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Dreams of Green

By **ROBIN GOLDWYN BLUMENTHAL**

HELEN AND JOHN SCHAEFER LOVE TO ENTERTAIN in their Tucson, Ariz., home. The expansive adobe-style house, featuring 13-foot-high ceilings and breathtaking views of the surrounding mountains, never fails to wow the couple's guests, who sometimes number well over 100. An added benefit: While the house is three times larger than their last one, the energy bills are almost exactly the same.

Protected from the blazing Arizona sun by energy-efficient windows, constructed with highly insulated concrete forms, and outfitted with radiant-floor heating powered by solar panels for winter nights, the Schaefer's \$1.2 million home epitomizes one of the hottest trends in luxury housing: going green.

The Schaefer's, retired educators in their seventies, didn't have to look far for an architect -- their daughter, Susan Schaefer Kliman, has a degree in energy-efficient design. But, says Helen Schaefer, "We probably would have tried to do some of this kind of thing even if we had another architect, simply because we're conservation-minded."

More and more home buyers are thinking like this. The green-building market is expected to grow from \$7.6 billion in 2005 to as much as \$39 billion in 2010. Better, more efficient building materials are becoming available all the time, and builders and consumers of all stripes are coming to see that green doesn't have to mean living in a mud hut or decorating strictly with hemp.

Runaway oil prices and Al Gore's documentary about climate change also have given the trend a lift. Even Paris Hilton has jumped on the bandwagon, vowing to add eco-friendly features to her new home in Beverly Hills.

Although most sprawling luxury manses, by definition, are less environmentally friendly than smaller houses -- they use more energy -- building materials like insulated concrete walls and gear like air conditioners that adjust themselves in response to demand for cooling can make the bigger structures superior in efficiency.



Courtesy of Klimactic Architecture

This home in Tucson, Ariz., features solar-powered heating, insulated concrete walls and other energy-efficient features -- all designed by the owners' daughter.

The Tuscan villa in Baton Rouge that Ben Elder, a chemicals executive, and his wife, Maria Bhacca, who owns a travel agency, fashioned from a flat-roofed lakefront house is a case in point. Even though their \$1.3 million home is a third larger than their previous one, Elder says the utility bills during the muggy Louisiana summers have been cut by more than half, to \$400 a month. "I credit the foam insulation on all the walls and in the attic," he says. Such insulation expands

to seal all the cracks and crevices that fiberglass can't reach, increasing the efficiency of the energy used.

But it isn't just the insulation and thermal windows that make the home green. Bhacca traveled around the world collecting natural materials like carved cantera stone from Mexico for the two large fireplaces and columns around the pool, and floors of Italian travertine marble. Doing without wall-to-wall carpeting in the 7,500-square-foot house makes the air quality a lot better, says Elder, who likes to look out at the view of College Lake while working out in his gym. He figures that details like the Brazilian mahogany doors, the windows and the zoned air-conditioning should help the couple get a premium when they put the house on the market sometime next year -- because they're hoping to downsize.

ENERGY EFFICIENCY IS OFTEN the focal point of green, or sustainable, building. But the trend also involves different methods of water conservation, healthier air quality, and the use of native materials or those recycled or produced in a way that minimizes harm to the environment. For instance, cork products use only the bark of the tree, saving the whole tree.

An interest in health came naturally to Phil Beron, an oncologist who decided to invest in a modernist home designed by Ray Kappe and built by "sustainable" builder LivingHomes of Santa Monica, Calif. The deeper Beron got into the field, the more hooked he became. "Really strange things happen when you get on this green thing," he says. "You start noticing things like leaving the water running when you shave."

Part of the attraction for Beron was the air quality of the home, which uses paints, glues and stains with compounds that don't emit harmful chemicals -- although he concedes that some of the health benefits from these are impossible to notice from day to day.

Some other green touches are more apparent: The siding of the house is from 70-year-old recycled redwood that was part of a wooden bridge, the cedar ceiling in the upper

living area is from the highest-rated sustainable wood, and the bathroom countertops are made of recycled glass.

