



EXPERT'S CORNER

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Tapping the Sun's Energy **Solar Hot Water Systems**

If you're looking for ways to whip your home's carbon footprint into a sleeker, more environmentally-friendly shape, it's hard to find a renewable energy source that's cleaner than the sun. One of the most cost-efficient ways to harness that power is with a solar hot water system.

"It's the first thing I tell people to do," says Richard Good, the president of Solar Services, Inc., located in Virginia Beach. "It makes sense when you look at the cost, the payback benefit and the added value to the house.

"According to Wells Fargo and the American Appraisal Institute, it's the number one home improvement. The institute says that a solar hot water system adds twenty dollars of value to a home for every one dollar in annual energy savings. If we put a system in the home of an average family, we're

going to save them somewhere around \$600 a year. That means the system adds \$12,000 to the value of the home."

Along with heating and cooling your home, keeping it supplied with a steady stream of hot water is one of the biggest sources of energy use. "In the average house and family, which is 2000 sq. ft. and 2.6 people, 25 percent of your energy consumption is hot water," explains Good. "And a solar hot water system will do 80 percent of the hot water, so that's a 20 percent reduction in your energy bill right there. And that's with 2.6 people in the home. Can you imagine the savings if you have two or three kids?"

"In the summer, a solar hot water system will generate enough hot water for two families actually," says Good.

To encourage homeowners to install energy-

saving devices, the government offers tax incentives on several different systems, including solar water heaters. "There's a federal tax credit of 30 percent, with a limit of \$2000," Good notes. "Most of the systems we put in fall in the range of \$6500 to \$8000, and that depends on the piping, where the water heater is going and the ease or difficulty of installation. So the cost of the system after tax credits is about \$5000, thus adding over 200% of its value to the home.

"If you're building a house and put it in the mortgage, your mortgage payment would be about half of your savings. Every time your utility rates go up, your savings go up as well. With an average family, the payback on a solar hot water system, without figuring in any utility rate increases, is probably seven to eight years. If you have a bigger family, it's less."

If you're working with a builder and want to have a solar system installed, or want to have the option to add one at a later date, Good advises checking your lot and the home's orientation to the sun. South is optimal for installing solar panels, but east or west can work too.

Also, you'll need a rectangular section of roof to work with. "A lot of roof designs today are triangular. In most cases when we put a solar hot water system on a house, it's going to be in two 4-by-8 foot collectors, so you'll have a block that is 8-by-8 feet."

While some alternative energy systems are still priced beyond the comfort zone of many homebuyers, solar hot water systems are well within reach, making them the perfect green accessory for your new home.