

Green Building Rating Systems and Green Leases

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Editors' Summary

This Article is adapted from *The Law of Green Buildings: Regulatory and Legal Issues in Design, Construction, Operations, and Financing* ch. 2 (J. Cullen Howe & Michael B. Gerrard eds., 2010). Copyright © 2010 by the American Bar Association and co-published with ELI Press. Reprinted by permission. This book provides an overview of green building law from a variety of well-known attorneys and other professionals in the green building field. These legal issues are likely to evolve quickly—and perhaps radically—in the coming years. This article highlights key legal issues practitioners should investigate and consider around Leadership in Energy and Environmental Design ratings and green leases.

Green building and leasing have become a best business practice for many property owners and tenants for commercial properties across the country. Attorneys with practices focused on construction and real estate must be able to advise their clients properly regarding the unique legal issues associated with green building. To do so, attorneys must first understand the various green building rating systems. While there are several, the three most widely accepted third-party-administered systems in the United States are Energy Star, Green Globes, and, in particular, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design green building rating system, more commonly known as LEED. This Article explains these green building rating systems and briefly examines other, less common rating systems used in the United States and the rest of the world. It also explains green leases and examines several useful resources regarding green leases.

I. Green Building Rating Systems in General

Green building standards seek to establish and implement measurable and attainable benchmarks to evaluate development impacts on the environment. The common theme found within all green building standards is to increase building efficiency and reduce the building's impact on the environment and human health through the efficient use of energy, water, building materials, and operational practices. While this sustainable theme remains constant, the construction methods, building materials, and architectural design for green buildings are constantly evolving. Thus, the standards that are used to measure green buildings are evolving constantly as well.

One way that green building standards measure performance is by establishing benchmarks or requirements in certain measurable categories. For instance, if a building were to utilize high-efficiency lavatory fixtures, the benchmark to attain a credit point under the LEED system requires the overall building to consume 20% less water (excluding landscaping) than the building's baseline calculation. In the case of energy, a quantifiable performance measure is to increase building energy efficiency incrementally beyond standard specifications.

Most green building standards look at the following six categories in determining sustainable building practices:

1. *Site location*—using existing infrastructure, minimizing the impact to the surrounding environment, and selecting sites served by mass transit;

1. LEED has separate categories that address each of these categories. These categories are discussed in more detail below.

2. *Energy conservation*—use of on-site renewable energy, efficient building methods, natural lighting, and efficient mechanical equipment;
3. *Water conservation*—promoting water conservation through the use of low-flow fixtures, the capture and reuse of water, and the use of gray water for irrigation;
4. *Material selection*—promoting the use of sustainable materials by emphasizing the use of products with low or no concentrations of hazardous chemicals and that are grown sustainably and locally;
5. *Indoor air quality*—seeking to optimize indoor air quality through ventilation and the use of products that emit low or no volatile organic compounds; and
6. *Building operations and maintenance*—ensuring that buildings are operated and maintained properly by, among other things, using automatic shutoffs for lighting and ensuring that the building's mechanical systems are operating efficiently.

II. Leadership in Energy and Environmental Design (LEED)

The USGBC's LEED rating system is an established and widely used green building rating system in the United States.² This section will detail the history of LEED, the basics of the LEED certification system, and some of the legal issues to consider when dealing with LEED.

A. Background and Development of LEED

David Gottfried, Mike Italiano, and current USGBC president and CEO S. Richard "Rick" Fedrizzi founded the USGBC in 1993 as a nonprofit organization aimed at conveying sustainable building practices to the mainstream. The organization sought to develop a comprehensive package of community-oriented, environmentally sound, and innovative development techniques to the building community to foster their efforts in the advancement of sustainable building practices. One of the USGBC's founding members was John Picard, an accomplished environmentalist, architect, and sustainability expert who was appointed to the Clinton Administration's "Greening of the White House" team. President William J. Clinton established this initiative on Earth Day in 1993, and sought to improve energy and environmental performance of the White House grounds. These initiatives were incorporated into a report, with many of the recommendations implemented into the White House's operations protocol. Since 1996, the White House has benefited from an annual savings of approximately \$300,000.³ This appoint-

ment boosted Picard's profile in the building industry and helped bring early national credibility to the USGBC.⁴

Following its inception, the USGBC established a set of criteria to evaluate and measure green building performance, which it referred to as LEED. LEED defines which elements are pertinent to a building's sustainable existence, such as structural materials, overall building design, landscaping, and site location. The LEED rating system seeks to promote whole-building integration by examining the design, construction, and operational practices of a building. In addition to whole-building integration, LEED takes into consideration the health and productivity of building inhabitants. Registered projects are those that register with the USGBC through filing the required documentation with the organization during the early stages of a project.⁵ In contrast, certified projects are those that have been certified by the USGBC as attaining the applicable number of credits to fulfill the desired level for LEED certification.⁶

After several years of development, the USGBC introduced the first LEED Pilot Project Program, or LEED Version 1.0, in 1999 (LEED v1.0), which addressed new construction. It was not until 2004 that LEED provided an avenue, through its LEED for Existing Buildings (LEED-EB) program, for existing buildings to obtain LEED certification. While the pilot program was being introduced, the USGBC sought to improve and expand upon it. The result, LEED v2.0, was released in 2000 with much anticipation. It became the rating system for new commercial construction and major renovations and was referred to as LEED-NC. A total of 624 projects were registered under this version, and 238 of those projects obtained LEED certification.⁷ In 2002, LEED-NC v2.1 was introduced, with 2,134 projects registering and 352 receiving certification.⁸ In October 2004, LEED-NC v2.2 was released, with 19,524 projects registered under this version. As of August 2009, 2,476 projects have received certification. In April 2009, LEED v3.0 was released, which applies to new construction (NC), existing buildings (EB), core and shell (CS), and commercial interiors (CI).⁹ As the USGBC expands its presence within the building community, it is continually updating older versions of

2. Information about LEED is available at <http://www.usgbc.org>.

3. Information about this initiative is available at <http://clinton3.nara.gov/Initiatives/Climate/greeningsummary.html>.

