

Wood and Green Building

HOME BUILDER GUIDELINES

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According to the National Association of Home Builders (NAHB), green built homes will account for up to 10% of new construction by the year 2010—and two thirds of all home builders expect to be involved in green building to some degree by the end of this year. Given the fact that most of the wood consumed in North America is used to build homes, this could have a significant impact on the industry and its customers.

Because wood is an inherently “green” material, the trend toward green building represents an opportunity. In addition to being the only major building material that’s renewable and sustainable over the long term, studies have shown that wood is superior to steel and cement in almost every environmental impact category. At the same time, green building has given another platform to those who want to minimize wood use in favor of other materials.

The debate is being waged through dozens of national and local green building programs across the country. Though different in scope and emphasis, most have a common goal of giving builders and others the information they need to create homes that are energy-efficient, use water and resources wisely, are healthy to live in and minimize pollution. However, one place they differ is in their treatment of wood.

Until recently, most residential green building programs were created for specific cities. Those that were national tended to focus on energy—such as the US EPA’s Energy Star® program—or were created for educational purposes and didn’t allow builders to rate and certify homes. The two programs described below are relatively new to the market. They’re national in scope, encompass all aspects of green building and highlight the main differences in how wood is treated. Both are points-based systems that can be used to achieve a certified rating of performance.

National Association of Home Builders (NAHB) Model Green Home Building Guidelines

Developed for mainstream builders, the NAHB guidelines are used by individual Home Builder Associations as the basis of their own locally relevant programs. The NAHB is also seeking to have its guidelines recognized as an official standard by the American National Standards Institute (ANSI).

In terms of wood use, a key element of most programs is making sure that products come from sustainably managed forests. The NAHB guidelines are inclusive in that they specify the use of wood certified through various credible organizations and/or systems, including the Canadian Standards Association, Sustainable Forestry Initiative, Forest Stewardship Council, and American Tree Farm System. They also reward renewability, and emphasize resource-efficient designs that optimize the use of natural resources. For more information, please visit www.nahb.org.

Wood and Energy-efficiency

With most rating systems, wood use is rewarded in the context of renewability, sustainability and/or the purchase of environmentally preferable products. But it can also be used to help meet overall energy-efficiency objectives. Because wood has better insulating value than other materials, a wood-framed home can minimize the energy needed for heating and cooling—which represents about 45% of most utility bills.





US Green Building Council (USGBC) LEED for Homes

LEED® for Homes (Leadership in Energy and Environmental Design for Homes) is the latest offering from the USGBC, which markets a number of well-entrenched LEED products for commercial construction.

As with other green building programs, LEED for Homes rewards the efficient use of materials and practices that lead to long term durability. However, it has two clauses that create an unfair bias against wood use. First is the fact that it only rewards timber certified as sustainable by the FSC, which is just one of several credible systems and represents less than 1/6 of certified forests in North America. It also places an emphasis on materials that are extracted, processed and manufactured within 500 miles of the home being built. Although this does make sense in many cases, it doesn't account for the fact that different materials have vastly different environmental impacts. Locally produced steel, for example, may be harder on the environment than wood harvested farther away, even with the impacts of transportation. The only way to impartially judge the relative impact of materials is through life cycle assessment (LCA)—which considers measurable lifetime performance.

For information on wood and LCA, please visit the Athena Sustainable Materials Institute at www.athenasmi.ca or the Consortium for Research on Renewable Industrial Materials at www.corrim.org. For information on LEED for Homes, visit www.usgbc.org.

Local Green Building Programs

In addition to these national programs, many individual cities have their own highly successful initiatives. The following examples have been chosen for their stature as well as the associated level of construction activity. Information on these and other programs can be found at www.beconstructive.com.

TEXAS

City of Austin Green Building Program, Austin Energy
www.austinenergy.com

- Wood neutral; no certification requirements

COLORADO

Built Green Colorado, HBA of Metro Denver
www.builtgreen.org

- Wood neutral; requires certification through any credible system

OREGON

Green Rated, City of Portland
www.green-rated.org

- Primarily negative; program accepts SFI certification but prefers and promotes FSC; rewards "rapidly" renewable materials only (rotation of 10-years or less)

FLORIDA

Green Home Designation, Florida Green Building Coalition
www.floridagreenbuilding.org

- Wood neutral; requires certification through any credible system

ARIZONA

Green Building Program, City of Scottsdale
www.ci.scottsdale.az.us/greenbuilding

- Generally neutral, though with negative elements; accepts FSC and SFI certification; rewards "rapidly" renewable materials (rotation of 10-years or less)

GEORGIA

EarthCraft House, Greater Atlanta HBA
www.earthcrafthouse.com

- Wood neutral; no certification requirements

COLORADO

Green Points, City of Boulder
www.bouldercolorado.gov

- Wood neutral with negative elements; requires FSC certification

CALIFORNIA

California Green Builder Program, Building Industry Institute
www.thebii.org/cgbp.asp

- Focuses on energy-efficiency; does not include building material use

CALIFORNIA

Green Building Guidelines
Alameda County Waste Management Authority
www.stopwaste.org

- Neutral with negative elements; requires FSC certified wood

NORTH CAROLINA

Green Builder Program
Western North Carolina Green Building Council
www.wncgbc.org

- Wood neutral; requires certification through any credible system