

POWER SMART PROGRAMS

Manitoba Non Profit Housing Association
November 22, 2012





Agenda

1. Commercial vs. Residential

2. Power Smart Programs:

- Commercial Buildings
- Residential Buildings

3. Contact us !

Commercial or Residential?

- **Commercial building**
 - A building is commercial if it has 3 or more stories, has a common entrance and common halls and has some type of central heating system.
- **Residential building**
 - A building is residential if it is less than 3 stories, has separate entrances and heating systems for each unit.
- Contact Manitoba Hydro If in doubt as to the building classification.

Commercial



Residential



Power Smart for Business Programs for Commercial Buildings

- Commercial Lighting
- Commercial Building Envelope (insulation, windows)
- Commercial HVAC (boiler, chiller)
- Geothermal
- Commercial Clothes Washers
- Water and Energy Saver for Multi-Unit Residential
- New Buildings
- Commercial Refrigeration
- Commercial Kitchen Appliances
- Building Optimization
- Custom Measures
- Network Energy Management
- Recreation Facilities Energy Efficiency Guide and Survey

Further information located at the Manitoba Hydro website - www.hydro.mb.ca.

Power Smart for Business Commercial Programs

Goal

- Encourage installation of energy efficient technologies in commercial buildings.
- Offer technical guidance & financial incentives.
- Accelerate market acceptance of energy efficient technologies and practices in Manitoba.

Commercial Power Smart Lighting Program

- Financial incentives: typically cover incremental cost between base case & energy efficient technology.
- Typical annual savings of 40%.
- Payback with incentive: less than 3 years for lighting equipment.



Commercial Lighting Eligibility Requirements

- Manitoba Hydro commercial customer billed at the Electrical General Service Rate
- Both existing buildings & new construction (only outdoor lighting measures or unconditioned spaces are eligible)
- Lighting systems operating at least 2,000 hours per year
- Common areas only (i.e. NO individual suites)

What Products are Eligible?

Prescriptive (per unit) incentives:

T8 fluorescents

T8 EE lamps

T5 fluorescents

T5 EE lamps

Compact fluorescents

Metal Halide and High Pressure Sodium

Induction fixtures

LED exit signs

Occupancy sensors

LED backlit signage

Calculated incentives

Ensure product is on the Eligible Product List (EPL).

Incentive Changes

T12 Federal Ballast Regulation

November 2, 2006:

T12 magnetic ballasts no longer available in new fixtures

April 1, 2010:

T12 magnetic ballasts no longer available for retrofitting existing fixtures

http://oee.nrcan.gc.ca/regulations/fluorescent_august2005

New Buildings Program

April 1, 2011:

Only outdoor lighting measures or unconditioned spaces eligible for incentives

T8 Fluorescent Lighting Systems

T8 fluorescent lighting systems

Fixture incentive (A)

Product	Renovation
Standard fixture	\$5/fixture
Premium fixture	\$20/fixture
High Performance Reflector kit	\$5/fixture

Ballast incentive (B)

Renovation only																
Proposed T8 system																
	Ballast type*	1x4			2x4				3x4			4x4			2x8	
		S	P	D	S	P	D	SD	S	P	D	S	P	D	S	P
Existing T12 system	1x4'	---	\$5	\$15	---	---	---	---	---	---	---	---	---	---	---	---
	2x4'	\$15 ¹	\$20 ¹	---	---	\$5	\$30	\$20	---	---	---	---	---	---	---	---
	3x4'	---	---	---	---	---	---	---	---	\$5	\$45	---	---	---	---	---
	4x4'	---	---	---	---	---	---	---	\$20 ¹	\$25 ¹	---	---	\$5	\$60	---	---
	2x8'	---	---	---	---	---	---	---	---	---	---	---	---	\$5	---	\$5
Existing T8 system	2x4'	\$15 ¹	\$20 ¹	---	---	---	---	---	---	---	---	---	---	---	---	---
	4x4'	---	---	---	---	---	---	---	\$20 ¹	\$25 ¹	---	---	---	---	---	---
		*S = Standard			P = Premium				D = Dimmable			SD = Step Dimmable				

¹ New fixture or High Performance Reflector kit must be installed to qualify for an incentive. For other lamp combinations, contact Manitoba Hydro.