The Brentwood, Calif., home, which Wired magazine made into a showcase for advertisers' cutting-edge technology, also includes a solar-energy and radiant heating and cooling system that uses 36% less energy than a conventional house of its size, and a kitchen computer that allows monitoring of energy use.

Beron paid more than \$30,000 to have the house previously on the site deconstructed and 85% of the wood sent to be reused in Third World countries. "From an architectural standpoint it makes you feel good, and from a psychological standpoint it makes you feel good," he says.

Beron, who paid about \$2.4 million for the land, the original home and construction of the new, green home, hopes it will make him feel good economically as well. He's putting it on the market for \$4.3 million, and hopes to plow the proceeds into the construction of other green homes.

"There's a certain cachet to having one of these homes," says Ben Kaufman, owner of GreenWorks Realty in Seattle, which does about 40% of its business in green homes. "We can differentiate and sell a green home at the high end of price per square foot."

Of course, green features such as better insulation and solar panels can add anywhere from 1% to 10% to the cost of standard construction, that represents a fairly modest investment in conservation. For some, lower energy bills help compensate. But "on the higher end, cost is not the issue," says Baton Rouge architect Kevin Harris. "It's the appeal and the sense they're doing their part to save the environment."

All over the country, owners of green homes echo that sentiment. "We have three girls, and we said, 'If we're not going to do something for the planet, who will?' " says David Ronn, a Houston attorney who used energy-efficient insulated concrete for the walls that cut the required output of the air-conditioning system by about half; easily renewable bamboo for the floors, and a solar hot-water heater that feeds into two tankless water heaters, which heats water only as it is used.

The Ronns also injected a bit of whimsy into the house, installing a slide for their children next to the stairs. The builder, GreenHaus Builders of Houston, even used recycled blue jeans to soundproof a recording studio.

"If you're already spending this much money, why not try to do a little more?" says Allison Nutt, who is on the board of the Nature Conservancy. Motion-sensitive lights and extra-thick, energy-conserving walls are being incorporated into the \$8 million, French-style mansion in Jackson, Miss., that she and her husband, David, expect to occupy in another year-and-a-half.

They plan to incorporate such energy savers as windows that let in the light but not the heat of the sun, and tankless hot-water heaters. What's more, the use of reclaimed materials and old beams will make the house, which is situated on 170 acres, "look like it's been there for several hundred years," says Nutt.

THE GREEN ASPECTS OF HER FRENCH-STYLED DOMICILE figured in the decision of Lori Perkins, a 47-year-old realtor and restaurateur, to trade up recently to the \$1.9 million home in the Lake Club section of the Lakewood Ranch development in Bradenton, Fla.

Standing in her living room, which has 25-foot ceilings and looks out on the pool, Perkins cheerfully recites the water savings achieved by her low-flow toilets (11,000 gallons a year), which are used in her 4.5 bathrooms. Building green "may cost a little more in the beginning, but in the long run it saves money," says Perkins, whose four-bedroom home has a monthly water bill that totals just \$53.

Perkins proudly displays her Energy Star-rated highly efficient LG washer and dryer set, for which she paid \$2,800 -- more than 50% higher than the standard fare. She notes that she'll cut down on both her water usage and dry-cleaning bills because of the versatility of the machines.

In a feature especially tailored for drought-plagued Florida, the developers of the Lake Club put down Empire Zoysia sod, which uses less water than standard lawns and is pest resistant; they also require 80% of plantings to be native or drought-resistant. In addition, the sod is irrigated by a drip system, rather than sprayed-water, from the man-made lake behind Perkins' home. There is a downside to this: The irrigation water smells a bit stagnant, but Perkins says the odor soon goes away.

Developers, builders and architects are leading the charge in sustainable building. Schroeder-Manatee Ranch, a local developer behind Lake Club, requires its builders to attain a certain number of points from a menu of green-building features.

Steve Case, co-founder of AOL, recently started building a sustainable luxury resort in Costa Rica. It will be set on a 650-acre seaside tract and incorporate both green technology and local cultural traditions.

But consumer demand is there, too. "Surveys show people enjoy our nature trails the most," says Tom Danahy, president of LWR Communities, a unit of Schroeder-Manatee. It is preserving half of its sprawling 30,000-acre tract at Lakewood Ranch for recreation, open spaces and parks.

