

Approved March 2, 2010

# 2008-2009

## Power Smart\* Annual Review

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Power Smart Planning, Evaluation & Research  
Consumer Marketing & Sales  
Customer Care & Marketing

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## EXECUTIVE SUMMARY

The 2008/09 Power Smart Annual Review reports the energy savings, customer energy cost savings, customer participation and associated greenhouse gas emission reductions that have been achieved through Manitoba Hydro's Power Smart initiative, including an assessment against the 2008/09 planned targets outlined in the 2008 Power Smart Plan.

The natural gas Power Smart program achieved savings of 9.5 million cubic metres which exceeded targets of 9.2 million cubic meters. The electric Power Smart program achieved an additional 242 GW.h and 235 MW in electric savings (at generation) which was below the planned savings of 310 GW.h and 252 MW. There were four significant drivers of the variance:

- 1) The economic downturn and unscheduled plant maintenance at Tolko resulted in the Bioenergy program falling below target by 29 GW.h.
- 2) Delays in the construction of Manitoba Hydro's head office at 360 Portage resulted in an unfavourable 14 GW.h variance.
- 3) Delays in the launch of four incentive based programs resulted in an unfavourable variance of 13 GW.h.
- 4) Overly optimistic planned codes and standards savings resulted in a variance of 16 GW.h.

Although the first two variance explanation items did not result in energy savings being achieved under the Power Smart program, the initiatives also did not result in any additional energy being consumed in Manitoba due to the nature of the initiatives.

The electric portfolio experienced success with the majority of programs achieving or exceeding planned savings. Two of the most successful programs were the CFL program which exceeded plan by 11 GW.h and the Performance Optimization which surpassed target by 6 GW.h.

Total Power Smart expenditures in 2008/09 were \$47 million, which consisted of \$35 million for electric initiatives and \$12 million for natural gas initiatives.

The combined Total Resource Cost (TRC) ratio for electric and natural gas incentive-based programs, including support costs and interactive effects, was 2.1. The Rate Impact Measure (RIM) ratio for electric incentive based programs, including support costs, was 1.1, and the average Levelized Utility Cost was 2.4¢/kW.h.

The RIM ratio, (including support costs and interactive effects) for natural gas incentive-based programs, was 0.7 and the average levelized Utility Cost was 10.6¢/m<sup>3</sup>.

The Power Smart initiative, including persisting savings, achieved 1,510 GW.h and 509 MW in electric savings, 37 million m<sup>3</sup> in natural gas savings and 1,089 thousand tonnes of greenhouse gas emission reductions in 2008/09.

The cumulative cost of the Power Smart initiative was \$293 million, in which \$257 million was due to the electric initiatives and \$35 million was due to the natural gas initiatives.

The energy savings from Power Smart programs translates to an annual reduction of \$60 million in participating customer energy bills in 2008/09, with \$46 million in reduced electricity bills and \$15 million in

reduced natural gas bills. By customer sector, \$19 million was saved in the residential sector, \$22 million in the commercial sector and \$20 million in the industrial sector.

Cumulative customer bill reductions are approximately \$399 million, consisting of \$352 million in electric bills and \$47 million in natural gas bills.

Awareness levels of the Power Smart brand continue to remain high with 94% of Manitoba respondents saying they recognize the brand name. Customers continue to report the strongest association between Power Smart and *Energy Efficiency* with the vast majority (87%) of respondents agreeing that the brand projects that message.

This report provides an integrated approach to evaluating the net energy savings achieved through the Power Smart initiative. The results reported are due to the combined electricity and natural gas energy

### 2008/09 Electricity Savings Results

The following tables outline the electricity savings achieved through the Power Smart portfolio during

conservation efforts. In this regard, any increased natural gas consumption (due to interactive effects) resulting from electricity efficiency efforts are netted against savings achieved directly through natural gas conservation.

Manitoba Hydro's Power Smart portfolio consists of electricity and natural gas focused initiatives, with each initiative falling into one of the following categories:

- Customer service initiatives & cost recovery programs;
- Codes & standards efforts;
- Incentive-based promotional programs,
  - Incentive-based efficiency programs,
  - Customer self-generation programs; or
  - Rate load management programs.

2008/09 and provide a comparison between achieved results and planned targets, where applicable:

#### Exhibit E.1

Annual GW.h Savings (at generation) - Power Smart Portfolio

	Actual	2008/09 Plan <sup>^</sup> GW.h	Total
INCENTIVE-BASED PROGRAMS	210	262	1,106
CODES & STANDARDS	30	46	382
CUSTOMER SERVICE INITIATIVES	2	3	22
<b>OVERALL IMPACT</b>	<b>242</b>	<b>310</b>	<b>1,510</b>

<sup>^</sup> Plan values are from the 2008 Power Smart Plan.  
Note: Figures may not add due to rounding

There were four significant drivers for the variance:

The economic downturn and unscheduled plant maintenance at Tolko resulted in the Bioenergy program falling below target by 29 GW.h.

Delays in the construction of Manitoba Hydro's head office at 360 Portage resulted in an unfavourable 17 GW.h variance.

Delays in the launch of four incentive based programs resulted in an unfavourable variance of 13 GW.h.

Overly aggressive planned codes and standards savings resulted in a variance of 16 GW.h.

The electric portfolio experienced success with the majority of programs achieving or exceeding planned savings. Two of the most successful programs were the CFL program which exceeded plan by 11 GW.h and the Performance Optimization which surpassed target by 6 GW.h.

**Exhibit E.2**

Annual Average Winter MW Savings (at generation) - Power Smart Portfolio

	Actual	2008/09 Plan <sup>^</sup> MW	Total
INCENTIVE-BASED PROGRAMS	227	243	406
CODES & STANDARDS	7	9	97
CUSTOMER SERVICE INITIATIVES	1	1	6
OVERALL IMPACT	235	252	509

<sup>^</sup> Plan values are from the 2008 Power Smart Plan.

\* MW savings are based on the average of the winter AM & PM system peak savings.

Note: Figures may not add due to rounding.

The following table outlines the costs associated with Power Smart electricity activity in 2008/09:

**Exhibit E.3**

2008/09 Power Smart Portfolio Electricity Costs

Power Smart Portfolio	2008/09 millions of dollars
INCENTIVE BASED PROGRAMS	
Efficiency Programs	23.3
Customer Self Generation Programs	1.7
Rate/Load Management Programs	6.4
	31.4
SUPPORT COSTS & CUSTOMER SERVICE INITIATIVES & STANDARDS	3.7
TOTAL ELECTRICITY PROGRAM COSTS	35.2

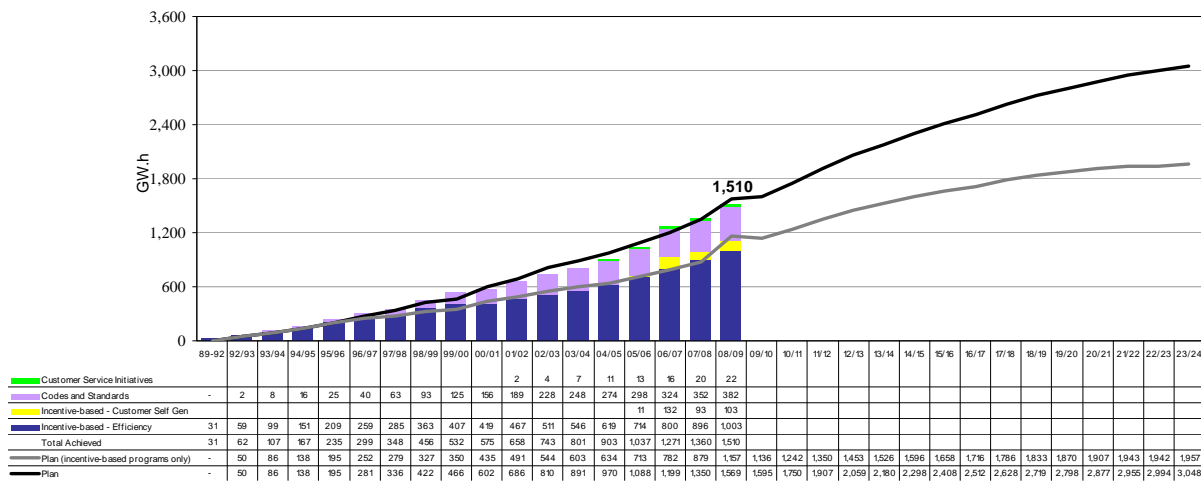
Note: This table presents all costs associated with Power Smart electric programs. Figures may not add due to rounding.

## Total Electricity Results (2008/09 Results + Persisting Savings)

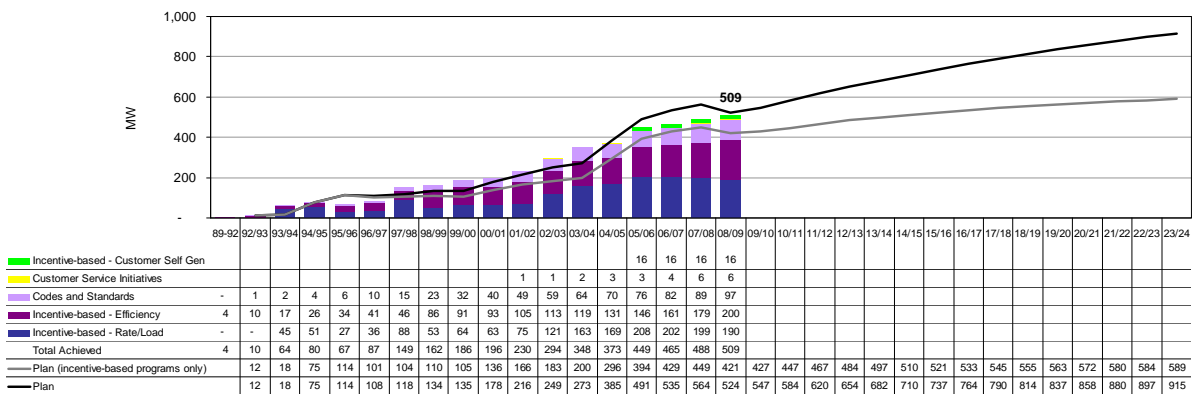
In 2008/09, Power Smart initiatives saved a total of 1,510 GWh and 509 MW which were 4% and 3% below their respective planned 2008/09 energy and demand savings. 2008/09 total savings represent 50% and 56% respectively of 2023/24 forecast energy and demand savings.

The following graphs present the energy and winter average demand savings achieved and corresponding targets:

**Exhibit E.4**  
**Electric Energy Savings - Power Smart Portfolio**  
 Total Savings Achieved vs. Plan  
*at generation*



**Exhibit E.5**  
**Average Winter Demand Savings - Power Smart Portfolio**  
 Total Savings Achieved vs. Plan  
*at generation*



## 2008/09 Natural Gas Savings Results

The Power Smart portfolio realized natural gas savings of 9.5 million m<sup>3</sup> during 2008/09, 3% more than planned.

### Exhibit E.6

#### Annual Natural Gas Savings

	Actual	2008/09 Plan	Total
	<i>millions of cubic metres</i>		
<b>PROGRAM &amp; INTIATIVE</b>			
Customer Service Intiatives	1.1	0.8	16.4
Incentive-Based Programs	10.4	9.8	26.0
	11.5	10.6	42.4
<b>INTERACTIVE EFFECT</b>			
Incentive-Based Interactive effect with Electric Programs	(2.1)	(1.4)	(5.8)
	(2.1)	(1.4)	(5.8)
<b>NET IMPACT OVERALL</b>	<b>9.5</b>	<b>9.2</b>	<b>36.6</b>

^ The 2008/09 plan values are from the 2008 Power Smart Plan.

Note: Figures may not add due to rounding.

The following table outlines the costs associated with the Power Smart natural gas activity in 2008/09:

### Exhibit E.7

#### 2008/09 Power Smart Portfolio of Natural Gas Costs

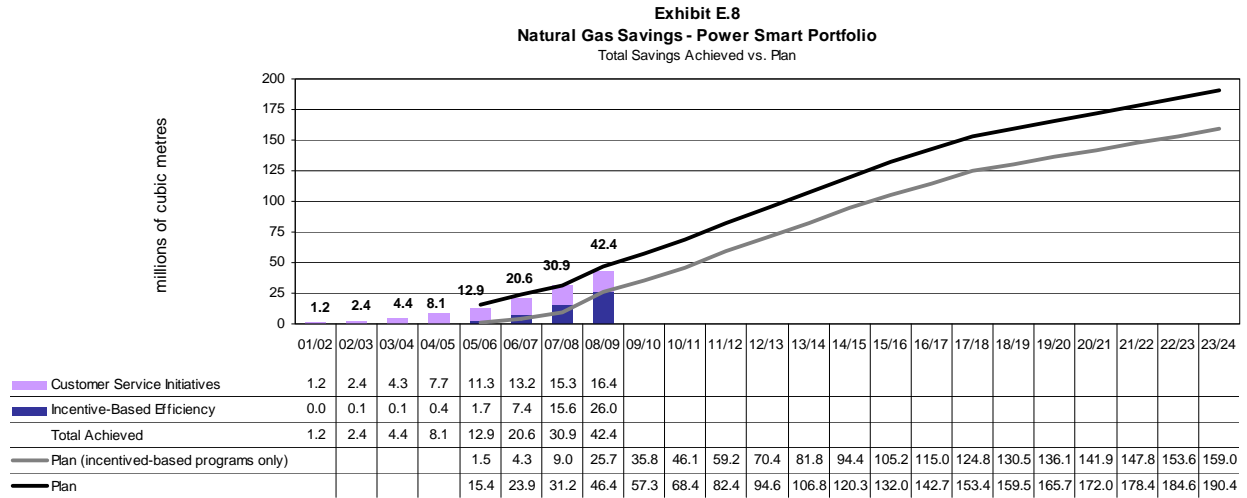
Power Smart Portfolio	2008/09
	<i>millions of dollars</i>
INCENTIVE BASED PROGRAMS	9.9
SUPPORT COSTS, CUSTOMER SERVICE INITIATIVES & STANDARDS	1.9
<b>TOTAL NATURAL GAS PROGRAM COSTS</b>	<b>11.8</b>

Note: Figures may not add due to rounding.

## Total Natural Gas Results (2008/09 Results + Persisting Savings)

In 2008/09, the Power Smart portfolio saved 42 million m<sup>3</sup> of natural gas, which was 9% below the planned targets.

To date, \$35 million has been invested in Power Smart natural gas activities.



Note: Figures may not add due to rounding.

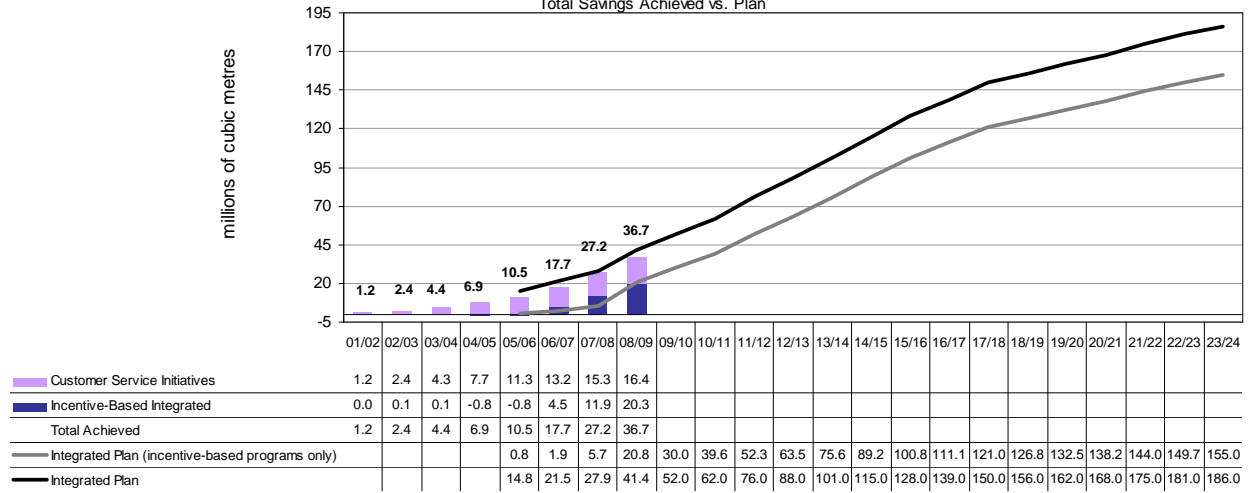


## Natural Gas Integrated Results

Some electric Power Smart programs have interactive effects which increase the consumption of natural gas. For example, a more energy efficient lighting system

emits less heat and therefore results in more energy required for space heating.

**Exhibit E.9**  
**Integrated Natural Gas Savings - Power Smart Portfolio**  
 Total Savings Achieved vs. Plan



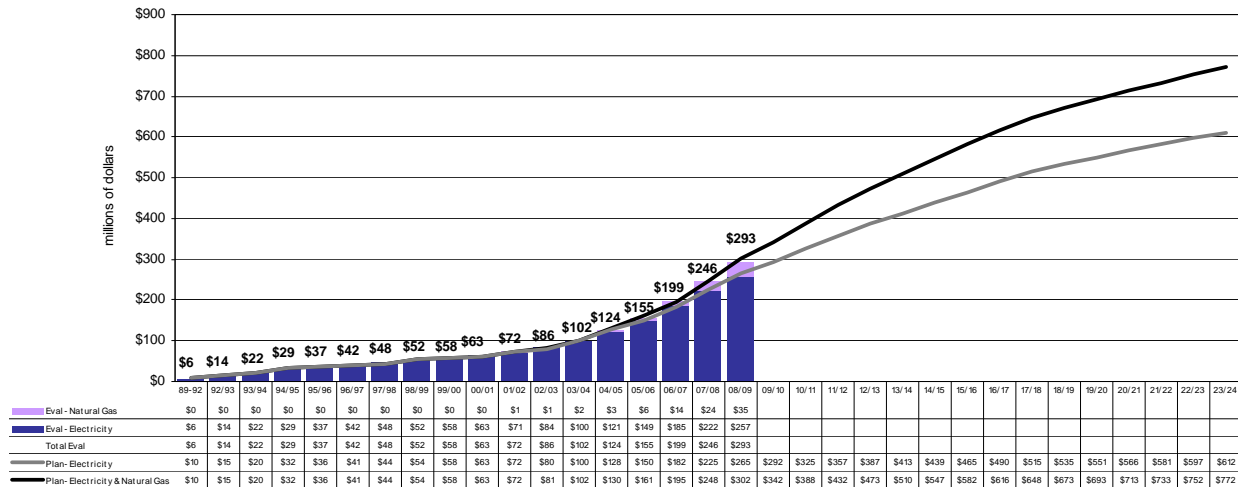
Note: Figures may not add due to rounding.

## Power Smart Utility Costs

Total Power Smart expenditures in 2008/09 were \$47 million, of which \$35 million was spent on electricity and \$12 million was spent on gas initiatives. Overall, Power Smart expenditures were 16% below the budget of \$56 million. The positive spending variance was caused primarily by lower electricity spending than budgeted; specifically electric efficiency spending was 18% below budget. Natural gas efficiency spending was 12% below budget.

Overall cumulative Power Smart expenditures of \$293 million represent 38% of the overall cumulative 2023/24 budget, as reported in the IFF-08. Cumulative expenditures are 3% lower than the budgeted amount of \$302 million to 2008/09. The following graph depicts the annual expenditures against the planned expenditures.

**Exhibit E.10**  
**Utility Costs- Power Smart Portfolio**  
 Cumulative Total Utility Cost vs. 2023/24 Plan  
*nominal dollars*



## The Affordable Energy Fund

The Affordable Energy Fund was established during 2006/07 through the Winter Heating Cost Control Act and it supports Manitoba Hydro's sustainable development initiatives. The purpose of the Fund is to provide support for programs and services that achieve specific objectives including encouraging energy efficiency and conservation through programs and

services for rural and northern Manitobans, low income customers and seniors and encouraging the use of alternative energy sources such as renewable energy.

Exhibit E.11 outlines the Affordable Energy Fund expenditures in 2008/09 and cumulatively.

### Exhibit E.11

#### Summary of Affordable Energy Expenditures

	2006/07	2007/08	2008/09	Cumulative
	<i>thousands of nominal dollars</i>			
Lower Income/Community Based Initiative	256	219	893	1,368
Geothermal Support	619	270	92	982
Community Support and Outreach*	0	0	35	35
Oil and Propane Heated Residential Homes**	0	75	85	159
Special Projects	0	0	0	0
<i>Residential Energy Assessment Service</i>	0	61	241	302
<i>Oil and Propane Furnace Replacement***</i>	0	0	6	6
<i>Residential Solar Water Heating</i>	0	0	89	89
	0	61	336	397
<b>TOTAL EXPENDITURES</b>	<b>875</b>	<b>625</b>	<b>1,441</b>	<b>2,941</b>

\* Allocated to Lower Income Program for 08/09 Evaluation.

\*\* Allocated to Home Insulation Program for 08/09 Evaluation.

\*\*\* Allocated to High Efficiency Furnace Program for 08/09 Evaluation.

## The Lower Income Furnace Replacement Budget

The Lower Income Furnace Replacement Budget was established during 2007/08 as a result of Public Utility Board Order 99/07. The purpose of the budget is to establish and administer a Furnace Replacement Program for low income customers.

Exhibit E.12 outlines the Lower Income Natural Gas Furnace Replacement Expenditures in 2008/09:

### Exhibit E.12

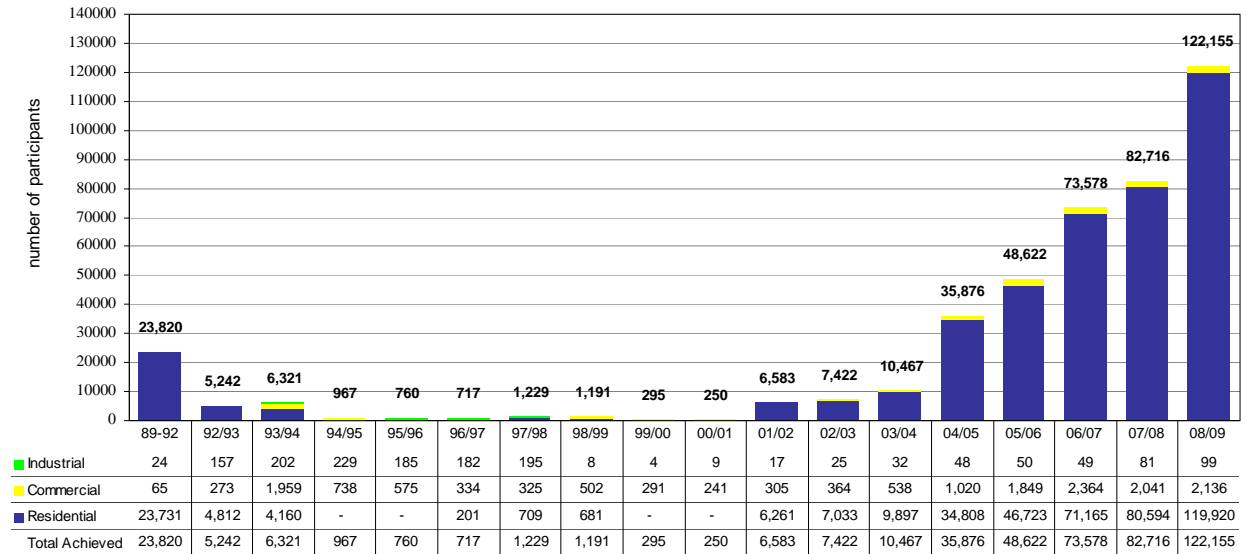
#### Summary of Furnace Replacement Expenditures

	2008/09	Cumulative
	<i>thousands of nominal dollars</i>	
Natural Gas Furnace Replacement	264	264
<b>TOTAL EXPENDITURES</b>	<b>264</b>	<b>264</b>

## Customer Participation

There were over 122 thousand participants in Power Smart customer service initiatives and incentive-based programs during 2008/09, and 428 thousand participants cumulatively.

**Exhibit E.13**  
**Power Smart Program Participation**

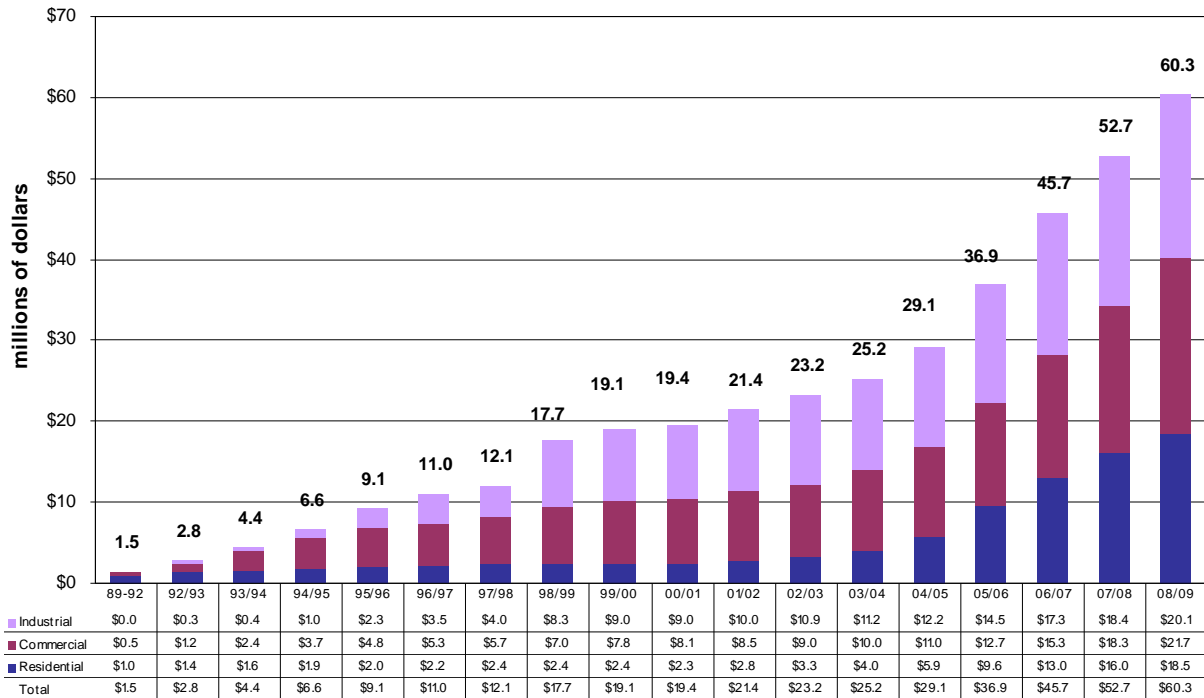


Note: Includes electric and natural gas participants.  
 Customers may participate in more than 1 Power Smart program.  
 Participation for codes & standards is excluded.  
 Curtailable Rates Program participation is included in the Industrial sector.

## Customer Bill Reductions

Power Smart customer service initiatives and incentive-based programs saved participating customers \$60 million in energy bills during 2008/09 and \$399 million cumulatively on electricity and natural gas bills to date.

**Exhibit. E.14**  
**Combined Electricity & Natural Gas Customer Bill Reduction (2008\$)**  
**Annual Reductions to Date by Sector**



Note: Includes electric and natural gas participants.

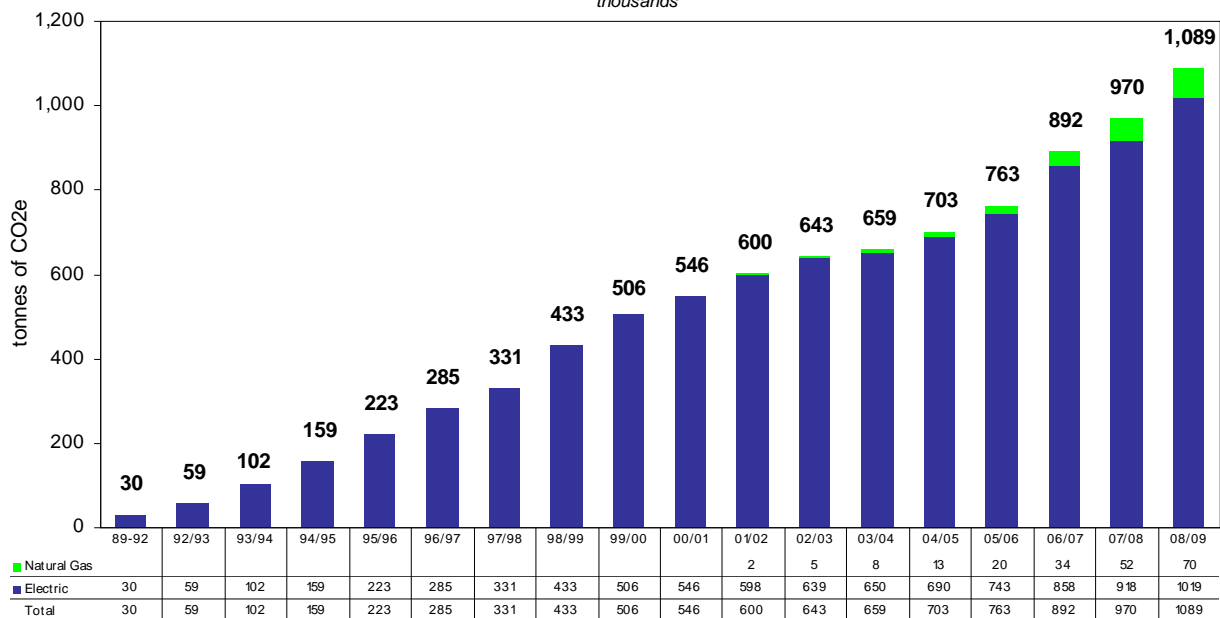
The annual bill reduction for participating customers in 2008/09 of \$60 million is comprised of \$45 million of savings on electricity bills and \$15 million on natural gas bills.

## Greenhouse Gas Reductions

The 1,510 GWh savings from electricity and 37 million m<sup>3</sup> savings from natural gas Power Smart programs resulted in greenhouse gas reduction of approximately 1,089 thousand tonnes of carbon dioxide equivalent emissions. This is comparable to removing approximately 311 thousand vehicles off the road for one full year. The majority (94%) of the greenhouse gas

emission reductions result from electric Power Smart activity and provide indirect emission reductions due to export sales displacing coal and natural gas fuelled generation outside of Manitoba. The remaining (6%) emission reductions are direct reductions that occur as a result of lower natural gas consumption in Manitoba.

**Exhibit E.15**  
**Total Annual Greenhouse Gas Emission Reductions**  
**Due to Electric & Natural Gas Savings**  
*thousands*



Note: Figures may not add due to rounding.

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# 1.0 Introduction

## 1.1 Background

In 1989, Manitoba Hydro launched the first of many Demand Side Management (DSM) programs, the Outdoor Timer Program. Soon after in 1991, Manitoba Hydro established Power Smart, the customer oriented brand for all of Manitoba Hydro's Demand Side Management (DSM) programs, initiatives and activities. DSM resource options are assessed and included in Manitoba Hydro's Integrated Resource Planning process. These resource options are developed to provide alternatives to traditional sources of power generation. Power Smart initiatives are justified based on their relative cost compared to traditional generation resource options and the customer service value realized by customers.

Since purchasing Centra Gas in 1999, Manitoba Hydro has been integrating natural gas conservation into the Corporation's overall Power Smart initiative. This report provides an integrated approach to evaluating the results and net energy savings are reported due to the combined electricity and natural gas energy conservation efforts. In this regard, any increased natural gas consumption (due to interactive effects) resulting from electricity efficiency efforts are captured and netted against natural gas conservation efforts. Interactive effects are not captured prior to the 2004/05 reporting period.

Energy conservation initiatives are designed to reduce customer energy requirements through energy-efficient measures (i.e. using less energy to obtain comparable or superior services). Load

management activities are designed to reduce energy demands through programs offered to alter the timing of customer demands (e.g. Curtailable Rates Program).

Manitoba Hydro's Power Smart strategy focuses on creating a sustainable market change where energy efficient technologies and practices become the market standard - market transformation. The approach used to create and maintain market transformation varies by product and market segment and generally involves a combination of the following activities:

- Customer service initiatives & cost recovery programs;
- Efforts to encourage and support implementation of energy efficiency into codes and standards; and
- Incentive-based promotional programs, including:
  - Incentive-based efficiency programs,
  - Customer self generation programs and
  - Rate/load management programs.

The work in each of these different areas supports the overall Power Smart objective as well as other corporate goals, including: providing customers with exceptional value, protecting the environment, and maximizing export revenues.

The Power Smart DSM initiative is designed to encourage the efficient use of energy in the commercial, agricultural, residential, institutional and industrial customer sectors.

More than thirty-five incentive-based programs and many other customer service initiatives have been offered over the last nineteen years with impact evaluations of all incentive-based programs prepared regularly. By evaluating the incentive-based

## *1.2 Power Smart Strategy*

Manitoba Hydro's Power Smart strategy is to create a sustainable market change where energy efficient technologies and practices become the market standard. To be effective in achieving the desired outcome, the corporation's strategy involves working along multiple tracks including:

- Providing customers with information and services on energy efficiency;
- Offering cost-recovery or incentive-based Power Smart programs designed to create market awareness, knowledge and acceptance of energy efficient technologies and products;

programs, Manitoba Hydro can determine its overall progress in achieving its corporate objectives and can adjust individual program targets and strategies to reflect market reaction and market changes.

- Working with industry and trade allies to gain support for the Corporation's Power Smart efforts;
- Working with other utilities and government agencies in joint efforts to incorporate energy efficiency in codes and standards;
- Undertaking communication and marketing efforts focused on promoting Power Smart programs and the Power Smart brand name;
- Leveraging the Power Smart brand name by establishing "Power Smart Design Standards"; and
- Making a sustainable and long-term commitment to the efficient use of energy.

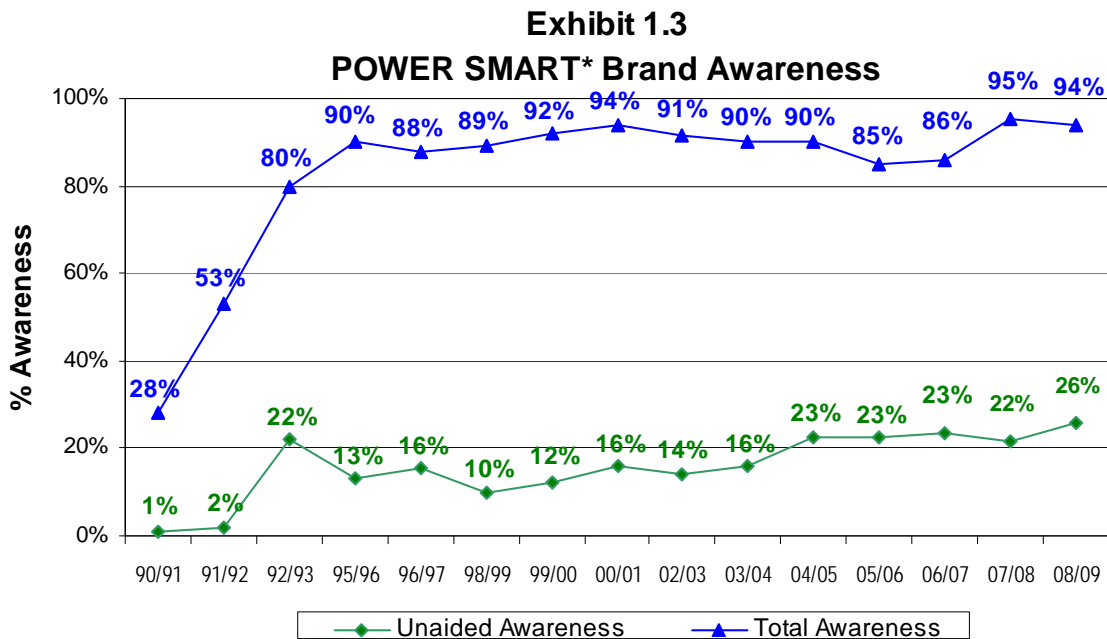
### 1.3 Power Smart Brand Awareness

Power Smart is the "brand name" that Manitoba Hydro has used since 1991 to promote its residential, commercial, industrial and agricultural energy efficiency initiatives.

The Power Smart campaign, as distinct from the marketing/promotional activities associated with specific Power Smart DSM programs, is a mass communications campaign undertaken to improve public awareness of the Power Smart brand and its association with energy efficiency, low electricity rates and increased system reliability.

Awareness levels of the Power Smart brand continue to remain high with 94% of Manitoba respondents saying they recognize the brand name. Independent recall (unaided awareness) of the Power Smart brand rose this past year to the upper 20% range from the mid teens in 2004/05. An additional 68% said they recognized the Power Smart brand name when it was mentioned (aided recall).

Approximately 34% of residential households report having participated in a Manitoba Hydro Power Smart program.



Note: POWER SMART\* awareness not measured in 93/94, 94/95, 97/98 or 01/02.

### 1.4 Perceptions of the Power Smart Brand

Customers continue to report the strongest association between the Power Smart brand and *Energy Efficiency* with the vast majority (87%) of respondents agreeing that the brand projects that message.