Energy Efficient (EE) lamp incentive (C)

Product	Renovation
4' 25 W T8 EE lamp	\$0.75/lamp
4' 28 W T8 EE lamp	\$0.50/lamp
4' 30 W T8 EE lamp	\$0.25/lamp

Calculating your incentive

Total incentive = A + B + C

A = (# of fixtures x fixture incentive)

B = (# of fixtures x ballast incentive)

C = (# of lamps x T8 EE lamp incentive)

Ballast incentive is not paid out on a dollar amount per ballast but is paid out on a per fixture basis.

Compact Fluorescent Lighting Systems

Product

Renovation

Compact Fluorescent (CF) lighting systems

Hard-wired: retrofit kit	\$45/kit
Hard-wired: new fixture	\$50/fixture
Dimmable hard-wired: retrofit kit	\$60/kit
Dimmable hard-wired: new fixture	\$70/fixture
Screw-in lamps: 5-20W*	\$5/lamp
Screw-in lamps: >20-30W*	\$8/lamp
Screw-in lamps: >30-45W*	\$12/lamp
Dimmable screw-in lamps: 5-10W	\$10/lamp
Dimmable screw-in lamps: >10-20W	\$15/lamp
Dimmable screw-in lamps: >20-30W	\$20/lamp

*Reflectorized lamps receive the same incentive as screw-in lamps.
For other screw-in CFL sizes, contact Manitoba Hydro.

LED Exit Signs

Product	Renovation
LED exit signs	\$45/sign

- Only NEW signs meeting CSA standards are eligible:
 - C22.2-C860-01 for signs with “EXIT” OR
 - C22.2-141-10 for signs with the “Running Man”

Participation

- Determine lighting requirements
- Contact Manitoba Hydro for an application
- Submit the completed application to Manitoba Hydro for review
- **Manitoba Hydro issues Pre-Approval (valid for one year):** product purchase & installation may now begin
- Electrical permits **MUST** be taken out

Participation

When lighting is installed & operational, send:

- Certificate of Inspection (within Winnipeg) or Certificate of Approval (outside Winnipeg);
- Completion Declaration;
- Completion Questionnaire;
- Itemized invoices detailing:
 - product costs (separate from design, labour, & taxes);
 - date of purchase;
 - product model details;
 - vendor's name.

Manitoba Hydro arranges Post-Inspection.

Incentive is processed.

Commercial Building Envelope Program

- Electric and Natural Gas commercial customers
- Insulation Upgrades (existing buildings only)
- Windows (existing buildings only)



Incentives - Insulation

- Three tiers of incentives for each of the three roof and wall categories
 - Roof: above deck, attic (in-fill), below deck
 - Wall: exterior surface, integral (in-fill), interior surface
- Incentives can cover as much as 100% of material cost of insulation.
- Incentives are calculated based on the starting R-value level of the existing assembly and must upgrade insulation to Power Smart effective levels(eg. R- 25 for flat roofs).
- Minimum size of upgrade: 100 m² (1076 ft²).
- Incentives are not designed to cover insulation that needs to be replaced (e.g. damaged insulation).

Insulation Incentives



Typical Roof Incentives:

Above Deck – 2.5-7.5 Cents/R/Sq.Ft

Attic – 0.5-2.0 Cents/R/Sq.Ft

Below Deck – 1.0-3.0 Cents/R/Sq.Ft

Incentives - Windows

- Incentives available to existing buildings only
- Incentives designed to cover up to 80% of incremental cost
- Paybacks of 1.5 to 8.5 yrs
- Proof of energy performance (of total window U-value) is required for each window type.