The Bottom Line

The green-building market is expected to grow from \$7.6 billion in 2005 to \$39 billion in 2010. It is now one of the hottest segments of luxury buildings.

In many parts of the country, green developments are shaping up as one of the strongest segments of the faltering housing market.

"Green building has become hot," says Casey Roloff, developer of Seabrook, an upscale vacation community two hours west of Seattle that has taken the trend to heart.

All the residences, including the \$2.5 million oceanfront properties, are accessible to town (Pacific Beach) by a five-minute walk, reducing the need for fossil-fuel-burning cars. The landscaping is native to the area, to cut water use, and 25% of the raw lumber is harvested according to the most rigorous timber-conservation standards. The insulation is formaldehyde-free, and there's a high percentage of recycled content in the kitchen cabinets. The result: Roloff expects Sea-brook's sales to double this year from last.

SOME HOMEOWNERS ARE SO COMMITTED to the cause that they've opened up their houses to tours in order to encourage others to adopt sustainability practices.

At Ecomanor, an Atlanta showcase home owned by conservationists Rutherford and Laura Turner Seydel, everything from the home furnishings to the garden has a sustainable touch. Chandeliers made from recycled scrap iron hold compact fluorescent bulbs, and the craft room's floor is marmoleum, a covering made of all-natural ingredients.

Although the five full and two half-bathrooms outnumber the bedrooms, the Seydels are using a rain-harvesting system that captures rainwater for the toilets, and they're dual-flush -- which use only one-third the amount of water to get rid of liquid waste versus solid.

Used sink and shower water -- known as grey water -- gets recycled to water the plants. Because of this, the Seydels' \$100,000 worth of landscaping has escaped harm during a punishing drought that brought with it a statewide ban on potable water use for irrigation.

Rutherford Seydel, a partner in an Atlanta-based law firm, especially likes the geothermal system of heating and cooling, which runs water through pipes that are dug way beneath the earth. This approach cut his energy bills in half. His favorite gear of all is technology that registers how much power is being used at any given time. He also likes the remote button that can turn his kids' lights on and off from his bedroom.

The Seydels were actively involved in the planning of their Tudor-style home, but verifying that the builders are doing what they say they will can sometimes be tricky. That's because so many environmentally correct features are behind the scenes, or -- as in the case of carpets recycled from soda bottles -- look no different from standard substances. But keeping a close eye on the work does pay off, because sometimes, as *Barron's* discovered, the gear simply doesn't work. During a recent stay in a "green" Holiday Inn in Bradenton, while visiting Lake Club, we found that lights that were supposed to be motion-sensitive failed to turn on or off automatically.

Fortunately, there are several certification programs -- one run by the U.S. Green Building Council, and the other by the National Association of Homebuilders, to rate and determine if something qualifies as "green."

