



## GREEN BUILDING RATING SYSTEMS WHICH ONE IS FOR YOUR BUILDING?

With so many green building rating systems, how do you decide which one is best for your building?

The sixth edition of Turner Construction Company's Green Building Market Barometer series, indicates that commitment to Green construction remains high, with a greater focus on the benefits of improving the health, wellbeing, and productivity of occupants and the organization's ability to recruit and retain employees. The latest edition of the Market Barometer surveyed more than 300 executives at organizations that own or rent space, or that design or construct buildings. The study found that interest in receiving independent third-party certification under a Green Building Rating System increased from the 2012 edition. Sixty-two percent of executives said it was extremely or very likely that their organization would seek LEED certification if it were constructing a Green building, up from 48% in 2012, while the percentage very likely to seek certification under an alternative rating system more than doubled from 17% to 43% over the two surveys.

Building owners can choose from a number of different green building rating systems. We will look some of the most popular green building rating systems including LEED, Green Globes, ENERGY STAR, and the Living Building Challenge.

### **Leadership in Energy and Environmental Design (LEED)**

[LEED](#) was developed by the U.S. Green Building Council (USGBC) and introduced in 2000. It is probably the best-known rating system and has the largest number of certified properties.

LEED promotes green-building design, construction, and operation. It takes into account site characteristics, material use, energy and water use, and the indoor environmental quality (IEQ). It has two separate tracks for new construction and existing buildings and uses a third-party verification process.

Many government agencies from municipal and provincial to federal government agencies use and encourage the LEED building rating system.

The LEED rating system includes five (5) different categories for certification:

1. Building Design and Construction (BD+C)
2. Interior Design and Construction
3. Building Operations and Maintenance (O+M)
4. Neighborhood Development
5. Homes



While BD+C applies to new buildings and existing buildings undergoing major renovation, the O+M applies to building operations.

LEED uses a point system to certify buildings and has four (4) different certification levels (Certified, Silver, Gold, or Platinum). A LEED building must meet the minimum prerequisites for LEED and can achieve a higher certification level through incorporating additional measures to earn more points.

## Green Globes

[Green Globes](#) is an online green building rating and certification tool that is used primarily in Canada and the USA. Green Globes was developed by ECD Energy and Environment Canada, an arms-length division of [JLL](#). The genesis of Green Globes, similar to LEED and many other systems around the world was [BREEAM](#), developed in the UK in the 1980's.

Like LEED, Green Globes also takes into account site characteristics, material use, energy and water use, and IEQ; and offers separate tracks for new construction and existing buildings. It also uses an independent third-party verification process.

Green Globes is licensed for use by [BOMA Canada](#) (Existing Buildings) and the [Green Building Initiative](#) in the USA (New and Existing Buildings). There are Green Globes modules for:

- New Construction/Significant Renovations
- Commercial Interiors (i.e. Office Fit-ups)
- Existing Buildings (offices, multi-residential, retail, health care, light industrial)

*Green Globes for Existing Buildings* was developed in 2000 by ECD Energy and Environmental Canada. It was based on the 1996 CSA publication of [BREEAM Canada](#).

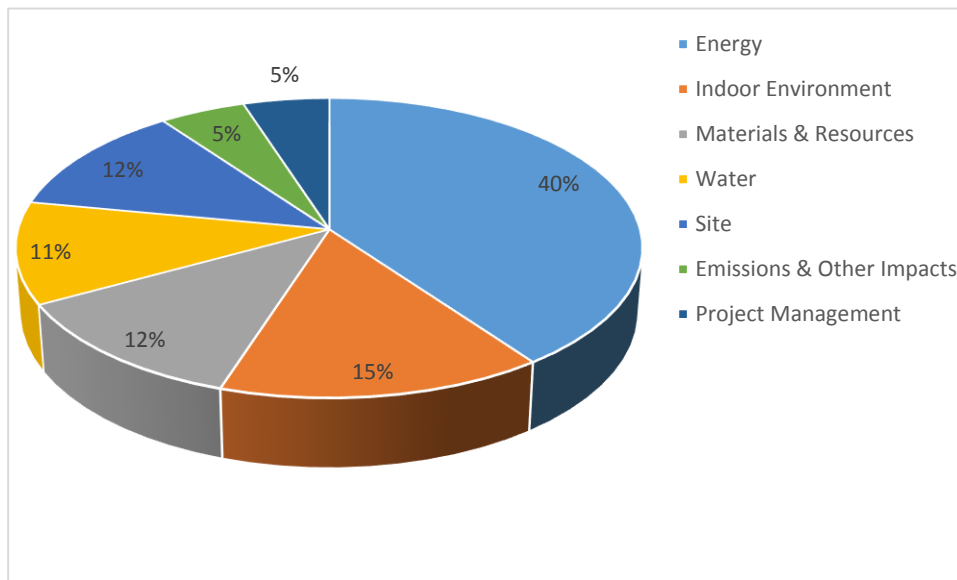
*Green Globes for New Buildings Canada* was developed with the support from the Canadian Department of National Defense and Public Works and Government Services. In 2004, the system was adapted for the USA, where it is administered by [the GBI](#), a standards developer through the American National Standards Institute (ANSI).

Since then, the assessments have undergone numerous periodic updates including the addition of building types, the most recent being the updates to New Construction and Office Fit-ups modules based on the [ANSI/GBI 01-2010: Green Building Assessment Protocol for Commercial Buildings](#) and includes life cycle cost analysis.

