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Home Improved

Cool new ways to save money -- and the planet.

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From [Reader's Digest](#)

Create a Green Zone

Get this: Your home is already an ecological wonder. Over the last 25 years the amount of energy used by the typical refrigerator dropped by two-thirds; washing-machine energy needs have been reduced by nearly half; the use of redwood decking has fallen by two-thirds; and toilets use less than half the water that they did in the 1970s.

You had no idea how good you were being, did you? Making choices that help the environment doesn't mean sacrificing comfort and, in fact, many green-home products are downright luxurious. Unfortunately, this contributes to the perception that the products are budget busters -- a myth, says Alex Wilson, executive editor of *Environmental Building News*. "Certainly there are high-end green homes that demonstrate what's feasible, but the average homeowner can use many green strategies -- and some actually reduce the cost of a home."

Architect Angela Dean, author of the book *Green by Design*, says even small changes can have a big impact. "Every time you change a light bulb, replace it with a compact fluorescent," she says. According to government experts, if every home in America replaced just one light bulb with a compact fluorescent, the reduction in pollution would be equal to removing one million cars from the road.

On the next few pages you'll find our picks for the best and the brightest ideas in green building. Many of the products you can add to your house right away; others you can save for, and incorporate the next time you need a new roof or deck. Either way, being good has never been easier.

Bamboo Flooring

Wood floors are gorgeous, but hardwoods traditionally used in flooring take decades to grow, and can be harvested irresponsibly in rain forests. The solution is bamboo

flooring. Although bamboo is technically a grass, it grows like a tree -- only faster. Since it matures in three years and regenerates itself, bamboo doesn't contribute to global deforestation. (Most material used in flooring comes from controlled bamboo forests in China.) When laminated into boards, bamboo is as tough as oak or maple, and has a richly patterned grain enlivened by tiny "nodes" -- the bamboo equivalent of knotholes. It installs much like hardwood flooring and costs about the same. Be sure to finish it with a water-based urethane, which is less toxic than solvent-based finishes. For more information, you can visit plyboo.com or teragren.com.

Solar Roofing

One drawback to solar-generated electricity is the unwieldy panels, which look out of place on a traditional home. Now you can harness the sun's power right through roof shingles, thanks to a technology called thin-film triple-junction amorphous silicon. These space-age solar cells are shaped like conventional shingles and can be installed just like regular shingles, then wired into your home's electric system. Wilson says they're not as efficient as freestanding solar panels, but depending on weather conditions, they can generate virtually all the power for your home. In August, when the shingles are cranking out more electricity than you need, the current gets fed into the power grid, running your meter backward and thereby reducing your electric bill -- which makes up for rainy days, when output is reduced. Solar shingles cost \$40 to \$50 a square foot installed, versus about \$8 for regular shingles, but you may only need them on the south side of the house. And many states are now offering generous subsidies. To learn more, visit eere.energy.gov.

On-Demand Water Heaters

Most houses have a hot-water tank that is constantly fired up, keeping 40 to 80 gallons ready for the next shower or laundry load. By contrast, on-demand water heaters don't use a tank. Instead they employ a powerful burner to heat water only when needed. The result is up to 34 percent greater efficiency, according to a report by the National Association of Home Builders Research Center. (The heaters cost from \$200 to \$500 more than a traditional system.) On-demand heaters also save space because they are small and wall-mounted (about the size of a household electrical circuit box). And they cut down on landfill waste, which is where old water tanks end up. Wilson recommends gas-fired models with an electronic ignition device; avoid pilot lights, which waste gas. "It's important to get the right size heater for your home and lifestyle," he says. This is a job for a heating professional, or your gas company. Visit nahbrc.com or [Bosch Water Heaters](#) for more information.

Decking

Traditional decking may use pressure-treated pine, which until this year was usually laced with toxic substances like arsenic. And the stain or paint applied to the wood often contains dangerous solvents. For a change, consider one of the many composite deck products made from recycled plastic (like milk jugs) and wood fiber. Besides looking great, they won't rot, crack or splinter. They resist termites, never need staining, and contain no toxic additives. Composite decking like Weyerhaeuser's ChoiceDek can cost two or three times as much as pressure-treated decking, and 15

percent more than cedar or redwood. But when you factor in the cost of maintaining a wood deck, the difference narrows over time. "Here is a great example of a product where the life cycle cost justifies the initial cost," says Wilson. For more, visit ecoproducts.com or trex.com.

Occupancy Switches

Scientists haven't figured out how to get kids to turn off lights in their rooms. But they've made great strides in occupancy switches, which sense when no one is in a room and then shut off automatically. Older models that monitored ambient sound levels were not reliable; the latest switches rely on infrared technology, ultrasonic signals, or both. Infrared switches are most common in homes; they need a direct line of sight and work best in simple four-walled spaces. Some, like Leviton's Decora Occupancy Sensor (\$70), are designed to replace a standard wall switch. Others are ceiling-mounted. Visit sensorswitch.com or smarthome.com for more information.

Salvaged Wood

Salvaged wood comes from two places -- buildings that are being torn down or, increasingly, underwater. Logging operations in the 19th century used waterways to float trees to sawmills; many logs sank. Today, divers are recovering these logs, which remain preserved in the cold fresh water. This salvaged wood often sells at a premium -- \$6 to \$8 per board foot, and considerably more for exotic varieties like bird's-eye maple. The logs are from virgin forests, where a thick canopy slowed growth and resulted in exceptionally tight grains favored by fine woodworkers. "You can't buy that kind of wood new anymore," says Wilson. Often the wood is from trees that are now largely wiped out, like longleaf yellow pine. The wood can be used in any part of construction, from ceiling beams to flooring, or in furniture. Lumber recovered from old buildings is notable for its character, which may include nail holes or other markings. Visit timelesstimber.com or thewoodenduck.com to learn more.

Compact Fluorescents

These light bulbs, which use about 75 percent less energy than incandescent bulbs, have been around since the early 1980s. But in the past few years they've gotten better, smaller -- and cheaper. How cheap? Try five bucks, with a five-year guarantee. The reason, says Wilson, is simple: competition. "When California had its power crisis there was a huge upsurge in compact fluorescent, and Chinese companies began making them inexpensively. Now they're being made by dozens of companies, plus some utilities offer rebates." Today's compact fluorescents have electronic ballasts that switch on quickly and don't buzz. And the colors are much warmer than the ghostly white models of the past. (Wilson recommends compacts with a color temperature of 3,000 degrees Kelvin.) Visit energystar.gov or wattstopper.com to learn more.