Green Certification

It's Your Choice

Owners are learning green certification is a challenging, thoughtful and smart investment.

BY PAUL R. BERGERON III

Innovation and ambition have helped countless apartment communities achieve significant savings from increases in conservation and efficiency, creating a healthier, more sustainable environment that their residents embrace from coast to coast.

Whether it's spending hundreds of dollars per unit to become "green certified" or a few extra minutes reading the labels on cans of paint or carpet labels, more and more owners/developers are working toward taking the next step of "doing well by doing good," as one property management developer likes to say.

In just the past couple of years, the multifamily housing industry's pursuit of going green has shifted from being an idea to being ideal. An increasing number of owners and investors are realizing that eco is not just the first three letters in the word ecology, but help to spell economical, too.

Green apartment communities are popping up in more than just a few select urban areas. Texas is one state that one U.S. Green Building Council spokesperson says is becoming "greener" than most would assume. Developing green buildings has become more than a Red State vs. Blue State issue because sustainability efforts put forth to any degree are understood and respected by most all consumers, no matter their age or any other demographic. Smart developers know this.

Given the upswing in new development, especially among those companies trying to impress new, young professionals who favor eco-conscious business practices, competitive apartment developers are finding that green certification has become that coveted distinction—a so-called "stamp of approval" that could set their properties apart.

The Great Debate

The apartment industry agrees that community and company value will improve from cost-cutting, energy efficiency-driven decisions at new development or for retrofitted properties. Owners conservatively report 15 percent to 50 percent in energy and cost savings after incorporating so-called "no-brainer" concepts such as changing light-bulb types, improved insulation in walls and windows, HVAC system upgrades and water-flow regulators.

What developers are still trying to nail down, though, is by what method and to what extreme they are ready to invest. In choosing their certification path, here lies the debate.

The most enthusiastic green developers set out to achieve certification through the design, construction and operations criteria set by the two most popular programs: Leadership in Energy and Environmental Design (LEED), created by the U.S. Green Building Council (USGBC); or the National Green Building Standard (NGBS). NAA/NMHC played key roles in the American National Standards Institute (ANSI) certification process for NGBS, offering input and comment as ANSI requires.

LEED initially was developed in 1993, mainly for use in commercial buildings. A variation designed specifically for multifamily was created in 2008. Early on, LEED certification was applied more in affordable housing communities. But lately, USGBC says LEED certification is underway in a large number of market-rate apartment buildings and it estimates that it will soon exceed the total of certified affordable housing structures. (Affordable housing developers were the early multifamily adopters of LEED certification.)

NGBS was introduced specifically for single-family and multifamily housing in 2007—seeking to develop a program expressly for residential property.

Both LEED and NGBS programs can be applied to mid-rise and high-rise multifamily housing properties. A quick review of certified inventory for each program shows that properties with fewer than 10 units are participating, including some with only three units. The average size of the 620 certified LEED properties

Zocalo Development's
LEED-certified Solera, Denver

Woodfield Investments' NGBS-certified Metro 808, Charlotte

is approximately 20 units, USGBC reports, with the largest at more than 300 units.

The popularity of these certifications is gaining momentum, with LEED and NGBS both on course to exceed 1,000 such apartment buildings in the next few years. Both groups greatly support any developers' intentions—at any level—to save energy and create healthier living environments.

There also are green development programs such as Enterprise Green Communities, which was developed as an alternative to LEED for affordable housing. Some student housing developers also have adopted green certification development standards for their properties. This effort, in part, is again an attempt to appeal to younger residents' preferences. Therefore, inclusion (not exclusion) is the rule for community types primed for green certification.

USGBC is a non-profit organization committed to a prosperous and sustainable future through cost-efficient and energy-saving green buildings, according to Asa Foss, LEED AP Homes, BPI Envelope Professor, LEED Residential Technical Development Director, USGBC.

"USGBC created the LEED Rating System to further this mission, but we also applaud other green building rating systems that help achieve this market transformational goal. It's not LEED or Bust," he says.

The NAHB Research Center became an Adopting Entity of the ICC 700 National Green Building Standard (NGBS) to further the company's nearly 50-year mission of improving the performance, durability and affordability of housing by removing barriers to innovation. NGBS provides a certification platform for new and remodeled multifamily buildings, as well as residential land development—one that is affordable and flexible, yet rigorous.

"[Our] goal in developing a certification program based on the NGBS was to systematically eliminate barriers to green certification for all housing types," says Michelle Desiderio, Director of Green Building Programs, NAHB Research Center. "We wanted to provide a certification program that addressed the needs of all facets of the residential construction industry—no matter the climate zone, average market sales price, type of construction or new or existing baseline—yet rewarded exceptional levels of sustainable design. It is designed to be accessible and meaningful to all segments of the industry and their customers."