Incentives - Windows

INCENTIVE FACTOR

Project type	U-value requirement	Incentive factor
Renovation (existing buildings)	≤ 1.70	\$125/m ² /U

Commercial Building Envelope Application Process

- Applications must be submitted for Pre-Approval:
- Windows
 - Proof of energy performance for each window type (Window test report, Energy Star, or NFRC).
 - Itemized list of all sizes and quantities of windows.
 - Copy of the window specification, including generic. description of frame, glazing, spacers, fills and coatings.
- Upon completion, submit completion declaration forms and itemized invoicing.
- Further details at www.hydro.mb.ca and program application form/guide.

Commercial HVAC Program

- Incentives available for:
 - High efficiency natural gas boilers
 - Water cooled chillers and Variable Speed Drives (VSDs)
 - CO₂ sensors
- Submit application and obtain pre-approval.
 - Note: detailed heat loss calculation is required and to be submitted with boiler application.
- Upon completion, submit completion documentation and itemized invoices.

Boiler Incentives and Savings

Minimum Combustion Efficiency:

>= 85% Near-condensing

>= 90% Condensing

Incentives:

\$2/MBH near-condensing retrofit

\$8/MBH condensing retrofit

Average Savings:

- **30%** off your annual heating bill
- \$6,000 annual savings per boiler
- \$150,000 in life cycle cost savings
- 2 to 5 year payback



Chillers

- Can be the largest single electric consuming piece of equipment in your building.
- Incentives for energy efficient water cooled Chillers and Variable Speed Drives (VSDs)
- Typical annual savings of \$2,500.
- Average payback of 3 yrs



Commercial Geothermal Program

Customer segmentation categories:

Electric Sector (feasibility study optional)

- Existing building that has been heated with electricity for a minimum of 2 years.
- Building property site is not adjacent to an existing natural gas distribution pipeline.

Natural Gas Sector

- Existing natural gas heated buildings or new buildings adjacent to natural gas pipelines are not eligible for feasibility study assistance or financial incentives.

Other Heating Fuels (i.e. propane, fuel oil, wood)

- Contact an authorized Commercial Geothermal Program representative regarding eligibility.

New construction projects must proceed through the Power Smart New Buildings Program

Commercial Geothermal Program

- Feasibility Study Assistance
 - Manitoba Hydro provides assistance up to 50 per cent of the first \$5,000 and up to 25 per cent of the remaining cost of the study (to a maximum grant of \$10,000 per study).
 - Limited to 20 per cent of System Installation Incentive
- System Installation Incentive
 - The lesser of:
 - \$1.25 per sq ft of heated space, or
 - \$60 per MBH of installed equipment, or
 - \$60 per MBH of eligible base building transmission and infiltration heating loads
- Feasibility study (if applicable) and project application must be approved by Manitoba Hydro before the equipment is purchased and/or installed.

Provincial Incentives

- Owners of commercial buildings and apartments may be eligible to receive up to 15 per cent of the value of their installed systems.
- Building owners who install new district geothermal service systems may be eligible to receive up to \$150,000, and can also receive refundable tax credits up to 15 per cent.
- The geothermal system must be installed by a MGEA recognized contractor: www.mgea.ca or 470-6447.
- For further information:
 - Province of Manitoba - www.manitoba.ca
 - Manitoba Geothermal Energy Alliance Manitoba Geothermal Energy Alliance
(MGEA) - www.mgea.ca

Commercial Clothes Washers Program

- ENERGY STAR® qualified and front-loading
- Commercial grade washer
- New and have higher energy efficiency rating than existing washer
- Save up to 30 per cent on water use and up to 20 per cent on energy use.
- Purchased within program timeline
- No in-suite installation allowed
- No pre-approval required



