

Top 10

Green Green Green Green

Building Myths

BUSTED BUSTED

10 "Green" building is a passing fad.

Locating buildings to take advantage of solar orientation, prevailing breezes, and natural features, while using locally available natural materials, are "green-building principles" that have been practiced for centuries. Unfortunately, we've forgotten many of those lessons, allowing machines and cheap energy to define our buildings and lifestyles.

Frank Lloyd Wright coined the term organic architecture early in the 20th century, with designs shaped by their environment. During the Environmental Movement of the 1960s, R. Buckminster Fuller outlined in his *Operating Manual for Spaceship Earth* an approach to resource efficiency and balance, while Ian L. McHarg's *Design with Nature* continues to influence work on design integration with nature. The Energy Crisis of the 1970s placed new emphasis on passive design, energy efficiency, and alternative energy sources. The demand for increased energy- and material-efficient buildings will only grow as the scarcity of these commodities increases.

9 "Green" materials are not available.

Manufacturers are learning that green products can recapture lost profits by mitigating potential liabilities while reducing waste, and they're using them. Products such as gypsum board, acoustic ceiling panels, and linoleum have had a certain recycled content for years. Likewise, steel and aluminum have been recycled since the war years. New and innovative products of sustainable natural materials, agri-byproducts, and increased recycled content join the market daily. The demand for and development of green-building products will only increase as raw materials become more depleted and costly, landfill becomes no longer an option, and clients become more environmentally aware.

8 Owners aren't concerned about "being green."

The May 2002 issue of *Environmental Building News* reported that there are currently 32 local and state government-sector green-builder initiatives either under way or being planned. This does not include the many federal green-building programs in place for such agencies as the Department of Defense, the Environmental Protection Agency, the National Parks Service, the U.S. Postal Service, and the Forest Service. The Clinton White House was a leader in government initiatives, with a program called the "Greening of the White House," which included the Old Executive Office Building. Corporate owners, school districts, and university systems continue to adopt green-building programs emphasizing LEED™ (Leadership in Energy & Environmental Design) rating criteria. Meanwhile, acceptance and demand for sustainable homes have resulted in green subdivisions in Illinois, South Carolina, Arizona, and Idaho.

7 "Green" building is easy. It's only common sense.

Green design is a holistic process; it's not merely slipping in green materials here and there. Green design requires much more pre-planning and research, with a closer collaboration between design and engineering, to achieve "living machines" more precisely engineered than conventional buildings. Green-building design is a process of doing more with less, of finding efficiencies in systems and materials that will not only result in less energy use, but also extend the building's life well beyond the traditional 50-year life cycle. This process requires an integrated team approach, in which measurable goals are established at the project's inception and design alternatives are explored, documented, and evaluated for long-term performance, while being sensitive to the environmental impact of those decisions. Design team members must be re-educated in the practices and synergistic opportunities available through sustainable practices.

6 Construction waste management is a waste of time.

Construction waste-management practices implemented on the job site can dramatically reduce "tipping fees" for landfilling waste. Contractors have demonstrated that construction waste management not only saves money, but it actually generates a profit through recycling, while providing a cleaner, safer workplace. Markets for many construction waste materials—such as cardboard, wood, concrete, metal, and glass—are available in most areas of the country, and these revenue opportunities are increasing daily, as recyclers' demand for postconsumer material increases. According to the Associated General Contractors (AGC) of America, "The recycling market can produce 10 times more jobs in the industry for the same cost as sending the waste to the landfill."

5 "Green" buildings cost more.

Innovative green-building designs have demonstrated that cost-efficiency is not sacrificed for environmental stewardship. On the contrary, achievement of sustainability through an integrated balance of materials and systems has shown that sustainability can be as cost-effective as conventional projects. The real challenge is for owners and architects to think long-term, rather than first-cost. When we factor in energy savings over time, or increased durability, or enhanced worker productivity, green design features and materials become much easier to justify.

The impact of a building's life-cycle cost has far greater significance than initial cost for successful financial return. Studies show that initial design and construction costs account for only 2% of a building's life-cycle cost over 30 years. Employees, an owner's most expensive asset, account for 92% of a building's life-cycle cost over that same period. Easily, a 1% improvement in worker health and productivity could justify additional up-front costs for indoor environmental improvements. Life-cycle cost benefits should be particularly inviting to healthcare facility owners, who traditionally occupy and use their buildings over a 40- to 50-year life span.

4 "Green" building is the architect's responsibility.

Green buildings begin with a commitment from the owner to build to a higher standard and require a close collaboration among all participants. The design team must be educated and oriented to the goals, costs, and benefits of green building. Stakeholders, including users, operators, builders, designers, and owners, need to work together to define requirements and identify sustainable opportunities.

3 "Green" designs look strange and different.

There is no such thing as a green architecture "look" or a green aesthetic. The application of design expression is no different than with traditional architecture. The first 12 buildings to achieve LEED Pilot Program Certification in March 2000 have no common "green look," nor do the 10 projects recognized by the AIA for Earth Day 2000.

2 "Green"-building information is not readily available.

The focus on sustainability has produced a tremendous amount of information. It's coming not just from academia and industry, but from all corners of intelligent thought. The more appropriate question is, where does one look first? Whether the subject is design, materials, manufacturing, specifying, or ecology, there is a wealth of information available; it's a matter of narrowing one's focus for a more effective search.

A simple search of the Internet using the words "sustainable" or "green" will uncover a number of leads, as will a similar subject search in the library. During the first annual International Green Building Conference, held in November 2002 in Austin, Texas, the conference bookstore did a brisk business between sessions. An array of books and guides on green building were displayed and first released at the show. The State & Local Government Toolkit, published by the U.S. Green Building Council (USGBC), is a central depository of information on existing green-building programs and the USGBC's LEED Rating System. [To obtain a copy, contact USGBC at (202) 828-7422.]

1 "Green" buildings don't work.

Green buildings, while offering greater occupant satisfaction, are proving to be far more efficient to operate, while offering healthier work environments. Operation and maintenance costs are reduced through more efficient use of resources. A number of studies have found that increased worker productivity and reduced absenteeism have been direct results of green design practices. In sum, green building is not just about being a good environmental steward. It is also about constructing a stable, reliable, energy-efficient building that makes economic and business sense.