Sustainability Information

LEED Is "Green Buildings"

Leadership in Energy and Environmental Design (LEED) is an ecology-oriented building certification program run under the auspices of the United States Green Building Council (USGBC). LEED concentrates its efforts on improving performance across five key areas of environmental and human health: energy efficiency, indoor environmental quality, materials selection, sustainable site development, and water savings.

LEED is the most widely used green building rating system in the world. Available for virtually all building, community and home project types, LEED provides a framework to create healthy, highly efficient and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement.

LEED works for all building types anywhere. LEED is in more than 165 countries and territories. LEED buildings save energy, water, and resources; generate less waste; and support human health. LEED buildings attract tenants; cost less to operate; and boost employee productivity and retention.

The state of Maryland passed its High Performance Buildings Act in 2008, requiring all new public construction and renovation of buildings greater than 7,500 square feet to meet at least the LEED Silver standard, or two Green Globes. Between 2009 and 2014, the state is required to fund half of the required additional cost for public school construction or renovation to attain that standard.

On May 10, 2011, Gov. Martin O'Malley of Maryland signed into law the state's adoption of the International Green Construction Code (IGCC) enabling the adoption of the IGCC by all local governments across the state. Thus, Montgomery College has been designing its facilities for LEED certification since 2011.

Montgomery College has been a leader in resource conservation, environmental action and sustainability since the first "energy crisis" of the 1970s and has historically integrated renewable solar and wind energy into its building programs. All new buildings such as the Rockville Campus Science Center and the Germantown Campus Bioscience Education Center received a Gold LEED Certification. We are particularly proud of this accomplishment since these buildings are teaching laboratory facilities with inherent high ventilation loads, which pose engineering design and operational challenges in order to minimize energy consumption.

The Catherine and Isiah Leggett Math and Science Building will continue the tradition of being designed for LEED Gold certification, as the teaching laboratory facility on the Takoma Park/Silver Spring Campus.

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LEED is pushing the green building industry to go further. Developed in a transparent, consensus-based process that includes several rounds of public comments and approval from USGBC members, LEED ensures that leaders can demand more from our buildings, creating healthy experiences, conserving precious resources and benefitting the business bottom line.

How LEED Works

LEED projects earn points across nine basic areas that address key aspects of green buildings: integrative process; location and transportation; sustainable sites; water efficiency; energy and atmosphere; materials and resources; indoor environmental quality; innovation; and regional priority.

LEED Certification Levels

Buildings can qualify for four levels of certification: Certified, Silver, Gold, and Platinum.

Goal of the LEED Credit Cystem

The LEED 2009 performance credit system aims to allocate points "based on the potential environmental impacts and human benefits of each credit." These are weighed using the environmental impact categories of the United States Environmental Protection Agency's Tools for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI) and the environmental-impact weighting scheme developed by the National Institute of Standards and Technology (NIST).

LEED Prerequisites

To participate in LEED, a building must comply with environmental laws and regulations, occupancy scenarios, building permanence and pre-rating completion, site boundaries and area-to-site ratios. Its owner must share data on the building's energy and water use for five years after occupancy (for new construction) or date of certification (for existing buildings). Each of the performance categories also have mandatory measures in each category, which receive no points.

In 2014, LEED 2009 was updated to LEED BD+C v4 with specialized credits. The IEQ category addresses thermal, visual, and acoustic comfort as well as indoor air quality. The thermal comfort credit applies to the following certification types: New Construction, Schools, Retail, Data Centers, Warehouses and Distribution Centers, Hospitality and Healthcare. The intent of this credit is to "promote occupants' productivity, comfort, and well-being by providing thermal comfort. As shown by laboratory and field research, occupants' satisfaction and work performance is directly impacted by a building's thermal conditions.

Energy reduction goals have demonstrated that LEED can be supported, while improving thermal satisfaction. For example, research has shown providing occupants control over the thermostat allows for comfort across a wider range of temperatures.