

OPINION GREEN ENVY

What are the true environmental benefits of the “green” house movement?

By Jane Powell

“Green building” is the feel-good trend of the moment. Cities stipulate it, builders market it and home buyers supposedly demand it. Who could be against it? It’s the panacea that will combat global warming, prevent sprawl, revitalize our downtowns, contribute to the region’s economic growth and keep California on the leading edge. So everyone is embracing green building as if they were French kissing George Clooney. It always sounds easy -- you just get some low-VOC paint, some linoleum, some wheatboard cabinets, make your garden gate out of cast-off Volvo parts, and presto! -- greenness is achieved without any serious thinking about the real effects of your choices on the planet. The reality is far more complicated. The “easy” choices are a cop-out -- not that you shouldn’t do them -- but they won’t balance out that SUV you’re driving.

‘Green building’ is an oxymoron

Building or remodeling uses up resources, even if those resources are recycled or salvaged. The greenest thing you can do is continue the life of an existing building, whose resources have already been extracted. Retrofitting an existing building for better energy efficiency, lower water use and so forth is greener than building new.

There is an all-too-common practice of demolishing a small existing building in order to throw up (I use the term deliberately) a larger “green” building, as though the small building had volunteered to be the virgin (timber) sacrifice on the altar of “smart growth.” Often it is promised that materials from the building will be reused, but I guarantee there is one thing that never gets re-used: lath. A small pre-World War II house contains several thousand linear feet of lath, all sawn from old-growth timber, which, even if recycled, will simply end up as mulch. We dutifully recycle our aluminum cans, yet demolishing 10,000 square feet of old buildings wipes out the environmental benefit of recycling 2,688,000 aluminum cans, according to figures compiled by Donovan Rypkema of Place Economics in Washington, D.C. We are also assured that these “green” replacement buildings will prevent farmland from being paved in the Central Valley, though really the only connection between these two things is a different kind of green -- the kind with dead presidents on it. Erecting a green building in the city will not prevent even 1 square foot of farmland from being developed as long as there is money to be made in doing so.

How many legislators does it take to change a lightbulb?

For the past umpteen years various people and organizations have tried to browbeat us into using compact fluorescent bulbs (CFLs). People have been remarkably resistant to doing so. So Assemblyman Lloyd Levine (D-Van Nuys), Chair of the Utilities and Commerce Committee, is attempting to legislate a ban on incandescent bulbs by 2012. We already have Title 24, a piece of legislation that mandates hard-wired fluorescents in kitchens and bathrooms, among other things. The push for fluorescents ignores the fact that greater energy savings could be achieved through better wall and ceiling insulation, or low-interest loans or grants for solar power. It’s not the incandescents that pollute (unlike CFLs, which contain mercury and can only be recycled at hazardous waste collection centers, not that anybody bothers...), but it’s the production of electricity used to power them that’s the issue. However, addressing that end of the problem doesn’t lend itself to a sound bite.

One notes there is no talk of banning SUVs, wide-screen TVs or whirlpool tubs. CFLs are all produced in China, where wages and environmental standards are lower. Although the EPA (energystar.gov) says CFLs last 10 times longer than incandescents (about seven years), they admit the average life is more like five years, which means some don’t even last that long. Lamp life, according to General Electric, is defined as the point when 50 percent of the bulbs in a statistically large sample have died. Under laboratory conditions, half of the CFLs will have gone out at 10,000 hours (six hours per day

equals 4.56 years). In less-than-ideal conditions in a house, they will often die sooner -- in enclosed fixtures or humid bathrooms because the heat- and moisture-sensitive ballasts will fail prematurely, or in places where they are switched on and off a lot. LEDs may be the answer, but they aren't widely available, and at the current price of \$50 for an LED with a standard Edison base, I don't think many people will be rushing out to buy them.

Hasta la vista, baby

No discussion of green building comes without a recommendation for using double- or triple-glazed window sashes, even though that will only create a minor increase in its insulation rating (as opposed to a major increase for an insulated 2-by-4 wall). PG&E will happily give you a rebate to replace your single-glazed windows with new double-glazed ones, ignoring the fact that the average life span of a double-glazing unit is only 10 years (some companies now offer a 20-year guarantee), or that a single-glazed window can be equally energy-efficient with the addition of a storm window, according to a study conducted by the Oak Ridge National Laboratory.

How green is it to replace your windows every 10 or 20 years? Even the U.S. Green Building Council realizes that replacing single-glazed windows in existing buildings makes no sense, saying, "taking a window from R-1 to R-3 (insulation rating) will not provide sufficient energy savings to offset the cost of replacement windows and associated waste. Historic windows were constructed of dense old growth wood. The life cycle of modern replacement windows is much shorter." Millions of wooden windows are sent to landfills every year, and the few that aren't are languishing at the local salvage yard. New wood windows use fast-growing lumber, which is less durable. Worse, many new or replacement windows are vinyl (PVC). Vinyl is a petroleum product and toxic chemicals are used in manufacturing it. PVC resin is useless on its own and requires stabilizers made from heavy metals in order to be used for windows. Vinyl is also ubiquitous, therefore difficult to avoid -- your shower curtain, your electrical wiring, the dashboard of your hybrid car -- all vinyl.

Size does matter

In 1970, the average house was 1,500 square feet. Nationally, it's now 2,200, and in the Bay Area, new houses average closer to 3,000 square feet. Ted Turner's daughter, Laura Turner Seydel, recently completed a 6,000-square-foot "Eco-Manor" in Atlanta. I suppose it's better that rich people build green, but according to Fortune magazine, her husband is currently lobbying the U.S. Green Building Council to ease their restrictions for LEED (Leadership in Energy and Environmental Design) certification, because the USGBC favors small homes, which effectively penalizes the rich and their need to live large. Cue the violins. Do they want points for not building a 12,000-square-foot house?

Hypocritical mass

None of us are free of environmental sin. I own a historic 3,800-square-foot house containing an obscene amount of old growth timber. I can't bring those trees back -- all I can do is lessen the building's environmental footprint as best I can, with more insulation, storm windows, a more efficient furnace. In this, like most of us, I get no financial help. The "Eco-Manor" cost \$1.5 million -- most of us are not in that income bracket. We do what we can -- turn down our thermostats, try to recycle, drive less. We do that because we feel powerless against the real issues: overpopulation, a government that protects corporate profits, an economy based on continually escalating consumption. On some level we are aware that if things were different we would already be driving electric cars that recharge through photovoltaic cells on the roof, free solar power would have been provided on a huge scale, along with free insulation for every building lacking it. Instead of spending billions on the war in Iraq, we would be using those billions to provide birth control and education for women worldwide. Green building is a good idea, and certainly if you're going to build or remodel, try to be as green as possible -- but don't fool yourself that it's going to save the planet.

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