The Cost of Perception

This article intends to describe some key differences in the programs and explain owners' decision-making process for either, as well as explain reasons why some choose not to participate in a green multifamily housing project or upgrade. Ultimately, it's the owner who must decide what's best for their situation.

So what holds owners back? Cost, or, more accurately, perceived cost.

More than a dozen developers and spokespersons involved with one or both programs were interviewed for this article, and "high cost" ranked first on most of their lists of reasons not to participate. Experienced and prospering green developers say that claim does not add up.

"We find that in development, ignorance is defined as not knowing the real costs," says Susan Maxwell, CAPS, Director of Real Estate, Zocalo Community Development, whose company built two newly constructed LEED-certified properties in Denver and has two others underway.

"We see our incremental costs running a little bit less than 2 percent over what they'd be without certification. We get that back in rent. Toward the end of lease-up, we priced our rents [at Solera, which opened in 2010] in downtown Denver a bit north of $2 per square foot in a market where our competition was charging $1.75 to $1.80."

Maxwell says it's about giving residents what they want. "Our survey showed that sustainability was third on the list of reasons for leasing for prospective renters behind location and 'new.' Price was fifth," she says.

Total verification costs between LEED and NGBS are comparable. Optional costs may come from hiring consultants to assist with building and architectural design, and fees paid to hire the green building inspectors and performance testers.

For NGBS inspectors, the fee is approximately two-tenths of 1 percent of the overall project cost—an estimated $30,000 for a $3 million job. With LEED, there is the approximate .25 to .30 basis points fee that goes to USGBC for earning LEED, says David Zucker, LEED-AP, Principal, Zocalo Community Development.

The additional costs for NGBS Bronze certification has not been above approximately .31 percent, says Janet Bowler, Director of Marketing, LEED Green Associate, NAHB Certified Green Professional, C.F. Evans Construction, Orangeburg, S.C.

C.F. Evans has built four NGBS Bronze apartment communities, one at Silver and has construction underway for two others. C.F. Evans' completed projects were two 14-unit properties, one at 120 units and another at 237 units. "The .31 percent spend increase is the biggest increase in cost we've seen to date on the bronze communities," Bowler says.

Steve Armstrong, PG, is President of Greensboro, N.C.-based

Environmental Solutions Group, a firm that inspects and verifies NGBS projects.

"Developers who object to doing green projects often say it's because of time and money," he says. "But what they are really saying is that they don't have time to deal with the process and the requirements. Hiring a firm to help and to lead the project eliminates that extra commitment."

Armstrong adds, "If you can explain to the renter the energy cost savings that will come with the 'green' apartments, the residents will feel they can afford any rent hikes and they will feel better about living there."

Payback

Doubt about the payback timeline that comes from investing in these strategies is another reason given for not pursuing green initiatives. Some question whether the owner/management company is the beneficiary of these sustainability practices (efficiency leads to lower expenses) or if it's simply an act of altruism for the resident and Mother Nature.

One mid-sized regional management company executive, who says he speaks honestly and not selfishly about the topic, explains: "Better air quality or less noise certainly helps the environment, but not my bottom line. Recycling, especially when it comes to hazardous materials, improves the condition of our natural resources, but the cash value that comes with doing it goes to someone else."

David Borchardt, PE, Chief Sustainability Officer, LEED AP BD+C, The Tower Companies, says the owners were fully committed to energy conservation well before LEED was pursued for his holdings.

"It's something they really care about. They want to do something good for the planet, but they also want to make good business decisions. In our case, it does both. We achieved payback in one to two years. Our company is for-profit, so we want to be smart. We're a private company, and that certainly helps us make decisions. If we were public, dealing with shareholders, it might be more difficult to convince them to pursue LEED certification."

The Tower Companies' The Blair Towns, Silver Spring, Md., became the first LEED-certified apartment community in the country in January 2004. The Blair Towns is one building, which is part of The Blairs, a 27-acre, 1,400-residential community spread over eight buildings as part of a mixed-use campus. The entire residential campus ultimately achieved LEED EBOM (Existing Buildings: Operations and Management) Gold in 2012. The Blair Towns received LEED EBOM Platinum Certification in 2011. EBOM is a classification designed for existing construction. LEED EBOM scores the actual energy and water use of a building, as well as the operations and maintenance activities of the property management firm.

Borchardt says the tax credits made available to The Tower Companies through Montgomery County (Md.) helps it reduce its property tax. "Depending on what level of LEED certification you achieve for your building, you can save 10 percent, 25 percent and up to 50 percent on property taxes."

Borchardt admits that there are significant costs involved when doing a LEED project—either with new development or retrofitting. In The Blairs' case, it involved

NGBS and LEED Are Under Review

The first revision to NGBS in four years is expected to be completed by year's end. NAHB Research Center says it will include a greater focus on energy and water consumption. The Research Center estimates that the 2012 Standard will require energy efficiency levels to improve by at least 20 percent over the 2008 NGBS requirements.

