



The Green Development Shift: How Canada Green Building Council is Transforming the Building Industry

**Green Building in North America:
International Symposium
CEC, May 2, 2007
Seattle, WA**

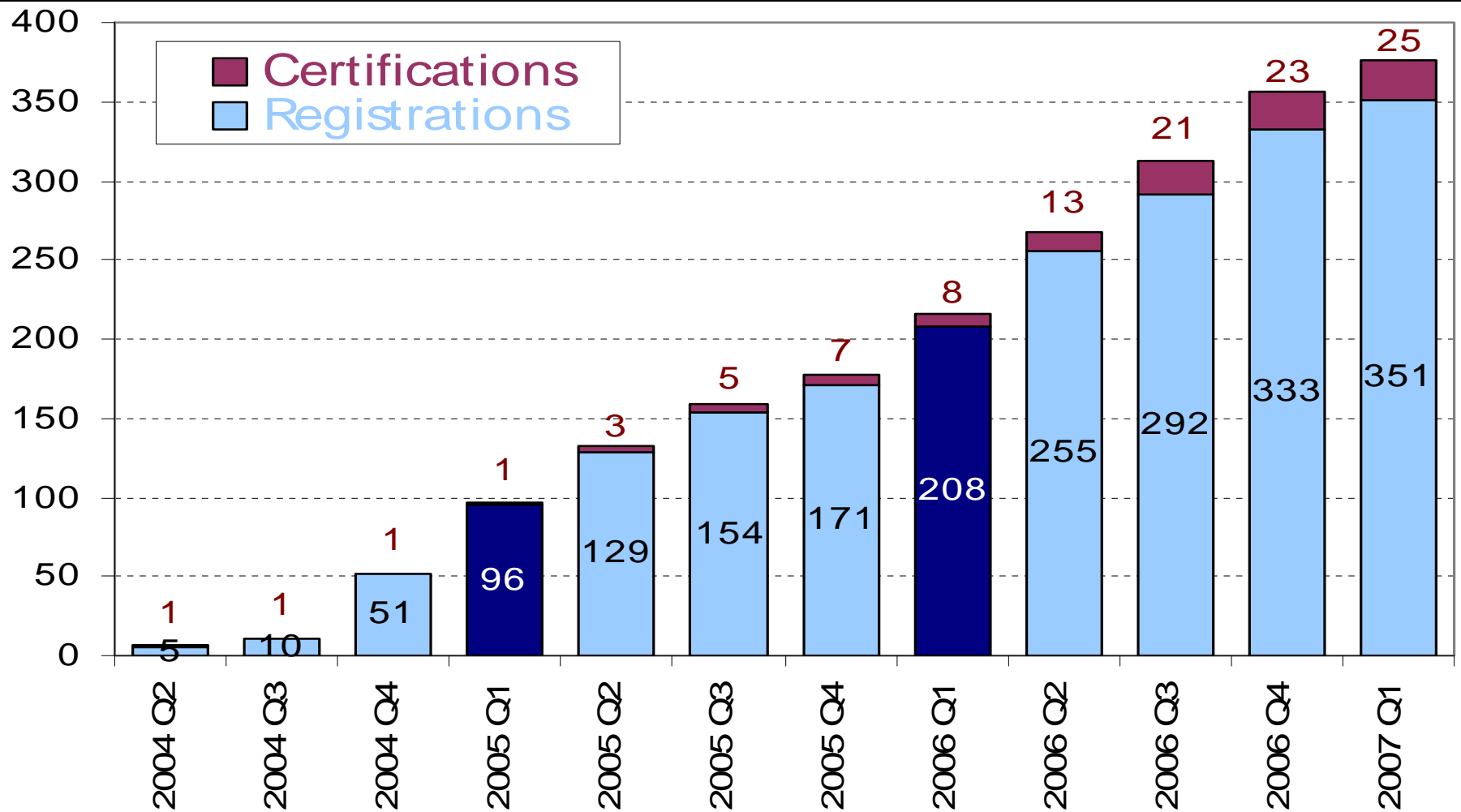
Canada Green Building Council (CaGBC)

- National non-profit organization of building industry leaders
- Rapid growth since it was established in December 2002
- National Board (elected) and committees with cross-representation from the industry
- Largely self-funded organization
- Provides industry-based solutions to advance environmentally responsible & economically profitable building practices
- Exclusive rights to LEED® building rating system in Canada



