

Green Crisis Averted:

Tips for avoiding the pitfalls of green building

Shawn R. Gaines

The industry needs to go green—no doubt about it.

According to the U.S. Green Building Council (USGBC), buildings account for 36 percent of total energy use, 30 percent of greenhouse gas emissions and 30 percent of raw materials used in the United States. Builders are uniquely positioned to play an active role in the green movement.

However, the movement is still relatively new. The USGBC formed in 1993 and its primary certification system—the Leadership in Energy and Environmental Design (LEED) rating system—was first standardized only ten years ago, with alterations and multiple levels of certification added along the way.

“Certification is confusing and complicated,” says Ed Begley Jr., actor, environmentalist and spokesperson for the eco-friendly design organization MyGreenCottage. “Many builders attempt to learn as they go, resulting in expensive mistakes, cost over-runs and unnecessary delays.”

Don’t give up hope. The sustainability industry is more ubiquitous than ever and ten years of LEED is plenty of time to flesh out a host of pitfalls that companies can learn from and avoid either during their first foray into green building or subsequent projects.

STAY FLEXIBLE

For some builders, one of the most fleshed-out aspects of LEED certification can also be the most restricting. Levels of LEED certification are based on acquiring specific points, awarded for anything from limiting pollution of natural water by managing storm water runoff (one point) to increasing overall energy performance by at least 42 percent (ten points).

The current version of LEED for New Construction and Major Renovations—version 2.2—stamps a building as certified at 26 points, Silver at 33, Gold at 39 and Platinum at 52. However, the quest for points can easily become a builder’s hamartia.

Miriam Landman is a green building advisor and educator, involved with the green movement for nearly two decades. She has seen the points pitfall take its toll firsthand—a contractor nearly ended up doing more harm than good to the environment in a sprint for a LEED point.

According to Landman, a contractor was completing a large commercial project and added white membrane roofing. The contractor believed the roof would achieve the LEED threshold for sustainable roofing (one point). However, after the paperwork was filled out and LEED points were distributed, the roof fell short.

The contractor’s project manager wanted the LEED point so badly that he suggested the contractor dispose of the roof and replace it with a brand new one that would meet LEED requirements. At that point, Landman, as consultant, spoke up.

Landman pointed out that a new roof would not be a wise move. The building had a perfectly good roof—highly reflective and just short of a LEED credit—and a replacement wouldn’t improve much while being a great expense.

“That would really go against the intent of the rating system,” says Landman. “They just got so caught up in the point scoring that they considered doing something that was wasteful from both a financial and a materials perspective.”

Most importantly, Landman assured the contractor that there are other ways to achieve extra points within the LEED rating system. For example, green power (one point) can be added to a construction at the last minute. In fact, the contractor eventually took a different route and obtained the last point needed for LEED certification.

“Some builders hold so stubbornly to certain criteria that they lose sight of the big picture,” says Begley. “Builders need to weigh decisions case-by-case, using common sense.”

Begley has seen occasions when LEED-certified wood had to be shipped hundreds of miles to a given construction site—a case where the carbon emissions easily negated the advantages of the green action.

Not all LEED points apply to all projects equally and builders need to avoid getting caught up in the points game before they lose out environmentally and financially. Builders should also be aware that the LEED rating sys-



Ed Begley, Jr.



tem takes into account possibilities for independently designed green innovations (one to four points).

HIRE THE RIGHT PEOPLE

With so many ins and outs inherent in LEED certification and the overall green process, having the right people on board with a project may be a first-time green builder's most valuable asset.

Landman recommends hiring at least an architect or an engineer with green experience for a developer's first green project, especially in cases where the developer is seeking LEED certification. An experienced contractor and a green consultant can also be beneficial. "There's a learning curve and usually after a project or two it just becomes part of the process," says Landman.

Of course, finding the perfect green team can feel like an impossible endeavor. Alice Cook, the Director of Sustainability for New York's Time Equities, Inc., spends a tremendous amount of time interviewing potential team members and reviewing project experience when identifying the ideal team for a new real estate project.

She has discovered the increasing difficulty of finding team members that can devote the necessary time and energy to a project without spreading themselves too thin.

"The industry is swamped—it's booming," says Cook. "It's funny with the economic downturn, but good consultants and engineers are very busy. It's hard to get them

to focus their attention on your project when they have 20 other projects as well."

Cook also warns against claims and titles that might not reflect a potential team member's actual experience. Architects that refer to themselves as green could be referencing a range of green experience, anything from the complete layout of a massive project to the most insignificant detail in a small construction.

