

HOME + GARDEN



SUSTAINABLE PIONEER

With Dorrie, his wife of 22 years, **Harold Powell** operates **Telios Environmental Design and Development**, developing buildings designed to use the least amount of energy to provide the highest quality of life. Their latest project exceeded the global Architecture 2030 Challenge, which sets strict targets to minimize greenhouse gases, and received an award from the Santa Barbara County Innovative Building Design Initiative. >



What sparked sustainable design for you?

I worked with Buckminster Fuller in the 1970s through a scholarship with the University of Pennsylvania. It was an eclectic, esoteric, and very advanced time. My inspirations were architects and philosophers such as Fritjof Capra (*The Tao of Physics*), Ian McHarg (*Design with Nature*), and Ivan Illich (*Deschooling Society*). It was transformative. I was involved at the highest level of the infancy of the environmental movement in the United States. We did a project for the United Nations, looking at the world's resources, trends, and needs—it was the first time anything like that had been done. A lot of organizations came from that, such as the Environmental Defense Fund. We explored and created low-flow showerheads before



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you could find them, experimented with fog showers, and worked on a system to store heat in salt.

How did you apply that to this home?

We used the General Systems Theory, Russell Ackoff and Buckminster Fuller’s paradigm of anticipatory comprehensive design science, which looks at the biggest picture first, working down to anticipate consequences and possible complications of design choices. It starts at the foundation with orientation. The house is passively solar heated, has solar water heating, and utilizes solar photovoltaics to produce its own electricity. The question—how does the air and light flow?—is one that is always asked in the design phase to help determine the building’s orientation to sun and seasonal weather patterns. Homes are the largest energy consumers in America. It’s important to build new green homes, but greening existing homes may be more important. But, the *most* important part is to teach children to love the earth. -NANCY BLACK

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TIPS TO GREEN YOUR HOME

- 1 TEST FOR INDOOR TOXICITY**, then retrofit with nontoxic paints, surfaces, furniture, and let fresh air and sunshine in with skylights, intelligent windows, and solariums.
- 2 INTRODUCE EDIBLE LANDSCAPING** along with indigenous plants and trees—and don’t forget the rain barrel.
- 3 INCREASE ENERGY EFFICIENCY** with passive solar heating, solar electric panels, solar hot water, Energy Star appliances, and install an energy monitoring system.

TOP TO BOTTOM: Harold Powell presents his latest award-winning modern, sustainable design; natural light and nontoxic paint illuminate the home’s interiors.