4. A detailed history of the USGBC's founding and development is available at <http://www.mnn.com/business/commercial-building/blogs/history-of-the-us-green-building-council>.

5. A list of all LEED-registered projects is available at <http://www.usgbc.org/LEED/Project/CertifiedProjectList.aspx>. Information about registering a project for LEED certification is available at <https://www.gbci.org/DisplayPage.aspx?CMSPageID=174&>.

6. A list of all LEED-certified projects is available at <http://www.usgbc.org/LEED/Project/CertifiedProjectList.aspx>. Information about LEED certification is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=64>.

7. Jerry Yudelson, *Where Are All the LEED Projects?*, tbl. 2 (July 12, 2007), available at http://www.sustainablefacility.com/Articles/Leed/BNP_GUID_9-5-2006_A_10000000000000134921.

8. Projects that are registered under a prior version of a LEED rating are allowed to proceed through the LEED certification process in accordance with the requirements of that rating system until the occurrence of the rating system sunset date. See GREEN BUILDING CERTIFICATION INSTITUTE, POLICY MANUAL: APPLICATION REVIEW POLICIES, available at http://www.gbci.org/DisplayPage.aspx?CMSPageID=156#Appeals_Policy.

9. Information about LEED v.3.0 is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1970>.

its rating systems as well as introducing new standards for a multitude of uses and building types, as discussed below.

B. LEED Basics

LEED is a voluntary, point-based system that measures performance based on a building's design, construction, operation, and maintenance. It seeks to comprehensively address a building's ecological footprint beginning with the planning stage through the life of the building. Points are awarded when a performance level has been achieved to the extent the applicable LEED credit requirement specifies. In addition, project developers must satisfy a number of prerequisites in each category and achieve a certain number of points before a building can attain LEED certification. Projects are awarded specific ratings depending on the number of points achieved: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points), and Platinum (80-100 points). At the end of construction or renovation, a project must submit verification that the particular design elements actually were implemented and that the mechanical systems are operating to design specifications before receiving certification. The USGBC arranged the LEED rating systems in a reference guide format, which contains detailed descriptions of each LEED credit along with relevant background information, such as technologies and practices that can be employed to achieve the credit and further resources.¹⁰

As shown in the table below, LEED certification is available for new construction, existing building renovations, existing buildings operation and maintenance, commercial interiors, core and shell design (including building structure, building envelope, and HVAC systems), schools, and homes.¹¹ There are also pilot programs for retail, health-care, and neighborhood development projects.¹² As detailed in the table, the LEED rating system is not static and is now in its fifth incarnation. For purposes of this Article we will focus on LEED v3.0 unless otherwise specified, since it is the version to which new projects currently must adhere. In addition, because LEED for New Construction (LEED-NC) is the most prevalent of the certification types, we will focus our attention on it.

The USGBC may award a project registered under LEED-NC up to 100 points in six specific categories:

1. *Sustainable Sites* (26 possible points): This category concerns the location of the building and the land uses associated with it. It requires the building owner to consider appropriate site selection, urban redevelopment, and brownfield development. It also encourages use of public transportation to the facility, reduction of site disturbance, and stormwater management.¹³

For example, if the building's site is a brownfield, one point is awarded. If the site is not prime farmland in a floodplain, habitat for any threatened or endangered

Rating Systems	Current Version	Application Types	Applicable Reference Guide
LEED for New Construction (LEED-NC)	LEED v3	Commercial, institutional, office, high-rise residential, recreation, manufacturing plants, and government buildings.	Green Building Design & Construction 2009 Edition
LEED for Core and Shell (LEED-CS)	LEED v3	Governs structure, envelope, and HVAC systems.	
LEED for Schools	LEED v3	Design and construction of K-12 schools. Classroom setup, site planning, environmental site assessment.	
LEED for Retail: New Construction and Major Renovations	In pilot	Assists interior designers to implement sustainable materials and best practices for tenants who may not have control over building operations.	
LEED for Healthcare	LEED v3	Includes inpatient and outpatient care facilities, long-term care facilities, medical offices, assisted living facilities, medical and research centers.	
LEED for Homes	N/A	Guide for planning and constructing homes that are far more efficient than standard construction practices.	
LEED for Neighborhood Development		Contains a guide for implementing urbanism, smart growth, site design, and environmental responsibility into a larger development.	
LEED for Commercial Interiors (LEED-CI)	LEED v3	Assists interior designers to implement sustainable materials and best practices for tenants who may not have control over building operations.	Green Interior Design & Construction 2009 Edition
LEED for Existing Buildings: Operations and Maintenance (LEED-EB O&M)	LEED v3	Includes sustainable building protocols with respect to a building's operation and maintenance practices creating a comprehensive approach to reducing a building's environmental impacts.	Green Building Operations & Maintenance 2009 Edition
LEED for Existing Schools		Design and refurbishment of K-12 schools. Classroom setup, site planning, environmental site assessment of existing school sites.	

