

No Energy? Join the Club

Zero-energy homes get you off the grid **BY KAREN J. BANNAN**

There is a \$950,000 home for sale in Frisco, Texas, that will never cost its new owners a cent for energy. The reason: the 3,817-square-foot house draws no electricity from the power grid. Instead, it uses special building materials, solar panels and environmentally friendly architecture, all of which lower energy output and generate enough juice to cancel out the home's power needs.

Three states away, builders are erecting a zero-energy-home community—a series of 73 high-efficiency houses that range in price from \$600,000 to \$750,000. Every one of the WillowCreek at the Peppertree Park homes, which are located in Southern California, have the same sales pitch: They need no energy aside from what is generated internally.

Both builders are getting a jump on the Million Solar Roofs Initiative, a plan the U.S. Department of Energy announced in 1997 that calls for the installation of solar energy systems on more than a million U.S. buildings by 2010.

"We have lowered the power needs of the home by 60 percent," says Jim Sargent, the builder of the zero-energy home in Texas. "We have also built a house that is strong, durable and soundproof. And about 75 percent of what we have done can be retrofitted onto existing construction."

Sargent's new home makes use of several innovative building materials and technologies that—especially for anyone in hurricane or earthquake areas—make sense from an economic and safety point of view. The Frisco house was built with Durisol Building Systems' Wall Forms, which snap together like Legos and are filled with concrete and rebar. From an energy perspective, Durisol claims its blocks are twice as energy efficient as traditional insulation. From a safety perspective, Durisol is virtually indestructible—it is fireproof and quake- and wind-resistant. And since it is so thick and sturdy, it also provides amazing soundproofing.

"The theater area upstairs is the open area of the house," Sargent says. "There's a stairwell at the center of the house to bring light into the space. You can be at the base of the stairs and not hear a thing, even when the volume is turned up."

The windows, like the staircase, are there for more than just aesthetic reasons. They were placed around the house based



on prevailing winds. The casements swing open to catch every breeze. A dark metal roof absorbs the sun's rays and releases heat, keeping the upstairs cooler during the day.

If the thought of going green and eliminating your energy bills sounds tempting, know that it will initially cost more to install. Solar equipment, rainwater harvesting, tankless hot water heaters and energy-efficient building materials can drive costs into the six-figure range. Even with state and federal rebates, you will not make back your investment in less than five to 10 years. But if you expect to keep your vacation home for more than a few years, the benefits definitely outweigh the costs. Eventually, your home may end up making you money.

"In California, the meters some solar-powered homes use go backward," explains Ali Iz, general manager of GE Energy's solar division, which manufactures solar equipment. "If a homeowner isn't occupying a house full-time, it's quite reasonable to expect a zero-energy bill or energy credits."

Jim Sargent, AndersonSargent Custom Builder, 972.617.3788, www.zeroenergyhomedallas.com; Durisol Building Systems, 866.801.0999, www.durisolbuild.com; GE Energy, www.gepower.com/solar; Million Solar Roofs Initiative, www.millionsolarroofs.com