



# **EXECUTIVE SUMMARY**

The 2010/11 Power Smart Annual Review reports the energy and demand 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 2010/11 planned targets outlined in the 2010 Power Smart Plan.

The Power Smart initiative, including persisting savings, has achieved 1,832 GW.h and 557 MW in electric savings, 57 million cubic metres in natural gas savings and 1,345 thousand tonnes of greenhouse gas emission reductions.

The electric savings resulting from the Power Smart initiative, including persisting savings, equate to more than a quarter of Winnipeg's power needs. The natural gas savings, including persisting savings, nearly equate to the natural gas needs of Selkirk and Steinbach combined. Together, these energy savings are equivalent to taking an estimated 269 thousand cars off the road for one year.

Overall, 2010/11 was a successful year for Manitoba Hydro's Power Smart protfolio. In 2010/11 alone, the electric Power Smart program achieved 269 GW.h and 220 MW in electric savings (at generation) which was above the planned savings of 258 GW.h and 208 MW. The natural gas Power Smart program achieved savings of 11.2 million cubic metres which was above the planned target of 6.7 million cubic metres.

Total Power Smart expenditures in 2010/11 were \$45 million, which consisted of \$29 million from the Power Smart electric budget, \$11 million from the Power Smart natural gas budget, \$4 million from the Affordable Energy Fund and \$1 million from the Furnace Replacement Budget.

To date, \$389 million (nominal dollars) have been invested in the Power Smart initiative, \$319 million from the Power Smart electric budget, \$58 million from the Power Smart natural gas budget, \$9 million from the Affordable Energy Fund and \$2 million from the Furnace Replacement Budget.

The participant bill reduction due to 2010/11 Power Smart results and persisting savings amounts to an annual reduction of \$73 million, with \$55 million in reduced electricity bills and \$17 million in reduced natural gas bills. By customer sector, \$25 million was saved in the residential sector, \$23 million in the commercial sector and \$25 million in the industrial sector. The participant bill reduction relates only to incentive-based programs and customer service initiatives.

Cumulative customer bill reduction is approximately \$547 million, consisting of \$465 million on electric bills and \$82 million on natural gas bills.

The combined total resource cost (TRC) ratio for electric and natural gas incentive-based programs, including support costs and interactive effects, was 2.6.

The rate impact measure (RIM) ratio for electric incentive-based programs, including support costs, was 1.3, and the average levelized utility cost was 1.9¢/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 10.8¢/m³.

Awareness levels of the Power Smart brand continue to remain high with 93% 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 (84%)

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 electric and natural gas energy 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.

#### 2010/11 Electricity Results

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

2010/11 and provide a comparison between achieved results and planned targets, where applicable:

**Exhibit E.1**Annual GW.h Savings (at generation) - Power Smart Portfolio

	2010/11 Actual	2010/11 Plan^	Cumulative Total*
INCENTIVE-BASED PROGRAMS	216	191	1,324
CODES & STANDARDS	51	64	481
CUSTOMER SERVICE INITIATIVES	1	3	26
OVERALL IMPACT	269	258	1,832

<sup>^</sup> Plan estimates are from the 2010 Power Smart Plan.

Note: Figures may not add due to rounding.

**Exhibit E.2**Annual Average Winter MW Savings (at generation) - Power Smart Portfolio

	2010/11 Actual	2010/11 Plan^	Cumulative Total*
INCENTIVE-BASED PROGRAMS	210	196	435
CODES & STANDARDS	9	11	113
CUSTOMER SERVICE INITIATIVES	1	1	9
OVERALL IMPACT	220	208	557

<sup>^</sup> Plan estimates are from the 2010 Power Smart Plan.

Note: Figures may not add due to rounding.

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

<sup>\*</sup> Savings include actual + persisting results, up to and including 2010/11.

<sup>\*</sup> Savings include actual + persisting results, up to and including 2010/11.

**Exhibit E.3** 2010/11 Power Smart Portfolio Electricity Costs

Power Smart Portfolio	2010/11
	millions of dollars
INCENTIVE-BASED PROGRAMS	
Efficiency Programs	18.8
Customer Self-Generation Programs	1.6
Rate/Load Management Programs	5.7
	26.1
SUPPORT COSTS & CUSTOMER SERVICE INITIATIVES & STANDARDS	3.3
TOTAL ELECTRICITY PROGRAM COSTS	29.4

Note: Figures may not add due to rounding.

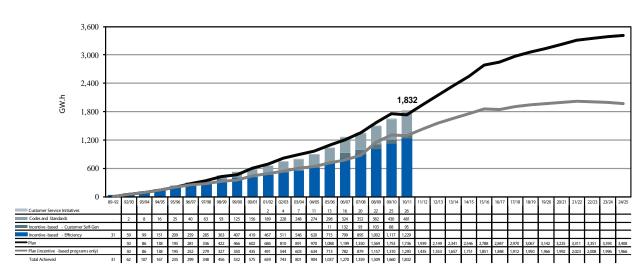
#### Total Electricity Results (2010/11 Results & Persisting Savings)

In 2010/11, Power Smart initiatives, including persisting savings, saved a total of 1,832 GW.h and 557 MW, which were 6% and 5% above their respective planned 2010/11 energy and demand savings. The cumulative savings to date represent 54% and 61% of the respective forecasted

energy and demand savings at the benchmark year of 2024/25.

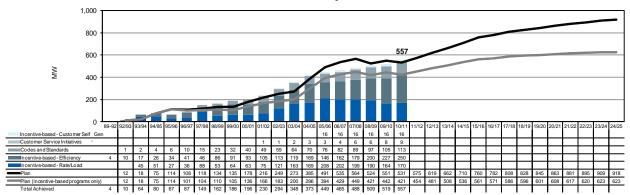
The following graphs present the energy and average winter demand savings achieved and corresponding targets.

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



#### 2010/11 Natural Gas Results

The Power Smart portfolio realized natural gas savings of 11.2 million cubic metres during 2010/11, 67% more than planned.

**Exhibit E.6** 

2010/11 Actual	2010/11	Cumulative
Actual	DI A	
	Plan^	Total*
n	illions of cubic metr	es
11.4	7.7	44.1
0.8	0.7	19.0
0.9	0.4	4.4
13.0	8.8	67.5
(1.9)	(2.1)	(10.4)
(1.9)	(2.1)	(10.4)
11.2	6.7	57.1
	11.4 0.8 0.9 13.0 (1.9)	0.8 0.7 0.9 0.4 13.0 8.8 (1.9) (2.1) (1.9) (2.1)

<sup>^</sup> Plan estimates are from the 2010 Power Smart Plan.

Note: Figures may not add due to rounding.

#### **Exhibit E.7**

2010/11 Power Smart Portfolio of Natural Gas Costs

Power Smart Portfolio	2010/11
	millions of dollars
INCENTIVE-BASED PROGRAMS	9.8
SUPPORT COSTS, CUSTOMER SERVICE INITIATIVES & STANDARDS	1.4
TOTAL NATURAL GAS PROGRAM COSTS	11.2

Note: Figures may not add due to rounding.

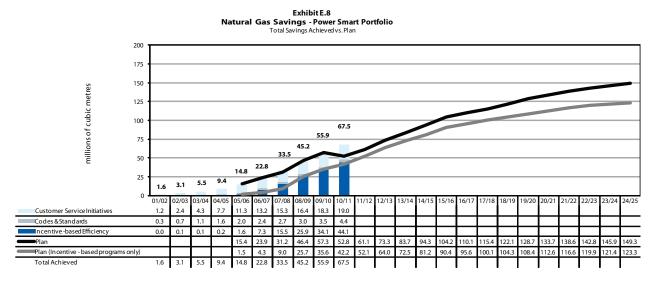
<sup>\*</sup> Savings include actual + persisting results, up to and including 2010/11.

#### Total Natural Gas Results (2010/11 Results & Persisting Savings)

In 2010/11, the Power Smart portfolio saved nearly 68 than plant million cubic metres of natural gas, which was 28% more Power Sm

than planned. To date, \$58 million has been invested in

Power Smart natural gas activities.

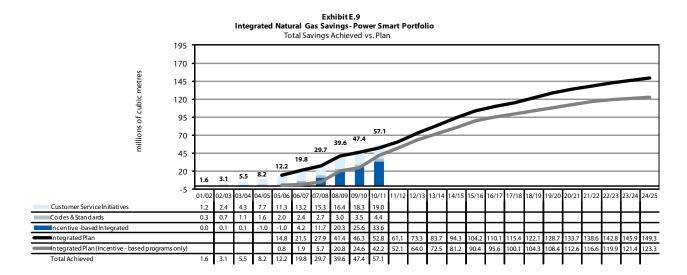


Note: Figures may not add due to rounding.

## **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.



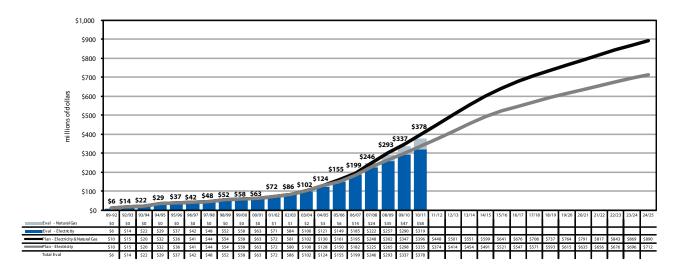
Note: Figures may not add due to rounding.

#### **Power Smart Utility Costs**

Total Power Smart expenditures in 2010/11 were \$41 million, of which \$29 million was spent on electricity and \$11 million was spent on gas initiatives. Cumulative Power Smart expenditures were \$378 million, or 5% lower than the budgeted amount of \$396 million. The positive spending variance can be credited to both electric and natural gas efficiency spending, which were both 5% below budget.

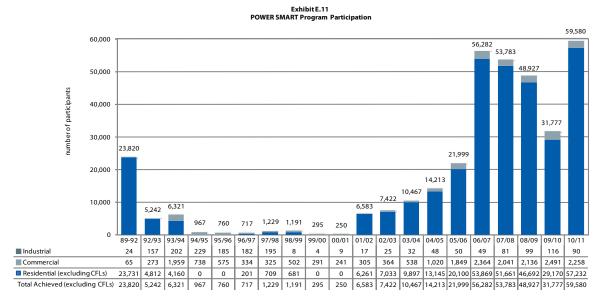
Cumulative Power Smart expenditures of \$378 million represent 42% of the overall cumulative 2024/25 budget, as reported in the IFF-10. The following graph depicts the annual expenditures against the planned expenditures.

Exhibit E.10
Utility Costs - Power Smart Portfolio
Cumulative Total Utility Costvs. 2024/25 Plan



#### **Customer Participation**

The following graph illustrates that participation in Manitoba Hydro's Power Smart programs continues to be strong.



Note:

Includes electric and natural gas participants of customer service initiatives, cost recovery and incentive-based programs. Participation for codes and standards is excluded.

Curtailable Rates Program participation is included in the industrial sector.

Customers may participate in more than one Power Smart program.

The 343,381 participants of the Residential Compact Fluorescent Lighting Program during 2004/05-2010/11 are excluded. Figures may not add due to rounding.

Excluding the Residential Compact Fluorescent Program, there were nearly 60,000 participants in Power Smart customer service initiatives and incentive-based programs during 2010/11, and nearly 352,000 participants cumulatively.

Participation of the Residential Compact Fluorescent

Program has been excluded to provide a better indication of participation trends. The Residential Compact Fluorescent Program was a low-cost option for achieving energy efficiency, and represented 51% of residential Power Smart participation and 49% of overall Power Smart participation.

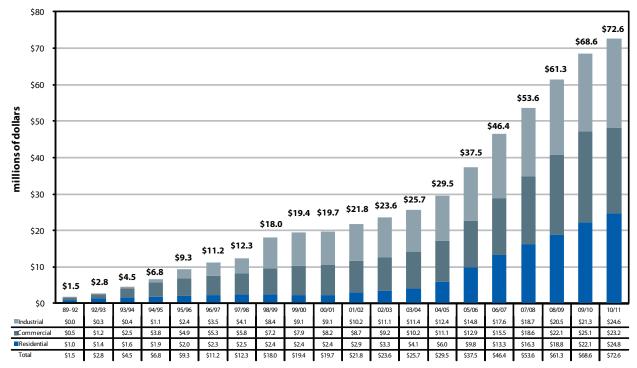
#### **Customer Bill Reductions**

Power Smart customer service initiatives and incentivebased programs saved participating customers nearly \$73 million in energy bills during 2010/11, and \$540 million cumulatively on electricity and natural gas bills to date.

