Planes
LEED

Planes Contributions to LEED®

Minimize impact. Maximize investment. Planes® is durable and adaptable so it will keep working for you through many years of change. Planes products may contribute to the individual prerequisites and credits of LEED. Because LEED is a holistic building rating system and sustainable design guideline, there is no such thing as LEED-certified products—only ways of using and applying products to support the criteria.

Planes contributes to the following LEED Certifications:
LEED CI - Commercial Interiors
LEED NC – New Construction
LEED EB – Existing Buildings
LEED CS – Core and Shell Development

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HAWORTH®

Planes® Contributions to LEED®-CI 2.0

Product Name: Planes Tables
LEED Rating System: Commercial Interiors 2.0
June 2005

Materials & Resources

Credit 2.1	**Construction Waste Management: Divert 50% From Landfill** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 2.2	**Construction Waste Management, Divert 75% From Landfill** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 3.3	**Resource Reuse, 30% Furniture and Furnishings** *Planes products are designed for long life, contributing to this point on future projects.*	1 point
Credit 4.1	**Recycled Content: 10% (post-consumer + ½ pre-consumer)** *Planes products may contribute to this point as a typical product contains 2% post-consumer and 83% pre-consumer recycled content.*	1 point
Credit 4.2	**Recycled Content: 20% (post-consumer + ½ pre-consumer)** *Planes products may contribute to this point as a typical product contains 2% post-consumer and 83% pre-consumer recycled content.*	1 point
Credit 5.1	**Regional Materials, 20% Manufactured Regionally** *Planes products may contribute to this point depending on the project location. Planes is manufactured in and around Holland, Michigan.*	1 point
Credit 7	**Certified Wood** *Planes components can be specified with FSC certified wood veneers.*	1 point

Indoor Environmental Quality

Credit 4.5	**Low-Emitting Materials, Systems Furniture and Seating** *Planes products are in process of being Greenguard certified.*	1 point

Innovation & Design Process

Credit 1.1-1.4	**Innovation in Design** *Innovation points may be achieved when a project substantially exceeds a LEED-CI performance credit. For instance, an innovation point may be awarded for achieving 30% recycled content on a LEED-CI 2.0 project. Planes can contribute to achieving this higher level of recycled content.*	1 point

HAWORTH®

Planes® Contributions to LEED®-NC 2.2

Product Name: Planes Tables
LEED Rating System: New Construction 2.2
October 2005

Materials & Resources

Credit 2.1	**Construction Waste Management: Divert 50% From Disposal** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 2.2	**Construction Waste Management: Divert 75% From Disposal** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 3.1	**Materials Reuse: 5%** *Planes products are designed for long life, contributing to this point on future projects.*	1 point
Credit 3.2	**Materials Reuse: 10%** *Planes products are designed for long life, contributing to this point on future projects.*	1 point
Credit 4.1	**Recycled Content: 10% (post-consumer + ½ pre-consumer)** *Planes products may contribute to this point as a typical product contains 2% post-consumer and 83% pre-consumer recycled content.*	1 point
Credit 4.2	**Recycled Content: 20% (post-consumer + ½ pre-consumer)** *Planes products may contribute to this point as a typical product contains 2% post-consumer and 83% pre-consumer recycled content.*	1 point
Credit 7	**Certified Wood** *Planes components can be specified with FSC certified wood veneers.*	1 point

Innovation & Design Process

Credit 1.1–1.4	**Innovation Credit for Low Emitting Furniture** *Low emitting furniture may be applied toward an innovation credit for LEED NC following the criteria of LEED-CI EQ Credit 4.5. Planes systems furniture is in process of being Greenguard certified as low emitting and may contribute to earning this innovation credit.*	1 point

HAWORTH®

Planes® Contributions to LEED®-EB 2

Product Name: Planes Tables
LEED Rating System: Existing Buildings 2
July 2005

Materials & Resources

Credit 1.1	**Construction, Demolition and Renovation Waste Management: Divert 50% From Disposal** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 1.2	**Construction, Demolition and Renovation Waste Management: Divert 75% From Disposal** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 2.1	**Optimize Use of Alternative Materials** *Planes contains more than 20% pre-consumer recycled content. FSC materials are also available on a special order basis.*	1-5 points

