How Green is Your House?

By Richard Stanley

Once we thought we lived in a world of unlimited bounty and opportunity. Now we know better. To maintain a high standard of living, our goal must be to make "green" choices to conserve resources at home, for example:

Construction Ideas

- **Size matters**. The average new house in the 1950s was about half the size of the average new house today. The present trend of constructing "McMansions", the Hummers of housing, is shamefully gluttonous. Does anyone really NEED, for example, a 5,600 square foot house in a neighborhood where the surrounding houses are about half that size? Think of the future costs just to heat or air condition these hulks. Recently, the L.A. city council passed an anti-mansionization ordinance both to limit over-scale infill housing and to preserve the present scale of neighborhoods such as Los Feliz and Silver Lake. Property values will be supported by this ordinance, too, as homogeneity adds value to a neighborhood.
- **Expose yourself.** Orient the house toward a southern exposure and build broad, over-hanging eaves. The eaves will shield the house from the summer heat when the sun is high overhead, while allowing the sun to heat the house when the winter sun is low on the horizon.
- **LEED the way.** Ask your architect about how your home can employ LEED certification (Leadership in Energy and Environmental Design) ideas. Even though intended for commercial buildings, LEED can inspire domestic construction. You'll gain while you live in the house—and when you go to sell.

Anytime Ideas

- **Once more with feeling**. Innovative architects are using recycled materials in construction. These materials range from used shipping containers to recycled wood and wood certified as produced according to Forest Stewardship Council standards.
- **Something in the air**. Paints and coatings are available to reduce the release of chemicals harmful to the atmosphere and your health—look for products with a low-VOC (volatile organic compound) rating. Insulation is a great future energy-saver, however, some insulation and other building materials off-gas formaldehyde and other harmful gases.
- **Thanks, but no tanks.** New "tankless" water heaters heat water on demand only—no need to waste energy maintaining a big tank of heated water. Further, you'll never run out of hot water with a tankless heater.

Like many eco-friendly products, the initial cost is more, but the long-term benefits are attractive. Tankless water heaters typically cost about $3,000 to $4,000 to install, mainly because of the re-routing of plumbing, gas and electric lines (some rebates may apply). A side benefit is that their small size can free up a closet-sized space inside, while moving the risks of water, gas and exhaust leaks outside.

- **Fasten your sun belt.** Solar panels have come a long way from the black tubes-on-the-roof days of the 1970s. Sure, the black tubes can still heat pools efficiently, but today, photovoltaic cells are the latest. The initial cost of these systems is not cheap. The 2-kilowatt system I put on my south-facing roof (another advantage of southern exposure!) cost about $19,000 in 2000, but with rebates and tax credits, the net cost to me was about $7,500. Similar incentives exist today. I figure that by 2012, I should break even. In the meantime, I just LOVE watching my meter spin backwards—and paying about 50¢ a day for electricity.
- **Wave good-bye.** If you're building or changing out windows, double-paned windows that control heat transfer and solar energy will offer great savings over time. If your existing windows are single-pane, ordinary glass, you still have options. Recently, I tinted most of my windows with "low-e" (low-emissivity) film that almost eliminates ultraviolet and infrared light waves and reduces visible light about 50%. (Tip: get the non-metallic film that is more transparent and reduces glare, too, especially at night.) I expect most of the fading effects of sunlight will be eliminated. The film also protects the glass from shattering dangerously. What I didn't expect was that those warming winter rays were reduced, too. Now, when I switch on the heat earlier on winter evenings, I muse, "There's always a compromise"—even with the best of intentions.

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