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Hydro

Commercial Clothes Washers

- Incentive: \$180 per qualified ENERGY STAR front-loading commercial clothes washer.
- Typical annual savings*: \$125-\$185 per washer.
- Payback: 3.5-5.2 years.
- **Incentive to upgrade to front-loading commercial clothes washers ends March 31, 2013.**

- energy and water savings

Water and Energy Saver Kit for Multi-Unit Residential

- If you are a property manager and/or landlord, please email powersmartforbusiness@hydro.mb.ca with your contact information and the # of residential buildings and suites that you manage. A Power Smart Representative will contact you.
- Free water saving kit
 - One energy efficient showerhead
 - One energy efficient bathroom faucet aerator
 - One energy efficient kitchen faucet aerator
- Property Manager/Landlords have up to 3 months to have products installed.



Power Smart New Buildings Program

What is a Power Smart Building

A commercial building designed to use 33% less energy than the same building designed to meet the Model National Energy Code of Canada for Buildings 1997 (MNECB)

Effective Spring 2011

New Buildings Program or nothing

Customer Eligibility

- General Service Electricity Rate
- Current registered owner of the property and the building
- Commercial use
- Manitoba Hydro customer for a min. of 36 consecutive months after the date of the final incentive payment

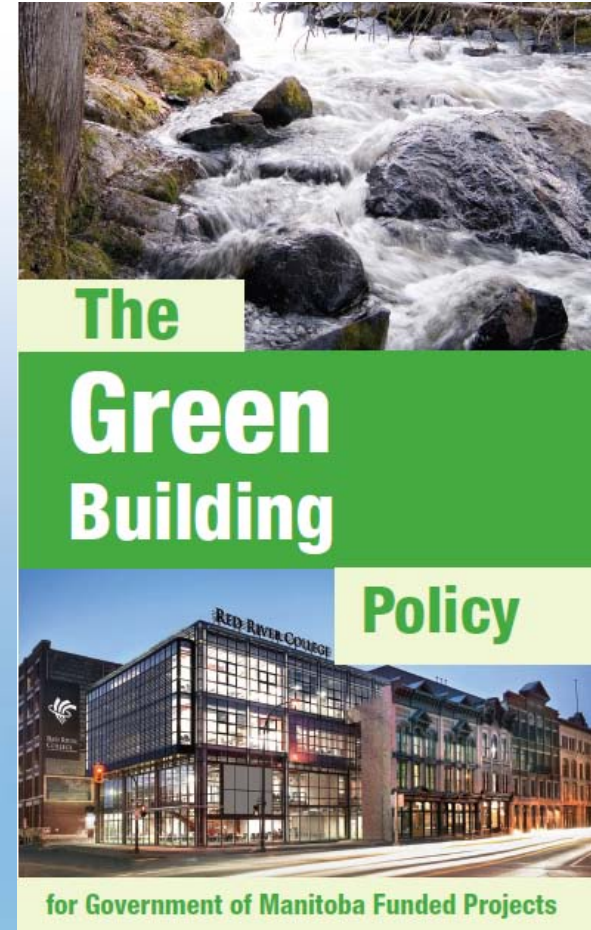
Green Building Policy

If your project is covered by this:

AND

is owned/fully-funded by the
Province

(public schools, crown corps,
MB Health, MIT, MB housing...)