Respondents report two other Power Smart messages as equal in strength with 78% associating the brand with Saving Money on Energy Bills and 77% associating it with Conserving the Environment.

Slightly less (73%) associate the brand with *Ensuring a Sufficient Supply of Electricity for the Future*.

Respondents continue to report a more moderate association between the Power Smart brand and the

## 1.5 Purpose of Report

Power Smart is an important component of Manitoba Hydro's Integrated Power Resource Plan.

Manitoba Hydro's corporate approved Power Smart DSM targets for electric energy and average winter demand savings at generation are 3048 GW.h/year and 915 MW by 2023/24, as outlined under the "2008 Power Smart Plan". These targets represent the expected impact of electricity efficiency codes and standards, customer service initiatives and incentive-based program activities. Manitoba Hydro's incentive-based Power Smart programs are expected to contribute the greatest portion of the savings, with projected energy and demand savings of 1987 GW.h/year and 598 MW by 2023/24.

Manitoba Hydro's corporate approved Power Smart DSM target for natural gas savings is 186 million m<sup>3</sup> by 2023/24, as outlined under the "2008 Power Smart Plan". This target represents the expected impact of incentive-based efficiency program activities, customer service initiatives and interactive effects from electricity programs. Manitoba Hydro's incentive-based efficiency Power Smart programs are expected to contribute the greatest portion of the savings, with projected savings of 137 million m<sup>3</sup> by 2023/24.

message of *Paying Lower Electricity Prices with 60%* of respondents agreeing that the brand projects that theme in 2008/09.

While this report will highlight all activities and results from the entire Power Smart portfolio, the emphasis will be on incentive-based program activities. Annual results for 2008/09 will be measured against planned savings of the most recent approved plan; the "2008 Power Smart Plan". More specifically, this report will:

- Report the energy and demand savings achieved by incentive-based Power Smart programs;
- Report the cost-effectiveness of incentive-based Power Smart programs; and
- Report the utility costs associated with all Power Smart programs and initiatives.

Refer to APPENDIX A - 'Sources of Evaluation and Planning Estimates' for details of the information considered when preparing program evaluation results and program plan estimates. Incentive-based programs are formally evaluated, while savings from other initiatives are calculated using engineering estimates as well as sales and market data provided by program specialists. Refer to APPENDIX B - 'Explanation of Benefit-Cost Ratios used in DSM Economic Tests' for formulas used to determine cost-effectiveness.

## 2.0 Power Smart Portfolio Review

Manitoba Hydro's Power Smart efforts include customer service initiatives and cost recovery programs, energy efficient codes and standards, and incentive-

based Power Smart programs. The following section includes a synopsis of the current Power Smart initiatives and highlights some success stories.

### 2.1 *Power Smart Customer Service Initiatives & Cost Recovery Programs*

One of the primary drivers in Manitoba Hydro's Power Smart activities involves providing value-added customer service. This is achieved by offering customers advice, financing services, access to energy efficiency information and providing energy efficiency solutions. Through these efforts, Manitoba residents and businesses are provided with a number of benefits including:

- Allowing customers to improve the comfort and productivity of their work and home environments while reducing their energy bills;
- Lower electricity rates;

- Assisting businesses to become more competitive in national and international markets; and
- Creating employment opportunities within Manitoba for manufacturers, distributors, retailers, trade allies and installers of energy efficient products and services.

## 2.1.1 Launch Date of Customer Service Initiative & Cost Recovery Programs

Exhibit 2.1.1-A identifies the launch date of all current and discontinued customer service initiatives and cost recovery programs.

### Exhibit 2.1.1-A

#### Launch Date of Customer Service Initiatives & Cost Recovery Programs

INITIATIVE	LAUNCH DATE
<b>RESIDENTIAL</b>	
Home Comfort & Energy Savings Program	February, 2001
ecoENERGY^	March, 2001
Wisdom in Saving Energy (WISE) Home Program	June, 2001
Residential Earth Power Program	April, 2002
Energy Saver Presentations^^	January, 2002
New Homes Workshop	January, 2002
Solar Hot Water Heaters	November, 2008
<b>COMMERCIAL</b>	
Religious Buildings Initiative	May, 2001
Power Smart Recreation Facility Survey	May, 1998
Power Smart Design Standards	September, 2002
<b>DISCONTINUED/COMPLETED PROGRAMS</b>	
R-2000 Home Program*	February, 2002
Power Smart Energy Manager Program	September, 2001

^formerly EnerGuide

^^formerly Home Energy Saver Workshops

\*In 2004/05 the R-2000 Home Program was grouped into the New Home Program

Exhibit 2.1.1-B provides an overview of the annual and total amount of participants for select customer service initiatives and cost recovery programs. Refer to

APPENDIX C - 'Total Power Smart Participation' for a detailed list of historical participation.

**Exhibit 2.1.1-B**

Customer Service Initiatives & Cost Recovery Program Participation

INITIATIVE	2008/09	Cumulative
<i>Number of Participants</i>		
<b>RESIDENTIAL</b>		
Home Comfort & Energy Savings Program		
<i>Power Smart Residential Loan*</i>	7,391	45,949
<i>Mail In/On-Line Energy Assessments</i>	251	3,179
	7,642	49,128
ecoENERGY Program^	4,967	30,966
Solar Hot Water Heaters	0	0
Wisdom in Saving Energy (WISE) Home Program	425	4,481
Residential Earth Power Program		
<i>Residential Earth Power Loan</i>	207	967
<i>Earth Power Consumer Workshops**</i>	0	688
	207	1,655
Energy Saver Presentations^^	291	3,764
New Homes Workshop	0	854
	13,532	90,848
<b>COMMERCIAL</b>		
Religious Buildings Initiative	19	214
Power Smart Recreation Facility Survey	4	65
	23	279
<b>DISCONTINUED/COMPLETED PROGRAMS</b>		
Power Smart Energy Manager - Pilot	0	38
R2000 Program	0	63
	0	101
<b>TOTAL</b>	<b>13,555</b>	<b>91,228</b>

\* Participation includes approved loans while energy savings is measured by completed projects.

\*\* Includes residential and commercial participants.

^ Participation includes 'D' & 'E' audits. ecoENERGY, previously called EnerGuide.

^^ Previously called Home Energy Saver Workshops.

Note: This table includes electric and natural gas Power Smart participants. Customers may participate in more than one Power Smart program.

## 2.1.2 Customer Service Initiative & Cost Recovery Program Activity

Customer service initiatives and cost recovery programs provide numerous benefits to Manitobans. Depending on the nature of the program, savings resulting from specific programs may be quantified to the extent that these savings can be reasonably determined. Estimated savings are generally calculated using engineering

estimates as well as sales and market data provided by program specialists. Regular assessments include a qualitative evaluation of the benefits, with service levels being adjusted accordingly. The following outlines the many benefits of Power Smart customer service initiatives and cost recovery programs.

### Home Comfort & Energy Savings Program

The Home Comfort & Energy Savings Program encourages homeowners to make energy efficient renovations to increase comfort and reduce home heating bills. The following services are offered under this customer service program:

- Customers can call or e-mail a Power Smart Energy Expert with energy-related questions.
- The Home Energy Calculator is a simple on-line check sheet that enables homeowners to compare previous energy savings projects undertaken and make decisions regarding future projects.
- The Home Comfort & Energy Evaluation Guide can be completed as a mail-in or on-line survey. The customized report includes easy-to-read graphs and a Power Smart target comparing the current energy consumption of the customer's home with a

home upgraded to the recommended Power Smart measures.

- Detailed brochures and renovation booklets for selecting and installing Power Smart measures guide the homeowner through the renovation process.
- A Power Smart Residential Loan of up to \$7.5 thousand allows customers to make energy efficient retrofits to their homes.

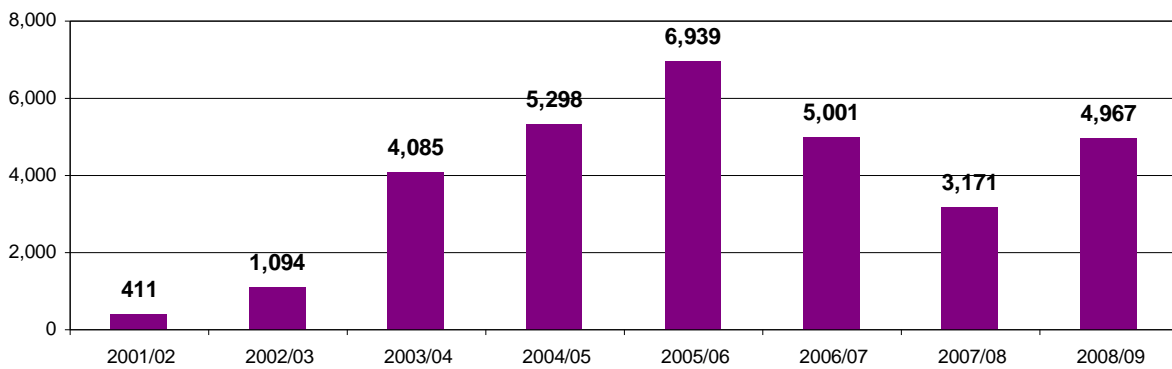


### ecoENERGY Program (formerly EnerGuide)

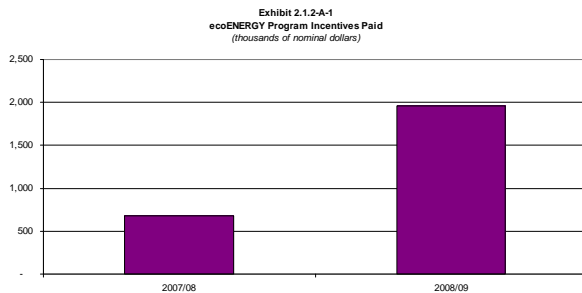
Manitoba Hydro continues to market the federal government energy evaluation programs. The EnerGuide for Houses (EGH) Program ended March 31, 2007, and was replaced by the ecoENERGY program. Manitoba Hydro began offering the new program on May 1, 2007 through its Power Smart initiatives. Manitoba Hydro signed a licensing Agreement to deliver the initiative until March 31, 2011.

The main goals of the ecoENERGY Program are to raise homeowner awareness of the benefits of energy efficiency, and to identify and prioritize energy efficient upgrades, by providing homeowners the information needed to make informed decisions. An in-home energy efficiency pre-retrofit evaluation 'D' based on the house-as-a-system approach, is the cornerstone of the program. The evaluation focuses on how the home's energy performance can be improved, while maintaining or improving the indoor environment.

**Exhibit 2.1.2-A**  
**ecoENERGY Program**  
*number of participant\**



\*D&E participants



Once the evaluation is conducted, the home is assigned an EnerGuide energy rating, based on a scale of 0 to 100. Homeowners who perform energy efficient upgrades on their homes as recommended by their report may take advantage of an 'E' or post-retrofit

evaluation to determine the effectiveness of the upgrades. The home then receives an updated EnerGuide energy rating label. Specific energy efficient upgrades qualify for Federal ecoENERGY grants. The grant amounts are based on qualifying energy saving improvements, with a maximum total grant amount of \$5,000 per residential dwelling.

The fee for an ecoENERGY evaluation is \$180 + GST for the pre-retrofit 'D' evaluation, and \$125 + GST for the post-retrofit 'E' evaluation. The 'E' evaluation fee is reduced to \$25 + GST if it is estimated the

homeowner will receive an ecoENERGY Grant of \$400 or more. The fees for both evaluations are equally subsidized by Manitoba Hydro and the Provincial Government.

### Wisdom in Saving Energy (W.I.S.E.) "Seniors Helping Seniors" Home Program

The W.I.S.E. Program operates in partnership with the Manitoba Society of Seniors. The program is designed to assist senior homeowners identify and implement energy saving measures in their homes. The program has been planned around the "Seniors Helping Seniors" concept and offers seniors an opportunity to volunteer and receive training from Manitoba Hydro energy experts in order to become qualified in-home energy advisors. The volunteer energy advisors visit homeowners and collect



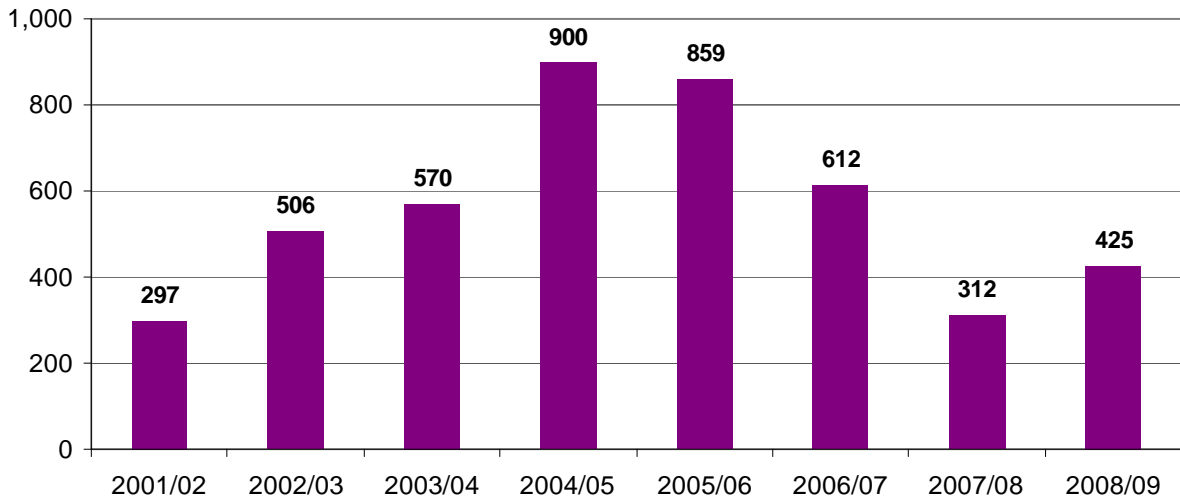
information about their homes, install energy saving devices, and offer energy saving tips and options to help senior customers save on energy consumption.

The program has been very well received by the community, as displayed by a consistently high mean satisfaction rating of 8.2 to 8.4 (out of 10) in the 8 years the program has been offered.

The following graph presents the number of participants in the WISE "Seniors Helping Seniors" Home Program. A total of 4,481

Manitoba seniors have participated in the program to date.

**Exhibit 2.1.2-B**  
**WISE Home Program**  
*Number of Participants*



## Residential Earth Power Program

Manitoba continues to be a leader in the geothermal industry, representing over 30 % of the national annual installations with over 6,000 residential installations to date.

The Residential Earth Power Program's primary objective is to maximize the adoption of geothermal heat pump technology to offset the use of conventional electric heating systems.



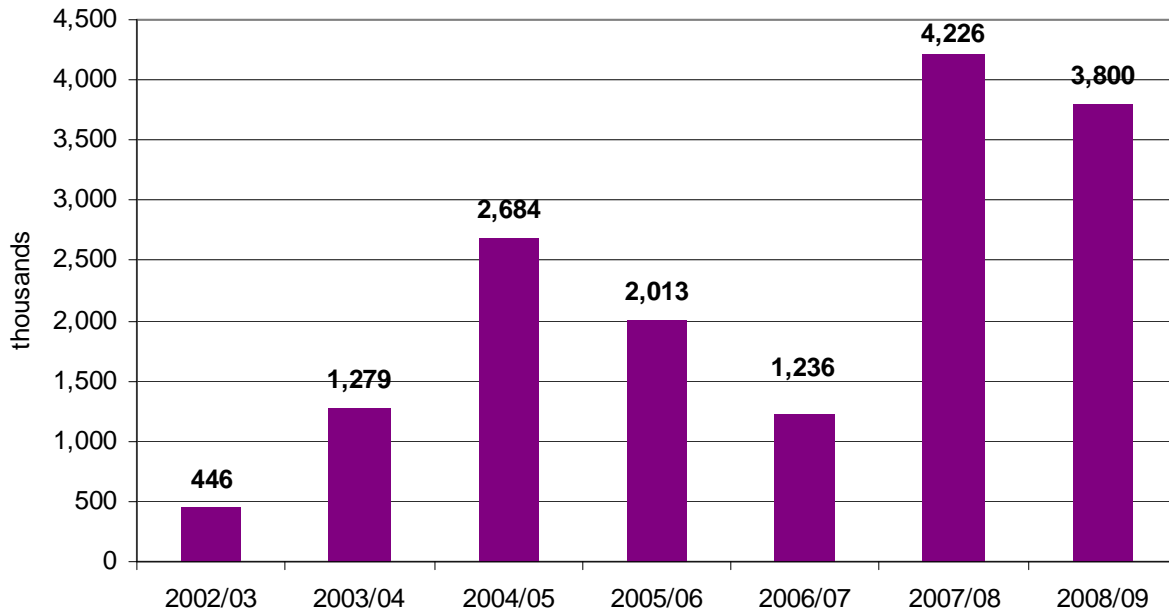
To facilitate this objective, the Earth Power Program has developed a comprehensive strategy to assist efforts of local stakeholders in developing a sustainable provincial geothermal industry. Since its launch in 2002, the program has focused efforts in mitigating three key market barriers which include:

- Consumer awareness;
- Underdeveloped industry infrastructure; and
- High capital cost.

In 2002, the Earth Power Program introduced convenient financing through the Residential Earth Power Loan - a vital component of the Earth Power Program. The original terms of the loan offered financing up to \$15 thousand over a term up to 15 years at a fixed interest rate of 6.5%. In April 2007, changes were made to the loan terms which increased the amount of financing available to \$20 thousand and lowered the interest rate to 4.9% for the first 5 years of a customer's loan. The interest rate on the balance of the loan term will be set at prevailing interest rates. The lower initial term interest rate is being subsidized by the Affordable Energy Fund.

The following graph presents the loan amounts processed under the Power Smart Residential Earth Power Program:

**Exhibit 2.1.2-C**  
**Residential Earth Power Loan**  
**Annual Loan Amounts**  
*Nominal Dollars*



Manitoba Hydro's Residential Earth Power Loan has continued to be an effective tool in facilitating residential geothermal installations. In 2008/09, a total of 206 customers financed their geothermal systems through the Residential Earth Power Loan. This brings the total number of loan participants to 966 since its

inception in 2002/03; equivalent to \$15.7 million in financing. Furthermore, residential geothermal market activity was strong due to the provincial Green Energy Tax Credit and a \$4,375 geothermal system grant available from the ecoENERGY Retrofit - Homes Program.

### Solar Water Heating Program

Manitoba Hydro has partnered with Natural Resources Canada to offer a \$1,200 rebate to homeowners who purchase and install a solar water

heating system. An additional \$1,250 rebate may be available if the customer participates in the ecoENERGY In-Home Energy Evaluation program.

## Energy Saver Presentations

The Energy Saver Presentations (formerly the Home Energy Saver Workshops) offer customers planning to retrofit existing homes an overview of how to improve the comfort and energy efficiency of their home to

reduce energy bills and save money. The presentation is offered at no-cost and is targeted at owners of existing homes.

## New Homes Workshop

New Home Workshops offer customers planning to build a new home an overview of how to build an affordable, comfortable and energy efficient home.

## Power Smart Recreation Facility Survey



The Power Smart Recreation Facilities Survey was created to help ice arenas and curling rinks reduce their operating costs by providing operators with an understanding of the energy use and potential energy

saving measures within the facility. Technical staff at Manitoba Hydro review comprehensive surveys filled in by facility operators and an evaluation report is prepared. The report compares the energy use of the facility with other similar facilities in Manitoba and provides a list of possible Energy Savings Opportunities. In October 2002, a guide called “Saving Money Through Energy Efficiency - Guidelines for Operators of Manitoba’s Rinks and Arenas” was developed to assist rink operators to operate their facilities more efficiently and to present practical ideas for saving money by reducing the use of energy. This guide has been updated and is now called “Energy Efficiency Guide for Ice Arenas and Curling Rinks”.

## Power Smart Design Standards



Manitoba Hydro developed design standards that new or renovated buildings must meet or exceed to achieve the Power Smart designation. The standards

take the form of efficiency requirements, prescriptive measures by building type, eligible products and systems, and recommended good practice. The Design Standards were originally created to match the requirements of the former Federal Commercial Building Incentive Program (CBIP) but have since evolved to become an industry guideline for building energy efficiency in Manitoba and are now listed as a requirement in The Green Building Policy for Government of Manitoba Funded Projects. In 2008/09, 14 projects received a Power Smart designation.

## Religious Buildings Initiative

The Religious Building Initiative was designed to assist religious organizations in finding ways to make their buildings more energy efficient. The initiative offers a benchmark audit and a low-interest loan of 8.5% to assist religious facilities in carrying out efficiency improvements. The benchmark audit report outlines how energy is being used in the building and indicates potential energy saving measures, which will reduce

energy consumption. As part of the Religious Building Initiative, a guide called “Energy Efficiency Guide for Religious Buildings” was created. This energy and water efficiency guide assists people involved in the operation and maintenance of religious buildings to develop an action plan and take steps toward improving the efficiency of their buildings.

## 2.2 Energy Efficient Codes and Standards

The most effective and permanent form of market transformation for energy efficient technologies and practices is the adoption of energy efficient codes and standards. However, the process of achieving these changes is complex and politically sensitive due to three factors:

**Governance:** The provincial government department responsible for energy is separate from the department responsible for building codes. Canada’s national model code development process historically only engages with provinces and territories via the department responsible for building codes.

**Applicability:** Building codes are minimum requirements for health and life-safety in buildings. Energy efficiency is not viewed by the code community as a necessary minimum requirement.

**Market Acceptance:** These changes impact building design and construction, as well as industry manufacturing processes, and therefore often do not receive strong industry support.

Manitoba Hydro’s strategy to affect change in codes and standards involves being an aggressive and active participant and in many cases, a driving force on a number of provincial and national energy efficiency codes and standards committees (e.g. Manitoba Hydro representatives often chair committees). The focus of Manitoba Hydro’s efforts on these committees is towards developing new energy-efficient technologies, developing energy efficient codes and standards and facilitating market acceptance of new technologies and building design practices.

## 2.3 Power Smart Incentive-Based Programs

Power Smart incentive-based programs are designed in consideration of specific market parameters and characteristics impacting market acceptance of the targeted energy-efficient technology or product. (For example, industry/customer awareness and appetite for

acceptance, availability of competing products, state of product lifecycles, cost barriers, training barriers, state of existing codes and standards, etc.). The following is a synopsis of incentive-based Power Smart programs offered during 2008/09.

### 2.3.1 Launch Date & Participation of Incentive-Based Power Smart Programs

Exhibit 2.3.1-A identifies the launch year of current and past Power Smart incentive-based programs.

Figure 2.3.1-B provides an overview of the annual and total amount of participants for incentive-based programs. Refer to APPENDIX C- ‘Total Power Smart Participation’ for a detailed list of historical participation.

For a description of current incentive-based Power Smart programs, see list in section 2.3.2. APPENDIX D provides a synopsis of discontinued Power Smart programs.

**Exhibit 2.3.1-A**  
**Launch Date of Incentive-Based Programs**

	YEAR LAUNCHED
<b>RESIDENTIAL</b>	
New Homes	February, 2004
Home Insulation	May, 2004
Compact Fluorescent Lighting	September, 2004
Seasonal LED Lighting	November, 2005
High Efficiency Furnace /Boiler	November, 2005
Appliances	June, 2006
Energy Efficient Light Fixtures	October, 2006
Lower Income Energy Efficiency Program	December, 2007
<b>COMMERCIAL</b>	
Commercial Lighting	April, 1992
Internal Retrofit	July, 1995
Custom Measures	December, 1995
Building Envelope	December, 1995
Commercial Earth Power	December, 1995
Parking Lot Controllers	December, 1995
Agricultural Heat Pads	April, 1998
City of Winnipeg Agreement	September, 2002
HVAC	September, 2003
Commercial Building Optimization	April, 2006
Commercial Refrigeration	April, 2006
Rinse and Save	July, 2006
Commercial Kitchen	January, 2008
Network Energy Management	May, 2008
Commercial Clothes Washers	July, 2008
Power Smart Energy Manager	November, 2008
Power Smart Shops	February, 2009
<b>INDUSTRIAL</b>	
Performance Optimization	June, 1993
Industrial Natural Gas Optimization	September, 2006
<b>DISCONTINUED/COMPLETED PROGRAMS</b>	
Commercial Construction- Air Conditioning Component	December, 1995
Commercial Construction- Air Barrier Component	December, 1995
High Efficiency Motor	September, 1991
Outdoor Timer	October, 1989
Roadway Lighting	April, 1991
Sentinel Lighting Conversion	April, 1991
Livestock Waterer	October, 1994
Energy Efficient Water Tank Measures Component of the 'No Worry Plan'	November, 1996
Energy Efficient Water Savings Measures Component of the 'No Worry Plan'	November, 1996
Agricultural Demand Controller	July, 1992
Infrared Heat Lamps	1991/92
Programmable Thermostat Pilot	October, 2006
Residential Showerhead Pilot	1991/92
Commercial Showerhead Pilot	1991/92
Refrigerator/Freezer Buy-Back Pilot	1991/92
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>	
Bioenergy	March, 2006
<b>RATE/LOAD MANAGEMENT PROGRAMS</b>	
Curtable Rates	November, 1993



**Exhibit 2.3.1-B**  
Incentive-Based Power Smart Program Participation

PROGRAM	2008/09	Cumulative
	<i>Number of Participants</i>	
<b>RESIDENTIAL</b>		
Compact Fluorescent Lighting	73,228	167,743
Appliances	13,277	39,087
LED Lighting	4,956	25,880
HE Furnace /Boiler	7,295	22,181
Home Insulation	4,578	16,218
Energy Efficient Light Fixtures	2,691	6,118
New Homes	220	803
Lower Income Energy Efficiency Program	143	282
	106,388	278,312
<b>COMMERCIAL</b>		
Commercial Lighting	1,292	8,719
Parking Lot Controllers	89	638
Rinse and Save	224	1,082
Building Envelope	244	595
HVAC	131	342
Internal Retrofit	68	1,143
Commercial Refrigeration	17	56
Commercial Earth Power	11	54
City of Winnipeg Agreement	1	311
Agricultural Heat Pads	4	118
Custom Measures	1	8
Commercial Building Optimization	1	1
Power Smart Energy Manager Program	0	0
Commercial Kitchen Appliance Program	21	21
Commercial Clothes Washer Program	9	9
Commercial New Construction Program	0	0
Network Energy Manager Program	0	0
Power Smart Shops Program	0	0
	2,113	13,097
<b>INDUSTRIAL</b>		
Performance Optimization	84	382
Industrial Natural Gas Optimization	10	10
	94	392
<b>DISCONTINUED/COMPLETED PROGRAMS</b>		45,137
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>		108,595
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>		
Bioenergy*	1	1
	1	1
<b>RATE/LOAD MANAGEMENT PROGRAMS:</b>		
Curtailable Rates*	4	5
	4	5
<b>TOTAL</b>	108,600	336,944

Note: This table includes electric and natural gas Power Smart participants. Customers may participate in more than one Power Smart program and are counted multiple times cumulatively. Participation is measured by number of completed projects and does not include market transformation. \*Participation represents the number of customers who participate each year. The cumulative number represents the actual number of customers who have participated.

## 2.3.2 Residential Programs

### New Home Program

Promotes and encourages energy efficiency in residential new construction, using measures such as: lighting, insulation, ventilation, water technologies, and improved building envelope. Customers can qualify by building to the Power Smart or R2000 standard. Manitoba Hydro became the delivery agent of Natural Resources Canada's R2000 Program in February of 2002.

### Home Insulation Program

Information and a financial incentives are offered to encourage owners of existing homes to upgrade their insulation to Power Smart levels.

### Compact Fluorescent Lighting Program

Encourages residential customers and property managers to "Switch and Save" by installing energy efficient compact fluorescent light bulbs.

### Seasonal Light Emitting Diode (LED) Lighting Program

Residential customers are encouraged to replace their incandescent holiday light strings with energy efficient LED light strings.

### Energy Efficient Light Fixtures Program

Residential customers and property managers are encouraged to install ENERGY STAR qualified light fixtures, dimmer switches and LED night lights in homes. This program also included the Torchiere Turn-In Program which encourages residential customers to replace their old halogen floor lamp with an ENERGY STAR qualified compact fluorescent torchiere lamp.

### Appliance Program

The appliance program encourages residential customers to purchase ENERGY STAR qualified clothes washers, refrigerators and chest freezers.

### High Efficiency Natural Gas Furnace/Boiler Program

Encourages residential customers who are replacing their existing natural gas furnace to purchase an ENERGY STAR qualified high efficiency natural gas furnace or boiler.

### Lower Income Energy Efficiency Program (LIEEP)

The Lower Income Energy Efficiency Program is designed to bring Power Smart and energy efficient measures to qualifying Manitoba lower income households. The program leverages Manitoba Hydro Power Smart programs, the Affordable Energy Fund, the Federal Government ecoENERGY Program, provincial government programs and existing community-based infrastructures. Energy efficiency measures include pre-and post in-home energy

evaluations, installation of basic energy efficiency items such as CFL's and low flow showerheads, insulation upgrades, and natural gas furnace upgrades.

### 2.3.3 Commercial Programs

#### Custom Measures Program

Encourages commercial customers who are renovating, undergoing plant expansion or building new facilities to improve system performance by installing or upgrading technologies such as; direct digital controllers, variable frequency drives and heat recovery ventilation systems. The program is designed for energy efficient projects that are not included in any of the existing Power Smart programs.

#### Building Envelope Program

Encourages building owners to incorporate window systems and/or insulation that meets Power Smart levels into their renovation or new building plans and helps to reduce air leakage that leads to heat loss.

#### HVAC Program

This program encourages the use of higher efficiency heating and cooling systems in commercial buildings such as: high efficiency furnaces, near-condensing and condensing boilers, variable speed drives and energy efficient water-cooled chillers.

#### Internal Retrofit Program

Energy efficiency in Manitoba Hydro buildings is encouraged by retrofitting existing and constructing new buildings to Power Smart levels.

#### Rinse and Save Program

The rinse and save program offers customers who operate a restaurant or food services business the free installation of a new low-flow pre-rinse spray valve. The old spray valve is recycled by Manitoba Hydro so that it cannot re-enter the market.

#### Commercial Lighting Program

This program encourages commercial customers to install cost-effective energy efficient lighting systems. Manitoba Hydro also works with lighting distributors, installers, contractors and manufacturers to assist customers in saving electricity.

#### Commercial Building Optimization Program

The commercial building optimization program encourages commercial customers with existing buildings to use an investigation process known as retro commissioning to help return their buildings to their design intent. The goal is to identify energy conservation opportunities with short payback periods.

### **Commercial Earth Power Program**

This program provides information and financial incentives to customers who install a geothermal heat pump to offset a conventional electric heating system in either new construction or existing commercial buildings.

### **Parking Lot Controllers Program**

The parking lot controllers program encourages commercial building and property managers to implement parking lot controller technology to effectively manage electricity usage in their parking lots.

### **Commercial Refrigeration Program**

This program encourages retail stores and restaurants to install energy efficient refrigeration equipment for their walk-ins, display cases and mechanical rooms to reduce energy consumption and create a more comfortable environment for their customers.

### **Agricultural Heat Pad Program**

The agricultural heat pad program helps swine barns realize energy and demand savings by using energy efficient heat pads over traditional heat lamps in hog farrowing crates.

### **City of Winnipeg Agreement**

Encourages, promotes and implements energy saving measures to improve the efficiency of city-owned facilities. The Power Smart Agreement encompasses electricity, natural gas and water saving measures for both new construction and renovation projects.

### **Commercial Clothes Washers Program**

Encourages customers to install energy efficient clothes washers at their business or facility.

### **Commercial Kitchen Appliances**

Encourages customers to upgrade to ENERGY STAR qualified steamers and fryers.

### **Network Energy Management Program**

Offers commercial customers a rebate to install network management software. The software programs shut down (PCs) when they are inactive and allows network administrators to perform regular maintenance tasks, such as IT upgrades and installations.

### **Power Smart Energy Manager Program**

Provides information, training, and support for Manitoba school divisions to hire dedicated Energy Managers.

## 2.3.4 Industrial Programs

### Performance Optimization Program

The performance optimization program encourages industrial and large commercial customers to study and implement energy efficiency measures in their electro-technology processes and motor-drive systems.

### Industrial Natural Gas Optimization Program

Provides industrial and large commercial customers with the technical support and financial incentives necessary to identify, investigate and implement systematic efficiency improvements throughout their facilities.

## 2.3.5 Rate/Load Management Programs

### Curtable Rates Program

Large industrial customers are provided with monetary incentives by way of a monthly credit on their electricity bill in exchange for customers having electrical load available for curtailment if called upon by Manitoba Hydro.

## 2.3.6 Customer Self-Generation Programs

### Bioenergy Optimization Program

Encourages industrial customers to install, operate and maintain generation equipment at their site for displacing their internal load.

## 3.0 Power Smart Success Stories

### First Nations Power Smart Program a Success in Peguis First Nation

Manitoba Hydro along with community members from Peguis First Nation teamed up to retrofit nine homes in their community. To encourage community participation in the project, Manitoba Hydro supplied training for community members on proper insulating techniques and installation methods for basic energy

efficiency measures such as draft proofing and insulated pipe wrap. Project costs were covered through funding from Power Smart, the Affordable Energy Fund and the Federal ecoENERGY program. Feedback from homeowners has been extremely positive and Manitoba Hydro looks forward to retrofitting additional homes.

### Power Smart Residential Loan Program Reaches \$150 Million

Manitobans reached a new high in May 2008, receiving over \$150 million in Power Smart residential loans for energy efficient renovations.

Manitoba Hydro's Power Smart Residential Loan Program passed the \$150 million milestone with more than 41,000 loans arranged through the program since it started in 2001. The average loan is now about \$3,700, a number that has increased over the years, as homeowners increased the extent of their energy efficiency projects.

Customers have used these loans to save \$22.9 million on their energy bills through the many Power Smart opportunities available. The energy savings attributed to the renovations that customers have undertaken has helped prevent 109,000 tonnes of greenhouse gases from entering the atmosphere.

In addition, the energy efficient upgrades undertaken have had significant economic benefits for the province. They have accounted for almost 1,500 person years of employment for contractors, retailers and related businesses since the program began in 2001.

### Manitoba Liquor Control Commission

The Manitoba Liquor Control Commission (MLCC) expanded their warehouse capacity by building a new warehouse to their facility located at 1555 Buffalo Place in Winnipeg. The new warehouse incorporated condensing boilers which are expected to save 7,080 cubic metres of natural gas annually saving the customer about \$2,830 per year. MLCC received a \$5,750 incentive for the installation of these boilers. The MLCC also installed energy efficient windows to allow more natural light which resulted in the customer receiving a \$40,565 rebate from Manitoba Hydro. The window project will provide an estimated 11,580 cubic metres of natural gas savings resulting in bill reductions

of \$4,630. Energy efficient T5 fixtures were also installed throughout the warehouse resulting in an incentive of \$38,160 to the MLCC. The new lighting is expected to save the customer 141,824 kWh and 16.19 kW every year resulting in bill reductions of \$6,520 per year. The MLCC also installed parking lot controllers to control energy consumption in their 240 parking stalls. They received a \$12,000 rebate for this measure and are expecting bill savings of \$3,627 per year from the reduction of electrical energy of 78,850 kWh per year.

With the support of Manitoba Hydro's Power Smart Programs the MLCC was selected as the recipient of a 2009 Manitoba Excellence in Sustainability Award in

the category of Action on Climate Change, Air Quality

and Energy Efficiency.

### ING Real Estate Canada

ING Real Estate Canada installed a number of energy saving technologies with the assistance of Manitoba Hydro's Power Smart for Business Power Smart Programs at its 2030 Notre Dame Avenue property in Winnipeg. ING upgraded their roof insulation and installed energy efficient lighting. ING received Power Smart for Business incentives of \$144,591 for the

insulation project and \$27,370 for lighting. LED exit signs, 20 pulse start metal halide fixtures, 149 T8 fluorescent fixtures, and 155 T5 fluorescent fixtures were installed. The upgrades will result in estimated annual natural gas savings of 109,613 cubic metres, and annual electricity savings of 20.8 kW and 60,436 kWh.

### Province of Manitoba Water Stewardship - WaterSmart Program

On November 12, 2008, a media conference was held by the Minister for Water Stewardship to announce their new WaterSmart Program which offers information and incentives for Manitobans to reduce water usage in their homes. Manitoba Hydro provided guidance to the Province with respect to program design and delivery and has been contracted to provide the following services under this initiative:

1) Qualifying water efficient toilets are eligible for financing under the Power Smart Residential Loan. The loan minimum remains unchanged at \$500, increasing

the likelihood that customers will finance toilets in combination with other energy efficient renovations.

2) Customers who have an ecoENERGY Evaluation Program through the Power Smart In-Home Energy Evaluation Program or the Lower Income Program and purchase and install a qualifying dual flush toilet after January 1, 2009, will receive a provincial rebate of \$50 in addition to the \$50 grant provided by the Federal Government. Manitoba Hydro will identify the customers eligible for this rebate and issue the rebate as a credit to the customer's energy bill.

