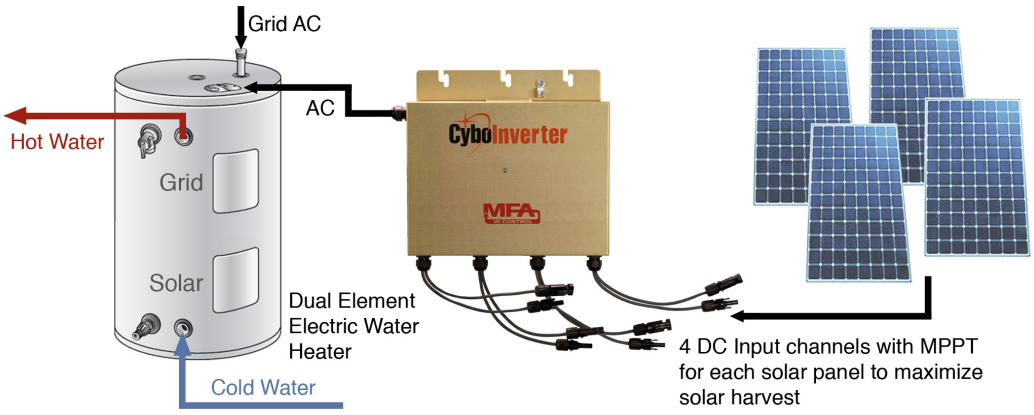
News Release

CyboEnergy Highlights Solar PV Water Heating Amid Rising Electricity Demand in the AI Era

January 21, 2026 — CyboEnergy, Inc. (Rancho Cordova, California) announced today its continued focus on the CyboInverter H Model, a patented off-grid solar inverter designed to power standard electric water heaters.

Dr. George Cheng, CEO of CyboEnergy, said, "Ultimately, AI is constrained by electricity. As electricity demand rises nationwide, driven in part by the rapid growth of large-scale AI data centers, homeowners are facing growing uncertainty around future electricity rates. With increasing strain on the power grid and rising electricity costs, it is time to rethink how and where to apply solar. In my view, water heating is one of the most practical places to start. Storing solar energy as hot water avoids batteries altogether and delivers real savings with much less complexity."

The CyboInverter H Model turns an electric water heater into a solar energy storage system, reducing electricity bills and future rate risk without batteries, plumbing, or maintenance.



As shown in the diagram above, an off-grid PV water heating system is remarkably simple. It consists of multiple solar panels and an off-grid CyboInverter H Model, which delivers solar energy directly to the lower heating element of the water heater. The temperature setpoint for the lower element can be intentionally set much higher than that of the upper element. This ensures that the upper element, which consumes grid power, only activates when a large amount of hot water is used within a short period. Compared to thermal solar systems, PV water heating offers many advantages: it is simple, clean, safe, cost-effective, and requires no maintenance. What better way to store solar energy than as hot water?

According to U.S. Department of Energy studies, water heating is one of the largest energy uses in homes with electric water heaters, making it an ideal target for solar energy savings. The

CyboInverter H Model allows homeowners to store solar energy as hot water and significantly reduce reliance on grid electricity, especially during peak pricing periods.

Unlike battery-based solar systems, the off-grid CyboInverter H Model is battery-less and maintenance-free and does not require on-grid solar permits. It eliminates concerns related to battery degradation, fire risk, and replacement costs. Compared to thermal solar, it avoids the plumbing complexity and corrosion issues often associated with traditional thermal solar installations. The following table summarizes key differences among commonly used solar water heating approaches.

Item	PV Water Heating (CyboInverter H)	Thermal Solar	Heat Pump Water Heater	DC Direct Water Heating
Solar Harvest	Very good	Temp dependent	Temp dependent	Poor, No MPPT
Need Plumbing	No	Yes	No	No
Installation	Simple	Complex	Simple	Relatively simple
Climate Dependence	Minimal	High (Cold sensitive)	High (Cold sensitive)	Medium
Safety and Code Compliance	UL listed, NEC compliant	Code compliant, complex	UL listed, NEC compliant	Typically not UL certified
System Cost	Lowest	Medium to high	Medium to high	Low in hardware, High safety risks.

CyboEnergy has supplied thousands of off-grid solar water heating inverters to the U.S. market over the past decade, including private-label systems used by national providers. While some packaged system providers exited the market following COVID-era supply chain disruptions, CyboEnergy continued to support end users directly with its CyboInverter H Model.

The CyboInverter H Model was selected as a Top Solar Inverter by *Solar Power World* magazine, recognizing its simple, clean, and cost-effective approach to solar water heating. CyboEnergy plans to expand educational resources for homeowners and installers in early 2026 to support broader adoption of battery-less PV solar water heating solutions.

About CyboEnergy

CyboEnergy Inc., based in California, USA, is an affiliate of CyboSoft, General Cybernation Group Inc., focused on the development, marketing, and support of clean energy product lines. CyboEnergy received the Frost & Sullivan 2013 Global Product Differentiation Excellence Award for Solar Inverters and the Frost & Sullivan 2017 Global Solar Inverter Technology Innovation Award. For more information, please contact: CyboEnergy, Tel: (916) 631-6313, e-mail: Jenny Jordan, jjordan@cyboenergy.com, Web site: www.cyboenergy.com.