment. While this may not have been a problem just a few years ago, water is running critically low. "To stay competitive, we must constantly be looking for ways to improve our product," said John King, chief executive officer, "in this case, necessity was the mother of invention."

The inspiration for this innovation came from the least likely of places, the bedroom of the 1970's and 80's. To eliminate evaporation while still maintaining the various advantages of a water-borne system the company looked to the waterbed.

"In our old system, the reflector tubes rested directly on the support water. This allowed for perfectly level support along their length and frictionless rotation," said Nicholas Kramer, the principal engineer.

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“We decided to install a barrier between the reflectors and the support basin to fully enclose the water,” Kramer continued. The barrier is a very thin plastic sheet that rests on the surface of the support water to isolate it from the outside air.

As the reflectors are installed, they partially submerge into the support water, causing the sheet to conform to their submerged shape. When all the reflectors have been installed, the sheet cross-section looks like the edge of a serrated knife as the half-submerged pipes push down on it. When the system is rotated throughout the day, the sheet sticks to the reflector and moves against the water in a near frictionless motion.

“I find the easiest way to think about it is to imagine a military tank on frictionless ice. The wheels of the tank are the reflector tubes, the tread is the plastic sheet, and the ice is the support water. If the operator commands the tank to move forward, the tank doesn't move; the wheels turn in place as the tread slides over the ice. Similarly, the reflectors turn in place as the sheet moves (very slowly) over the surface of the water,” explained Kramer.

Climate change continues to threaten the water supply of the southwest, driving up cost. The waterbed innovation creates another competitive advantage for Hyperlight Energy’s low-cost technology and mitigates potential threats poised by water supply issues.

More information is available at: www.hyperlightenergy.com

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