10. The LEED reference guides for the various LEED rating systems are available at http://www.usgbc.org/Store/PublicationsList_New.aspx?CMSPageID=1518.

11. Information about these LEED rating systems is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222>.

12. *See id.*

13. *See LEED 2009 for New Construction and Major Renovations*, at 1-20, available at <http://www.anjec.org/pdfs/WorkshopMaterials33009LEEDSChecklist.pdf>.

species, within 100 feet of any wetland, within 50 feet of a body of water, or former parkland, one point is awarded. Additional points are awarded if the project encourages public transportation, fuel-efficient vehicle parking, has a well-designed stormwater system, or uses paving and roofing materials that do not absorb high amounts of heat. In addition, a point is awarded for certain efforts to reduce light pollution in the form of excess nighttime exterior lighting.

A prerequisite for receiving any points in this category is that a developer must prevent the loss of soil during construction, prevent soil sedimentation into storm sewers and streams, and prevent air pollution in the form of dust or particulate matter.

2. *Water Efficiency* (10 possible points): This category requires the efficient use of water in building operations. Points are awarded for water-efficient landscaping—one point is awarded if potable water consumption for irrigation is reduced by 50% and another point is awarded if no potable water is used for irrigation. Points are also awarded for innovative wastewater technologies, such as using water-conserving plumbing fixtures or non-potable water to reduce potable water use by 50%. Additional points are awarded for 20% and 30% reductions, respectively, in water use in the building. In addition, a prerequisite was added in LEED v3.0 to require that a building reduce water use by at least 20% compared to a baseline.¹⁴
3. *Energy and Atmosphere* (35 possible points): There are three prerequisites to achieving any points in this category. First, the building's energy systems must be installed, calibrated, and then perform as designed. Second, the building and building systems must meet energy-efficiency standards that surpass the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Energy Standard 90.1–2007¹⁵ by at least 10%. Third, there must be no chlorofluorocarbon (CFC)-based refrigerants in the building.

Points are awarded on a sliding scale based on the overall energy savings as compared to a typical building of similar size and use. Additional points are awarded for utilizing renewable energy either on-site or pursuant to an agreement with an energy provider, managing refrigerants properly, and measuring energy savings.¹⁶
4. *Materials and Resources* (14 possible points): This category requires that collection and storage of recyclables be provided for in building design and operations. It also encourages the use of recycled materials, locally

manufactured environmentally responsible materials, and certified wood.

Points can be obtained for minimizing construction waste and for using recycled and locally manufactured materials. In addition, major renovation projects are eligible for points for reusing the existing walls, floors, and roof, and for reusing interior non-structural elements.¹⁷

5. *Indoor Environmental Quality* (15 possible points): This category seeks to ensure that green buildings have optimal lighting, thermal comfort, and healthy indoor air quality for their occupants. The category requires as a prerequisite that the building meet a minimum indoor air quality (IAQ) performance standard and, generally speaking, prohibits smoking in the building.

Points are awarded for a number of indoor air quality aspects, including increased ventilation, avoiding building materials that emit formaldehyde or volatile organic compounds, providing a certain number of individual lighting and temperature controls, and providing daylight and exterior views within most of the building. Credits are given for carbon dioxide monitoring; increased ventilation effectiveness; indoor air quality management during and after construction; the use of low-emitting materials, coatings, paints, and finishes; and allowing occupants to control the systems in their personal workspace.¹⁸

6. *Innovation and Design* (6 possible points): This category encourages project planning and design to improve the coordination and integration of the various elements in a green building. Using a LEED-accredited professional (AP) is worth one point. Up to four additional points can be awarded for developing and implementing strategies that address sustainability issues in ways that are either not covered in the LEED guidelines or that substantially exceed LEED requirements.¹⁹

In addition, a new aspect introduced in LEED v3.0 is that a project can be awarded up to four regional points. The USGBC created regional points in consultation with its local chapters. These points recognize that some issues, such as water and air quality, are more important in certain regions of the country than others.²⁰

C. LEED Certification Submittal Process

I. General Considerations

To achieve the desired level of LEED certification, the project must go through a certification process beyond standard building inspections. From a practical and legal perspective, the owner, architect, and contractor should work together to

14. See *id.* at 21-27.

15. ASHRAE 90.1 is an energy conservation standard for buildings (except low-rise buildings) that the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) first created in 1975. It is updated every three years, with the most recent update occurring in 2007.

16. See *LEED 2009 for New Construction and Major Renovations*, at 29-45.

17. See *id.* at 47-55.

18. See *id.* at 57-81.

19. See *id.* at 83-84.

20. See *id.* at 85. Additional information about these regional points is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1971>.

determine the party that will serve as the primary LEED consultant for the project, or whether they are going to hire a third-party LEED consultant. The primary LEED consultant will register the project with the USGBC via the LEED online program.²¹ Upon registering, the party seeking LEED certification will have to pay a registration fee based on membership and a certification fee that is based on several factors, including the square footage of the project.²² During the design phase, the primary LEED consultant will indicate which points it expects to get and relevant information concerning how it expects to do so. The USGBC will thereafter mark each credit as anticipated or denied, although it cannot officially award any credits until after the building is completed. The party may appeal these initial decisions in a manner similar to the final appeal process described below. The LEED consultant submits material during the construction phase that demonstrates how the project has met the requirements of each prerequisite and point and works with the various stakeholders to track credits and ensure that the requirements of each credit have been met. The USGBC will make a final decision on each credit request at the end of the construction phase, which is referred to as the final review.

