

Provincial Green Building Policy



DNR District Office Florenceville, NB. LEED Gold Certified – Constructed 2006

Department of Supply and Services

April 2011

My Green Experience



What is a “Green” Building?

A green building (often called a sustainable or high-performance building) is...*a structure that is designed, built, renovated, operated and maintained in an ecological and resource-efficient manner.*

Green buildings are designed to:

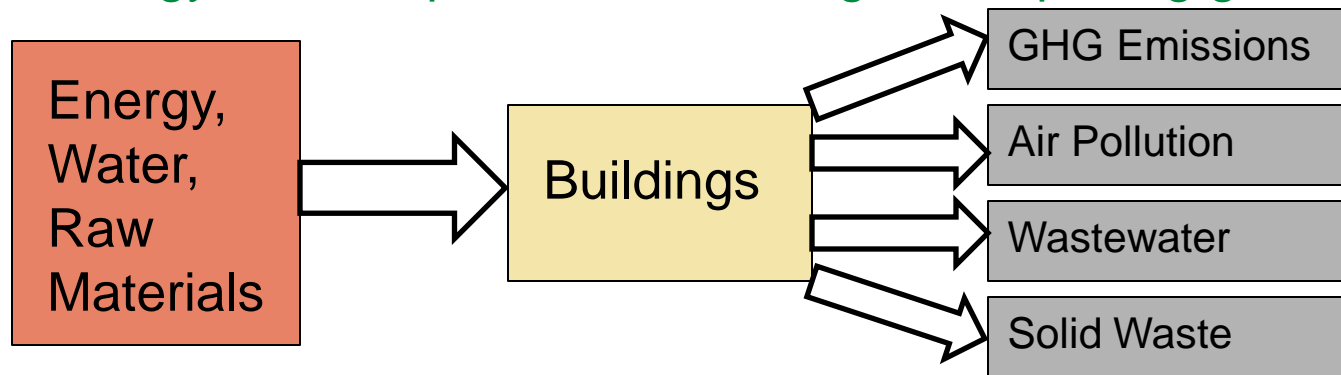
- *Use energy, water and materials more efficiently*
- *Improve the indoor environmental quality and comfort of occupants*
- *Reduce the overall impact to the environment*



Why Build Green?

Current building practices are unsustainable. Buildings¹ account for:

- 33% of all energy used in Canada
- 35% of Green House Gas (GHG) emissions in Canada
- 50% of natural resources consumed in Canada
- 25% of landfill waste
- Energy Consumption from Buildings is outpacing growth in floor space



¹ Canada Green Building Council Municipal Green Building Toolkit, Chapter 1, p. 2:

Green Building Policy Development

- Green building policy commitments made in July 2008 Council of the Federation meeting and December 2008 Speech from the Throne
- An Interdepartmental Steering Committee was responsible for developing the policy
 - co-chaired by Dept. of Supply and Services and EECA
 - representation from 8 other departments/agencies:
 - Education Health
 - Environment Local Government
 - Facilicorp Social Development
 - Finance PETL
- A Technical Sub-committee with representatives from EECA, DSS, SD, Edu & UNB were responsible for developing the technical requirements of the policy

Green Building Policy

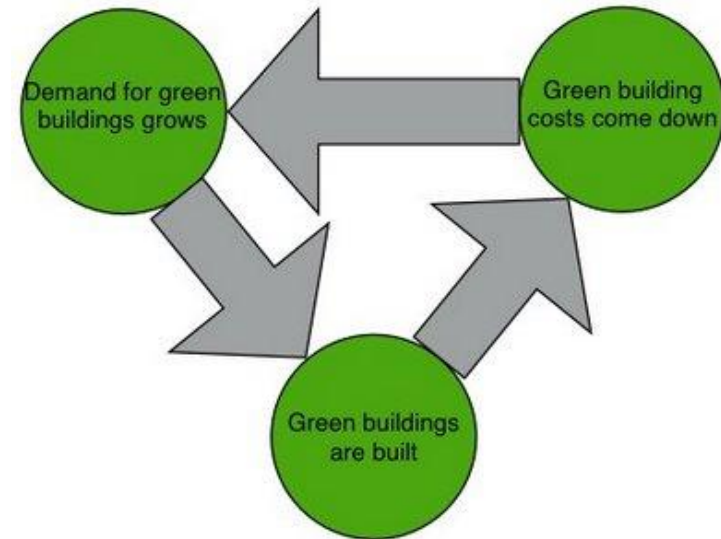
Purpose



The purpose of this policy is to demonstrate the Government's commitment to the economic, environmental and societal improvements made possible by adopting high-performance sustainable building practices and to provide leadership and guidance in the application and development of sustainable building practices in the province of New Brunswick.

