

U.S. Green Building Council

The **U.S. Green Building Council (USGBC)**, co-founded by Mike Italiano, David Gottfried and Rick Fedrizzi in 1993, is a non-profit trade organization that promotes sustainability in how buildings are designed, built, and operated. USGBC is best known for the development of the [Leadership in Energy and Environmental Design](#) (LEED) green building rating systems and Greenbuild, a green building conference and expo that promotes the [green building](#) industry, including [environmentally responsible materials](#), [sustainable architecture techniques](#) and [public policy](#).

Because of its name, USGBC is sometimes confused for a government agency or entity, but it is not; it is a private [501\(c\)\(3\)](#), membership based non-profit organization. At the end of February 2010, USGBC had more than 18,500 member organizations from every sector of the building industry. USGBC works to promote buildings that are environmentally responsible, profitable and healthy places to live and work. To achieve this it has developed a variety of programs and services, and works closely with key industry and research organizations and federal, state and local government agencies.

USGBC also offers a host of educational opportunities, including workshops and Web-based seminars to educate the public and industry professionals on different elements of the green building industry, from the basics to more technical information. Through its partnership with the [Green Building Certification Institute](#), USGBC offers industry professionals the chance to develop expertise in the field of green building and to receive accreditation as LEED Green Associates or LEED APs with specialty.

Leadership in Energy and Environmental Design (LEED)

LEED began its development in 1994 founded and 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



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process. LEED also has grown from six volunteers on one committee to more than 200 volunteers on nearly 20 committees and nearly 200 professional staff.

USGBC established benchmarks for the [LEED Green Building Rating System](#) in 2000. LEED is a framework for assessing building performance and meeting sustainability goals. LEED rating systems are currently available for new construction, existing buildings, commercial interiors, core and shell, schools, retail and homes, and rating systems are in pilot or under development for neighborhood developments and health care. Certification is generally voluntary, but required or under consideration as a requirement for certain buildings in many U.S. localities.

Recently, USGBC updated their online reference guides to help promote eco-friendly building practices worldwide. This included an interactive web tool to explain the LEED Green Building Rating System and a web application equating the rating system with a nutrition label. This redesign was carried out by [Unison Agency](#).

The [National Building Museum](#) presented Rick Fedrizzi and the USGBC with its 2009 [Honor Award](#) (themed "Visionaries in Sustainability"), citing the organization's "exceptional achievement in establishing and integrating green building standards" in its LEED systems as one of the reasons for selection.^[1] The museum also awarded USGBC with its [Henry C. Turner Prize](#) in 2005 for its leadership and innovation in the construction industry, specifically for LEED.^[2] To date, it is the only organization to have received two awards from the Building Museum.

What is LEED?

Leadership in Energy and Environmental Design (LEED) is a rating system devised by the United States Green Building Council (USGBC) to evaluate the environmental performance of a building and encourage market transformation towards sustainable design. The system is credit-based, allowing projects to earn points for environmentally friendly actions taken during construction and use of a building. LEED was launched in an effort to develop a “consensus-based, market-driven rating system to accelerate the development and implementation of [green building](#) practices.” The program is not rigidly structured; not every project must meet identical requirements to qualify.

These LEED products are currently available:

1. LEED - v3.0 for New Construction and Major Renovations
2. LEED - for Homes
3. LEED - for Core and Shell
4. LEED – for Existing Buildings: Operations and Maintenance
5. LEED – for Commercial Interiors
6. LEED - for Schools
7. LEED - for Retail



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8. LEED - for Healthcare
9. LEED - for Neighborhood Development (in pilot stage)

Detailed information on the LEED program and project certification process is available from USGBC at <http://www.usgbc.org/>. The program outlines the intent, requirements, technologies, and strategies for meeting each credit. Credits are broken down into individual points. A building requires at least 40 points for certification in LEED-NC v3.0. Silver, gold, and platinum levels are also available.

LEED Certification Levels

- Certified 40 - 49 Points
- Silver 50 - 59 Points
- Gold 60 - 79 Points
- Platinum 80-110 Points

How Does Concrete Help Achieve LEED Certification?

Using concrete can help increase the number of points awarded to a building in the LEED system. The following table provides suggestions for earning LEED-NC v3 points through the use of cement and concrete products. The credit categories and the credit numbers are those in the LEED rating system. Points must be documented according to LEED procedures in order to be earned. The USGBC website, <http://www.usgbc.org/>, contains a downloadable “letter template” that greatly simplifies the documentation requirements for LEED v3.0. The potential available points that can be earned with the help of concrete range from 25 to 34.

How Concrete Can Contribute to Points

PROJECT CHECKLIST - LEED– New Construction (NC) v3

Sustainable Sites		Points
Credit 3	Brownfield Redevelopment	1
Credit 5.1	Site Development, Protect or Restore Habitat	1
Credit 5.2	Site Development, Maximize Open Space	1
Credit 6.1	Stormwater Design, Quantity Control	1
Credit 6.2	Stormwater Design, Quality Control	1
Credit 7.1	Heat Island Effect, Non-roof	1



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Credit 7.2	Heat Island Effect, Roof	1
Energy and Atmosphere		
Prerequisite 2	Minimum Energy Performance	Required
Credit 1	Optimize Energy Performance	1 - 19
Materials and Resources		
Credit 1.1	Building Reuse, Maintain 55%, 75%, 95% of Existing Walls, Floors, and Roof	up to 3
Credit 2	Construction Waste Management, Divert 50% or 75%	up to 2
Credit 4	Recycled Content, 10% or 20% (post-consumer plus ½ pre-consumer)	up to 2
Credit 5	Regional Materials, 10% or 20%	up to 2
Innovation and Design Process		
Credit 1	Innovation in Design	1-5
Credit 2	LEED Accredited professional	1
Project Totals		25 - 34

Why Use LEED?

LEED is a voluntary program; however, obtaining a LEED certification projects a positive environmental image to the community. Additionally, using many green building practices can result in energy and cost savings over the life of the structure. Other advantages include better indoor air quality and plenty of daylight. Studies have shown that workers in these environments have increased labor productivity, job retention, and days worked. These benefits contribute directly to a company's profits because salaries—which are about ten times higher than rent, utilities, and maintenance combined—are the largest expense for most companies occupying office space. In addition, students in these environments have higher test scores and lower absenteeism. Retail sales are higher in daylit buildings.

Who Uses LEED?

Many cities and states either provide tax credits or grants for green buildings, or require [green building](#) certification for public buildings. The U.S. government is adopting LEED or similar



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green building standards for the General Services Administration (which owns or leases over 8300 buildings), the U.S. Army, the Department of State, the Department of Energy (DOE), and the Environmental Protection Agency (EPA). Numerous states including California, New York, Oregon, and Washington have adopted LEED for public buildings. Many agencies are requiring LEED silver certification as a minimum. Thirteen countries have expressed interest in LEED including China and India; these countries have exceptionally high levels of new building construction. Conditions vary and the list is growing, so please contact local jurisdictions or USGBC for details. Support for green buildings has increased rapidly each year over the last five years.



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