HAWORTH®

Planes® Contributions to LEED®-CS 2.0

Product Name: Planes Tables
LEED Rating System: Core & Shell 2.0
July 2006

Materials & Resources

Credit 2.1	**Construction, Waste Management: Divert 50% From Disposal** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 2.2	**Construction Waste Management: Divert 75% From Disposal** *Planes packing materials include cardboard, polyethylene and polypropylene, all of which are easily recycled in many markets.*	1 point
Credit 3	**Materials Reuse: 1%** *Planes products are designed for long life, contributing to this point on future projects.*	1 point
Credit 4.1	**Recycled Content: 10% (post-consumer + ½ pre-consumer)** *Planes products may contribute to this point as a typical product contains 2% post-consumer and 83% pre-consumer recycled content.*	1 point
Credit 4.2	**Recycled Content: 20% (post-consumer + ½ pre-consumer)** *Planes products may contribute to this point as a typical product contains 2% post-consumer and 83% pre-consumer recycled content.*	1 point
Credit 6	**Certified Wood** *Planes components can be specified with FSC certified wood veneers.*	1 point

HAWORTH®

Leadership in Energy and Environmental Design

From Wikipedia, the free encyclopedia

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System, developed by the U.S. Green Building Council (USGBC), provides a suite of standards for environmentally sustainable construction. Since its inception in 1998, LEED has grown to encompass more than 14,000 projects in 50 U.S. States and 30 countries covering 1.062 billion square feet (99 km²) of development area.[2] The hallmark of LEED is that it is an open and transparent process where the technical criteria proposed by the LEED committees are publicly reviewed for approval by the more than 10,000 membership organizations that currently constitute the USGBC.

Individuals recognized for their knowledge of the LEED rating system are permitted to use the LEED Accredited Professional (AP) acronym after their name, indicating they have passed the accreditation exam given by the Green Building Certification Institute (a third-party organization that handles accreditation for the USGBC).

7 World Trade Center, considered New York City's first "green" office tower by gaining gold status in the U.S. Green Building Council's LEED program.[1]

Contents

History

LEED began its development in 1994 spearheaded by Natural Resources Defense Council (NRDC) senior scientist Robert K. Watson who, as founding chairman of the LEED Steering Committee until 2006, led a broad-based consensus process which included non-profit organizations, government agencies, architects, engineers, developers, builders, product manufacturers and other industry leaders. Early LEED committee members also included USGBC co-founder Mike Italiano, architects

Bill Reed and Sandy Mendler, builder Gerard Heiber and engineer Richard Bourne. As interest in LEED grew, in 1996, engineers Tom Paladino and Lynn Barker co-chaired the newly formed LEED technical committee.

From 1994 to 2006, LEED grew from one standard for new construction to a comprehensive system of six interrelated standards covering all aspects of the development and construction process. LEED also has grown from six volunteers on one committee to more than 200 volunteers on nearly 20 committees and nearly 150 professional staff.

LEED was created to accomplish the following:

- Define "green building" by establishing a common standard of measurement
- Promote integrated, whole-building design practices
- Recognize environmental leadership in the building industry
- Stimulate green competition
- Raise consumer awareness of green building benefits
- Transform the building market

Green Building Council members, representing every sector of the building industry, developed and continue to refine LEED. The rating system addresses six major areas:

- Sustainable sites
- Water efficiency
- Energy and atmosphere
- Materials and resources
- Indoor environmental quality
- Innovation and design process

Benefits and disadvantages

LEED certified buildings use key resources more efficiently when compared to conventional buildings which are simply built to code. LEED certified buildings have healthier work and living environments, which contributes to higher productivity and improved employee health and comfort. The USGBC has also compiled a long list of benefits of implementing a LEED strategy which ranges from improving air and water quality to reducing solid waste, benefitting owners, occupiers, and society as a whole.

Often when LEED certification is pursued, this will increase the cost of initial design and construction, for several reasons. One reason is that sustainable construction principles may not be well understood by the design professionals undertaking the project. This could require time to be spent on research. Some of the finer points of LEED certification (especially those which demand a higher-than-orthodox standard of service from the construction team) could possibly lead to misunderstandings between the design team, construction team, and client, which could result in delays. Also, there may be a lack of abundant availability of manufactured building components which meet LEED standards. Pursuing LEED certification for a project is an added cost in itself as well. This added cost comes in the form of USGBC correspondence, LEED design-aide consultants, and the hiring of the required Commissioning Authority (CxA) - all of which would not necessarily be included in an environmentally responsible project unless it were also seeking LEED certification.