Exhibit. E.12

Combined Electricity & Natural Gas Customer Bill Reduction (2010\$)

Annual Reductions to Date by Sector



Note:

Includes electric and natural gas participants.

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 includes primary and distribution rates only.

The annual bill reduction for participating customers due to actual and persisting results in 2010/11 of nearly

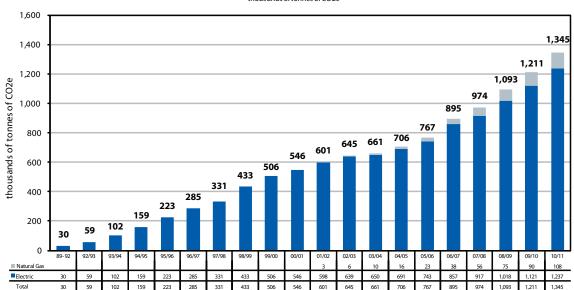
\$73 million is comprised of \$55 million of savings on electricity bills and \$17 million on natural gas bills.

#### **Greenhouse Gas Reductions**

The 1,832 GW.h savings from electric Power Smart programs and 57 million cubic metres of savings from natural gas Power Smart programs equates to a greenhouse gas emission reduction of approximately 1,345 thousand tonnes of carbon dioxide equivalent emissions. This is comparable to removing approximately 269 thousand vehicles from the road for one full year.

The majority (92%) of the greenhouse gas emission reductions result from electric Power Smart program activity through indirect emission reductions from Manitoba Hydro export sales displacing coal and natural gas fuelled generation outside of Manitoba. The remaining (8%) emission reductions are direct reductions that occur as a result of lower natural gas consumption in Manitoba.

Exhibit E.13
Total Annual Greenhouse Gas Emission Reductions
Due to Electric & Natural Gas Savings
thousands oftonnes of CO2e



Note: Figures may not add due to rounding

#### The Affordable Energy Fund

The Affordable Energy Fund was established in 2006/07 through the Winter Heating Cost Control Act. 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, lower income customers and seniors, and encouraging the use of alternative energy sources such as renewable energy.

Exhibit E.14 outlines the Affordable Energy Fund expenditures in 2010/11 and cumulatively.

**Exhibit E.14**Summary of Affordable Energy Fund Expenditures

	2006/07	2007/08	2008/09	2009/10	2010/11	Cumulative
			thousands of	nominal dolla	ars	
Lower Income Expenditures						
Lower Income/Community Based Initiative	256	219	893	1,672	2,666	5,706
Community Support and Outreach	-	-	35	130	133	299
	256	219	928	1,802	2,799	6,004
Support Expenditures						
Geothermal Support	619	270	92	104	108	1,193
Oil and Propane Heated Residential Homes	-	75	85	31	32	222
Special Projects						
Residential Energy Assessment Service	-	61	241	85	119	506
Oil and Propane Furnace Replacement	-	-	6	36	42	84
Solar Water Heating	-	-	89	119	56	264
Power Smart Residential Loan	-	-	0	130	312	442
	619	406	513	506	669	2,712
Community Energy Development	-	-	-	750	-	750
TOTAL EXPENDITURES	875	625	1,441	3,058	3,468	9,466

## Lower Income Furnace Replacement Budget

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

In 2010/11 alone, customers installed 445 furnaces and

16 boilers through the Furnace Replacement Program. Cumulatively, 1,233 furnaces and 30 boilers have been installed to the end of 2010/11 as a result of the program.

Exhibit E.15 outlines the Lower Income Natural Gas Furnace Replacement Expenditures between 2008/09 and 2010/11.

**Exhibit E.15**Summary of Lower Income Furnace Replacement Budget Expenditures

	2008/09	2009/10	2010/11	Cumulative
		thousands of r	nominal dollars	
Natural Gas Furnace Replacement	264	815	1,312	2,391
TOTAL EXPENDITURES	264	815	1,312	2,391

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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 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 that 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 2002/03 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). Customer self-generation programs are designed to encourage customer onsite generation.

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;
- Incentive-based promotional programs, including:
  - o Efficiency programs,
  - o Customer self-generation programs and
  - o Rate/Load management programs; and
- Efforts to encourage and support implementation of energy efficiency into codes and standards.

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 capturing additional electricity export sales.

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 twenty-two years with impact evaluations of all incentive-based programs prepared regularly.

By evaluating the incentive-based 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.

# 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 (market transformation). To be effective in achieving the desired outcome, the corporation's strategy involves working along multiple tracks including:

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

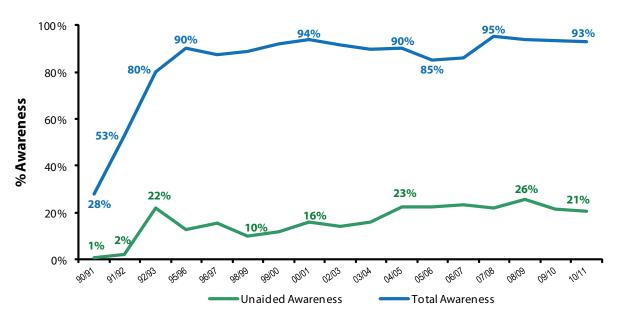
Power Smart is the brand name used by Manitoba Hydro since 1991 to promote its energy efficient programs and services.

Manitoba Hydro continues to successfully maintain the Power Smart brand's profile with 93% of respondents currently saying they recognize the brand name. This includes 21% of respondents who independently recall (unaided recall) the Power Smart brand name, and 76% of respondents who say they recognize the brand name when the Power Smart brand name is identified (aided recall).

The Power Smart campaign, being 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 environmental conservation.

Approximately one-third (33%) of respondents said they had participated in a Manitoba Hydro Power Smart program.

Exhibit 1.3 POWER SMART\* Brand Awareness



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

Customers continue to strongly agree that the Power Smart brand is most strongly associated with 'Encouraging customers to be more energy efficient' (84% provided a 7 or higher out of 10) and 'Helping customers save money on their energy bills' (82% provided a 7 or higher out of 10). Approximately three-quarters of respondents agree the Power Smart brand conveys the messages of 'Conserving the environment' (73% provided a 7 or higher out of 10), and ensuring 'There will be electricity available for Manitobans in the

future' (73% provided a 7 or higher out of 10).

Respondents continue to report a more moderate level of agreement (61% provided a 7 or higher out of 10) with the statement 'Power Smart programs contribute to Manitobans paying among the lowest prices for electricity in North America.'

# 1.4 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 3,408 GW.h/year and 918 MW by 2024/25, as outlined under the 2010 Power Smart Plan. These targets represent the expected impact of efficiency codes and standards, customer service initiatives and incentive-based program activities. Manitoba Hydro's Power Smart program activity is expected to contribute the greatest portion of the savings, with projected energy and demand savings of 2,133 GW.h/year and 626 MW by 2024/25.

Manitoba Hydro's corporate approved Power Smart DSM target for natural gas savings is 149 million cubic metres by 2024/25, as outlined in the 2010 Power Smart Plan. This target represents the expected impact of incentive-based efficiency program activities, customer service initiatives, interactive effects from electricity programs, as well as savings resulting from efficiency codes and standards. Manitoba Hydro's Power Smart program activity is expected to contribute the greatest portion of the savings, with projected savings of 106 million cubic metres by 2024/25.

While this report highlights all activities and results from the overall Power Smart portfolio, the emphasis will be on incentive-based program activities. Annual results for 2010/11 will be measured against planned savings of the most recent approved plan, the 2010 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. 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, 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.

# 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:

 Enabling 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 Initiatives & Cost Recovery Programs

Exhibit 2.1.1-A identifies the launch dates 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
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#### **RESIDENTIAL**

Home Comfort & Energy Savings Program

ecoENERGY Program^

Wisdom in Saving Energy (WISE) Home Program

R-2000 Home Program component of the New Home Program\*

Residential Earth Power Program

Energy Saver Presentations^^

New Home Program Workshop

Solar Hot Water Heating

#### COMMERCIAL

Religious Buildings Initiative

**Power Smart Recreation Facilities Survey** 

**Power Smart Design Standards** 

#### DISCONTINUED/COMPLETED PROGRAMS

Power Smart Energy Manager - Pilot

May, 1998

May, 2001

February, 2001

March, 2001

June, 2001

February, 2002

April, 2002

January, 2002

January, 2002 November, 2008

September, 2002

September, 2001

Formerly called EnerGuide.

<sup>^^</sup> Formerly called Home Energy Saver Workshops.

In 2004/05, the R-2000 Home Program was grouped under the New Home Program.

Exhibit 2.1.1-B provides an overview of the annual and total number 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	2010/11	Cumulative
	Number of	Participants
RESIDENTIAL		
Home Comfort & Energy Savings Program		
Power Smart Residential Loan*	5,262	57,937
Mail In/On-Line Energy Assessments	263	3,595
	5,525	61,532
ecoENERGY Program^	3,428	41,403
Wisdom in Saving Energy (WISE) Home Program	460	5,391
Energy Saver Presentations^^	0	3,956
Residential Earth Power Loan	60	1,141
New Home Program Workshop	0	854
R-2000 Home Program component of the New Home Program^^^	-	63
Solar Hot Water Heating	18	36
	9,491	114,376
COMMERCIAL		
Religious Buildings Initiative	5	228
Power Smart Recreation Facilities Survey	2	68
	7	296
DISCONTINUED/COMPLETED PROGRAMS		
Power Smart Energy Manager - Pilot	-	38
Residential Earth Power Consumer Workshops**	-	688
·	-	726
TOTAL	9,498	115,398

<sup>\*</sup> Participation includes approved loans, while energy savings is measured by completed projects.

<sup>\*\*</sup> Includes residential and commercial participants.

<sup>^</sup> Formerly called EnerGuide. Participation includes 'D' & 'E' audits.

<sup>^^</sup> Formerly called Home Energy Saver Workshops.

In 2004/05, the R-2000 Home Program was grouped under the New Home Program.

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 will 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 adjusted accordingly. The following outlines the many benefits of Power Smart customer service initiatives and cost recovery programs.

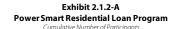
#### **Home Comfort & Energy Savings Program**

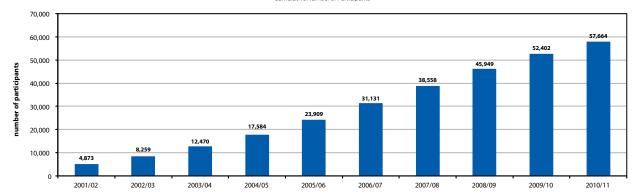
The Home Comfort & Energy Savings Program encourages homeowners to make energy efficient renovations to increase comfort and reduce home heating bills. The following services are offered under this customer service program:

- Customers can email a Power Smart Energy Expert with energy-related questions;
- The Home Energy Calculator is a simple online check sheet that enables homeowners to compare energy saving projects previously undertaken and make decisions regarding future projects;
- The Home Comfort & Energy Evaluation Guide can be completed as a mail-in or online survey.
   This 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; and
- Power Smart Residential Loans of up to \$7,500 over a term of up to five years, and \$5,500 for furnaces over a term of up to fifteen years (interest rates are fixed for the first five years and adjusted to market rates in the remaining years).

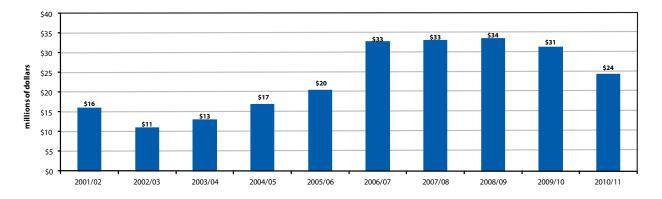
Since its inception, the Power Smart Residential Loan Program has had nearly 58,000 participants, borrowing more than \$232 million in total. To date, \$64 million in loans remain outstanding. Exhibit 2.1.2-A displays participation under the Power Smart Loan Program, and Exhibit 2.1.2-A-1 summarizes finalized loan amounts.