Green Building Policy Goals

- Reduce overall energy consumption and expenditures
- Improve occupant health and well being
- Mitigate harmful environmental impacts
- Reduce GHG emissions
- Stimulate market and create opportunities
- Create a common standard across government



Green Building Policy Scope

Policy applies to:

- all new construction and major renovation projects >500m² floor area, partially or wholly funded by PNB (including in-kind contributions)

and

- provincially funded social housing projects (Part 9 or Wood Framed)

(i.e. to all government departments, schools, crown corps, health authorities, agencies, social housing, and to entities outside government receiving PNB funding for new construction & major renovation projects)

Implementation date was **April 1st, 2010** for Gov't Building Projects and **January 1st, 2011** for Building Projects with Gov't Funding

Scope – Project Types/Requirements

Type 1 Building Projects (>2,000 m² Floor Area)

- Integrated Design Process
- Minimum LEED Silver or Green Globes 3 Globes Certification
- Certain LEED Credits Will Be Mandatory (or Green Globe Equivalents)
- Minimum 33% Better Energy Performance Than MNECB 1997
- Energy Utilization Index (EUI) Targets (e.g. 161 ekWh/m²/yr office bldgs.)

Type 2 Building Projects (1,000 m² to 2,000 m² Floor Area)

- Prescriptive Path (Core Performance Guide) for Energy Efficiency (No Modeling Required)
- Certain LEED Credits Will Be Mandatory (Certification Not Req'd)

Scope – Project Types/Requirements

Type 3 Buildings Projects (500 m² to 999 m² Floor Area)

- Reduced Set of Prescriptive Path Requirements (Core Performance Guide) for Energy Efficiency (Certification Not Required)
- Punch List of Low Cost Green Building Practices (Low Flow Fixtures, Low VOCs, No Incandescent Lighting, Construction Waste Recycling, etc.)

Type 4 Building Projects (Social Housing Projects, Part 9 NBC/Wood Frame)

- Prescriptive Path for Energy Performance or Modeled to EnerGuide 83
- Punch List of Low Cost Green Building Practices Applicable to Residential Type Construction

Green Building Rating Systems

LEED Canada 2009



Green Globes Design™

85-100%		Demonstrates movement beyond awareness and commitment to sound energy and environmental design practices by demonstrating good progress in reducing environmental impacts.
70-84%		Demonstrates excellent progress in achieving eco-efficiency results through current best practices in energy and environmental design.
55-69%		Demonstrates leadership in energy and environmental design practices and a commitment to continuous improvement and industry leadership.
35-54%		Reserved for select building designs which serve as national or world leaders in energy and environmental performance. The project introduces design practices that can be adopted and implemented by others.

LEED® Canada-NC 2009

Five Environmental Categories:

1. Sustainable Sites (14)
2. Water Efficiency (5)
3. Energy & Atmosphere (17)
4. Materials & Resources (14)
5. Indoor Environmental Quality (15)

Additional Categories:

Innovation and Design

Regional Priority

Four Levels of Certification:

Certified – 40 to 49 points

Silver – 50 to 59 points

Gold – 60 to 79 points

Platinum – 80 to 110 points

Example of Type 1 Building (>2,000m² / 21,500ft²)



École Sainte-Thérèse
Building Area is 7000m²

- LEED Silver or Green Globes 3 Globes (min.)
- Integrated Design Process
- Max Energy Consumption Targets (Modeling Required)
- Cost Impact: ~5% (~\$677,880)
- Energy Savings (20-yr PV): ~\$753,200

Example of Type 2 Building (~1,000m² / 11,000ft²)



Proposed Fire Hall No.1, Miramichi
Building Area is ~1,000m²

- LEED® certification not required
- Core Performance Guide for energy efficiency (no modeling)
- Pared down checklist of green building practices
- Cost Impact: ~2-3% (~\$40,000 - \$60,000)
- Energy Savings (20-yr PV): ~\$107,000

Example of Type 3 Building (~500m² / 5,500ft²)



DNR District Office Bathurst
Building Area is 585m²

- LEED® certification not required
- Pared down Core Performance requirements (no certification)
- Checklist of low cost and no cost green building practices
- Cost Impact: Negligible
- Expected Energy Savings: ~\$30,000 (20-yr PV)

The Province's Newest Green Building!



- LEED Gold Certified
- 4 Green Globes
- 1st Project in the Province to achieve the Durable Building and the Construction Waste Management Credits (50% Diverted From Landfill)

DNR District Office Richibucto

Equivalencies, Reduced Requirements and Exemptions

- Green Globes™ will be recognized as an equivalent to LEED®
- Alternative ratings will be considered but must meet intent of the policy
- Reduced project energy/environmental requirements may be accepted in cases where clearly demonstrated to be not feasible
- Exemptions to policy may be granted in special cases such as historical buildings, temporary/seasonal buildings, etc.

All exempted and reduce requirement projects must still attempt to incorporate as many green building practices as practical

Reporting and Evaluation



- Policy will be reviewed at minimum annually to ensure alignment with applicable codes, standards and technologies
- One year post-occupancy actual efficiencies will be compared to target efficiencies to evaluate effectiveness of policy
- Third-party rating system report or signed declarations from Arch/Eng of record will be used to confirm compliance with policy

Further Information

www.gnb.ca/0099/gbp-e.asp

(English)

www.gnb.ca/0099/gbp-f.asp

(French)

QUESTIONS?