The next version of LEED (LEED v4) will soon begin its fifth public comment process. Nearly 20,000 comments have been submitted so far. Volunteer groups draft the standards, and then those go through approximately four layers of volunteer committee approvals before each public comment period is opened.

Raters from Everyday Green test for infiltration, air flow and duct leakage

purchasing new boilers and chillers. "But because our buildings were from the 1950s and 1960s, we were going to need replace these anyway," he says. "The more we looked at this, it helped to make our decision easier."

AvalonBay's Rockville Centre in Long Island, N.Y., this year became the first NGBS-certified apartment building in the Northeast. Christopher Capece, Senior Development Director, AvalonBay Communities, Inc., says he compared this 349-unit property through NGBS with LEED certification standards.

"Our cost benefit analysis favored the NGBS certification," Capece says. "Not only did we believe we could more efficiently achieve the NGBS, which is well positioned for wood-framed construction, but we also believed that NGBS provided a certification that had equal or better marketing recognition among our renter pool."

AvalonBay's multi-layered cost benefit analysis for the properties enabled it to quantify projected utility savings. "We built an extensive analysis that modeled the community with the enhanced green features versus the community had we built it per local codes," he says. "We then quantified the impact of the green enhancements for power, gas, heat/cool loss, thermal boundaries, etc., and applied local utility cost rates to monetize the cost savings impact on the community."

Capece says AvalonBay modeled kilowatt and btu reductions per unit type and then monetized that reduction to quantify a monthly savings to the resident. "We're on the verge of stabilization right now, and will be able to quantify these actual cost savings versus the projections in the coming year," he adds.

Verification Differences

Another strong distinction between LEED and NGBS is the verification process. Both offer four levels of green achievement, each coming with raised minimum requirement standards based on a point-scoring system. Both use six categories or "chapters" that are applied to the process, such as:

LEED (for new construction): Sustainable Sites; Water Efficiency; Energy & Atmosphere; Materials and Resources; Indoor Environmental Quality; Innovation & Design Process.

NGBS (Chapters): Lot Design, Preparation, Development; Resource Efficiency; Energy Efficiency; Water Efficiency; Indoor Environmental Quality; and Operation, Maintenance and Building Owner Education. Additional points can be scored in any one category.

NGBS is mostly, but not exclusively, based on a prescriptive method. Its program requires developers to use prescribed types and grades of building materials, supplies and appliances, and unit design must be built to specification. Generally speaking, its inspectors make sure the property is built to meet energy savings performance levels, provide an elevated level of indoor environmental quality and include sustainable construction and resource-efficient options. After that point, it's up to the residents to use the units' functions properly, and to make sure the maintenance staff assures that all systems work accordingly.

For LEED, as with the NGBS, many of these same precise eco-friendly materi-

How to Score Points

The LEED and NGBS certification programs are based on point-scoring systems. Following is one example, Charlottetown Terrace (pictured above), a 161-unit LEED Gold-certified community built by the Charlotte (N.C.) Housing Authority. Below are things developers can do to score certification points.

Not all bulleted items are required for all programs. Check the USGBC and NAHB Research Center websites for details on what is required for specific certification levels.

Both certification groups encourage developers to be green, even if the property doesn't achieve certification status. Consider these practices suggested steps toward saving money and energy.

- Non-smoking community
- Ongoing green education for residents
- Energy efficient windows
- Energy star appliances
- Energy star compact fluorescent lights (CFL)
- Low-flow toilets, kitchen/bath aerators and shower heads
- Common area occupancy sensor/daylight harvesting lighting
- High-efficiency variable refrigerant flow (VRF) heat pumps
- Low-emitting paints, adhesives, and sealants
- Building products containing high-recycled content
- Solar reflecting TPO roof
- Parking lot asphalt "reclaimed" and resurfaced at the site
- Resilient floor tiles and carpet tiles containing high recycled content
- 75 percent of interior walls refinished to minimize construction waste
- The maintenance staff only using "green cleaning products"

Energy savings in the construction and operation of this building include:

48% reduction in water usage
33% reduction in energy usage
80% recycled waste content
27% recycled construction/finish materials

There is an estimated total savings of 642,268 kWh/year and 2,313,867 gallons of water resulting in a **37.2%** overall consumption improvement.

Source: Charlotte Housing Authority

als, supplies and specifications are mandatory. Before the community is inhabited, LEED-H requires that it is performance-tested. Not only must each unit be built correctly, but all functions are tested in every unit (LEED allows for a sampling of units within the community which helps reduce verification costs) to ensure that they meet required performance levels. NGBS does not require performance testing, except for Emerald certified buildings, and does not allow sampling for inspection at any of its levels.