#### Exhibit 2.1.2- A-1 Power Smart Residential Loan Program Finalized Loan Amounts

millions of nominal dollars

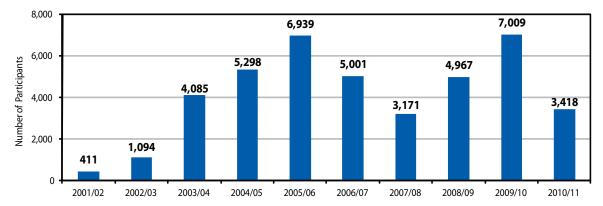


#### ecoENERGY Program (formerly EnerGuide)

Manitoba Hydro continues to market Federal Government energy evaluation programs. In March 2010, the Federal Government announced the ecoENERGY program across Canada would no longer be available to new participants, eliminating much of the forecasted program activity. Homeowners who had a pre-retrofit energy evaluation prior to April 1, 2010

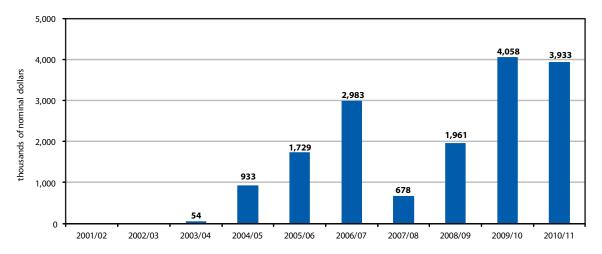
would still be eligible for remaining ecoENERGY grants, provided the recommended energy improvements to their home were completed, and a second post-retrofit energy evaluation was performed within 18 months of the pre-retrofit evaluation, or by March 31, 2011. The grant amounts were based on qualifying energy saving improvements, with a maximum total grant amount of \$5,000 per residence (grants subject to availability).

Exhibit 2.1.2 - B ecoENERGY Program Number of D & E Participants



Note: Activity prior to 2007/08 was under the former EnerGuide Program.

Exhibit 2.1.2 -B-1 ecoENERGY Program Federal Grants Paid to Manitobans (thousands of nominal dollars)



Note: Activity prior to 2007/08 was under the former EnerGuide Program.

As seen above, Federal grants paid to Manitobans more than doubled from 2008/09 to over \$4 million in 2009/10, then remained quite constant into 2010/11. 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 was reduced to \$25 + GST if it was estimated the homeowner would receive an ecoENERGY grant of \$400 or more.

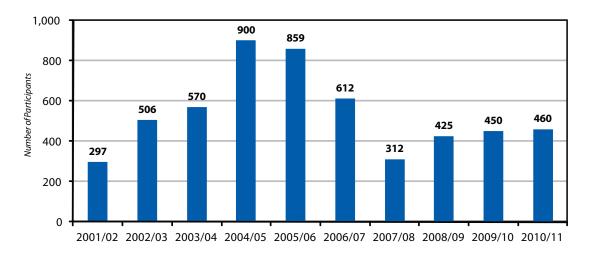
The fees for both evaluations were equally subsidized by Manitoba Hydro and the Provincial Government. This program ended March 31, 2011.

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

The W.I.S.E. Home Program operated in partnership with the Manitoba Society of Seniors. The program was designed to assist senior homeowners to identify and implement energy saving measures in their homes. The program was planned around the "Seniors Helping Seniors" concept and offered 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 visited homeowners and collected information about their

homes, installed energy saving devices and offered energy saving tips and options to help senior customers save on energy consumption. The program was very well received by the community, as displayed by a consistently high mean satisfaction rating during the ten years the program was offered. A total of 5,391 Manitoba seniors participated in the program. The following graph presents the number of participants in the W.I.S.E. Home Program:

Exhibit 2.1.2 -C W.I.S.E. Home Program Number of Participants



#### **Residential Earth Power Program**

Manitoba continues to be a leader in the geothermal industry 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 Residential 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 Residential Earth Power Program introduced convenient financing through the Residential Earth Power Loan, a vital component of the program.

The original terms of the loan offered financing up to \$15,000 over a term up to fifteen 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 \$20,000 and lowered the interest rate to 4.9% for the first five 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 subsidized by the Affordable Energy Fund.

Manitoba Hydro's Residential Earth Power Loan has continued to be an effective tool in facilitating residential geothermal installations. In 2010/11, a total of 53 customers financed their geothermal systems through the Residential Earth Power Loan. This brings the total number of loan participants to 1,134 since its inception in 2002/03; equivalent to \$18.9 million in financing. Furthermore, residential geothermal market activity was strong due to the Provincial Green Energy Tax Credit and the \$4,375 Federal ecoENERGY grant.

# Exhibit 2.1.2 -D Residential Earth Power Loan Annual Loan Amounts thousands of nominal dollars

5,000 4,500 4,226 3,800 4,000 thousands of nominal dollars 3,500 3,000 2,684 2,197 2,500 2,013 2,000 1,500 1,279 1,236 1,000 606 446 500

2006/07

2007/08

2005/06

Total residential geothermal installations in Manitoba have continued to decrease over the past two years. The recession experienced in 2008 has led to lower disposable income, increased consumer reluctance to take on more debt and a higher price premium on geothermal

2003/04

2004/05

2002/03

installations. All of which have had a dramatic effect on sales throughout Canada. Other factors contributing to the decrease in geothermal installations include falling natural gas prices due to the recession in the United States, as well as the emergence of shale gas exploration.

2009/10

2010/11

2008/09

#### **Solar Water Heating Program**

Manitoba Hydro partnered with Natural Resources
Canada to offer a \$1,200 rebate to homeowners who
purchase and install a solar water heating system. Natural
Resources Canada will cover the \$1,200 rebate up to
\$292,000 and Manitoba Hydro agreed to contribute
\$350,000 in program administration, promotion,

#### **Power Smart Recreation Facilities 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 completed by facility operators and an evaluation report is prepared. The report compares the energy use of the facility with similar facilities in Manitoba and provides a

advertising and monitoring.

An additional \$1,250 rebate may be available to the homeowner if they participate in Natural Resource Canada's ecoENERGY In-Home Energy Evaluation program.

list of possible energy saving 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 energy use. This guide has been updated and is now called Energy Efficiency Guide for Ice Arenas and Curling Rinks.

#### **Religious Buildings Initiative**

The Religious Buildings 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 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 Buildings
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.

#### **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 practices. 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 2010/11, 21 projects received a Power Smart designation.

# 2.2 Energy Efficient Codes & 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 can be complex when faced with lack of 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 such committees). The focus of Manitoba Hydro's efforts on these committees is towards developing new energy efficient technologies, developing energy efficiency 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. Examples of such factors are 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.

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

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

Exhibit 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

PROGRAM RESIDENTIAL	YEAR LAUNCHED	
New Home	February, 2004	
Home Insulation	May, 2004	
Compact Fluorescent Lighting	September, 2004	
Energy Efficient Light Fixtures	October, 2006	
Lower Income Energy Efficiency	December, 2007	
Affordable Energy Fund - Propane & Oil Furnace/Boiler	May, 2009 September, 2010	
Water & Energy Saver  COMMERCIAL	September, 2010	
Commercial Lighting	April, 1992	
Internal Retrofit	July, 1995	
Commercial Custom Measures	December, 1995	
Commercial Building Envelope	December, 1995	
Commercial Earth Power	December, 1995	
City of Winnipeg Power Smart Agreement	September, 2002	
Commercial HVAC	September, 2003	
Commercial Building Optimization	April, 2006	
Commercial Refrigeration	April, 2006	
Commercial Kitchen Appliances	January, 2008	
Commercial Network Energy Management	May, 2008	
Commercial Clothes Washers	July, 2008	
Power Smart Energy Manager	November, 2008	
Power Smart Shops	February, 2009	
Commercial New Buildings	April, 2009	
Commercial C02 Sensors	April, 2009	
INDUSTRIAL		
Performance Optimization	June, 1993	
Natural Gas Optimization	September, 2006	
CUSTOMER SELF-GENERATION		
Bioenergy Optimization	March, 2006	
RATE/LOAD MANAGEMENT		
Curtailable Rates	November, 1993	
DISCONTINUED/COMPLETED		
RESIDENTIAL DISCONTINUED/COMPLETED		
Outdoor Timer	October, 1989	
Refrigerator/Freezer Buy-Back Pilot	1991/92	
Residential Showerhead Pilot	1991/92	
EE Water Savings Measures Component of the 'No Worry Plan'	November, 1996	
EE Water Tank Measures Component of the 'No Worry Plan'	November, 1996	
Seasonal LED Lighting	November, 2005	
Programmable Thermostat Pilot	October, 2006	
High Efficiency Furnace /Boiler	November, 2005	
Residential Appliances	June, 2006	
COMMERCIAL DISCONTINUED/COMPLETED		
Roadway Lighting	April, 1991	
Sentinel Lighting Conversion	April, 1991	
Commercial Showerhead Pilot	1991/92	
Infrared Heat Lamps	1991/92	
Agricultural Demand Controller	July, 1992	
Livestock Waterer	October, 1994	
Commercial Construction - Air Barrier Component	December, 1995	
Commercial Construction - Air Conditioning Component	December, 1995	
3	December, 1995	
Commercial Parking Lot Controllers		
	April, 1998	
Commercial Parking Lot Controllers	April, 1998 July, 2006	
Commercial Parking Lot Controllers Agricultural Heat Pads		

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

PROGRAM		Cumulative
	Number of Pa	rticipants
RESIDENTIAL	75.004	242 204
Compact Fluorescent Lighting*	75,821	343,381
Water & Energy Saver	38,448	38,448
Home Insulation	3,656	24,967
Energy Efficient Light Fixtures	3,351	10,595
Lower Income Energy Efficiency	2,056	3,054
New Home	230	1,238
COMMEDIAL	123,562	421,683
COMMERCIAL	201	40.004
Commercial Lighting	991	10,821
Commercial Building Envelope	453	1,419
Power Smart Shops	378	708
Commercial HVAC/ C02 Sensors	89	538
Internal Retrofit	39	1,224
Commercial Clothes Washers	37	206
Commercial Refrigeration	36	133
Commercial Earth Power	19	96
Commercial Kitchen Appliances	16	64
Commercial Custom Measures	8	29
Commercial Building Optimization	4	7
City of Winnipeg Power Smart Agreement	2	317
Commercial Network Energy Manager	2	8
Power Smart Energy Manager	-	-
Commercial New Buildings	-	-
	2,074	15,570
INDUSTRIAL		
Performance Optimization Program	72	551
Natural Gas Optimization Program	14	48
	86	599
DISCONTINUED/COMPLETED	175	112,555
EFFICIENCY PROGRAMS SUBTOTAL	125,897	550,407
EFFICIENCI FROGRAMIS SUBTOTAL	123,097	330,407
CUSTOMER SELF-GENERATION		
Bioenergy Optimization**	1	5
DATE // OAD MANACEMENT.	1	5
RATE/LOAD MANAGEMENT:		_
Curtailable Rates**	3	5
	3	J
TOTAL	125,901	579,983

<sup>\*</sup> Participation is defined as one household.

Notes: 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, except for Bioenergy Optimization and Curtailable Rates.

Participation is measured by number of completed projects and does not include market transformation.

<sup>\*\*</sup> Participation represents the number of customers who participate each year. The cumulative number represents the actual number of unique 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 Gold, Silver or R-2000 standard. Manitoba Hydro became the delivery agent of Natural Resources Canada's R-2000 Program in February 2002.

#### **Home Insulation Program**

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

#### **Compact Fluorescent Lighting Program**

Financial incentives are provided to encourage residential customers and property managers of multiunit residential buildings to install energy efficient compact fluorescent light bulbs.

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

The Energy Efficient Light Fixtures Program provides financial incentives to residential customers and property managers of multi-unit residential buildings to encourage the installation of ENERGY STAR® qualified light fixtures, dimmer switches and LED night lights in homes.

#### Water & Energy Saver Program

The Water and Energy Saver Program offers free Water & Energy Saver kits to customers. Each kit contains a low-flow showerhead, low-flow faucet aerators, water heater pipe wrap, water heater temperature gauge and refrigerator/freezer thermometer.

#### Lower Income Energy Efficiency Program (LIEEP)

The Lower Income Energy Efficiency program is designed to bring Power Smart and energy efficient measures to qualifying lower income Manitoba households. The program leverages Manitoba Hydro Power Smart programs, the Affordable Energy Fund, the Federal Government ecoENERGY Program (until the program ended in March 2011), provincial government programs and existing community-based infrastructures. Energy efficiency measures include pre-and post inhome energy evaluations, installation of basic energy efficiency items such as CFLs and low-flow showerheads, insulation upgrades and natural gas furnace upgrades.

# 2.3.3 Commercial Programs

#### **Commercial Building Optimization Program**

The Commercial Building Optimization Program encourages commercial customers with existing buildings to use an investigation process known as retrocommissioning to help return their buildings to their design intent. The goal is to identify operational energy conservation opportunities with short payback periods.

