



Canada Green Building Council
Every Building Greener

Conseil du bâtiment durable du Canada
Verdir tous les bâtiments

Leadership in Energy and Environmental Design (LEED®)

LEED® is a third-party certification program and an internationally accepted benchmark for the design, construction and operation of high performance green buildings. It provides building owners and operators the tools they need to have an immediate and measurable impact on their building's performance. LEED rating systems encourage and accelerate the global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.

LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health:

- Sustainable site development
- Water efficiency
- Energy efficiency
- Materials selection
- Indoor environmental quality

Credits and Prerequisites are organized into these five categories. An additional category, Innovation & Design Process, addresses sustainable building expertise as well as design measures not covered under the five environmental categories.

REGISTRATION PROCESS:

To have a project LEED certified, project teams must first determine which rating system applies to their project. Generally, a project is a viable candidate for certification if it meets all prerequisites and can achieve the minimum number of points necessary to earn the certified level. However, project teams should pay careful attention to the additional detail on the applicability of the rating systems found in the introductory sections of the LEED Canada Reference Guides.

Once a rating system is selected, the project signals its intent to certify by registering with the CaGBC. At this point it will be listed in the CaGBC's database (if so desired) and may be referred to as a LEED Candidate.

CERTIFICATION PROCESS:

Once a project is completed, the required documentation is submitted to the CaGBC's LEED team, who review the materials provided and determine if all the necessary criteria are met. A LEED® AP is able to guide project teams through the entire process.



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LEED® v4

As a movement and an industry, green building is evolving rapidly. Recognizing leadership in this field means periodically moving the goal posts, and rethinking the measures by which leadership is assessed. That's the reason for LEED Version 4, the next exciting step in the continuous improvement of the LEED rating systems.

The development of LEED v4 spanned more than three years, engaged hundreds of volunteers and thousands of stakeholders around the world. LEED v4 has the potential to drive the reduction of building carbon emissions and take a stronger stand on human health, more so than any previous version of LEED.

Guided by a set of goals for what LEED projects should accomplish, LEED v4 includes a comprehensive technical update to the rating system requirements. While some aspects remain familiar, others incorporate important, fundamental revisions.

- Materials, for example, are evaluated more holistically using multiple attributes through approaches such as Life Cycle Assessment and Environmental Product Declarations.
- There is a greater emphasis on performance, as reflected in water and energy metering requirements, while integrative design, envelope commissioning, and acoustics are some of the new issues addressed within LEED v4.

Projects now use the LEED rating system on a wider variety of project types than ever before. From stadiums to convention centers, commercial offices to hospitals, each space type has unique needs and challenges when using LEED. LEED v4 addresses 21 different market sector adaptations, including new and existing data centers, new and existing warehouse and distribution centers, hospitality, existing schools, existing retail, and multifamily midrise.

Registration for the LEED v4 rating systems opened in November 2013, and the first set of Canadian ACPs were published in June 2014. The first LEED v4 certified project was Edelweiss House in Quebec, which certified LEED v4 Platinum in September 2015. The deadline for projects to register under the LEED Canada 2009 rating systems is also approaching – with registration closing on October 31, 2016.

Visit www.cagbc.org/leedv4 for more info and for ongoing updates.



LEED® CANADA RATING SYSTEMS (LEED 2009 – older version of LEED, registration closes for this rating system in October 2016)

LEED Canada for New Construction and Major Renovations – The LEED Canada NC rating system applies to commercial and institutional buildings. It also applies to retail, mid- and high-rise multi-unit residential buildings (MURBs), public assembly buildings, manufacturing plants, and other types of buildings. Special provisions are provided for instances where there is leased tenant space.

LEED Canada for Core and Shell Development – Applicants with space that is not fitted out at the time of certification (e.g., intended for future lease) may wish to consider LEED Canada for Core & Shell Development, which covers base building elements and those spaces fit – up by the owner.

LEED Canada for Existing Building: Operations and Maintenance 2009 – This rating system helps building owners and operators measure operations, improvements and maintenance on a consistent scale, with the goal of maximizing operational efficiency while minimizing environmental impacts. LEED Canada EB:O&M 2009 addresses whole-building cleaning and maintenance issues (including chemical use), recycling programs, exterior maintenance programs, and systems upgrades.

