

GOING GREEN 

## INTRODUCTION TO GREEN BUILDINGS



A COMPREHENSIVE OVERVIEW OF THE BENEFITS OF GOING GREEN.

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## WHAT IS A "GREEN" BUILDING?

Green buildings also go by the name High Performance buildings as they typically have water and energy efficient systems, and use fewer raw materials and other resources enabling them to have a smaller "environmental footprint." In general, a green building reduces the impact on the environmental and social systems that surround it and enhances the health and well-being of occupants and the community.



Parks Canada Gulf Islands Office

## SUSTAINABLE DEVELOPMENT

Sustainable development, as defined by the Brundtland Commission in their 1987 report, is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

According to a recent survey by Siemens/McGraw Hill Construction, over one-third of the top 180 US corporate leaders anticipate becoming leaders in green in the next three years, and 43 percent of respondents see green activities and green building specifically being part of their company's growth strategy. Nearly 20 percent view sustainability as a way of gaining advantage over the competition.



VITP - Smart Car Parking

## WHAT IS LEED®?

LEED® is a standard rating system introduced by the US Green Building Council in 1998 and adopted by the Canadian Green Building Council. LEED® stands for Leadership in Energy and Environmental Design.

LEED® certification provides a common standard of measurement and is applicable to new construction, existing buildings, commercial interiors, core and shell. LEED® is currently in the pilot phase for homes, neighbourhood development and retail buildings.

LEED® projects are rated on six performance criteria:

1. Sustainable Sites
2. Water Efficiency
3. Energy and Atmosphere
4. Materials and Resources
5. Indoor Environmental Quality
6. Innovation and Design Process

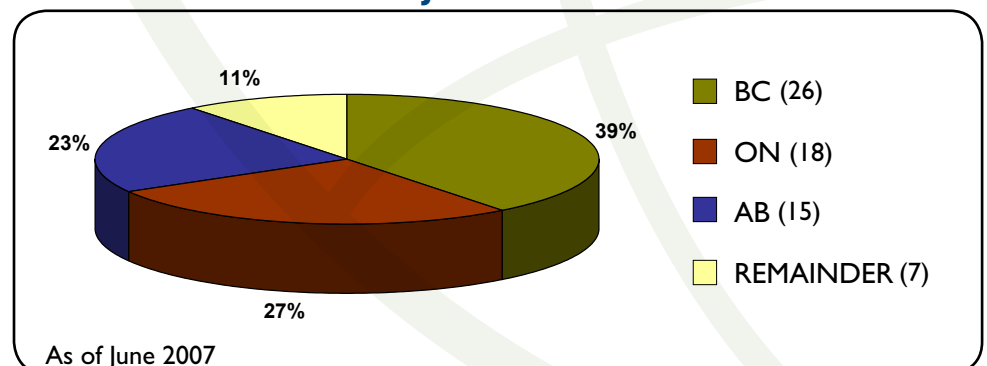
According to the number of credits achieved in each of the six areas a building is awarded a Certified, Silver, Gold or Platinum level of LEED® designation. Since inception, 735 projects in the US and 66 in Canada have been awarded LEED® status, with the number of projects registering increasing between 50 and 75 percent annually. As of June, over 5,500 projects in the US and 230 projects in Canada are registered for LEED®.

## WHAT IS SUSTAINABILITY?

The concept of sustainability is to recognize the impacts of growth on environmental, social and governance issues ("ESG"). It is growing in acceptance as a new priority for companies, governments and communities.

Sustainability is a holistic concept; decisions in one area have impacts on several other areas. Additional density to accommodate population growth is to be weighed against the consequences of carbon emissions, air quality, increases in transit services, and providing for a diversity of incomes. The strategy to achieve success is not based solely on capacity, but rather follows through on many issues—in effect, working smarter instead of harder.

## LEED® PROJECTS BY PROVINCE



Source: Canadian Green Building Council

## BENEFITS OF GREEN BUILDINGS

### ENVIRONMENTAL



#### LAND/SITE

Carefully planning a building's position as it relates to exposure to sun and wind and other aspects of the terrain can profoundly affect its reliance on mechanical heating/cooling and artificial lighting. This can result in significant operating cost savings.



#### INDOOR AIR QUALITY

Healthier and more pleasant working conditions boost productivity and job satisfaction. Air quality plays a major role. Some green systems are actually less expensive to install than conventional systems because they reduce the need for overhead ducting and demand loads required on HVAC equipment.



#### ATMOSPHERE

Buildings are responsible for about 30 percent of greenhouse gas emissions. Green buildings are designed with operational efficiency to reduce these emissions.



#### ENERGY

Green buildings use about one-third less energy than conventional structures.



#### MATERIALS & WASTE

The use of local renewable and recycled materials means fewer materials end up in the local landfill. The local economy benefits from reducing the extraction and processing of non-localized virgin resources.