#### **Commercial New Buildings Program**

The New Buildings Program provides technical guidance and financial incentives for designing, constructing and operating new, energy efficient buildings in Manitoba.

#### **Internal Retrofit Program**

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

#### **Commercial Building Envelope Program**

The 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.

#### **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 HVAC Program**

The HVAC 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, CO<sub>2</sub> and energy efficient water-cooled chillers.

#### **Commercial Custom Measures Program**

The 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.

#### **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.

#### **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.

#### City of Winnipeg Power Smart Agreement

The City of Winnipeg Power Smart 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 Kitchen Appliances Program**

The Commercial Kitchen Appliances Program encourages customers to upgrade to ENERGY STAR\* qualified steamers and fryers.

#### **Commercial Clothes Washers Program**

The Commercial Clothes Washers Program encourages customers to install energy efficient clothes washers at their business or facility.

#### **Power Smart Energy Manger Program**

The Power Smart Energy Manager Program provides information, training and support for Manitoba school divisions to hire dedicated Energy Managers.

# Commercial Network Energy Manger Program

The Network Energy Management Program offers commercial customers a rebate when installing network management software. The software shuts down PCs when they are inactive while still allowing network administrators to perform regular maintenance tasks, such as IT upgrades and installations.

#### **Power Smart Shops Program**

The Power Smart Shops Program promotes energy efficiency to small independent commercial customers. The program encourages business customers to fully convert their buildings to a Power Smart Shop efficiency level by providing incentives, expertise, competitive pricing, and through the installation of energy efficient products.

# 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 electrotechnology processes and motor-drive systems.

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

This program provides industrial and large commercial customers with the technical support and financial incentives necessary to identify, investigate and implement systematic efficiency improvements in the natural gas fired systems throughout their facilities.

# 2.3.5 Rate/Load Management Programs

#### **Curtailable 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**

This 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

#### Manitoba Hydro is an ENERGY STAR

Manitoba Hydro was named ENERGY STAR Participant of the Year by Natural Resources Canada at the 2010 ENERGY STAR Market Transformation Awards held in June 2010. Manitoba Hydro's Power Smart Program was recognized as a national leader for transforming the market through its ongoing commitment to promote energy efficient practices and products, including those offered under the ENERGY STAR label.

#### Manitoba Awarded A+ for Energy Efficiency

In August 2010, the Canadian Energy Efficiency Alliance (CEEA) awarded Manitoba an A+ on the 2009 National Energy Efficiency Report Card. This was Manitoba's fourth consecutive first place rating. Manitoba's A+ rating was based the completion of a number of activities:

 Launched a process to increase energy efficiency requirements for new construction covered by the Manitoba Building Code;

- Started setting mandatory requirements for the energy efficiency of products;
- Introduced, through Manitoba Hydro, several new Power Smart initiatives; and
- Implemented Canada's strongest policy for ensuring a high level of energy efficiency in publicly-funded new construction and renovation projects.

#### **First Nations Power Smart Program**

Since its launch in 2009, the First Nations Power
Smart Program has assisted close to forty First Nations
communities with energy efficient retrofits, including
insulation upgrades and basic energy efficient measures.
This includes two diesel-powered First Nations
communities.

Manitoba Hydro not only supplies the materials to these First Nations communities, it also provides training to community members on proper installation techniques, allowing them to complete the work themselves. Feedback has been so positive that many communities are beginning work on their second and third phases of upgrades.

#### **Home Insulation Program Rebate Milestone**

During the 2010/11 fiscal year, the Home Insulation Program rebated its 25,000<sup>th</sup> participant. Combined, Home Insulation Program participants save \$5,000,000 annually on their energy bills. Since 2004/05, the Home Insulation Program has saved 34 GW.h of electricity, 16 MW of demand and 9 million m3 of natural gas

annually. Over the life of the program, greenhouse gas emissions have been reduced by more than 50,000 tonnes.

#### M.R. Lopes Investments Ltd. (Stadacona Place)

Stadacona Plaza, built in 1965, was originally comprised of one-bedroom apartments. It was recently renovated to include two-bedroom units, with many measures installed to make the building more energy efficient and environmentally friendly. Measures that were installed include energy efficient lighting, appliances and windows; parking lot controllers; low-flow showerheads and low-flush toilets; as well as improved levels of insulation.

reductions each year. They are expected to save 194,647 kW.h of energy and 38 KW of demand each year, resulting in 150 tonnes of CO2e reductions annually. They were awarded the 2010 CMHC Housing Award for Best Practices in Affordable Housing. As well, the project was nominated for the 2011 Manitoba Excellence in Sustainability Award - Action on Climate Change, Air Quality and Energy Efficiency.

Stadacona Plaza received \$32,250 in Power Smart incentives, and can expect more than \$13,000 in bill

#### Host of Biennial National Building Performance Simulation Conference

In May 2010, Manitoba Hydro hosted eSim's biennial national conference of the International Building Performance Simulation Association of Canada. eSIM is widely recognized as the leading conference for strengthening the building performance simulation community, promoting sustainable design practices and showcasing various building simulation software and modeling methods.

Over eighty professionals, academics and students attended, representing Canada, the U.S., Europe, Asia

and Africa. Being held locally allowed for a dramatic increase in local attendees. This boost in local participation further develops local industry expertise in this field.

Hosting the event at the state-of-the-art Manitoba Hydro Place allowed for real life demonstration of the value and success of design best practices.

#### Global Advertising & Marketing Award Winner

In 2010, Manitoba Hydro's Power Smart programs won a total of fifteen advertising and marketing awards in local and international competitions.

The Utility Communicators International (UCI) Better
Communications Competition presented Manitoba
Hydro with seven awards for various marketing
campaigns including one first-place award, three secondplace awards and three third-place awards for pieces

ranging from print ads, direct mail, outdoor creative and customer videos.

Manitoba Hydro was also recognized for television advertising, winning seven awards from The Television Bureau of Canada, and a first-place award for best TV or Cinema Single from the Advertising Association of Winnipeg (AAW) Signature Awards.

# 3.1 Power Smart Initiatives Launched in 2010/11

## Water & Energy Saver Program

October 9, 2010 -Water heating is the second largest energy user in a home next to space heating. The Power Smart Water & Energy Saver Program provides energy efficient plumbing fixtures and other low cost measures to residential Manitoba Hydro customers to assist them in reducing energy consumption as it relates to water

heating. Eligible residential customers can receive a no charge Water and Energy Saver Kit mailed directly to their home. Tenants can also benefit from the program via their property managers and landlords who can participate through the Multi-Unit Residential Bulk component of the program.

# **First Nations Power Smart Program**

April 22, 2010 - Manitoba Hydro has announced the First Nations Power Smart Program through which First Nations communities can improve the energy efficiency and comfort of their homes.

Program details are as follows:

- Each First Nations community is matched with a Manitoba Hydro energy efficiency specialist to select qualifying homes and recommend energy efficient measures to install
- Measures include insulation and basic energy efficiency upgrades such as compact fluorescent

light bulbs, insulated pipe wrap, draft-proofing, low-flow showerheads and faucet aerators.

- Community members are trained to conduct the upgrades and deliver the Power Smart program.
- On request, energy saving seminars can be arranged to provide community members with information and tips on what they can do to make their community more energy efficient.

# 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 program also 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 impact. 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.

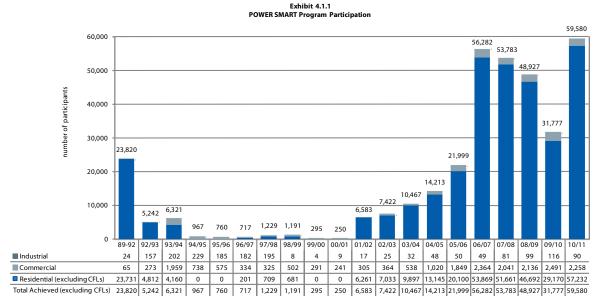
## 4.1 Power Smart Portfolio Results

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 of customer service initiatives, cost recovery and incentive-based programs. Participation for codes and standards is excluded.

Curtailable Rates Program participation is included in the industrial sector.

Customers may participate in more than one Power Smart program.

The 343,381 participants of the Residential Compact Fluorescent Lighting Program during 2004/05-2010/11 are excluded. Figures may not add due to rounding.

As displayed in the preceding graph, participation in Manitoba Hydro's Power Smart programs continues to be strong. Excluding the Residential Compact Fluorescent Program, there were nearly 60,000 participants in Power Smart customer service initiatives and incentive-based programs during 2010/11, and nearly 352,000 participants cumulatively.

Participation of the Residential Compact Fluorescent

Program has been excluded to provide a better indication of participation trends. The Residential Compact Fluorescent Program was a low-cost option for achieving energy efficiency, and represented 51% of residential Power Smart participation and 49% of overall Power Smart participation.

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

2010/11 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

	2010/11		
	Actual	Plan^	Total*
INCENTIVE-BASED PROGRAMS	216	191	1,324
CODES & STANDARDS	51	64	481
CUSTOMER SERVICE INITIATIVES	1	3	26
OVERALL IMPACT	269	258	1,832

^ Plan estimates are from the 2010 Power Smart Plan.

\* Savings include actual + persisting results, up to and including 2010/11.

Note: Figures may not add due to rounding.

Exhibit 4.1.2-B
Annual Average Winter MW Savings (at generation) - Power Smart Portfolio

	2010	0/11	
	Actual	Plan^	Total*
INCENTIVE-BASED PROGRAMS	210	196	435
CODES & STANDARDS	9	11	113
CUSTOMER SERVICE INITIATIVES	1	1	9
OVERALL IMPACT	220	208	557

^ Plan estimates are from the 2010 Power Smart Plan.

\* Savings include actual + persisting results, up to and including 2010/11.

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.

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

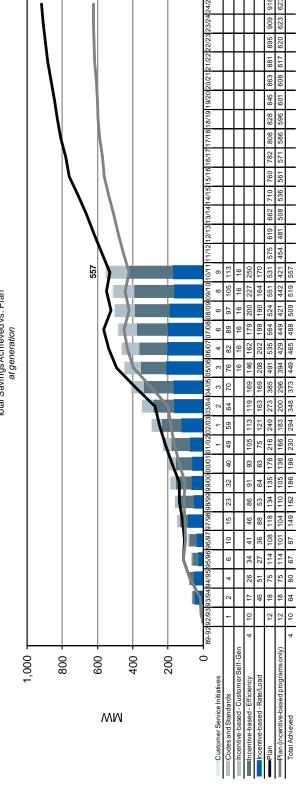
portfolio and the corresponding targets.

1,832 89-92 3,600 3,000 2,400 1,200 . 009 1,800 0 q.WĐ

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

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

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



Targeted savings are unadjusted for programs not running or other revisions.

Figures may not add due to rounding.

Overall to 2010/11, the entire Power Smart portfolio has and 5% above their respective targets. achieved 1,832 GW.h and 557 MW (at generation), 6%

# 4.1.3 Power Smart Portfolio - Impact of Natural Gas Programs

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

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

	2010/11 Actual	2010/11 Plan^	Total*
	m	illions of cubic metres	
PROGRAMS & INITIATIVES			
Incentive-Based Programs	11.4	7.7	44.1
Customer Service Initiatives	0.8	0.7	19.0
Codes & Standards	0.9	0.4	4.4
	13.0	8.8	67.5
INTERACTIVE EFFECT			
Incentive-Based Interactive effect with Electric Programs	(1.9)	(2.1)	(10.4)
	(1.9)	(2.1)	(10.4)
NET IMPACT OVERALL	11.2	6.7	57.1

Note: Figures may not add due to rounding.

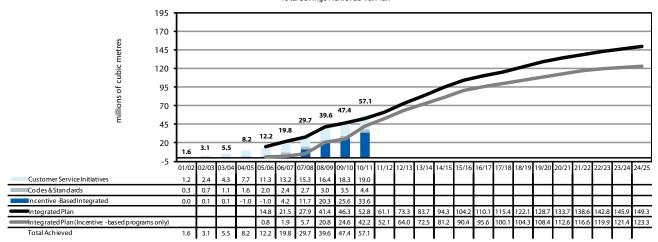
The Power Smart portfolio provided natural gas savings of 13.0 million cubic metres in 2010/11, which was 48% more than planned.

The Natural Gas Optimization Program nearly doubled its planned natural gas target, saving an additional 1.5 million cubic metres in 2010/11.