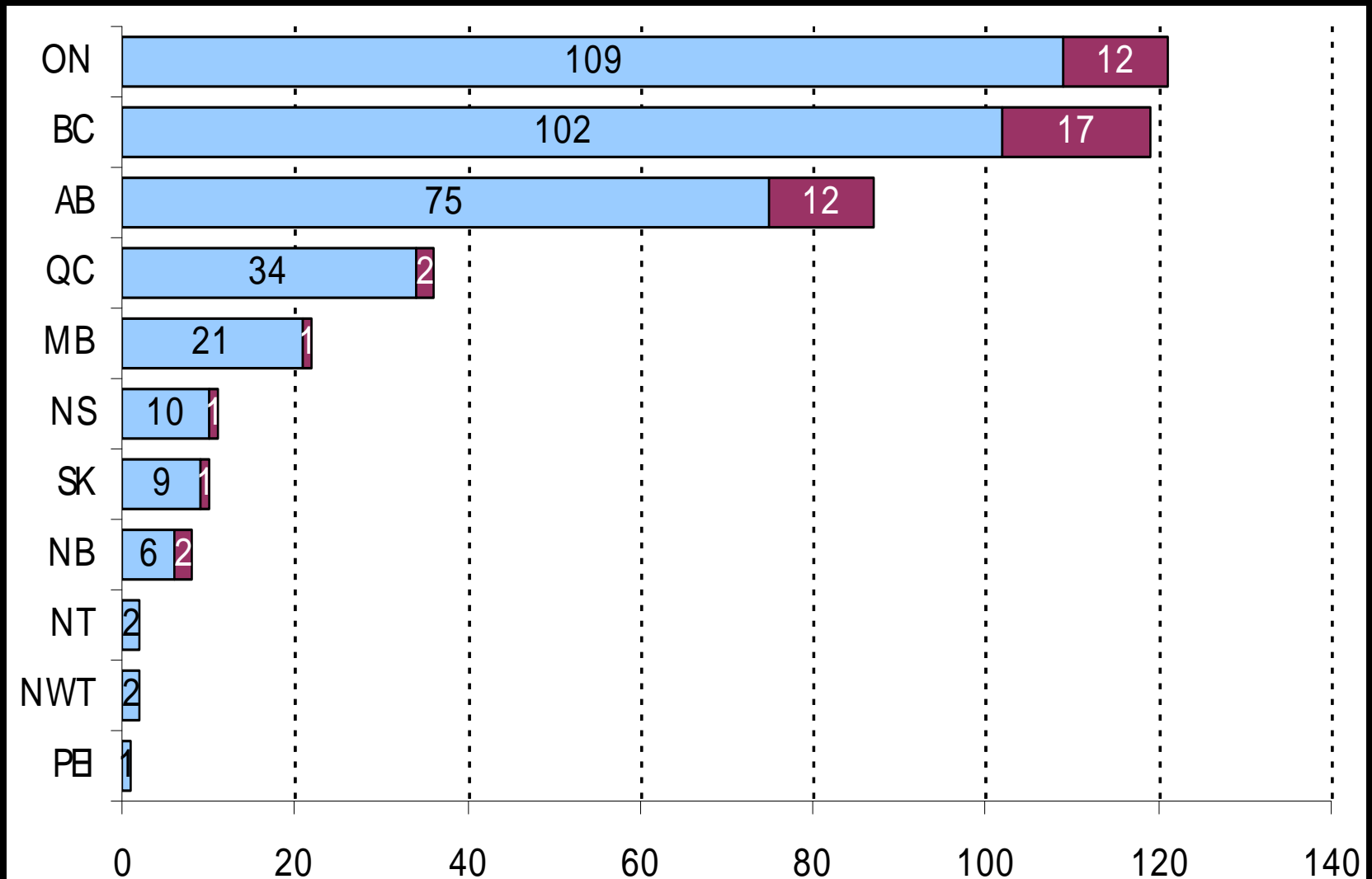
LEED Canada Registrations & Certifications

- total number of projects



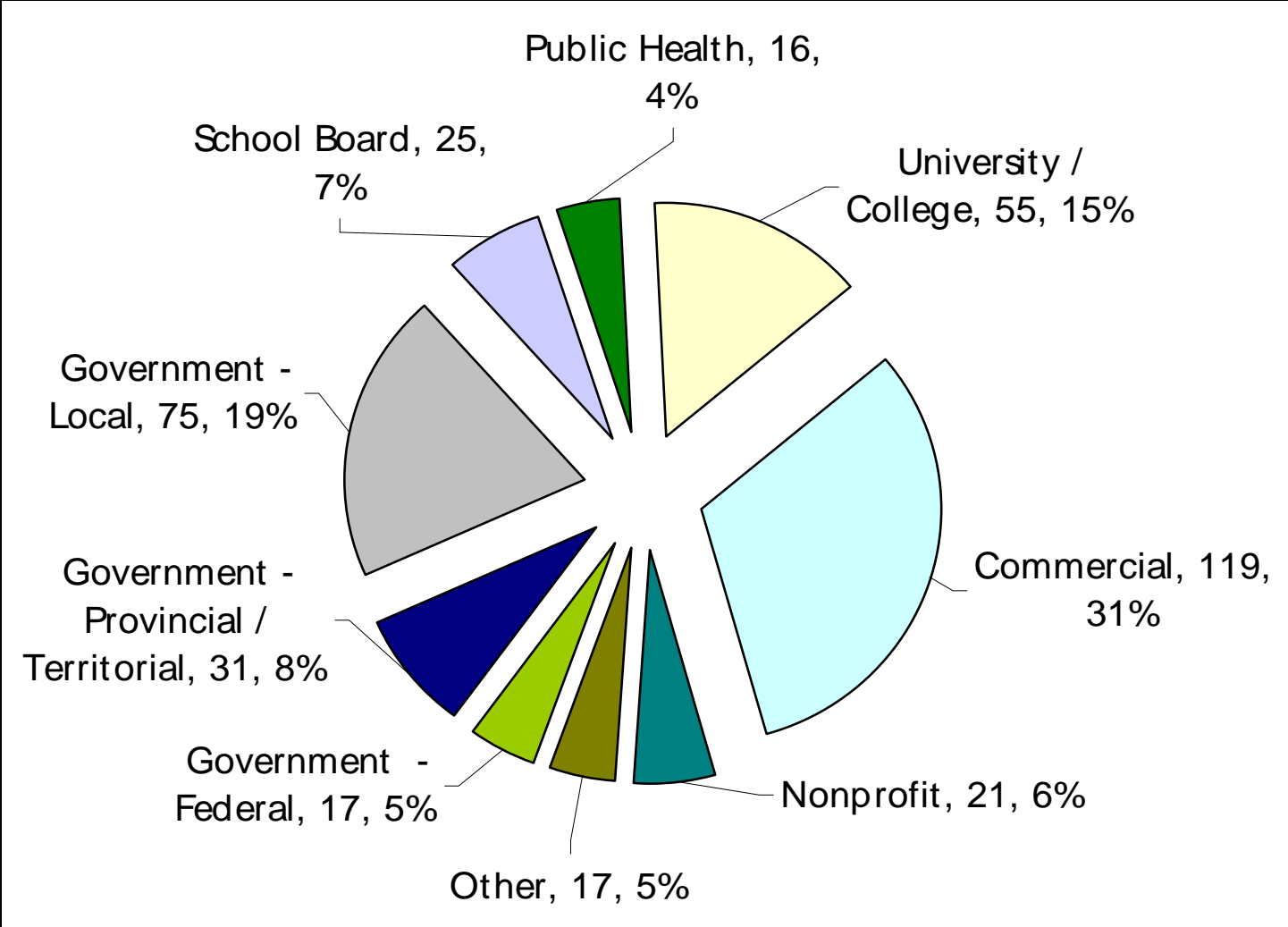
LEED Canada Registrations & Certifications