2. Legal Considerations

If a design professional is serving as a LEED consultant on a project, he or she must carefully consider the impact of the submittal on his or her professional liability insurance. Most insurance policies for design professionals state that they do not apply to warranties and guarantees, nor any claims based upon or arising out of express warranties and guarantees.

If a design professional is sued for the failure to obtain a certain LEED certification level, a dispute could arise between the professional and his or her insurance provider if he or she is found liable. To avoid this potential exposure, the design professional should add something along the lines of the following statement to the LEED submittals: "The signing of this and any other submittal template is solely for the satisfaction of this LEED certification process and does not constitute any guarantee or warranty of any work or product." Design professionals should discuss these issues with their insurance providers beforehand and also should note that this disclaimer may not suffice in avoiding coverage issues without confirmation from their insurance providers. Design professionals should include language in their contracts explicitly stating that they cannot guarantee LEED certification and that the reasonable standard of care will apply to their performance of services relating to LEED design just as they apply to any other professional services.

D. LEED Certification Appeals Process

A party has the opportunity to appeal a ruling by the USGBC (at a cost of \$500 for each credit appealed) if a project fails to achieve the intended LEED certification level following the final LEED review. To challenge the final ruling, the project team must submit an appeal to the USGBC within 25 business days of the final review. If the denial is upheld, no further recourse is available. There is likely no recourse available against the USGBC for denying certification of a project, as it has no contractual duty to any of the parties. In addition, the forms completed during the project registration process include express disclaimers of any liability or reliance on obtaining certification, and all parties involved must also agree to hold the USGBC harmless.

E. Criticisms of LEED and Its Evolution

Although LEED is by far the most prevalent green building rating system in the United States, it is not beyond criticism. In fact, the growth of LEED has resulted in an increase in commentators addressing its shortfalls, which include the high costs required for LEED certification, failure to sufficiently emphasize building energy efficiency, the time it takes to achieve certification, the subjective nature of USGBC decisionmaking, the lack of oversight or regulation of the USGBC, and the lack of post-occupancy performance tracking. This section will discuss these criticisms and will examine some of the changes that were made to the system in response to these criticisms.

1. Criticisms of LEED

There have been several criticisms of LEED. One criticism is the amount of money and paperwork that is required to register a project, complete the many templates and narratives required for the various points, and conduct a LEED rating audit at the end of construction.²³ In addition, it is impossible to know precisely how many points will be obtained until construction is completed. The USGBC tried to remedy this problem somewhat in LEED-NC 2.2 by allowing developers to submit the design portion of the LEED certification application to it before construction. Although actual credits are not awarded at this stage, a project developer is notified of the likelihood that portions of the project will achieve a LEED credit if the construction activity is consistent with the design-phase plan.

Another criticism is that all environmental improvements under LEED are assigned one value, even though some improvements cost much more and have far greater environmental benefits than others.²⁴ Critics note that the

21. This online program is available at <https://www.gbci.org/DisplayPage.aspx?CMSPageID=137>.

22. Additional information about LEED registration and certification fees is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1497>.

23. The LEED certification process and documentation of LEED credits can cost as much as \$20,000 to \$60,000, depending upon project size, complexity, and project team experience. See Jim Nicolow, *Measuring the Cost to Become LEED Certified*, FACILITIESNET MAG. (Nov. 2008).

24. Ted Bowen, *Constructive Criticism: LEED Green Building Program Confronts Critics and Growing Pains*, GRIST MAG. (Oct. 26, 2005), available at <http://www.grist.org/article/leed1>.

emphasis on procedure and points sometimes ignores actual environmental benefits.²⁵ For example, it is conceivable that a development could get one point for installing an energy-efficient HVAC system costing millions of dollars and one point for installing a bicycle rack costing several hundred dollars. However, one of the advantages of LEED is that it allows owners and builders to choose the most cost-effective way to achieve a certain level of LEED certification.

A third criticism was that the LEED checklist system does not vary enough to take into account local environmental conditions.²⁶ For example, under previous versions of LEED, a building in Maine received the same credit as a building in Arizona for water conservation, even though water conservation is more important in the latter case. As explained below, this criticism was addressed in v3.0 with the introduction of regional credits.

A fourth criticism has been that the USGBC takes too long to certify buildings, thus creating a backup of applications.²⁷ This has been somewhat remedied by the use of Internet-based submittals rather than paper-based submittals. However, backups still occur, given the increase in building owners seeking LEED certification.

A fifth criticism, and perhaps the biggest one, has to do with energy efficiency. Many commentators have noted that a building could achieve some level of LEED certification, even though it uses as much or more energy than another building of the same type and size that was not LEED-certified.²⁸ Before the rollout of LEED 3.0, the USGBC tried to address this by requiring that as of June 2007, all LEED-certified projects get a minimum of two energy points in the Energy and Atmosphere section of the credits. Practically speaking, this meant that LEED-NC projects registered after this date were required to better the ASHRAE Energy Standard 90.1–2004 by 14% and LEED-EB projects had to better the standard by 7%.

2. Changes From LEED v2.2 to v3.0

LEED underwent substantial revisions in 2009 with the rollout of v3.0.²⁹ The most important changes from LEED v2.2 to LEED v3.0 can be generalized into three components: (i) harmonization of the different LEED categories; (ii) credit-weighting; and (iii) regionalism. The harmonization enhancement was intended to create uniform standards between prerequisites and credits across all LEED rating systems. Historically, each of the LEED rating systems had different point requirements for each certification level. LEED

v3.0 harmonizes all rating systems on a 100-point scale, with 40 points required for basic certification, 50 points for Silver, 60 points for Gold, and 80 points for Platinum certification.