After interactive effects, a net savings of 11.2 million cubic metres of natural gas were saved in 2010/11, which is 67% more than planned.

<sup>\*</sup> Savings include actual + persisting results, up to and including 2010/11.

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.

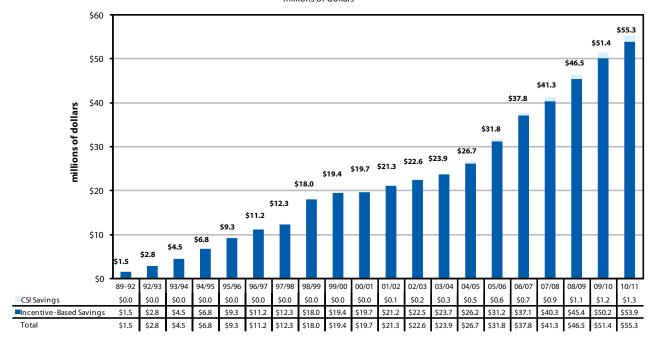
To date, the Power Smart portfolio has saved over 57 million cubic metres of natural gas, after interactive effects, which is 8% above target.

## 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 (2010\$)
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.

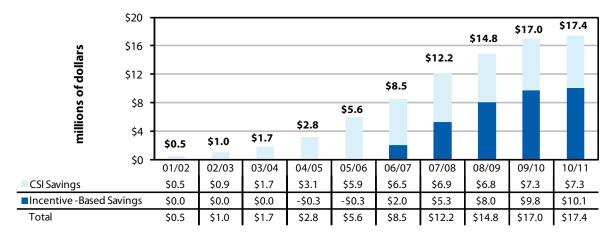
Power Smart customer service initiatives and incentivebased programs saved participating customers over \$55 million in 2010/11 and over \$465 million cumulatively on electricity bills to date.

## **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 (net of interactive effects).

Exhibit 4.1.4 -B
Customer Natural Gas Bill Reduction (2010\$)
millions of dollars



Note:

Figures may not add due to rounding.

Bill reductions exclude savings due to codes & standards.

Interactive effects in 2010/11 resulted in a \$4.1 million increase in customer bills, which is captured within incentive-based savings.

Natural gas bill reduction includes primary and distribution rates only.

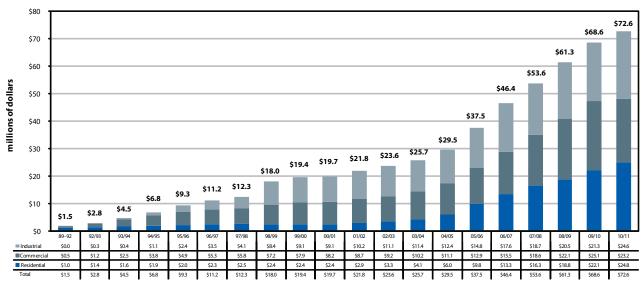
As a result of Power Smart initiatives, participating customers saved more than \$17 million in 2010/11, and \$81 million cumulatively on their natural gas bills to date.

Although natural gas savings achieved in 2010/11 were greater than in 2009/10, natural gas prices dropped. As such, customer natural gas bill reduction was only \$0.4 million higher in 2010/11.

## **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 (2010\$)
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 includes primary and distribution rates only.

Power Smart customer service initiatives and incentive-based programs saved participating customers over \$72 million in 2010/11 alone. These savings are essentially split evenly between industrial, commercial and residential customers.

To date, participating customers have saved over \$546 million cumulatively on electricity and natural gas bills. Approximately 37%, 37% and 26% have been 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.

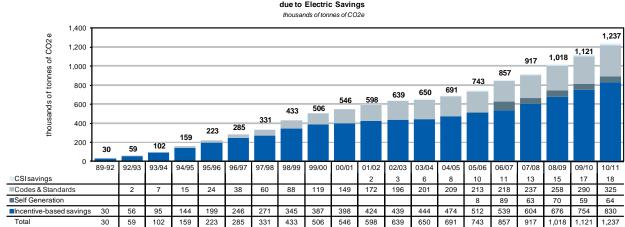


Exhibit 4.1.5-A

Total Annual Indirect Greenhouse Gas Emission Reductions
due to Electric Savings

Note: Figures may not add due to rounding.

The 1,832 GW.h savings resulting from electric Power Smart program activity and codes and standards initiatives to date have displaced greenhouse gas emissions by more than approximately 1,237 thousand

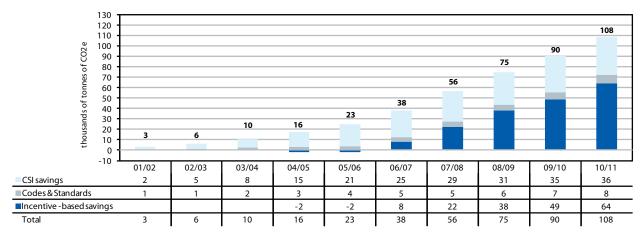
tonnes of carbon dioxide equivalent emissions. This is comparable to removing approximately 247 thousand cars off the road for one full year.

# **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 oftonnes ofCO2e



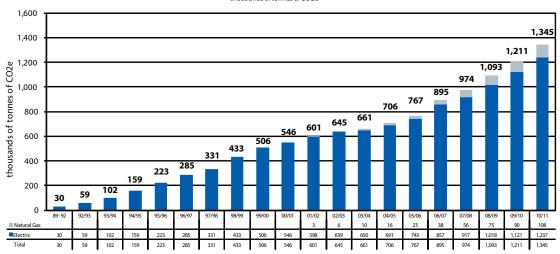
Note: Figures may not add due to rounding.

The 57 million cubic metres of reduced natural gas consumption (after interactive effects) from Power Smart programs to date has displaced approximately 108 thousand tonnes of greenhouse gas emissions in 2010/11 alone. This is equivalent to removing approximately 21 thousand vehicles off the road 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.

Exhibit 4.1.5 - C
Total Annual Greenhouse Gas Emission Reductions
Due to Electric & Natural Gas Savings
thousands of cones of CO2e



The 1,832 GW.h savings from electricity and 57 million cubic metres savings from natural gas Power Smart programs have resulted in greenhouse gas emission reductions of approximately 1,345 thousand tonnes of

carbon dioxide equivalent emissions. This is comparable to removing approximately 269 thousand vehicles off the road for one full year.

# 4.2 Customer Service Initiatives & Cost Recovery Programs

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

Exhibits 4.2.1-A through 4.2.1-C provide an overview of the estimated electricity and natural gas savings achieved to 2010/11 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 & Cost Recovery Programs

	2010/11 Actual	2010/11 Plan^	Total*	2024/25 Plan^
RESIDENTIAL				
Power Smart Residential Loan	0.5	0.6	7.4	9.6
Residential Earth Power Loan	0.6	1.6	11.8	31.1
Solar Hot Water Heating	-	-	0.1	0.1
ecoENERGY	-	-	0.8	
	1.2	2.3	20.1	40.8
DISCONTINUED/COMPLETED PROGRAMS	-	-	3.0	
	-	-	3.0	-
TOTAL (at customer meter)	1.2	2.3	23.0	40.8
TOTAL (at generation)	1.3	2.6	26.3	46.5

Plan estimates are from the 2010 Power Smart Plan.

**Exhibit 4.2.1 - B**Average Winter MW Savings - Electric Customer Service Initiatives & Cost Recovery Programs

	2010/11 Actual	2010/11 Plan^	Total*	2024/25 Plan^
RESIDENTIAL				
Power Smart Residential Loan	0.3	0.3	4.2	5.1
Residential Earth Power Loan	0.3	0.5	3.3	9.7
ecoENERGY	-	-	-	-
Solar Hot Water Heating	-	-	-	-
	0.6	0.8	7.5	14.8
DISCONTINUED/COMPLETED PROGRAMS	-	-	0.2	-
			0.2	-
	-	-		
TOTAL (at customer meter)	0.6	0.8	7.7	14.8
TOTAL (at generation)	0.7	1.0	8.8	16.9

<sup>^</sup> Plan estimates are from the 2010 Power Smart Plan.

<sup>\*</sup> Savings include actual + persisting results, up to and including 2010/11.

<sup>\*</sup> Savings include actual + persisting results, up to and including 2010/11.

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

	2010/11 Actual	2010/11 Plan^	Total*	2024/25 Plan^
RESIDENTIAL				
Power Smart Residential Loan	0.3	0.5	14.3	7.5
Residential Earth Power Loan	0.4	0.2	2.1	4.1
Solar Hot Water Heating	-	-	-	-
ecoENERGY	-	-	2.3	-
	0.8	0.7	18.7	11.6
DISCONTINUED/COMPLETED PROGRAMS	-	-	0.3	_
	-	-	0.3	-
TOTAL	0.8	0.7	19.0	11.7

<sup>^</sup> Plan estimates are from the 2010 Power Smart Plan.

# 4.3 Energy Efficiency Codes & Standards

Along with other North American utilities, Manitoba Hydro has been engaged in DSM activities for many years. In addition to utility-specific DSM programs, some utilities, including Manitoba Hydro, are actively 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 prepares an annual forecast of the expected influence of codes and standards, and since

1995 this forecast has been used to adjust Manitoba Hydro's system load forecast.

In many cases, legislation is the most effective and permanent form of market transformation, as it ensures customers do not revert to less efficient technologies/practices once the incentives and/or promotional activities are discontinued. Traditionally, changing legislation can be complex when faced with lack of market acceptance. These changes impact building design and construction, as well as industry manufacturing processes, and therefore do not always receive strong industry support.

<sup>\*</sup> Savings include actual + persisting results, up to and including 2010/11.

## 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 three functions:

- Provide industry with assistance in the development of technologies;
- 2. Develop codes and standards; and
- Assist in industry and market 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 now 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 renovations 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 recommended 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 supersedes 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

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.

# 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 this, Manitoba Hydro initiated and sponsored amendments to the insulation tables for new houses in the Manitoba building code as an interim measure to improve upon eroding insulation practices below the 53rd parallel. The interim measures improved insulation practices in new housing north of the 53rd 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.

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. As a result, Manitoba's minimum requirements for insulation in new homes are the highest in Canada.

In September 2007, Manitoba Hydro presented research on the life cycle benefits of improved basement insulation to homeowners and was successful at convincing the Building Standards Board of Manitoba

to request R20 in foundation walls for all homes in Manitoba.

As of January 1st, 2010, The Manitoba Energy Act regulations state that all natural gas furnaces sold in Manitoba's commercial market must be at least 92% annual fuel utilization efficiency (AFUE) or greater. Meanwhile, Federal regulations require only a minimum efficiency of 90%. As a result, Manitoba Hydro's Commercial Gas Furnace program has had a direct impact on market transformation in Manitoba. For this reason, the additional 2% in energy savings relative to the Federal regulations have been claimed from all furnaces sold in Manitoba's residential & commercial market from January 1st, 2010 forward.

Manitoba Hydro's most recent involvement with Provincial codes was with the Manitoba amendments made to Part 9 (residential) of the Building Code that came into force on December 1st, 2010. The amendments introduced energy efficiency and water efficiency as new objectives under the code, and stipulated minimum performance requirements for newly-constructed homes in the areas of insulation, windows, heating systems and plumbing fixtures. Manitoba Hydro played a key role in developing the recommendations through technical review of proposed efficiency levels, and perhaps even more critically, through preparing the industry for accepting the code recommendations through offering the Power Smart New Home Program. With the final approved efficiency levels consisting largely of the

technologies which made up the Power Smart Gold standard, testament can be given to the importance that voluntary incentive-based programs have in accelerating market acceptance and penetration of energy efficient technologies, thereby making the transition to building codes more seamless. With enforcement occurring for all building permits issued after December 1st, 2010, it is anticipated that savings related to the code amendment will be realized in early-2011.

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

The following section outlines the estimated energy and demand savings resulting from codes and standards improvements in the Manitoba marketplace. As part of the 2010/11 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.

