

Q&A with Michelle Moore on LEED for Homes

Residential structures are responsible for 21 percent of U.S. carbon dioxide emissions—a little less than half the total CO₂ emissions of buildings as a whole, says a U.S. Green Building Council senior vice president.

As a senior vice president of the U.S. Green Building Council (USGBC), Michelle Moore is responsible for the organization's policy and advocacy campaigns and communications strategy promoting its mission of market transformation. Initiatives under her stewardship include USGBC's partnership with the Clinton Climate Initiative, its national Green Schools campaign, and the Leadership in Energy and Environmental Design (LEED) for Homes program. Before joining USGBC in 2004, Moore's work focused on the intersection of technology, entrepreneurship, and sustainability. She developed Interface Inc.'s E-business program in the mid-1990s and later helped launch a successful tech startup. Before moving to the private sector, Moore worked in politics in both the electoral and policy arenas.

Why did the USGBC decide to launch a LEED for Homes rating program? And why now? Why not five years ago—or three years from now?

Like all of USGBC's programs, the development and launch of LEED for Homes was driven by our mission of market transformation. To have a sustainable built environment, the residential community has to be at the table. In terms of the timing, the technical development of the LEED for Homes program was actually kicked off in 2000. The fact of its national launch now is a happy intersection with a massive wave of consumer and builder interest. The changes and change in mindset that are occurring in all sectors of our economy and our society—rising energy costs, the inevitability of a price on carbon, an awakening to the connection between living sustainably and living well, the realization that

green is good business—are all driving the rapid mainstreaming of green building practices. Education—for builders, homebuyers, and Realtors—is going to be critical to keeping up the momentum.

What was the process for creating the LEED for Homes rating system? How rigorous was it? Who was involved?

LEED for Homes is technically rigorous. If you build or buy a LEED-certified home, you can have confidence that it represents the leading edge of green homebuilding. It doesn't have to cost more than a conventional home. It will, however, require an investment of time in professional education. Balancing cost with innovation is also about choices, like investing in cutting-edge energy- and water-saving technologies instead of imported marble for the bathroom.

LEED for Homes was developed through consensus by the LEED for Homes Committee, which is made up of diverse representatives of stakeholders in homebuilding. For example, six of the largest green homebuilding initiatives in the country have been represented on the LEED for Homes Committee, together with manufacturers, builders, and designers. As a part of its work, the committee conducted a homebuilder review during which homebuilders from around the country shared their input.

The resulting draft of LEED for Homes then went into a two-year pilot testing period overseen by 12 LEED for Homes providers—experienced local and regional organizations that have strong ties to both existing green homebuilding programs and the national network of home energy raters.

Over 400 builders and 6,300 homes were enrolled during the pilot



phase. Their participation and suggestions during this trial period led to more than 200 further refinements of the LEED for Homes rating system.

Next, LEED for Homes entered the first of two public comment periods, which gave any and all interested stakeholders an opportunity to provide feedback on the draft rating system prior to its release. The final step in the consensus process USGBC used was a ballot concerning the rating system, which gave USGBC's full membership the opportunity to vote yes or no on its national release. LEED for Homes passed the ballot with flying colors this past December.

What differentiates LEED for Homes from other green residential programs?

There are more than 80 local and regional green homebuilding programs in the United States, and LEED was developed to work in harmony with these programs by providing a national benchmark for defining leadership in green homebuilding. LEED's technical rigor is consistently applied everywhere, and it is further distinguished by third-party certification. So, like the LEED rating systems for com-

mercial construction, each project is required to submit documentation that demonstrates that it meets LEED requirements, and is subject to independent verification.

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The value of LEED as a national benchmark to the residential market as a whole is that it can generate economies of scale. For instance, for a manufacturer or a national

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builder/developer, tracking the requirements of nearly 100 local programs is a lot harder than aligning the investment in sustainability to a single, national benchmark.

In practice, consistent with USGBC's collaborative approach, LEED is typically offered alongside the local or regional green homebuilding program as a national distinction. New Mexico has already passed a green home tax incentive recognizing both LEED and New Mexico's local green homebuilding program.

Is "bioregionalism" factored into the LEED for Homes criteria?

LEED for Homes is designed to work equally well in all parts of the country. It incorporates different criteria for various climate regions, precipitation zones, radon zones, and termite infestation zones. The program also awards credits for regionally appropriate design and construction.

How do the LEED for Homes criteria mandate a reduction in greenhouse gas emissions?

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There are many factors that contribute to greenhouse gas emissions from our homes, including building materials, transportation of building materials, and water usage—but chief among these factors by far is energy consumption. Leaving the lights on keeps the coal-fired power plants running.