### Power Smart Limited Time \$500 High Efficiency Furnace/Boiler Rebate

On July 30, 2008, the provincial government and Manitoba Hydro announced an increased rebate in an effort to help customers with increasing natural gas rates. From August 5 - October 13, 2008, customers who install a 92% high efficient furnace with a DC variable speed motor or a boiler with an AFUE of 80% received a \$500 rebate, more than double the existing \$245 rebate. The limited time offer was very successful with 3,706 increased rebates paid. An additional 892 customers received the \$245 rebate during the time period August 1 to December 1, 2008. Total customer

participation for this time period represented 66% of market activity, as defined by the total number of gas permits issued. Participation in the ecoENERGY In-home Energy Evaluation during the extended rebate time period doubled as compared to the previous year, and the Power Smart Loan program experienced an increase in the number of loans issued for furnace replacements.

### 3.1 *Power Smart Initiatives Launched During Reporting Period*

#### **Manitoba Hydro Approves Power Smart Network Energy Management Program**

Participants of this program will receive a rebate pursuant to the purchase and installation of eligible software. The rebate will be the lesser \$15 per computer or 100% of the software, installation and support costs. This strategy will address the barrier of initial costs, facilitate early adoption of the technology, expedite market transformation and influence the energy conserving software industry to lower costs.

In the commercial sector, PCs account for over 7% of total electric consumption. PCs are recognized as the

fastest growing energy consumption area in the commercial sector, growing at least three times faster than other end-uses such as HVAC. Further, 65% of PC electric consumption is avoidable, as it is simply associated with machines being left on outside of working hours. The widespread practice of machines being left on centers around: user convenience, myths about damaging PCs by turning them on and off, and required network-based system maintenance such as information technology (IT) upgrades and patch installation. In the Manitoba market, it is estimated that at least 70% of PCs are routinely left on outside of working hours.

#### **New Power Smart for Business Program Aims to Curb Clothes Washer Energy and Water Consumption**

Manitoba Hydro launched the newest addition to its already comprehensive suite of Commercial Power Smart Programs, with the July 15th rollout of the Power Smart Commercial Clothes Washer Program.

The Program will provide a \$180 post-sale rebate upon the installation of an ENERGY STAR qualified front-loading commercial clothes washer. The Program target market is comprised of non-single family facilities such

as laundromats and multi-residential housing utilizing common laundry areas including: apartments, student housing, and military barracks.

While front-loading clothes washers are electric appliances, they can save both electricity and natural gas. The savings are from a combination of design improvements, water savings, and reduced drying time.

#### **Power Smart Shops will Help Small Businesses Save Energy**

The current suite of Power Smart for Business Programs expanded with the introduction of the Power Smart Shops Program which promotes energy efficiency to independent small business owners who operate retail stores, restaurants, services, and offices.

Small business owners face unique barriers that historically preclude them from participating in energy efficiency opportunities. The Program mitigates the barriers surrounding customers' limited capital to invest

in upgrading their facilities, and limited time to research and implement energy efficient improvements.

The Program offers a free energy assessment to identify energy, water, and waste efficiency opportunities, followed by the installation of a number of free low-cost efficiency upgrades, and lastly, the offering of incentives and set pricing for the purchase and installation of the remaining efficiency opportunities.



## Power Smart Solar Water Heating Program

Manitoba has an abundance of solar energy, which can be harnessed and used in solar water heating systems. Water heaters will then need less energy to reach the desired temperature for all household hot water needs, which will help reduce customer's energy bills and their impact on the environment. In addition to domestic hot water, solar water heating systems are also a suitable fit to supplement pool, hot tub, and space heating requirements.

Manitoba Hydro has partnered with Natural Resources Canada to offer a \$1,200 rebate to homeowners who purchase and install a solar water heating system. This partnership commits Manitoba Hydro to carry out all program administration, promotion, and savings monitoring along with market and infrastructure

development. The partnership is forecasted to continue until October 2010. An additional \$1,250 rebate may be available to customers who participate in Manitoba Hydro's ecoENERGY In-Home Energy Evaluation program and a 10% tax credit is currently offered through the Provincial Green Energy Equipment Tax Credit Program.

Solar water heating systems can operate year round and typically raise water temperatures by 22 to 28 C (40 to 50 F), which could result in savings of up to \$175 a year on a customer's energy bill. The cost of heating water accounts for approximately 20% of the energy that is used in most homes. Solar water heating systems are usually designed to supply an average household with 50% of this energy.

## 4.0 Market Results

In the past, the success of Manitoba Hydro’s Power Smart initiative was evaluated on DSM incentive-based program activity alone. However, the true impact of Power Smart programs includes the impact of the program on the market as a whole - market transformation. However, market transformation is more difficult to measure. Manitoba Hydro has made significant in-roads in developing program-specific

methodologies for measuring its impact. Wherever possible, Manitoba Hydro has attempted to obtain sales/technology specific data to calculate a program’s true effect. In some instances, qualitative information is used to determine a program’s impact on the market. Manitoba Hydro plans on continuing to further quantify and report on the influence of market transformation within the Manitoba marketplace.

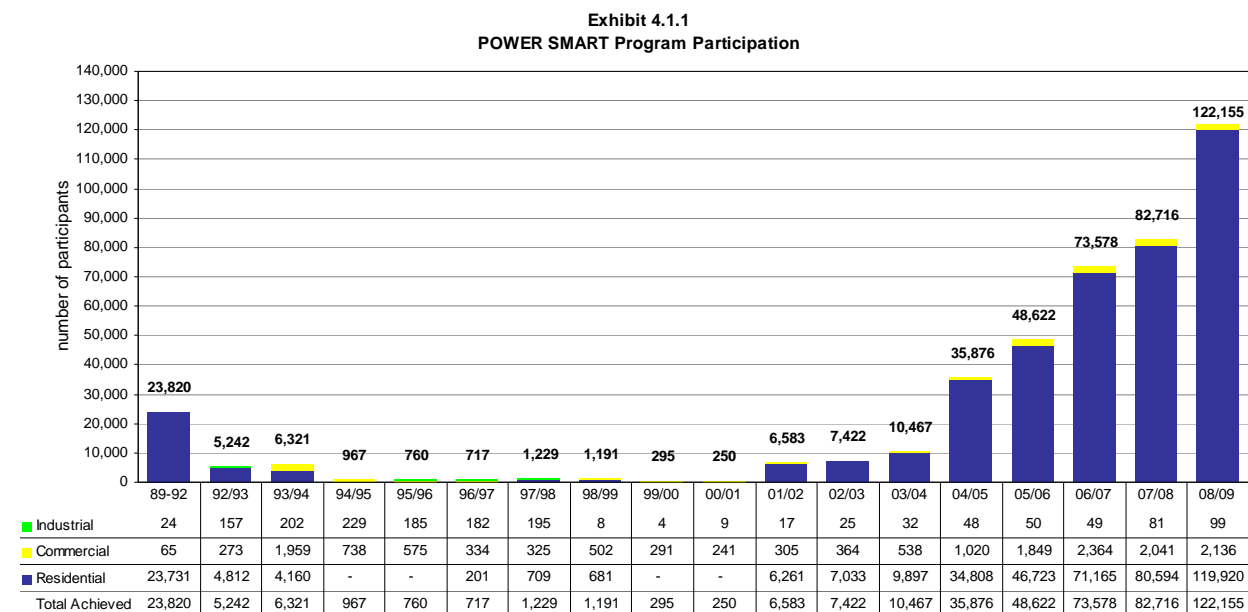
### 4.1 Power Smart Portfolio Results

The following sections provide an overview of Power Smart portfolio results to date.

#### 4.1.1 Participation in Power Smart Programs

The following graph outlines total Power Smart participation in incentive-based programs, customer service initiatives and cost recovery programs with

participation presented by sector (i.e. residential, commercial/agricultural and industrial programs).



Note: Includes electric and natural gas participants.  
 Customers may participate in more than one Power Smart program.  
 Participation for codes & standards excluded.  
 Curtailable Rates Program participation is included in the industrial sector.

There were over 122 thousand Power Smart participants during 2008/09, and have been approximately 428 thousand participants cumulatively. Refer to Appendix

C for a historical list of participants by Power Smart program.

#### 4.1.2 Power Smart Portfolio - Impact of Electric Programs

The following tables outline the electricity savings achieved through the Power Smart portfolio during

2008/09 and provide a comparison between achieved results and planned targets, where applicable:

##### Exhibit 4.1.2-A

Annual GW.h Savings (at generation) - Power Smart Portfolio

	Actual	2008/09 Plan <sup>^</sup> GW.h	Total
INCENTIVE-BASED PROGRAMS	210	262	1,106
CODES & STANDARDS	30	46	382
CUSTOMER SERVICE INITIATIVES	2	3	22
<b>OVERALL IMPACT</b>	<b>242</b>	<b>310</b>	<b>1,510</b>

<sup>^</sup> Plan values are from the 2008 Power Smart Plan.

Note: Figures may not add due to rounding.

##### Exhibit 4.1.2-B

Annual Average Winter MW Savings (at generation) - Power Smart Portfolio

	Actual	2008/09 Plan <sup>^</sup> MW	Total
INCENTIVE-BASED PROGRAMS	227	243	406
CODES & STANDARDS	7	9	97
CUSTOMER SERVICE INITIATIVES	1	1	6
<b>OVERALL IMPACT</b>	<b>235</b>	<b>252</b>	<b>509</b>

<sup>^</sup> Plan values are from the 2008 Power Smart Plan.

Note: MW savings are based on the average of the winter AM & PM system peak savings.

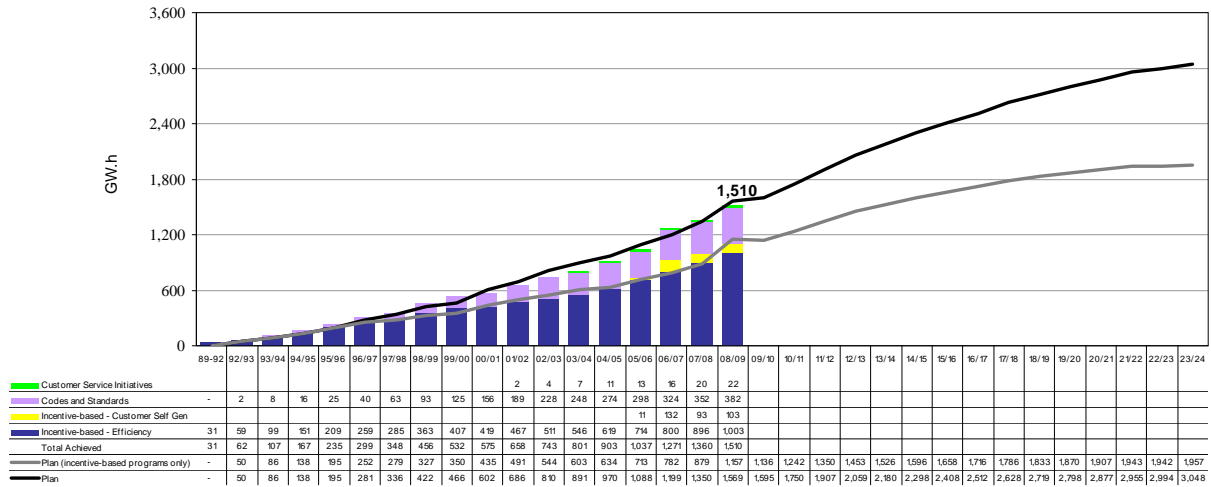
MW savings reported is expected Curtailable load on system at the time a curtailment occurs.

Figures may not add due to rounding.

Power Smart portfolio demand savings were 7% below target. Demand savings for incentive-based programs were 7% below target.

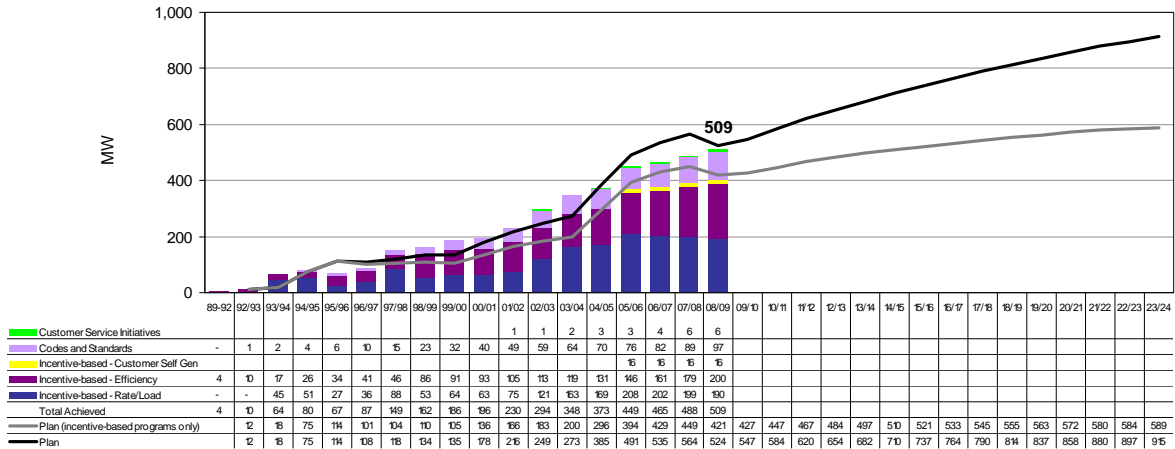
The following graphs present the electric energy and demand savings achieved to date by the Power Smart portfolio and the corresponding targets:

**Exhibit 4.1.2-C**  
**Electric Energy Savings - Power Smart Portfolio**  
 Total Savings Achieved vs. Plan  
 at generation



Note: Targeted savings are unadjusted for programs not running or other revisions. Figures may add due to rounding.

**Exhibit 4.1.2-D**  
**Average Winter Demand Savings - Power Smart Portfolio**  
 Total Savings Achieved vs. Plan  
 at generation



Note: Targeted savings are unadjusted for programs not running or other revisions. Figures may not add due to rounding.

Overall, results of the entire Power Smart portfolio achieved to 2008/09 were 1,510 GW.h and 509 MW

(at generation), which are 3.8% and 2.9% below their respective targets.

### 4.1.3 Power Smart Portfolio - Impact of Natural Gas Programs

The following table and graph presents natural gas savings achieved by the Power Smart portfolio:

**Exhibit 4.1.3 - A**  
Annual Natural Gas Savings

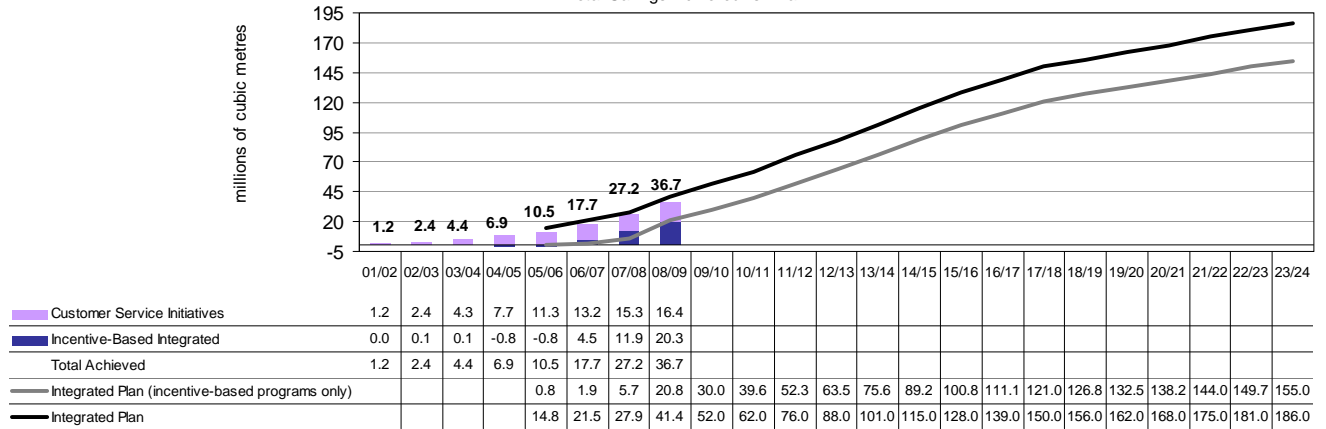
	Actual	2008/09 Plan	Total
	<i>millions of cubic metres</i>		
<b>PROGRAM &amp; INTIATIVE</b>			
Customer Service Initiatives	1.1	0.8	16.4
Incentive-Based Programs	10.4	9.8	26.0
	11.5	10.6	42.4
<b>INTERACTIVE EFFECT</b>			
Incentive-Based Interactive effect with Electric Programs	(2.1)	(1.4)	(5.8)
	(2.1)	(1.4)	(5.8)
<b>NET IMPACT OVERALL</b>	9.5	9.2	36.6

Note: Figures may not add due to rounding.  
Natural gas savings due to codes & standards are not measured.

The Power Smart portfolio provided natural gas savings of 11.5 million m<sup>3</sup> in 2008/09, which is 8% more than plan. After interactive effects, a net

savings of 9.5 million m<sup>3</sup> of natural gas were saved in 2008/09, which are 3% more than plan.

**Exhibit 4.1.3 - B**  
**Integrated Natural Gas Savings - Power Smart Portfolio**  
 Total Savings Achieved vs. Plan



Note: Figures may not add due to rounding.  
 Natural gas savings due to codes & standards are not presented.

To date, the Power Smart portfolio has saved 37 million m<sup>3</sup> of natural gas, after interactive effects, which are 11% below target.

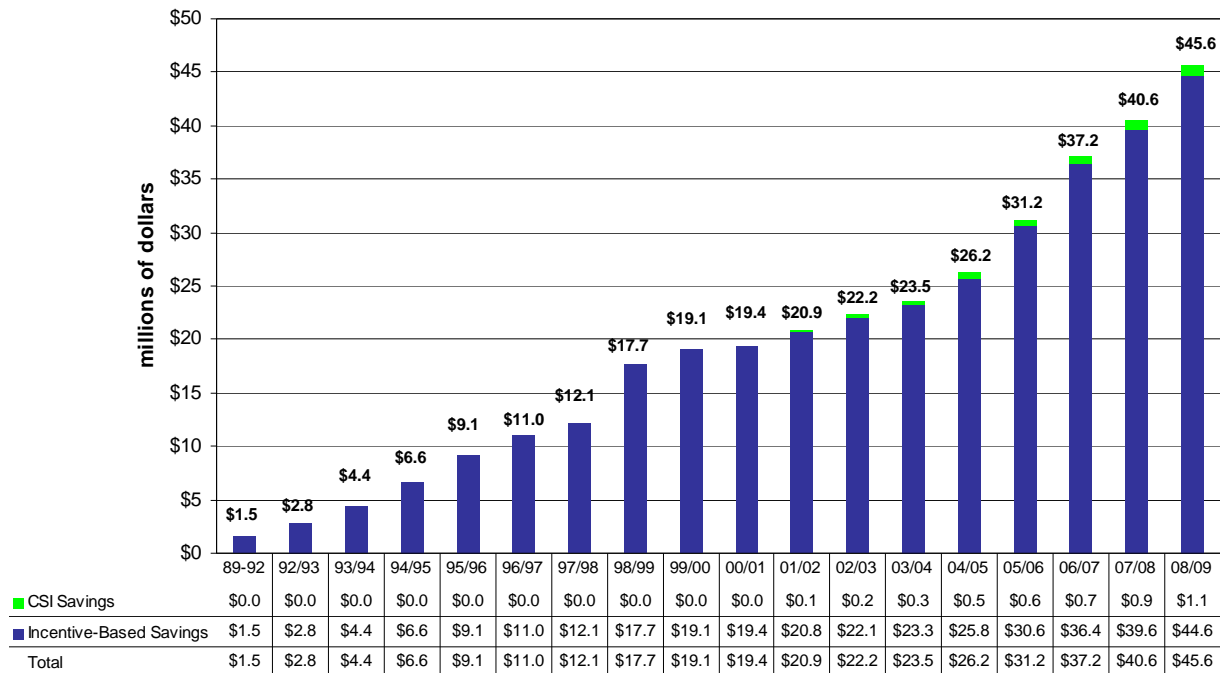
## 4.1.4 Customer Bill Reduction

### Electricity Bill Reduction

When customers save electricity through Manitoba Hydro's Power Smart programs, it translates into lower electricity bills for participating customers. Displayed in Exhibit 4.1.4-A are the annual customer

bill reductions resulting from customer service initiatives and incentive-based Power Smart program electrical savings to date.

**Exhibit 4.1.4-A**  
**Customer Electricity Bill Reduction (2008\$)**  
millions of dollars



Note: Figures may not add due to rounding.  
Bill reductions exclude savings due to codes & standards.  
Demand savings resulting from the Curtailable Rates Program are excluded from this analysis.

Power Smart customer service initiatives and incentive-based programs have saved participating

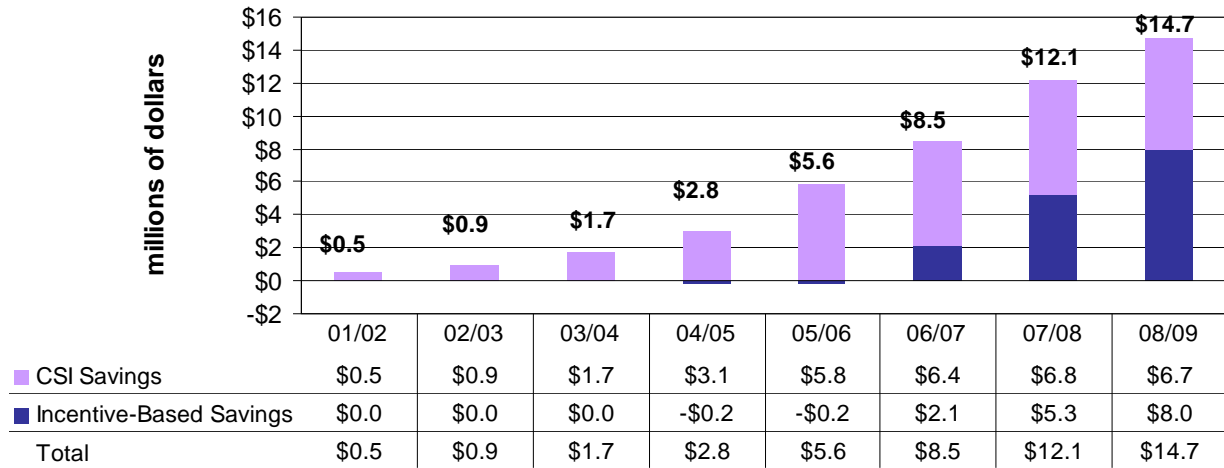
customers over \$45 million in 2008/09 and \$352 million cumulatively on electricity bills to date

## Natural Gas Bill Reduction

Customers also save on their natural gas bills when participating in certain Power Smart initiatives. Exhibit 4.1.4-B displays annual customer bill reductions resulting from net Power Smart natural gas initiatives savings to date.

4.1.4-B displays annual customer bill reductions

**Exhibit 4.1.4-B**  
**Customer Natural Gas Bill Reduction (2008\$)**  
 millions of dollars



Note: Figures may not add due to rounding.  
 Bill reductions exclude savings due to codes & standards.  
 Interactive Effects in 2008/09 resulted in a \$2.1 million increase in customer bills, which is captured within Incentive-Based Savings.

As a result of Power Smart initiatives, participating customers saved more than \$14 million in 2008/09 and over \$46 million cumulatively on their natural gas bills to date.

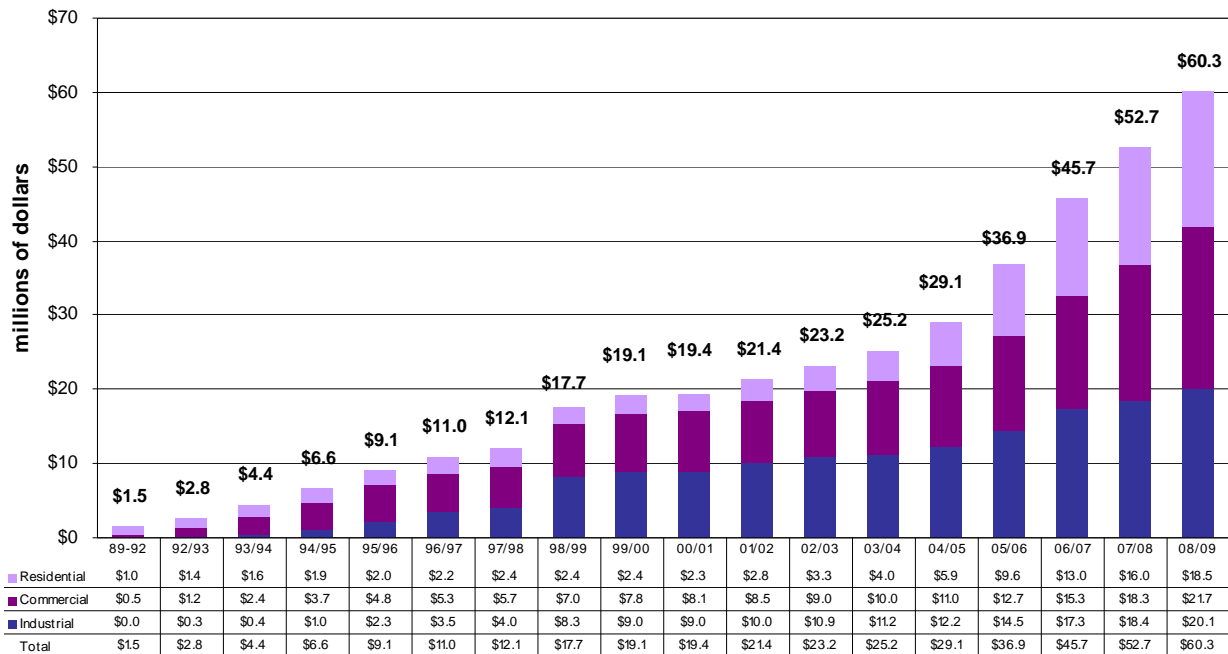


## Combined Bill Reduction

The following graph presents the annual customer bill reduction for participants of Power Smart customer service initiatives and incentive-based programs by

sector. Savings include those from both electric and natural gas initiatives

**Exhibit 4.1.4-C**  
**Combined Electricity & Natural Gas Customer Bill Reduction (2008\$)**  
**Total Annual Reductions by Sector**  
 millions of dollars



Note: Figures may not add due to rounding.  
 Bill reductions exclude savings due to codes & standards.  
 Demand savings resulting from the Curtailable Rates Program are excluded from this analysis.  
 Natural gas bill reduction is based on Manitoba Hydro's primary gas rate.

Power Smart customer service initiatives and incentive-based programs saved participating customers \$60 million in 2008/09 alone.

Approximately 33%, 36% and 31% were saved by industrial, commercial and residential customers respectively.

To date, participating customers have saved \$399 million cumulatively on electricity and natural gas bills. Approximately 38%, 38% and 24% were saved cumulatively by industrial, commercial and residential customers respectively.

## 4.1.5 Power Smart Program Impact on Greenhouse Gas Emissions

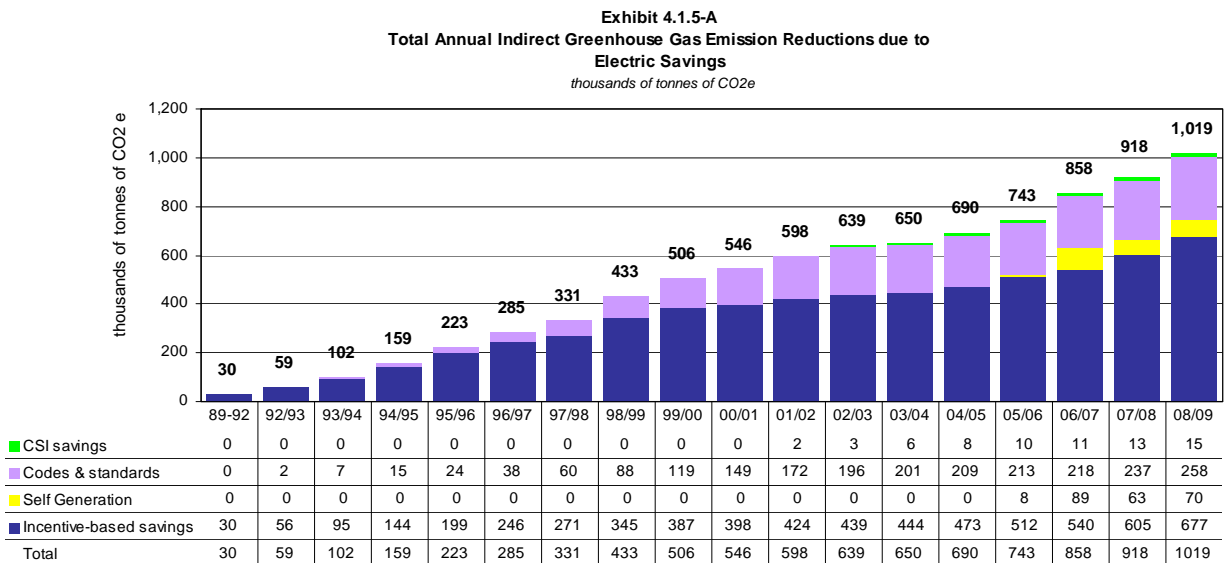
The energy efficiency measures and improvements installed through Manitoba Hydro's Power Smart programs reduce the amount of greenhouse gas and other air polluting emissions from power generation and

the transmission and distribution of natural gas, and will continue to do so over their product lives. Both electricity and natural gas consumption reductions have a positive impact on greenhouse gas emissions.

### Impact of Electricity Savings

As Manitobans conserve electric energy through Power Smart programs, more hydro-electricity is available for export. These exports displace coal and natural gas fuelled generation outside of Manitoba, which results in significant global reductions of greenhouse gases and other emissions. Therefore, the impact of Power Smart programs on global greenhouse gas emissions is quantified based on estimates of reduced coal and

natural gas fuelled generation outside the province, and is measured in carbon dioxide equivalent emissions. Because the emission reductions do not occur at the site of the participating customer, these reductions are referred to as indirect emission reductions. Exhibit 4.1.5-A shows the equivalent reduction in carbon dioxide emissions resulting from Power Smart electric program activity to date.



Note: Figures may not add due to rounding.

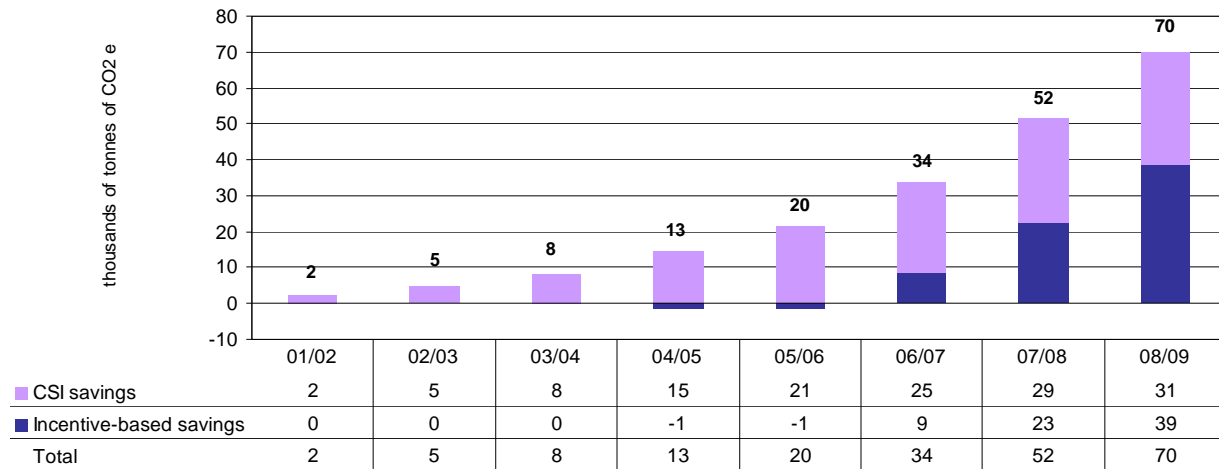
The 1,510 GWh savings resulting from electricity Power Smart program activity and codes and standards initiatives to date have displaced greenhouse gas emissions by approximately 1,019 thousand tonnes of

carbon dioxide equivalent emissions. This is comparable to removing approximately 291 thousand cars off the road in the United States for one full year.

## Impact of Natural Gas Savings

Power Smart natural gas programs result in direct emission reductions at the location of the participating customer. The following chart displays direct greenhouse gas reductions that occur as a result of lower natural gas consumption in Manitoba.

**Exhibit 4.1.5-B**  
**Total Annual Direct Greenhouse Gas Emission Reductions**  
**due to Natural Gas Savings**  
*thousands of tonnes of CO<sub>2</sub>e*



Note: Figures may not add due to rounding.

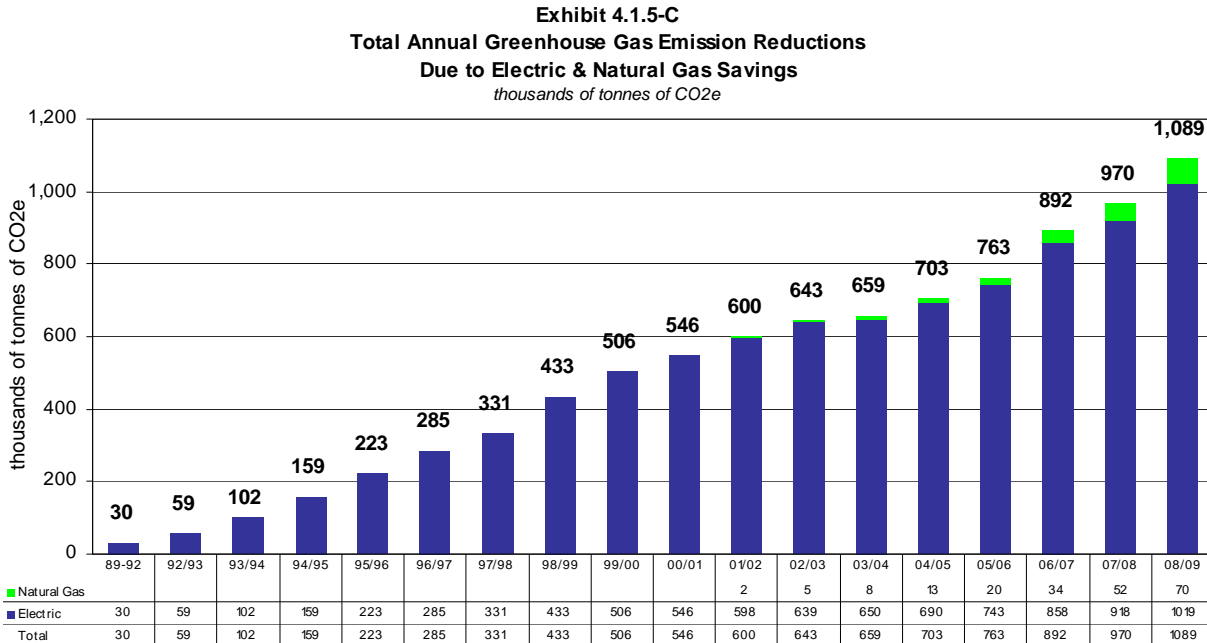
The 37 million m<sup>3</sup> of reduced natural gas consumption (after interactive effects) from Power Smart programs to date displaced 70 thousand tonnes of greenhouse gas

emissions in 2008/09 alone. This is equivalent to removing approximately 20 thousand vehicles off the road in Manitoba for one full year.



## Combined Impact of Electricity and Natural Gas Savings

The following graph presents the greenhouse gas emission reductions that have resulted from all electric and natural gas Power Smart program activity to date.



The 1,510 GW.h savings from electricity and 37 million m<sup>3</sup> savings from natural gas Power Smart programs have resulted in greenhouse gas reduction of approximately 1,089 thousand tonnes of carbon dioxide

equivalent emissions. This is comparable to removing approximately 311 thousand vehicles off the road for one full year.

## 4.2 Customer Service Initiatives & Cost Recovery Programs

### 4.2.1 Annual Energy Savings from Customer Service Initiatives & Cost Recovery Programs

Exhibits 4.2.1-A through 4.2.1-C provide an overview of the estimated electrical and natural gas savings achieved to 2008/09 through customer service initiatives

and cost recovery programs, for those programs where energy savings can be reasonably measured or estimated using engineering calculations.

