

An Introduction to LEED-ND for CNU Members

By Laurence Aurbach, CNU DC Chapter secretary, July 30, 2009

This summer, CNU members will be asked to vote on LEED for Neighborhood Development. It will be a somewhat historic event, as it will be the first time CNU members have voted on anything as a group. This article provides an introduction to LEED-ND, what it does and doesn't do, and what members need to know as they consider how to vote.

LEED Background

LEED (Leadership in Energy and Environmental Design) is a family of rating systems that certify green, environmentally responsible building practices. It was created by the U.S. Green Building Council, a nonprofit, nongovernmental, volunteer-based organization in Washington, DC with 78 local affiliates around the world. When it debuted in 1998, LEED for New Construction was one of the first rigorous, green building rating systems on the market.

LEED had remarkably quick success, becoming the nation's premier and best-known green building rating system. Its product lines have proliferated to include existing buildings, interiors, homes, schools and more. Today 8,000 commercial buildings register to participate annually. That represents approximately five percent of the commercial building market, and the numbers are growing steadily. More than 114,000 people have earned a LEED Accredited Professional credential to demonstrate a working knowledge of the systems. Clearly, LEED has achieved a level of visibility and support that gives it the potential to transform the market on a national scale. That is, in fact, LEED's mission.

As the industry standard, LEED attracted much criticism soon after it was introduced. From the new urbanist point of view, a major criticism was that LEED didn't address context in any significant way. The system could identify some very green buildings but even the highest-rated buildings could be isolated in auto-dependent sprawl. In response, the USGBC in 2003 formed a partnership with CNU and the Natural Resources Defense Council to create LEED for Neighborhood Development. The pilot version was released in 2007; two rounds of public comment received 6,400 responses; now, after six years of development, the system is up for a vote.

The vote is a membership referendum on whether CNU endorses the release of LEED-ND in its present state. The vote will inform the position of the CNU Board, and the three partner organizations will use the vote results to try to reach a mutually agreeable decision.

The Intent of LEED

USGBC has created statements of mission, vision, guiding principles and agenda, which combined are analogous to the CNU Charter. The mission statement reads:

To transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life.

Of particular relevance to new urbanism, the USGBC Strategic Plan Agenda has this objective:

Sustainable Cities and Communities: Catalyze and lead the building sector's active participation in the movement to achieve sustainable cities and communities.

The family of LEED rating systems is a primary means for USGBC to achieve its goals. LEED rating systems strive to serve the top 25 percent of the real estate market in terms of green performance. That is LEED's client base. It's a constant balancing act between opposing goals – on the one hand, to be rigorous enough to identify top performance; on the other hand, to include a sufficient proportion of the market to catalyze reform.

It's also a moving target. The state of the art in green building technology progresses. Research and observation add to the knowledge base. Feedback from clients and advocates points towards improvements. Economic conditions affect development and construction decisions.

How LEED-ND is Administered

In order to follow that moving target, LEED recently changed its business model. Starting this year, it will use a “continuous improvement cycle” similar to the improvement cycle of conventional building codes. LEED-ND will be reviewed and revised on a predictable schedule, perhaps every three years or so. This is a critical feature for a number of new urbanists including some who have worked closely on the system. LEED-ND has undeniable flaws and shortcomings, and those must be fixed or addressed in future revisions. The support of some new urbanists is absolutely contingent on the predictable process of continuous improvement that LEED promises.

LEED has also changed its certification administration. As LEED's popularity has risen, its case load has exploded, causing frustrating bottlenecks and expensive delays. In addition, the USGBC wanted a more professional certification process that was more in line with established national standards. Therefore the certification arm of LEED was spun off to a new organization, the Green Building Certification Institute. GBCI provides independent, third-party review to certify that a project meets criteria established by the USGBC. GBCI contracts out its certification functions to a network of 10 professional certification bodies.

GBCI is certainly thinking big – deploying an army of 50,000 professional certifiers who themselves will be ISO-certified. It has exclusivity agreements such that 80 percent of the green building certification workforce will be dedicated to LEED. In addition, the new LEED Online website will be used to manage project certifications, and will be able to handle one million users at a time. All this has important ramifications (which are discussed in the “LEED-ND is not holistic” section below).

How LEED-ND Scoring Works

LEED-ND is a system of 12 prerequisites and 44 credits. The first hurdle for a project is that it must meet all of the prerequisites. Once that hurdle is passed, the prerequisites no longer play a role. The focus moves to the credits and credit points.

Within each credit, a number of points are available. Some credits provide just one point, and some credits provide many points. The more points a project earns, the higher its final rating. A project can earn a rating of Certified, Silver, Gold or Platinum.

The applicant can choose which credits and points to pursue. This gives maximum flexibility to the applicant, and allows the system to recognize a wide variety of project types with different advantages and strengths.