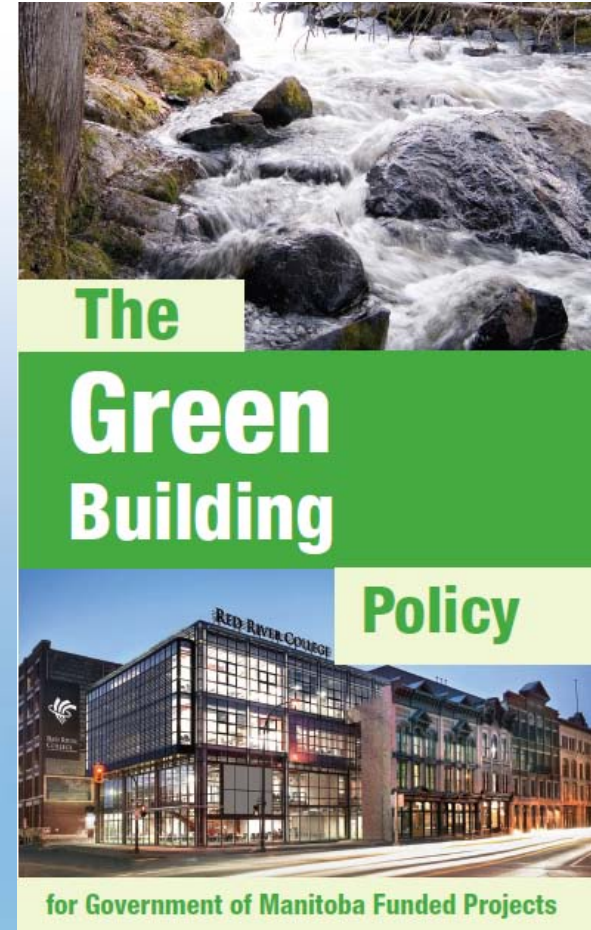


Green Building Policy

The building is only eligible for the Proven Performance incentive.



Modified application criteria exist for these projects.



Exclusions from the Green Building Policy

- Any provincially owned building that is excluded from the GBP for Gov't of Manitoba Funded Projects must provide written proof of exclusion, provided by the Province of Manitoba's Green Building Coordination team, to be eligible for the incentives under the Prescriptive Path or Custom Design & Construction Path.

Choose your path



How to choose

Prescriptive Path

\$0.50/sq.ft.

Pre-set efficiency measures and requirements

Smaller projects

Limited applicability

Prescriptive Path +

Geothermal

Non-gas areas only

Lighting

Outdoor/parkade lighting

Clothes Washers

Commercial-grade washers

Kitchen Appliances

Fryers and steamers

Refrigeration

Grocery/convenience store



How to choose

Custom Design Path

\$1.00/sq.ft.

Larger, complex buildings

IDP, Energy modeling, Cx

Works well with LEED®

All building types

- Add on Power Smart Commercial programs: lighting (exterior), refrigeration, clothes washer, kitchen appliances & refrigeration.

Manitoba Hydro's Power Smart Residential Programs

Power Smart for Residential Programs

- Power Smart Incentive Programs
 - Home Insulation Program
 - Water and Energy Saving Program
- Financing Programs
 - Power Smart Residential Loan
 - PAYS (Pay As You Save) NEW!!
- Lower Income Energy Efficiency Program

Home Insulation Program (HIP)

The Home Insulation Program offers information and rebates to add insulation to residential existing homes. Eligible homeowners may receive a portion of the insulation cost.

Follow these three steps to start saving:

Qualify

Insulate

Get a rebate



Home Insulation Program (HIP)

Step 1: Qualify

Determine which areas of the home you would like to insulate

Decide whether you will “do-it-yourself”; or hire a contractor



Home Insulation Program (HIP)

Step 2: Insulate

Select the materials to complete your project, or select a contractor and supervise their work

Obtain all required building or electrical permits or ensure the primary contractor has done so



Home Insulation Program (HIP)

Step 3: Get a rebate

Submit the original, two-page, Home Insulation Rebate Application to Manitoba Hydro

The form must include your contractor's or retailer's signature. You must also attach all original receipts

The form must be sent to Manitoba Hydro within 30 days of the finishing the installation



Water & Energy Saver Program

Program provides a **free** Water and Energy Saver Kit mailed to customers. Save up to \$27 per year on your energy bill!



