



A New, Low-Cost Solar Water Heater

In the last issue of Going Green we learned about the new rebates for solar water heating systems. In today's issue I'd like to cover a new, low-cost solar water heater. The new SunCache solar heating system is the result of 10 years of R&D funding by the U.S. Department of Energy.

The SunCache is certified by the national SRCC (Solar Rating and Certification Corporation) so it's eligible for rebates as well as the 30% federal tax credit. It also won GreenSpec's Top-10 New Green Building Products for 2008 (www.BuildingGreen.com). Depending on the size of your household and other factors it can reduce your water heating energy by 30-60%.

The SunCache is the lowest-cost residential-scale solar water heater certified in the U.S. This is great news for those that have never been able to afford solar water heating. It also makes for a very economical multi-family or commercial application.



The heater can be supplied as a complete system, including a pre-assembled valve package that minimizes installation to only two solder joints (plus the thermostatic mixing valve) for the "Do It Yourselfer" or you can have it professionally installed. It is a "Passive System", meaning no pumps or electronic controls are required. Operation is simple. Cold water that would normally go directly into your water heater is diverted through the SunCache first, where it's preheated by the collector before entering your water heater. The only maintenance required is to top-off the water level in the collector every five years.

The collector is made of a special polyethylene outer shell with UV inhibitors that holds 50 gallons of regular tap water. Inside the shell is a network of copper tubing. The cover glazing is made from an impact-modified, thermo-formed acrylic that's replaceable. These components are mounted in double extruded aluminum frame that's available with either a black or dark bronze baked enamel finish with welded corners. Stainless steel and aluminum mounting hardware is also included with the system.

Extensive testing was performed on this system to evaluate it's effectiveness under the two most critical failure conditions for solar water heaters – overheating and freezing. Testing in Sacramento proved overheating was not a problem as the unit reached a maximum temperature of 165 °F. In terms of freezing, the National Renewable Energy Lab found that it could survive 14 °F for 18 hours, about 10 °F colder than other passive systems.

The MSRP for the kit, which includes 50 ft of PEX pipe, 24 ft of pipe insulation, and a tempering valve, is \$3,000 plus tax and shipping. The unit comes with a standard 10 year warranty against freezing if it's installed in their recommended territories; this applies to Nevada City & Grass Valley but not Truckee.

The SunCache is just one of many solar water heating systems we're proud to be offering to our foothill customers! Feel free to call us for more information on this or other solar water heating systems.

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