

LEEDing the Way

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2.3.04

MY PEOPLE WANTED A HEALTHY HOUSE, SO I WAS MADE WITH NATURAL MATERIALS, MY SKIN BREATHS AND THE SUN KEEPS ME WARM.

YOU'RE LUCKY! I FEEL EITHER TOO HOT OR TOO COLD. I HAVE TROUBLE BREATHING, MY PARTS ITCH AND I'M STILL OFF-GASSING.



LEED Basics

- USGBC
- Leadership in Energy and Environmental Design
- 2000 release of initial standard
- First national standard defining green building
- Rubric for assessing building performance and sustainability goals by assigning points to various achievements

Goals of LEED

- Assessment standard to measure the “greenness” of a building
- Integrated design processes
- Demonstrate the advantages of green building
- Transform the marketplace

The Impact

- Unprecedented impact on building market
- Industry demands standards catered to needs of specific building types
- LEED Pilot Programs
 - LEED-EB
 - LEED-CS
 - LEED-CI
 - LEED-R



for
New
Construction

For building owners and design teams that address the new building design and construction or major renovations process. Also referred to as LEED 2.0.



for
Core and
Shell

For developers and design teams that address the new building design and construction process for buildings where the interiors are not part of the initial design process.



for
Commercial
Interiors

For building owners, tenants and design teams that address commercial interiors design and installation process. (Note: process can be driven by either owners or tenants.)



for
Existing
Buildings

For building owners and service providers that address building operation and on-going upgrades and performance improvements.



for
Residential
Buildings

For residential building owners, developers and design teams that address the new residential building design and construction process.

LEED-Residential

- Development began late in 2001
- USGBC committee formed of professionals specializing in residential building
- Draft for LEED residential in November, 2001

The Categories

- Sustainable Sites
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Design and Innovation

Sustainable Sites

- Rational: proper site consideration will limit suburban sprawl, minimize unnecessary environmental threats, and protect greenfields
- Points rewarded for
 - Sustainable site (urban growth boundary)
 - Effects of building process on site (erosion and sediment control)
 - Sustained care for site (pest management)

Energy and Atmosphere

- Rational: Energy efficient products and practices will minimize atmospheric impact, especially important in homes, which are occupied 24 hours a day
- Points Rewarded for
 - Performance checks of building systems (verification plans for HVAC)
 - Following stringent energy codes (USGBC specific)
 - Use of energy efficient appliances (Energy Star)
 - Renewable and alternative energy (Solar)

Materials and Resources

- Rational: use recycled and environmentally friendly buildings products and minimize the waste in the construction process and in operation
- Points Rewarded for:
 - Waste management plans (diverting construction wastes from landfills)
 - Use of renewable materials (bamboo)
 - Use of certified and non-endangered products (wood from sustainably harvested forests)

Indoor Environmental Quality

- Rational: Indoor environments can protect the health of residents and maintain clear air
- Points rewarded for:
 - moisture control procedures (prevent contaminants and dangerous gases)
 - Ventilation (natural where possible)
 - Use of healthy products (VOC-free finishes)
 - Air quality considered in construction process (quality control checklist)

Design and Innovation

- Rational: award points for efforts that are not accounted for in other categories
- Points rewarded for
 - Exceptional performance by the design team
 - Unique use of materials
 - Use of cutting edge green building technologies

A Good Candidate

- Silva: residential high rise building in Vancouver
- First residential building in Canada to aim for LEED certification
- May help inspire USGBC to speed development on LEED-R
- Hope to standardize sustainable growth in living communities because it results in a higher quality of life for residents
- City government committed because high rise residential green building can show people the value of sustainability



Silva

- 67 home complex
- Noted for energy and water efficiency, enhanced livability, conservation of materials and resources, waste management and sustainable resource management
- High performance windows, local materials, efficient water and energy systems

To LEED or Not?

- Rapid expansion of the LEED validates its success
- As LEED is catered to fit current practices, it will likely continue to be widely used
- Critics claim
 - Too many added expenses
 - Labor intensive documentation process
- Some teams use LEED rubric as a guide but do not apply for certification

The Future

- The future of LEED looks promising as more and more projects apply for certification
- There has been talk of merging LEED-R with LEED-CI and LEED-O & M
- But the industry continues to demand building specific standards

Sources

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