#### WATER

Low-flow fixtures, efficient appliances, rainwater capture, and wastewater treatment lessen use of potable water and related operating costs. Green buildings can reduce water use by 30 to 50 percent.

### A POSITIVE IMAGE

Sustainability can be a strong marketing advantage. The positive image created by going green can help attract and retain employees, tenants, clients and suppliers. Sustainability also ensures that the company or owner is "future proofed" against new regulations or higher standards concerning environmental impacts of buildings or operations.

### SOCIAL BENEFITS

In 2004, Turner Construction surveyed over 800 green building owners, developers, architects, engineers and consultants. The survey looked at seven categories of "benefits" related to green buildings. According to the survey, the most highly perceived benefits were:

- ▶ Greater health and well-being of occupants (86%)
- ▶ Higher building value (79%)
- ▶ Higher worker productivity (76%)
- ▶ Higher return on investment (63%)
- ▶ Higher asking rents (62%)
- ▶ Higher occupancy rates (52%)
- ▶ Higher retail sales (40%)



Coast Capital Savings Office Interior

### ECONOMIC BENEFITS

The largest obstacles to green construction are perceived higher construction costs (by 70 percent of all executives), a general lack of awareness of the benefits (by 63 percent) and short-term budget horizons (53 percent). Recent studies have shown construction of LEED® certified buildings to be cost neutral, with a premium of about 2 percent for LEED® Silver buildings and between 6 and 8 percent for LEED® Gold and Platinum rated buildings. However, taking into account lower energy and water bills, the net value of green buildings results in an average payback (or return on investment) of about ten times the average cost of building it. (Kats, G., Green Building Costs and Financial Benefits, 2003)

### PRODUCTIVITY AT WORK

Pennsylvania Power and Light<sup>1</sup> found that conversion from general to high-efficiency task lighting reduced lighting costs by 69 percent and annual operating costs by 73 percent, attributed to reduced absenteeism and higher productivity. The payback for electricity changes alone amounted to 4.1 years, a 24 percent return on investment (ROI). The total payback amounted to 540 percent in just 69 days.

<sup>1</sup> Romm & Browning, Greening the Building and the Bottom Line, 1998.

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Our Knowledge is your Property



**DOUG FRYE**  
President & CEO  
CMN Inc.

## MESSAGE FROM THE CEO

There is no doubt that sustainability is playing an increasingly important role in the commercial real estate industry. I would like to take it a step further and say that “going green” is not just good for the environment, it is good for business. The fact is, sustainability, or green building, makes economic sense. A recent survey by J.P. Morgan said that assets of funds that were designed to invest in socially responsible companies have gone from \$12 billion in 1995 to \$178 billion in 2005. CMN is committed to being a change agent for green building and sustainable practices. Through knowledge and discipline, we can have both sustainability and economic prosperity.

## COLLIERS - A SUSTAINABILITY PARTNER

Recognizing the important role that green buildings have to play in our enterprises and our communities, Colliers partners with clients by assessing the costs and benefits of green buildings.

Colliers offers service to clients through all phases of the real estate ownership cycle, both leasehold or freehold, including construction/renovation project management through our MHPM division, Real Estate Management Services (REMS), financing, appraisal, and brokerage services.

## FOR FURTHER INFORMATION PLEASE CONTACT:

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## VICTORIA - THE GREEN MACHINE!

The Cascadia region (British Columbia, Washington State and Oregon) is a hotspot for green buildings, and Victoria is a strong sustainability leader in Canada. The Vancouver Island Tech Park was the very first registered LEED® project in Canada in 2002. In 2006, the Gulf Islands National Park Reserve Operations Centre in Sidney was awarded the first-ever LEED®-Platinum designation in Canada. The Dockside community in Vic. West and the Westhills community in Langford are part of the pilot project for LEED®-Neighbourhoods. More than a dozen new green buildings and premises are planned for throughout the Greater Victoria area, further establishing this region as a national and international showcase of innovative building techniques.

## VICTORIA LEED® PROJECTS COMPLETED:

- ▶ **Vancouver Island Tech Park:**  
172,000 square foot office park.  
LEED®-NC Gold, 2002
- ▶ **Coast Capital Savings:**  
25,000 square foot office premises.  
LEED®-CI Certified, 2004
- ▶ **UVIC Medical Sciences Building:**  
43,500 square foot educational facility.  
LEED®-NC Gold, 2006
- ▶ **D'Ambrosio Architecture and Urbanism:**  
13,100 square foot office premises.  
LEED®-CI Gold, 2006
- ▶ **Operations Centre, Gulf Islands National Park Reserve:**  
11,500 square foot office premises.  
LEED®-CI Platinum, 2006

