



## **Rebate Program for Solar Water Heating Hits The Streets**

Back in November I wrote about how solar water heating is poised to grow like solar electricity has here in Nevada County thanks to new rebates coming from PG&E. The details on this rebate program have finally become available and you can read all about them here – <http://www.pge.com/myhome/saveenergymoney/solarenergy/csi/thermal/index.shtml>

PG&E is tentatively scheduled to begin accepting applications on May 1, 2010 for single-family residential customers and on June 1, 2010, for multifamily and commercial customers. The program will run for eight years, ending on December 31, 2017. In addition to the rebate there's a Federal Tax Credit of 30% on the installed cost after subtracting the rebate. This combination will help to make these solar "thermal" systems affordable and cost effective for many residents. While the rebate applies only to customers with natural gas or electric water heaters, the tax credit applies to all solar systems. Pool heating systems don't qualify for the rebate or the tax credit but they're typically cost-effective without incentives anyway.

If you're a customer of PG&E (or one of the other utilities managing the program) you may want to consider switching to electric backup if you currently have a propane water heater. This is especially true if your existing water heater is over 10 years old. Instead of incurring the replacement cost of a new propane heater, that money could be better invested into a solar water heating system, further offsetting the cost of the solar system (by the replacement cost of a new propane heater). Solar thermal systems for residential water heating work more efficiently with electric backup. A number of our solar electric customers planning to add solar water heating are switching to electric backup which, with enough solar power, means their homes will eliminate all or part of their gas consumption.

The amount of the rebate depends on the savings the solar system provides, whether the backup heater is gas or electric, and when you apply for the rebate. Like the rebate for solar electric systems, the rebate for solar thermal systems will be reduced over time. The program is retroactive for systems that were installed or issued a building permit after July 15, 2009.

This rebate is expected to dramatically increase the installation of solar thermal systems, bringing a second wave of solar thermal systems into our community. Back in the 1980's I was involved with hundreds of solar thermal installations. But when the 50% tax credit expired, the solar thermal industry in California all but completely disappeared. We've serviced many of those 80's vintage systems, putting them back online for another 25 years of service. We've also completed removed some that were of poor design or were installed improperly and failed; this shouldn't be happening! While some systems require regular maintenance and have storage tanks with a 15-20 year life expectancy, our primary focus has and will continue to be systems with minimal maintenance and replacement costs.

The solar water heating system in my own home was installed in 1983 and is still working. In 1984 I monitored the system for a year and found it provided 85% of my family of four's hot water needs.

Only a pump & sensor needed to be replaced a few years back. And all I do to “maintain” the system is top the water off in the tank every six months or so. I open a valve and a “sight tube” showing the water level on the side of the tank tells me when to close the valve; it couldn’t be simpler! This “drain-back system”, which is manufactured locally by Morley Manufacturing, carries a lifetime tank warranty. Because the storage tank is roughly half the equipment cost, a tank built to last increases the return on investment, making the system more cost-effective, offsetting the higher initial cost. We’ll have a demo unit at The Union’s Home and Garden show this weekend at the Nevada County Fairgrounds, so stop by our booth and check it out!

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