There are fewer than two dozen NGBS Emerald certified apartment communities. Armstrong estimates that 60 percent of NGBS-certified properties have done so at the Bronze level. He says it's not difficult to move up to Silver, which mandates greater energy efficiency, especially at "high-end" properties that are likely to use more efficient materials, higher-grade windows and better HVAC systems. These also often are designed with enclosed hallways, which are more effective at retaining energy.

Reaching Gold often comes down to efficient water usage. He says that owners will have to pay the extra $10 on toilets, among other things, to make that happen.

"Performance testing is a fundamental component of a residential green building program," Foss says. "Meeting LEED's performance testing requirements will save the average project 30 percent on their heating and cooling costs. There is no understating the importance of these performance tests."

LEED says that requiring performance testing is a critical and valuable difference between it and NGBS's certification levels below Emerald. LEED's performance testing includes duct leakage testing and unit-by-unit air infiltration testing from the envelope and neighboring units. In

Solar panels at Zocalo's Solera, Denver

addition, LEED requires ducted kitchen exhausts for better indoor air quality.

The Real Value: Evaluating Operations

"There is no easy part of the process," Borchardt says. "LEED EBOM certification is a long process. Property management is a stressful enough profession to begin with, and this just adds another layer of responsibility."

Borchardt says achieving LEED is an "all-in" process that includes every aspect of apartment management on a daily basis. "For us, The Blairs community uses the same cleaning company throughout, the same landscaping company, the same pest control company, and use carpets, glues and paints and other materials that meet the environmental standards set by LEED while maintaining and turning all of its units."

Borchardt says the 24-7 and 365-day mentality extends beyond the construction stage. "Your staff all has to operate on the same page throughout," he says. "The maintenance technicians must be sure to use compliant paints all the time, for example. If they run out during a job, they can't just go to the store and buy what they want to finish. Everything must meet the standards set to be uniform and documented."

Says Armstrong, "During large projects, so many different contractors are coming and going. It's easy to be complacent. And even the staff members who are working can get distracted and interrupted and sometimes take shortcuts. Contractors must understand ahead of time what materials must be used at all times."

Achieving LEED EBOM takes approximately one year, Borchardt says. It takes approximately three months to make sure the community is prepared for the performance period. The property then goes through the performance period for three to six months, and then there is the three more months needed to gather all the documentation that prove compliance.

"If you misstep (for example, use the incorrect materials or supplier), your review period is reset, you have to start over," he says, adding that his review included approximately 10,000 pages of receipts and other documents.

An additional benefit to the "rigorous" process, Borchardt says, is that it gives the company the chance to examine exactly how it operates. "This helped us to identify inefficiencies, and it gives the property manager a chance to retrain the staff on how to do things, which improves overall operations," Borchardt says. "This can create camaraderie among staff. By operating at peak efficiency, especially through energy conservation, we find that the payback comes in one to two years. That's pretty quick, when you think about it."

Stamp of Approval

Selling the benefits of green living and green certification to residents is not difficult, Zucker says.

"LEED represents a more thoughtful, higher quality of construction that shows residents and investors more durable value," he says. "LEED represents a stamp of approval. This is not a process that is self-done or self-regulated. It comes from an established program. Our residents know this. Many of them work nearby in LEED-certified commercial buildings."

For Zocalo, its downtown Denver location truly helped. Its residents' average salary is in the six figures and 80 percent of them walk to work, Zucker says. Solera's rents were priced about 15 percent above most A properties nearby.

Says Maxwell, "Whether you are a tree-hugger, a dollar-hugger or a health-hugger, LEED development has something for you."

Zucker confirms his resident base's mindset conforms to green. "Society overall—especially Generation Y—has become more skeptical about just about everything," he says. "Like their beer, they want things that are truly built hand-crafted. That's what we offer."

Armstrong says, "With new construction, it's getting to the point that building green is being expected of developers. Many of us who live in this country are onboard with helping to improve the environment. Consumers [residents] can do this by shopping for green products. When a developer takes those steps for you and applies them to your apartment home, it allows the resident to feel good about living there. Properties will lease-up faster when they market themselves in that way."

Kelly Vickers is National Director of Sustainability at Alliance Residential. She says the role her company's residents play is intertwined with the role of its onsite teams.

"Our associates must enhance awareness of our Focus Green program and educate residents on what they can do to further our initiatives, because actions taken by residents in support of sustainability are critical to the program's success," she says.

"It's a continuous effort to keep residents engaged. We encourage involvement and maintain awareness of what we are trying to do, with the ultimate goal of inspiring each resident to not only support our initiatives but to also make personal changes to benefit the greater good. We can say we offer recycling programs at X number of communities, but if our residents don't understand what or where to recycle, we aren't accomplishing what we need to accomplish."

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