The prerequisite/credit framework has a significant implication. The prerequisites are essentially the minimum entry requirements – nothing more. Prerequisites do not provide any points. A project must accumulate points to get a rating, and only credits provide points. So when you assess the rigor and stringency of the LEED-ND standards, keep in mind that credits are where the points are earned.

LEED Standards and New Urbanism

The whole point of CNU participation in LEED-ND is to advance new urbanism. It is important that new urbanists judge whether the system achieves that purpose, by evaluating specific credits, the cumulative process, the overall framework and philosophy, and how the system is administered.

The three-part outline of LEED-ND reflects the interests of the three partner organizations. Smart Location and Linkage reflects NRDC's smart growth interests; Neighborhood Pattern and Design reflects CNU's planning and design interests; Green Infrastructure and Buildings reflects USGBC's ecological and green building interests.

Certain of the prerequisites and credits have been of special interest to new urbanists and have received greater attention than others. Here is a review:

- *SLL Prerequisite 1: Smart Location* – This has been the most contentious standard, with new urbanists trying to expand the range of qualifying locations, and others trying to focus growth on existing urban centers. This standard is also one of the more complex, with four possible paths to compliance and some very convoluted definitions. The allowance for planned bus service may turn out to be a loophole.
- *NPD Prerequisite 2: Compact Development* – Minimum development density is also of major concern to new urbanists. Some think the standards are set too high, others too low.
- *NPD Prerequisite 3: Connected and Open Community* – Much like density, some new urbanists think the standards are set too high, others too low. This standard has been contentious for the same reasons as the Smart Location prerequisite.
- *NPD Credit 1: Walkable Streets* – The ideas of new urbanist frontage design are represented here and in the Walkable Streets prerequisite. It can supply a whopping maximum of 12 points. There are many worthwhile ideas, but a significant proportion of streets are allowed to be auto-oriented, high speed arterials.

- *NPD Credit 3: Mixed-Use Neighborhood Centers* – New urbanists have criticized the lack of a mixed use prerequisite in LEED-ND; this credit is the only one that gives points for a diverse mix of uses. This credit has technical flaws that may prevent it from functioning as intended in larger projects.
- *GIB Credit 8: Stormwater Management* – This credit has the effect of penalizing small, dense projects; at the same time, it gives supportive points as a counterbalance. The counterbalancing points may not be sufficient to recognize development patterns that are best for watershed health. In addition, the credit calculation lacks methodological rigor.
- *IDP Credit 2: LEED Accredited Professional* – This credit awards one point if there is an accredited new urbanist on the project team. CNU accreditation is earned by passing an exam (administered by the University of Miami) that covers knowledge of basic new urbanist principles. By early 2010, the LEED Accredited Professional credential will be available for Neighborhood Development. That will certify a practitioner has knowledge of the LEED-ND system, and it will be another way to earn this credit point.
- *RP Credit 1: Regional Priority Credit* – This credit does a little bit of tailoring to regional context by giving extra weight to certain other credits that are yet to be determined. Regional priority credits are customized down to the scale of zip codes. If LEED-ND receives vote approval, then later this fall CNU chapters and members will participate with USGBC to work out the local details of this credit.

What LEED-ND is Not

- *LEED-ND is not simple.* The system is a complex, sprawling chunk of bureaucracy. The rating system itself is 108 pages and the associated Reference Guide probably will be at least as long. You'll have to read some parts multiple times to understand them. Sometimes LEED-ND resembles an IRS tax form: credits have multiple options, "and/or" frameworks are abundant, cross references are common, and the prose style tends towards the bureaucratic. Several options require expensive consultations with experts or governmental documentation, all of which contribute to cumulative complexity. An industry of consultants has grown up to administer LEED systems for buildings; the same can be expected for LEED-ND.

Because LEED-ND is complex, it can also be expensive and time-consuming. A typical LEED-ND project is likely to incur somewhere between \$50,000 and \$75,000 in additional soft costs for fees, analysis and documentation (T. Bardacke, personal communication, July 23, 2009). Half of that cost comes from LEED-ND's one required green building certification, which may be borne by someone other than the applicant. The cost of LEED-required commissioning, as well as design work for green features, is in addition to those figures.

- *LEED-ND is not holistic.* LEED has always worked to be as quantitative and objective as possible. Now that GBCI is administering certification, certification review will be executed by professional certifiers who must have a planning background, but may have little training or experience in new urbanism. That means the quantitative, opinion-free approach is more important than ever. But it

also means elements that are essential to the art of urban design are simply absent.

LEED-ND does not address beauty and spirit; it does not address civic art in the Camillo Sitte sense. It does not address the aliveness of designs in the Christopher Alexander sense or legibility in the Kevin Lynch sense. It is silent on architectural style, composition and harmony. The Léon Krier perspective is entirely absent. It is silent on most of Steve Mouzon's Original Green principles. It does not incorporate the Transect or any other method of coordinating design elements. LEED-ND is not an awards program like the CNU Charter Awards, with an educated, experienced panel making evaluations, and it does not aim to be. The LEED ideal is performance-based technical objectivity more along the lines of Underwriter's Laboratory or Energy Star.