**Exhibit 4.2.1 - A**

## Annual GW.h Savings - Electric Customer Service Initiatives &amp; Cost Recovery Programs

	Actual	2008/09 Plan <sup>^</sup>	Total	2023/24 Plan <sup>^</sup>
	<i>GW.h</i>			
<b>RESIDENTIAL</b>				
Power Smart Residential Loan	0.6	0.6	5.2	14.7
Residential Earth Power	1.4	1.6	10.2	26.8
ecoENERGY	-	-	0.8	0.8
Solar HWT	-	-	-	-
	2.0	2.2	16.1	42.3
<b>DISCONTINUED/COMPLETED PROGRAMS</b>				
	-	-	3.0	0.2
	-	-	3.0	0.2
<b>TOTAL (at customer meter)</b>	<b>2.0</b>	<b>2.2</b>	<b>19.1</b>	<b>42.5</b>
<b>TOTAL (at generation)</b>	<b>2.3</b>	<b>2.6</b>	<b>21.8</b>	<b>48.4</b>

<sup>^</sup> 2008/09 planning estimates and 2023/24 planning targets are from the approved DSM option in the “2008 Power Smart Plan”.

**Exhibit 4.2.1 - B**

## Annual MW Savings - Electric Customer Service Initiatives &amp; Cost Recovery Programs

	Actual	2008/09 Plan <sup>^</sup>	Total	2023/24 Plan <sup>^</sup>
	<i>MW</i>			
<b>RESIDENTIAL</b>				
Power Smart Residential Loan	0.3	0.3	3.0	7.8
Residential Earth Power	0.4	0.3	2.5	4.8
ecoENERGY	-	-	-	-
Solar HWT	-	-	-	-
	0.7	0.6	5.5	12.6
<b>DISCONTINUED/COMPLETED PROGRAMS</b>				
	-	-	0.2	0.0
	-	-	0.2	0.0
<b>TOTAL (at customer meter)</b>	<b>0.7</b>	<b>0.6</b>	<b>5.7</b>	<b>12.6</b>
<b>TOTAL (at generation)</b>	<b>0.8</b>	<b>0.7</b>	<b>6.5</b>	<b>14.4</b>

<sup>^</sup> 2008/09 planning estimates and 2023/24 planning targets are from the approved DSM option in the “2008 Power Smart Plan.”

**Exhibit 4.2.1 - C**Annual m<sup>3</sup> Savings - Natural Gas Customer Service Initiatives & Cost Recovery Programs

	Actual	2008/09 Plan <sup>^</sup>	Total	2023/24 Plan <sup>^</sup>
			<i>millions of cubic metres</i>	
<b>RESIDENTIAL</b>				
Power Smart Residential Loan	1.0	0.5	12.3	19.3
Residential Earth Power	0.1	0.3	1.4	4.9
ecoENERGY for Houses	-	-	2.3	7.2
Solar HWT	-	-	-	-
	1.1	0.8	16.1	31.4
<b>DISCONTINUED/COMPLETED PROGRAMS</b>	-	-	0.3	0.0
	-	-	0.3	0.0
<b>TOTAL</b>	1.1	0.8	16.4	31.4

<sup>^</sup> 2008/09 planning estimates and 2023/24 planning targets are from the approved DSM option in the “2008 Power Smart Plan”.

### 4.3 Energy Efficiency Codes & Standards

Canadian and U.S. electric utilities, including Manitoba Hydro, have been engaged in DSM activities for many years. In addition to utility specific DSM programs, some utilities are involved in a number of provincial and national committees. These committees work with governments and equipment manufacturers to gain acceptance of higher efficiency levels for various technologies and to encourage adoption of energy efficiency standards and regulations.

Manitoba Hydro annually prepares a forecast of the expected influence of codes and standards, and since 1995 this forecast has been and is used to adjust Manitoba Hydro’s system load forecast.

In many markets, legislation is the most effective and permanent form of market transformation, as it ensures that customers do not revert to less efficient technologies/practices once the incentives and/or promotional activities are discontinued. Traditionally, changing legislation is complex and politically sensitive due to 3 factors:

1. Codes and standards fall under federal, provincial and municipal jurisdictions;
2. National energy efficiency standards are difficult to agree upon due to varying environmental and market conditions; and
3. Industry places less emphasis upon making changes that are not related to safety issues.

### 4.3.1 National Activities

As Manitoba is not a major manufacturer of energy efficient products and offers a relatively small market for appliances/equipment, Manitoba Hydro's strategy is to be a very active participant, and in many cases a driving force, on a number of National energy efficiency code and standards committees. Manitoba Hydro representatives often chair these committees which undertake 3 functions:

1. Provide industry with assistance in the development of technologies;
2. Develop codes and standards; and
3. Assist in industry, market and government acceptance of the codes and standards.

These activities have proven to be extremely successful given the adoption and acceptance of code changes in recent years. The following examples highlight some of the efforts underway to encourage the future adoption of National energy efficiency standards and regulations:

Manitoba Hydro is a key player on the CSA Strategic Steering Committee on Performance, Energy Efficiency, and Renewables (SCOPEER), which is responsible for changes to National performance standards and legislation which have resulted in the improvement of energy utilization of numerous appliances. An example of the influence of this committee is in the residential refrigeration market. As a result of the efforts of this committee, working with Canadian manufacturers, refrigerator manufacturers market products which exceed the current minimum efficiency standards for inter-provincial exporting.

Beginning in September 2005, Manitoba Hydro chaired the newly created Manitoba Energy Code Advisory

Committee which was tasked to provide recommendations for the adoption, development, and implementation of energy efficiency requirements for all new commercial construction (i.e. new buildings, additions to existing buildings, and major renovation of existing buildings) in Manitoba.

In the report "Building Energy, Building Leadership", the Committee recommended Manitoba adopt the Model National Energy Code for Buildings in the following three stages: (1) Adopt the Model National Energy Code for Buildings (1997) as a regulation under The Buildings and Mobile Homes Act, (2) Develop and adopt Manitoba Amendments to the Model National Energy Code for Buildings by January 1, 2009, and (3) Support and participate in a national initiative to update the Model National Energy Code for Buildings.

The Committee recommends that Manitoba adopt the energy code as a regulation under The Buildings and Mobile Homes Act, rather than as a regulation under The Energy Act because The Buildings and Mobile Homes Act supersede all other provincial legislation with respect to requirements for buildings.

Manitoba Hydro and representatives of the Province of Manitoba are working together to develop an industry consultation plan and a strategy to implement the recommendations outlined in the report.

Further supporting the development of energy codes for buildings, Manitoba Hydro is a former chair of the Building Energy Codes Collaborative (BECC). BECC is a provincial-territorial-federal committee supported by the Council of Energy Ministers, the Assistant Deputy Minister Steering Committee on Energy Efficiency (ASCEE) and Natural Resources Canada. It consists of

representatives from both the code ministries and the energy ministries of provinces and territories working together to advance energy efficiency in building codes. In 2007 BECC was successful in securing the political and financial support necessary to convince the Canadian Commission on Building and Fire Codes to

### 4.3.2 Provincial Activities

Initially a building code for residential homes was proposed by the Federal Government and was to be adopted by the Province of Manitoba in 1997. Due to a decline in new house starts and the perceived impact on building costs of a proposed Model National Energy Code for Houses (MNECH), it was anticipated that members of the new home construction industry would be reluctant to support the proposed MNECH. Recognizing the MNECH support may be low; Manitoba Hydro initiated and sponsored amendments to Insulation Tables for new houses in the Manitoba building code as an interim measure to shore up eroding insulation practices below the 53<sup>rd</sup> parallel. The interim measures improved insulation practices in new housing north of the 53<sup>rd</sup> parallel. As anticipated the MNECH was not adopted, however, Manitoba Hydro's amendments were introduced in Manitoba in November 1998 with the support of the new home construction industry.

update the Model National Energy Code for Buildings. Currently, Manitoba, Ontario, Quebec and British Columbia are recognized as the most active and have made the most progress with respect to implementing energy efficiency requirements in buildings.

In July 2006, the requirements under Insulation Tables for new houses of the Manitoba Building Code were adjusted to simplify the requirements. Manitoba Hydro played a key role in ensuring that efficiency requirements were not significantly diluted. Insulation requirements for homes heated primarily with natural gas increased; insulation requirements for electrically heated homes were only slightly decreased. As a result, Manitoba's minimum requirements for insulation in new homes are the highest in Canada. It is estimated that this code change has resulted in energy and demand reductions of 11.7 GW.h and 4.2 MW annually by the end of 2008/09.

In September 2007, Manitoba Hydro presented research on the life cycle benefits of improved basement insulation to homeowners and were successful at convincing the Building Standards Board of Manitoba to request R20 in foundation walls for all homes in Manitoba.



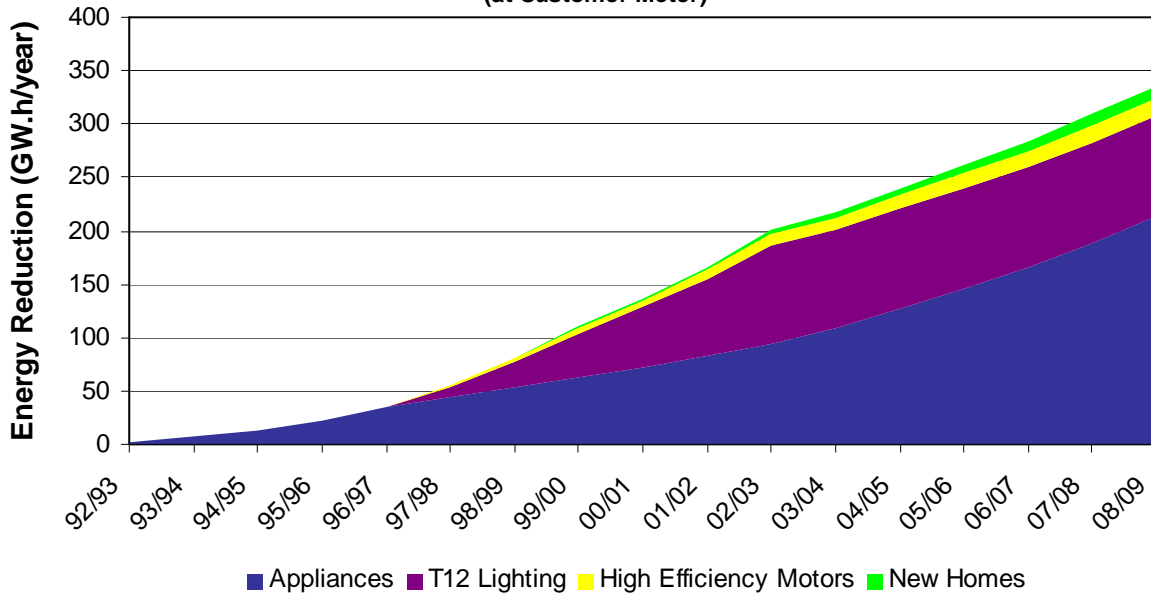
## Energy Efficiency Codes and Standards Savings

Code	Rationale	2008/09 at meter	Cumulative
High Efficiency Motors	-MB Hydro becomes member of Coordinated Utilities Approach (CUA) in 1991	0.0 GW.h	16.2 GWh
	-Code Changed in Oct. 1997: minimum level of efficiency increased from 78.5-92.1% to 82.5-95.0%	0.0 MW	2.8 MW
	-2006/07 was the last year incremental savings were claimed for this code		
Appliances	-MB Hydro is a member of Strategic Steering Committee on Performance, Efficiency, and Renewables (SCOPEER)	24.3 GW.h	213.2 GW.h
	-Savings calculated based upon energy star efficiency improvements	5.9 MW	51.7 MW
Commercial Lighting	-Influenced Federal Government code change improving efficiency of T12 lights from 40 watts to 34 watts	0.3 GW.h 0.1 MW	94.1 GW.h 26.5 MW
New Homes	-Influenced MB Building Code to shore up existing insulation practices in new housing north of the 53rd parrallel	1.5 GW.h 0.5 MW	11.7 GW.h 4.2 MW
TOTAL		26.1 GW.h 6.5 MW	335.2 GW.h 85.1 MW

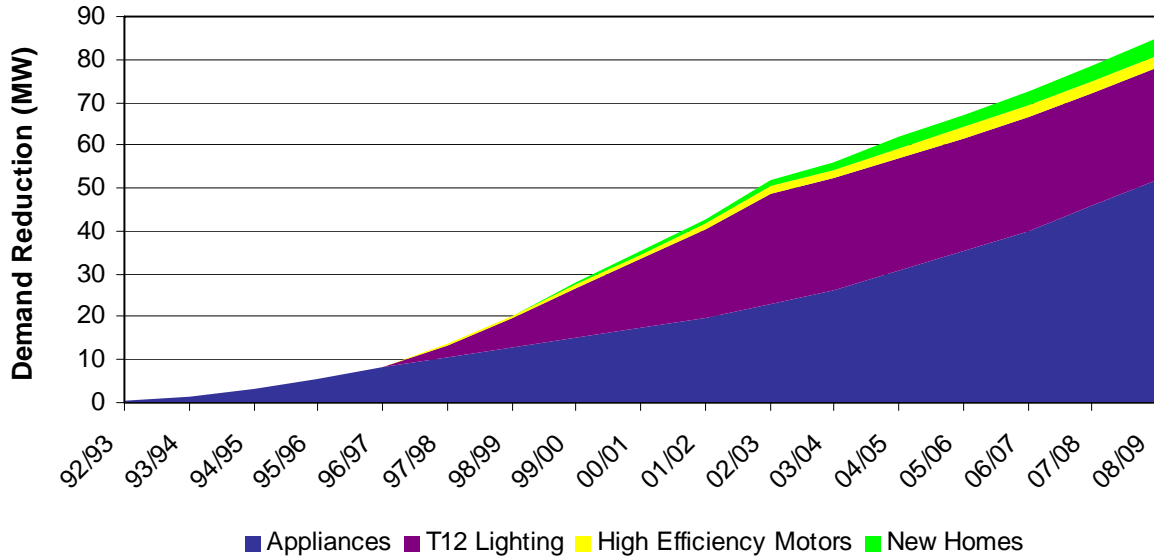
### 4.3.3 Energy Efficiency Codes & Standards Annual Energy and Demand Savings

The following section outlines the estimated energy and demand savings resulting from codes and standards improvements in the Manitoba marketplace. As part of the 2008/09 evaluation process, the assumptions and methodologies used in calculating historical codes and standards savings were reviewed and revised where appropriate to reflect more current market knowledge.

**Exhibit 4.3.3 - A**  
**Energy Efficiency Codes & Standards**  
**Cumulative GW.h Savings Achieved**  
**(at Customer Meter)**



**Exhibit 4.3.3 - B**  
**Energy Efficiency Codes & Standards**  
**Cumulative MW Savings Achieved**  
**(at Customer Meter)**



Because there are many participants (utilities, governments, manufacturers, environmental groups, etc.) contributing to the formation of energy efficiency standards, it is difficult to allocate specific credit for energy and demand savings among the various

participants. For this reason, Manitoba Hydro only reports the estimated load reduction results from changes to energy efficiency codes and standards. The estimated savings from codes and standards are not included in Power Smart economic metrics.

## 4.4 Incentive-Based Power Smart Programs

Power Smart incentive-based programs are designed to accelerate market awareness and acceptance of new energy efficiency standards and practices.

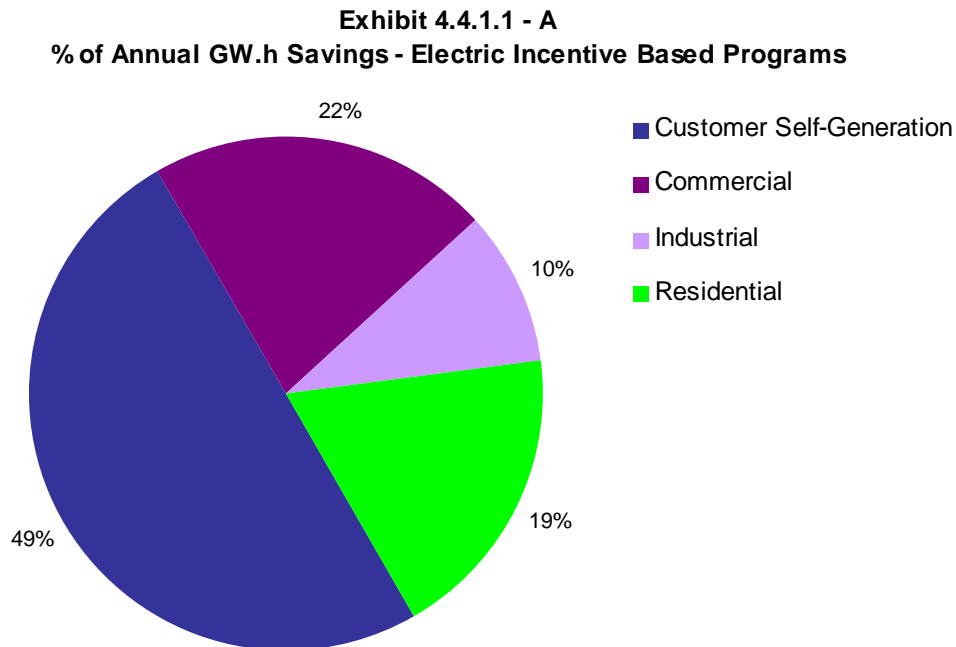
### 4.4.1 Power Smart Electric Program Results

The following sections outline the Power Smart program results in terms of electric energy and demand savings, benefit/cost analyses and average levelized costs.

#### 4.4.1.1 Annual Energy Savings

Exhibits 4.4.1.1 A and B provide an overview of the energy savings achieved to 2008/09 by incentive-based Power Smart programs.

The following chart represents the contribution to savings that each sector made in 2008/09:



**Exhibit 4.4.1.1 - B**

Annual GW.h Savings - Electric Incentive Based Programs

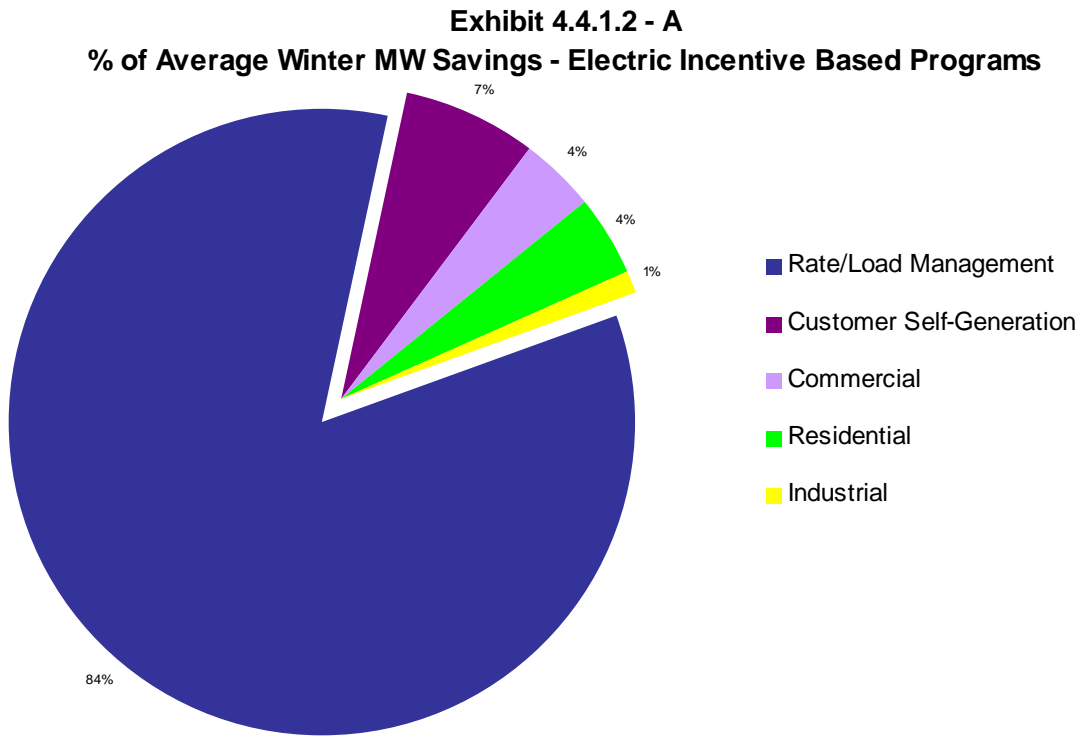
	Actual	2008/09 Plan <sup>^</sup>	Total	2023/24 Plan <sup>^</sup>
	<i>GW.h</i>			
<b>RESIDENTIAL</b>				
Compact Fluorescent Lighting	21.9	11.9	49.9	-
Home Insulation	5.6	5.6	22.1	50.9
Appliances	4.5	1.9	12.1	6.3
Energy Efficient Light Fixtures	1.1	1.7	2.1	10.2
New Homes	0.8	0.6	3.7	27.2
Seasonal LED Lighting	0.8	1.4	3.1	3.7
Lower Income Energy Efficiency Program	0.6	2.8	1.1	5.5
Water Saver Package	-	3.0	-	14.4
High Efficient Furnace & Boiler Program	-	0.1	-	0.2
	35.1	28.8	94.0	118.0
<b>COMMERCIAL</b>				
Commercial Lighting	25.0	26.5	218.9	460.7
Building Envelope	3.0	4.8	9.3	71.9
Agricultural Heat Pads	2.5	2.1	24.3	46.3
Parking Lot Controllers	2.0	6.6	32.4	74.9
Spray Valves	1.9	1.3	4.8	-
Internal Retrofit	1.8	15.4	19.8	45.8
Commercial Geothermal	1.6	1.4	20.2	43.3
Commercial Refrigeration	1.2	0.5	4.3	26.5
HVAC - Chillers	0.6	0.8	4.8	22.5
Custom	0.5	0.5	15.9	21.8
Commercial Building Optimization	0.5	1.4	0.5	44.4
City of Winnipeg Agreement	0.2	0.3	11.4	13.2
Commercial Kitchen Appliances	0.2	0.1	0.2	2.5
Commercial Clothes Washers	0.0	0.1	0.0	2.4
New Construction	-	0.7	-	42.5
Power Smart Energy Manager	-	5.6	-	7.0
Network Energy Manager	-	4.2	-	22.8
Power Smart Shops	-	0.7	-	7.0
	40.9	72.9	366.9	955.5
<b>INDUSTRIAL</b>				
Performance Optimization	18.5	12.9	294.9	446.4
Efficient Motors (QMR)	-	-	-	21.5
	18.5	12.9	294.9	467.9
<b>DISCONTINUED/COMPLETED PROGRAMS</b>				
	-	-	136.4	114.4
	-	-	136.4	114.4
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>				
	94.5	114.6	892.2	1,655.8
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>				
BioEnergy Optimization Program	94.0	120.0	94.0	77.8
	94.0	120.0	94.0	77.8
<b>RATE/LOAD MANAGEMENT PROGRAMS</b>				
Curtailable Rates	-	-	-	-
	-	-	-	-
<b>TOTAL (at customer meter)</b>				
	188.5	234.6	986.2	1,733.5
<b>TOTAL (at generation)</b>				
	210.4	262.1	1,106.6	1,953.1

<sup>^</sup> Planning estimates are from the approved DSM option in the "2008 Power Smart Plan".

Note: Figures may not add due to rounding.

#### 4.4.1.2 Average Winter Peak Demand Savings

Exhibits 4.4.1.2 A and B highlight the demand savings of incentive-based Power Smart programs achieved to 2008/09. The demand savings are presented as an average of the winter AM and PM system peak savings.



**Exhibit 4.4.1.2 - B**

Average Winter MW Savings - Electric Incentive Based Programs

	Actual	2008/09 Plan <sup>^</sup>	Total	2023/24 Plan <sup>^</sup>
	<i>MW</i>			
<b>RESIDENTIAL</b>				
Compact Fluorescent Lighting	4.5	2.4	10.2	-
Home Insulation	2.7	2.7	10.7	24.6
Appliances	0.6	0.3	1.6	1.1
Lower Income Energy Efficiency Program	0.2	0.9	0.4	2.6
New Homes	0.2	0.3	1.0	5.2
Energy Efficient Light Fixtures	0.1	0.3	0.3	2.0
Seasonal LED Lighting	0.0	0.1	0.2	0.2
Water Saver Package	-	0.2	-	1.1
High Efficient Furnace & Boiler Program	-	0.3	-	0.5
	8.4	7.6	24.3	37.3
<b>COMMERCIAL</b>				
Commercial Lighting	4.5	6.6	38.5	100.4
Building Envelope	1.4	0.8	3.9	11.6
Commercial Geothermal	0.6	0.7	9.3	22.0
Commercial Refrigeration	0.5	0.1	1.3	2.9
Agricultural Heat Pads	0.2	0.2	3.5	5.6
Internal Retrofit	0.2	4.1	3.2	9.4
Spray Valves	0.2	-	0.2	-
Custom	0.1	0.0	1.2	1.7
City of Winnipeg Agreement	0.1	0.1	2.1	2.7
Commercial Kitchen Appliances	0.0	0.0	0.0	0.8
Commercial Clothes Washers	0.0	0.0	0.0	1.9
HVAC	-	0.0	-	0.2
Commercial Building Optimization	-	0.5	-	14.8
New Construction	-	0.1	-	6.4
Power Smart Energy Manager	-	0.3	-	0.4
Network Energy Management Program	-	0.2	-	1.2
Power Smart Shops	-	0.1	-	0.8
	7.9	13.9	63.4	183.0
<b>INDUSTRIAL</b>				
Performance Optimization	2.5	2.0	68.7	93.0
Efficient Motors (QMR)	-	-	-	3.8
	2.5	2.0	68.7	96.8
<b>DISCONTINUED/COMPLETED PROGRAMS</b>				
	-	-	21.6	17.5
	-	-	21.6	17.5
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>				
	18.8	23.4	178.0	334.6
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>				
BioEnergy Optimization Program	14.3	14.3	14.3	9.7
	14.3	14.3	14.3	9.7
<b>RATE/LOAD MANAGEMENT PROGRAMS</b>				
Curtailable Rates	172.8	182.0	172.8	182.0
	172.8	182.0	172.8	182.0
<b>TOTAL (at customer meter)</b>				
	205.8	219.7	365.0	526.3
<b>TOTAL (at generation)</b>				
	227.1	242.5	405.6	588.3

<sup>^</sup> Planning estimates are from the approved DSM option in the "2008 Power Smart Plan".

Note: Figures may not add due to rounding.

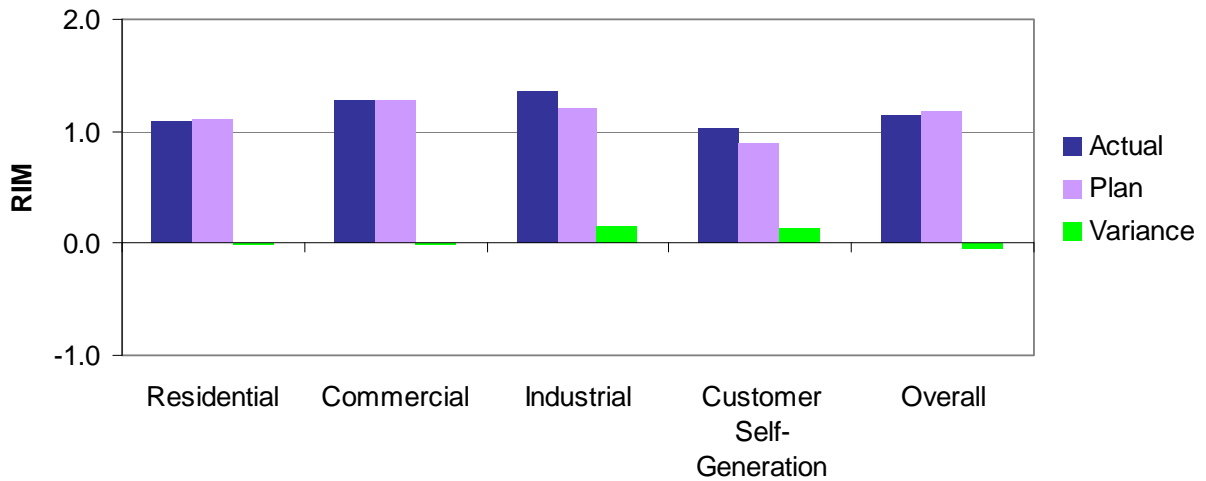
### 4.4.1.3 Electric Rate Impact Measure - Benefit/Cost Analysis

Exhibits 4.4.1.3-A and B identify the benefit/cost ratios under the Rate Impact Measure (RIM) test by program.

The calculation of the benefit/cost ratio was based on a 30-year planning period. Refer to APPENDIX F - 'Summary of Evaluation and Planning Reports' for

further detail of assumptions and of the type of calculations used in evaluating programs. Refer to APPENDIX B- 'Explanation of Benefit/Cost Ratios used in DSM Economic Tests' for formulas and criteria used to determine cost-effectiveness.

**Exhibit 4.4.1.3 - A**  
**2008/09 RIM - Electric Incentive Based Programs**





**Exhibit 4.4.1.3 - B**

Rate Impact Cost Benefit/Cost Analysis - Electric Incentive-Based Program

	Actual	Plan^^	2008/09 Total*	2023/24 Plan^^
			<i>RIM</i>	
<b>RESIDENTIAL</b>				
Home Insulation	1.5	1.5	1.5	1.5
Compact Fluorescent Lighting	1.2	1.1	1.1	1.2
Appliances	0.8	0.6	0.8	0.9
New Homes	0.8	0.7	0.7	1.2
Seasonal LED Lighting	0.7	0.8	0.8	0.8
Energy Efficient Light Fixtures	0.7	0.9	0.8	1.0
Lower Income Energy Efficiency Program**	0.6	1.1	0.7	1.6
Water & Energy Saver Package	0.0	0.9	0.0	1.0
Residential HE Furnace & Boiler Program	0.0	641,376.1	0.0	907,654.3
	1.1	1.1	1.1	1.3
<b>COMMERCIAL</b>				
Internal Retrofit	2.6	2.0	2.8	3.2
Agricultural Heat Pads	1.8	1.4	1.6	1.8
Commercial Geothermal	1.8	1.5	1.6	1.7
Building Envelope	1.7	1.3	1.4	2.5
Commercial Refrigeration	1.5	0.7	1.3	1.2
Spray Valves	1.4	1.1	1.4	1.1
Commercial Lighting	1.2	1.3	1.1	1.4
City of Winnipeg	1.1	1.3	1.2	1.5
Custom	1.1	1.0	1.2	1.1
Parking Lot Controllers	1.0	1.1	1.3	1.5
HVAC	0.9	0.9	1.1	1.1
Commercial Kitchen Appliance Program	0.9	0.9	0.9	1.2
Commercial Building Optimization	0.5	1.1	0.3	1.7
Commercial Clothes Washers Program	0.2	0.7	0.2	1.6
Commercial New Construction	0.0	0.8	0.0	1.1
Power Smart Energy Manager Program	0.0	1.4	0.0	1.7
Network Energy Management Program	0.0	0.8	0.0	1.1
Power Smart Shops	0.0	0.0	0.0	1.0
	1.3	1.3	1.2	1.4
<b>INDUSTRIAL</b>				
Performance Optimization	1.4	1.2	1.3	1.4
Emergency Preparedness	0.0	0.0	0.0	0.0
	1.4	1.2	1.3	1.4
<b>DISCONTINUED/COMPLETED PROGRAMS</b>	0.0	-	0.7	-
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>				
BioEnergy Optimization Program	1.0	0.9	1.3	1.3
<b>OVERALL PROGRAM COSTS</b>	1.2	1.2	1.1	1.4
<b>OVERALL PROGRAM COSTS + SUPPORT COSTS^</b>	1.1	1.2	1.1	1.4

\* "Total" values represent the cumulative results of the program/portfolio since its inception.

\*\* Includes Affordable Energy Fund.

^ Support costs contain Customer Service Initiatives and Basic Information Services and program support costs.

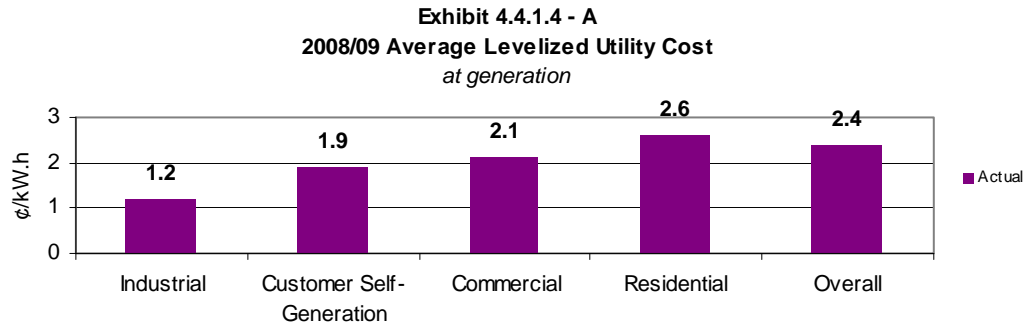
^^ Planning ratios are from the "2008 Power Smart Plan".

Note: Benefit/cost analysis is not calculated for rate/load management programs.

#### 4.4.1.4 Electric Average Levelized Utility Costs - ¢/kW.h Saved

Exhibits 4.4.1.4-A and B highlight the average levelized cost of 2008/09 electric incentive-based programs in ¢/kW.h. The calculation of ¢/kW.h saved was based upon current program kW.h savings at generation over a 30-year planning period. Refer to APPENDIX E - 'Summary of Evaluation and Planning Reports' for

further detail of assumptions and of the type of calculations used in evaluating programs. The utility costs presented do not include costs associated with customer service initiatives, standards activities, or the customer costs of demand side management measures.



**Exhibit 4.4.1.4 - B**

Average Levelized Utility Cost at Generation - ¢/kW.h saved by Power Smart Program

	2008/09 Actual ¢/kW.h
<b>RESIDENTIAL</b>	
Compact Fluorescent Lighting	1.1
Home Insulation	1.8
LED Lighting	3.2
Appliances	3.3
Energy Efficient Light Fixtures	4.2
New Homes	7.0
Lower Income Energy Efficiency Program (excluding external funding)	n/a
Water Energy Saver	n/a
	2.6
<b>COMMERCIAL</b>	
Agricultural Heat Pads	0.1
Spray Valves	0.1
Commercial Geothermal	1.0
Building Envelope	1.5
Parking Lot Controlllers	1.8
Commercial Refrigeration	1.9
HVAC	2.3
Commercial Lighting	2.3
Internal Retrofit	2.5
City of Winnipeg	2.8
Custom	3.5
Commercial Kitchen	4.5
Commercial Building Optimization	6.9
Commercial Clothes Washer	n/a
Power Smart Energy Manager	n/a
New Construction	n/a
Network Energy Manager	n/a
Power Smart Shops	n/a
	2.1
<b>INDUSTRIAL</b>	
Performance Optimization	1.2
Emergency Preparedness	n/a
	1.2
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>	
Bioenergy	1.9
	1.9
<b>OVERALL: PROGRAM COSTS</b>	<b>2.1</b>
<b>OVERALL: PROGRAM COSTS + SUPPORT COSTS</b>	<b>2.4</b>

Note: Average levelized cost analysis is not provided for rate/load management programs.  
Support costs contain Customer Service Initiatives and Basic Information Services and program support costs.

Programs in the start-up phase are not evaluated on average levelized utility costs metric because the results can be misleading.

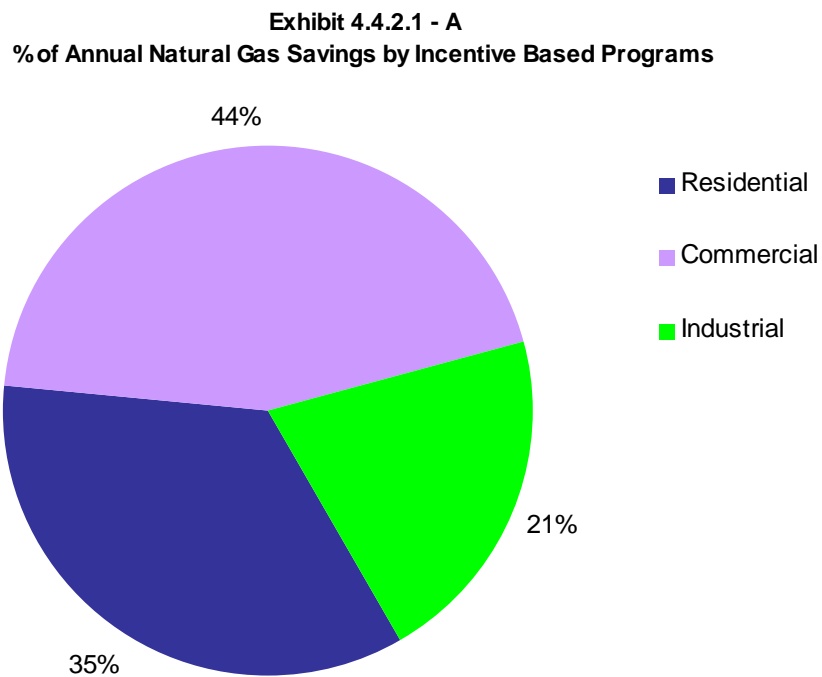
## 4.4.2 Power Smart Natural Gas Program Results

The following sections outline the Power Smart program results in terms of natural gas energy savings, benefit/cost analyses and average levelized costs.

### 4.4.2.1 Annual Natural Gas Energy Savings

Exhibits 4.4.2.1-A and B provide an overview of the energy savings achieved to 2008/09 by incentive-based Power Smart programs.