**SAVINGS** 

**Exhibit 4.3.3-A**Energy Efficiency Codes & Standards Savings

(AT METER) **CODE CATEGORY & COMPONENTS** CODE & MANITOBA HYDRO'S INFLUENCE 2010/11 Cumulative Residential Insulation -Manitoba Building Code Regulation 4/2008 (Oct. 2.9 GW.h 17.3 GW.h 2008) increased minimum required level of insulation 2.2 MW 7.6 MW from R12 to R20 278,447 m3 544,782 m3 -Member of Strategic Steering Committee on Perfor-**Residential Appliances:** 32.8 GW.h 285.4 GW.h mance, Efficiency & Renewables (SCOPEER) Ranges, dishwashers, clothes washers, 4.8 MW 62.1 MW clothes dryers, refrigerators, freezers -Savings based on Energy Star efficiency improve-295,245 m3 3,400,037 m3 ments 9.0 GW.h Other Residential Equipment: -CSA Standard C191-00 (July 2004) for electric hot 9.0 GW.h Central air conditioning, electric hot water water tanks 0.3 MW 0.3 MW -CSA Standard C656-05 (Nov. 2006) for central air tank, furnace 206,864 m3 310,856 m3 conditioning -MB Energy Act (Dec. 2009) states furnaces must be ≥92% AFUE 0.4 GW.h 94.8 GW.h Commercial Lighting: -Member of Strategic Lighting Initiative Committee T12 & T8 fluorescent lighting (SLIC), etc. 0.1 MW 26.7 MW -National Energy Efficiency Act (1996) increased min. - m3 - m3 efficiency requirement of T12 lighting from 40 to 34 Other Commercial Equipment: -MB Energy Act (Dec. 2009) states furnaces must be - GW.h - GW.h ≥92% AFUE - MW - MW **Furnaces** 112,232 m3 154,426 m3 **Industrial Equipment:** -Member of Coordinated Utilities Approach (CUA) - GW.h 16.2 GW.h **High Efficiency Motors** -Oct. 1997 code change (min. efficiency increased to - MW 2.8 MW - m3 - m3 -Last year of claimed savings was 2006/07 TOTAL 45.0 GW.h 422.8 GW.h 7.5 MW 99.5 MW 892,788 m3 4,410,101 m3

As a result of efforts to achieve energy savings through energy efficient codes and standards, including persisting savings, it is estimated that 423 GW.h and 100 MW in electric savings, and 4 million cubic metres in natural gas savings were achieved, resulting in nearly 294 thousand tonnes of greenhouse gas emission reductions in 2010/11.

In 2010/11 alone, as a result of energy efficient codes and standards, it is estimated that 45 GW.h and over 7 MW in electric savings, and 893 thousand cubic metres in natural gas savings were achieved, resulting in 32 thousand tonnes of greenhouse gas emission reductions.

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

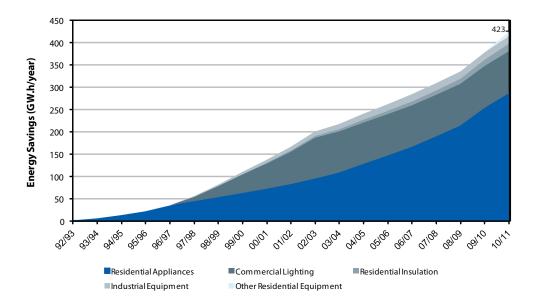


Exhibit 4.3.3 - C
Energy Efficiency Codes & Standards
Cumulative MW Savings Achieved
(at Customer Meter)

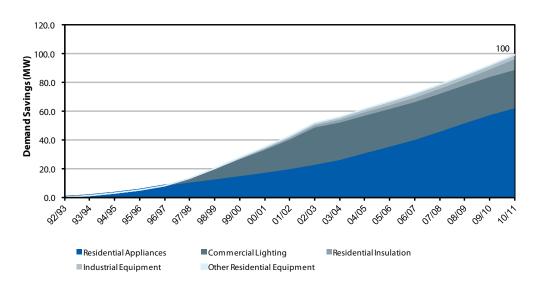
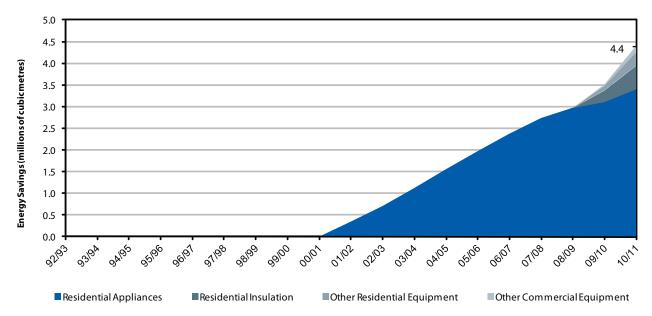


Exhibit 4.3.3 - D
Energy Efficiency Codes & Standards
Cumulative Natural Gas Savings



Because there are many participants (utilities, governments, manufacturers, environmental groups, etc.) contributing to the formation of energy efficiency codes and 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,

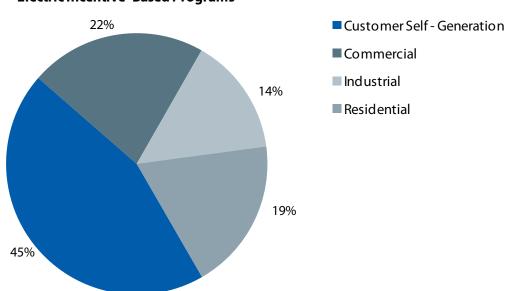
benefit/cost analyses and average levelized utility costs.

## 4.4.1.1 Annual Energy Savings

Energy savings achieved by incentive-based Power Smart programs in 2010/11 is displayed by sector and program in Exhibits 4.4.1.1-A and B respectively. Exhibit 4.4.1.1-B

also provides cumulative energy savings achieved by incentive-based Power Smart programs.

Exhibit 4.4.1.1 - A
Percentage of Annual GW.h Savings
Electric Incentive -Based Programs



