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GREEN PIECES THE SCOOP ON SUSTAINABILITY 2010



For the Love of Sunshine

Sunlight Solar harnesses the sun to keep you in hot water **BY LAURA HAWKINS**

How many times have you picked up your garden hose on a summer day to give your wilting peonies a drink, only to have to wait interminably for the scalding water to run through the hose? Every time I go through this ritual, I begin to devise a new version of the same amateurish scheme—if only I could run my garden hose across over my roof to a tank in the sun to store that free, effortlessly heated water

for the evening dinner dishes or to fill my soaking tub. And then the cool water emerges, and the thought evaporates.

The garden-hose-on-a-hot-day concept is one of those stunningly simple ideas that has by now gone all high-tech and newfangled, thanks in part to one of the leaders in the sustainable building industry, Sunlight Solar Energy (SSE). In our last issue we introduced you to SSE, a friendly and high-energy company known for

its design and installation of solar electricity systems. But SSE has another way to soak up the sun—the solar thermal system, a sophisticated solution to the ancient conundrum of how to gather and store that sun-heated water for later use.

Passive solar collection for heating water has certainly been around for a long time—earliest recorded evidence dates to bathhouses in 4th century Rome, where vast, south-facing openings

were built to allow the sun to heat indoor pools. The first generation of solar heating systems was born in America in the 1920s. But like most first generations, the systems were plagued with problems like overheating and freezing pipes in winter.

SSE's vision of solar thermal systems is not only cutting-edge and accessible, but also (gasp!) affordable. It uses flashed-in, flat plate rooftop collectors that look like skylights, as well as a closed-

loop, glycol system of copper coils and a heat exchanger. It's that simple.

Many homeowners in the Northeast question the application of a solar thermal system to homes here. The first requirement is sunshine, and we have plenty of that—we average 4.3 hours of sunshine a day, more than some points in Florida! The second requirement, a workable site, is dictated mostly by the position of the house. "It's counterintuitive," says Carolyn Humphreys, SSE's Community Outreach Coordinator. "You'd think an older home would be more difficult to retrofit, but many older homes face south, and we

love a southern roof; the old houses are often better suited than newer homes."

Though the variables are many, a solar thermal system can be designed and installed in a modest home for about \$7-9,000. That upfront cost can ultimately be reduced by almost 50 percent after the Connecticut Clean Energy Fund or NYSERDA incentives plus tax credits are applied. So, the net out-of-pocket expense would be \$3,500-\$5,500.

Hats off to the green experts! How Mother Nature must appreciate those who take her wealth and harness its power without diminishing it or disturbing a pebble. *

bottle basics

What type of water bottles should I be using on a day-to-day basis?



If you go to any of the sports games at the local high schools, you will notice an abundance of reusable, hard plastic Lexan bottles in an array of colors. Unfortunately, most of them are made with #7 plastic which leaches BPA, a known endocrine disruptor, into our water. Endocrine disruptors disturb our hormonal messaging or communication within our bodies. BPA has been linked to insulin resistance, type two diabetes, decreased levels of testosterone in men, and breast and uterine cancer in women.

Recently, some manufacturers like Nalgene have added bottles made of the safer plastics (#2 and #4) to their product lines. So, when shopping for a reusable water bottle, always check the bottom of the bottle first. The best options are made of #2 (high density polyethylene/ HDPE), #4 (low density polyethylene/ LDPE), or #5 (polypropylene/ PP) plastic. Using safe reusable water bottles is better than refilling a Poland Springs-type bottle. While made of #1 (recyclable) plastic, these bottles are not safe to refill and reuse. ~Casey Kaplan