However, these higher initial costs can be effectively mitigated by the savings incurred over time due to the lower-than-industry-standard operational costs which are typical of a LEED certified building. Additional economic payback may come in the form of employee productivity gains incurred as a

result of working in a healthier environment. Studies have suggested that an initial up front investment of 2% extra will yield over ten times the initial investment over the life cycle of the building.[3]

Although the deployment of the LEED standard has raised awareness of green building practices, its scoring system is skewed toward the ongoing use of fossil fuels. More than half of the available points in the standard support efficient use of fossil fuels, while only a handful are awarded for the use of sustainable energy sources. Further, the USGBC has stated support for the 2030 Challenge, an effort that has set a goal of using no fossil fuel green house gas emitting energy to operate by 2030. [4]

In addition to focusing on efficient use of fossil fuels, LEED focuses on the end product. For example, because leather does not emit VOCs they are deemed healthy for environments, disregarding the use of extremely harmful chemicals in the process of tanning leather. Other products that do not use harmful chemicals and focus on more sustainable production do not earn any additional points for their attention to environmental concerns.

LEED is a measurement tool and not a design tool. It is also not yet climate specific, although the newest version hopes to address this weakness partially. Because of this, designers may make materials or design choices that garner a LEED point, even though they may not be the most site or climate appropriate choice available.

Incentive Programs

Some areas have implemented or are considering incentives for LEED-certified buildings.

The city of Cincinnati, Ohio adopted a measure providing an automatic 100% real property tax exemption of the assessed property value for newly-constructed or rehabilitated commercial or residential properties that earn a minimum of LEED Certified.[5]

In the state of Nevada construction materials for a qualifying LEED building are exempt from local taxes. Pieces of construction that are deemed "inseparable" part such as concrete or sheetrock qualify.[6]

The state of Michigan is considering tax-based incentives for LEED buildings.[7]

Many local governments have adopted LEED incentive programs. Program incentives include tax credits, tax breaks, density bonuses, reduced fees, priority or expedited permitting, free or reduced cost technical assistance, grants and low interest loans.[8][9]

Certification

Different LEED versions have varied scoring systems based on a set of required "prerequisites" and a variety of "credits" in the six major categories listed above. In LEED v2.2 for new construction and major renovations for commercial buildings there are 69 possible points and buildings can qualify for four levels of certification:

- **Certified** - 26-32 points
- **Silver** - 33-38 points
- **Gold** - 39-51 points
- **Platinum** - 52-69 points

Point rating

Points have been distributed as follows. Required "prerequisites" in each category receive no points. [10][11][12]

Sustainable sites (14 points)

- Construction Activity Pollution Prevention Plan (required)
- Site selection (1 pt)
- Development density and community connectivity (1 pt)
- Brownfield redevelopment (1 pt)
- Alternative transportation availability (4 pts)
  - Public transportation access (1 pt)
  - Bicycle storage and changing rooms (1 pt)
  - Low-emitting and fuel-efficient vehicles (1 pt)
  - Parking capacity and carpooling (1 pt)
- Reduced site disturbance (2 pt)
  - Protect or restore open space (1 pt)
  - Development footprint (1 pt)
- Stormwater management (2 pts)
  - Rate and quantity (1 pt)
  - Treatment (1 pt)
- Reduce heat islands (2 pts)
  - Roof (1 pt)
  - Non-roof (1 pt)
- Light pollution reduction (1 pt)

Water efficiency (5 points)

- Water efficient landscaping (2 pt)
  - Reduce by 50% (1 pt)
  - No potable use or no irrigation (1 pt)
- Innovative wastewater technologies (1 pt)
- Water use reduction (2 pt)
  - (20%) (1 pt)
  - (30%) (1 pt)

Energy and atmosphere (17 points)

- Fundamental commissioning (required)
- Minimum (code) energy performance (required)
- Fundamental Refrigerant Management (required)
- Optimize energy performance by 14% (new) or 7% (existing) buildings (2 pts, required as of June 26, 2007)