Also, LEED v3.0 has increased the value of certain credits in an attempt to better align the desired outcomes of the system as a whole to the value of certain building strategies and techniques, particularly those that promote energy efficiency and reduce greenhouse gas emissions. To prioritize these credits in terms of their environmental impact, all credits have been evaluated based on 13 environmental impact categories, with those credits focused on energy efficiency and greenhouse gas reduction credits awarded greater point values under LEED v3.0. In addition, energy efficiency now accounts for more than one-third of the possible points. The minimum threshold for energy efficiency has been reduced from 14% to 10% above the applicable ASHRAE standard; however the applicable standard is now the newer ASHRAE 90.1–2007, rather than the earlier ASHRAE 90.1–2004.³⁰

Before LEED v3.0, the rating systems failed to account for certain factors that were more important in certain regions of the country than others. For example, terrain, climate, and regional resources vary dramatically between development sites in Arizona, as compared to Florida or Vermont. While these sites differ in many ways, under the old LEED versions, they were all evaluated based on the same set of standards. LEED v3.0 created a regionalized credit priority program, which allows for six LEED credits specific to a region's environmental concerns.³¹ Projects employing regional priority credits may implement four of these six credits and attain up to four additional points. For example, regional credits in urban areas of Florida incentivize (among other things) decreased reliance on fossil fuels, reuse of existing building stock, decreased reliance on insufficient municipal wastewater plants, and utilization of abundant local sunshine, while regional credits in rural areas of Michigan incentivize (among other things) the preservation of prime agricultural land, reduction of light trespass into neighboring natural habitats, and minimizing the amount and improving the quality of stormwater that empties into the Great Lakes.

In addition, v3.0 incorporates minimum program requirements (MPRs) that a project must possess to be eligible for certification under LEED v3.0.³² To be eligible for certification, a project must, among other things, commit to sharing whole-building energy and water-usage data. The primary goal of MPRs is to help protect the integrity of the LEED program by, among other things, closing the gap between designed building performance and actual building perfor-

25. See, e.g., Nadav Malin, *The Going Rate*, ARCHITECTURE (Apr. 2003), at 45 (characterizing the LEED system as "confusing, cumbersome, and in some cases oversimplified").

26. See, e.g., Amanda Sturgeon, *Hello LEED v.3!*, ARCHITECTURE WK. (June 3, 2009).

27. See, e.g., Randy Udall & Auden Schendler, *LEED Is Broken—Let's Fix It*, iGREENBUILD.COM (Aug. 9, 2005), available at http://www.igreenbuild.com/cd_1706.aspx.

28. See, e.g., HENRY GIFFORD, A BETTER WAY TO RATE GREEN BUILDINGS: LEED SETS THE STANDARD FOR GREEN BUILDING, BUT DO GREEN BUILDINGS ACTUALLY SAVE ANY ENERGY? (2008).

29. Information about LEED v3.0 is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1970>.

30. As previously stated, ASHRAE 90.1 is an energy conservation standard for buildings (except low-rise buildings) that was first created by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) in 1975. It is updated every three years. The most recent update occurred in 2007.

31. Information about regional credits is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1971#region>.

32. See LEED-NC Rating System v3.0, pp. xiv-xv, available at <http://www.usgbc.org/ShowFile.aspx?DocumentID=5546>.

mance.³³ If a project cannot or does not comply with these MPRs, the Green Building Certification Institute (GBCI), an offshoot of the USGBC, which is now in charge of LEED certification, reserves the right to revoke it.³⁴

F. LEED Accreditation

Under prior versions of LEED, individuals could take a test and become a LEED AP in one or more of the LEED rating systems. In connection with the rollout of LEED v3.0, the USGBC and the GBCI, an organization the USGBC created in 2008 to conduct the testing and handle the accreditation of LEED APs,³⁵ created three tiers of LEED professional accreditations that help to distinguish knowledgeable and experienced green building professionals. The first tier is a LEED Green Associate, who is able to demonstrate knowledge and skill in understanding and supporting green design, construction, and operations. The second-tier professional is a LEED AP+, a designation that is intended to distinguish certain professionals who have an extraordinary depth of knowledge in green building practices and an expertise in a particular LEED field, such as new construction or commercial interiors. Individuals wishing to become a LEED Green Associate or a LEED AP+ must pass a GBCI-administered test. The third and final tier of designation is that of a LEED AP Fellow. LEED AP Fellows are an elite class of professionals who have years of experience, have undergone a peer review of their project portfolio, and are the true leaders of the green building profession. This designation is still under development. Pursuant to the new accreditation regime, all three tiers of LEED APs are also required to take continuing-education classes to maintain their accreditation levels.³⁶

III. Other Green Building Rating Systems

While the USGBC's LEED portfolio remains the most widely used green building system, there are other rating systems that have gained recognition, such as the Building Research Establishment's Environmental Assessment Method (BREEAM),³⁷ Green Globes,³⁸ Energy Star,³⁹ and Green Guide for Healthcare (GGHC),⁴⁰ as well as several other regional residential rating systems. These rating systems are discussed in more detail below.

33. See U.S. Green Building Council Press Release, Buildings Seeking LEED to Provide Performance Data (June 25, 2009), available at <http://www.usgbc.org/Docs/News/MPRs%200609.pdf>.

34. Information about the GBCI is available at <http://www.gbci.org>.

35. *Id.*

36. Information about these continuing-education classes is available at <http://www.gbci.org/DisplayPage.aspx?CMSPageID=202&>.