Industry professionals are also wary of heightened expectations consigned to LEED Accredited Professional (LEED-AP) designation. The LEED-AP exam is composed exclusively of multiple choice questions with a passing grade set at 75 percent. A quick study can potentially result in accreditation, even if the test taker has no tangible experience with LEED. Preparing for and passing the test is better utilized to simply inform professionals about LEED standards, rather than identify expertise.

INTEGRATE DESIGN

Cook's nominee for the biggest challenge with LEED is integrating green initiatives into a project's naturally changing time line. "Project time lines are shifting and so the LEED time lines shift as well," says Cook. "However, the LEED consultants aren't always as in tune with the project as the architect or engineer."

In traditional buildings, adding systems is typically linear. The building is designed and, one by one, electrical and other components are added. Often, this leaves the green compo-

nent as an afterthought—the bells and whistles of an otherwise typical project. Designing in a fully integrated fashion takes into account the synergy a building can create, according to Estrellita Sibila, Miami-Dade County's first attorney to achieve LEED-AP recognition.

A typical encounter of this pitfall for Sibila is with a building envelope. Buildings with a significant amount of insulation combined with energy-efficient windows wouldn't need a very powerful air-conditioning unit. However, if the building's team isn't integrated, those working on the HVAC system might not be aware of this and the overall construction will ultimately end up more costly and less green.

"A lot of people design a building and then decide they want it green," says Sibila. "So they tack on green systems and different features which aren't able to capitalize on the energy efficiencies that come from the integrated design process."

By keeping lines of communication open among project managers, architects and LEED consultants and designers, LEED-qualifying initiatives can be enacted more smoothly and at the right point in the time line.

Sibila recommends that if a builder is committed to a green construction a charrette should take place up front. By bringing a project's entire team together to discuss and identify the green opportunities of a project before it begins, builders can avoid going back and attempting to alter an already tightly woven design.



PREVENT RESISTANCE

With formal knowledge of the green movement still spreading, anyone from a financial backer to a potential tenant might be skeptical of green innovations, especially when the builder is also relatively new to the green industry.

Haymount is a new community currently being developed in Virginia. Landman investigated the community and found that, initially, both the builders and financiers were resistant to the green ideas the county wanted to incorporate into the development.

In response, the county revised the town's plan, simply adding language that explained and encouraged New Urbanist design principles. The new wording set a precedent for all new construction in the county, making projects greener across the board.

Especially in the case of retrofitting green components in an existing building, Sibila has found it difficult for project managers to convince tenants of the benefits.

"Somebody might come in and do a complete retrofit of a lighting system and the HVAC system and the tenants aren't aware of why it's happening or what it means to the efficiency of the building," explains Sibila. By educating tenants about upcoming green changes before they occur, the process becomes significantly easier.

In other cases, the resistance to a green building might not even exist, but a lack of

community cultivation has left the real estate market unaware of its benefits.

"Many builders, struggling in the current economy, feel they can't afford marketing," says Begley. "In truth, they can't afford not to."

Begley recommends Chamber of Commerce events and community classes on green buildings as cost-effective options for spreading the word. "The great news is that newly budget-conscious Americans are hyper-aware of escalating fuel and energy costs and are receptive to learning more about energy savings," he adds.

DON'T FORGET THE DETAILS

Clearly, there's a big picture for the sustainability movement. According to the U.S. Environmental Protection Agency, climate change is causing immense alterations in ecosystems across the globe, from shrinking glaciers to drying soil. Minimizing greenhouse gas emissions will slow the process, while saving money and increasing energy independence.

The small details, however, often make the biggest difference. "On average, 30 percent of a home's heat can be lost through small cracks and openings in the home," says Begley. "My philosophy is to start with the low-hanging fruit first—inexpensive fixes like iridescent light bulbs."

Landman encourages builders who are browsing new green products to conduct re-

search before committing to a product. Greenwashing—being misled by a company regarding its green practices—comes in many forms, especially with so many green products currently entering the market.

"There are marketing plans that are out there that are false or exaggerated and it can be hard to vet that," says Landman. "You have to ask a lot of questions and do a lot of technical research, looking at a product's ingredients, process, suppliers—everything."

To simplify the research, there are third-party certifications that products can receive to substantiate green claims. These certifications include Green Seal, GREENGUARD and the Forest Stewardship Council (FSC), among other popular stamps of approval.

It's a green world and—if there's anything to learn from the environmental problems that prompted the green movement—it can be a complicated one. Yet with the right attitude, preparation and understanding, the most difficult green building can be completed inexpensively and with ease. □



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