**Exhibit 4.4.1.1 - B**Annual GW.h Savings - Electric Incentive-Based Programs

RESIDENTIAL  Compact Fluorescent Lighting**  21.7  Mater & Energy Saver  5.3  Mater & Energy Saver  10.0  Lower Income Energy Efficiency  23.3  New Home  0.8  0.5  Energy Efficient Light Fixtures**  10.0  0.8  0.5  Energy Efficient Light Fixtures**  10.0  23.3  New Home  0.8  0.5  Energy Efficient Light Fixtures**  10.0  22.3  Residential Discontinued/Completed Programs**  2-  1.1  55.2  49.6  36.4  35.0  199.2  179.3  COMMERCIAL  Commercial Lighting  19.4  28.6  Commercial Building Envelope  5.6  Commercial Building Envelope  5.6  Commercial Building Envelope  5.6  Commercial Hyd-C - Chillers & CO2 Sensors  1.8  Commercial Hyd-C - Chillers & CO2 Sensors  1.5  Commercial Retrofit  2.0  Commercial Retrofit  Commercia		2010/11 Actual	2010/11 Plan^	Total*	2024/25 Plan^
Home Insulation**   5.3	RESIDENTIAL				
Water & Energy Saver   5.3	Compact Fluorescent Lighting**	21.7	19.2	92.1	-
Lower Income Energy Efficiency	Home Insulation**	5.3	4.7	33.8	51.2
Energy Efficient Light Fixtures**	Water & Energy Saver	5.3	4.3	5.3	24.0
New Home	Lower Income Energy Efficiency	2.3	1.7	4.2	6.8
Refrigerator Retirement         -         3.3         -         13.0           Residential Discontinued/Completed Programs**         -         1.1         55.2         49.6           COMMERCIAL         36.4         35.0         199.2         179.3           COMMERCIAL         -         36.4         35.0         199.2         179.3           COMmercial Lighting         19.4         28.6         258.7         469.7           Commercial Building Envelope         5.6         5.7         19.4         86.3           Internal Retrofit         2.6         4.5         24.0         60.8           Commercial Earth Power**         2.4         2.2         26.0         42.3           Commercial Custom Measures         1.5         0.6         18.8         23.3           Commercial Refrigeration         1.4         1.3         7.0         30.9           Power Smart Shops         0.4         0.4         0.7         1.7           City of Winnipeg Power Smart Agreement         0.3         0.2         11.1         4.4           Commercial Building Optimization         0.2         0.7         0.9         16.7           Commercial Nitchen Appliances         0.1         0.2         0.6	Energy Efficient Light Fixtures**	1.0	0.2	3.7	1.3
Residential Discontinued/Completed Programs** - 1.1 55.2 49.6   36.4 35.0 199.2 179.3   179.	New Home	0.8	0.5	5.0	33.4
COMMERCIAL Commercial Lighting 19.4 28.6 258.7 469.7 Commercial Building Envelope 5.6 5.7 19.4 86.3 Internal Retrofit 2.6 4.5 Commercial Earth Power** 2.4 2.2 2.6 Commercial HVAC - Chillers & CO2 Sensors 1.8 1.0 Commercial Custom Measures 1.5 0.6 18.8 23.3 Commercial Refrigeration 1.4 1.3 7.0 30.9 Power Smart Shops 0.4 0.4 0.4 0.7 1.7 City of Winnipeg Power Smart Agreement 0.3 0.2 11.1 4.4 Commercial Building Optimization 0.2 0.7 0.9 16.7 Commercial Network Energy Management 0.1 0.2 0.6 5.4 Commercial Network Energy Management 0.3 0.1 0.1 0.4 1.6 Commercial Network Energy Management 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.4 0.4 0.4 0.5 0.6 0.7 0.9 0.7 0.9 0.7 0.9 0.8 0.7 0.9 0.8 0.7 0.9 0.8 0.7 0.9 0.8 0.7 0.9 0.8 0.7 0.9 0.8 0.7 0.9 0.8 0.8 0.9 0.1 0.1 0.1 0.4 0.4 0.6 0.7 0.7 0.9 0.9 0.6 0.7 0.9 0.9 0.7 0.9 0.9 0.7 0.9 0.9 0.7 0.9 0.9 0.7 0.9 0.9 0.7 0.9 0.7 0.9 0.9 0.7 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.9 0.7 0.7 0.9 0.7 0.9 0.7 0.7 0.9 0.7 0.9 0.7	Refrigerator Retirement	-	3.3	-	13.0
COMMERCIAL  Commercial Lighting Commercial Building Envelope 5.6 5.7 19.4 86.3 Internal Retrofit 2.6 4.5 2.4 2.2 2.6 4.2 2.2 2.6 4.2 2.3 Commercial Earth Power** 2.4 2.2 2.6 Commercial HVAC - Chillers & CO2 Sensors 1.8 1.0 7.1 2.5 Commercial Custom Measures 1.5 0.6 18.8 2.3.3 Commercial Refrigeration 1.4 1.3 7.0 30.9 Power Smart Shops 0.4 0.4 0.7 1.7 City of Winnipeg Power Smart Agreement 0.3 0.2 11.1 4.4 Commercial Building Optimization 0.2 0.7 0.9 16.7 Commercial Kitchen Appliances 0.1 0.2 0.6 5.4 Commercial Clothes Washers 0.1 0.1 0.2 0.6 Commercial New Waildings Program - 3.1 0.2 1.0 Commercial New Buildings Program	Residential Discontinued/Completed Programs**	-	1.1	55.2	49.6
Commercial Lighting		36.4	35.0	199.2	179.3
Commercial Building Envelope	COMMERCIAL				
Internal Retrofit	Commercial Lighting	19.4	28.6	258.7	469.7
Commercial Earth Power**         2.4         2.2         26.0         42.3           Commercial HVAC - Chillers & CO2 Sensors         1.8         1.0         7.1         25.8           Commercial Custom Measures         1.5         0.6         18.8         23.3           Commercial Refrigeration         1.4         1.3         7.0         30.9           Power Smart Shops         0.4         0.4         0.7         1.7           City of Winnipeg Power Smart Agreement         0.3         0.2         11.1         4.4           Commercial Building Optimization         0.2         0.7         0.9         16.7           Commercial Citythes Washers         0.1         0.2         0.6         5.4           Commercial Network Energy Management         -         3.1         0.2         1.0           Commercial New Buildings Program         -         3.3         -         91.3           Power Smart Energy Manager         -         -         -         -         -           Commercial Discontinued/Completed Programs         6.6         1.3         115.7         90.8           INDUSTRIAL         Performance Optimization         28.3         12.9         347.9         442.8           Emergency P	Commercial Building Envelope	5.6	5.7	19.4	86.3
Commercial HVAC - Chillers & CO2 Sensors   1.8	Internal Retrofit	2.6	4.5	24.0	60.8
Commercial Custom Measures         1.5         0.6         18.8         23.3           Commercial Refrigeration         1.4         1.3         7.0         30.9           Power Smart Shops         0.4         0.4         0.7         1.7           City of Winnipeg Power Smart Agreement         0.3         0.2         11.1         4.4           Commercial Building Optimization         0.2         0.7         0.9         16.7           Commercial Kitchen Appliances         0.1         0.2         0.6         5.4           Commercial New Buildings Program         0.1         0.1         0.4         1.6           Commercial New Buildings Program         -         3.1         0.2         1.0           Commercial New Buildings Program         -         3.3         -         91.3           Power Smart Energy Manager         -         -         -         -           Commercial Discontinued/Completed Programs         6.6         1.3         115.7         90.8           INDUSTRIAL         Performance Optimization         28.3         12.9         347.9         442.8           Emergency Preparedness         -         -         -         54.5         54.5           EFFICIENCY PROGRAMS SUBTOTAL	Commercial Earth Power**	2.4	2.2	26.0	42.3
Commercial Refrigeration         1.4         1.3         7.0         30.9           Power Smart Shops         0.4         0.4         0.7         1.7           City of Winnipeg Power Smart Agreement         0.3         0.2         11.1         4.4           Commercial Building Optimization         0.2         0.7         0.9         16.7           Commercial Kitchen Appliances         0.1         0.2         0.6         5.4           Commercial Clothes Washers         0.1         0.1         0.4         1.6           Commercial Network Energy Management         -         3.1         0.2         1.0           Commercial New Buildings Program         -         3.3         -         91.3           Power Smart Energy Manager         -         -         -         -           Commercial Discontinued/Completed Programs         6.6         1.3         115.7         90.8           INDUSTRIAL         Performance Optimization         28.3         12.9         347.9         442.8           Emergency Preparedness         -         -         -         54.5         54.5           Industrial Discontinued/Completed Programs         -         -         54.5         54.5           EFFICIENCY PROGRAM	Commercial HVAC - Chillers & CO2 Sensors	1.8	1.0	7.1	25.8
Power Smart Shops   0.4   0.4   0.7   1.7	Commercial Custom Measures	1.5	0.6	18.8	23.3
City of Winnipeg Power Smart Agreement       0.3       0.2       11.1       4.4         Commercial Building Optimization       0.2       0.7       0.9       16.7         Commercial Kitchen Appliances       0.1       0.2       0.6       5.4         Commercial Clothes Washers       0.1       0.1       0.4       1.6         Commercial Network Energy Management       -       3.1       0.2       1.0         Commercial New Buildings Program       -       3.3       -       91.3         Power Smart Energy Manager       -       -       -       -       -         Commercial Discontinued/Completed Programs       6.6       1.3       115.7       90.8         INDUSTRIAL       28.3       12.9       347.9       442.8         Emergency Preparedness       -       -       -       35.3         Industrial Discontinued/Completed Programs       -       -       54.5       54.5         EFFICIENCY PROGRAMS SUBTOTAL       106.9       101.3       1,092.2       1,663.5         CUSTOMER SELF-GENERATION PROGRAMS       86.6       69.6       86.6       77.8         TOTAL (at customer meter)       193.5       170.8       1,741.2	Commercial Refrigeration	1.4	1.3	7.0	30.9
Commercial Building Optimization         0.2         0.7         0.9         16.7           Commercial Kitchen Appliances         0.1         0.2         0.6         5.4           Commercial Clothes Washers         0.1         0.1         0.4         1.6           Commercial Network Energy Management         -         3.1         0.2         1.0           Commercial New Buildings Program         -         3.3         -         91.3           Power Smart Energy Manager         -         -         -         -           Commercial Discontinued/Completed Programs         6.6         1.3         115.7         90.8           INDUSTRIAL         28.3         12.9         347.9         442.8           Emergency Preparedness         -         -         -         -         35.3           Industrial Discontinued/Completed Programs         -         -         -         54.5         54.5           EFFICIENCY PROGRAMS SUBTOTAL         106.9         101.3         1,092.2         1,663.5           CUSTOMER SELF-GENERATION PROGRAMS         86.6         69.6         86.6         77.8           TOTAL (at customer meter)         193.5         170.8         1,178.8         1,741.2	Power Smart Shops	0.4	0.4	0.7	1.7
Commercial Kitchen Appliances         0.1         0.2         0.6         5.4           Commercial Clothes Washers         0.1         0.1         0.4         1.6           Commercial New Buildings Program         -         3.1         0.2         1.0           Commercial New Buildings Program         -         3.3         -         91.3           Power Smart Energy Manager         -         -         -         -           Commercial Discontinued/Completed Programs         6.6         1.3         115.7         90.8           INDUSTRIAL         Performance Optimization         28.3         12.9         347.9         442.8           Emergency Preparedness         -         -         -         -         35.3           Industrial Discontinued/Completed Programs         -         -         54.5         54.5           EFFICIENCY PROGRAMS SUBTOTAL         106.9         101.3         1,092.2         1,663.5           CUSTOMER SELF-GENERATION PROGRAMS           Bioenergy Optimization         86.6         69.6         86.6         77.8           TOTAL (at customer meter)         193.5         170.8         1,178.8         1,741.2	City of Winnipeg Power Smart Agreement	0.3	0.2	11.1	4.4
Commercial Clothes Washers         0.1         0.1         0.4         1.6           Commercial Network Energy Management         -         3.1         0.2         1.0           Commercial New Buildings Program         -         3.3         -         91.3           Power Smart Energy Manager         -         -         -         -           Commercial Discontinued/Completed Programs         6.6         1.3         115.7         90.8           INDUSTRIAL         Performance Optimization         28.3         12.9         347.9         442.8           Emergency Preparedness         -         -         -         -         35.3           Industrial Discontinued/Completed Programs         -         -         -         35.3           Industrial Discontinued/Completed Programs         -         -         -         54.5         54.5           EFFICIENCY PROGRAMS SUBTOTAL         106.9         101.3         1,092.2         1,663.5           CUSTOMER SELF-GENERATION PROGRAMS         86.6         69.6         86.6         77.8           Bioenergy Optimization         86.6         69.6         86.6         77.8           TOTAL (at customer meter)         193.5         170.8         1,178.8         1,741.2	Commercial Building Optimization	0.2	0.7	0.9	16.7
Commercial Network Energy Management       -       3.1       0.2       1.0         Commercial New Buildings Program       -       3.3       -       91.3         Power Smart Energy Manager       -       -       -       -       -         Commercial Discontinued/Completed Programs       6.6       1.3       115.7       90.8         INDUSTRIAL       Energency Definization       28.3       12.9       347.9       442.8         Emergency Preparedness       -       -       -       -       35.3         Industrial Discontinued/Completed Programs       -       -       54.5       54.5         EFFICIENCY PROGRAMS SUBTOTAL       106.9       101.3       1,092.2       1,663.5         CUSTOMER SELF-GENERATION PROGRAMS Bioenergy Optimization       86.6       69.6       86.6       77.8         TOTAL (at customer meter)       193.5       170.8       1,178.8       1,741.2	Commercial Kitchen Appliances	0.1	0.2	0.6	5.4
Commercial New Buildings Program       -       3.3       -       91.3         Power Smart Energy Manager       -       -       -       -         Commercial Discontinued/Completed Programs       6.6       1.3       115.7       90.8         INDUSTRIAL       INDUSTRIAL         Performance Optimization       28.3       12.9       347.9       442.8         Emergency Preparedness       -       -       -       35.3         Industrial Discontinued/Completed Programs       -       -       54.5       54.5         EFFICIENCY PROGRAMS SUBTOTAL       106.9       101.3       1,092.2       1,663.5         CUSTOMER SELF-GENERATION PROGRAMS       Bioenergy Optimization         86.6       69.6       86.6       77.8         TOTAL (at customer meter)       193.5       170.8       1,178.8       1,741.2	Commercial Clothes Washers	0.1	0.1	0.4	1.6
Power Smart Energy Manager   -   -   -   -   -     -	Commercial Network Energy Management	-	3.1	0.2	1.0
Commercial Discontinued/Completed Programs         6.6         1.3         115.7         90.8           INDUSTRIAL         42.3         53.3         490.6         951.7           INDUSTRIAL         28.3         12.9         347.9         442.8           Emergency Preparedness         -         -         -         -         35.3           Industrial Discontinued/Completed Programs         -         -         54.5         54.5           EFFICIENCY PROGRAMS SUBTOTAL         106.9         101.3         1,092.2         1,663.5           CUSTOMER SELF-GENERATION PROGRAMS         86.6         69.6         86.6         77.8           Bioenergy Optimization         86.6         69.6         86.6         77.8           TOTAL (at customer meter)         193.5         170.8         1,178.8         1,741.2	Commercial New Buildings Program	-	3.3	-	91.3
12.3   53.3   490.6   951.7	Power Smart Energy Manager	-	-	-	-
NDUSTRIAL   Performance Optimization   28.3   12.9   347.9   442.8	Commercial Discontinued/Completed Programs	6.6	1.3	115.7	90.8
Performance Optimization         28.3         12.9         347.9         442.8           Emergency Preparedness         -         -         -         -         35.3           Industrial Discontinued/Completed Programs         -         -         54.5         54.5           28.3         12.9         402.4         532.5           EFFICIENCY PROGRAMS SUBTOTAL         106.9         101.3         1,092.2         1,663.5           CUSTOMER SELF-GENERATION PROGRAMS Bioenergy Optimization         86.6         69.6         86.6         77.8           TOTAL (at customer meter)         193.5         170.8         1,178.8         1,741.2		42.3	53.3	490.6	951.7
Emergency Preparedness					
Industrial Discontinued/Completed Programs	·	28.3	12.9	347.9	442.8
28.3 12.9 402.4 532.5  EFFICIENCY PROGRAMS SUBTOTAL 106.9 101.3 1,092.2 1,663.5  CUSTOMER SELF-GENERATION PROGRAMS Bioenergy Optimization 86.6 69.6 86.6 77.8  TOTAL (at customer meter) 193.5 170.8 1,178.8 1,741.2	Emergency Preparedness	-	-	-	35.3
EFFICIENCY PROGRAMS SUBTOTAL 106.9 101.3 1,092.2 1,663.5  CUSTOMER SELF-GENERATION PROGRAMS Bioenergy Optimization 86.6 69.6 86.6 77.8  TOTAL (at customer meter) 193.5 170.8 1,178.8 1,741.2	Industrial Discontinued/Completed Programs				
CUSTOMER SELF-GENERATION PROGRAMS  Bioenergy Optimization 86.6 69.6 86.6 77.8  86.6 69.6 86.6 77.8  TOTAL (at customer meter) 193.5 170.8 1,178.8 1,741.2		28.3	12.9	402.4	532.5
Bioenergy Optimization         86.6         69.6         86.6         77.8           TOTAL (at customer meter)         193.5         170.8         1,178.8         1,741.2	EFFICIENCY PROGRAMS SUBTOTAL	106.9	101.3	1,092.2	1,663.5
Bioenergy Optimization         86.6         69.6         86.6         77.8           TOTAL (at customer meter)         193.5         170.8         1,178.8         1,741.2					
86.6 69.6 86.6 77.8  TOTAL (at customer meter) 193.5 170.8 1,178.8 1,741.2	CUSTOMER SELF-GENERATION PROGRAMS				
TOTAL (at customer meter) 193.5 170.8 1,178.8 1,741.2	Bioenergy Optimization	86.6	69.6	86.6	77.8
		86.6	69.6	86.6	77.8
	TOTAL (at customer meter)	193.5	170.8	1,178.8	1,741.2
TOTAL (at generation) 216.0 191.5 1,324.3 1,960.6					
	TOTAL (at generation)	216.0	191.5	1,324.3	1,960.6

Note: Figures may not add due to rounding.

 $<sup>^{\</sup>star}$  Savings include actual + persisting results., up to and including 2010/11.

<sup>\*\*</sup> Includes market transformation.

In 2010/11, Power Smart incentive-based programs, including both efficiency-based programs and customer self-generation, surpassed plan by 22.7 GW.h. Efficiency-based programs were 5.6 GW.h above plan while customer self-generation was 17.0 GW.h above plan.

The variances within Power Smart incentive-based efficiency programs in 2010/11 are highlighted below:

#### **Residential:**

- The residential sector, which accounted for 19% of total GW.h savings in 2010/11, contributed 36.4 GW.h, exceeding its planned savings by 1.4 GW.h.
- The Compact Fluorescent Lighting Program achieved 21.7 GW.h, exceeding plan by 2.5 GW.h.
- The Water & Energy Saver Program contributed 5.3
   GW.h in its first year of activity, which was 1 GW.h or 19% more energy savings than planned.
- The delayed launch of the Refrigerator Retirement Program accounted for 3.3 GW.h of unrealized savings.