37. Information about BREEAM is available at <http://www.bre.co.uk>.

38. Information about Green Globes is available at <http://www.greenglobes.com/design/homeca.asp>.

39. Information about Energy Star is available at <http://www.energystar.gov>.

40. Information about Green Guide for Healthcare is available at <http://www.gghc.org>.

A. The BREEAM

The BREEAM green building rating system was established in 1990 by the Building Research Establishment (BRE), which is based in the United Kingdom.⁴¹ The BRE was created in 1917 by the Department of Scientific and Industrial Research (DSIR), which was tasked with creating a government-funded organization that would explore innovative building materials and construction methods for use in the thriving housing market following World War I. Some of the early work the BRE carried out includes research with reinforced concrete in floors and setting the British standard for brick.⁴²

According to the BRE, the BREEAM is the most widely used environmental performance rating system in the world, although it is not widely used in the United States. Since the BRE's inception, more than 818,943 homes and 22,972 buildings have been registered.⁴³ The BRE is responsible for operating the BREEAM as well as the EcoHomes rating systems, which provides ratings for new, converted, or remodeled homes and apartments.⁴⁴ The BREEAM scoring system is based on an accumulation of points to achieve one of the following ratings: pass, good, very good, excellent, and outstanding. The BREEAM rating system categories include courthouses, sustainable homes, EcoHomes, EcoHomesXB (existing buildings), health care, industrial, international, multifamily, prisons, office, retail, educational facilities, and communities. The BRE has made a concerted effort to cover a multitude of building types and even includes the BREEAM Bespoke rating system for international and specialized buildings, which do not conform to the aforementioned categories.

Like LEED, both the BREEAM and EcoHomes are voluntary and underwent significant updates in August of 2008. The most notable changes consist of a new two-stage evaluation process similar to LEED (where both the design and building as constructed are evaluated) and the introduction of mandatory credits.

B. Green Globes

Green Globes is an online building assessment tool for both residential and commercial structures. Green Globes helps both with the new construction of commercial buildings and with the maintenance and improvement of existing buildings. It is questionnaire-driven and is generally acknowledged to be less cumbersome and less expensive to administer than LEED, although not as well known or rigorous. Based on a 1,000-point scale, projects can earn between one and

41. Information about the BRE and BREEAM is available at <http://www.bre.co.uk>.

42. *See id.*

43. See BRE, "What's BREEAM?," available at <http://www.breeam.org/page.jsp?id=66>.

44. Information about EcoHomes is available at <http://www.breeam.org/page.jsp?id=21>.

four Globes, with four indicating the highest level of sustainability within the system.⁴⁵

Green Globes was brought to Canada from the United Kingdom in 1996 following the introduction of the BREEAM. Green Globes' online assessment tool was released in 2000 and provides green guidelines for residential and commercial structures. The Green Building Initiative (GBI), a nonprofit organization based in the United States, acquired the rights to distribute Green Globes to the United States in 2004.⁴⁶ In 2005, the GBI became the first green organization accredited by the American National Standards Institute (ANSI), which promoted the establishment of Green Globes as an ANSI standard.⁴⁷

C. Energy Star

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) introduced the Energy Star rating system in 1992. All appliances and electrical devices bearing the Energy Star logo have been evaluated and given a rating based on energy efficiency and utility cost savings as compared to traditional products. The program aims to educate consumers in the financial and environmental benefits gained by choosing a certified Energy Star product. The Energy Star product categories include appliances, HVAC systems, consumer electronics, office equipment, and lighting.

The Energy Star rating has also been expanded to include whole-home and commercial building efficiency. EPA has recently developed an energy-efficiency assessment tool named Portfolio Manager, which allows a user to input energy usage information about a particular building and receive an energy performance score, thus determining the building's eligibility to apply for the Energy Star certification.⁴⁸ A building attaining a score of 75 or higher on a 100-point scale is eligible to receive the Energy Star rating, meaning that it is in the top 25th percentile based on EPA's National Energy Performance Rating.

D. The GGHC

The leading vehicle for green building implementation in the health-care industry is the GGHC, a health care industry-driven system that the American Society for Healthcare Engineering created in 2002.⁴⁹ There are a number of unique challenges in accomplishing standard green building practices in health-care facilities, including the following: (1) the need for hospitals and other health-care facilities to be open with all systems functioning around the clock; (2) the high level of dangerous waste that health-care facilities produce; (3) patients' increased sensitivities to chemicals and pollut-

ants (along with related air circulation issues); (4) the need for health-care facilities to meet stringent regulatory standards that are not applicable to typical commercial developments; and (5) the fact that health-care facilities have different transportation expectations than some other places of business.

As a result of these differences, general green building standards for the health-care industry have taken longer to develop than standards for other types of buildings. The GGHC is a voluntary self-certifying program that borrows from, but is not formally connected to, the LEED rating system. In a manner similar to the LEED system, the GGHC gives a certain number of credits for each environmentally friendly and energy-efficient characteristic incorporated into a building. The GGHC includes metrics for both construction and operations, which allows it to be used for existing facilities as well as new construction. Because the GGHC is a self-certifying system, health-care entities that wish to use it must vouch for their own compliance with the program.