• by province



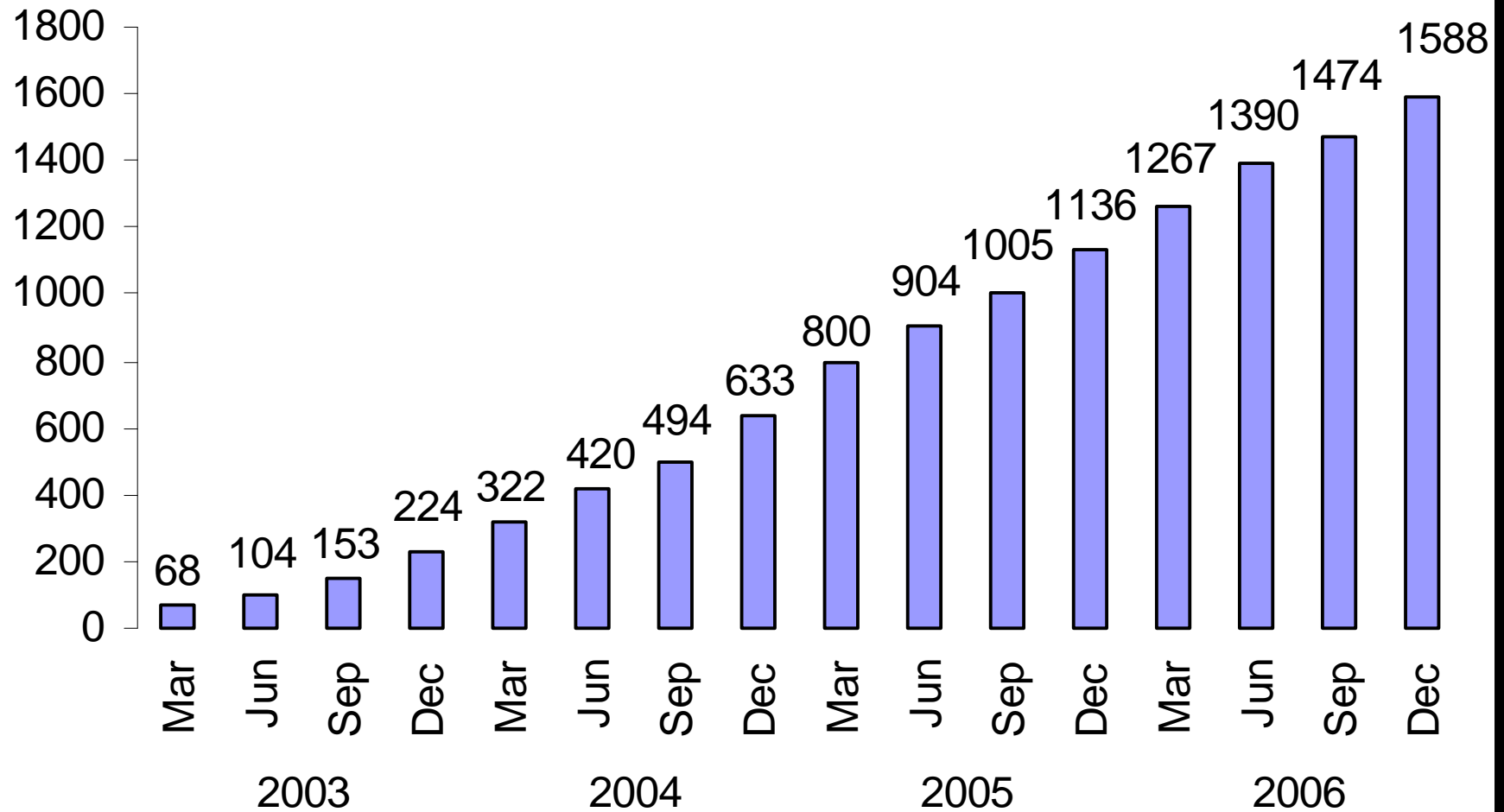
LEED Canada Registrations & Certifications

