

16 April 2009

**U.S. Homebuyers Opt for Energy Efficiency:
Energy-efficient houses cost more, but provide long-term savings**

From: *America.gov*

URL: <http://www.america.gov/st/business-english/2009/April/20090310104042AKIlennoCcM0.2718928.html>



A Brookfield home in Virginia is equipped with a rooftop wind mill.

By Kathryn McConnell

Staff Writer

Washington — Developers who promote housing built to meet strict environmental standards say “green” building technologies are not only good for the environment but also for homeowners’ wallets. U.S. homebuyers are buying this message in greater numbers than ever.

Homebuyers increasingly are conscious of the vulnerability of the natural environment and of the rising cost of fossil fuels used to heat and cool traditionally built houses, Virginia-based Brookfield Homes sales manager Peter Daly told *America.gov*.

Interest in energy-efficient homes has grown rapidly in recent years, according to Harvey Bernstein, a vice president of the New York-based information service McGraw-Hill Construction, which tracks the residential green building market.

The share of energy-efficient housing will have grown from 2 percent of the market in 2005 to as much as 20 percent in 2013, McGraw-Hill predicts.

Builder Brookfield’s new houses make use of energy provided by solar, wind and geothermal power. The company installs panels of photovoltaic solar

cells on the roof of each house it builds. The panels connect to a power meter in the house's utility room, which converts the collected sunlight into electricity.

Glass water tubes on the roof radiate heat from the sun and transfer the water to a holding tank. Other tubes run from the tank to supply the house with hot water.

A lightweight rooftop wind turbine on each Brookfield-constructed home generates up to 400 watts of electricity on windy days. The electricity is stored in batteries and can be tapped later. The houses also are fitted with energy-efficient light bulbs.

Energy to maintain the homes' inside temperature is generated by a geothermal heating and cooling unit that extracts warmth from under the Earth's surface, where the temperature is a constant 55 degrees Fahrenheit (13 degrees Celsius). Dual-pane windows radiate heat off rooms during summer and help capture warm air during winter.

Housing developers and renovators across the United States increasingly turn to toxic-free adhesives and paints and install low-flow water taps, toilets and shower heads. Brookfield buyers also can choose such features as wall insulation made of recycled materials and kitchen counters made from man-made materials that resemble more expensive stone surfaces, Daly said.

Some homeowners install roof shingles made of a durable composite of recycled plastics and sawdust that will not rot and are easy to maintain. The result is a light-colored roof, which deflects heat away from the house in summer.



The green-building market is expected to double over the next five years.

“Green homes are here to stay,” Bernstein told *America.gov*. Buyers appreciate that these materials create a healthier living environment, he said.

Although energy-efficiency features cost more than traditional home energy systems, the costs are outweighed by long-term savings on electric bills, according to Daly. The company estimates that making use of all the energy-efficient technologies it offers would cut consumer energy costs by about 70 percent.

Because consumers perceive homes built to meet environmental standards as higher quality, they are willing to pay more for them, despite fluctuations in the market, according to McGraw-Hill’s Bernstein.

One New England homeowner spent 20 percent more to build a home that is environmentally friendly than he would have spent on building with

traditional systems, yet he expects to recover the extra cost in energy savings within five years. His home produces nearly all the energy it needs.

LOCATION, LOCATION, LOCATION

Housing-related energy-efficiency savings increase with the right geography, architect Russell Katz told *America.gov*.

Katz's new and refurbished apartment buildings in Takoma Park, Maryland, and the adjacent Takoma neighborhood in the District of Columbia are located near public transit stops, lessening tenants' needs for commuting by car.

Katz has installed laminated bamboo flooring instead of carpeting or hardwood floors. The flooring is as durable as hardwood, yet bamboo grows at a faster rate than hardwood so its forests will be easier to replenish. Carpet, compared to bamboo, has a short life span and is difficult to recycle.

Katz's buildings were designed to light rooms with as much natural lighting as possible. His elevators use less energy than traditional hydraulic units. When all features are combined, tenants save approximately 30 percent from their energy bills, he said.

Many states and the federal government offer tax incentives for making buildings more energy efficient, which influences where architects like Katz will work. He and other supporters of energy-efficient housing say local governments can promote it further by expediting reviews of building plans.

The United States Green Building Council, a nonprofit group, has created a certification process called Leadership in Energy and Environmental Design to encourage global adoption of energy-efficient building standards. The system is an accepted benchmark for the design, construction and operation of green buildings in the United States.

More information on [Leadership in Energy and Environmental Design](#) standards is available on the [U.S. Green Building Council Web site](#).