■ *LEED-ND is not finished.* ... and probably never will be. It is an ongoing work in progress. LEED-ND will be updated as it gathers feedback from experience, and that breaking-in process is essential. But equally important are the things we already know – that sketchy credits must be tuned up, anti-urban credits must be overhauled, and the cumulative complexity and expense must be reduced.

The LEED long-term strategy is a steady increase in performance and rigor. With each revision cycle the standards will become more stringent. They'll rise to a zero-impact level of sustainability at first, and then eventually will reach a net-positive level of sustainability. These changes will have to be carefully coordinated with advances in the market, technology and knowledge. In addition, LEED plans to move away from prescriptive or relative standards, and towards verified, evidence-based performance standards.

During each revision cycle there will be opportunities to comment and suggest changes to LEED-ND. And if you'd like to work on the nitty-gritty of developing a LEED system, consider joining a LEED Technical Advisory Group. The terms are staggered so every year there is turnover and calls for new committee members to apply.

■ *LEED-ND is not a code.* LEED-ND is not intended to be a model code or plan. The USGBC recommends that localities incentivize the use of LEED-ND, not mandate it. Because of LEED's process of continuous revisions, any adoption of specific language in codes is liable to rapidly become obsolete.

Conclusion

For full disclosure, I'll state that I've contributed technical assistance to LEED-ND since 2005, and have served on the LEED Location and Planning Technical Advisory Group since 2008. For the past eight years, I've advocated that CNU get involved in rating or certifying neighborhoods. I think a rigorous rating system endorsed by CNU would advance CNU's mission; the lack of such a system has hindered the progress of new urbanism. In a separate essay, I outlined the reasons for rating neighborhood design (which can be grouped into six broadly overlapping categories: communication, recognition, planning, marketing, research and investing).

So I'm not neutral on the topic of neighborhood rating. However, even if one accepts that CNU should endorse a system, it is not crystal clear that LEED-ND is a good choice. There are numerous

positives and negatives to weigh. This article has enumerated some of the negatives, such as bureaucratic administration, credits that need improvement, cost and complexity, and a philosophy of strict objectivity.

Some of the positives have been discussed also. CNU has the opportunity to help shape a system with national visibility, legitimacy, and growing popularity. No other rating system comes close to LEED in terms of institutional support, market interest, breadth and depth of input, and comprehensiveness.

A “no” vote will indicate the CNU membership is fundamentally opposed to the concept and framework of LEED-ND. It means we think the system’s flaws and shortcomings cannot be improved through continuous revision cycles. The likely consequence of a “no” vote is that our partnership with USGBC will wane; LEED-ND will continue on, but CNU will have less of a voice in the development process and less input to future revisions. If in the long run LEED-ND proves to be a hindrance to new urbanism, at least CNU will not have given its support.

If CNU votes “yes,” the system will go live later this year with CNU identified as a partner and co-author. CNU will continue to participate in the customization of regional priority credits. Longer term, CNU may strengthen and continue its partnership with USGBC, and may help guide the strategic direction not only of LEED-ND, but of all planning-related elements in all LEED systems.

These are some of the issues that CNU membership must weigh and decide on. Whatever conclusion you arrive at, please do participate and vote. This vote is not trivial and your ballot counts.

Resources

[CNU page on LEED-ND](#), with archive of previous versions

[USGBC page on LEED-ND](#), with background research and statistics about pilot projects

[GBCI \(Green Building Certification Institute\)](#) – the organization responsible for certifying all LEED projects

[NRDC page on LEED-ND](#) explaining priorities

Documents

Aurbach, Laurence [“Why Rate Neighborhood Design?”](#) *Ped Shed Blog*, January 30, 2008.

Benfield, Kaid, [“The new LEED-ND standards: what’s new, what’s good, and what’s not \(part 1\).”](#) *NRDC Switchboard Blog*, May 7, 2009.

Benfield, Kaid, [“The new LEED-ND standards: what’s new, what’s good, and what’s not \(part 2\).”](#) *NRDC Switchboard Blog*, May 8, 2009.

Benfield, Kaid, [“The new LEED-ND standards: what’s new, what’s good, and what’s not \(part 3\).”](#) *NRDC Switchboard Blog*, May 9, 2009.

USGBC, [“Green Building by the Numbers,”](#) April 2009, and [“About LEED,”](#) June 2009.

USGBC, [“Guiding Vision and Introduction – LEED v3 and LEED 2009.”](#) May 1, 2008.

USGBC, [“Guidance to Local and State Governments – Using LEED-ND to Encourage Sustainable Development.”](#) February 2008.

US EPA, [“Buildings and the Environment: A Statistical Summary.”](#) US EPA Green Building Workgroup, December 20, 2004.