The following chart represents the contribution to savings each sector made in 2008/09:



**Exhibit 4.4.2.1 - B**

## Annual Natural Gas Savings - Incentive-Based Programs

	Actual	2008/09		2023/24 Plan <sup>^^</sup>
		Plan <sup>^</sup>	Total	
		<i>millions of cubic metres</i>		
<b>RESIDENTIAL</b>				
HE Gas Furnace	1.7	0.8	5.8	5.5
Home Insulation	1.7	1.9	5.6	19.9
New Homes	0.1	0.1	0.3	6.9
Lower Income Energy Efficiency Program	0.0	0.7	0.1	1.9
Water & Energy Saver	-	0.5	-	2.4
Appliances	-	0.0	-	0.1
	3.6	4.1	11.7	36.7
<b>COMMERCIAL</b>				
HVAC	2.3	2.0	4.8	36.9
Building Envelope	1.2	2.0	2.4	30.5
Spray Valves	1.0	0.2	2.1	-
Commercial Building Optimization	0.1	0.3	0.1	7.6
Commercial Kitchen Appliance program	0.0	0.1	0.0	2.7
City of Winnipeg Agreement	-	0.0	0.8	0.2
Commercial Custom	-	0.1	-	1.2
New Construction	-	0.1	-	3.0
Power Smart Energy Manager Program	-	0.5	-	0.6
Commercial Clothes Washer Program	-	0.0	-	0.2
Power Smart Shops	-	0.0	-	0.1
	4.6	5.1	10.3	82.8
<b>INDUSTRIAL</b>				
Industrial Natural Gas Optimization	2.2	0.6	3.8	5.2
	2.2	0.6	3.8	5.2
<b>DISCONTINUED/COMPLETED PROGRAMS</b>	-	-	0.2	0.2
	-	-	0.2	0.2
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>10.4</b>	<b>9.8</b>	<b>26.0</b>	<b>125.0</b>
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>				
Bioenergy	-	-	-	3.8
	-	-	-	3.8
<b>INTERACTIVE EFFECTS WITH ELECTRICITY PROGRAMS</b>				
Appliances	0.1	-	0.2	(0.0)
Commercial Refrigeration	0.1	-	0.3	0.2
Commercial Clothes Washers	0.0	-	0.0	-
Lower Income	-	(0.0)	-	-
Power Smart Shops	-	(0.0)	-	(0.2)
Network Energy Manager	-	(0.1)	-	(0.4)
New Homes	(0.0)	(0.0)	(0.0)	(0.0)
Energy Efficient Light Fixtures	(0.1)	(0.0)	(0.2)	(0.1)
Commercial Lighting	(0.2)	(0.2)	(2.0)	(3.5)
Compact Fluorescent Lighting	(1.9)	(1.1)	(4.1)	-
	(2.1)	(1.4)	(5.8)	(4.0)
<b>NET IMPACT OVERALL</b>	<b>8.3</b>	<b>8.4</b>	<b>20.3</b>	<b>124.8</b>

<sup>^</sup> 2008/09 planning estimates are from the approved DSM option in the “2008 Power Smart Plan”, however, there may be some variances due to revisions.

<sup>^^</sup> 2023/24 planning targets are from the “2008 Power Smart Plan”.

Note: Figures may not add due to rounding.

Power Smart incentive-based efficiency program activity in 2008/09 provided 10.4 million m<sup>3</sup> of natural gas savings, 6% above plan.

Some Power Smart electricity programs have interactive effects which can result in an increase or decrease in natural gas consumption. For example, a more energy efficient lighting system emits less heat, requiring more energy to heat the space. In cases where the heat is produced through electric heating sources, the interactive effect is taken into account when calculating the anticipated electricity savings that will result from

the program. In cases where the heat is produced through natural gas heating systems, the interactive effects are reported here. These interactive effects represent the increase in natural gas consumption for gas-heated homes from installing energy efficient lighting systems.

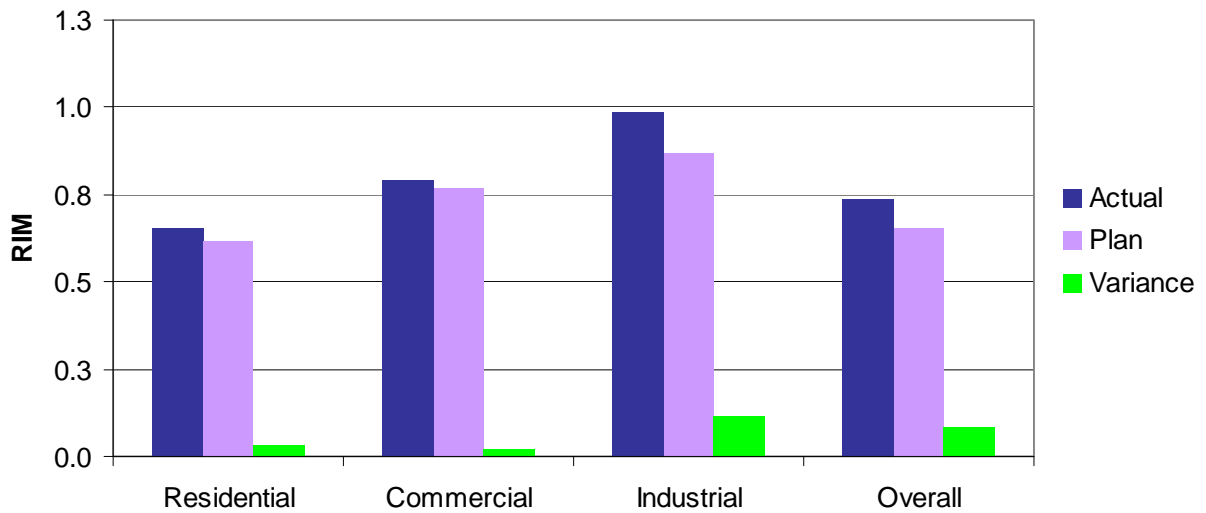
In 2008/09, interactive effects increased consumption by 2.1 million m<sup>3</sup>, thus providing an integrated incentive-based natural gas result of 8.3 million m<sup>3</sup>. The total integrated incentive-based natural gas result achieved in 2008/09 was 20.3 million m<sup>3</sup> of gas.

#### 4.4.2.2 Natural Gas Rate Impact Measure - Benefit/Cost Analysis

Exhibits 4.4.2.2-A and B identify the benefit/cost ratios under the Rate Impact Measure (RIM) test by program. The calculation of the benefit/cost ratio was based on a 30-year planning period. Refer to APPENDIX F- 'Summary of Evaluation and Planning Reports' for

further detail of assumptions and the type of calculations used in evaluating programs. Refer to APPENDIX B - 'Explanation of Benefit/Cost Ratios used in DSM Economic Tests' for formulas and criteria used to determine cost-effectiveness.

**Exhibit 4.4.2.2 - A**  
**2008/09 RIM - Natural Gas Incentive Based Programs**



**Exhibit 4.4.2.2 - B**

Rate Impact Cost Benefit/Cost Analysis - Natural Gas Incentive-Based Program

	Actual	2008/09 Plan^^	Total*	2023/24 Plan^^
		<i>RIM</i>		
<b>RESIDENTIAL</b>				
New Homes	0.9	0.4	0.7	0.9
Home Insulation	0.7	0.6	0.7	0.6
HE Gas Furnace	0.6	0.7	0.6	0.7
Lower Income Energy Efficiency Program**	0.2	0.5	0.2	0.6
Water & Energy Saver Package	-	0.7	0.0	0.7
	0.7	0.6	0.7	n/a
<b>COMMERCIAL</b>				
Spray Valves	0.9	0.8	0.9	0.9
HVAC	0.8	0.8	0.8	0.8
Building Envelope	0.7	0.7	0.7	0.7
Commercial Kitchen Appliance program	0.6	0.6	0.6	0.8
Building Optimization	0.6	0.6	0.3	0.7
Custom	-	0.7		
City of Winnipeg	-	1.0	0.8	0.0
Commercial New Construction	-	0.7		0.9
Power Smart Energy Manager Program	-	0.8		0.9
Commercial Clothes Washer Program	-	1.0		0.0
Power Smart Shops	-	0.0		0.9
	0.8	0.8	0.8	n/a
<b>INDUSTRIAL</b>				
Industrial Natural Gas Optimization	1.0	0.9	0.9	0.9
	1.0	0.9	0.9	0.9
<b>DISCONTINUED/COMPLETED PROGRAMS</b>	-	-	0.6	-
<b>CUSTOMER SELF-GENERATION</b>				
BioEnergy Optimization Program	-	0.0	0.0	0.9
	-	0.0	0.0	0.9
<b>OVERALL: PROGRAM COSTS</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>
<b>OVERALL: PROGRAM COSTS incl. INTERACTIVE EFFECTS</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>
<b>OVERALL: PROGRAM COSTS + SUPPORT COSTS incl. INTERACTIVE EFFECTS^</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>

^ Support costs contain Customer Service Initiatives and Basic Information Services and program support costs.

^^ Planning ratios are from the "2008 Power Smart Plan".

\* "Total" values represent the cumulative results of the program/portfolio since its inception.

\*\* Includes Furnace Replacement Budget.

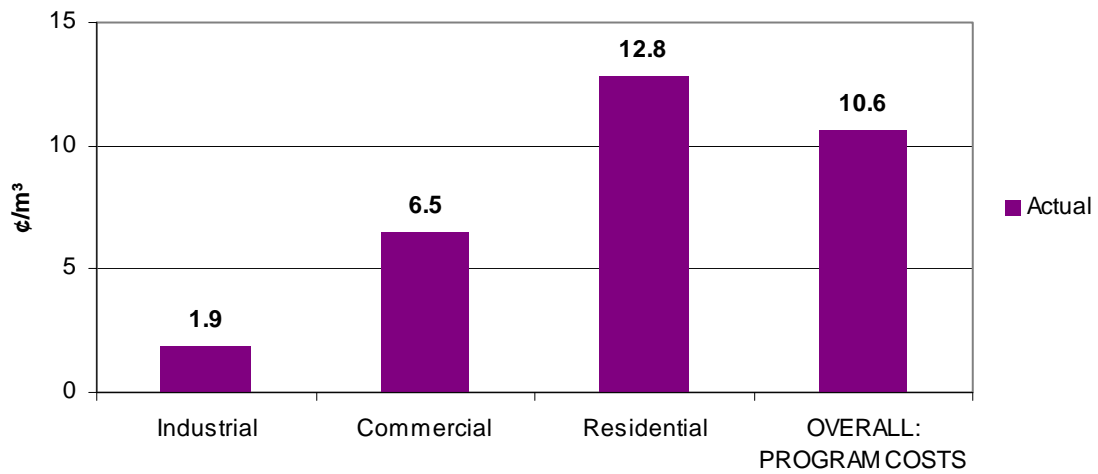


### 4.4.2.3 Natural Gas Average Levelized Utility Costs - ¢/m<sup>3</sup> Saved

Exhibits 4.4.2.3-A and B highlight the average levelized cost of incentive-based programs implemented prior to 2008/09 in ¢/m<sup>3</sup>. The calculation of ¢/m<sup>3</sup> saved was based upon current program natural gas savings over a 30-year planning period. Refer to APPENDIX E - 'Summary of Evaluation and Planning Reports' for

further details of assumptions and of the types of calculations used in evaluating programs. The utility costs presented do not include costs associated with future Power Smart incentive-based programs, customer service initiatives, standards activities, or the customer costs of demand-side management measures.

**Exhibit 4.4.2.3 - A**  
**2008/09 Average Levelized Utility Cost (¢/m<sup>3</sup>)**



**Exhibit 4.4.2.3 - B**Average Levelized Utility Cost - ¢/m<sup>3</sup> saved by Power Smart Program

	2008/09 Actual ¢/m <sup>3</sup>
<b>RESIDENTIAL</b>	
New Homes	1.2
Home Insulation	11.0
HE Gas Furnace	13.6
Lower Income Energy Efficiency Program (excluding external funding)	n/a
	12.8
<b>COMMERCIAL</b>	
Spray Valves	1.6
HVAC	4.5
Building Envelope	9.1
Commercial Kitchen	n/a
Commercial Building Optimization	n/a
City of Winnipeg	n/a
Power Smart Energy Manager	n/a
New Construction	n/a
Power Smart Shops	n/a
	6.5
<b>INDUSTRIAL</b>	
Industrial Natural Gas Optimization	1.9
<b>OVERALL: PROGRAM COSTS</b>	<b>8.2</b>
<b>OVERALL: PROGRAM COSTS incl. INTERACTIVE EFFECTS†</b>	<b>8.9</b>
<b>OVERALL: PROGRAM COSTS + SUPPORT COSTS incl. INTERACTIVE EFFECTS^</b>	<b>10.6</b>

^ Support costs contain Customer Service Initiatives and Basic Information Services and program support costs.

† Increased or decreased natural gas benefits resulting from electric incentive-based programs have been included in the overall calculation.

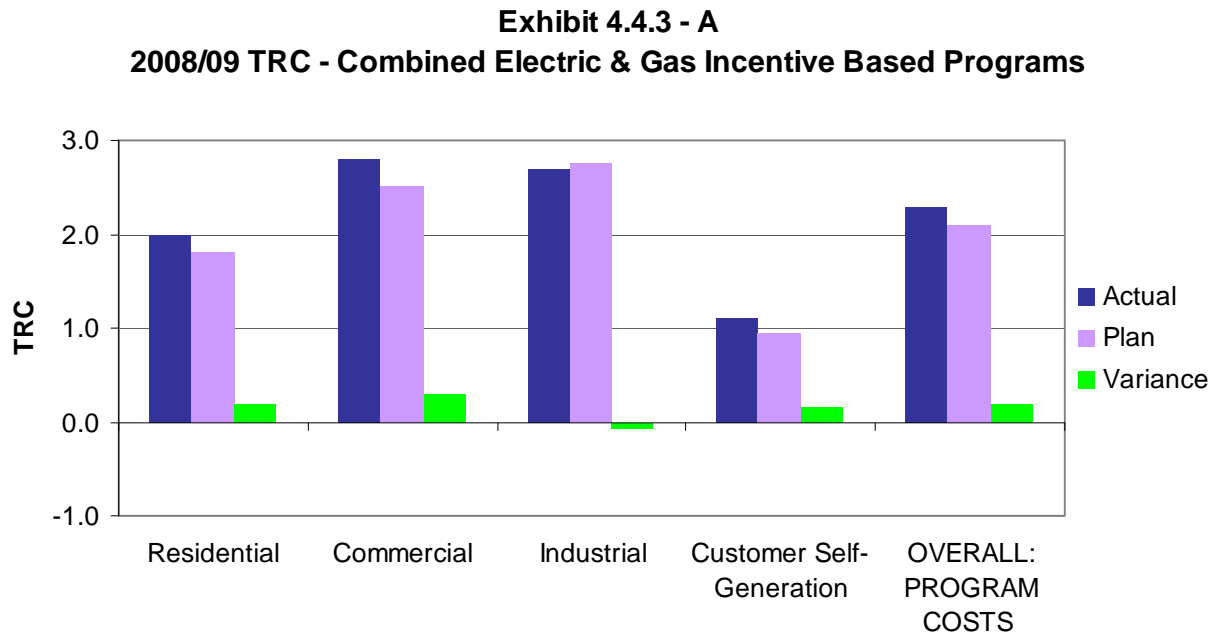
Programs in the startup phase are not evaluated against average levelized utility costs because the results can be misleading.

### 4.4.3 Power Smart Combined Electricity & Natural Gas Program Results

#### Total Resource Cost - Benefit/Cost Analysis

Exhibits 4.4.3-A and B show the combined electricity and natural gas benefit/cost analysis results under the Total Resource Cost (TRC) test by program. The

calculation of the benefit/cost ratio was based on a 30-year planning period.



**Exhibit 4.4.3 - B**

Total Resource Cost Benefit/Cost Analysis - Combined Electric & Gas Incentive-Based Program

	Actual	2008/09		2023/24 Plan^^
		Plan^^	Total	
	TRC			
<b>RESIDENTIAL</b>				
Compact Fluorescent Lighting	4.2	2.9	2.4	3.7
Home Insulation	2.8	2.7	2.8	2.4
Seasonal LED Lighting	2.4	3.1	3.3	3.9
Appliances	1.9	1.1	1.3	1.2
High Efficiency Furnace/Boiler	1.4	0.9	1.3	0.9
New Homes	1.2	0.8	1.0	1.2
Energy Efficient Light Fixtures	1.1	2.4	1.2	2.8
Lower Income Energy Efficiency Program*	0.5	1.1	0.6	0.9
Water Saver Package	-	5.7	-	7.7
	2.0	1.8	1.9	1.8
<b>COMMERCIAL</b>				
Agricultural Heat Pads	67.1	6.6	46.6	9.0
Rinse and Save	25.2	13.1	19.1	13.1
Commercial Refrigeration	4.6	1.4	3.5	4.1
Building Envelope	4.6	2.0	2.8	1.9
HVAC	3.1	3.6	3.1	3.6
Commercial Lighting	2.4	3.1	2.3	3.3
Parking Lot Controllers	2.3	2.7	3.4	3.3
City of Winnipeg	2.2	4.6	2.9	14.8
Commercial Earth Power	1.9	2.6	1.8	2.9
Kitchen Appliance	1.7	1.1	1.7	1.4
Custom Measures	1.6	1.3	1.7	1.4
Internal Retrofit	1.5	2.0	2.6	3.2
Building Optimization	0.9	1.4	0.5	2.9
Clothes Washer	0.4	0.7	0.4	1.5
New Construction	-	1.6	-	1.7
Power Smart Energy Manager	-	1.5	-	1.7
Network Energy Management Program	-	2.1	-	2.7
Power Smart Shops	-	-	-	1.5
	2.8	2.5	2.5	2.7
<b>INDUSTRIAL</b>				
Industrial Natural Gas	2.8	2.5	3.0	2.1
Performance Optimization	2.7	2.8	3.4	3.4
Emergency Preparedness	-	-	-	-
	2.7	2.8	3.5	3.2
<b>DISCONTINUED/COMPLETED PROGRAMS*</b>				
	-	-	1.7	-
	-	-	1.7	-
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>				
BioEnergy Optimization Program	1.1	0.9	1.3	1.8
	1.1	0.9	1.3	1.8
<b>OVERALL: PROGRAM COSTS</b>				
	2.3	2.1	2.5	2.4
<b>OVERALL: PROGRAM COSTS + SUPPORT COSTS^</b>				
	2.1	2.1	2.3	2.4

\* Includes Affordable Energy Fund.

^ Support costs contain Customer Service Initiatives and Basic Information Services and program support costs.

^^ Planning ratios are from the "2008 Power Smart Plan".

Note: Increased or decreased natural gas benefits resulting from electric incentive-based programs have been included in the overall calculation.

In TRC analysis, program administration costs include funds from the Federal Government.

Benefit/cost analysis is not calculated for rate/load management programs.

For 2008/09, the combined overall TRC benefit/cost ratio including support costs was 2.1, which is on target with the plan. Results indicate that all evaluated energy efficiency Power Smart programs, except the Lower Income Energy Efficiency Program, were cost-effective under the Total Resource Cost test in 2008/09.

#### 4.4.4 Lower Income Energy Efficiency Program

**Exhibit 4.4.4**  
Lower Income Energy Efficiency Program Cost Effectiveness Ratios

	TRC	RIM	Levelized Utility
<b>ELECTRIC</b>			
LIEEP (with Power Smart, AEF & External Funding)	0.7		
LIEEP*		1.2	3.9
LIEEP (with AEF)		0.8	10.3
<b>NATURAL GAS</b>			
LIEEP (with Power Smart, AEF, Furnace Replacement Budget, & External Funding)	0.2		
LIEEP*		0.4	49.3
LIEEP (with AEF)		0.2	159.8
LIEEP without Furnace Replacement Program (with Power Smart, AEF, & External Funding)	0.2		
LIEEP without Furnace Replacement Program (with Power Smart & AEF)		0.1	203.3
LIEEP Furnace Replacement Program Only (with Furnace Replacement Budget & External Funding Furnace)	1.1		
LIEEP Furnace Replacement Program Only (with Furnace Replacement Budget)		0.1	351.3
<b>Combined</b>	<b>0.5</b>		

\* Excludes Affordable Energy Fund.

Note: Includes start up costs.

For illustrative purposes, a portion of the AEF spending was attributed to natural gas.

## 5.0 Total Power Smart Utility Costs

Total utility costs include all costs incurred by the utility in the planning, development, design, implementation, and evaluation of Power Smart programs.

Program costs are costs attributed to a specific program and include program administration costs and incentive costs.

Support costs are costs of activities supporting Power Smart programs which cannot be wholly assigned to any one specific program. These costs include activities

such as Power Smart promotions (general branding), promoting sustainability and standards, and demand side management administration (overall planning and evaluation). Support costs also include costs attributed to running Customer Service Initiative programs and the basic information portions of the efficiency programs.

### 5.1 Summary of Total Power Smart Utility Costs

Exhibit 5.1 summarizes the utility costs of programs cumulative to 2008/09. The reported utility costs cumulative to 2008/09 are presented in nominal dollars

and detail actual accounting expenditures to 2008/09 for all Power Smart initiatives and activities.

#### Exhibit 5.1

Summary of Utility Costs cumulative to 2008/09

UTILITY COSTS	Cumulative <i>millions of nominal dollars</i>
TOTAL UTILITY COSTS	
Program Cost	239.4
Support Cost	53.4
	292.8
<b>TOTAL UTILITY COSTS</b>	<b>292.8</b>

Note: Support costs include both customer service initiatives and support activity costs. As of April 1, 2004, natural gas programs were added to the Power Smart portfolio. Figures may not add due to rounding.

As of March 31<sup>st</sup>, 2009, Manitoba Hydro had invested \$293 million in Power Smart. The highest component of this expenditure was the program utility costs at \$239

million, which is 82% of the total expenditures cumulative to 2008/09.

## 5.2 Utility Costs Allocated to Current Power Smart Programs

Exhibits 5.2-A and B outline the costs to the utility for Power Smart programs implemented between April 1, 1989 and March 31, 2009.

### Exhibit 5.2 - A

Utility Costs for Support, Basic Information Services & Customer Service Initiatives & Standards

	Actual 2008\$	Cumulative nominal \$
	<i>thousands of dollars</i>	
<b>CUSTOMER SERVICE INITIATIVES</b>		
<i>Customer Service Initiatives &amp; Standards Electric Cost</i>	182	1,861
<i>Customer Service Initiatives &amp; Standards Natural Gas Cost</i>	-216	2,830
	-34	4,691
<b>BASIC INFORMATION SERVICES</b>		
<i>Basic Information Services Electric Cost</i>	1,696	14,427
<i>Basic Information Services Gas Cost</i>	512	3,216
	2,208	17,643
<b>Discontinued/Completed Basic Information Services</b>		
<i>Discontinued Basic Information Services Electric Cost</i>	0	2,884
<i>Discontinued Basic Information Services Gas Cost</i>	0	20
	0	2,904
<b>SUPPORT COSTS</b>		
<b>Power Smart Communications</b>		
<i>Power Smart Communications Electric Cost</i>	1,122	12,475
<i>Power Smart Communications Natural Gas Cost</i>	918	2,052
	2,041	14,527
<b>Residential Retrofit</b>		
<i>Residential Retrofit Electric Cost</i>	73	285
<i>Residential Retrofit Natural Gas Cost</i>	135	427
	208	713
<b>Retrofit Demonstrations</b>		
<i>Retrofit Demonstrations Electric Cost</i>	2	47
<i>Retrofit Demonstrations Natural Gas Cost</i>	0	80
	2	127
<b>Integrated Plan/Targets</b>		
<i>Integrated Plan/Targets Electric Cost</i>	172	2,898
<i>Integrated Plan/Targets Natural Gas Cost</i>	141	335
	313	3,233
<b>DSM Administration</b>		
<i>DSM Administration Electric Cost</i>	247	3,215
<i>DSM Administration Natural Gas Cost</i>	202	585
	449	3,800
<b>DSM Tracking System</b>		
<i>DSM Tracking System Electric Cost</i>	1	355
<i>DSM Tracking System Natural Gas Cost</i>	1	7
	1	362
<b>Commercial Audits</b>		
<i>Commercial Audits Electric Cost</i>	0	133
<i>Commercial Audits Natural Gas Cost</i>	0	45
	0	178
<b>Sustainabilities &amp; Standards</b>		
<i>Sustainabilities &amp; Standards Electric Cost</i>	55	235
<i>Sustainabilities &amp; Standards Natural Gas Cost</i>	102	427
	157	661
<b>Power Smart for Business</b>		
<i>Power Smart for Business Electric Cost</i>	198	1,062
<i>Power Smart for Business Natural Gas Cost</i>	132	376
	329	1,438
<b>Discontinued/Shelved Support Costs</b>		
<i>Discontinued Support/Shelved Costs Electric Cost</i>	0	3,157
<i>Discontinued/Shelved Support Costs Natural Gas Cost</i>	0	0
	0	3,157
<b>TOTAL SUPPORT COSTS &amp; CUSTOMER SERVICE INITIATIVES &amp; STANDARDS</b>	<b>5,674</b>	<b>53,432</b>

Note: As of April 1, 2004, natural gas programs were added to the Power Smart portfolio. Figures may not add due to rounding.

**Exhibit 5.2 - B**

Utility Costs Efficiency Programs

	Actual 2008\$	Cumulative nominal \$
	<i>thousands of dollars</i>	
<b>EFFICIENCY PROGRAMS</b>		
<b>RESIDENTIAL</b>		
<b>Home Insulation</b>		
Home Insulation Electric Cost	1,590	7,991
Home Insulation Natural Gas Cost	2,751	7,908
	4,341	15,899
<b>New Homes</b>		
New Homes Electric Cost	635	3,828
New Homes Natural Gas Cost	0	397
	635	4,225
High Efficiency Furnaces (Natural Gas)	3,166	7,066
Compact Fluorescent Lighting	1,271	4,703
LED Seasonal Lighting Program	339	1,083
Energy Efficient Light Fixtures	380	895
Appliances	1,719	5,142
<b>Lower Income Energy Efficiency Program</b>		
First Nation Program	6	26
Lower Income Energy Efficiency Program Electric Cost	204	522
Lower Income Energy Efficiency Program Natural Gas Cost	205	407
	414	955
Water and Energy Saver Package	78	107
Refrigerator Buy Back Program	0	142
	12,343	40,217
<b>COMMERCIAL</b>		
<b>Custom</b>		
Custom Electric Cost	238	2,009
Custom Natural Gas Cost	0	91
	238	2,100
<b>Commercial Insulation</b>		
Commercial Insulation Electric Cost	237	982
Commercial Insulation Natural Gas Cost	1,010	1,802
	1,248	2,784
<b>Commercial Windows</b>		
Commercial Windows Electric Cost	441	1,603
Commercial Windows Natural Gas Cost	462	1,033
	903	2,636
Parking Lot Controllers	377	5,114
Commercial Geothermal	221	3,250
<b>HVAC</b>		
HVAC Electric Cost	211	1,062
HVAC Natural Gas Cost	1,370	3,641
	1,581	4,704
<b>CO2 Sensors</b>		
CO2 Sensors Electric Cost	1	1
CO2 Sensors Gas Cost	10	10
	10	10
Internal Retrofit*	4,311	23,115
Commercial Lighting	7,723	47,645
Agricultural Heat Pads	42	771
City of Winnipeg Agreement	63	10,573
Refrigeration	174	955
<b>Spray Valves</b>		
Spray Valves Electric Cost	21	78
Spray Valves Natural Gas Cost	122	307
	143	386
<b>Building Optimization Program</b>		
Building Optimization Program Electric Cost	28	304
Building Optimization Program Natural Gas Cost	157	661
	185	966
<b>Power Smart Energy Manager</b>		
Power Smart Energy Manager Electric Cost	115	194
Power Smart Energy Manager Natural Gas Cost	94	220
	210	413
<b>New Construction</b>		
New Construction Electric Cost	95	247
New Construction Natural Gas Cost	143	208
	238	455
<b>Clothes Washers</b>		
<b>Kitchen Appliances</b>		
Kitchen Appliances Electric Cost	90	98
Kitchen Appliances Natural Gas Cost	16	57
	106	155
<b>Power Smart Shops</b>		
Power Smart Shops Electric Cost	60	61
Power Smart Shops Natural Gas Cost	15	16
	75	78
<b>Network Energy Manager</b>		
	20	23
	17,912	106,253



**Exhibit 5.2 - B**

## Utility Costs Efficiency Programs

	Actual 2008\$	Cumulative nominal \$
	<i>thousands of dollars</i>	
<b>INDUSTRIAL</b>		
Performance Optimization	2,504	20,304
Industrial Natural Gas Optimization	334	800
Emergency Preparedness	81	81
	2,918	21,185
Discontinued/Shelved Program Costs		
<i>Discontinued/Shelved Program Electric Costs</i>	10	13,431
<i>Discontinued/Shelved Program Gas Costs</i>	38	333
	48	13,764
<b>EFFICIENCY PROGRAMS COSTS SUBTOTAL</b>	<b>33,222</b>	<b>181,418</b>
<b>CUSTOMER SELF GENERATION</b>		
BioEnergy Optimization Program		
<i>BioEnergy Optimization Program Electric Cost</i>	1,718	5,039
<i>BioEnergy Optimization Program Natural Gas Cost</i>	8	112
	1,726	5,151
<b>RATE/LOAD MANAGEMENT PROGRAMS</b>		
Curtable Rates	6,382	52,795
	6,382	52,795
<b>TOTAL EFFICIENCY PROGRAM COSTS</b>	<b>41,331</b>	<b>239,364</b>

\* Includes 3.6 million for Downtown Office Project which was not allocated to the Internal Retrofit Program in 2008/09.  
 Note: As of April 1, 2004, natural gas programs were added to the Power Smart portfolio.  
 Figures may not add due to rounding.

### 5.3 Utility Costs by Energy Source

**Exhibit 5.3**

## Summary of Electricity &amp; Natural Gas Utility Costs

	Actual 2008\$	Cumulative nominal \$
	<i>millions of dollars</i>	
<b>ELECTRICITY</b>		
Program Cost	31.4	214.3
Support Cost	3.7	43.0
	35.2	257.3
<b>NATURAL GAS</b>		
Program Cost	9.9	25.1
Support Cost	1.9	10.4
	11.8	35.5
<b>TOTAL UTILITY COSTS (ELECTRICITY + NATURAL GAS)</b>	<b>47.0</b>	<b>292.8</b>

Note: Support costs include both customer service initiatives and support activity costs.

Total Power Smart electricity initiatives represent 75% of total Power Smart Expenditures in 2008/09 and 88% of cumulative Power Smart expenditures to date.

## 5.4 The Affordable Energy Fund

The Affordable Energy Fund was established during 2006/07 through the Winter Heating Cost Control Act and it supports Manitoba Hydro's sustainable development initiatives. The purpose of the Fund is to provide support for programs and services that achieve specific objectives including encouraging energy efficiency and conservation through programs and

services for rural and northern Manitobans, low income customers and seniors and encouraging the use of alternative energy sources such as renewable energy.

Exhibit 5.4 provides a summary of Affordable Energy Expenditures:

**Exhibit 5.4**  
Summary of Affordable Energy Expenditures

	2006/07	2007/08	2008/09	Cumulative
	<i>thousands of nominal dollars</i>			
Lower Income/Community Based Initiative	256	219	893	1,368
Geothermal Support	619	270	92	982
Community Support and Outreach*	0	0	35	35
Oil and Propane Heated Residential Homes**	0	75	85	159
Special Projects				
<i>Residential Energy Assessment Service</i>	0	61	241	302
<i>Oil and Propane Furnace Replacement***</i>	0	0	6	6
<i>Residential Solar Water Heating</i>	0	0	89	89
	0	61	336	397
<b>TOTAL EXPENDITURES</b>	<b>875</b>	<b>625</b>	<b>1,441</b>	<b>2,941</b>

\* Allocated to Lower Income Program for 08/09 Evaluation.

\*\* Allocated to Home Insulation Program for 08/09 Evaluation.

\*\*\* Allocated to High Efficiency Furnace Program for 08/09 Evaluation.

## 5.5 The Lower Income Furnace Replacement Budget

The Lower Income Furnace Replacement Budget was established during 2007/08 as a result of Public Utility Board Order 99/07. The purpose of the budget is to establish and administer a natural gas Furnace Replacement Program for low income customers.

Exhibit 5.5 outlines the Lower Income Furnace Replacement Expenditures in 2008/09:

**Exhibit 5.5**

Summary of Furnace Replacement Expenditures

	2008/09	Cumulative
	<i>thousands of nominal dollars</i>	
Natural Gas Furnace Replacement	264	264
<b>TOTAL EXPENDITURES</b>	<b>264</b>	<b>264</b>

# APPENDIX A

## *Sources of Evaluation and Planning Estimates*

Many sources are used to identify the evaluation estimates of load savings and utility costs resulting from Power Smart programs. These include:

### Sources of Evaluation

#### Impact Evaluation Reports

Impact evaluation reports are prepared for Power Smart programs to identify net program load savings and costs as well as the cost-effectiveness of these savings. Net savings and costs differ from gross savings and costs as they take into consideration factors such as free riders, free drivers, heating/cooling interactive effects, and persistence effects.

A number of variables potentially affect the cost effectiveness of Power Smart programs. These variables are electric energy, demand or natural gas reduction, hours of operation, measure persistence, average measure life, measure reinvestment, and changes in marginal cost values.

#### Data Tracking Results

Load savings and utility costs taken from the data tracking results are gross evaluation estimates because

an impact evaluation of the program has not yet been completed.

#### Life-to-Date Expenditure Report

The utility costs cumulative to 2008/09 are accounting figures from the Life-to-Date Expenditure Report for the period of April 1, 1989 to March 31, 2009.

Economic costs include all costs directly associated with the savings achieved in the 2008/09 year. Thus, the utility costs will include an apportioning of original program start-up costs and the value of incentives related to the measures installed under the 2008/09 programs.

When measuring cost effectiveness of a program, the economic costs, rather than accounting costs, are used.

#### Engineering Estimates

As experts in various technologies, engineering expertise is used to quantify usage and savings data. Computer simulation and modeling may also be used.

#### Sales & Market Data

Includes in-depth market knowledge of specialists, product specifications and ratings, sales and replacement data.

## Sources of Planning Estimates

### 2008/09 Electric Planning Estimates

The 2008/09 electric planning estimates were taken from the approved option (Recommended Option) from the “2008 Power Smart Plan”.

In all cases the “2008 Power Smart” plan volumes and estimates were used regardless of delays in programs launches and modifications.

### 2008/09 Natural Gas Planning Estimates

The 2008/09 natural gas planning estimates were taken from the approved option (Recommended Option) from the “2008 Power Smart Plan”.

In all cases the “2008 Power Smart” plan volumes and estimates were used regardless of delays in program launches and modifications.

### 2023/24 Planning Estimates

The 2023/24 electric planning targets for energy and demand savings are from the approved DSM option in the “2008 Power Smart Plan” report which includes forecasts for 2008/09 through to 2023/24. The 1992/93 through to 2007/08 planning estimates for energy and demand savings are from the respective Power Smart Resource Options reports or Power Smart Plan. Electric long range planning targets did not exist prior to 1992/93.

The 2023/24 natural gas planning targets are from the approved DSM option in the “2008 Power Smart Plan” report which includes forecasts for 2008/09 through to

Consistent usage of the same plan helps reduce the probability of errors and provides a verifiable public target to compare against. Ensuring the same source information helps ensure a realistic and objective evaluation of the programs/portfolio was conducted and improves the reliability and verifiability of the Power Smart Annual Review.

Consistent usage of the same plan helps reduce the probability of errors and provides a verifiable public target to compare against. Maintaining the same source information helps ensure a realistic and objective evaluation of the programs/portfolio was conducted and improves the reliability and verifiability of the Power Smart Annual Review.

2023/24. Natural gas long range planning targets did not exist prior to 2005/06.

The 2008/09 to 2023/24 planning estimates for utility costs are included in the current Integrated Financial Forecast report (IFF08-1). The 2007/08 planning estimates are from IFF07-1. The 1990/91 to 2006/07 planning estimates are from IFF90-4, IFF91-4, IFF92-4, IFF93-3, IFF94-2, IFF95-1, IFF96-1, IFF97-1, IFF98-1, IFF99-1, IFF00-1, IFF01-1, IFF02-1, IFF03-1 and IFF05-1, IFF06-1 respectively. The 2008/09 planning estimates are from the “2008 Power Smart Plan” report.

## APPENDIX B

### *Explanation of Benefit-Cost Ratios Used in DSM Economic Tests*

#### Total Resource Cost (TRC) Test

The primary economic indicator for evaluating the cost effectiveness of both electricity and natural gas incentive-based programs is the Total Resource Cost (TRC) test. A TRC benefit/cost ratio greater than one

(>1.0) indicates that the energy efficiency opportunity program is cost effective.