- Energy optimization (8 pts in addition to the 2 required above)
- On-site renewable energy (3 pts)
- Enhanced Commissioning (1 pt)
- Enhanced Refrigeration Management (1 pt)
- Measurement and verification (1 pt)
- Green power (1 pt)

Materials and resources (13 points)

- Storage and collection of recyclables (required)
- Building reuse (3 pts):
  - 75% reuse of building structure and shell excluding windows (1 pt)
  - 100% reuse of building structure and 50% of walls, floors, ceilings (1 pt)
- Construction waste reuse or recycling (by weight or volume) (2 pts):
  - 50% diversion (1 pt)
  - 75% diversion (1 pt)
- Reuse of existing materials (by cost) (2 pts)
  - 5% salvaged or refurbished materials (1 pt)
  - 10% salvaged or refurbished materials (1 pt)
- Recycled content (2 pts)
  - Criteria vary in recent versions of LEED, but depend on value of pre- and post-consumer recycled content (2 pt)
- Use of local materials (2 pts)
  - Fabrication shop within 500 miles (800 km) of building site and raw materials source within 500 miles (800 km) of building site, 10% (1 pt) or 20% (+1 pt).
- Rapidly renewable materials (1 pt)
- Certified Wood (1 pt)

Indoor environmental quality (15 points)

- Minimum indoor air quality (required)
- Environmental tobacco smoke control (required)
- Outdoor air delivery monitoring (1 pt)
- Increased ventilation (1 pt)
- Construction indoor air quality management (2 pt)
- Indoor chemical and pollutant source control (1 pt)
- Controllability of systems (2 pt)
- Thermal comfort (2 pt)
- Daylight and views (2 pt)

Innovation and design process (5 points)

- One point for having a LEED AP as a principal participant on the project.
- Additional points for this category are awarded above and beyond the core 64 points, and are described as rewarding strategies that go above and beyond the criteria for those points. Examples for up to four design points using steel construction include structure as finish, structure as plumbing, lightweight materials, recyclability, and potential for disassembly. (up to 4 pts)

Process

LEED certification is obtained after submitting an application documenting compliance with the requirements of the rating system as well as paying registration and certification fees. Certification is granted solely by the Green Building Council responsible for issuing the LEED system used on the project.

Recently the application process for new construction certification has been streamlined electronically, via a set of active PDFs that automates the process of filing the documentation.

Directory of LEED-certified projects

The Green Building Council provides an online directory of LEED-certified projects.[13]

LEED versions

Different versions of the rating system are available for specific project types:[14]

- LEED for New Construction: New construction and major renovations (the most commonly applied-for LEED certification)[15]
- LEED for Existing Buildings: Existing buildings seeking LEED certification
- LEED for Commercial Interiors: Commercial interior fitouts by tenants
- LEED for Core and Shell: Core-and-shell projects (total building minus tenant fitouts)
- LEED for Homes: Homes
- LEED for Neighborhood Development: Neighborhood development
- LEED for Schools: Recognizes the unique nature of the design and construction of K-12 schools
- LEED for Retail: Consists of two rating systems. One is based on New Construction and Major Renovations version 2.2. The other track is based on LEED for Commercial Interiors version 2.0.

LEED has evolved since its original inception in 1998 to more accurately represent and incorporate emerging green building technologies. LEED-NC 1.0 was a pilot version. These projects helped inform the USGBC of the requirements for such a rating system, and this knowledge was incorporated into LEED-NC 2.0. The present version of LEED for new construction is LEED-NC v2.2. LEED also forms the basis for other sustainability rating systems such as the Environmental Protection Agency's Labs21.

LEED is a measurement tool for green building in the United States and it is developed and continuously modified by workers in the green building industry, especially in the ten largest metro areas in the U.S.; however, LEED certified buildings have been slower to penetrate small and mid-major markets.[16] Also, some criticism suggests that the LEED rating system is not sensitive and does not vary enough with regard to local environmental conditions. For instance, a building in Maine would receive the same credit as a building in Arizona for water conservation, though the principle is more important in the latter case. Another complaint is that its certification costs require money that could be used to make the building in question even more sustainable.Many critics have noted that compliance and certification costs have grown faster than staff support from the USGBC.

