The Green Building Policy for Government of Manitoba Funded Projects
The Vision

To create a significant improvement in how new and renovated buildings funded by the Government of Manitoba perform over their entire life cycle from an environmental, energy and economic perspective.
The Goals

• **Reduce overall expenditures** through improved building performance, **full cost accounting** and a life-cycle approach to costing.

• **Reduce Manitoba’s exposure to the price volatility** and long-term supply concerns associated with the use of non-renewable fossil fuel imported from outside the province (ex: natural gas, fuel oil and propane).
The Goals

• Create a common and consistent framework for green building standards across provincial government departments, Crown corporations and agencies and other levels of government.

• Minimize the negative environmental impacts associated with building site selection, construction, renovation, operation, maintenance, repair and demolition or deconstruction, without impairing the intended use or function of the building.
The Goals

- **Reduce greenhouse gas emissions** from Manitoba’s building sector by improving energy efficiency and expanding use of clean, renewable energy.

- Capitalize on other benefits often achieved by green buildings such as **Healthier, more productive indoor environments** and improved asset values.

- **Create economic opportunities** for Manitoba business by stimulating the demand for green building products and services.
The Scope

1. Organizations and Projects Affected
   Provincial Government Departments; Crown Corps.; RHAs; Schools
   Other projects receiving provincial government funding

2. Building Project Type and Size
   Commercial/Institutional; New Construction >600 m²; Major Renovation

3. Future Scope
   Residential Buildings; Existing Buildings; Leased Accommodations
The Requirements

1. Integrated Design Process
2. Energy Efficiency
   MNECB+33%
   Power Smart
3. Life Cycle Costing
4. Minimum LEED® Silver Certification
   or Green Globes™ equivalent
5. Preference for Low or Zero Carbon Energy
Currently:

- **80+ projects** are currently participating
- **4+ Million sf** of construction
- **40% ICI permitted activity** in Manitoba

Courtesy of MIT
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Courtesy of Prairie Architects
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Courtesy of ft3 Architects
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Courtesy of Mb Communication Services
Green Building Policy Projects

- Recreation Centers, 23
- Hospitals, 8
- Offices, 5
- PCH, 2
- Colleges/Universities, 7
- Detention Centers, 4
- Schools, 11
- Arena, 3
- Other, 4
- Stores, 2
- Warehouses, 1

Total projects:
- 33 (Schools, 11)
- 35 (Recreation Centers, 23)
- 28 (Hospitals, 8)
- 12 (Offices, 5)
- 9 (PCH, 2)
- 6 (Detention Centers, 4)
- 4 (Colleges/Universities, 7)
- 3 (Arenas, 3)
- 2 (Other, 4)
- 2 (Stores, 2)
- 1 (Warehouses, 1)
Manitoba Green Building Policy Projects
Current Status & Future Projections

Number of Projects vs Year

- Actual Results
- Projected

*Note: Results shown after Dec 2012 are projected. Actual results may vary.
Trends and Observations

- Adoption of **green building language** and understanding has increased
- Adoption of **green design practices** such as commissioning, energy modeling, and green product specification
- Adoption of **green construction practices** such as waste diversion, erosion control
More Trends and Observations

• One size does not fit all.
• Delivery of a green building is **not just the consultant’s deliverable**.
• Clarity of the deliverables: **GBP is not just LEED**
• The green building momentum fades at **occupancy**.

…. therefore …. 
The Green Building Policy
for Government of Manitoba Funded Projects
Green Building Program Ver. 2.0

• **Enhance Accessibility.** Ensure Manitoba’s green building standards and practices, reporting requirements, forms, team roles and responsibilities are readily available to stakeholders.

• **Provide Clarity.** Translate Manitoba’s Green Building Policy document into a manual.

• **Expand Program.** Ensure the advantages of building green are preserved. Identify GBP standards and practices for existing buildings, leases and residential.
Enhance Accessibility

- Updated Web site
- The Green Building Coordination Team
- Internal and Industry Advisory Groups
- Presentations
Provide Clarity

- The Green Building Program Manual
- The Green Building Program Forms
- Green Building Program Guidelines
Provide Clarity

- NO SUBSTANTIVE CHANGE TO THE 2007 REQUIREMENTS

- 2013 V2 just unpacks the original requirements for Commercial Institutional: New Construction Projects
Provide Clarity: Criteria for New Construction

- Verification
- Planning and Design
- Adaptation and Resilience
- Sustainable Materials
- Responsible Construction
- Transition to Occupancy
Criteria for New Construction:

Verification:

*Protect owner investment, confirm delivery of green building criteria and provide quality assurance.*

- Energy Efficient Design
- Environmental Measures
- Building Commissioning
Criteria for New Construction:

Verification:

*Protect owner investment, confirm delivery of green building criteria and provide quality assurance*

• Energy Efficient Design

**NOTE:** Green Building Regulation applies in parallel to the energy efficiency criteria of the GBP.

Applies also to leased buildings that are built-to-suit for a government tenant.
Criteria for New Construction:

Planning & Design: Maximize potential for occupant comfort, and community, financial and environmental sustainability.
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- Integrated Design Process
- Life Cycle Cost Analysis
Criteria for New Construction:

Planning & Design: Maximize potential for occupant comfort, and community, financial and environmental sustainability.