Water & Energy Saver Program

1 or 2 low flow showerheads (1.5 GPM)



1 kitchen faucet aerator (1.5 GPM)



2 bathroom faucet aerators (1.5 GPM)



3 meters of hot water tank pipe wrap



Power Smart Residential Loan

Helps to make energy efficiency improvements affordable

Borrow up to \$7,500* per home

Annual interest rate is fixed at 4.8% for first 5 years

Paid on the Manitoba Hydro energy bill

Speak to your contractor or retailer for details



* Up to \$5,500 of that may be put toward the purchase of a high efficiency natural gas furnace.

Power Smart Residential Loan

Eligible Measures

Adding insulation

Installing ventilation

Sealing air leaks

Replacing windows & doors

Upgrading the efficiency or your
furnace and water heater



PAYS Program

Pay As You Save (PAYS) Financing is convenient and affordable on-bill financing for residential customers of Manitoba Hydro.

PAYS Financing lets the customer use their energy and water savings pay for their financing bill.

Financing is delivered through participating contractors and retailers.



PAYS Key Features



Transferability

Between homeowners and landlords/tenants.
Financing Agreement is tied to the property.
Caveat is registered with the Land Titles Office.

Monthly Payment

Less than the measure's estimated monthly utility bill savings.

On-bill Repayment

Placed on customer's energy bill.

PAYS Key Features



How much a customer can borrow

Dependent on the estimated utility bill savings

Large savings = larger amount that can be borrowed

Small savings = smaller amount that can be borrowed

If savings don't cover the full cost of work customer must pay the contractor /retailer difference

Eligible Measures

Space Heating Equipment

Natural gas and electric furnaces
Geothermal heat pump systems

Insulation

Water Heating

Drain water heat recovery systems

Water Conservation

WaterSense labeled toilets (when done in conjunction with one of the above)



Lower Income Energy Efficiency Program

Program goals:

- Increase participation of lower income households in energy efficient opportunities
- Reduce the energy burden for lower income households across Manitoba
- Leverages existing Power Smart Programs, Affordable Energy Fund, Furnace Replacement Program, various provincial programs and existing community-based infrastructures.

Lower Income Energy Efficiency Program

General Eligibility

- Total household income (before deductions) must fall within levels associated with the community size
- Lower income households must pay their utility bills in order to receive the benefits associated with the retrofit measures
- House type includes single detached homes, semi-detached homes (includes houses, townhouses, row houses, multiple houses), or mobile homes on permanent foundations
- Lower income homeowners for Furnace Replacement Program

Lower Income Energy Efficiency Program

Total Household Income Thresholds

(Income qualifications are based on how many people live in your home and the total income (before deductions) of the household.)

Household Size	Community size (population)		
	<30,000	30,000 to 99,999	500,000+
1 person	\$22,808	\$24,926	\$29,123
2 person	\$28,393	\$31,030	\$36,255
3 person	\$34,905	\$38,146	\$44,571
4 person	\$42,381	\$46,316	\$54,115
5 person	\$48,068	\$52,531	\$61,378
6 person	\$54,213	\$59,248	\$69,223
7 or more people	\$60,356	\$65,963	\$77,070

Lower Income Energy Efficiency Program

Provides qualifying lower income households with:

- Free in-home energy efficiency review and basic energy saving items
- Insulation Upgrades
- High Efficiency Furnace Upgrade (for lower income homeowners at \$19/month over 5 years)

Contact us to review your residential housing and design a program to meet your needs!

For Further Information on Power Smart Programs:

Cynthia Hyrich

Public Sector Account Officer

chyrich@hydro.mb.ca

Colleen Battigelli Smith

Lower Income Program

cbsmith@hydro.mb.ca

Sean Woroniak

PAYS Program

sworoniak@hydro.mb.ca

Contact us to determine which program may work for you or visit our website for more information:

Manitoba Hydro website –
www.hydro.mb.ca

Power Smart Programs Questions?

Manitoba Non Profit Housing Association

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