From Cutting Edge to Common Practice: How Green Building Rating Systems Contribute to Energy Efficient Building Codes

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2010 was a big year for building energy efficiency and state and national codes. The success of the year can be directly traced to decades of familiarity with green building programs as well as nationwide uptake of LEED. After more than 40 years of mere modest improvements in building energy efficiency (looking specifically at the predominant national model energy codes, ASHRAE Standard 90.1 and the IECC), we achieved an approximately 30% efficiency improvement in the last six years and got a first-in-the-nation green building code in our most populous state. Note the U.S. Department of Energy chart below mapping improvements in commercial building energy efficiency since 1975:

It's easy to argue that these efficiency improvements (which are mirrored in comparable efficiency improvements in residential building energy codes) are a product of the natural course of time. But these leaps would have never come to be without the huge groundswell of support from energy efficiency advocates across the country, the organizations coordinating their efforts, and above all a growing vision that we can do better: A lot better.

Bipartisan coalitions and businesses big and small have found common ground in the achievability and affordability of such leaps in efficiency. A closer look reveals a growing consciousness of the ability of buildings and communities to achieve levels of performance beyond the minimum thresholds set in even the most recently updated base building codes and standards. Minimizing pollution and toxicity, reducing vehicular miles traveled, improving water efficiency and incorporating on-site energy from renewable sources are now seen as not only viable but increasingly standard practice in the building industry. In many cases, all of these benefits are realized at no extra cost (especially for the seasoned project team).

Green building rating systems – both the locally developed programs like the nation's first in Austin, Texas or like California-based GreenPoint Rated program and nationally developed and recognized programs like LEED – have had major successes in driving the market to demand better buildings. As early as 2000, LEED building owners were realizing the benefits of higher occupant satisfaction, decreased water and energy use, and the improved marketability of a recognized brand that provides meaningful third-party verification for better building design and construction.

As consumers drove the demand for more and more green real estate, states and local jurisdictions took advantage of the opportunity to showcase the feasibility of these next-generation technologies and methods by demonstrating leadership on public buildings or providing incentives for the private sector to do the same. The climate was right for a handful of jurisdictions to even take the next step and incorporate these rating systems directly into their codes.

And while these intentionally beyond-code, voluntary, third-party verified certification programs were not designed to function like mandatory building codes, the increasing interest in applying them as such initiated the development of a complementary tool intended to raise the floor. By the end of 2006, ASHRAE Standard 189.1 was under development and so was the massive overhaul of the LEED Green Building Rating System, in response to the demand for rating system standardization and a more differentiated value attribution for building measures with greater environmental benefits.

The 2010 release of the International Green Construction Code (jointly released by ICC, USGBC, ASHRAE, AIA, IES and ASTM and including Standard 189.1 as a jurisdictional compliance option) now provides jurisdictions with an adoptable, usable and enforceable code to raise the floor for all buildings. This set of codes and standards is a critical complement in the policy toolbox to green building rating systems, like LEED, that are often adopted to demonstrate leadership in public buildings and for projects seeking government incentives. And while the IGCC was released as a fully published code in March of 2010, later this year we will welcome its 2012 version, and the next version of LEED not long after. We will then look forward to ushering in a new age of improved base codes, integrated green building codes, and next-generation beyond-code green building rating systems like LEED, each working with one another in an important, distinct and complementary manner.

On the road to truly sustainable buildings and communities, it's not a choice between minimum green building codes and beyond-code green building programs. We need both.

The cycle is virtuous. We need rating systems like LEED to continue to serve as

the proving ground for technologies, methods, verification protocols, and more aggressive levels of efficiency. As those practices are adopted by market leaders, innovators and building industry pioneers, they too will be incorporated into code books of progressive jurisdictions, which will in turn inform the base codes – the building code, the plumbing code, the mechanical code, the fire code, the zoning code, and so on. Rating systems and green building codes play distinct, complementary and ultimately vital roles on the road to sustainable buildings and communities, and when applied on a broad scale, speed up the conveyor belt of green building information – from groundbreaking and leading-edge to common practice.

We hope you'll join us in embracing both rating systems *and* codes, both carrots *and* sticks. We need every tool in the toolbox – particularly the push and pull forces of these separately-intended, but equally important rating systems and codes – to carry out our mission and achieve our vision.

For more on USGBC's work on green building codes, read USGBC's white paper, *Greening the Codes*.

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