- by building type



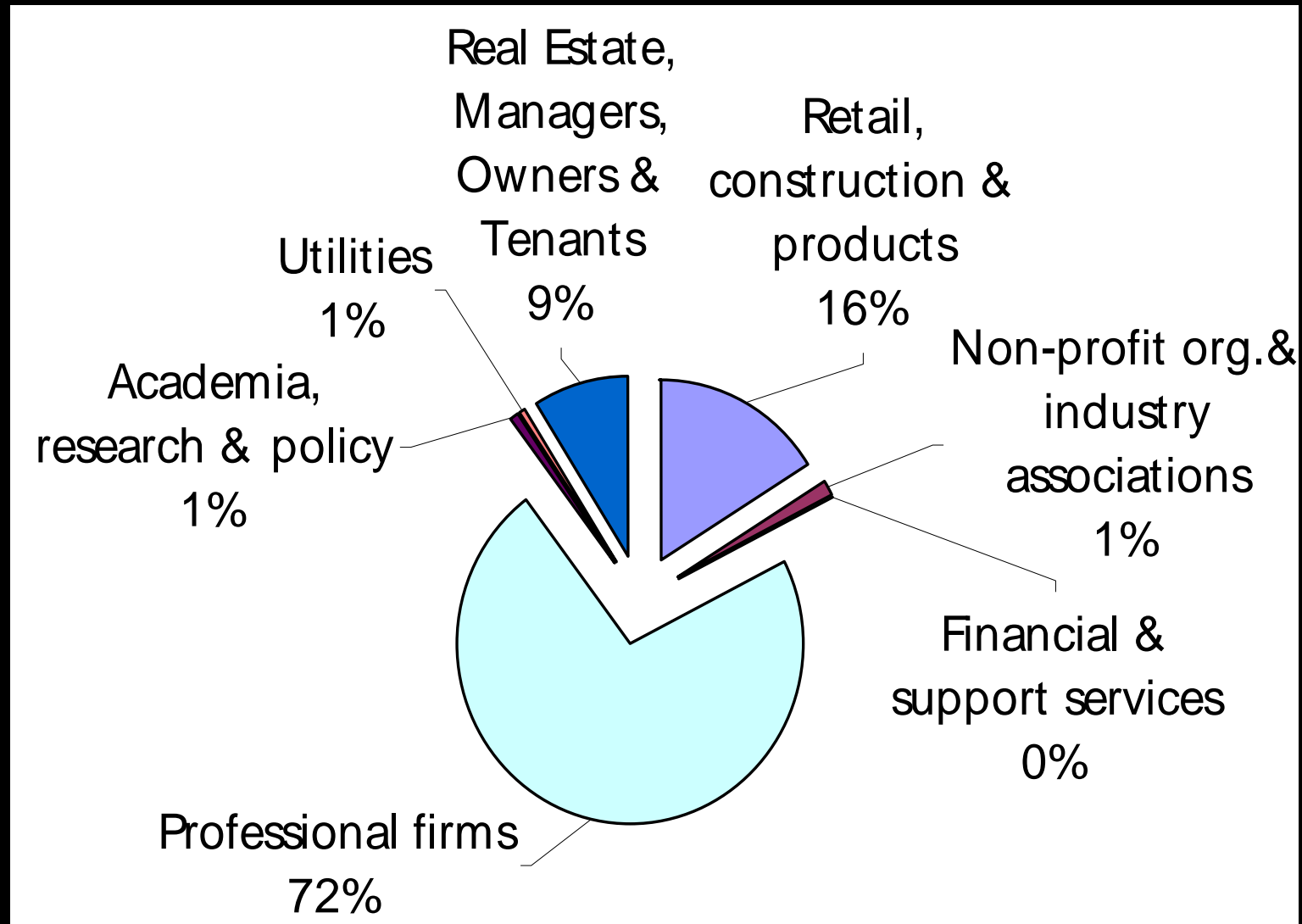
Membership Growth

- annually

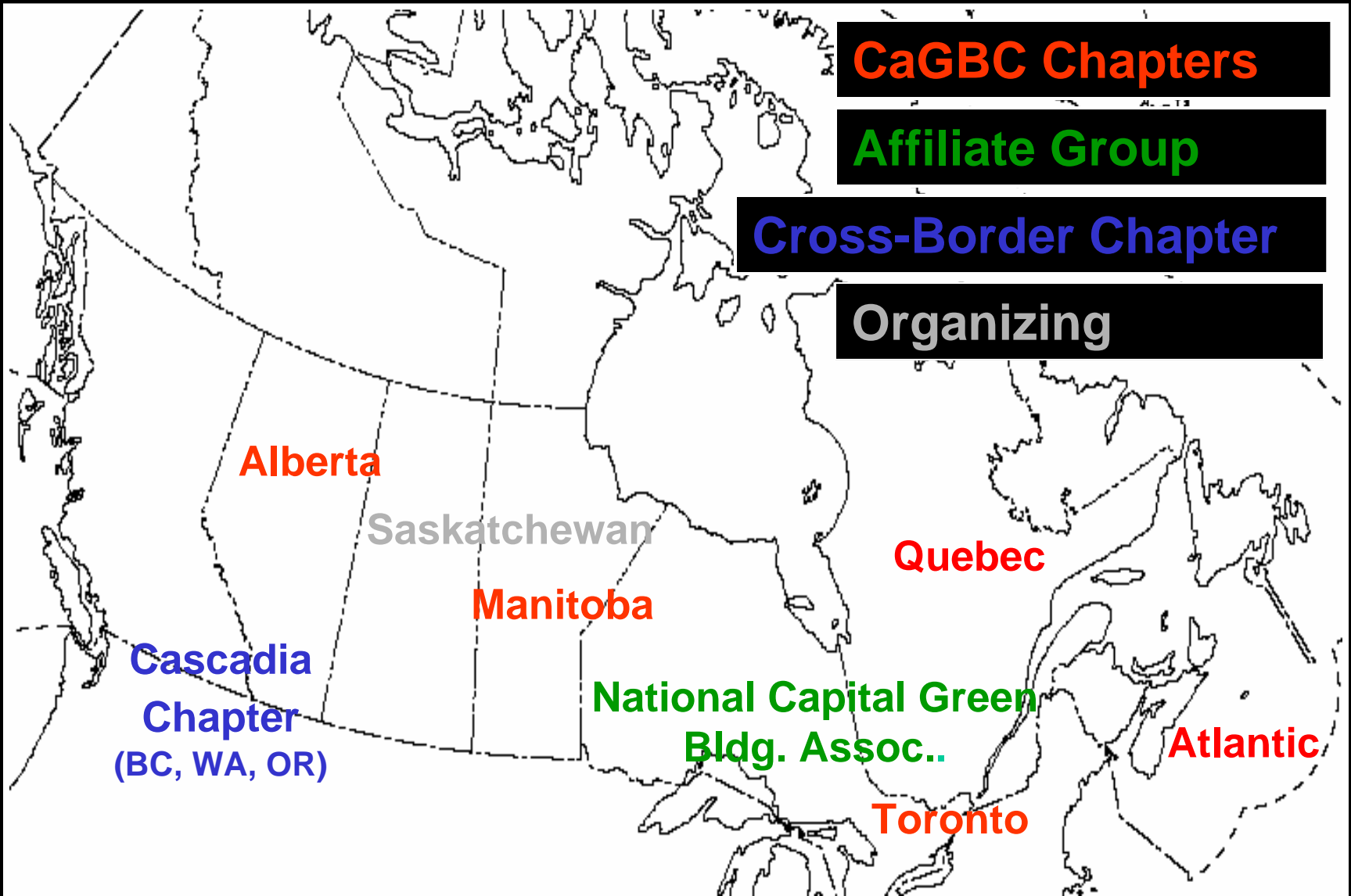


CaGBC Membership

- by member category



CaGBC Chapters & Affiliate Groups



LEED®?

