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Cover Story

Green Day



Sun Rah!: Solar panels on the roof of 1005 S. Seventh St. Photo By: Michael T. Regan

You can do good, and save dough, with sustainable-energy architecture and design.

by [Daniel Brook](#)

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From the outside, the ecofriendly rowhouse at 1005 S. Seventh St. looks like an ordinary South Philadelphia home. And that's the point, say 40-something husband-and-wife architects and residents Laura Blau and Paul Thompson.

"We wanted to prove it could be done in South Philadelphia. It's just a regular rowhome," says Blau. "It's a regular house except it's got this other stuff that deals with sustainability," says Thompson.

As workmen scurry up and down the staircase, the diminutive, bespectacled couple explains what makes this rowhouse different from all other rowhouses. First there's the heating system, known as radiant flooring. Instead of radiators, water tubes snake back and forth under the (locally grown) cherry-wood floor. Because the heat isn't concentrated in one place, the water only has to be heated to 110 degrees to heat the house, conserving energy. Plus, most of the energy used to heat the water comes from the solar panels on the roof. In summer, solar power alone heats the water. In winter about half the energy comes from the sun and half from a natural gas boiler in the basement.

Then there are smaller touches, like the roof, which collects rainwater for Blau's small garden, and a reading room with large windows that flood the room with natural light. In front of the house there's a large tree. In the summer, the leaves shield the house from the sun; in winter, the leafless tree lets in plenty of light, Thompson points out.

For Blau and Thompson, their ecofriendly home is just part of a larger environmentally aware lifestyle. "Living in the city itself is sustainable. You don't need a car because everything is nearby," says Thompson. The couple uses PhillyCarShare in lieu of owning an automobile (or two).

Having been married for three years, Blau and Thompson will soon be adopting a son from Vietnam. They are also business partners, and have recently founded BluPath Design, an architecture firm specializing in so-called "green design."

Blau and Thompson say the construction will be completed by the end of September. By then the home will have been completely gutted and rebuilt, a yearlong process. Building green, Blau acknowledges, requires "a significant extra cost up front." But, her husband adds, "it's absolutely going to pay for itself." Thompson is even considering writing a paper for an architecture journal detailing how successful the project was in terms of conserving nonrenewable resources.

But both agree that saving money is not the motivating factor. "It's an ethical choice," Blau explains. "It's about the world we'd like to be living in," with more conservation of resources and less dependence on foreign oil. "It's about putting our money where our mouth is." Economically, Blau explains, it would have made more sense to install solar panels for electricity rather than hot water, since Pennsylvania offers tax benefits for solar electricity but not for hot water. But Blau says she wanted a "real physical relationship" with the green aspects of her home. With solar-powered hot water, she says, she can feel the heat in each room and in the sinks, baths and showers.

Blau also suspects it will help the couple explain to clients the advantages of green design. Since the top floor of the rowhouse will be the BluPath office, clients will get a chance to see the home and feel the warmth coming through the wood floors.

Sustainable residential architecture is on the cutting edge of the green design movement. Leadership in Energy and Environmental Design (LEED), a nationwide group that certifies architects in sustainable design and ranks buildings on a point system for their sustainability, has yet to formulate standards for residential construction. According to Taryn Holowka, a LEED spokesperson, the group ranks buildings in five different areas: the sustainability of the site, materials and resources, water efficiency, energy efficiency and internal environmental quality.

A mile away in Center City, Gersil Kay, who runs Conservation Lighting International, is also not waiting for LEED to catch up to the latest in green design. Kay's Philadelphia-based company specializes in fiber optic lighting, which uses one-fourth as much energy as conventional lighting. Considering that lighting costs can make up as much as one-third of a building's energy expenditures, Kay says, using more energy-efficient lighting is a wise economic decision as well as an ethical one.

Kay's family started their electrical contracting company decades ago, making it one of the oldest in Philadelphia. When her father retired in 1993 at age 102, Kay took over the business. Having been exposed to the lighting business from early childhood, Kay noticed on trips to Europe the use of fiber optic lighting. "I was so impressed with it that I was waiting for it to

come over here. But it didn't. So I decided to do it myself," Kay says. Aside from being energy efficient, fiber optic lighting gives designers more control over light than conventional lighting fixtures do. This has made it particularly well-loved by museum curators, who strive to painstakingly light up artifacts without attention-grabbing fixtures. Additionally, fiber optic lighting is useful for museums since it does not emit heat or ultraviolet rays, both of which are damaging to materials like wood and paper.

Today Kay's company has provided lighting for Philadelphia institutions like the Museum of the University of Pennsylvania and the soon-to-be-built Liberty Bell pavilion, as well as sites nationwide, like the Georgia State Capitol Building and the Seagrams Building on Park Avenue in New York. Kay's even won a few commissions in England, where fiber optic lighting took off years ago.

Still, Kay acknowledges, it's not easy being green. After four years of campaigning, she still hasn't convinced the Illuminating Engineering Society to recognize the technology. Perhaps if Philadelphia architects and designers lead, the design community will follow.

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