



Canada Green Building Council
Every Building Greener

Conseil du bâtiment durable du Canada
Verdir tous les bâtiments

The Canada Green Building Council (CaGBC)

The Canada Green Building Council (CaGBC) is a not-for-profit, national organization that has been working since 2002 to advance green building and sustainable community development practices in Canada.

Together with our membership of over 1650 industry organizations involved in designing, building and operating buildings, homes and communities, the Council has made excellent inroads toward achieving our mission of reducing the environmental impact of the built environment.

Over the past 12 years, we have 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 Council also educated 20,000 green professionals to answer the demand for knowledge and jobs this new green marketplace created.

Yet, we all know that there is much more work to be done. Buildings generate about 35 per cent all of greenhouse gases, 35 per cent of landfill waste comes from construction and demolition activities, and 70 per cent of all municipal water is consumed in and around buildings. It is critical we broaden our scope to make a larger impact on these numbers.

That is why we aim to make Every Building Greener. We believe that we must look beyond new buildings to the existing building stock, and beyond individual buildings to neighbourhood and community solutions. Leveraging the green building knowledge and expertise of our national membership network and Chapters, a community scale approach will enable even more significant steps to be made toward creating long term sustainable solutions for Canadian cities.

How we strive to do this

CaGBC has a number of offerings and member services that push the green building industry forward, including:

- Educational programs and tools to build green building knowledge, skills and technologies;
- LEED certification of green buildings and homes; support of Living Building Challenge and Passive House Institute;
- Advocacy at all levels of government for continuous improvement of industry standards;
- EcoDistricts – a program which involves revitalizing existing or developing new neighbourhoods along sustainability principles including density, green building construction or retrofit, green infrastructure systems, alternative transportation, local food production, and bringing the natural environment back into cities.
- Canada Builds Green Directory – CaGBC's comprehensive online listing of Canada's foremost companies and organizations that provide green building products and services.



47 rue Clarence Street
Suite 202
Ottawa, ON K1N 9K1



613.241.1184
Toll free / sans frais: 866.941.1184
Fax / téléc: 613.241.4782



cagbc.org cbdca.org

Membership and Governance

The membership is comprised of professionals from more than 1600 public and private sector organizations across the country. Members join because they see value in having an active voice in the Canadian green building community and providing their companies with a competitive advantage in the growing momentum towards more sustainable buildings.

The CaGBC is governed by a 12-person board, whose members represent key building industry sectors across the country. The organization relies on its elected board and the time, commitment and passion of members in eight chapters, as well as affiliate organizations and committees to advance and achieve its objectives. The Council has staff and offices in Ottawa and Vancouver.



Bio: Thomas Mueller, MA, LEED® AP, President and CEO, Canada Green Building Council

Thomas Mueller is a Founding Director of the Canada Green Building Council (CaGBC) and became President & CEO of the Council in 2005. In this role as Chief Executive, he leads the Council's national green building strategy, programs, and standards, along with advocacy and policy efforts.

As a member of the Board of Directors of the World Green Building Council (WGBC); the Green Building Certification Institute (GBCI) and the Cornerstone Standards Council (CSC) he supports the transformation of the built environment at home and abroad.

Thomas is a well known advocate for green buildings and is frequently invited to participate in government and industry consultations related to green development. He is a nationally and internationally recognized authority and speaker on green buildings.

He is currently participating in the LEED International Roundtable, the WGBC Americas Network; Quest National Advisory Committee, City of Vancouver's Green Building Advisory Committee and the Dean's Advisory Committee, Environmental Studies, U. of Waterloo.

Thomas has an Undergraduate Degree in Geography, Planning and Applied Ecology from the Ludwig-Maximilian University in Munich, Germany, and holds a Master's of Regional Planning & Resource Development from the University of Waterloo, Ontario.

For his green building work, Thomas received the 2000 and 2002 Innovation Award from the Architectural Institute of BC and the 2005 FCM - CH2M Hill Sustainable Community Award. In 2008, he became a Fellow of the Cascadia Green Building Council.



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

As recently announced by the USGBC, Canada has the second largest number of certified buildings and LEED certified space in the world, after the United States. As of September 30, 2014, the total number of LEED certified projects in Canada was 1,878 bringing the total registered and certified projects to 6,878.

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. These are the results:

- Energy savings of 2,630,652 eMWh which is enough to power 89,271 homes in Canada for a full year.
- A 512,672 CO₂e tonne reduction in greenhouse gas emissions which equates to taking 96,913 cars off the road for a year.
- Water savings totaling over 5.6 billion litres, the equivalent of 2,252 Olympic-sized swimming pools.
- Recycling over 2.7 million tonnes of construction/demolition waste which represents 841,126 garbage trucks.
- Installing 121,309 sq metres of green roofs, or an area the size of 80 NHL hockey rinks, to reduce the urban heat island effect and mitigate storm water flows in urban areas.