Leadership in Energy & Environmental Design



www.cagbc.org

- LEED is a building rating system developed by the US Green Building Council
- LEED Canada New Construction is a system designed to certify new and existing commercial, institutional, and high-rise residential buildings.
- LEED Canada Commercial Interiors to certify tenant improvements in commercial and institutional buildings
- LEED Homes & LEED Neighbourhood Developments under development

Why LEED?



- Key reasons

- Defines “green” by providing a common framework or language
- verifies actual performance through measurement & third-party certification
- supports performance benchmarking with other jurisdictions
- it has become the national green building standard for new buildings

Why LEED?

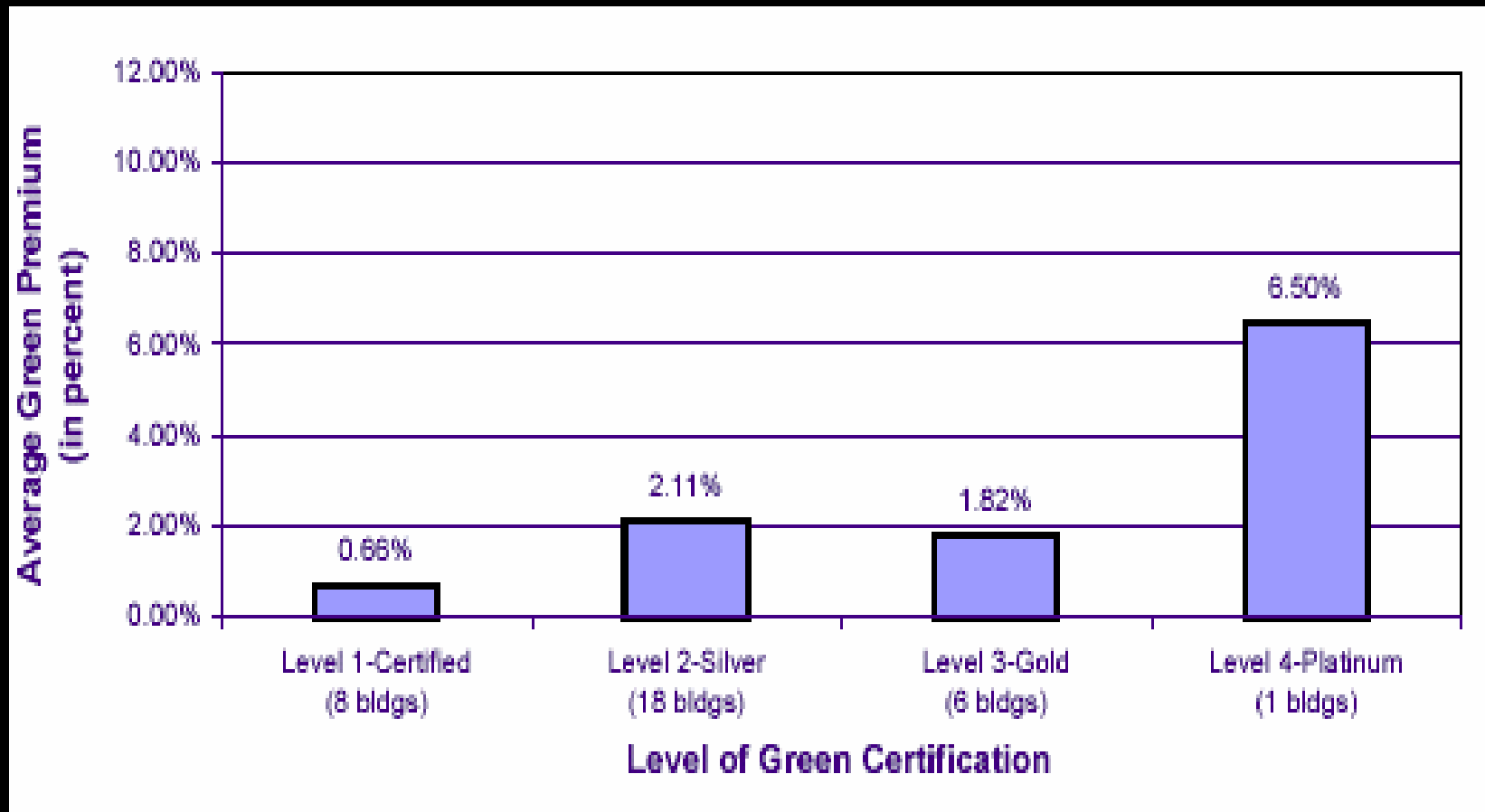


- Key reasons

- results in the lowest lifecycle cost
- ensures strategic design objectives are followed through
- relatively simple to implement with mainly performance-based credits
- drives innovation & enhances building performance

