

What is LEED?

LEED stands for Leadership in Energy and Environmental Design.

LEED was developed by the U.S. Green Building Council as a third-party certification program based on a performance-based rating system that was designed to accelerate the development and implementation of sustainable building practices.

Why is building according to LEED principles compelling?

Aside from existing and upcoming changes to legislation requiring LEED certification goals for new builds in major cities such as Boston and Washington, DC, there are both environmental and financial benefits to pursuing LEED certification.

LEED-Certified Buildings

- Provide for lower operating costs through the efficient use of energy and water
- Reduce harmful greenhouse gas and ozone-depleting emissions
- Provide for healthier and safer environments for occupants
- Reduce waste sent to landfills
- Often qualify for expedited approvals, tax rebates, zoning allowances and other incentives in many cities
- Demonstrate to customers and the local community an owner's commitment to environmental stewardship and social responsibility

Today, there exists a suite of USGBC LEED Rating System products based on building type and/or situation. Two of these hold the most significance for Starwood Hotels:

LEED for New Construction and Major Renovations (LEED-NC)

LEED-NC provides a set of performance standards for certifying the design and construction phases of commercial, institutional buildings and high-rise residential buildings.

As of April 2008, there are 980 LEED-NC certified buildings and a total of 6,442 LEED-NC registered projects. Of 980 LEED-NC certified buildings, there are 9 hotel developments and of the 6,442 LEED-NC registered projects, there are 164 LEED-NC registered hotel or related projects.

LEED for Existing Buildings: Operations & Maintenance (LEED-EB)

LEED-EB provides a set of standards for certifying operational efficiency and minimal environmental impact of existing properties not undergoing major renovations. LEED-EB requires that a building be in operation for at least 1 year in order to be eligible for certification.



Delving Deeper into the LEED-NC Rating System

LEED Category	Prerequisites	Credits	Possible Points
Sustainable Sites (SS)	1	8	14
Water Efficiency (WE)	none	3	5
Energy & Atmosphere (EA)	3	6	17
Materials & Resources (MR)	1	7	13
Indoor Environmental Quality (EQ)	2	8	15
Innovation & Design Process (ID)	none	2	5
Totals	7	34	69

LEED-NC Certification Levels

The number of points accumulated by a project determines the level of LEED Certification a project earns. LEED Certification Levels are as follows:

LEED Certification Level	Points Needed
Certified	26–32
Silver	33–38
Gold	39–51
Platinum	52–69

LEED-NC has 7 Prerequisites

Prerequisites are mandatory, regardless of whether or not a project is attempting any credits in the associated category. All but 2 categories (WE & ID) have prerequisites.

LEED-NC prerequisites are:

SS Prerequisite 1: Construction Activity Pollution Prevention

Establish a sediment and erosion control plan that prevents the loss of soil during construction by storm water runoff and/or wind erosion, prevents buildup of sediments (soil) in storm sewers or receiving streams, and prevents polluting the air with dust and particulate matter.

Feasibility:

Erosion and sediment control practices outlined by LEED represent best practice construction, and in most cases are already incorporated into construction processes and require no additional costs or efforts due to local zoning or building codes that already mandate such measures.

EA Prerequisite 1: Fundamental Commissioning of the Building Energy Systems

Execute a commissioning plan that verifies the installation and performance of major mechanical systems.

Feasibility:

Commissioning is feasible for all projects by contracting with a qualified commissioning agent to perform the required services.

EA Prerequisite 2: Minimum Energy Performance

Comply with, or if registered after June 26, 2007, exceed, the minimum energy efficiency requirements established by ASRHAE Standard 90.1-2004: Energy Standards for Buildings Except Low-Rise Residential.

Feasibility:

In many cases, this represents standard practices or slight improvement over code conditions.





EA Prerequisite 3: Fundamental Refrigerant Management

No CFC-based refrigerants may be used in new base building HVAC systems.

Feasibility:

In most new construction projects, all mechanical systems will use compliant refrigerants.

MR Prerequisite 1: Storage and Collection of Recyclables

Provide an easily accessible area that serves the entire building and is dedicated to the collection and storage of non-hazardous materials for recycling, including at least paper, corrugated cardboard, glass, plastic and metals.

Feasibility:

This prerequisite is generally feasible in all locations.

EQ Prerequisite 1: Minimum IAQ Performance

Meet the ventilation rates required by ASHRAE 62.1-2004: Ventilation for Acceptable Indoor Air Quality.

Feasibility:

Most code-compliant mechanical system designs automatically qualify for this prerequisite.

EQ Prerequisite 2: Environmental Tobacco Smoke (ETS) Control

Prohibit smoking in the building, and locate an exterior designated smoking area at least 25 feet away from entries, outdoor air intakes and operable windows.

Feasibility:

This prerequisite is easily achieved in circumstances where a smoke-free policy is standard practice.

LEED-NC Categories and Related Point Opportunities

Sustainable Sites (SS)

Focuses on minimizing the impact of development on land resources and supports more sustainable community infrastructure.

Points are awarded for things such as

- Promoting alternative transportation
- Preventing pollution from storm water runoff
- Protecting night skies from light pollution
- Eliminating heat-island effects
- Protecting or restoring habitat for native plants and animals

Water Efficiency (WE)

Focuses on the conservation of fresh water supplies.

Points are awarded for things such as

Reductions from a calculated water-use baseline which is achieved by using landscaping and irrigation systems that save water; and by choosing toilets, faucets and showerheads that use less water than current code.

Energy & Atmosphere (EA)

Focuses on conserving energy and minimizing the use of energy generated from the burning of fossil fuels.



Points are awarded for things such as

- Reductions from a calculated energy-use baseline which is achieved by optimizing mechanical systems and through the use of integrated building-design techniques
- Incorporating onsite renewable energy technologies
- Purchasing green power

Materials & Resources (MR)

Rewards environmentally responsible choices related to materials selection and disposal.

Points are awarded for things such as

- Recycling construction waste
- Using materials that are salvaged, contain recycled content, are regionally sourced, come from renewable sources such as bamboo, or contain sustainably harvested wood

Indoor Environmental Quality (EQ)

Focuses on providing a healthy and comfortable environment for building occupants.

Points are awarded for things such as

- Good ventilation
- Providing a thermally comfortable space
- Making use of low-emitting materials that will not pollute the air through off-gassing
- Providing occupant controllability of lighting and thermal conditions in a space
- Providing occupants with access to natural daylight and views to outdoors

Innovation & Design Process (ID)

Rewards exceptional performance in a given credit area and/or for the implementation of innovative practices.

Examples include

- A green cleaning program to promote the health and safety of guests and staff by reducing chemical air pollutants
- A green education program to extend knowledge of sustainable building and operational practices to guests and staff
- The purchase of additional green power to offset electricity consumed
- The inclusion of a LEED Accredited Professional throughout both the design and construction phases of a project