LEED looks at the overall energy performance of the home and requires the Energy Star for Homes program, which is based on HERS [Home Energy Rating System] ratings. With Energy Star as a prerequisite, paired with an aggressive series of additional credits for energy efficiency, LEED-certified homes consistently use 30 to 50 percent less energy than conventional homes, which means at least 30 to 50 percent reductions in greenhouse gas emissions. Other LEED credits like the use of locally produced materials and water efficiency also contribute to greenhouse gas reductions, although they are harder to measure.

How important are compact development and mixed-use development to the LEED for Homes program?

LEED for Homes includes a new category, location and linkages, which rewards projects located within neighborhoods that have walkable access to shops and services, public transportation, existing infrastructure, and/or publicly accessible open space.

In addition, projects earn points when incorporated into compact development patterns that conserve land and habitat and protect watersheds. Providing alternative modes of transportation is also recognized.

Many people in the United States think green homes are too expensive. Are LEED for Homes-rated residences more expensive than conventional homes?

The net cost of owning a LEED Home is comparable to that of owning a conventional home. While high-design, high-priced green houses may be more likely to get headlines, there are a large and growing number of affordable housing projects that have earned LEED certification. They stand as the best demonstration that you can build green on a budget. Moreover, the energy savings and access to public transportation associated with a green home are arguably even more important to families living on a modest and tightly constrained budget. Research has shown that the cost savings associated with living in a green affordable home can add up to 10 percent of annual household income.

Some green home technologies and systems may cost more until the market for them reaches sufficient scale for prices to come down. In those instances, it's a matter of consumer choice. For instance, if you lived in Atlanta and had 70 days of water reserves remaining, would you invest in rainwater harvesting and a graywater system so that you weren't literally flushing drinkable water down the toilet? Maybe. Would it be more expensive than sending runoff and water from your sink directly into the sewer system? Yes, for now it is.

To offset potential additional first costs of these kinds of technologies, the federal government, states, cities, and utility companies are increasingly offering a variety of incentives and rebates. Solar panels and solar water heaters are the most recognized focus of incentives, but rebates and other programs are also available for weatherization and other lower-tech efficiency measures.

Another source of cost savings is insurance discounts for green

homes. LEED-certified homes provide a healthier indoor environment with cleaner air and fewer indoor toxins. Some insurance companies are recognizing the link to lower risk and are offering discounts.

How does LEED for Homes address the need for affordable green housing?

Working to ensure that every family has the opportunity to choose a green home regardless of its level of income demands collaboration and an ongoing focus on policy and financing.

USGBC has worked closely with Enterprise Community Partners, and with the support of the Home Depot Foundation, to ensure that LEED for Homes works for affordable housing without adding costs.

We're also delivering professional education to affordable housing builders and developers, educating policy makers about the benefits of green homes for families who need affordable housing, and demonstrating to financial institutions the economic benefits of green homes to the individual and in the aggregate.

Can LEED for Homes be applied to manufactured homes?

LEED for Homes can be applied to manufactured housing, but it hasn't yet been in any great number. Among our plans for future refinements to the rating system is to develop a specific protocol for the certification of manufactured homes.

Does the current version of LEED for Homes address green renovations of existing homes, which greatly outnumber new construction?

LEED addresses the home as a complete system. So while it is an appropriate tool for a major home renovation, its scope isn't well matched for a kitchen and bath remodeling project.

Therefore, for the vast home-renovation market, we've taken a different approach that we're confi-

dent is better suited for the needs of designers and contractors, as well as for the homeowner. USGBC has partnered with the American Society of Interior Designers [ASID] to create the ReGreen Residential Remodeling Guidelines. ReGreen offers detailed best-practice guidelines for green home renovations. ReGreen is available free for download at www.thegreenhomeguide.org.

How is the USGBC going to expand the LEED for Homes program in the future?

USGBC doubled the reach of the LEED for Homes program this spring by significantly expanding our local provider network. Creating these local linkages is essential to meeting the needs of homebuilders and increasing the availability of certified homes.

In alignment with the expansion of our local network, USGBC will be focusing on education. With the residential homebuilding market in sharp decline in most cities, smart homebuilders will be investing their time creating a competitive green edge—getting ready to respond to what McGraw-Hill [publisher of McGraw-Hill Construction reports] estimates will be fully 10 percent of the housing market by 2010.

We'll also be continuing to reach out to consumers, offering a diverse range of online programs both at www.thegreenhomeguide.org and through partnerships. LEED certification is one tool for consumers to know what's green and what's greenwash. But knowing what to ask your builder, your Realtor, or your design professional is going to be just as important. **UL**

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