The TRC is calculated based on the following formula:

$$\text{TRC} = \frac{\text{Utility Marginal Benefit}}{\text{Total Program Administration Costs} + \text{Incremental Product Cost}}$$

Where:

- For electricity, the Utility Marginal Benefit includes the revenue realized by Manitoba Hydro from conserved electricity being sold in the export market and the avoided cost of new infrastructure (e.g. generation and electric transmission facilities).
- For natural gas, the Utility Marginal Benefit includes the avoided cost of purchasing natural gas by Manitoba Hydro primarily from Alberta, the

avoided cost of infrastructure (e.g. gas transmission facilities) and the value of reduced greenhouse gas emissions.

- Total program administration costs are the total costs of running the DSM program.
- Incremental Product Costs are the incremental costs associated with implementing the Power Smart measure.

#### Rate Impact Measure (RIM) Test

The secondary economic indicator for evaluating the effectiveness of both electricity and natural gas incentive-based programs is the Rate Impact Measure (RIM) test. The RIM test indicates the cost effectiveness of a program from the ratepayer's perspective. All DSM related savings and costs incurred by the utility, including revenue loss and incentive payments, affect

the RIM benefit/cost ratio. The results of the test provide an indication of the program's expected long term impact on rates. Manitoba Hydro does not have specific RIM criteria that individual programs must pass, however a RIM greater than 1.0 indicates an overall positive impact on rates.

The RIM is calculated based on the following formula:

$$\text{RIM} = \frac{\text{Utility Marginal Benefit}}{\text{Revenue Loss} + \text{Utility Program Administration Costs} + \text{Incentives}}$$

Where:

- For electricity, the Utility Marginal Benefit includes the revenue realized by Manitoba Hydro from conserved electricity being sold in the export market and the avoided cost of infrastructure (e.g. generation and electric transmission facilities).
- For natural gas, the Utility Marginal Benefit includes the avoided cost of purchasing natural gas by Manitoba Hydro primarily from Alberta and the avoided cost of infrastructure (e.g. gas transmission facilities) and the utility's value of reduced greenhouse gas emissions.
- Revenue Loss includes Manitoba Hydro's lost revenue associated with the participants' reduced energy consumption.
- Utility Program Administration Costs are the costs to Manitoba Hydro associated with implementing the Power Smart measure. The utility's program administration costs are net of any funding received from external sources, including the Federal Government.
- Incentives are the funds provided by Manitoba Hydro to the participant associated with implementing the Power Smart measure. These incentives are net of any funding received from external sources to support the customer incentives.

# APPENDIX C

## Total Power Smart Participation

Power Smart Participants- Annual Increments <sup>††</sup>	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative
<b>Residential</b>																					
<b>Residential CSI</b>																					
Home Comfort & Energy Savings Program																					
Residential Loan Program													4,873	3,386	4,211	5,114	6,325	7,222	7,427	7,391	45,949
Mail In/On-Line Energy Assessments													570	532	338	378	234	455	421	251	3,179
Home Comfort & Energy Savings Program Subtotal													5,443	3,918	4,549	5,492	6,559	7,677	7,848	7,642	49,128
ecoENERGY Program <sup>†</sup>													411	1,094	4,085	5,298	6,939	5,001	3,171	4,967	30,966
WISE Home Program													297	506	570	900	859	612	312	425	4,481
Residential Earth Power Program																					
Residential Earth Power Loan														35	92	185	139	85	224	207	967
Earth Power Consumer Workshops															150	475	63		0	0	688
Residential Earth Power Program Subtotal													0	35	92	335	614	148	224	207	1,655
Energy Saver Presentations <sup>††</sup>													58	1,156	453	467	337	610	392	291	3,764
New Homes Workshops													40	305	116	158	119	116	0	0	854
Residential CSI SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	6,249	7,014	9,865	12,650	15,427	14,164	11,947	13,532	90,848
<b>Residential CSI Discontinued Programs</b>																					
R-2000 Home Program <sup>†</sup>													12	19	32	n/a	n/a	n/a	n/a	n/a	63
Residential CSI Discontinued Programs SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	12	19	32	0	0	0	0	0	63
<b>RESIDENTIAL CSI TOTAL</b>	0	0	0	0	0	0	0	0	0	0	0	0	6,261	7,033	9,897	12,650	15,427	14,164	11,947	13,532	90,911
<b>Residential Incentive-Based Programs</b>																					
New Home Program																36	126	217	204	220	803
Home Insulation Program																459	1,419	5,211	4,551	4,578	16,218
Compact Fluorescent Lighting Program																21,663	26,623	17,296	28,933	73,228	167,743
Seasonal LED Program																1,900	10,880	8,144	4,956		25,880
Energy Efficient Light Fixtures Program																	1,047	2,380	2,691		6,118
Power Smart Appliance Program																	10,374	15,436	13,277		39,087
Power Smart HE Furnace Program																	1,228	7,028	6,630	7,295	22,181
Water & Energy Saver Package																				0	0
Lower Income Energy Efficiency Program																			139	143	282
Residential Incentive-Based Programs SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,158	31,296	52,053	66,417	106,388	278,312
<b>Residential Incentive-Based Discontinued Programs</b>																					
Programmable Thermostat Program																		4,948	2,230	n/a	7,178
Outdoor Timer	6,169	8,954	8,134	4,812	4,160												n/a	n/a	n/a	n/a	32,229
Refrigerator/Freezer Buy-Back Pilot			474														n/a	n/a	n/a	n/a	474
Energy Efficient Water Tank/ Water Savings Measures of the 'No Worry Plan'								201	709	681							n/a	n/a	n/a	n/a	1,591
Residential Incentive-Based Discontinued Programs SUBTOTAL	6,169	8,954	8,608	4,812	4,160	0	0	201	709	681	0	0	0	0	0	0	4,948	2,230	0	0	41,472
<b>Residential Incentive-Based TOTAL</b>	6,169	8,954	8,608	4,812	4,160	0	0	201	709	681	0	0	0	0	0	22,158	31,296	57,001	68,647	106,388	319,784
<b>Residential TOTAL</b>	6,169	8,954	8,608	4,812	4,160	0	0	201	709	681	0	0	6,261	7,033	9,897	34,808	46,723	71,165	80,594	119,920	410,695
<b>Commercial</b>																					
<b>Commercial CSI</b>																					
Religious Buildings Initiative													14	6	25	13	34	63	40	19	214
Power Smart Recreation Facility Survey													30	5	6	5	4	5	6	4	65
Commercial CSI SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	0	44	11	31	18	38	68	46	23	279
<b>Commercial CSI Discontinued Programs</b>																					
Power Smart Energy Manager <sup>††</sup>													18	20			n/a	n/a	n/a	n/a	38
Commercial CSI Discontinued Programs SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	18	20	0	0	0	0	0	0	0	38
<b>Commercial CSI TOTAL</b>	0	0	0	0	0	0	0	0	0	0	0	18	44	31	31	18	38	68	46	23	317



Power Smart Participants- Annual Increments*†	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative	
<b>Commercial Incentive-Based Programs</b>																						
Commercial Custom Measures***																		4	3	1	8	
Building Envelope***																		172	179	244	595	
Commercial HVAC***																		99	112	131	342	
Internal Retrofit Program <sup>iv</sup>				8	15	21	30	24	49	60	37	52	42	55	31	135	425	59	32	68	1,143	
Commercial Rinse & Save																		656	202	224	1,082	
Commercial Lighting Program <sup>v</sup>				129	634	556	488	264	235	384	178	122	152	184	373	742	871	999	1,116	1,292	8,719	
Commercial Building Optimization Program																				1	1	
Commercial Earth Power Program***																		28	15	11	54	
Parking Lot Controllers**																		253	296	89	638	
Commercial Refrigeration																		12	27	17	56	
Agricultural Heat Pads										18	22	7	11	14	10	12	9	5	6	4	118	
City of Winnipeg Agreement <sup>vi</sup>														4	5	11	274	9	7	1	311	
Power Smart Energy Manager Program																					0	
Commercial Kitchen Appliance Program																					21	
Commercial Clothes Washer Program																					9	
Commercial New Construction Program																					0	
Network Energy Manager Program																					0	
Power Smart Shops Program																					0	
<b>Commercial Incentive-Based Programs SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>137</b>	<b>649</b>	<b>577</b>	<b>518</b>	<b>288</b>	<b>284</b>	<b>462</b>	<b>237</b>	<b>181</b>	<b>205</b>	<b>257</b>	<b>419</b>	<b>900</b>	<b>1,579</b>	<b>2,296</b>	<b>1,995</b>	<b>2,113</b>	<b>13,097</b>	
<b>Commercial Incentive-Based Discontinued Programs</b>																						
Sentinel Lighting Conversion			65	63	70												n/a	n/a	n/a	n/a	199	
Roadway Lighting				73	71	55											n/a	n/a	n/a	n/a	199	
Commercial Construction & Renovation <sup>iv,vii</sup>								46	41	40	54	42	56	76	88	102	232	n/a	n/a	n/a	777	
Livestock Waterer					129	96	57										n/a	n/a	n/a	n/a	282	
Agricultural Demand Controller					24	10											n/a	n/a	n/a	n/a	34	
Infrared Heat Lamps					1,016												n/a	n/a	n/a	n/a	1,016	
<b>Commercial Incentive-Based Discontinued Programs SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>136</b>	<b>1,310</b>	<b>161</b>	<b>57</b>	<b>46</b>	<b>41</b>	<b>40</b>	<b>54</b>	<b>42</b>	<b>56</b>	<b>76</b>	<b>88</b>	<b>102</b>	<b>232</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,507</b>	
<b>Commercial Incentive-Based TOTAL</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>273</b>	<b>1,959</b>	<b>738</b>	<b>575</b>	<b>334</b>	<b>325</b>	<b>502</b>	<b>291</b>	<b>223</b>	<b>261</b>	<b>333</b>	<b>507</b>	<b>1,002</b>	<b>1,811</b>	<b>2,296</b>	<b>1,995</b>	<b>2,113</b>	<b>15,604</b>	
<b>Commercial TOTAL</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>273</b>	<b>1,959</b>	<b>738</b>	<b>575</b>	<b>334</b>	<b>325</b>	<b>502</b>	<b>291</b>	<b>241</b>	<b>305</b>	<b>364</b>	<b>538</b>	<b>1,020</b>	<b>1,849</b>	<b>2,364</b>	<b>2,041</b>	<b>2,136</b>	<b>15,921</b>	
<b>Industrial</b>																						
<b>Industrial Incentive-Based Programs</b>																						
Performance Optimization <sup>ii</sup>					3	1	4	4	4	8	2	7	15	22	28	44	46	44	66	84	382	
Industrial Natural Gas Optimization Program																			10	10	10	
<b>Industrial Incentive-Based Programs SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>2</b>	<b>7</b>	<b>15</b>	<b>22</b>	<b>28</b>	<b>44</b>	<b>46</b>	<b>44</b>	<b>76</b>	<b>94</b>	<b>392</b>	
<b>Industrial Incentive-Based Discontinued Programs</b>																						
High Efficiency Motor <sup>iii</sup>			24	157	199	228	181	178	191	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,158	
<b>Industrial Incentive-Based Discontinued Programs SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>157</b>	<b>199</b>	<b>228</b>	<b>181</b>	<b>178</b>	<b>191</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,158</b>	
<b>Customer Self Generation Programs</b>																						
Bioenergy Optimization Program																			1	1	1	1
<b>Customer Self Generation Programs TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	
<b>Rate/Load Management Programs</b>																						
Curtaileable Rates <sup>v</sup>											2	2	2	3	4	4	4	4	4	4	5	
<b>Rate/Load Management Programs TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	
<b>Industrial TOTAL</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>157</b>	<b>202</b>	<b>229</b>	<b>185</b>	<b>182</b>	<b>195</b>	<b>8</b>	<b>4</b>	<b>9</b>	<b>17</b>	<b>25</b>	<b>32</b>	<b>48</b>	<b>50</b>	<b>49</b>	<b>81</b>	<b>99</b>	<b>1,556</b>	
<b>CSI PROGRAMS ACTIVE &amp; DISCONTINUED SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>18</b>	<b>6,305</b>	<b>7,064</b>	<b>9,928</b>	<b>12,668</b>	<b>15,465</b>	<b>14,232</b>	<b>11,993</b>	<b>13,555</b>	<b>91,228</b>	
<b>INCENTIVE PROGRAMS ACTIVE &amp; DISCONTINUED SUBTOTAL</b>	<b>6,169</b>	<b>8,954</b>	<b>8,697</b>	<b>5,242</b>	<b>6,321</b>	<b>967</b>	<b>760</b>	<b>717</b>	<b>1,229</b>	<b>1,191</b>	<b>295</b>	<b>232</b>	<b>278</b>	<b>358</b>	<b>539</b>	<b>23,208</b>	<b>33,157</b>	<b>59,346</b>	<b>70,723</b>	<b>108,600</b>	<b>336,944</b>	
<b>ALL PROGRAMS ACTIVE &amp; DISCONTINUED TOTAL</b>	<b>6,169</b>	<b>8,954</b>	<b>8,697</b>	<b>5,242</b>	<b>6,321</b>	<b>967</b>	<b>760</b>	<b>717</b>	<b>1,229</b>	<b>1,191</b>	<b>295</b>	<b>250</b>	<b>6,583</b>	<b>7,422</b>	<b>10,467</b>	<b>35,876</b>	<b>48,622</b>	<b>73,578</b>	<b>82,716</b>	<b>122,155</b>	<b>428,172</b>	

\* Participant numbers include free riders but exclude free drivers and market transformation.

† Customers may participate in more than one Power Smart Program.

<sup>i</sup> The program offering in-home energy assessments prior to 2007/08 was known as the EnerGuide for Houses program

<sup>ii</sup> Starting in 2004/05 the R2000 Program was grouped into the Power Smart New Home Program

<sup>iii</sup> Power Smart Energy Manager Program participation is measured by schools. Schools that joined the program in 2000/01 participated for 4 years and schools that joined in 2002/03 participated for 2 years.

<sup>iv</sup> Participation is measured by completed projects.

<sup>v</sup> Annual participation represents the number of customers who participate each year. Since most customers participate year after year, the cumulative number represents the actual number of customers who have participated to date.

<sup>vi</sup> Formerly known as the Home Energy Saver Workshop

\*\* A summation of annual participation columns will not necessarily correspond with the total participation to date. This is a result of the Curtaileable Rates Program participation (see footnote v).

## APPENDIX D

### *Synopsis of Discontinued Power Smart Incentive-Based Programs*

#### Residential Programs

##### Programmable Thermostat Program

This program encourages residential customers to replace non-programmable thermostats with ENERGY STAR programmable models.

##### Outdoor Timer

Encouraged the use of outdoor timers to control block heaters and interior car warmers at existing homes.

##### Residential Showerhead Pilot

Encouraged the installation of energy efficient showerheads in existing homes.

##### Refrigerator/Freezer Buy-Back Pilot Project

Encouraged the removal of older, inefficient second refrigerators and freezers in existing homes.

##### Energy Efficient Water Tank Measures Component of the “No Worry Plan”

Encouraged residential customers with electric hot water heaters to purchase, finance or lease the highest available energy efficient heater when replacing their electric heaters or installing new ones.

##### Energy Efficient Water Saving Measures Component of the “No Worry Plan”

Encouraged customers of the “No Worry Plan” Hot Water Tank Program to install energy saving devices (faucet aerators, heat traps, energy efficient shower heads, pipe wrap) as part of a bonus package when installing their new water tanks.

#### Commercial Programs

##### Roadway Lighting

Converted existing incandescent and mercury vapour street lighting to efficient high pressure sodium.

##### Sentinel Lighting Conversion

Encouraged the conversion of yard lighting and sentinel lighting from mercury vapour and incandescent lighting to efficient high pressure sodium.

### **Livestock Waterer**

Encouraged dairy and cattle operations to install energy efficient waterers to reduce demand and energy consumption.

### **Agricultural Demand Controller**

Encouraged large agricultural operations to install demand controllers to reduce peak demand consumption.

### **Infrared Heat Lamps**

Encouraged swine farrowing operations to use energy efficient heat lamps in place of standard heat lamps to reduce energy and demand consumption.

### **Commercial Showerhead Pilot**

Encouraged commercial operations to retrofit shower facilities with energy efficient showerheads.

### **Industrial Programs**

#### **High Efficiency Motors**

Encouraged the installation of high efficiency motors in industrial and commercial operations.

## APPENDIX E

### *Curtable Rates Program Information & Methodology*

- The Curtable Rates Program provides incentives to large industrial customers who curtail their electrical load when called upon by Manitoba Hydro. Incentives are provided by way of a credit on the customer's monthly energy bill.
- 2008/09 reported demand savings for the Curtable Rates Program are based on a methodology where curtailments throughout the year are analyzed to determine the amount of curtable load that can be expected to be on the system at the time a curtailment is called. This methodology has been in place since 2000/01. For previous methodology details, refer to the appropriate Power Smart Annual Review.
- Curtable Rates Program targets are from the current approved "2008 Power Smart Plan" report.
- Curtable Rate Program targets and savings are adjusted for efficiency. This adjustment is made to equate load available for curtailment to that of an actual generator. Curtailments are not as efficient since there is potential risk customers may not curtail at all or may not curtail in time for Manitoba Hydro's system peak. The efficiency factor is based on the curtailment option selected by the customer.
- Savings resulting from the Curtable Rates Program are available as long as the service offering continues, whether or not actual curtailments are made at the time of system peak or at any other time. Curtailments may be made: to re-establish contingency reserves; to maintain planning reserve obligations; to protect firm load when reserves are insufficient to avoid curtailing firm load; and to meet Manitoba Hydro's non-spinning reserves to the extent necessary. The expected availability of this load and not the timing of its dispatch determine the future benefits of demand savings for this program.
- Under the 2008/09 Power Smart Annual Review, the Curtable Rates Program has been treated as an incentive-based program. This is consistent with treatment in the current approved "2008 Power Smart Plan" report. As a rate/load management program, certain economic indicators such as TRC and RIM are not reported.

## APPENDIX F

### *Summary of Evaluation and Planning Reports*

Following are a listing and brief description of the reports used in this Review:

#### Evaluation Reports:

##### **Energy Efficient Light Fixtures Program**

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2008.

##### **Seasonal LED Lighting Program**

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

##### **High Efficiency Gas Furnace/Boiler Program**

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2009.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February 2008.

Energy savings were calculated using an engineering analysis. Per bulb kW and kW.h were based upon consumer reported usage. The calculations of program benefits and costs were based upon an average expected product life of 9 and 20 years and persistence of 100%.

2005/06 Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, January, 2006.

Energy and demand savings were calculated using an engineering analysis. Per string kW and kW.h savings were based upon customer reported hours of use. An average expected product life of 20 years was estimated based upon manufacturer information and engineering analysis. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would have a persistence level of 94% for re-installation over the planning period.

2007/08 Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, March, 2009.

2006/07 Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, January, 2008.

2005/06 Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, August, 2006.

### Home Insulation Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

2005/06 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, August, 2006.

### Power Smart Appliance Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February 2008.

Energy savings were calculated using an engineering analysis. Per project m<sup>3</sup> savings were based upon a net energy savings of 293 m<sup>3</sup> per installation. The calculations of program benefits and costs were based upon an average expected product life of 25 years.

2004/05 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2005.

Energy and demand savings were calculated using an engineering analysis. Per project kW and kW.h savings were based upon an engineering analysis of ASHRAE based formula for heat/cooling loss. The calculations of program benefits and costs were based upon an average expected product life of 30 years.

Energy savings were calculated using an engineering analysis. Per appliance kW, kW.h, and m<sup>3</sup> were based upon Natural Resources Canada's annual energy consumption rating found on the EnerGuide label. Energy use is determined according to standardized test procedures that all manufacturers must apply. The calculations of program benefits and costs were based upon an average expected product life of 16 years for clothes washers, 30 years for freezers and 22 years for refrigerators.

## Residential Compact Fluorescent Lighting Program

2008/09 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, August 2009.

2007/08 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, November 2008.

2006/07 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, February 2008.

2005/06 Impact Evaluation, Power Smart Planning &

Market Research, Consumer Marketing & Sales, August, 2006. 2004/05 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2005.

## Residential New Homes Program

2008/09 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, September 2009.

2007/08 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, October 2008.

2006/07 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, February 2008.

2005/06 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, October 2006.

2004/05 Impact Evaluation Memo, Power Smart

Planning & Market Research, Consumer Marketing & Sales, October 2006.

Energy and demand savings were calculated using an engineering analysis. Per lamp kW and kW.h savings were based upon customer reported hours of use. An average expected product life of 4.5 years was estimated based upon the distribution of products actually installed under the program year. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would have a persistence level of 88% for residential markets, 88% for the school program participants, and 92% for the bulk purchase participants for re-installation over the planning period.

Energy (GW.h), demand (MW) and natural gas (m<sup>3</sup>) savings were calculated using engineering estimates. For technologies that are included in other Power Smart programs, efforts were made to use the same per sale impact assumptions. An average expected life of 30 years was estimated based upon the distribution of products actually installed under the program year. Products costs for products with an expected life of less than 30 years were adjusted to represent 30 years. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period.

**Lower Income Energy Efficiency Program**  
2008/09 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, October 2009.

Energy (GW.h), demand (MW) and natural gas (m<sup>3</sup>)  
savings were calculated using engineering estimates.

2007/08 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, January, 2009.

**Commercial Building Optimization Program**  
2008/09 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, July, 2009.

2007/08 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, November, 2008.

**Commercial Earth Power Program**  
2008/09 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, September 2009.

2006/07 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, March, 2008.

2007/08 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, October, 2008.

Energy and demand savings were calculated using an  
engineering analysis. Per project kW and kW.h savings  
were based upon simulation analysis and manufacturers  
test results. The average expected life assumed was  
calculated at 20 years.

**Commercial Custom Measures Program**  
2008/09 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, July 2009.

2006/07 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, February, 2008.

2007/08 Impact Evaluation Memo, Power Smart  
Planning & Market Research, Consumer Marketing &  
Sales, October, 2008.

Energy and demand savings were calculated using an  
engineering analysis. Per project kW and kW.h savings  
were based upon simulation analysis and manufacturers  
test results. The average expected life assumed was  
calculated at 20 years.



## Commercial HVAC Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

## Commercial Building Envelope Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

**Insulation:** Energy and demand savings were calculated using an engineering analysis. Per project kW and kW.h

## Commercial Parking Lot Controllers

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

Energy and demand savings were calculated using an engineering analysis based off an average size furnace, boiler or chiller capacity. Savings were based upon simulation analysis and manufacturers test results using an average life expectancy of 25 years for furnace or boilers and 30 years for chillers.

savings were based upon the modified ASHRAE method for heating and cooling loads. The calculations of program benefits and costs were based upon an average expected product life of 25 years.

**Windows:** Energy and demand savings were calculated using an engineering analysis. Per project kW and kW.h savings were based upon tested performance of individual window units entered into the modified ASHRAE method for calculating heating and cooling loads. The calculations of program benefits and costs were based upon an average expected product life of 25 years.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, March, 2008.

Energy and demand savings were calculated using an engineering analysis. Per project kW and kW.h savings were based upon simulation analysis and manufacturers test results and the amount of circuits installed. The average expected life assumed was calculated at 15 years.

## Commercial Refrigeration Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008. Energy and demand savings were calculated based on the

## Internal Retrofit Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, August 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, January, 2008.

2005/06 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, September, 2006.

2004/05 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2005.

2003/04 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, June 2004.

Pacific Gas and Electric Company Work papers for June 13, 2005 and adjusted for the Manitoba market using engineering analysis.

Per project savings were calculated based on the quantity of the measure installed, the customer reported hours of use and type of heating system. Products costs for products with an expected life of less than 10 years were adjusted to represent 10 years.

2002/03 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, January, 2004.

2001/02 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2002.

2000/01 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2001.

1999/2000 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, August, 2000.

1998/99 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1999.

1997/98 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1998.

1996/97 Impact Evaluation, Market Planning, Power Smart Energy Services, December, 1997.

1995/96 Impact Evaluation, Planning & Evaluation, Business and Energy Services, November, 1996.

Energy and demand savings were calculated using an engineering analysis. An average expected project life of 30 years (2000/01-2005/06), 27 years (1996/97-1999/00) and 15 years (1995/96) was estimated based upon the distribution of products actually installed

### Energy Efficient Lighting Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

2005/06 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2006.

2004/05 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2005.

2003/04 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, December 14, 2004.

2002/03 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2004.

2001/02 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, August 9, 2004.

under the program year, except for T8 lighting systems where a 20 year life was assumed. Under the 2000/01-2008/09 evaluations, product costs for products with an expected life of less than 30 years were adjusted to represent 30 years.

2000/01 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2001.

1999/2000 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, October, 2000.

1998/99 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1998.

1997/98 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1998.

1996/97 Impact Evaluation, Market Planning, Power Smart Energy Services, December, 1997.

1995/96 Impact Evaluation, Planning & Evaluation, Business and Energy Services, October, 1996.

Energy and demand savings were calculated using an engineering analysis. Per project kW and kW.h savings were based upon customer reported activities for the various lighting technologies. An average expected project life of 20 years (1999/97-2008/09) and 18 years (1995/96) was estimated based upon the distribution of products actually installed under the program year, with the exception of compact fluorescent screw-in bulbs which are assumed to have a two year product life.

## Agricultural Heat Pad Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, April, 2009.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

2005/06 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, August 2006.

2004/05 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2005.

2003/04 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, December, 2004.

2002/03 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, March 9, 2003.

## City of Winnipeg Power Smart Agreement

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales.

2001/02 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, March , 2003.

2000/01 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2001.

1999/2000 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, October, 2000.

1998/99 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1999.

Energy and demand savings were calculated using an engineering analysis. Per heat pad kW and kW.h savings were based upon customer reported activities. An average expected product life of 15 years was estimated based upon the distribution of products actually installed under the program year. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period. Savings due to market transformation driven sales in prior years were retroactively added in 1998/99 through 2005/06.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales.

2005/06 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales.

2004/05 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales.

2003/04 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales.

2002/03 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales.

### Commercial Rinse & Save Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

### Performance Optimization Program

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, August 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February, 2008.

Electric and natural gas savings are determined via engineering calculations included in the individual Energy Measure Agreement completed for each project. This calculation is based on the difference between the existing/baseline system and the selected option. The average expected life assumed varied depending upon the technology installed under the program year. Depending on the type of project, electric energy savings are either stipulated or involve monitoring/verification. When necessary, savings figures are adjusted accordingly.

Energy savings were calculated using an engineering analysis. Per valve kW.h savings were based upon water usage (hours of operation and flow rates) water temperature, and the efficiency of heating equipment. The calculations of program benefits and costs were based upon an average expected product life of 10 years and a persistence level of 95% for re-installation.

2005/06 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2006.

2004/05 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, March, 2006.

2003/04 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, December 14, 2004.

2002/03 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February 5, 2003.

2001/02 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February 5, 2003.

2000/01 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2001.

1999/2000 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, October, 2000.

#### **Industrial Natural Gas Optimization Program**

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, August 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2008.

#### **Bioenergy Optimization Program**

2008/09 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, August 2009.

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, September, 2008

#### **Commercial Construction & Renovation Program**

2005/06 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, September 2006.

1998/99 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1999.

1997/98 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1998.

1996/97 Impact Evaluation, Market Planning, Power Smart Energy Services, August, 1997.

1995/96 Impact Evaluation, Planning & Evaluation, Business Energy Services, January, 1997.

Energy and demand savings were calculated based upon pre- and post-metering of projects. The expected project life is project and technology dependent.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, March, 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, March, 2008

Energy and demand savings were measured via a revenue meter installed at the customer's generator. The amount of annual energy generated determined the program energy savings.

2004/05 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, November, 2005.

2003/04 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, October, 2004

2002/03 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, July 22, 2004.

2001/02 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February 10, 2003.

2000/01 Impact Evaluation, Power Smart Planning & Market Research, Consumer Marketing & Sales, December, 2001.

1999/2000 Interim Evaluation Report, memo from T. Thiessen (Market Planning, Marketing Programs) to K. Krentz (Marketing Programs, Power Smart Marketing Services), January 2, 2001.

#### Residential Programmable Thermostat Pilot Program

2007/08 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, December 2008.

2006/07 Impact Evaluation Memo, Power Smart Planning & Market Research, Consumer Marketing & Sales, February 2008.

#### 'No Worry Plan' Hot Water Tank Program

1999/2000 Impact Evaluation of the Energy Efficiency Component, memo from L. Morrison (Market Planning, Marketing Programs) to C. Hyrich (Marketing Programs, Power Smart Marketing Services), December 13, 2000.

1998/99 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1999.

1997/98 Impact Evaluation, Marketing Programs, Power Smart Marketing Services, September, 1998.

1996/97 Impact Evaluation, Market Planning, Power Smart Energy Services, December, 1997.

Energy and demand savings were calculated using an engineering analysis. Per project kW and kW.h savings were based upon simulation analysis and manufacturers test results. The average expected life assumed varied depending upon the technology installed under the program year. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period, with the exception of Air Barrier, High Efficiency Air Conditioning, and High Efficiency Window technologies.

Energy savings were calculated using an engineering analysis. Per thermostat kW.h and m3 savings were based upon customer reported use of the thermostat. The calculations of program benefits and costs were based upon an average expected product life of 25 years, and a persistence level of 70%.

1997/98 Impact Evaluation of the Energy Efficiency Component, Marketing Programs, Power Smart Marketing Services, September, 1998.

1996/97 Impact Evaluation of the Energy Efficiency Component, Market Planning Power Smart Energy Services, December, 1997.

Energy and demand savings were calculated using an engineering analysis. Per project kW and kW.h savings were based upon industry findings. An average expected life of 30 years was used for the hot water tanks and heat traps and an average expected life of 15 years was used for all other technologies installed under the

### High Efficiency Motor Program

1996/97 Impact Evaluation, Market Planning, Power Smart Energy Services, November, 1997.

1995/96 Impact Evaluation, Planning & Evaluation, Business and Energy Services, November, 1996.

Energy and demand savings were calculated using an engineering analysis. Per motor kW and kW.h savings

### Outdoor Timer Market Transformation

1996/97 Activity, memo from M.R. Esposito (Market Planning, Power Smart Energy Services) to T. Johnson (Marketing Programs, Power Smart Energy Services), October 31, 1997.

1995/96 Activity, memo from L.K. Morrison (Planning & Evaluation, Business & Energy Services) to T. Johnson (Program Development, Business & Energy Services), November 7, 1996.

### Energy Efficient Livestock Waterer Program

1996/97 Impact Evaluation, Market Planning, Power Smart Energy Services, August, 1997.

1995/96 Impact Evaluation, Planning & Evaluation, Business and Energy Service, October, 1996.

Energy and demand savings were determined based upon metered results. The program's effect on energy

### Roadway Lighting Conversion Program

1999/2000 energy efficiency component. The calculations of program benefits and costs were based upon the assumption that energy efficiency measures would be replaced or reinvested over a 30-year planning period.

were based upon customer reported activities. An average expected product life of 15 years was estimated based upon the distribution of products actually installed under the 1996/97 program year. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period.

Energy and demand savings were calculated using an engineering analysis. Per timer kW and kW.h savings were based upon customer reported activities. An average expected product life of 9 years was estimated. The calculations or program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period.

efficient waterer sales was determined based upon a trend analysis. An average expected product life of 20 years was estimated. The calculations of program benefits and costs were based upon the average expected life of the waterers.



1994/95 Impact Evaluation, Planning & Evaluation, Energy Management, September, 1995.

Energy and demand savings were calculated using an engineering analysis. An average expected product life

### **Sentinel Lighting Conversion Program**

1993/94 Impact Evaluation, Planning & Evaluation, Energy Management, September, 1994.

Energy and demand savings were calculated using an engineering analysis. An average expected product life

### **Agricultural Demand Controller Program**

1993/94 Impact Evaluation, Planning & Evaluation, Energy Management, September, 1994.

Energy and demand savings were calculated using a billing analysis. An average expected product life of 15

### **Infrared Heat Lamp Program**

1991/92 Impact Evaluation Summary Report, Planning & Evaluation, Energy Management, December, 1992.

Energy and demand savings were calculated using an engineering analysis. Per heat lamp kW and kW.h savings were based upon customer reported activities.

### **Refrigerator/Freezer Buy-Back Pilot Project**

1991 Impact Evaluation Summary Report, Planning & Evaluation, Energy Management, October, 1992.

Energy and demand savings were calculated using an engineering analysis. Per fridge/freezer kW and kW.h savings were based upon customer reported activities

## **Planning Reports**

“2008 Power Smart Plan”, Power Smart Planning, Evaluation & Research, Consumer Marketing & Sales, February 2008.

“2006 Power Smart Plan”, Power Smart Planning & Market Research, Consumer Marketing & Sales, November 2006.

of 20 years was estimated. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30-year planning period.

of 20 years was estimated. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period.

years was estimated. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period.

An average expected product life of 1 year was estimated. The calculations of program benefits and costs were based upon the assumption that energy efficient measures would be replaced or reinvested over a 30 year planning period.

and EnerGuide ratings. An average expected remaining product life of 6 years was estimated. The calculations of program benefits and costs were based upon the average expected remaining life of the old refrigerators and freezers.

“2005 Power Smart Plan - Natural Gas Supplement”, Power Smart Planning & Market Research, Consumer Marketing & Sales, May 2005.

“2004 Power Smart Plan”, Power Smart Planning & Market Research, Consumer Marketing & Sales, October 2004.

“Power Smart RESOURCE OPTIONS for the 2001 Corporate Plan”, Marketing Programs, Consumer Marketing & Sales, June 20, 2001.

“Power Smart RESOURCE OPTIONS for the 2000 Corporate Plan”, Marketing Programs, Power Smart Marketing Services, July 4, 2004.

“Power Smart RESOURCE OPTIONS for the 1999 Corporate Plan”, Marketing Programs, Power Smart Energy Services, April 30, 1999.

“Power Smart RESOURCE OPTIONS for the 1998 Corporate Plan”, Marketing Programs, Power Smart Energy Services, July 20, 1998.

“Power Smart RESOURCE OPTIONS for the 1997 Corporate Plan”, Market Planning, Business & Energy Services, May 8, 1997.

“Power Smart RESOURCE OPTIONS for the 1996 Corporate Plan”, Planning & Evaluation, Energy Management, May 8, 1996.

“Power Smart RESOURCE OPTIONS for the 1995 Corporate Plan”, Planning & Evaluation, Energy Management, May 23, 1995.