Over the past 12 years, we have 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 12 years has made Canada one of the global leaders 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 29 cities or municipalities that have a green building policy with LEED certification as a target. 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 (higher productivity, better quality of life) have been proven.

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.



LEED® CANADA RATING SYSTEMS

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.



Education at the CaGBC

Co-developed and delivered by industry leaders and subject matter experts, CaGBC education programs provide behind the scenes, inside perspectives on the projects, issues and best practices giving you the best, most well-rounded education experience possible. We have education solutions for individuals, corporations, associations and higher learning institutions that are delivered in a variety of formats to suit your specific needs and budget. Our education content is delivered in a variety of ways:

- Public workshops delivered by our chapters;
- Private workshops delivered on site for 10-30 participants at your office;
- E-learning through on-demand courses, and live or recorded webinars; and
- Higher Education available at 21 institutions across Canada.

Why consider a course from CaGBC?

- Dynamic faculty with proven expertise;
- Specific to Canadian (and provincial) codes and standards;
- Case studies and current best practices relevant to Canada's building industry;
- Stringent quality control processes that ensure the highest standards and accuracy of content; and
- Eligible for LEED Credential Maintenance and CE credits towards many other professional licenses and designations.

Sustainable Building Advisor Program (SBA)

The CaGBC is licensed to deliver the Sustainable Building Advisor (SBA) Program in various Canadian locations including B.C., Ontario, Manitoba and Quebec. The SBA Program is part of CaGBC's ongoing efforts to engage and work with strategic education partners to develop and deliver a range of green building training to both new and experienced green building professionals.

The five-month certification program requires no existing green building education or experience and is focused on practical, forward-thinking ways to design, construct and manage buildings that are resource efficient, environmentally responsible, cost effective, and healthy for all occupants.

We have offered the SBA Program three times in Toronto, with a fourth Toronto program planned for Fall 2014. Our first Vancouver SBA program took place last October, with another scheduled for this Fall. The first Ottawa SBA program is also currently underway. The CaGBC will be running additional programs in various regions beginning in Fall 2014.

Passive House

The Passive House standard is the perfect complement to the CaGBC's core mission of making every building greener, which is why we are proud to be working with the Canadian Passive House Institute to offer the first one day courses available in Canada. We began offering courses in late fall 2012, with more planned in 2014. Visit www.cagbc.org/passivehouse for more information.

The Living Building Challenge

Living Building Challenge is a philosophy, advocacy tool, and certification program that addresses development at all scales. It is comprised of seven performance areas: Site, Water, Energy, Health, Materials, Equity, and Beauty. These are subdivided into a total of twenty Imperatives, each of which focuses on a specific sphere of



influence.

The Living Building Challenge has swept North America, now with more than sixty projects from coast to coast pursuing certification under this vigorous performance standard. In response to frequent requests for introductory presentations, the CaGBC decided to create an opportunity to share the tenets of the program with advanced practitioners in the United States and Canada through a one-day course.

EcoDistricts

The CaGBC is developing a multi-year transformative initiative called EcoDistricts, with the Portland-based organization of the same name, and we have been working with them since 2013 to bring related workshops to Canada.

EcoDistricts are neighbourhoods or districts where neighbours, community institutions and businesses join with city leaders and utility providers to meet ambitious sustainability goals and co-develop innovative district-scale projects. Unique partnerships, governance and financing models are often required to bring plans to reality.

Higher Education

Designed with full-time, continuing education and professional development students in mind, CaGBC's Higher Education content is timely, relevant and developed by industry professionals. Available in full-semester and individual modules, our courses give students a working knowledge of the LEED rating systems and help prepare them for the LEED Green Associate or LEED Specialty exams.

Through these turnkey learning tools and resources, institutions can:

- Reduce course development time and effort
- Increase enrolment and revenue
- Contribute to the long-term success of your students
- Leverage CaGBC's reputation and connection to the green building industry

Partner schools across Canada - Nova Scotia Community College, Algonquin College, Humber College, George Brown College, University of Toronto, Conestoga College, EPIC, Centennial College, Fanshawe College, Durham College, SIAST, University of Manitoba, Red River College, Mount Royal University, SAIT Polytechnic, NAIT, University of Alberta, University of British Columbia, Ryerson University, Douglas College and Cégep Du Vieux Montreal.

