Government of Alberta 💻

Infrastructure

TECHNICAL BULLETIN

TECHNICAL SERVICES BRANCH

ISSUE NO. 39

DECEMBER 2015

SUSTAINABLE RATING SYSTEMS AND INITIATIVES AVAILABLE IN CANADA

BACKGROUND

The intent of this bulletin is to inform of the sustainable rating systems and initiatives in Canada that have impacts on environmental, health, energy and investment. There are several regional systems not listed.

TABLE OF CONTENTS

- BOMA BESt
- BREEAM
- BuiltGreen
- EnerGuide
- ENERGY STAR for New Homes
- Envirohome
- EQuilibrium[™]
- Green Globes
- LEED LEED (Leadership in Energy and Environmental Design)
- Living Building Challenge
- Novoclimat –
- Passive House
- R-2000
- WELL Building Standard

BOMA BEST

Building Owners and Managers Association (BOMA) of Canada have developed BOMA BESt (Building Environmental Standards) to assess energy and environmental performance for existing buildings (offices, shopping centres, open air retail plazas, light industrial buildings and multi-unit buildings), using the Green Globes environmental assessment platform (see below). BOMA BESt assesses environmental performance and management over the following six areas: energy, water, waste reduction and site, emissions and effluents, indoor environment and environmental management system. (Launch 2005)

BREEAM

BREEAM is a widely recognized environmental assessment method and rating system for buildings. This international system measures performance against established benchmarks over a number of categories, such as energy and water use, health, well-being, pollution, transport, materials, waste, ecology and management processes. (Launched 1990)

BREEAM Systems:

- Masterplanning
- New Construction
- In-Use
- Refurbishment and Fit-out

BUILTGREEN

BuiltGreen Canada is a national certification program focused on home building. BUILT GREEN® homes account for: resource efficiency (i.e. electrical, water), comfort (i.e. airtight, sound reduction), home health (ventilation, low/zero VOC paints), durability and waste reduction. The result is a home that could save 10 per cent in annual utility bills as compared to a code-built home, is more comfortable, is healthier to live in, lasts longer and is constructed more efficiently than a conventional home. (Launched 2003)

BuiltGreen Systems:

- Single Family Program
- High Density Program

ENERGUIDE

EnerGuide for Homes – This straightforward 0 to 100 rating system, backed by the federal government department Natural Resources Canada (NRCan), measures a home's energy performance only, so it's specifically for users wanting to focus on this specific aspect of a home's construction.

Government of Alberta 💻

Infrastructure

TECHNICAL BULLETIN

TECHNICAL SERVICES BRANCH

ISSUE NO. 39

DECEMBER 2015

EnerGuide homes have had their plans evaluated by a certified energy advisor. The result is an environmentally friendly, energy-efficient home with lower operating costs. (Launched 2006)

EnerGuide Systems:

- EnerGuide for New Housing
- EnerGuide for Existing Housing

ENERGY STAR

ENERGY STAR for New Homes is also backed by NRCan, but just for the Ontario market. The label ensures homes are performance tested, third-party verified and government backed. ENERGY STAR homes' energy efficiency improvements are mostly hidden—better insulation, high-performance windows, tightly air sealed—but very effective at improving home performance. Constructing an ENERGY STAR home results in 2 to 3 tonnes less greenhouse gas emissions and 25 per cent savings in monthly utilities compared to a home built to the minimum Ontario Building Code. ENERGYSTAR Portfolio Manager is a benchmarking system for schools, office buildings, retail and hospitals. (Launched 1992)

ENERGYSTAR Systems:

- New Homes
- Products
- Portfolio Manager (Energy Benchmarking)

ENVIROHOME

This joint initiative of the Canadian Home Builders' Association and TD Canada Trust is a marketing program for R-2000 builders and R-2000 homes. To qualify as an EnviroHome, builders must first start with R-2000 designation and then incorporate additional features that are based on Canadian Mortgage and Housing Corporation's (CMHC) Healthy Housing initiative, such as: occupant health, energy efficiency, resource efficiency, environmental responsibility, and affordability. (Healthy Housing is an initiative that recognizes a builder's knowledge and skills rather awarding specific buildings). (Launched 1994)