E. Regional Residential Rating Systems

Given the fact that LEED did not focus on residential properties until the release of its LEED-Homes rating system in 2008,⁵⁰ in recent years, a number of regional green residential rating systems have emerged. One example is California's Build It Green system.⁵¹ Build It Green is a nonprofit organization whose mission is to promote healthy energy- and resource-efficient buildings throughout the state. The organization has developed a residential rating program called GreenPoint Rated, which provides an objective, third-party verification system that equips consumers to find green homes and understand green benefits, and recognizes green features. Under the program, homes are graded on five categories: energy efficiency; resource conservation; indoor air quality; water conservation; and community. If a home meets the minimum point requirements in each category and scores at least 50 points, it earns the right to bear the GreenPoint Rated label. The system also provides a score that allows prospective purchasers to evaluate and compare the environmental performance of different homes.⁵² There are a number of similar state and local organizations that encourage green homes, including Built Green Colorado,⁵³ Built Green Seattle,⁵⁴ the California Green Builder Program,⁵⁵ and the California Home Energy Rating System (HERS),⁵⁶ to name a few.

45. Additional information about Green Globes is available at <http://www.greenglobes.com>.

46. Information about the GBI is available at <http://www.thegbi.org>.

47. Information about ANSI is available at <http://www.ansi.org>.

48. Additional information about Portfolio Manager is available at http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager.

49. Additional information about the GGHC is available at <http://www.gghc.org>.

50. Information about LEED for Homes is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=147>.

51. Information about Build It Green is available at <http://www.builditgreen.org>.

52. Additional information about the GreenPoint Rated program is available at <http://www.builditgreen.org/node/5>.

53. Information about Built Green Colorado is available at <http://www.builtgreen.org>.

54. Information about Built Green Seattle is available at <http://www.builtgreen.net>.

55. Information about the California Green Builder program is available at <http://www.cbiba.org/go/cbia/government-affairs/green-building>.

56. Information about HERS is available at <http://www.energy.ca.gov/HERS/index.html>.

IV. Green Leasing Systems/Measurements

A. What Is a Green Lease?

A green lease is a lease of space in a green building. Much like the term “green building,” a green lease does not have a widely accepted definition, and thus it can take many forms. A green lease typically details environmentally friendly products to be used, water and energy conservation methods and targets, the use of alternative sources of on-site energy such as solar or wind, indoor air quality standards, and dispute resolution procedures.

The most useful resources for attorneys to utilize in drafting green leases are the USGBC’s LEED for Commercial Interiors, or LEED-CI,⁵⁷ the Building Owners and Managers Association’s (BOMA’s) *Guide to Writing a Commercial Real Estate Lease, Including Green Lease Language* (BOMA Guide),⁵⁸ the Real Property Association of Canada’s (REALpac’s) Green Lease Resource Centre,⁵⁹ and the California Sustainability Alliance’s Leasing Toolkit.⁶⁰ Each of these is explained below.

B. Green Leasing Frameworks and Guides

1. LEED-CI

The most prominent third-party green building standard for leased space is the USGBC’s LEED-CI. This standard provides all parties with a framework and a third-party certification system to adhere to in drafting a green lease. LEED-CI specifically pertains to commercial interior spaces.

2. BOMA Guide

BOMA is a membership organization of building owners, managers, developers, leasing professionals, facility managers, asset managers, and the providers of the products and services necessary to operate commercial properties.⁶¹ In the summer of 2008, BOMA released the BOMA Guide, which was designed to facilitate the ongoing implementation of sustainable building practices. The BOMA Guide provides both property owners and tenants with a framework to enter into a green lease without the rigidity of the USGBC certification process. The BOMA Guide provides building professionals with the tools necessary to craft greener leases through useful annotations in its standard form lease.

One of the most common barriers to implementing energy-efficient building practices and technology is the split incentive, where the landlord pays for capital improvements

but the tenants, who pay the utility bills, get the benefits of energy savings.⁶² Green leases attempt to address this issue in the lease. For example, one approach the BOMA Lease Guide recommends to address the conflict between tenants and landlords is to define operating costs carefully so that landlords and tenants agree to share the cost of energy-efficiency improvements.⁶³

3. REALpac’s Green Lease Resource Centre

REALpac’s Green Lease Resource Centre also provides excellent materials for attorneys to utilize in creating a green lease. Its website contains a form of green office lease, as well as multiple other helpful resources.⁶⁴ The form of lease is a modified version of the National Standard Office Lease that REALpac has published since 2002. It focuses on targets and goals for sustainable features while generally avoiding harsh penalties for unintentional noncompliance with such goals. It is also designed to consider long-term changes in the real estate industry, such as carbon offsetting and trading.

4. California Sustainability Alliance’s Leasing Toolkit

The California Sustainability Alliance’s Leasing Toolkit is an excellent resource for all stakeholders in a green lease. It provides an effective road map of a green lease transaction from the request for proposal stage through lease negotiations. It also provides a useful green lease provision database that can help in drafting a green lease. The leasing toolkit is available at http://sustainca.org/green_leases_toolkit.

C. Unique Legal Issues for Green Leases

Much like the rest of the green building industry, green leases contain a collection of legal issues that landlords and tenants have not considered previously in lease agreements. This section briefly considers four common issues and considerations in connection with a green lease: (1) the perception that green building is generally more costly and its construction process might take longer than standard construction; (2) the fact that new green building products should be used with care; (3) the responsibility for obtaining the necessary LEED certification level; and (4) how the use of green building products and materials impacts the insurance/casualty provisions within a lease.

1. Cost and Time Concerns for a Green Lease

The green building techniques used in a space subject to a green lease may be more costly and time-consuming than the standard construction process. Although having a green space is obviously an important issue, having a finished space

57. Information about LEED-CI is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=145>.

58. This guide is available for purchase at <http://shop.boma.org/showItem.aspx?product=GL2008&session=0CE2E87865EE4E429A05387AD6DE289C>.