- Recycling
- Active Transportation
- Natural Light & Views
- Low Water Landscape Planning
- Indoor Air Quality
- Potable Water Management
- Energy Management
- Community Access

Courtesy of ft3 Architecture xLandscape Interior Design
Criteria for New Construction:

Adaptation & Resilience:

Reduce potential risks associated with climate change and energy supply volatility.

- Energy Sources
- Adaptability of Systems

SolarWall® preheating intake air

185 Smith Street, Winnipeg, Manitoba, Canada
Photo source: Manitoba Housing Authority
Criteria for New Construction:

Sustainable Materials:

- Augment occupant health,
support resource conservation
and support a green economy in
Manitoba

- Low Emitting Materials
- Water Efficient Fixtures, Fittings & Appliances
- Manitoba Products
- Products with Recycled Content
- Salvaged Building Materials
Responsible Construction:

- Protect the community and the environment from construction practices that produce waste and pollution.
- Pollution Prevention Planning
- Waste Diversion From Landfill
Criteria for New Construction:

Transition to Occupancy:

Ensure persistence of green building investments during occupancy.

- Purchase Energy Efficient Electronics & Appliances
- Purchase Low Emitting Paints, Solvents, Cleaning Products and Furnishings
- Use Green Cleaning Products and Procedures
- Non-Smoking Policy
- Use Local Recycling Programs
- Conduct Energy & Water Use Monitoring
Provide Clarity: The Manual

- Describes each criteria, reporting requirement, cross-references and general commentary
- Consolidates Manitoba context, codes, programs
- Contains Guidelines for select criteria
# Green Building Project Co-Ordination Guideline

**October 2013**

This chart is typical of conventional design/bid/build delivery models. Timing for each phase may vary according to project size and scope. Other project delivery models need to adjust the steps and processes to accommodate project conditions.

## Project Stages

<table>
<thead>
<tr>
<th>Pre-Design</th>
<th>Design</th>
<th>Construction</th>
<th>Post Occupancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Programming</td>
<td>Initial Budget</td>
<td>Schematic Design (SD)</td>
</tr>
</tbody>
</table>

### Green Building Program Milestones

- **Project Activities**
  - **Pre-Design:** Activities A and B
  - **Design:** Activities C, D, E, F, and G
  - **Construction:** Activities H, I, J, K, L, and M
- **IDP Activities**
  - **Pre-Design:** Activities A and B
  - **Design:** Activities C, D, E, F, and G
  - **Construction:** Activities H, I, J, K, L, and M

### Green Building Regulation

**Guideline for Government Departments, Agencies and Crown Corporations**

1. **Schedule and conduct Business/Project Planning Meetings(s)**
2. **Schedule and conduct Programming Meetings**
3. **Schedule and conduct Facility Performance/Single-purpose Team Start-Up Meetings**
4. **Schedule and conduct General Contractor and Sub-contractor Start-Up Meetings**
5. **Schedule and conduct Construction Meetings**
6. **Schedule and conduct Post Occupancy Deliverable Meetings**

**NOTE:**
This Schedule indicates the approximate timing of first meetings for the IDP Protocol. It is intended that subsequent meetings will be scheduled as appropriate to the project.

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**Manitoba Green Building Program**

1. **Responsible for Building Owners/Budget representatives**
2. **Responsible for Green Building Program**
3. **Responsible for Green Building Program**
4. **Responsible for Green Building Program**

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**Address:**
1700 Portage Avenue
Winnipeg, MB
R3E 0E2

greenbuildings@gov.mb.ca
Provide Clarity: The Forms

- For use as guidance for Owner’s Project Requirements
- Provides program reporting framework
- Guidance for Variance application
Variances and “The Practicality Clause”

One size does not fit all.

Where it is not practical to apply a GBP criteria to a project, apply for a Variance.
What is next?

• Expansion of the Green Building Program:
  ▪ Residential buildings
  ▪ Leased accommodations
  ▪ Existing building operation
  ▪ Building deconstruction guidelines

• Regulation:
  ▪ National Energy Code of Canada
  ▪ CCERA Green Building Regulation
What else?

- Final version of the GBP manual will be published Spring 2014
- Next version in 2015/2016
Thank You