**Persisting Energy Savings - GW.h  
Electric Incentive Based Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	At Generation 2008/09	At Generation 2023/24	
<b>RESIDENTIAL</b>																							
Compact Fluorescent Lighting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.1	15.4	20.6	28.1	28.1	32.0	0.0	
Home Insulation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	4.2	10.7	16.5	16.5	18.8	18.8	
Appliances	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	7.6	7.6	8.7	0.4	
Energy Efficient Light Fixtures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	1.0	1.2	1.2	
New Homes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	1.9	2.9	2.9	3.3	3.3	
Seasonal LED Lighting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	2.3	2.3	2.6	2.6	
Lower Income Energy Efficiency Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6	
Water Saver Package	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
High Efficient Furnace & Boiler Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	20.3	38.3	58.9	58.9	67.2	26.9	
<b>COMMERCIAL</b>																							
Commercial Lighting	0.0	0.0	0.0	2.9	17.0	35.9	55.0	61.2	67.4	85.4	90.8	94.9	100.2	105.6	116.2	132.6	153.1	175.8	193.9	193.9	221.1	220.9	
Commercial Insulation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.9	1.9	2.1	2.1	
Commercial Windows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.6	0.7	0.9	1.0	1.4	1.8	2.3	3.2	3.9	4.5	4.5	5.1	4.7	
Agricultural Heat Pads	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	5.5	6.7	9.2	11.6	12.9	15.4	16.4	17.0	21.8	21.8	24.8	19.4	
Parking Lot Controllers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6	3.7	4.1	4.4	5.9	6.8	8.8	11.5	20.0	27.9	30.5	30.5	34.7	31.8	
Spray Valves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	2.9	2.9	3.3	0.0	
Internal Retrofit	0.0	0.0	0.0	0.2	1.2	2.7	3.3	3.8	4.3	4.9	5.4	5.9	6.1	6.9	9.4	12.2	14.4	17.0	18.0	18.0	20.5	19.9	
Commercial Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.1	1.8	2.9	3.2	4.0	5.1	7.8	8.8	11.1	15.3	18.6	18.6	21.2	21.2	
Commercial Refrigeration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.0	3.0	3.5	1.4	
HVAC - Chillers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.7	4.1	4.3	4.3	4.9	4.9	
Custom	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	2.6	10.0	10.8	11.7	12.2	12.8	12.8	12.9	13.1	15.4	15.4	17.5	16.5	16.5	
Commercial Building Optimization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
City of Winnipeg Agreement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	0.7	7.3	10.7	11.2	11.2	12.8	11.2	
Commercial Kitchen Appliances	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Commercial Clothes Washers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
New Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Power Smart Energy Manager	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Network Energy Manager	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Power Smart Shops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	0.0	0.0	0.0	3.1	18.2	38.6	58.3	66.6	75.2	102.4	119.3	126.7	138.2	149.5	170.2	198.6	242.0	288.6	325.9	325.9	371.6	354.0	
<b>INDUSTRIAL</b>																							
Performance Optimization	0.0	0.0	0.0	0.0	0.0	2.4	7.2	35.1	43.5	85.9	107.7	110.8	142.9	170.5	181.5	207.6	238.6	249.3	276.4	276.4	304.0	273.4	
Efficient Motors (QMR)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	2.4	7.2	35.1	43.5	85.9	107.7	110.8	142.9	170.5	181.5	207.6	238.6	249.3	276.4	276.4	304.0	273.4	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
<b>Residential</b>																							
Retrofit/Demonstration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Water Heater Rental	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Thermostat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.4	0.4	0.4	
Res Hot Water	5.0	8.9	15.3	20.5	24.8	29.2	30.9	34.7	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	41.6	
Outdoor Timer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	5.0	8.9	15.7	20.9	25.1	29.6	31.2	35.1	37.2	37.5	37.6	37.6	37.6	37.6	37.6	37.6	37.6	37.8	37.9	37.9	43.2	43.1	
<b>Commercial</b>																							
RBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Commercial Showerhead 2	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.6	1.6	
Infrared Heat Lamp	0.0	0.0	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	4.2	4.2	
Livestock Waterer	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Roadway Lighting	0.0	0.0	3.9	13.5	23.2	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	34.0	34.0	
Sentinel Lighting	0.0	0.0	2.3	4.7	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	8.5	8.5	
Commercial Air Barrier	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	
Agricultural Demand Controller	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Commercial Air Conditioning	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	
Aboriginal Commercial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	0.0	0.0	11.3	23.4	35.8	42.7	42.8	43.1	43.1	43.2	43.3	43.5	43.7	43.8	43.9	44.0	44.0	44.0	44.0	44.0	50.2	49.8	
<b>Industrial</b>																							
Industrial (Basic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Retrofit/Demonstration GSL	0.0	0.0	0.0	0.1	0.7	9.7	32.7	32.7	32.7	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.1	33.0	33.0	36.3	36.3	
High Efficiency Motors	0.0	0.0	0.4	4.8	7.7	10.3	13.3	17.9	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	23.6	23.6	
<b>Subtotal</b>	0.0	0.0	0.4	4.9	8.3	20.0	46.0	50.6	54.2	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	59.9	59.9	
<b>Total Discontinued</b>	5.0	8.9	27.4	49.2	69.3	92.3	120.1	128.8	134.5	135.1	135.3	135.5	135.6	135.8	135.9	136.1	136.1	136.3	136.4	136.4	153.4	152.8	
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	5.0	8.9	27.4	52.3	87.5	133.3	185.6	230.4	253.2	323.5	362.3	373.0	416.8	455.8	487.6	552.2	637.0						











**Persisting Average Winter MW  
Electric Incentive Based Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	At Generation 2008/09	At Generation 2023/24	
<b>RESIDENTIAL</b>																							
Compact Fluorescent Lighting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	4.2	5.7	5.7	6.5	0.0	
Home Insulation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.0	5.2	8.0	8.0	9.1	9.1	
Appliances	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.0	1.2	0.0	
Energy Efficient Light Fixtures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	
New Homes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.7	0.7	0.8	0.8	
Seasonal LED Lighting	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	
Lower Income Energy Efficiency Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	
Water Saver Package	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
High Efficient Furnace & Boiler Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.5</b>	<b>5.4</b>	<b>10.4</b>	<b>15.9</b>	<b>15.9</b>	<b>18.1</b>	<b>10.5</b>	
<b>COMMERCIAL</b>																							
Commercial Lighting	0.0	0.0	0.0	0.5	2.6	5.7	9.2	10.8	11.6	15.1	16.4	17.4	18.5	19.7	21.7	24.2	27.7	31.1	34.1	34.1	38.8	38.8	
Commercial Insulation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	0.7	0.9	0.9	
Commercial Windows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.8	1.1	1.5	1.7	1.8	1.8	2.0	1.8	
Agricultural Heat Pads	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.0	1.2	1.6	2.0	2.2	2.6	2.7	2.8	3.2	3.2	3.7	3.2	
Parking Lot Controllers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Spray Valves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Internal Retrofit	0.0	0.0	0.0	0.0	0.3	0.6	0.6	0.7	0.9	1.0	1.1	1.2	1.3	1.4	1.7	2.2	2.4	2.8	3.0	3.0	3.4	3.2	
Commercial Geothermal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	1.1	1.5	1.7	2.0	2.4	3.8	4.2	5.4	7.4	8.7	8.7	9.9	9.9	
Commercial Refrigeration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.8	1.0	0.2	
HVAC - Chillers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Custom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.5	0.5	0.9	0.9	0.9	1.0	1.1	1.1	1.3	1.3	
Commercial Building Optimization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
City of Winnipeg Agreement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.4	1.8	2.0	2.3	1.9	
Commercial Kitchen Appliances	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Commercial Clothes Washers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
New Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Power Smart Energy Manager	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Network Energy Manager	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Power Smart Shops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.5</b>	<b>2.9</b>	<b>6.3</b>	<b>9.8</b>	<b>11.8</b>	<b>13.5</b>	<b>18.3</b>	<b>20.7</b>	<b>22.3</b>	<b>24.3</b>	<b>26.6</b>	<b>31.1</b>	<b>35.2</b>	<b>41.9</b>	<b>48.9</b>	<b>55.5</b>	<b>55.5</b>	<b>63.2</b>	<b>61.0</b>	
<b>INDUSTRIAL</b>																							
Performance Optimization	0.0	0.0	0.0	0.0	0.0	0.3	1.1	4.6	5.8	37.4	39.1	39.5	48.4	52.9	54.1	57.6	61.7	63.2	66.2	66.2	72.9	69.4	
Efficient Motors (QMR)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.3</b>	<b>1.1</b>	<b>4.6</b>	<b>5.8</b>	<b>37.4</b>	<b>39.1</b>	<b>39.5</b>	<b>48.4</b>	<b>52.9</b>	<b>54.1</b>	<b>57.6</b>	<b>61.7</b>	<b>63.2</b>	<b>66.2</b>	<b>66.2</b>	<b>72.9</b>	<b>69.4</b>	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
<b>Residential</b>																							
Retrofit/Demonstration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Water Heater Rental	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Thermostat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Res Hot Water	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Outdoor Timer	0.3	0.5	0.9	1.2	1.5	1.9	2.0	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.7	2.7	
<b>Subtotal</b>	<b>0.3</b>	<b>0.5</b>	<b>1.0</b>	<b>1.3</b>	<b>1.6</b>	<b>1.9</b>	<b>2.1</b>	<b>2.4</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.9</b>	<b>2.9</b>	
<b>Commercial</b>																							
RBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Commercial Showerhead 2	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Infrared Heat Lamp	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	
Livestock Waterer	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	
Roadway Lighting	0.0	0.0	0.9	3.1	5.4	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.9	7.9	
Sentinel Lighting	0.0	0.0	0.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.0	
Commercial Air Barrier	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Agricultural Demand Controller	0.0	0.0	0.0	0.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	
Commercial Air Conditioning	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Aboriginal Commercial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>2.2</b>	<b>5.7</b>	<b>9.0</b>	<b>10.6</b>	<b>10.7</b>	<b>10.8</b>	<b>10.8</b>	<b>10.8</b>	<b>10.8</b>	<b>10.9</b>	<b>10.9</b>	<b>10.9</b>	<b>11.0</b>	<b>11.0</b>	<b>11.0</b>	<b>11.0</b>	<b>11.0</b>	<b>11.0</b>	<b>12.5</b>	<b>12.4</b>	
<b>Industrial</b>																							
Industrial (Basic)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Retrofit/Demonstration GSL	0.0	0.0	0.0	0.3	0.3	1.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.7	4.5	
High Efficiency Motors	0.0	0.0	0.1	0.7	1.3	1.8	2.3	3.0	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	4.2	4.2	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>1.0</b>	<b>1.7</b>	<b>3.4</b>	<b>6.6</b>	<b>7.3</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.9</b>	<b>8.7</b>	
<b>Total Discontinued</b>	<b>0.3</b>	<b>0.5</b>	<b>3.3</b>	<b>8.1</b>	<b>12.3</b>	<b>16.0</b>	<b>19.3</b>	<b>20.4</b>															









**Persisting Natural Gas Savings - million m<sup>3</sup>**  
**Natural Gas Incentive Based Programs**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>RESIDENTIAL</b>																							
HE Gas Furnace	0.0	0.0	0.0	0.0	0.6	2.6	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Home Insulation	0.0	0.0	0.0	0.0	0.3	2.2	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
New Homes	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Lower Income Energy Efficiency Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.0	0.0	0.0	1.0	4.9	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
<b>COMMERCIAL</b>																							
HVAC	0.0	0.0	0.0	0.0	0.0	0.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Commercial Insulation	0.0	0.0	0.0	0.0	0.0	0.3	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Commercial Windows	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Spray Valves	0.0	0.0	0.0	0.0	0.0	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Building Optimization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Kitchen Appliance program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Winnipeg Agreement	0.0	0.1	0.1	0.4	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.4
Commercial Custom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Energy Manager Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Clothes Washer Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Shops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.1	0.1	0.4	0.7	2.4	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.8	4.5	4.5	4.5	4.5	4.5	4.4	4.1
<b>INDUSTRIAL</b>																							
Industrial Natural Gas Optimization Program	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.5	1.5
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.5	1.5
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
Thermostat	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	0.0	0.1	0.1	0.4	1.7	7.4	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	14.8	14.5	14.5	14.5	14.5	14.5	14.2	13.9
<b>CUSTOMER SELF-GENERATION</b>																							
Bioenergy Optimization Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>LESS: INTERACTIVE EFFECTS</b>	0.0	0.0	0.0	-1.2	-2.5	-2.9	-3.7	-3.7	-3.1	-2.6	-2.2	-1.5	-1.5	-1.5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.6	-1.6	-1.7	-1.7
<b>NET IMPACT: OVERALL</b>	0.0	0.1	0.1	-0.8	-0.8	4.5	11.9	11.9	12.6	13.0	13.4	14.1	14.1	14.1	14.1	13.3	12.9	12.9	12.9	12.9	12.9	12.5	12.2

NOTE: Subtotals may not be exact due to rounding

**Persisting Natural Gas Savings - million m<sup>3</sup>**  
**Natural Gas Incentive Based Programs**

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>															
HE Gas Furnace	4.0	4.0	4.0	4.0	4.0	4.0	3.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Home Insulation	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.5	3.5	1.8	1.8
New Homes	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Lower Income Energy Efficiency Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>8.1</b>	<b>7.5</b>	<b>5.5</b>	<b>4.1</b>	<b>4.1</b>	<b>4.0</b>	<b>3.7</b>	<b>3.7</b>	<b>1.9</b>	<b>1.9</b>
<b>COMMERCIAL</b>															
HVAC	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Insulation	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Windows	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Spray Valves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Building Optimization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Kitchen Appliance program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Winnipeg Agreement	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Custom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Energy Manager Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Clothes Washer Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Shops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>3.8</b>	<b>3.8</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>3.6</b>	<b>3.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>INDUSTRIAL</b>															
Industrial Natural Gas Optimization Program	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>															
Thermostat	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>13.6</b>	<b>13.6</b>	<b>13.4</b>	<b>12.0</b>	<b>12.0</b>	<b>12.0</b>	<b>11.3</b>	<b>8.5</b>	<b>4.1</b>	<b>4.1</b>	<b>4.0</b>	<b>3.7</b>	<b>3.7</b>	<b>1.9</b>	<b>1.9</b>
<b>CUSTOMER SELF-GENERATION</b>															
Bioenergy Optimization Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>LESS: INTERACTIVE EFFECTS</b>	<b>-1.2</b>	<b>-0.3</b>	<b>-0.5</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>
<b>NET IMPACT: OVERALL</b>	<b>12.4</b>	<b>13.3</b>	<b>13.0</b>	<b>11.7</b>	<b>11.8</b>	<b>11.8</b>	<b>11.2</b>	<b>8.4</b>	<b>3.9</b>	<b>3.9</b>	<b>3.9</b>	<b>3.5</b>	<b>3.5</b>	<b>1.7</b>	<b>1.7</b>

NOTE: Subtotals may not be exact due to rounding

**Total Annual Gas Savings - million m3  
Natural Gas Incentive Based Programs**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>RESIDENTIAL</b>																							
HE Gas Furnace	0.0	0.0	0.0	0.0	0.6	2.6	4.0	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
Home Insulation	0.0	0.0	0.0	0.0	0.3	2.2	3.9	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
New Homes	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Lower Income Energy Efficiency Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.0	0.0	0.0	1.0	4.9	8.1	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
<b>COMMERCIAL</b>																							
HVAC	0.0	0.0	0.0	0.0	0.0	0.4	2.5	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Commercial Insulation	0.0	0.0	0.0	0.0	0.0	0.3	1.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Commercial Windows	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Spray Valves	0.0	0.0	0.0	0.0	0.0	0.8	1.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.3	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Building Optimization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Kitchen Appliance program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Winnipeg Agreement	0.0	0.1	0.1	0.4	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.4
Commercial Custom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Energy Manager Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Clothes Washer Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Shops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.1	0.1	0.4	0.7	2.4	5.6	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	9.4	9.1	8.0	8.0	8.0	8.0	7.9	7.6
<b>INDUSTRIAL</b>																							
Industrial Natural Gas Optimization Program	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.6	1.6
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	1.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.6	1.6
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
Thermostat	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	0.0	0.1	0.1	0.4	1.7	7.4	15.6	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	25.2	24.9	23.8	23.8	23.8	23.7	23.4	21.2
<b>CUSTOMER SELF-GENERATION</b>																							
Bioenergy Optimization Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>LESS: INTERACTIVE EFFECTS</b>	0.0	0.0	0.0	-1.2	-2.5	-2.9	-3.7	-5.8	-5.1	-4.7	-4.3	-3.6	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.7	-1.8
<b>NET IMPACT: OVERALL</b>	0.0	0.1	0.1	-0.8	-0.8	4.5	11.9	20.3	20.9	21.3	21.8	22.4	24.4	24.4	24.4	23.5	23.2	22.1	22.1	22.1	22.0	21.7	19.4

NOTE: Subtotals may not be exact due to rounding



**Total Annual Gas Savings - million m3  
Natural Gas Incentive Based Programs**

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>															
HE Gas Furnace	5.8	5.8	5.8	5.8	5.8	5.8	5.2	3.2	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Home Insulation	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.3	5.3	3.6	1.8
New Homes	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1
Lower Income Energy Efficiency Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>11.7</b>	<b>11.7</b>	<b>11.7</b>	<b>11.7</b>	<b>11.7</b>	<b>11.7</b>	<b>11.1</b>	<b>9.1</b>	<b>7.7</b>	<b>5.9</b>	<b>5.9</b>	<b>5.6</b>	<b>5.6</b>	<b>3.8</b>	<b>1.9</b>
<b>COMMERCIAL</b>															
HVAC	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.4	2.3	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Insulation	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.9	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Windows	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Spray Valves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Building Optimization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Kitchen Appliance program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
City of Winnipeg Agreement	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Custom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
New Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Energy Manager Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Clothes Washer Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Power Smart Shops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>7.3</b>	<b>7.3</b>	<b>7.1</b>	<b>7.1</b>	<b>7.1</b>	<b>7.1</b>	<b>7.1</b>	<b>6.5</b>	<b>3.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>INDUSTRIAL</b>															
Industrial Natural Gas Optimization Program	1.6	1.6	1.6	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>															
Thermostat	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>20.9</b>	<b>20.9</b>	<b>20.7</b>	<b>19.2</b>	<b>19.2</b>	<b>19.2</b>	<b>18.6</b>	<b>15.8</b>	<b>11.4</b>	<b>5.9</b>	<b>5.9</b>	<b>5.6</b>	<b>5.6</b>	<b>3.8</b>	<b>1.9</b>
<b>CUSTOMER SELF-GENERATION</b>															
Bioenergy Optimization Program	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>LESS: INTERACTIVE EFFECTS</b>	<b>-1.3</b>	<b>-0.5</b>	<b>-0.6</b>	<b>-0.4</b>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.2</b>	<b>-0.2</b>
<b>NET IMPACT: OVERALL</b>	<b>19.5</b>	<b>20.4</b>	<b>20.1</b>	<b>18.8</b>	<b>19.1</b>	<b>19.1</b>	<b>18.5</b>	<b>15.7</b>	<b>11.2</b>	<b>5.8</b>	<b>5.8</b>	<b>5.4</b>	<b>5.4</b>	<b>3.6</b>	<b>1.7</b>

NOTE: Subtotals may not be exact due to rounding

# APPENDIX J

## GW.h Energy Savings – Customer Service Initiatives (CSI)

### 2008/09 Annual Energy Savings - GW.h Electric CSI Programs

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>RESIDENTIAL</b>																
Power Smart Residential Loan	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Residential Earth Power	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>GW.h IMPACTS (at meter)</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>
<b>GW.h IMPACTS (at generation)</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>

NOTE: Subtotals may not be exact due to rounding

### 2008/09 Annual Energy Savings - GW.h Electric CSI Programs

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	At Generation 2008/09	At Generation 2023/24
<b>RESIDENTIAL</b>																	
Power Smart Residential Loan	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0	0.7	0.7
Residential Earth Power	1.4	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.0</b>	<b>0.0</b>	<b>2.3</b>	<b>2.3</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																	
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>GW.h IMPACTS (at meter)</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.0</b>	<b>0.0</b>	<b>N/A</b>	<b>N/A</b>
<b>GW.h IMPACTS (at generation)</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.0</b>	<b>0.0</b>	<b>2.3</b>	<b>2.3</b>

NOTE: Subtotals may not be exact due to rounding

**Persisting Energy Savings - GW.h  
Electric CSI Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	At Generation 2008/09	At Generation 2023/24	
<b>RESIDENTIAL</b>																							
Power Smart Residential Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.6	2.2	2.7	3.2	3.9	4.6	4.6	5.2	5.2	
Residential Earth Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	2.8	4.8	6.1	8.8	8.8	10.0	8.9	
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	0.8	0.8	0.8	0.8	0.9	0.9	
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	3.4	6.3	8.7	10.8	14.2	14.2	16.1	15.0	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	2.4	2.8	2.8	2.8	2.8	2.8	3.2	0.0	
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.4	2.6	3.0	3.0	3.0	3.0	3.0	3.4	0.2	
<b>GW.h IMPACTS (at meter)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.4	6.0	9.3	11.7	13.8	17.2	17.2	N/A	N/A	
<b>GW.h IMPACTS (at generation)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9	6.8	10.6	13.4	15.7	19.6	19.6	19.6	15.2	

NOTE: Subtotals may not be exact due to rounding

**Persisting Energy Savings - GW.h  
Electric CSI Programs**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>																														
Power Smart Residential Loan	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.7	3.0	2.4	1.4	1.4	0.7	0.0	0.0	
Residential Earth Power	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.5	7.8	4.0	4.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
ecoEnergy	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.5	0.0	0.0	0.0	0.0	0.0	
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2	13.8	13.2	9.4	9.4	8.0	5.4	5.4	5.4	5.4	4.5	3.7	2.9	1.4	1.4	0.7	0.0	0.0
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																														
PSEM	2.8	2.8	2.2	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	3.0	3.0	2.4	1.8	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>GW.h IMPACTS (at meter)</b>	17.2	17.2	16.5	15.9	14.8	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.0	13.4	9.6	9.6	8.2	5.6	5.6	5.6	5.6	4.5	3.7	2.9	1.4	1.4	0.7	0.0	0.0
<b>GW.h IMPACTS (at generation)</b>	19.6	19.6	18.9	18.2	16.8	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.0	15.2	10.9	10.9	9.4	6.3	6.3	6.3	6.3	5.2	4.2	3.3	1.6	1.6	0.8	0.0	0.0

NOTE: Subtotals may not be exact due to rounding

**Total Annual Energy Savings - GW.h  
Electric CSI Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	At Generation 2008/09	At Generation 2023/24	
<b>RESIDENTIAL</b>																							
Power Smart Residential Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.6	2.2	2.7	3.2	3.9	4.6	5.2	6.0	6.0	
Residential Earth Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.0	2.8	4.8	6.1	8.8	10.2	11.6	10.5	
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.8	0.8	0.8	0.8	0.8	0.9	0.9	
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.0	3.4	6.3	8.7	10.8	14.2	16.1	18.4	17.3	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	2.4	2.8	2.8	2.8	2.8	2.8	3.2	0.0	
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.4	2.6	3.0	3.0	3.0	3.0	3.0	3.4	0.2	
<b>GW.h IMPACTS (at meter)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.4	6.0	9.3	11.7	13.8	17.2	19.1	N/A	N/A	
<b>GW.h IMPACTS (at generation)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.9	6.8	10.6	13.4	15.7	19.6	21.8	21.8	17.5	

NOTE: Subtotals may not be exact due to rounding

**Total Annual Energy Savings - GW.h  
Electric CSI Programs**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>																														
Power Smart Residential Loan	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.3	3.7	3.1	2.0	2.0	1.4	0.0	0.0	
Residential Earth Power	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	9.8	9.2	5.4	5.4	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ecoEnergy	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	15.8	15.2	11.4	11.4	10.0	6.0	6.0	6.0	6.0	5.1	4.3	3.5	2.0	2.0	1.4	0.0	0.0	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																														
PSEM	2.8	2.8	2.2	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	3.0	3.0	2.4	1.8	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>GW.h IMPACTS (at meter)</b>	19.1	19.1	18.5	17.9	16.8	16.3	16.3	16.3	16.3	16.3	16.3	16.3	16.0	15.4	11.6	11.6	10.2	6.2	6.2	6.2	6.2	5.2	4.3	3.5	2.0	2.0	1.4	0.0	0.0	
<b>GW.h IMPACTS (at generation)</b>	21.8	21.8	21.1	20.5	19.1	18.6	18.6	18.6	18.6	18.6	18.6	18.6	18.2	17.5	13.2	13.2	11.6	7.0	7.0	7.0	7.0	5.9	5.0	4.0	2.3	2.3	1.6	0.0	0.0	

NOTE: Subtotals may not be exact due to rounding

# APPENDIX K

## Average Winter MW Savings – Customer Service Initiatives (CSI)

### 2008/09 Average Winter MW Electric CSI Programs

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>RESIDENTIAL</b>																
Power Smart Residential Loan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Residential Earth Power	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>MW IMPACTS (at meter)</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>
<b>MW IMPACTS (at generation)</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>

NOTE: Subtotals may not be exact due to rounding

### 2008/09 Average Winter MW Electric CSI Programs

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	At Generation 2008/09	At Generation 2023/24
<b>RESIDENTIAL</b>																	
Power Smart Residential Loan	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.4	0.4
Residential Earth Power	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.8</b>	<b>0.8</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																	
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>MW IMPACTS (at meter)</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>N/A</b>	<b>N/A</b>
<b>MW IMPACTS (at generation)</b>	<b>0.8</b>	<b>0.8</b>	<b>0.8</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.8</b>	<b>0.8</b>

NOTE: Subtotals may not be exact due to rounding

**Persisting Average Winter MW  
Electric CSI Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	At Generation 2008/09	At Generation 2023/24
<b>RESIDENTIAL</b>																						
Power Smart Residential Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	1.1	1.4	1.6	2.0	2.7	2.7	3.1	3.1
Residential Earth Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.6	1.1	1.4	2.1	2.1	2.4	2.1
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	1.3	2.0	2.7	3.4	4.8	4.8	5.5	5.2
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																						
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1
<b>MW IMPACTS (at meter)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.5	2.2	2.9	3.6	5.0	5.0	N/A	N/A
<b>MW IMPACTS (at generation)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.7	2.5	3.3	4.1	5.7	5.7	5.7	5.2

NOTE: Subtotals may not be exact due to rounding

**Persisting Average Winter MW  
Electric CSI Programs**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>																														
Power Smart Residential Loan	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.3	1.9	1.6	1.3	1.1	0.7	0.0	0.0
Residential Earth Power	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.9	1.8	1.8	1.4	1.4	1.1	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.6	4.6	4.6	4.2	4.2	3.8	3.2	3.2	3.2	3.2	2.7	2.4	2.1	1.8	1.1	0.7	0.0	0.0
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																														
PSEM	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>MW IMPACTS (at meter)</b>	5.0	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.7	4.6	4.6	4.2	4.2	3.9	3.2	3.2	3.2	3.2	2.7	2.4	2.1	1.8	1.1	0.7	0.0	0.0
<b>MW IMPACTS (at generation)</b>	5.7	5.7	5.7	5.6	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.3	5.2	5.2	4.8	4.8	4.4	3.7	3.7	3.7	3.7	3.1	2.7	2.3	2.0	1.2	0.8	0.0	0.0

NOTE: Subtotals may not be exact due to rounding

**Total Average Winter MW  
Electric CSI Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	At Generation 2008/09	At Generation 2023/24
<b>RESIDENTIAL</b>																						
Power Smart Residential Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.8	1.1	1.4	1.6	2.0	2.7	3.0	3.5	3.5
Residential Earth Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.6	1.1	1.4	2.1	2.5	2.8	2.5
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.9	1.3	2.0	2.7	3.4	4.8	5.5	6.3	6.0
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																						
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1
<b>MW IMPACTS (at meter)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.5	2.2	2.9	3.6	5.0	5.7	N/A	N/A
<b>MW IMPACTS (at generation)</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.7	2.5	3.3	4.1	5.7	6.5	6.5	6.1

NOTE: Subtotals may not be exact due to rounding

**Total Average Winter MW  
Electric CSI Programs**

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>																														
Power Smart Residential Loan	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.6	2.2	1.9	1.7	1.4	1.0	0.0	0.0	
Residential Earth Power	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.3	2.2	2.2	1.8	1.8	1.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
ecoEnergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.4	5.3	5.3	4.9	4.9	4.5	3.5	3.5	3.5	3.5	3.0	2.7	2.4	2.1	1.4	1.0	0.0	0.0
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																														
PSEM	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>MW IMPACTS (at meter)</b>	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.3	5.3	4.9	4.9	4.6	3.5	3.5	3.5	3.5	3.0	2.7	2.4	2.1	1.4	1.0	0.0	0.0
<b>MW IMPACTS (at generation)</b>	6.5	6.5	6.5	6.4	6.4	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.2	6.1	6.1	5.6	5.6	5.2	4.0	4.0	4.0	4.0	3.4	3.1	2.7	2.4	1.6	1.2	0.0	0.0

NOTE: Subtotals may not be exact due to rounding

# APPENDIX L

## m<sup>3</sup> Natural Gas Savings – Customer Service Initiatives (CSI)

2008/09 Natural Gas Savings - million m3  
Natural Gas CSI Programs

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>RESIDENTIAL</b>																							
Power Smart Residential Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Residential Earth Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ecoEnergy Earth Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>

NOTE: Subtotals may not be exact due to rounding

2008/09 Natural Gas Savings - million m3  
Natural Gas CSI Programs

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>															
Power Smart Residential Loan	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0
Residential Earth Power	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
ecoEnergy Earth Power	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>															
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TOTAL</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>

NOTE: Subtotals may not be exact due to rounding



**Persisting Natural Gas Savings - million m3  
Natural Gas CSI Programs**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>RESIDENTIAL</b>																							
Power Smart Residential Loan	1.2	2.1	3.5	5.6	7.8	9.6	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
Residential Earth Power	0.0	0.1	0.1	0.5	0.8	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2
ecoEnergy Earth Power	0.0	0.1	0.4	1.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>1.2</b>	<b>2.3</b>	<b>4.0</b>	<b>7.3</b>	<b>10.9</b>	<b>12.8</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.9</b>	<b>14.8</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
PSEM	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.1</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TOTAL</b>	<b>1.2</b>	<b>2.4</b>	<b>4.3</b>	<b>7.7</b>	<b>11.3</b>	<b>13.2</b>	<b>15.3</b>	<b>15.3</b>	<b>15.3</b>	<b>15.3</b>	<b>15.2</b>	<b>15.1</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>14.9</b>	<b>14.8</b>

NOTE: Subtotals may not be exact due to rounding

**Persisting Natural Gas Savings - million m3  
Natural Gas CSI Programs**

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>															
Power Smart Residential Loan	11.3	11.3	11.3	11.3	11.3	11.3	11.3	10.1	9.2	7.8	5.7	3.5	0.0	0.0	0.0
Residential Earth Power	0.8	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ecoEnergy Earth Power	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	1.9	1.1	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>14.4</b>	<b>14.1</b>	<b>14.0</b>	<b>13.6</b>	<b>13.6</b>	<b>13.6</b>	<b>13.6</b>	<b>12.4</b>	<b>11.4</b>	<b>9.7</b>	<b>6.8</b>	<b>3.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>															
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>TOTAL</b>	<b>14.5</b>	<b>14.2</b>	<b>14.0</b>	<b>13.7</b>	<b>13.7</b>	<b>13.7</b>	<b>13.7</b>	<b>12.4</b>	<b>11.4</b>	<b>9.7</b>	<b>6.8</b>	<b>3.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

NOTE: Subtotals may not be exact due to rounding

**Total Annual Natural Gas Savings - million m3  
Natural Gas CSI Programs**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
<b>RESIDENTIAL</b>																							
Power Smart Residential Loan	1.2	2.1	3.5	5.6	7.8	9.6	11.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
Residential Earth Power	0.0	0.1	0.1	0.5	0.8	1.0	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3
ecoEnergy Earth Power	0.0	0.1	0.4	1.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	1.2	2.3	4.0	7.3	10.9	12.8	14.9	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.0	15.9
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
PSEM	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	1.2	2.4	4.3	7.7	11.3	13.2	15.3	16.4	16.4	16.4	16.4	16.4	16.2	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.0	15.9

NOTE: Subtotals may not be exact due to rounding

**Total Annual Natural Gas Savings - million m3  
Natural Gas CSI Programs**

	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
<b>RESIDENTIAL</b>															
Power Smart Residential Loan	12.3	12.3	12.3	12.3	12.3	12.3	12.3	11.1	10.1	8.8	6.7	4.5	1.0	0.0	0.0
Residential Earth Power	0.9	0.7	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
ecoEnergy Earth Power	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	1.9	1.1	0.0	0.0	0.0	0.0
Solar HWT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	15.6	15.3	15.1	14.7	14.7	14.7	14.7	13.5	12.5	10.8	7.9	4.6	1.1	0.0	0.0
<b>DISCONTINUED/COMPLETED PROGRAMS</b>															
PSEM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R2000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	15.6	15.3	15.1	14.8	14.8	14.8	14.8	13.5	12.5	10.8	7.9	4.6	1.1	0.0	0.0

NOTE: Subtotals may not be exact due to rounding

# APPENDIX M

## GW.h & Average Winter MW Energy Savings – Codes and Standards

### Annual Energy Savings - GW.h Codes and Standards

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Appliances:																	
Ovens	0.4	(0.2)	(0.1)	0.1	(0.3)	(0.1)	(0.1)	(0.1)	(0.3)	0.2	0.2	0.0	0.0	0.1	(0.2)	(0.2)	(0.2)
Dishwashers	(0.0)	0.1	0.2	0.4	0.7	0.8	0.7	0.7	0.7	0.8	0.8	1.3	2.0	2.0	2.5	3.4	3.5
Clothes Washers	(0.3)	(0.3)	0.1	0.1	0.1	0.2	0.6	0.8	0.8	0.8	0.7	0.9	3.0	3.1	3.9	3.6	3.8
Clothes Dryers	0.1	0.1	0.4	0.4	4.6	0.5	0.1	0.1	0.1	0.2	0.2	0.2	1.0	1.0	1.0	0.9	0.9
Refrigerators	2.0	4.7	6.1	7.1	7.0	7.2	7.1	7.2	7.8	7.8	10.1	11.0	12.9	13.2	12.8	16.2	17.1
Freezers	(0.3)	0.3	0.4	0.5	0.7	0.4	0.5	0.5	0.5	0.5	0.3	0.3	0.5	(0.8)	(0.5)	(0.7)	(0.8)
High Efficiency Motors Program	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0.0	0.0
New Homes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0	1.0	1.1	1.2	1.5	0.8	1.2	1.3	1.5
T12 Lighting	0.0	0.0	0.0	0.0	0.0	9.7	15.4	16.5	14.9	16.3	19.2	0.5	0.4	0.3	0.3	0.3	0.3
<b>Subtotal</b>	<b>1.9</b>	<b>4.6</b>	<b>7.1</b>	<b>8.6</b>	<b>12.8</b>	<b>20.3</b>	<b>26.0</b>	<b>28.6</b>	<b>27.2</b>	<b>29.2</b>	<b>34.2</b>	<b>16.9</b>	<b>22.9</b>	<b>21.4</b>	<b>22.5</b>	<b>24.8</b>	<b>26.1</b>
GW.h IMPACTS (at meter)	1.9	4.6	7.1	8.6	12.8	20.3	26.0	28.6	27.2	29.2	34.2	16.9	22.9	21.4	22.5	24.8	26.1
GW.h IMPACTS (at generation)	2.2	5.3	8.1	9.8	14.6	23.1	29.6	32.5	30.9	33.3	39.0	19.2	26.1	24.3	25.6	28.3	29.8

NOTE: Subtotals may not be exact due to rounding

### Annual Energy Savings - Average Winter MW Codes and Standards

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Appliances:																	
Ovens	0.1	(0.0)	(0.0)	0.0	(0.1)	(0.0)	(0.0)	(0.0)	(0.1)	0.0	0.0	0.0	0.0	0.0	(0.1)	(0.0)	(0.0)
Dishwashers	(0.0)	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.6	0.8	0.9
Clothes Washers	(0.1)	(0.1)	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.8	1.0	0.9	0.9
Clothes Dryers	0.0	0.0	0.1	0.1	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2
Refrigerators	0.5	1.1	1.5	1.7	1.7	1.8	1.7	1.8	1.9	1.9	2.5	2.7	3.1	3.2	3.1	4.0	4.2
Freezers	(0.1)	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	(0.2)	(0.1)	(0.2)	(0.2)
High Efficiency Motors Program	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0
New Homes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.4	0.5	0.5
T12 Lighting	0.0	0.0	0.0	0.0	0.0	2.7	4.3	4.7	4.2	4.6	5.4	0.1	0.1	0.1	0.1	0.1	0.1
<b>Subtotal</b>	<b>0.5</b>	<b>1.1</b>	<b>1.7</b>	<b>2.1</b>	<b>3.0</b>	<b>5.2</b>	<b>6.8</b>	<b>7.6</b>	<b>7.2</b>	<b>7.8</b>	<b>9.1</b>	<b>4.1</b>	<b>5.6</b>	<b>5.2</b>	<b>5.5</b>	<b>6.2</b>	<b>6.5</b>
MW IMPACTS (at meter)	0.5	1.1	1.7	2.1	3.0	5.2	6.8	7.6	7.2	7.8	9.1	4.1	5.6	5.2	5.5	6.2	6.5
MW IMPACTS (at generation)	0.5	1.3	2.0	2.4	3.4	5.9	7.7	8.7	8.2	8.8	10.3	4.7	6.4	5.9	6.2	7.0	7.4