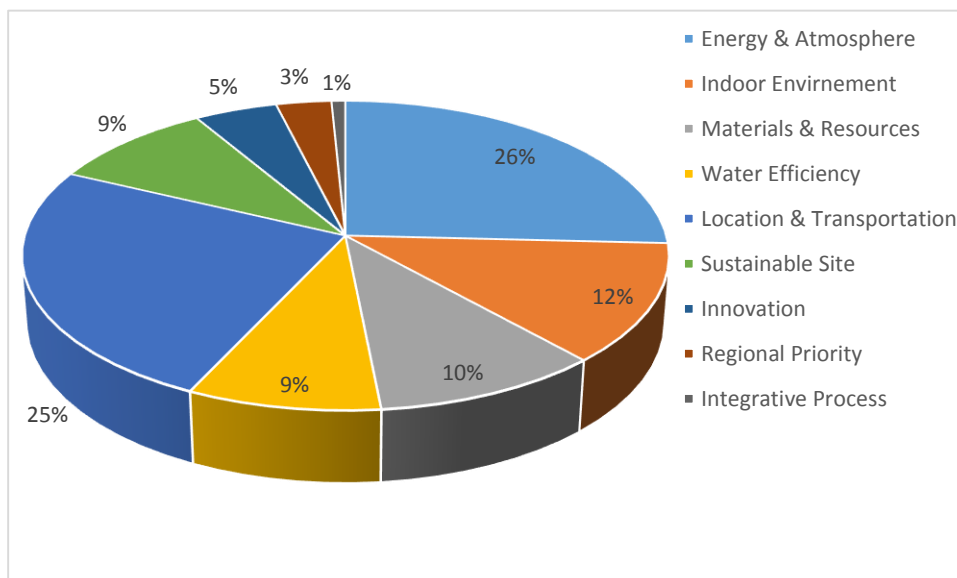
## Green Globes vs. LEED

Green Globes and LEED focus on the same general environmental areas. Figures 1 and 2 show the weighting for the different areas for Green Globes and LEED respectively.

**Figure 1. Green Globes Point Weighting**



**Figure 2. LEED-NC V4 Point Weighting**



The certification process for Green Globes is quite different from the LEED certification process. While both rating systems offer online tools, the Green Globes tools are interactive and provide immediate



feedback, whereas LEED requires the data to be uploaded but it does not provide any feedback, except when there are protocol errors.

Both Green Globes and LEED require a minimum number of points for certification. While LEED has prerequisites that have no point value, Green Globes does not have any prerequisites. Green Globes allows non-applicable categories to be excluded from the total point count, thus ensuring buildings are not penalized for categories that are not applicable to a building, which can eliminate potentially expensive measures for just to score points.

The most significant difference between the two systems is the time and cost for completing the certification process. According to the GBI, Green Globes certification typically is completed in three to five months at one-third to one-half the cost for a comparable LEED certification.

## **ENERGY STAR**

[ENERGY STAR for buildings](#) is quite different from LEED and Green Globes. It is intended to help owners save money and reduce greenhouse-gas emissions by making their buildings more energy-efficient.

ENERGY STAR for buildings relies on the U.S. Energy Information Administration's Commercial Buildings Energy Consumption Survey database, ENERGY STAR provides an online benchmarking tool, Portfolio Manager that allows more than 25 different types of facilities to be compared to peer buildings nationwide and receive a score based on their relative energy-efficiency performance. If, after adjustments for climate/weather are made, a building is more efficient than 75 percent of comparable buildings, it receives ENERGY STAR certification.

While energy is the largest category in both Green Globes and LEED (figures 1 and 2), it is the only scored category in ENERGY STAR. While ENERGY STAR tracks water consumption, it does not count toward ENERGY STAR certification.

Both LEED and Green Globes recognize ENERGY STAR as a complementary system and award energy credits/points based on the ENERGY STAR score of certain types of existing buildings.

## **Living Building Challenge**

The [Living Building Challenge](#)<sup>™</sup> is a building certification program, advocacy tool and philosophy that defines the most advanced measure of sustainability in the built environment possible today. It is arguably the built environment's most rigorous performance standard.

The Challenge is comprised of seven performance categories called Petals: Place, Water, Energy, Health & Happiness, Materials, Equity and Beauty. Petals are subdivided into a total of twenty Imperatives, each of which focuses on a specific sphere of influence. This compilation of Imperatives can be applied to



almost every conceivable building project, of any scale and any location. It can be applied to a new building as well as an existing structure.

It recognizes four typologies: Renovation, Infrastructure + Landscape, Building, and Community. If a project attains all imperatives assigned to its typology, it is awarded the Living Building Certification.

Projects that do not achieve full certification, can achieve Petal Certification or Net Zero Energy Building Certification.

A project can achieve Petal Certification by satisfying imperatives related to limits to growth and inspiration and education, as well as at least one imperative in the areas of water, energy, and materials.

Net Zero Energy Building Certification recognizes buildings that meet the energy imperatives, as well as imperatives related to place, equity, and beauty.

## **Which Green Building Rating System is for your Building?**

As the building owner, ultimately, you must decide which green-building rating system best meets your needs. There are many factors that can impact your decision, including the cost of achieving certification and the certification process.

**Contact us for a free no obligation assessment of how we can help you save money and improve your bottom line by effectively managing your energy costs.**

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