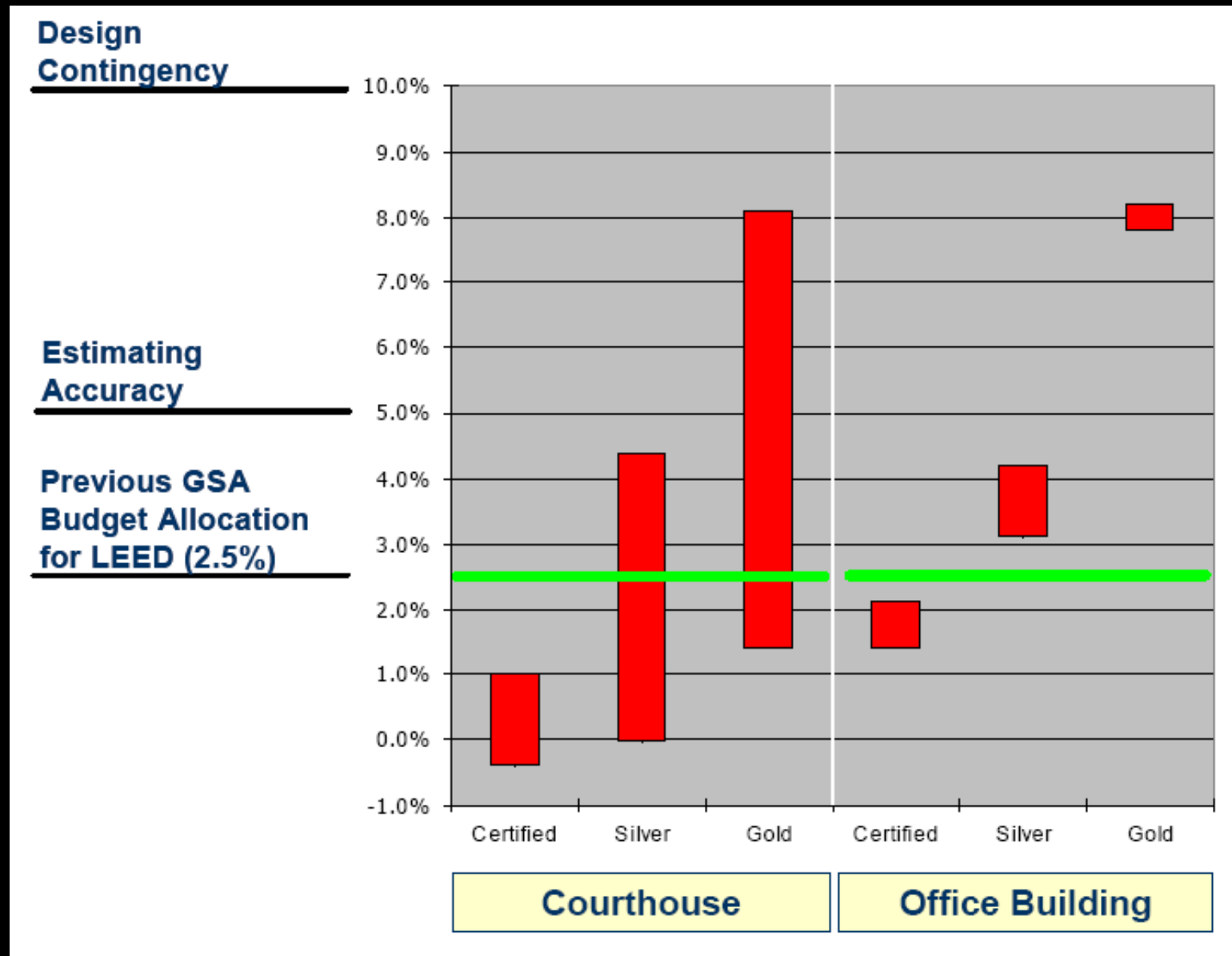
Green Building Costs

- Average Cost Premium vs. Level of LEED Certification



Source: The Costs and Financial Benefits of Green Buildings, California Sustainable Building Task Force, 2003

LEED Costs



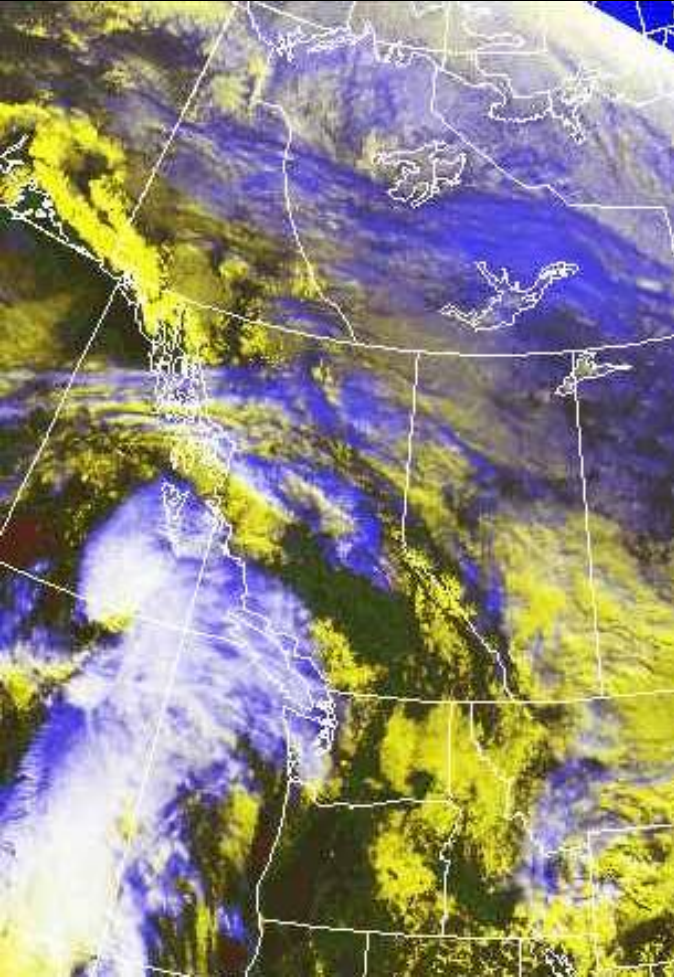
Financial Benefits of Green Buildings

- Costs & benefits per sq.ft.