NOTE: Subtotals may not be exact due to rounding



**Utility Cost (1000s in 2008\$)  
Electric Incentive Based Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative Total 2008/09	Cumulative Total 2023/24	
<b>RESIDENTIAL</b>																							
Compact Fluorescent Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	778	806	923	1,271	4,805	4,805		
Home Insulation*	0	0	0	0	246	375	234	218	394	44	44	70	69	134	740	1,101	1,878	1,515	1,675	8,741	8,741		
Appliances	0	0	0	0	0	0	0	0	0	0	0	0	20	14	10	94	1,521	1,934	1,719	5,312	5,312		
Energy Efficient Light Fixtures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	153	491	380	1,024	1,024		
New Homes	0	0	0	38	148	93	211	120	61	32	1	18	129	285	218	297	596	891	640	635	4,411	4,411	
Seasonal LED Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83	385	358	339	1,166	1,166	
Lower Income Energy Efficiency Program*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	101	209	1,138	1,490	1,490	
Water Saver Package	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	18	0	0	78	97	97		
High Efficient Furnace & Boiler Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3	3		
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>393</b>	<b>468</b>	<b>445</b>	<b>338</b>	<b>455</b>	<b>76</b>	<b>5</b>	<b>62</b>	<b>198</b>	<b>373</b>	<b>386</b>	<b>1,826</b>	<b>2,945</b>	<b>5,735</b>	<b>6,069</b>	<b>7,235</b>	<b>27,050</b>	<b>27,050</b>	
<b>COMMERCIAL</b>																							
Commercial Lighting	0	0	106	1,124	2,409	2,842	2,789	1,159	986	1,951	871	637	989	1,171	2,844	5,210	6,283	7,204	7,445	7,723	53,544	53,544	
Commercial Insulation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	212	255	237	705	705
Commercial Windows	0	0	0	7	25	41	124	164	60	42	74	66	151	117	236	314	390	380	441	2,632	2,632		
Agricultural Heat Pads	0	0	0	0	0	3	66	34	88	88	46	59	66	59	127	72	65	60	42	875	875		
Parking Lot Controllers	0	0	0	38	128	207	110	99	185	20	50	198	108	281	354	1,052	908	583	377	4,699	4,699		
Spray Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	27	21	87	87		
Internal Retrofit**	0	0	114	270	451	543	157	204	169	223	110	283	134	275	604	689	587	777	597	711	6,898	6,898	
Commercial Geothermal	0	0	0	14	47	76	64	217	113	130	107	164	278	625	269	503	623	351	221	3,802	3,802		
Commercial Refrigeration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	231	307	293	174	1,005	1,005		
HVAC - Chillers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	174	201	71	212	657	657		
Custom	0	0	0	19	64	103	76	0	211	513	128	143	79	153	11	6	118	187	238	2,053	2,053		
Commercial Building Optimization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179	58	39	28	304	304		
City of Winnipeg Agreement	0	0	0	0	0	0	0	0	0	0	0	0	0	76	414	67	3,516	1,287	187	63	5,611	5,611	
Commercial Kitchen Appliances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	90		
Commercial Clothes Washers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	43	98	98		
New Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	139	95	236	236			
Power Smart Energy Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	79	115	196	196		
Network Energy Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	20	23	23		
Power Smart Shops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	60	61	61		
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>219</b>	<b>1,393</b>	<b>2,938</b>	<b>3,651</b>	<b>3,376</b>	<b>1,803</b>	<b>1,669</b>	<b>2,831</b>	<b>1,773</b>	<b>1,326</b>	<b>1,752</b>	<b>2,204</b>	<b>4,898</b>	<b>6,964</b>	<b>12,919</b>	<b>12,192</b>	<b>10,753</b>	<b>10,914</b>	<b>83,576</b>	<b>83,576</b>	
<b>INDUSTRIAL</b>																							
Performance Optimization	0	0	85	181	232	479	485	436	636	386	256	395	999	3,155	1,186	1,608	1,676	1,075	3,215	2,504	18,988	18,988	
Emergency Preparedness	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81	81		
Efficient Motors (QMR)	0	0	0	22	50	19	4	0	0	0	0	0	0	0	0	0	0	0	0	95	95		
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>85</b>	<b>203</b>	<b>283</b>	<b>498</b>	<b>488</b>	<b>436</b>	<b>636</b>	<b>386</b>	<b>256</b>	<b>395</b>	<b>999</b>	<b>3,155</b>	<b>1,186</b>	<b>1,608</b>	<b>1,676</b>	<b>1,075</b>	<b>3,215</b>	<b>2,585</b>	<b>19,165</b>	<b>19,165</b>	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
Residential		0	63	26	118	0	0	4	0	0	0	0	0	0	0	13	46	0	0	0	270	270	
Retrofit/Demonstration	0	0	0	0	0	0	18	387	383	73	5	0	0	0	0	0	0	0	0	0	865	865	
Water Heater Rental	0	0	0	0	0	0	0	0	0	0	0	0	0	9	4	8	69	34	10	134	134		
Thermostat	0	0	170	0	0	0	2	60	25	15	4	0	0	0	0	0	0	0	0	275	275		
Res Hot Water	0	0	239	187	91	53	19	3	9	4	0	0	0	0	0	0	0	0	0	1,077	1,077		
Outdoor Timer	192	280	239	187	91	53	19	3	9	4	0	0	0	0	0	0	0	0	0	0	1,077	1,077	
<b>Subtotal</b>	<b>192</b>	<b>343</b>	<b>435</b>	<b>304</b>	<b>91</b>	<b>53</b>	<b>43</b>	<b>449</b>	<b>416</b>	<b>91</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>17</b>	<b>53</b>	<b>69</b>	<b>34</b>	<b>10</b>	<b>2,620</b>	<b>2,620</b>	
Commercial		0	0	51	12	0	0	0	0	0	0	0	0	16	28	5	65	24	0	0	201	201	
RBB	0	63	116	34	3	117	0	0	0	0	0	0	0	0	0	0	0	0	0	333	333		
Commercial Showerhead 2	0	17	278	32	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	332	332		
Infrared Heat Lamp	0	0	0	0	0	149	129	90	23	4	0	0	0	0	0	0	0	0	0	395	395		
Livestock Waterer	0	109	1,447	2,041	1,864	1,416	17	0	45	0	0	0	0	0	0	0	0	0	0	6,939	6,939		
Roadway Lighting	0	31	1,276	1,069	1,096	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,472	3,472		
Sentinel Lighting	0	0	0	0	8	27	44	95	75	3	10	32	21	17	18	7	4	0	5	367	367		
Commercial Air Barrier	0	0	31	609	207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	848	848		
Agricultural Demand Controller	0	0	0	0	2	3	78	73	0	0	0	7	52	0	134	10	0	0	0	359	359		
Commercial Air Conditioning	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Aboriginal Commercial	0	220	3,199	3,796	3,184	1,711	192	263	217	7	10	32	28	85	46	145	79	24	5	0	13,245	13,245	
<b>Subtotal</b>	<b>0</b>	<b>220</b>	<b>3,199</b>	<b>3,796</b>	<b>3,184</b>	<b>1,711</b>	<b>192</b>	<b>263</b>	<b>217</b>	<b>7</b>	<b>10</b>	<b>32</b>	<b>28</b>	<b>85</b>	<b>46</b>	<b>145</b>	<b>79</b>	<b>24</b>	<b>5</b>	<b>0</b>	<b>13,245</b>	<b>13,245</b>	
Industrial		0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	
Industrial (Basic)	0	0	61	309	325	596	1,023	346	318	82	11	4	0	0	0	0	0	37	0	0	3,112	3,112	
Retrofit/Demonstration GSL	0	22	301	731	585	465	426	462	622	45	3	0	0	0	0	0	0	0	0	3,662	3,662		
High Efficiency Motors	0	22	362	1,040	916	1,060	1,449	808	940	127	14	4	0	0	0	0	0	37	0	0	6,780	6,780	
<b>Subtotal</b>	<b>0</b>	<b>22</b>	<b>362</b>	<b>1,040</b>	<b>916</b>	<b>1,060</b>	<b>1,449</b>	<b>808</b>	<b>940</b>	<b>127</b>	<b>14</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>6,780</b>	<b>6,780</b>	
<b>Total Discontinued</b>	<b>192</b>	<b>585</b>	<b>3,996</b>	<b>5,141</b>	<b>4,192</b>	<b>2,824</b>	<b>1,683</b>	<b>1,521</b>	<b>1,574</b>	<b>225</b>	<b>33</b>	<b>37</b>	<b>28</b>	<b>85</b>	<b>54</b>	<b>163</b>	<b>133</b>	<b>131</b>	<b>39</b>	<b>10</b>	<b>22,646</b>	<b>22,646</b>	
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>																							
	<b>192</b>	<b>585</b>	<b>4,300</b>	<b>6,776</b>	<b>7,806</b>	<b>7,441</b>	<b>5,993</b>	<b>4,098</b>	<b>4,333</b>	<b>3,518</b>	<b>2,068</b>	<b>1,820</b>	<b>2,977</b>	<b>5,818</b>	<b>6,524</b>	<b>10,560</b>	<b>17,674</b>	<b>19,133</b>	<b>20,076</b>	<b>20,744</b>	<b>152,436</b>	<b>152,436</b>	
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>																							
BioEnergy Optimization Program		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	1,694	1,636	1,718	1,890	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>147</b>	<b>1,694</b>	<b>1,636</b>	<b>1,718</b>	<b>1,890</b>	<b>0</b>	
<b>RATE/LOAD MANAGEMENT PROGRAMS</b>																							
Curtaillable Rates		0	0	0	84	616	1,512	1,361	1,334	1,154	1,475	1,823	2,338	3,081	4,646	6,084	6,100	6,800	6,653	6,595	6,382	7,020	0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>	<b>616</b>	<b>1,512</b>	<b>1,361</b>	<b>1,334</b>	<b>1,154</b>	<b>1,475</b>	<b>1,823</b>	<b>2,338</b>	<b>3,081</b>	<b>4,646</b>	<b>6,084</b>	<b>6,100</b>	<b>6,800</b>	<b>6,653</b>	<b>6,595</b>	<b>6,382</b>	<b>7,020</b>	<b>0&lt;/</b>	

**Administration Cost (1000s in 2008\$)  
Electric Incentive Based Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative Total 2008/09	Cumulative Total 2023/24	
<b>RESIDENTIAL</b>																							
Compact Fluorescent Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	624	748	577	673	624	3,266	3,266	
Home Insulation	0	0	0	0	246	375	234	218	394	44	4	44	70	69	134	268	422	283	211	211	3,227	3,227	
Appliances	0	0	0	0	0	0	0	0	0	0	0	0	0	20	14	10	94	555	603	404	1,700	1,700	
Energy Efficient Light Fixtures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	311	388	760	760	
New Homes	0	0	0	38	148	93	211	120	61	32	0	18	129	285	218	287	530	765	528	534	3,996	3,996	
Seasonal LED Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	229	247	273	801	801	
Lower Income Energy Efficiency Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	169	840	1,051	1,051	
Water Saver Package	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	18	0	78	97	
High Efficient Furnace & Boiler Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	3	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>38</b>	<b>393</b>	<b>468</b>	<b>445</b>	<b>338</b>	<b>455</b>	<b>76</b>	<b>4</b>	<b>62</b>	<b>198</b>	<b>373</b>	<b>386</b>	<b>1,188</b>	<b>1,910</b>	<b>2,470</b>	<b>2,819</b>	<b>3,274</b>	<b>14,900</b>	<b>14,900</b>	
<b>COMMERCIAL</b>																							
Commercial Lighting	0	0	106	828	923	764	618	422	548	410	302	323	395	801	1,092	1,850	1,802	2,132	2,030	1,828	17,174	17,174	
Commercial Insulation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140	141	43	324	324	
Commercial Windows	0	0	0	0	7	25	41	77	73	8	1	24	13	41	31	59	52	153	159	100	864	864	
Agricultural Heat Pads	0	0	0	0	0	0	3	66	34	40	29	20	23	31	26	79	43	42	27	18	480	480	
Parking Lot Controllers	0	0	0	0	38	128	207	77	73	66	5	31	151	86	211	278	486	176	116	142	2,271	2,271	
Spray Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	15	3	33	33	
Interior Retrofit	0	0	114	220	198	175	61	65	67	60	43	88	48	101	119	174	187	225	265	520	2,730	2,730	
Commercial Geothermal	0	0	0	0	14	47	76	35	73	27	12	38	78	140	279	144	198	198	211	130	1,701	1,701	
Commercial Refrigeration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	231	215	192	93	732	732	
HVAC - Chillers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	21	14	13	117	117	
Custom	0	0	0	0	19	64	103	48	0	88	86	77	93	58	62	8	1	77	33	205	1,024	1,024	
Commercial Building Optimization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179	58	39	20	297	297	
City of Winnipeg Agreement	0	0	0	0	0	0	0	0	0	0	0	0	0	59	240	6	469	82	28	63	948	948	
Commercial Kitchen Appliances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	46	46	
Commercial Clothes Washers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	34	34	
New Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	95	95	
Power Smart Energy Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	113	113	
Network Energy Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	20	
Power Smart Shops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	60	60	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>219</b>	<b>1,048</b>	<b>1,198</b>	<b>1,205</b>	<b>1,109</b>	<b>789</b>	<b>870</b>	<b>698</b>	<b>478</b>	<b>601</b>	<b>801</b>	<b>1,316</b>	<b>2,061</b>	<b>2,598</b>	<b>3,718</b>	<b>3,532</b>	<b>3,271</b>	<b>3,548</b>	<b>29,061</b>	<b>29,061</b>	
<b>INDUSTRIAL</b>																							
Performance Optimization	0	0	85	181	232	337	247	290	261	200	215	202	283	1,904	393	188	332	391	494	579	6,815	6,815	
Emergency Preparedness	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81	81	81	
Efficient Motors (QMR)	0	0	0	22	50	19	4	0	0	0	0	0	0	0	0	0	0	0	0	0	95	95	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>85</b>	<b>203</b>	<b>283</b>	<b>356</b>	<b>251</b>	<b>290</b>	<b>261</b>	<b>200</b>	<b>215</b>	<b>202</b>	<b>283</b>	<b>1,904</b>	<b>393</b>	<b>188</b>	<b>332</b>	<b>391</b>	<b>494</b>	<b>659</b>	<b>6,991</b>	<b>6,991</b>	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
<b>Residential</b>																							
Retrofit/Demonstration	0	63	26	118	0	0	0	0	0	0	0	0	0	0	0	13	46	0	0	0	266	266	
Water Heater Rental	0	0	0	0	0	0	18	387	383	73	5	0	0	0	0	0	0	0	0	0	865	865	
Thermostat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	4	8	48	24	4	96	96	
Res Hot Water	0	0	161	0	0	0	2	60	25	15	4	0	0	0	0	0	0	0	0	0	266	266	
Outdoor Timer	144	214	182	153	63	53	19	3	9	4	0	0	0	0	0	0	0	0	0	0	844	844	
<b>Subtotal</b>	<b>144</b>	<b>277</b>	<b>369</b>	<b>270</b>	<b>63</b>	<b>53</b>	<b>38</b>	<b>449</b>	<b>416</b>	<b>91</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>17</b>	<b>53</b>	<b>48</b>	<b>24</b>	<b>4</b>	<b>2,337</b>	<b>2,337</b>		
<b>Commercial</b>																							
RBB	0	0	26	12	0	0	0	0	0	0	0	0	0	16	28	5	65	0	0	0	152	152	
Commercial Showerhead 2	0	63	87	34	3	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	305	305	
Infrared Heat Lamp	0	17	150	32	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	204	204	
Livestock Waterer	0	0	0	0	0	129	112	79	23	4	0	0	0	0	0	0	0	0	0	0	347	347	
Roadway Lighting	0	109	1,447	2,041	1,864	1,416	17	0	45	0	0	0	0	0	0	0	0	0	0	0	6,939	6,939	
Sentinel Lighting	0	31	1,276	1,069	1,096	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,472	3,472	
Commercial Air Barrier	0	0	0	0	8	27	44	77	73	1	16	10	10	9	4	1	0	1	0	0	282	282	
Agricultural Demand Controller	0	0	31	439	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	619	619	
Commercial Air Conditioning	0	0	0	0	0	2	3	77	73	0	0	0	3	19	0	11	2	0	0	0	190	190	
Aboriginal Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Subtotal</b>	<b>0</b>	<b>220</b>	<b>3,017</b>	<b>3,625</b>	<b>3,126</b>	<b>1,691</b>	<b>175</b>	<b>233</b>	<b>215</b>	<b>5</b>	<b>1</b>	<b>16</b>	<b>13</b>	<b>45</b>	<b>37</b>	<b>20</b>	<b>69</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>12,509</b>	<b>12,509</b>	
<b>Industrial</b>																							
Industrial (Basic)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Retrofit/Demonstration GSL	0	0	61	274	279	205	383	346	318	45	11	4	0	0	0	0	0	37	0	0	1,963	1,963	
High Efficiency Motors	0	22	265	335	259	227	243	264	334	45	3	0	0	0	0	0	0	0	0	0	1,997	1,997	
<b>Subtotal</b>	<b>0</b>	<b>22</b>	<b>265</b>	<b>608</b>	<b>538</b>	<b>433</b>	<b>626</b>	<b>610</b>	<b>652</b>	<b>90</b>	<b>14</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>3,960</b>	<b>3,960</b>	
<b>Total Discontinued</b>	<b>144</b>	<b>519</b>	<b>3,712</b>	<b>4,504</b>	<b>3,727</b>	<b>2,177</b>	<b>839</b>	<b>1,292</b>	<b>1,283</b>	<b>186</b>	<b>24</b>	<b>21</b>	<b>13</b>	<b>45</b>	<b>45</b>	<b>38</b>	<b>122</b>	<b>85</b>	<b>24</b>	<b>5</b>	<b>18,806</b>	<b>18,806</b>	
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>144</b>	<b>519</b>	<b>4,016</b>	<b>5,794</b>	<b>5,601</b>	<b>4,206</b>	<b>2,644</b>	<b>2,709</b>	<b>2,869</b>	<b>1,160</b>	<b>721</b>	<b>885</b>	<b>1,296</b>	<b>3,639</b>	<b>2,885</b>	<b>4,012</b>	<b>6,082</b>	<b>6,479</b>	<b>6,608</b>	<b>7,486</b>	<b>69,757</b>	<b>69,757</b>	
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>																							
BioEnergy Optimization Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	81	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>73</b>	<b>81</b>	<b>0</b>	
<b>RATE/LOAD MANAGEMENT PROGRAMS</b>																							
Curtailable Rates	0	0	0	84	119	210	72	49	46	33	34	33	9	9	14	17	9	7	10	5	5	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>																			

**Incentive Cost (1000s in 2008\$)**  
**Electric Incentive Based Programs**

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative Total 2008/09	Cumulative Total 2023/24	
<b>RESIDENTIAL</b>																							
Compact Fluorescent Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	259	228	250	647	1,540	1,540	
Home Insulation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	472	679	1,595	1,304	1,464	5,515	5,515	
Appliances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	966	1,331	1,315	3,611	3,611	
Energy Efficient Light Fixtures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	103	69	204	204	
New Homes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	66	126	111	101	414	414	
Seasonal LED Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	156	112	67	365	365	
Lower Income Energy Efficiency Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	298	338	338	
Water Saver Package	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
High Efficient Furnace & Boiler Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>637</b>	<b>1,035</b>	<b>3,103</b>	<b>3,250</b>	<b>3,961</b>	<b>11,987</b>	<b>11,987</b>	
<b>COMMERCIAL</b>																							
Commercial Lighting	0	0	0	296	1,487	2,078	2,171	736	438	1,541	569	315	594	371	1,552	3,360	4,482	5,072	5,415	5,895	36,370	36,370	
Commercial Insulation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	114	194	381	381	
Commercial Windows	0	0	0	0	0	0	0	47	91	52	41	50	53	110	86	177	262	237	220	341	1,768	1,768	
Agricultural Heat Pads	0	0	0	0	0	0	0	0	48	59	26	36	35	33	48	29	23	33	24	395	395	395	
Parking Lot Controllers	0	0	0	0	0	0	33	25	119	15	20	47	22	69	76	566	732	468	236	2,429	2,429	2,429	
Spray Valves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	12	17	54	54	54	
Internal Retrofit	0	0	0	50	253	368	97	139	101	162	67	195	85	174	485	515	400	0	0	0	3,092	3,092	
Commercial Geothermal	0	0	0	0	0	0	0	29	144	86	117	69	86	138	346	125	305	425	141	91	2,101	2,101	
Commercial Refrigeration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	92	101	81	274	274	
HVAC - Chillers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	104	180	58	199	541	541	541	
Custom	0	0	0	0	0	0	29	0	124	427	51	50	21	91	3	7	41	153	33	1,029	1,029	1,029	
Commercial Building Optimization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	7	
City of Winnipeg Agreement	0	0	0	0	0	0	0	0	0	0	0	0	0	16	174	61	3,047	1,205	159	0	4,663	4,663	
Commercial Kitchen Appliances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	45	45	
Commercial Clothes Washers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9	
New Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Power Smart Energy Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	
Network Energy Manager	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Power Smart Shops	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>345</b>	<b>1,740</b>	<b>2,446</b>	<b>2,268</b>	<b>1,014</b>	<b>799</b>	<b>2,133</b>	<b>1,295</b>	<b>725</b>	<b>951</b>	<b>888</b>	<b>2,837</b>	<b>4,365</b>	<b>9,201</b>	<b>8,105</b>	<b>6,873</b>	<b>7,175</b>	<b>53,160</b>	<b>53,160</b>	
<b>INDUSTRIAL</b>																							
Performance Optimization	0	0	0	0	0	142	237	147	374	185	41	194	716	1,251	792	1,420	1,344	684	2,720	1,925	12,174	12,174	
Emergency Preparedness	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Efficient Motors (QMR)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>142</b>	<b>237</b>	<b>147</b>	<b>374</b>	<b>185</b>	<b>41</b>	<b>194</b>	<b>716</b>	<b>1,251</b>	<b>792</b>	<b>1,420</b>	<b>1,344</b>	<b>684</b>	<b>2,720</b>	<b>1,925</b>	<b>12,174</b>	<b>12,174</b>	
<b>DISCONTINUED/COMPLETED PROGRAMS</b>																							
<b>Residential</b>																							
Retrofit/Demonstration	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
Water Heater Rental	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Thermostat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	10	5	37	37	
Res Hot Water	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	
Outdoor Timer	48	66	58	34	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233	233	
<b>Subtotal</b>	<b>48</b>	<b>66</b>	<b>66</b>	<b>34</b>	<b>28</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>10</b>	<b>5</b>	<b>284</b>	<b>284</b>	
<b>Commercial</b>																							
RBB	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	
Commercial Showerhead 2	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	29	
Infrared Heat Lamp	0	0	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128	128	
Livestock Waterer	0	0	0	0	0	20	17	11	0	0	0	0	0	0	0	0	0	0	0	0	47	47	
Roadway Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sentinel Lighting	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Commercial Air Barrier	0	0	0	0	0	0	18	2	2	9	16	11	7	9	2	3	0	5	0	0	85	85	
Agricultural Demand Controller	0	0	0	171	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229	229	
Commercial Air Conditioning	0	0	0	0	0	0	1	0	0	0	0	0	4	33	0	123	8	0	0	0	169	169	
Aboriginal Commercial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>181</b>	<b>171</b>	<b>58</b>	<b>20</b>	<b>17</b>	<b>30</b>	<b>2</b>	<b>2</b>	<b>9</b>	<b>16</b>	<b>15</b>	<b>40</b>	<b>9</b>	<b>125</b>	<b>11</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>712</b>	<b>712</b>	
<b>Industrial</b>																							
Industrial (Basic)	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	
Retrofit/Demonstration GSL	0	0	0	36	47	390	640	0	0	37	0	0	0	0	0	0	0	0	0	0	1,149	1,149	
High Efficiency Motors	0	0	36	396	326	238	183	198	289	0	0	0	0	0	0	0	0	0	0	0	1,665	1,665	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>432</b>	<b>378</b>	<b>628</b>	<b>823</b>	<b>198</b>	<b>289</b>	<b>37</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,821</b>	<b>2,821</b>	
<b>Total Discontinued</b>	<b>48</b>	<b>66</b>	<b>284</b>	<b>637</b>	<b>465</b>	<b>647</b>	<b>844</b>	<b>229</b>	<b>291</b>	<b>39</b>	<b>9</b>	<b>16</b>	<b>15</b>	<b>40</b>	<b>9</b>	<b>125</b>	<b>11</b>	<b>21</b>	<b>15</b>	<b>5</b>	<b>3,816</b>	<b>3,816</b>	
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>48</b>	<b>66</b>	<b>284</b>	<b>982</b>	<b>2,204</b>	<b>3,235</b>	<b>3,349</b>	<b>1,389</b>	<b>1,464</b>	<b>2,357</b>	<b>1,346</b>	<b>934</b>	<b>1,681</b>	<b>2,180</b>	<b>3,639</b>	<b>6,548</b>	<b>11,591</b>	<b>11,914</b>	<b>12,858</b>	<b>13,066</b>	<b>81,137</b>	<b>81,137</b>	
<b>CUSTOMER SELF-GENERATION PROGRAMS</b>																							
BioEnergy Optimization Program	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	1,683	1,516	1,645	1,810	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>147</b>	<b>1,683</b>	<b>1,516</b>	<b>1,645</b>	<b>1,810</b>	<b>0</b>	
<b>RATE/LOAD MANAGEMENT PROGRAMS</b>																							
Curtailable Rates	0	0	0	0	497	1,303	1,288	1,284	1,108	1,441	1,790	2,305	3,072	4,637	6,070	6,083	6,791	6,645	6,586	6,377	7,015	0	
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>497</b>	<b>1,303</b>	<b>1,288</b>	<b>1,284</b>	<b>1,108</b>	<b>1,441</b>	<b>1,790</b>	<b>2,305</b>	<b>3,072</b>	<b>4,637</b>	<b>6,070</b>	<b>6,08</b>							

# APPENDIX O

## Natural Gas Incentive Based TRC, Utility, Administration and Incentive Costs

		<b>Total Resource Cost (1000s in 2008\$)</b>							<b>Natural Gas Incentive Based Programs</b>		
		2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative Total 2008/09	Cumulative Total 2023/24
<b>RESIDENTIAL</b>											
	HE Gas Furnace	0	0	0	0	2,084	6,255	4,675	5,329	18,344	18,344
	Home Insulation	0	0	0	0	793	4,327	3,711	4,746	13,577	13,577
	New Homes	0	12	76	171	117	266	422	245	1,309	1,309
	Lower Income Energy Efficiency Program	0	0	0	0	79	0	164	271	514	514
	<b>Subtotal</b>	<b>0</b>	<b>12</b>	<b>76</b>	<b>171</b>	<b>3,074</b>	<b>10,848</b>	<b>8,972</b>	<b>10,590</b>	<b>33,744</b>	<b>33,744</b>
<b>COMMERCIAL</b>											
	HVAC	0	0	0	0	106	939	2,475	2,952	6,472	6,472
	Commercial Insulation	0	0	0	0	0	570	1,356	1,336	3,263	3,263
	Commercial Windows	0	0	0	0	0	130	338	352	820	820
	Spray Valves	0	0	0	0	0	128	55	122	305	305
	Commercial Building Optimization	0	0	0	0	77	231	158	116	582	582
	Commercial Kitchen Appliance program	0	0	0	0	0	0	0	26	26	26
	City of Winnipeg Agreement	0	0	0	0	0	0	0	0	0	0
	Commercial Custom	0	0	0	0	0	0	0	0	0	0
	New Construction	0	0	0	0	0	0	0	143	143	143
	Power Smart Energy Manager Program	0	0	0	0	0	0	119	92	211	211
	Commercial Clothes Washer Program	0	0	0	0	0	0	0	0	0	0
	Power Smart Shops	0	0	0	0	0	0	1	15	16	16
	<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>183</b>	<b>1,998</b>	<b>4,502</b>	<b>5,154</b>	<b>11,838</b>	<b>11,838</b>
<b>INDUSTRIAL</b>											
	Industrial Natural Gas Optimization Program	0	0	0	0	103	37	1,877	2,322	4,339	4,339
	<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>37</b>	<b>1,877</b>	<b>2,322</b>	<b>4,339</b>	<b>4,339</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>											
	Thermostat	0	0	0	0	0	230	147	18	396	396
	<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>230</b>	<b>147</b>	<b>18</b>	<b>396</b>	<b>396</b>
	<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>0</b>	<b>12</b>	<b>76</b>	<b>171</b>	<b>3,359</b>	<b>13,114</b>	<b>15,499</b>	<b>18,084</b>	<b>50,317</b>	<b>50,317</b>
<b>CUSTOMER SELF-GENERATION</b>											
	Bioenergy Optimization Program	0	0	0	0	0	0	13	8	21	21
	<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>8</b>	<b>21</b>	<b>21</b>
	<b>PROGRAMS SUBTOTAL</b>	<b>0</b>	<b>12</b>	<b>76</b>	<b>171</b>	<b>3,359</b>	<b>13,114</b>	<b>15,512</b>	<b>18,092</b>	<b>50,338</b>	<b>50,338</b>
	Support Costs	200	221	239	527	1,228	1,627	1,597	1,927	7,565	7,565
	Contingency	200	234	315	698	4,587	14,741	17,109	20,019	57,903	57,903
	<b>TOTAL RESOURCE COST OF PROGRAMS</b>	<b>400</b>	<b>467</b>	<b>629</b>	<b>1,396</b>	<b>9,175</b>	<b>29,483</b>	<b>34,218</b>	<b>40,038</b>	<b>115,806</b>	<b>115,806</b>

NOTE: Subtotals may not be exact due to rounding



**Utility Cost (1000s in 2008\$)**  
**Natural Gas Incentive Based Programs**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative Total 2008/09	Cumulative Total 2023/24
<b>RESIDENTIAL</b>										
HE Gas Furnace	0	0	0	0	589	1,333	2,122	3,166	7,210	7,210
Home Insulation	0	0	0	0	381	1,860	2,980	2,751	7,972	7,972
New Homes	0	12	76	93	62	94	138	0	476	476
Lower Income Energy Efficiency Program	0	0	0	0	79	0	164	469	713	713
<b>Subtotal</b>	<b>0</b>	<b>12</b>	<b>76</b>	<b>93</b>	<b>1,112</b>	<b>3,287</b>	<b>5,405</b>	<b>6,385</b>	<b>16,371</b>	<b>16,371</b>
<b>COMMERCIAL</b>										
HVAC	0	0	0	0	106	612	1,657	1,379	3,754	3,754
Commercial Insulation	0	0	0	0	0	424	826	1,010	2,260	2,260
Commercial Windows	0	0	0	0	0	130	281	462	873	873
Spray Valves	0	0	0	0	0	129	55	122	306	306
Commercial Building Optimization	0	0	0	0	77	231	158	157	623	623
Commercial Kitchen Appliance program	0	0	0	0	0	0	0	16	16	16
City of Winnipeg Agreement	0	0	0	0	0	0	0	0	0	0
Commercial Custom	0	0	0	0	0	0	0	0	0	0
New Construction	0	0	0	0	0	0	0	143	143	143
Power Smart Energy Manager Program	0	0	0	0	0	0	119	94	213	213
Commercial Clothes Washer Program	0	0	0	0	0	0	0	0	0	0
Power Smart Shops	0	0	0	0	0	0	1	15	16	16
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>183</b>	<b>1,525</b>	<b>3,097</b>	<b>3,399</b>	<b>8,204</b>	<b>8,204</b>
<b>INDUSTRIAL</b>										
Industrial Natural Gas Optimization Program	0	0	0	0	103	37	290	334	764	764
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>37</b>	<b>290</b>	<b>334</b>	<b>764</b>	<b>764</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>										
Thermostat	0	0	0	0	0	195	131	38	364	364
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>195</b>	<b>131</b>	<b>38</b>	<b>364</b>	<b>364</b>
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>0</b>	<b>12</b>	<b>76</b>	<b>93</b>	<b>1,398</b>	<b>5,045</b>	<b>8,923</b>	<b>10,156</b>	<b>25,702</b>	<b>25,702</b>
<b>CUSTOMER SELF-GENERATION</b>										
Bioenergy Optimization Program	0	0	0	0	0	0	13	8	21	21
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>8</b>	<b>21</b>	<b>21</b>
<b>PROGRAMS SUBTOTAL</b>	<b>0</b>	<b>12</b>	<b>76</b>	<b>93</b>	<b>1,398</b>	<b>5,045</b>	<b>8,937</b>	<b>10,163</b>	<b>25,723</b>	<b>25,723</b>
Support Costs	200	221	239	527	1,228	1,627	1,597	1,927	7,565	7,565
Contingency	0	0	0	0	0	0	0	0	0	0
<b>UTILITY COST OF PROGRAMS</b>	<b>200</b>	<b>234</b>	<b>315</b>	<b>620</b>	<b>2,626</b>	<b>6,672</b>	<b>10,533</b>	<b>12,090</b>	<b>33,289</b>	<b>33,289</b>

NOTE: Subtotals may not be exact due to rounding

**Administration Cost (1000s in 2008\$)  
Natural Gas Incentive Based Programs**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative Total 2008/09	Cumulative Total 2023/24
<b>RESIDENTIAL</b>										
HE Gas Furnace	0	0	0	0	266	292	449	355	1,363	1,363
Home Insulation	0	0	0	0	173	532	764	596	2,065	2,065
New Homes	0	12	76	76	21	31	50	0	266	266
Lower Income Energy Efficiency Program	0	0	0	0	79	0	141	129	350	350
<b>Subtotal</b>	0	12	76	76	539	855	1,404	1,081	4,044	4,044
<b>COMMERCIAL</b>										
HVAC	0	0	0	0	106	286	297	251	940	940
Commercial Insulation	0	0	0	0	0	75	76	173	324	324
Commercial Windows	0	0	0	0	0	82	86	122	290	290
Spray Valves	0	0	0	0	0	53	31	25	109	109
Commercial Building Optimization	0	0	0	0	77	231	158	116	582	582
Commercial Kitchen Appliance program	0	0	0	0	0	0	0	8	8	8
City of Winnipeg Agreement	0	0	0	0	0	0	0	0	0	0
Commercial Custom	0	0	0	0	0	0	0	0	0	0
New Construction	0	0	0	0	0	0	0	143	143	143
Power Smart Energy Manager Program	0	0	0	0	0	0	119	92	211	211
Commercial Clothes Washer Program	0	0	0	0	0	0	0	0	0	0
Power Smart Shops	0	0	0	0	0	0	1	15	16	16
<b>Subtotal</b>	0	0	0	0	183	727	767	945	2,622	2,622
<b>INDUSTRIAL</b>										
Industrial Natural Gas Optimization Program	0	0	0	0	103	37	92	87	320	320
<b>Subtotal</b>	0	0	0	0	103	37	92	87	320	320
<b>DISCONTINUED/COMPLETED PROGRAMS</b>										
Thermostat	0	0	0	0	0	111	95	18	224	224
<b>Subtotal</b>	0	0	0	0	0	111	95	18	224	224
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	0	12	76	76	825	1,731	2,359	2,130	7,209	7,209
<b>CUSTOMER SELF-GENERATION</b>										
Bioenergy Optimization Program	0	0	0	0	0	0	13	8	21	21
<b>Subtotal</b>	0	0	0	0	0	0	13	8	21	21
<b>PROGRAMS SUBTOTAL</b>	0	12	76	76	825	1,731	2,372	2,138	7,230	7,230
Support Costs	200	221	239	527	1,228	1,627	1,597	1,927	7,565	7,565
Contingency	200	234	315	603	2,053	3,358	3,969	4,065	14,795	14,795
<b>ADMINISTRATION COSTS OF PROGRAMS</b>	400	467	629	1,206	4,106	6,716	7,938	8,130	29,591	29,591

NOTE: Subtotals may not be exact due to rounding

**Incentive Cost (1000s in 2008\$)**  
**Natural Gas Incentive Based Programs**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Cumulative Total 2008/09	Cumulative Total 2023/24
<b>RESIDENTIAL</b>										
HE Gas Furnace	0	0	0	0	323	1,041	1,673	2,810	5,848	5,848
Home Insulation	0	0	0	0	208	1,328	2,216	2,155	5,906	5,906
New Homes	0	0	0	17	41	63	89	0	210	210
Lower Income Energy Efficiency Program	0	0	0	0	0	0	23	340	363	363
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>573</b>	<b>2,432</b>	<b>4,001</b>	<b>5,305</b>	<b>12,327</b>	<b>12,327</b>
<b>COMMERCIAL</b>										
HVAC	0	0	0	0	0	326	1,360	1,128	2,814	2,814
Commercial Insulation	0	0	0	0	0	348	750	837	1,936	1,936
Commercial Windows	0	0	0	0	0	47	195	340	583	583
Spray Valves	0	0	0	0	0	76	24	96	197	197
Commercial Building Optimization	0	0	0	0	0	0	0	42	42	42
Commercial Kitchen Appliance program	0	0	0	0	0	0	0	8	8	8
City of Winnipeg Agreement	0	0	0	0	0	0	0	0	0	0
Commercial Custom	0	0	0	0	0	0	0	0	0	0
New Construction	0	0	0	0	0	0	0	0	0	0
Power Smart Energy Manager Program	0	0	0	0	0	0	0	2	2	2
Commercial Clothes Washer Program	0	0	0	0	0	0	0	0	0	0
Power Smart Shops	0	0	0	0	0	0	0	0	0	0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>798</b>	<b>2,330</b>	<b>2,454</b>	<b>5,582</b>	<b>5,582</b>
<b>INDUSTRIAL</b>										
Industrial Natural Gas Optimization Program	0	0	0	0	0	0	197	247	444	444
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>197</b>	<b>247</b>	<b>444</b>	<b>444</b>
<b>DISCONTINUED/COMPLETED PROGRAMS</b>										
Thermostat	0	0	0	0	0	84	37	20	140	140
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>84</b>	<b>37</b>	<b>20</b>	<b>140</b>	<b>140</b>
<b>EFFICIENCY PROGRAMS SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>573</b>	<b>3,314</b>	<b>6,564</b>	<b>8,026</b>	<b>18,493</b>	<b>18,493</b>
<b>CUSTOMER SELF-GENERATION</b>										
Bioenergy Optimization Program	0	0	0	0	0	0	0	0	0	0
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>573</b>	<b>3,314</b>	<b>6,564</b>	<b>8,026</b>	<b>18,493</b>	<b>18,493</b>
Support Costs	0	0	0	0	0	0	0	0	0	0
Contingency	0	0	0	0	0	0	0	0	0	0
<b>INCENTIVE COSTS OF PROGRAMS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>573</b>	<b>3,314</b>	<b>6,564</b>	<b>8,026</b>	<b>18,493</b>	<b>18,493</b>

NOTE: Subtotals may not be exact due to rounding