In 2003, the Canada Green Building Council received permission to create its own version of LEED based upon LEED-NC 2.0, now called LEED Canada-NC v1.0.[17]

For existing buildings LEED has developed LEED-EB. Recent research has demonstrated that buildings which can achieve LEED-EB equivalencies can generate a tremendous ROI. In a recent white paper by the Leonardo Academy comparing LEED-EB buildings vs. data from BOMA's Experience Exchange Report 2007 demonstrated LEED-EB certified buildings achieved superior operating cost savings in 63% of the buildings surveyed ranging from $4.94 to $15.59 per square foot of floor space, with an average valuation of $6.68 and a median valuation of $6.07.[18]

In addition the overall cost of LEED-EB implementation and certification ranged from $0.00 to $6.46 per square foot of floor space, with an average of $2.43 per square foot demonstrating that implementation is not expensive, especially in comparison to cost savings. These costs should be significantly reduced if automation and technology are integrated into the implementation.[19]

LEED and carbon trading

It is expected that LEED-NC 3.0 will include a requirement for a carbon footprint (carbon building print) and a significant reduction of GHG (green-house gases) beyond a baseline level. The reduction in carbon dioxide must be measured based on the direct and indirect carbon dioxide and equivalent reductions. These include emissions related to the consumption of grid delivered electricity, on-site combustion of fossil fuels, and fugitive refrigerant emissions.

The efforts to quantify emission and reductions in emissions will be in an effort to monetize the climate change externality in the same way that a Kyoto Clean Development Project (carbon project) does. ITC Hotel Sonar Bangla Sheraton & Towers in Kolkata, India is the only green building project in the world to monetize the reductions that acts as the main precedent for this type of project.

Professional accreditation

Green building professionals can become LEED accredited through the LEED Accredited Professional Exam. This accreditation enables an individual to facilitate the rating of buildings with the various LEED systems. Since January 2008, professional accreditation is administered by the Green Building Certification Institute. GBCI has an education provider program that provide seminars and lectures to prepare candidates to take and pass the LEED AP Exam. Beginning in 2009, the LEED AP Exam process will change significantly to mirror to various LEED Building Certification Rating Systems[20]

International initiatives

With many countries either having, or being in the process of developing domestic assessment methods, international exchanges and coordination have being increasingly evident.

In 1997, for example, the International Organization for Standardization's Technical Committee 59 (ISO TC59) - Building Construction resolved to establish an ad hoc group to investigate the need for standardized tools within the field of sustainable building. This subsequently evolved and was formalized as Sub-Committee ISO T59/SC17 – Sustainability in building construction – the scope of which includes the issues that should be taken into account within building environmental assessment methods.

In Europe, under European Committee for Standardization's TC350 -Sustainability of Construction Works, a consensus-building process that relates to other standards (ISO) and harmonizes existing approaches was launched. These standards shall enable the exchange of sustainability information related to internationally traded products and services.

The Sustainable Building Alliance (SB Alliance), a non-profit, non-partisan international network of universities, research centers and technical assessment organizations that is intended to accelerate the international adoption of Sustainable Building (SB) practices through the promotion of shared methods of building performance assessment and rating. The SB Alliance initiative is supported by the UNESCO Chair for sustainable buildings and the UNEP sustainable building and construction initiative.

See also

- Department of Housing and Urban Development (HUD)
- Design for Environment

- Design Impact Measures
- EcoHomes
- Ecological footprint
- Energy conservation
- Environmental design
- General Services Administration
- Green Globe
- Greensburg, Kansas - the first city to (re)build from scratch to LEED Platinum standards
- High-Performance Green Buildings
- Passive house
- Permaculture
- Renewable energy
- Sustainable architecture
- Zero energy building