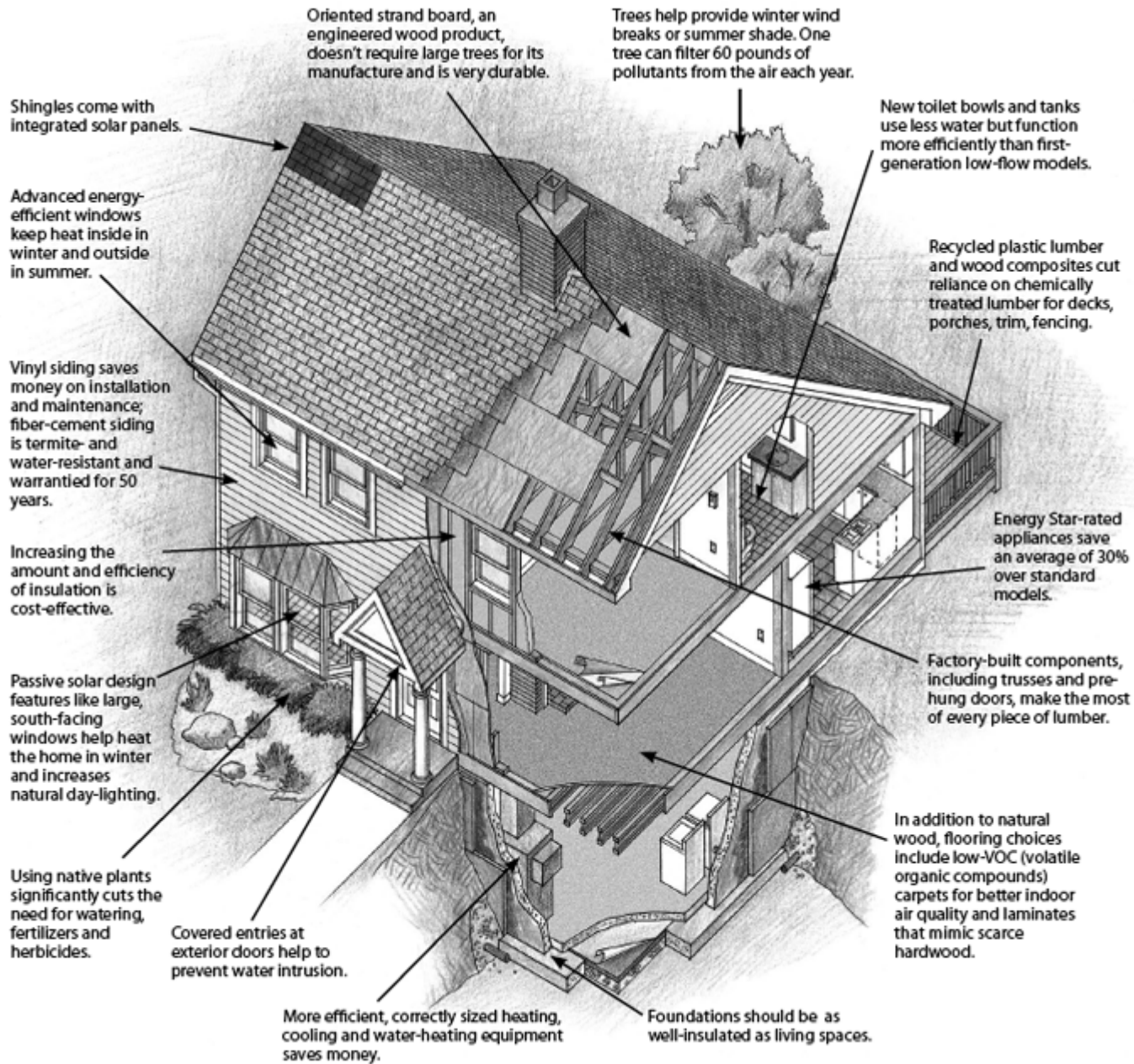
AT ITS BEST, GREEN BUILDING can be nothing short of breathtaking. At the modernist Santa Fe-style Hideaway in Borrego Springs, Calif., no expense was spared to build a green house originally designed for billionaire money-manager Charles Brandes. The 6,000-square-foot home, set in the desert, features its own airplane hangar and runway, and more than a nod to green.

"This is the pet project of a billionaire; money typically isn't too much of an issue," says David Itzikman, who bought the house earlier this year as a vacation home with his brother-in-law and business partner in developer GH Capital, Gregory Perlman.

The architect, Drew Hubbell, explains that using straw-bale construction allows the two-foot-thick walls to act as a thermos and store whatever temperature is introduced. Helping to cool the house are overhangs and trellises, and the underground garage, originally built for a Ferrari collection, has tubular glass "light wells" that eliminate the need for electric lights during the day.

Windows near the roof line in the great room pull hot air out during the day and cool air in at night. Most of the materials are natural, with lime-wash plaster used on the walls to eliminate what's known as "off-gassing" of chemicals, and Portuguese clay tiles are used for the flooring.

The pool is even filtered with salt, rather than chlorine. But perhaps one of the most striking features is the roof deck. From that perch, there is an unobstructed view of the desert night sky in all directions, surrounded by 1,400 undeveloped acres. Could anything be more green than that?



Rick Vitullo, courtesy of the National Association of Home Builders

Color Me Green: Here are just some of the ways that homes can save energy and protect the environment.