59. Information about REALpac is available at <http://www.realpac.ca/splash.asp>.

60. Information about the California Sustainability Alliance is available at http://www.sustainca.org/content/leasing_toolkit.

61. Additional information about BOMA is available at <http://www.boma.org/Pages/default.aspx>.

62. STEVEN A. TEITELBAUM, BOMA’S LEASE GUIDE: GUIDE TO WRITING A COMMERCIAL REAL ESTATE LEASE INCLUDING GREEN LEASE LANGUAGE (2008).

63. *See id.*

64. This form of green lease is available at http://www.realpac.ca/s_223.asp.

ready in the allotted time period may be more important. Thus, it is important for all parties to discuss these potential timing and cost issues with construction and design professionals who have green building experience and can provide advice in regard to both of these concerns.

2. Careful Use of Green Building Products

Landlords, tenants, and construction and design professionals must collaborate to select and install green building products and systems that result in the achievement of both the green leasing goals of the project and the needs of the tenant, because certain green building products and systems may create unforeseen issues for the tenant. Some specific examples of a failure to collaborate were detailed in a presentation by Frank Musica at the American Institute of Architects' (AIA's) 2007 Convention. In the first example Musica cited, a design firm specified cork flooring in the kitchen areas of a space. However, the flooring had not been tested properly for use in high-traffic kitchen areas and resulted in mold growth caused by water spillage.

A second example involved a tenant who provided the government with military and terrorism identification systems. The tenant invested in green design that featured extensive day lighting, which included skylights and large window systems. Upon government inspection of the new space, it was determined that the day lighting was putting confidential information at risk. As a result, the tenant faced a threatened revocation of its contractor's security rating and cancellation of existing contracts. These outcomes show why all of the parties involved with green space must work together carefully in the installation of green building products and systems to avoid these types of issues.

3. Responsibility for Obtaining LEED Certification

Many companies and government agencies require their space to satisfy an applicable LEED certification level for commercial interiors. In such instances, tenants may seek to require the achievement of such LEED certification level as a condition precedent to taking occupancy or paying rent. Other tenants may require lease provisions under which the landlord's failure to achieve a certain certification level constitutes a lease default.

Landlords will generally not guarantee such certification, because the project architect, general contractor, subcontractor, and, most important, the USGBC, all have a major impact on whether a space meets the required certification level. The landlord will thus need to (a) make sure it is working with construction and design professionals so that all understand these issues and are able to fulfill the applicable green building requirements; and (b) protect itself in its applicable construction and design agreements.

The landlord and tenant should also collaborate in crafting a lease that adequately protects each of their respective interests and avoids liability outside of either party's control.

Lease incentives such as free-rent periods or rental abatements may be the best way to properly incentivize a property owner to deliver a green lease space without undue penalty (default) for items outside of its control. As previously mentioned, the California Sustainability Alliance's Leasing Toolkit provides an effective road map of a green lease transaction.⁶⁵ In addition, the responsibility for obtaining the necessary LEED certification level must be considered within the lease, so that there are clear directives as to who will be responsible for certain registration and certification materials and what the consequences are for not attaining certification.

4. Green Lease Insurance/Casualty Provisions

A green lease should carefully consider the increase in both the replacement cost and the rebuilding period due to specific green building issues following a casualty event. As previously mentioned, green building products are generally more expensive than standard materials. There will also be additional costs incurred if the space needs to obtain its LEED certification again following a casualty event. Thus, each of these issues should be addressed when determining replacement value in the lease. If the casualty event is not the fault of the tenant, the lease should also consider who would be responsible for the costs of the LEED recertification. Finally, the rebuilding of the space may take longer due to the installation of many energy-efficient systems, an increased demand of green building products resulting in longer periods of time to obtain the products, and the LEED recertification process following the casualty event.

V. Conclusion

Since its inception, LEED has continued to evolve to become more rigorous and transparent. The most recent version of LEED, v3.0, has become more stringent with respect to energy efficiency, embraced the concept of regionalization through the adoption of regional credits, and increased its transparency through the introduction of MPRs. It remains to be seen, however, whether LEED will continue to be the dominant green building rating system in the industry. For example, Energy Star focuses exclusively on building energy efficiency, a topic that has recently received a good deal of attention from the Barack Obama Administration.⁶⁶

Green leases typically require that the landlord and tenant work together in an integrated design process to meet certain environmental goals. Constructing a green building can be more expensive than constructing a normal building. However, the operating costs are usually less, leading to the

65. The leasing toolkit is available at http://sustainca.org/green_leases_toolkit.

66. For example, in March 2010, the Obama Administration proposed a \$6 billion rebate program called "Homestar" to retrofit residential buildings. Under the program, the federal government would identify the kinds of building supplies and systems that would save energy over time. The homeowner would be eligible for a rebate from the store or the contractor for 50% of the cost of each upgrade, up to \$1,500. If the homeowner retrofitted the whole house, he or she would be eligible for a rebate of up to \$3,000. Information about this program is available at <http://www.whitehouse.gov/the-press-office/fact-sheet-homestar-energy-efficiency-retrofit-program>.

split-incentive problem. In addition, green building systems have detailed operating and maintenance requirements. A landlord may prepare an operations manual for the building and require the tenant to comply with it. Conversely, a tenant

may want to impose an obligation on the landlord to operate and maintain the building in accordance with certain green standards. These and other issues require that a green lease be drafted and negotiated carefully before it is signed.