Notes

1. ^ "7 World Trade Center Officially Certified as New York City's First 'Green' Office Tower" (PDF). Silverstein Properties. http://www.tishmanconstruction.com/pdfs/7wtcgreen.pdf. Retrieved on 2006-05-26.
2. ^ "Green Building By the Numbers". USGBC. http://www.usgbc.org/ShowFile.aspx?DocumentID=3340. Retrieved on 2008-12-01.,
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4. ^ "The 2030 Challenge". architecture2030.org. http://www.architecture2030.org/2030_challenge/index.html.
5. ^ "LEED Initiatives in Government and Schools". http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1852.
6. ^ "Exemption for LEED Certified Green Buildings". http://tax.state.nv.us/LEED.htm.
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12. ^ Jones, Alan. "The LEED rating system" (PDF). http://www.ncmbc.us/docs/TheLEEDRatingSystem-ShelleyMcPhatter.pdf.
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14. ^ U.S. Green Building Council: LEED
15. ^ LEED-NC Version 2.2 Registered Project Checklist
16. ^ Burr, Andrew C. (April 23, 2008). "LEED's Big Market Bias". CoStar Group. http://www.costar.com/News/Article.aspx?id=652024CBB8139C748C5F6F871CD4EF6B. Retrieved on 2008-04-27.
17. ^ Canada Green Building Council: Green Building Rating System
18. ^ Going Green....Is it the 800lb Elephant in the Room?
19. ^ Going Green....Is it the 800lb Elephant in the Room?
20. ^ Chicago US Green Building Council, Exam Changes

References

- Lucuik, M., Trusty, W., Larsson, N., & Charette, R. (2005). A Business Case for Green Building in Canada: Presented to Industry Canada [Report]. United States Green Building Council.

- Kats, G., Alevantis, L., Berman, A., Mills, E., & Perlman, J. (2003). The Costs and Financial Benefeits of Green Buildings: A Report to California's Sustainable Building Task Force [Report]. United States Green Building Council.
- United States Green Building Council. (2006, August). Foundations of the Leadership in Energy and Environmental Design, Environmental Rating System, A Tool for Market Transformation [Policy Manual].

External links

- U.S. Green Building Council
- World Green Building Council
- Canada Green Building Council
- Sustainable Building Alliance
- UNEP-SBCI
- International Organization for Standardization
- European Committee for Standardization
- Summary of Indoor Environment Quality credits for material selection

Other national rating systems

- South Korea: /Greening Building System
- Japan: CASBEE
- Australia: Nabers / Green Star
- Brazil: AQUA / LEED Brasil
- Canada: LEED Canada/ Green Globes
- China: GB Evaluation standard for green building
- Finland: PromisE
- France: HQE
- Germany: DGNB
- Hong Kong: HKBEAM
- India: GRIHA (national green rating)/ LEED India
- Israel: SI-5281
- Italy: Protocollo Itaca
- Mexico: LEED Mexico
- Netherlands: BREEAM Netherlands
- New Zealand: Green Star NZ
- Portugal: Lider A
- Singapore: Green Mark and Construction Quality Assessment System (CONQUAS â)
- South Africa: Green Star SA
- Spain: VERDE
- United States: LEED/Green Globes
- United Kingdom: BREEAM

Categories: LEED certified buildings | Sustainable building | Sustainable building in the United States | Low-energy building | Environment of the United States | Building engineering | Energy in the United States | Environmental design
Hidden categories: All articles with unsourced statements | Articles with unsourced statements since October 2008 | Articles with unsourced statements since December 2008 | All pages needing cleanup | Articles with minor POV problems from December 2008

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FAQ

FREQUENTLY ASKED QUESTIONS

LEED® for Commercial Interiors

What is LEED for Commercial Interiors?
LEED for Commercial Interiors is a certification program developed by the U.S. Green Building Council that addresses the specifics of tenant spaces primarily in office, retail and institutional buildings. Tenants who lease their space or do not occupy the entire building can LEED certify their space as a green interior.

LEED for Commercial Interiors was designed to work hand-in-hand with the LEED for Core & Shell certification system. LEED for Core and Shell is a tool that developers can use to LEED certify the core and shell of their development. LEED for Core and Shell and LEED Commercial Interiors establish green building criteria for commercial office real estate for use by both developers and tenants.

What tools are available for projects going through the LEED certification process for a commercial interior?
There are many tools available for projects going through the LEED certification process. The Reference Guide will help guide the project team through the LEED credit process. In addition, the LEED for Commercial Interiors certification system and other resources are available on USGBC's Web site under the LEED section.

How do I know if my commercial interior space is a good fit for LEED?
Projects should review the rating system and be sure the project can meet all prerequisites and achieve the minimum number of points required for LEED certification. If more than one rating system applies, the project team may decide which certification type to pursue. Email: leedinfo@usgbc.org for more info.

What are the LEED requirements for the tenant space vs. the whole building?
The following is a list of credits specific to the Commercial Interiors certification system that differentiate the tenant space project from a whole building project. Sustainable Sites credit 1 applies to the building selected, not to the scope of work.

