



*News Release*

**CyboEnergy Releases Dual-Output CyboInverters  
for Off-Grid Solar Heating, Cooling, and Refrigeration**

June 23, 2016 – CyboEnergy, Inc. (Rancho Cordova, CA), the developer of the world's first solar power Mini-Inverter that possesses the key merits of both central inverters and microinverters, announced today that the company has released a Dual-Output Off-Grid CyboInverter that can run two distinct types of AC loads such as an electric water heater or a refrigerator.

CyboEnergy CEO, Dr. George Cheng said, “With the rapid deployment of renewable energy, the power grid in many areas can no longer take more on-grid solar systems. For instance, Hawaii ended the solar net-metering program in 2015. In April 2016, ISO (Independent System Operator) in California forced temporary shutdown of large solar farms to avoid grid instability. For this reason, off-grid solar heating and cooling has a great potential in the U.S. and European market.”

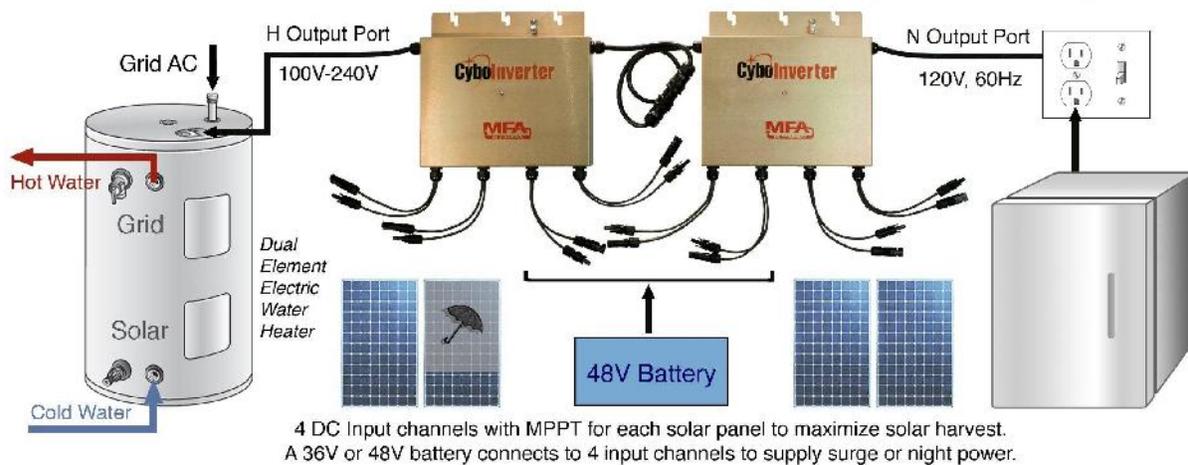
The following graphic shows a 4-channel 1.2KW Dual-Output Off-Grid CyboInverter that has two AC output ports to power different types of loads. Each inverter has four input channels that can connect to four solar panels or batteries and produce 1150W AC peak power. The product is patented, UL1741 certified, NEMA 6 rated, and made in the USA. Based on the AC standards, four popular Dual-Output Off-Grid CyboInverter models are listed in the table below.



Model	Off-Grid Port 1	Off-Grid Port 2	Region
CIM-1200H/N	100V-240V, 60Hz	120V, 60Hz	US, Canada, Mexico.
CIM-1200H/S	100V-240V, 50Hz	220V, 50Hz	Argentina, China, Russia, Asia
CIM-1200H/T	100V-240V, 50Hz	230V, 50Hz	Europe, India, Africa.
CIM-1200H/W	100V-240V, 60Hz	220V, 60Hz	Brazil, South Korea, Peru, Philippines, Saudi Arabia.



The following diagram illustrates an off-grid solar power system for heating and cooling with two dual-output off-grid solar power inverters, where a master unit is daisy-chained with a slave unit to form a 2.4KW system. Four 300W solar panels connect to four input channels of the 2 inverters respectively. One 48V battery connects to the remaining 4 input channels in parallel to provide night-time power and surge power to start the compressor of an air conditioner or refrigerator. In off-grid mode 1 (left side), the system can harvest solar energy from the solar panels and send power to a single- or dual-element electric water heater or area heater. In off-grid mode 2 (right side), the system can run lights, fans, computers, phone chargers, and a refrigerator. After the A/C and/or refrigerator is started, the required AC power will drop significantly. If the solar provides sufficient power to allow the inverters to run the A/C and/or refrigerator, the inverters will not pull power from the battery. This ensures a longer battery life.



An off-grid solar power system enabled by Dual-Output CyboInverters has many features and benefits including: (1) Does not require batteries for normal operations, (2) Dual AC outputs to enable off-grid heating and cooling, (3) Panel level MPPT to maximize solar power production, (4) No high voltage or high current DC so the system is intrinsically safe, (5) Flexible to build larger microgrids with multiple inverters, and (6) Cost-effective, and easy to install and maintain.

### About CyboEnergy

CyboEnergy is a subsidiary of CyboSoft, focusing on development, manufacturing, marketing, and services of product lines in the renewable energy field. CyboEnergy received the Frost & Sullivan's 2013 Global Product Differentiation Excellence Award for Solar Inverters. For more information, please contact: CyboEnergy, Tel: (916) 631-6313, e-mail: Info@cyboenergy.com, Web site: [www.cyboenergy.com](http://www.cyboenergy.com).

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