Category	20-year NPV
Energy Value	\$5.79
Emissions Value	\$1.18
Water Value	\$0.51
Waste Value (construction only - 1 year)	\$0.03
Commissioning O&M Value	\$8.47
Productivity and Health Value (Certified & Silver)	\$36.89
Productivity and Health Value (Gold & Platinum)	\$55.33
Less Green Cost Premium	(\$4.00)
Total 20-year NPV (Certified and Silver)	\$48.87
Total 20-year NPV (Gold and Platinum)	\$67.31

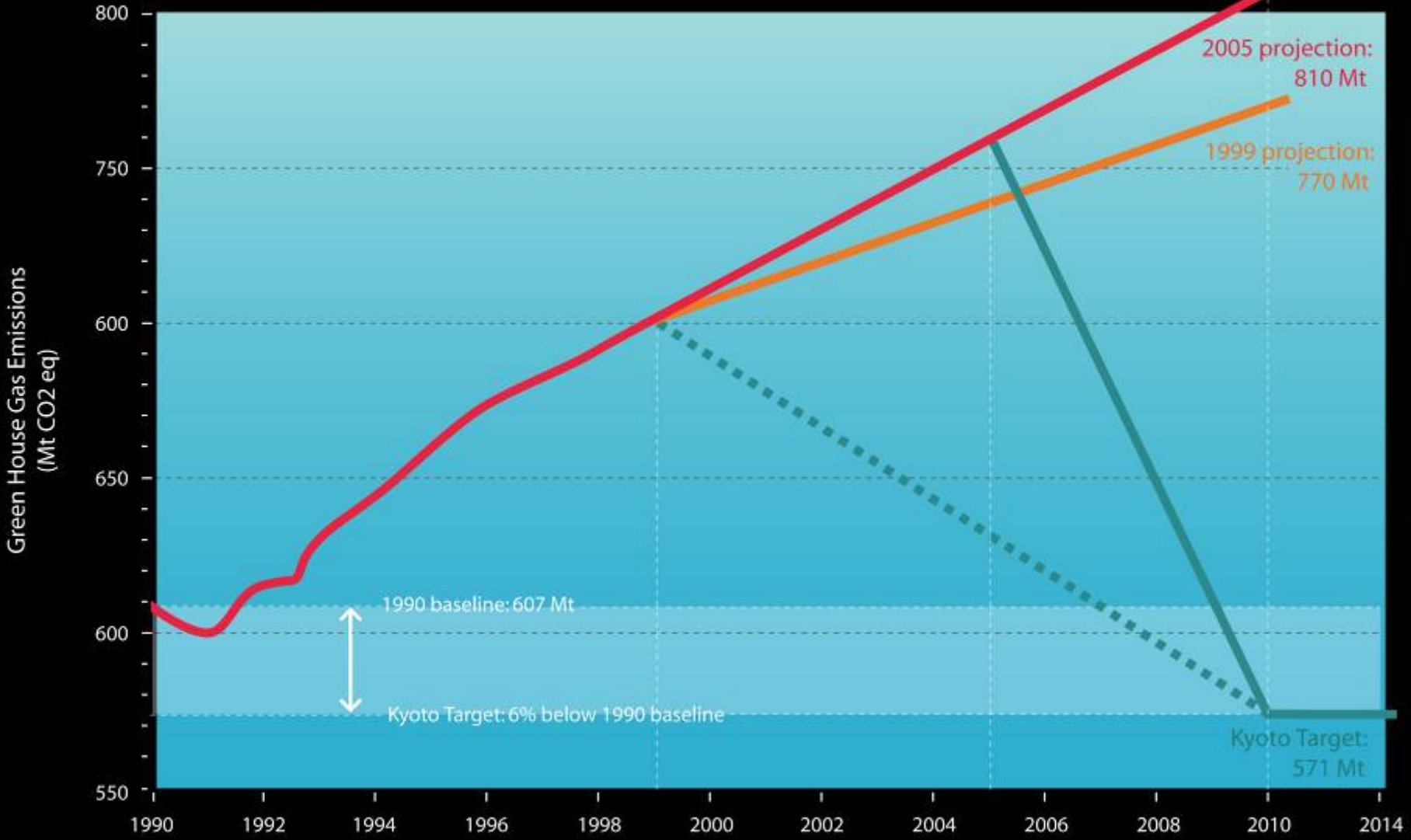
Source: The Costs and Financial Benefits of Green Buildings, California Sustainable Building Task Force, 2003

LEED Uptake in Canada



- 2010 Winter Olympics
- GVRD, Vancouver, Richmond, Saanich
- Calgary, Kingston, Ottawa, Toronto, York Region, Edmonton
- Waterloo
- Victoria Docks Green
- Toronto Waterfront Revitalization
- Alberta Infrastructure
- Province of Manitoba
- Manitoba Hydro
- Province of BC
- Province of New Brunswick
- Federation of Can. Municipalities
- Public Works & Govt. Services
- La Société Immobilière du Québec