EQUILIBRIUM

CMHC is leading this national sustainable housing demonstration initiative to develop an approach to promoting low-environmental impact healthy housing. EQuilibrium[™] is an integrated whole house solution specifically designed to deal with the challenges of the Canadian climate. A limited number of buildings are being constructed to this standard as it's currently a demonstration initiative. (Launched 2006)

GREEN GLOBES

This assessment and rating system is operated by BOMA BESt for existing buildings (see above) and ECD Energy and Environment Canada Ltd. for other uses. Green Globes is an online, interactive tool with automated reporting that significantly reduces the time and cost of submissions. (Launched 2004)

Green Globes Systems:

- Green Globes-NC (New Construction)
- Green Globes CIEB (Continual Improvement of Existing Buildings)

GRESB

GRESB is an industry-driven organization committed to assessing the ESG (Environmental, Social & Governance) performance of real assets globally, including real estate portfolios and infrastructure assets. More than 175 members, of which about 60 are pension funds and their fiduciaries, use the GRESB data in their investment management and engagement process, with a clear goal to optimize the risk/return profile of their investments. GRESB is not a rating system, but a tool for conscience investing. (Launched 2009)

LEED

LEED (Leadership in Energy and Environmental Design) is an internationally recognized third-party certification program for buildings and homes that's administered in Canada by the Canada Green Building Council (CaGBC). LEED adopts a holistic approach to sustainability, accounting for the following five areas: sustainable site development, Government of Alberta 💻

Infrastructure

TECHNICAL BULLETIN

TECHNICAL SERVICES BRANCH

DECEMBER 2015

ISSUE NO. 39

water efficiency, energy efficiency, materials selection and indoor environmental quality. Ratings of certified, silver, gold or platinum are awarded according to a comprehensive 100-point rating system. LEED-certified buildings and homes result in healthier environments, lower operating costs and a reduced impact on the environment.

(Launched 2002 Canada, 1994 US)

LEED Canada Systems:

LEED NC (New Construction and

Major Renovations)

LEED for Homes

LEED Core and Shell

LEED Commercial Interiors

LEED EBOM (Existing Buildings;

Operations and Maintenance)

LEED for Neighbourhoods

LEED Systems adaptable from the US Green Building Council (USGBC):

LEED for Healthcare LEED for Retail LEED for Schools

LIVING BUILDING CHALLENGE

Living Building Challenge is equal parts philosophy, advocacy platform and certification program. The intent is to define priorities not just on a technical level, but as a set of core values to direct the building industry towards truly understanding how to solve problems rather than just shifting them. This performance-based standard promotes regional solutions that respond to different variables rather than being a checklist of best practices. The challenge covers seven areas: site, water, energy, health, materials, equity and beauty. (Launched 2006)

NOVOCLIMAT

This initiative of the Quebec Ressources Naturelles et Faune department is a program for new homes to improve energy efficiency. Homes built according to this standard realize improved energy performance of a minimum of 25 per cent. (Launched 1999)

PASSIVE HOUSE

This certification system focuses on optimizing a home or building's envelope to maintain heat through: super-insulation, air tightness, high performance windows, efficient heat recovery ventilation and by minimizing thermal bridges. With this focus on optimizing building envelope, Passive House has a high standard in terms of lowering heating energy consumption, making it a good choice for builders targeting passive design and wanting strong heating energy efficiency. (Launched 2010)

R-2000

This is another standard administered by NRCan. R-2000 measures energy efficiency, indoor air tightness quality and environmental responsibility in home construction, promising energy savings, reduced environmental impact, improved home health and comfort. (Launched 1982)

WELL BUILDING STANDARD

is a new standard that buildings should be developed with people's health and wellness at the center of design. The WELL Building Standard® is an evidence-based system for measuring, certifying and monitoring the performance of building features that impact health and well-being. WELL is administered by the International WELL Building InstituteTM (IWBI), a public benefit corporation whose mission is to improve human health and well-being through the built environment. WELL is third-party certified by Green Business Certification Inc. (GBCI). (Launched 2013)

CONTACT

For further information contact: Cam Munro Technical Services Branch, 780-422-7456, cam.munro@gov.ab.ca