- Water Efficiency credit 1 is based on the planned occupancy of the space, regardless of when the restrooms are constructed, who pays for them or where they happen to be located.

- Energy and Atmosphere prerequisite 1, Fundamental Commissioning, applies to the work done during the project, and as a minimum applies to the energy-related system listed in the requirement. (See page 19 of V2 of LEED for Commercial Interiors).

- It is not expected that the central building-wide systems will be commissioned (unless it is part of the scope of work of the project), but some tenants may

elect to have their commissioning authority confirm that these systems meet the owner's project requirements and the basis of design. Note that Indoor Environmental Quality prerequisite 1, and the flush-out compliance path in Indoor Environmental Quality credit 3.2 require evaluations of the air handling system; ideally, this is done before deciding on the project space. Owners who routinely hire their own commissioning authority may elect to have them do these evaluations.

- Energy and Atmosphere prerequisite 2, Minimum Energy Performance, and Energy and Atmosphere prerequisite 3, CFC Reduction in HVAC&R Equipment, only apply to the scope of work defined by the project team.

- Energy and Atmosphere credit 1.1 and 1.2 only look at the lighting power used in the project space. By contrast, Energy and Atmosphere credit 1.3 either prescriptively addresses the design of the HVAC system, or the overall performance of the HVAC system even when a project shares a common system with other parts of a building. The exception, "Appropriate Zoning and Controls," by virtue of how the requirement is written, only applies to the tenant space.

- In the Indoor Environmental Quality section of the LEED for Commercial Interiors certification system, several of the prerequisites and credits address performance of the HVAC system. In Indoor Environmental Quality prerequisite 1, Minimum IAQ Performance, the requirements of ASHRAE 62.1-2004 apply to the capabilities of the building's HVAC system; but, because modifications to the whole HVAC system may be beyond the scope of an individual tenant project, the requirement provides an alternative minimum.

I am trained as an interior designer and don't have the background to handle the energy- and HVAC-related credits. What do I do?
Successful LEED projects begin with a fully integrated design team in which all the professional disciplines work together toward the project goals. Following a process of integrated design will ensure that the team is working together and minimize any potential errors.

I am not familiar with commissioning and have never encountered it in an interior project. Is it really necessary? How do I get it done?
Commissioning is a process to assure that the project is built and operating as it was designed. Independent commissioning agents can be hired to perform the task. Larger Architectural and Engineering firms may have commissioning agents on staff. Commissioning is an important step designed to save the project money over the lifecycle of the project.

Where do I find the reference materials for my project?
Go to www.usgbc.org then click on 'MyUSGBC' in the upper right-hand corner. Log-in with your site user information and look on the left-hand side of the screen under

'Project.' There you can access resources, Letter Templates, Credit Interpretation Requests (CIR's) and Surveys.

Does the LEED certification system recommend building products?
No, USGBC certifies buildings and tenant spaces under the LEED certification systems, not the materials that are used to construct the building or interiors.

Within the LEED certification system, building products contribute to achieving LEED points following performance-based requirements. To meet these requirements, practitioners identify products that have specific attributes. Some LEED points will require that certain limits or minimums be met. Other points require that specific product technical information be quantified in order to calculate the product's aggregate environmental or health value.

Many manufactures now offer the necessary product technical information that you need to meet LEED credit requirements and have trained sales professionals who can guide you to products and materials that may contribute to LEED credits, as well as meet your broader environmental criteria.

What educational programs are available to learn more about LEED?
Numerous training workshops and webinars are available on the USGBC Web site; click here for more information.

Are IIDA, ASID, and AIA continuing education units available for LEED Workshops?
Yes, continuing education units are available; please inquire when you sign up for a LEED workshop for details.

Can interior designers become LEED Accredited Professionals?
Yes. Anyone wishing to seek accreditation can sit for the any or all of the three LEED Professional Accreditation exams. There is a specific track for the interior designer profession. LEED Accredited Professionals that are serving on a LEED project team will earn one LEED point towards certification for all LEED certification systems (under Innovation in Design Credit 1). Visit www.gbci.org for more information about the LEED Professional Accreditation process.

How do I get started?
You can learn more about LEED on USGBC's Web site: www.usgbc.org or by contacting USGBC via email leedinfo@usgbc.org.