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GREEN TECHNOLOGY

It's Easy Being Green —By Steven Chandler Hall

Building your home with benefits for you and respect for the planet

Today, many homebuilders want to build projects that protect their environment. Happily, the savvy homeowner can design a house that, at little or no cost, provides the rewards of a healthier environment and lower utility bills. Indeed, many measures launched out of concern for the environment will deliver better results than those provided by traditional products and methods.

Some features—like solar panels or geothermal heating and cooling systems—are initially more expensive. But using them may lead to a relatively rapid payback with offsetting rebates and as energy prices escalate. The solar option can provide other benefits such as emergency backup power that replaces the need for diesel generators.

Whether you want simply to improve your existing home or build a new home, it's important that environment-friendly features be considered at the outset. They must be designed into your plans, for it's difficult to add these elements later. Make sure that the scope of the project is adequate, but that you don't waste resources by building more space than you can use. Savings can go into higher design detailing, furnishings, or artwork, and make your home a showcase of your taste.

First you'll need an environmental audit and a guide. One company in the Fairfield County/Westchester County area has pioneered environmental design and construction: Steven Winter Associates, Inc., of Norwalk (www.swinter.com).

Another firm, in the Boston area, is the Integrative Design Collaborative of Arlington, Massachusetts (www.integrativedesign.net), an affiliate of Regensis of Santa Fe, New Mexico. My firm, Chandler, LLC (www.chandlerllc.com), can be a guide and has access to audit resources. Here are some issues an audit will help you consider:

Your Site—Situating your home properly can have real rewards. South-facing windows let in the sun for passive heat gain in cold months. Planting deciduous trees on the south side provides screening in the summer to shade the windows. Evergreen plantings to the north screen the house from the cold winter winds that rob it of heat.

Managing the water runoff—especially from heavy storms—is both efficient and socially responsible. You can capture water from your roofs and pavement and reuse it with drip irrigation. Keep pavement to a minimum and consider paving that lets



Photo courtesy of Chandler, LLC

water go through it back into the groundwater. That way, you will not further burden city storm drains and add to either treatment costs or pollution from runoff to ponds, streams, or the sea.

Landscape—Native plantings not only promote biodiversity, they require less maintenance and irrigation than non-native plants—and no chemicals.

Systems Design—Intelligent design insures an efficient thermal envelope that keeps in heat in the winter and keeps you cool in the summer. Highly efficient heating and cooling systems are now available. Good ductwork design, duct insulation, and sealing of connections can be very effective. Foam offers the best insulation, sealing pesky cracks that allow cold air to sneak in. It's possible to order very high-performance windows and doors, too. Some firms can computer model this envelope in 3-D, providing an infrared thermal picture that allows the design to be tweaked for greatest efficiency.

You can select low-voltage electrical systems and fixtures; fluorescent and/or longlife lamps; appliances that have earned the ENERGY STAR rating. Occupancy sensors turn off the lights when people leave a room. Make sure your plumbing system uses plastic piping (not expensive copper) and that hot-water lines are insulated. (You can also choose systems that heat water at the point of use and eliminate hot

water piping.) Low-flow fixtures aren't popular, but they're getting better.

Some concrete mixtures include ingredients that are better for the environment than others. Renewable, reclaimed, and recyclable materials can be used for roofing, flooring, carpet, fabrics, trim, and cabinetry. You can choose paint, sealers, and clear coats that don't give off harmful vapors.

Construction—If demolition is part of your project, then salvage can provide both environmental and tax benefits (a nice combination). Charities like Green Demolitions, of Greenwich (www.greendemolitions.org) will take away reusable components like cabinetry and appliances at no charge, and give you a receipt to use for tax deduction.

Prefabricated foundations and panelized or modular construction can significantly reduce the time it takes to get to a watertight shell—minimizing winter weather's negative effects on exposed construction, including mold.

It's a win-win situation, building a home with consideration for the environment—at little or no extra cost. **ME**

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