LEED Canada EB:O&M certification is unlike any other LEED certification in that it focuses on the operation and maintenance phase of the building lifecycle rather than the construction phase. Buildings may be operated and maintained for decades, and so under this rating system they must file for recertification at least once every five years to maintain their LEED Canada EB:O&M status.

LEED Canada for Homes – This rating system promotes the design and construction of high-performance green homes. A green home uses less energy, water and natural resources; creates less waste; and is healthier and more comfortable for the occupants. The net cost of owning a LEED home is comparable to that of owning a conventional home. LEED Canada for Homes applies to single family homes and multifamily buildings up to 3 residential stories. Mixed use projects can apply.

LEED Canada for Commercial Interiors - LEED® Canada-CI is the green benchmark for the ten-ant improvement market. It is the recognized system for certifying high-performance green interiors that are healthy, productive places to work; are less costly to operate and maintain; and have a reduced environmental footprint. LEED Canada-CI gives the power to make sustainable choices to tenants and designers, who do not always have control over whole building operations. The LEED Canada-CI rating system is applicable to tenant improvements of new or existing office space.

LEED for Neighbourhood Development – Developed to guide and assess sustainable community development, the CaGBC has developed Canadian Alternative Compliance Paths (ACPs) for the LEED 2009 ND rating system. The ACPs are formally approved approaches that provide clarity and guidance for Canadian projects, addressing sections of the rating system that contain US-specific standards or wording. Canadian projects interested in pursuing LEED 2009 ND certification are encouraged to review these ACPs, and employ them as needed as part of the certification process. The ACPs have been embedded within the original LEED 2009 ND rating system, and can be viewed on the CaGBC's website www.cagbc.org.



What is the current status of green building in Canada compared to the rest of the world?

Canada has [the second largest number of certified buildings](#) and LEED certified space in the world, after the United States. As of April 30, 2016, the total number of LEED certified projects in Canada was 2,702 bringing the total registered and certified projects to 5,783. Since certifying its first project in 2005, the CaGBC has been collecting data to evaluate the impact that LEED Canada has made on Canadian energy and water consumption, greenhouse gas emissions and waste diversion.

In April 2016, CaGBC announced that Canadian LEED certified buildings have reduced over 1 million tonnes of CO₂e in ghg emissions since 2005.

Current data for LEED certified buildings in Canada is:

- Energy savings of 6,503,647 eMWh which is enough to power 220,702 homes in Canada for a full year.
- A 1,261,016 CO₂e tonne reduction in greenhouse gas emissions which equates to taking 238,377 cars off the road for a year.
- Water savings totalling 12.8 billion litres, the equivalent of 5,131 Olympic-sized swimming pools.
- Recycling over 1.6 million tonnes of construction/demolition waste which represents 491,174 garbage truck loads.
- Installing 231,608 sq. metres of green roofs, or an area the size of 153 NHL hockey rinks, to reduce the urban heat island effect and mitigate storm water flows in urban areas.

Over the past 14 years CaGBC has acted as the voice of the green building industry, and successfully advocated for green building policies with all levels of governments and the private sector across Canada. As a result of this advocacy and the hard work of our members, thousands of commercial and government buildings, schools, homes, community centres and historical structures have been retrofitted or newly constructed to green building standards. The work done over the past 14 years has made Canada a global leader in green building.

All three levels of government have developed green building policies for their own building stock which has had a significant impact on greening the Canadian building industry. For example, there are now over two dozen cities or municipalities that have a green building policy with LEED certification as one of its targets.

At the national level, the CaGBC is encouraged by the recent budget allocations [announced by the federal government](#) and continues to engage with officials across levels of government to encourage investment and adoption of green building policies as a key opportunity in the fight against climate change.

Voluntary adoption of LEED and green building practices by landlords, developers, institutions and builders driven by market demand has also played a key role in the advancement of green building in Canada. The business case is strong because of the economic benefits (return on investment), environmental benefits (reduced carbon) and social (employee recruitment, higher productivity, better quality of life) have been proven.

Green buildings as an economic driver are detailed in our recent [CaGBC's 2016 Market Impacts of Green Building report](#) which shows that through both direct and indirect benefits, green has a large impact on investment, job creation, and revenue for companies of all sizes across the extensive supply chain and through the entire lifecycle of projects.