Canada's GHG emissions



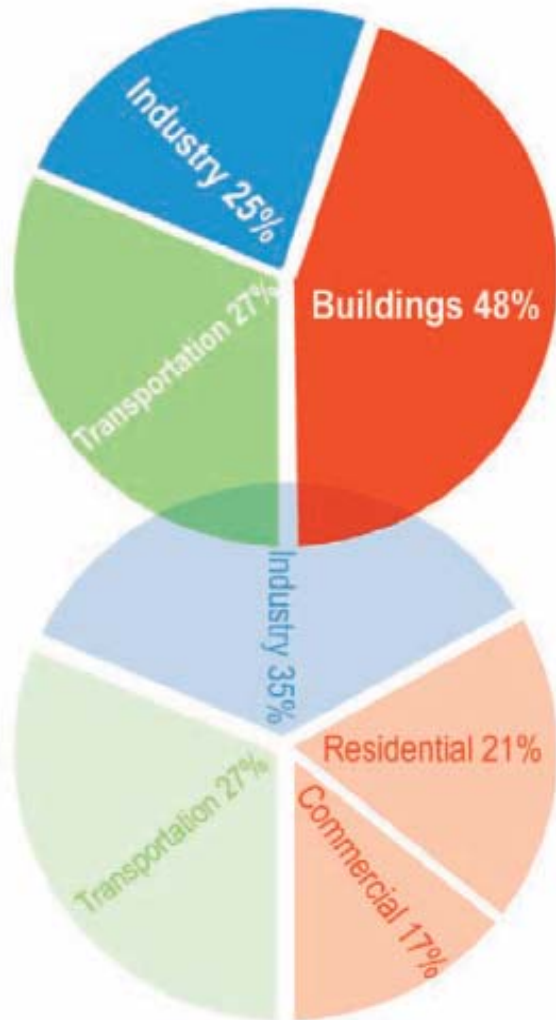
CaGBC Goals

- **Short & long-term goals**
 - **100,000 buildings & 1 million homes certified by 2012**
 - **Zero impact from buildings and communities by 2025**

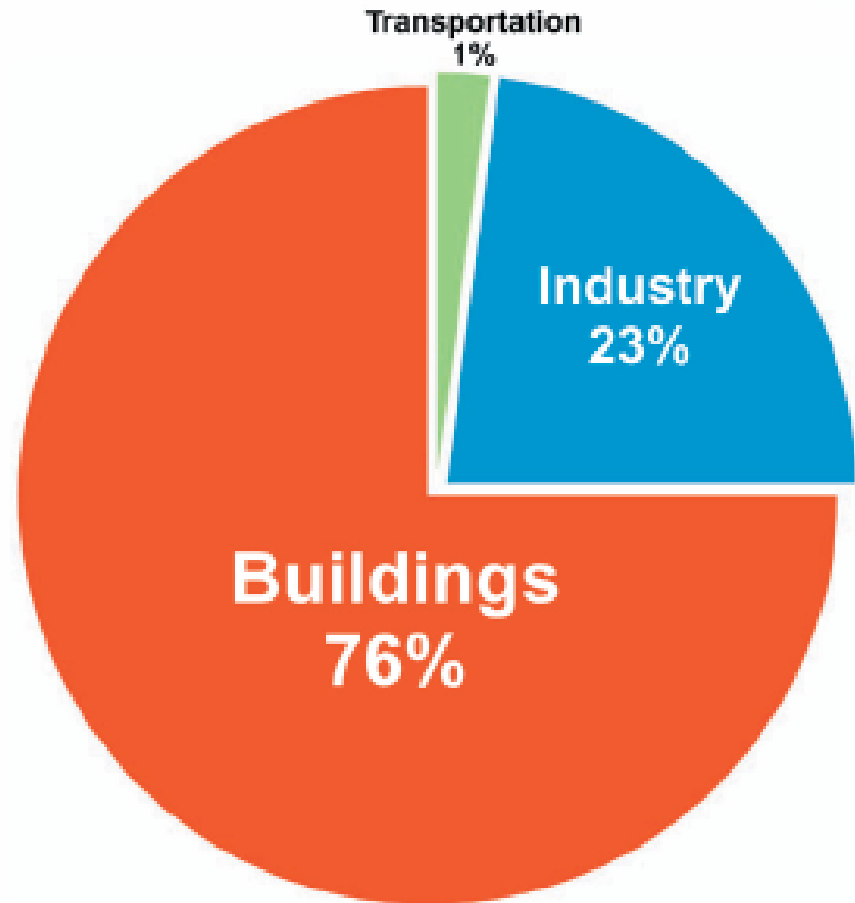


AIA

Architects and Climate Change



GRAPHIC 1: Combining the annual energy required to operate residential, commercial, and industrial buildings along with the embodied energy of industry-produced building materials like carpet, tile, glass, and concrete exposes buildings as the largest energy consuming and greenhouse gas emitting sector.



GRAPHIC 4: 76% of all power plant generated electricity is used just to operate buildings.

Green House Gas Reduction Potential

- New & existing buildings

	2003 Actual	2005 reduction vs. BAU Growth	Target 2012 Reduction from 2003		Target Use in 2012	% progress towards Kyoto
	MT	MT	%	MT	MT	%
Residential	90	92.2	50%	45	45	26.8%
Personal Transport	120					
Commercial/ Institutional	84	38.0	50%	42	42	25.0%
Freight Transport	96					
Gen. Manufacturing	36					
Energy-Intensive Manufacturing	84					
Oil & Gas Export	90					
Non-Energy Emiss.	140					
Total	740					
Kyoto Target	572					

CaGBC Programs & Initiatives

• Implementation support

- LEED technical workshops (NC,CI)
- LEED professional accreditation
- Project certification
- Municipal Green Building Toolkit & training
- Project delivery training for public sector owners and staff
- LEED for Contractors workshop
- Integrated HVAC Design training



Important Next Steps

- **Develop LEED Complete framework**
- **Revise certification process**
- **Develop performance indicators, benchmarks & verification process**
- **Establish a Building Design & Technology Roadmap towards 2030**



World Green Building Council



green building council australia



New Zealand
Green Building Council





Contact

Canada Green Building
Council

Western Office

310-319 W. Pender St.

Vancouver, BC

V6B 1T3

604.681.7002

tmueller@cagbc.org

Canada Green Building
Council

Main Office

325 Dalhousie Street

Bureau/Suite 800

Ottawa, ON

K1N 7G2

613.241.1184

info@cagbc.org