#### Commercial:

- The commercial sector, which accounted for 22% of savings in 2010/11, contributed 42.3 GW.h, falling 11.0 GW.h short of target.
- The Commercial Lighting Program was
   9.2 GW.h below plan, which can be attributed to the emerging trend of a higher proportion of program participants undertaking smaller lighting projects than planned.

- The Internal Retrofit Program was 1.9 GW.h below plan due to a lower number of projects than anticipated along with a deviation from the planned product mix.
- The Commercial Network Energy Management Program experienced dramatically lower participation than planned, resulting in a negative variance of 3.1 GW.h.

#### **Industrial:**

The industrial sector, which is driven primarily
by the Performance Optimization Program,
accounted for 14% of total GW.h savings in
2010/11 contributing 28.3 GW.h, which was 15.4
GW.h above plan. Energy savings for the
Performance Optimization Program were 119%
greater than planned due to greater per project
savings than anticipated.

### **Customer Self-Generation:**

 The Bioenergy Optimization Program accounted for 45% of total GW.h savings in 2010/11 contributing 86.6 GW.h of savings, thereby surpassing its intended annual energy savings target by 24%.

# 4.4.1.2 Average Winter Peak Demand Savings

Demand savings achieved by incentive-based Power Smart programs in 2010/11 is displayed by sector and program in Exhibits 4.4.1.2-A and B respectively. Exhibit 4.4.1.2-B also provides cumulative demand savings achieved by incentive-based Power Smart programs. The demand savings are presented as an average of the winter AM and PM system peak savings.

Exhibit 4.4.1.2 - A % of Average Winter MW Savings - Electric Incentive -Based Programs

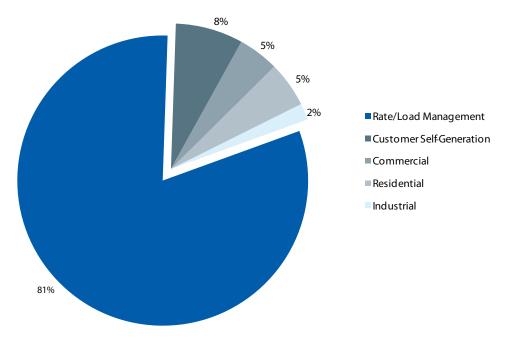


Exhibit 4.4.1.2 - B Average Winter MW Savings - Electric Incentive-Based Programs

	2010/11 Actual	2010/11 Plan^	Total*	Planned Savings to 2024/25^
RESIDENTIAL				
Compact Fluorescent Lighting**	5.1	3.9	21.3	-
Home Insulation**	2.6	2.3	16.4	24.8
Lower Income Energy Efficiency	0.8	0.4	1.5	2.1
Water & Energy Saver	0.7	0.7	0.7	3.8
New Home	0.3	0.2	1.5	7.7
Energy Efficient Light Fixtures**	0.2	0.0	0.6	0.2
Refrigerator Retirement	_	0.3	-	1.1
Residential Discontinued/Completed Programs**	_	0.2	4.9	4.3
	9.7	8.1	46.9	44.1
COMMERCIAL				
Commercial Lighting	3.5	7.4	45.7	100.7
Commercial Building Envelope	2.7	2.6	8.8	39.5
Commercial Earth Power**	0.9	0.8	11.2	17.4
Internal Retrofit	0.5	0.5	4.0	14.3
Commercial Refrigeration	0.3	0.2	1.9	4.2
Commercial Custom Measures	0.2	0.1	1.4	2.4
City of Winnipeg Power Smart Agreement	0.1	0.1	2.5	0.5
Power Smart Shops	0.1	0.1	0.1	0.3
Commercial New Buildings	_	0.6	-	17.5
Commercial Building Optimization	0.0	0.2	0.0	5.6
Commercial Network Energy Management	0.0	0.2	0.0	0.1
Commercial Clothes Washers	0.0	0.1	0.3	1.2
Commercial Kitchen Appliances	0.0	0.1	0.1	1.8
Commercial HVAC	-	-	-	-
Power Smart Energy Manager	_	_	_	
Commercial Discontinued/Completed Programs	0.3	0.1	15.1	13.8
μ	8.6	13.1	91.3	219.2
INDUSTRIAL				
Performance Optimization	3.5	2.0	75.5	92.5
Emergency Preparedness	-	-	-	35.3
Industrial Discontinued/Completed Programs	_	-	8.2	7.9
,	3.5	2.0	83.7	135.6
EFFICIENCY PROGRAMS SUBTOTAL	21.7	23.1	221.9	398.9
CUSTOMER SELF-GENERATION PROGRAMS				
Bioenergy Optimization	14.3	7.6	14.3	9.7
военегду Оринизаціон	14.3	7.6	14.3	9.7
RATE/LOAD MANAGEMENT PROGRAMS	14.3	7.0	14.3	9./
Curtailable Rates	1545	146.2	1545	146 2
Cur (all able Kates	154.5 154.5	146.3 146.3	154.5 154.5	146.3 146.3
TOTAL (at customer meter)	190.6	177.0	390.7	554.9
TOTAL (at generation)	210.3	195.6	435.3	620.9
10 IAE (at generation)	210.3	193.0	د،دد+	020.9

Plan estimates are from the 2010 Power Smart Plan. Savings include actual + persisting results, up to and including.

Includes market transformation.
Figures may not add due to rounding. Note:

In 2010/11, Power Smart incentive-based programs, including both efficiency-based programs and customer self-generation, surpassed plan by 13.6 MW. The greatest driver of demand savings was the Curtailable Rates Program, which accounted for 81% of total MW savings.

The most notable variances by program sector are highlighted below:

#### Residential:

- The residential sector, which accounted for 5% of total demand savings in 2010/11, contributed 9.7 MW, exceeding its planned savings by 1.6 MW.
- The Compact Fluorescent Lighting Program exceeded planned demand savings by 1.2 MW or 31%.
- The Refrigerator Recycling Program was delayed and did not launch in 2010/11 as forecasted. As a result, the program did not report demand savings and fell 0.3 MW below plan.

### Commercial:

- The commercial sector, which also accounted for 5% of total demand savings in 2010/11, contributed 8.6 MW, falling 4.5 MW below target.
- The Commercial Lighting Program achieved 3.5
   MW or 47% of its planned demand savings.
   This can be attributed to a higher number of program participants taking on smaller lighting projects than planned.

 The Commercial New Buildings Program did not have any completed projects in 2010/11. As a result, the program did not claim any demand savings, thereby falling below plan by 0.6 MW.

#### **Industrial:**

 The industrial sector accounted for 2% of total demand savings in 2010/11, contributing 3.5 MW or 75% above plan. This positive variance is largely due to greater than expected per project savings by the Performance Optimization Program.

### **Customer Self-Generation:**

 The Bioenergy Optimization Program contributed 14.3 MW in total demand savings, surpassing plan by 88% or 6.7 MW.

#### Rate/Load Management:

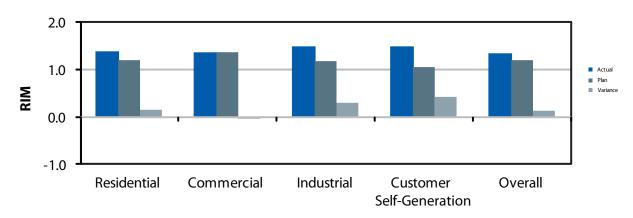
 The Curtailable Rates Program, which accounted for 81% of total demand savings in 2010/11, contributed 154.5 MW, 8.2 MW above plan.

# 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 evaluation period. Refer to APPENDIX F - 'Summary of Evaluation & 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 2010/11 RIM - Electric Incentive-Based Programs



**Exhibit 4.4.1.3 - B**Rate Impact Cost Benefit/Cost Analysis - Electric Incentive-Based Program

	2010/11 Actual	2010/11 Plan^^	Total*	2024/25 Plan^^
		I	RIM	
RESIDENTIAL				
Home Insulation	1.7	1.7	1.6	1.6
New Home	1.5	1.1	0.8	1.6
Compact Fluorescent Lighting	1.3	1.2	1.2	1.3
Lower Income Energy Efficiency**	1.2	0.8	0.7	1.3
Water & Energy Saver	1.1	1.0	1.1	1.0
Energy Efficient Light Fixtures	1.0	0.8	0.9	0.8
Refrigerator Recycling	-	-		0.8
COMMERCIAL	1.4	1.2	1.2	1.3
COMMERCIAL	2.0	4.0	4 7	4.0
Commercial Earth Power	2.0	1.8	1.7	1.9
Internal Retrofit	1.8	1.3	2.5	1.0
Commercial Custom Measures	1.7	1.3	1.3	1.3
Commercial Building Envelope	1.7	1.9	1.6	1.9
Commercial Building Optimization	1.4	1.5	0.5	1.7
Commercial Refrigeration	1.4	1.2	1.4	1.2
City of Winnipeg Agreement Power Smart Agreement <sup>®</sup>	1.3	1.5	0.7	1.6
Commercial Kitchen Appliances	1.1	1.1	1.0	1.3
Commercial Lighting	1.1	1.3	1.1	1.4
Commercial HVAC	1.0	0.9	1.0	1.0
Commercial Clothes Washers	0.9	1.3	1.1	1.5
Power Smart Shops	0.9	0.9	0.7	0.9
Commercial Network Energy Management	0.3	0.8	0.2	1.0
Commercial New Buildings	-	1.4	-	1.5
Power Smart Energy Manager	-	_	-	1.0
	1.3	1.4	1.2	1.4
INDUSTRIAL				
Performance Optimization	1.5	1.2	1.3	1.2
Emergency Preparedness		-	-	1.2
	1.5	1.2	1.3	1.2
DISCONTINUED/COMPLETED PROGRAMS	1.5	1.3	0.9	1.3
CUCTOMED CELE CENTERATION DOOGDANG				
CUSTOMER SELF-GENERATION PROGRAMS	4.5	1.0	1.3	1 4
Bioenergy Optimization	1.5	1.0	1.3	1.4
OVERALL PROGRAM COSTS	1.4	1.2	1.2	1.2
OVERALL PROGRAM COSTS + SUPPORT COSTS^	1.3	1.2	1.1	1.2

 $<sup>^{\</sup>ast}$  "Total" values represent the results of the program/portfolio since its inception.

<sup>\*\*</sup> Includes all Affordable Energy Fund expenditures.

<sup>^</sup> Support costs contain customer service initiatives, basic information services and program support costs.

<sup>^^</sup> Plan estimates are from the 2010 Power Smart Plan.

Ø Includes the present value of projected future commitment payment receipts.

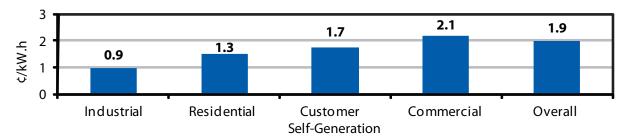
Note: Benefit/Cost analysis is not calculated for rate/load management programs.

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

Exhibits 4.4.1.4-A and B highlight the average levelized utility cost of 2010/11 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 evaluation period. Refer to APPENDIX E - 'Summary of Evaluation & 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 - A
2010/11 Average Levelized Utility Cost
at generation



**Exhibit 4.4.1.4 - B**Average Levelized Utility Cost at Generation - ¢/kW.h saved by Power Smart Program

	2010/11 Actual	2010/11 Total***	2024/25 Plan^^
	71010.0.	¢/kW.h	
RESIDENTIAL			
Lower Income Energy Efficiency*	2.3	6.3	1.3
Energy Efficient Light Fixtures	1.9	3.6	4.6
New Home	1.6	7.2	0.1
Home Insulation	1.5	2.3	1.9
Compact Fluorescent Lighting	0.9	1.4	1.0
Water & Energy Saver	0.7	1.0	1.8
Refrigerator Recycling	-	-	2.3
Discontinued/Completed Programs	-	0.7	1.0
	1.3	1.4	1.4
COMMERCIAL			
Commercial Network Energy Management	11.9	19.2	1.0
Commercial Clothes Washers	11.2	7.9	4.0
Internal Retrofit	4.2	2.3	8.5
Power Smart Shops	3.7	7.5	3.3
Commercial Kitchen Appliances	2.7	3.5	2.2
Commercial Lighting	2.4	1.4	1.9
City of Winnipeg Agreement Power Smart Agreement	2.3	8.1	0.0
Commercial Building Optimization	1.6	5.4	1.4
Commercial Building Envelope	1.7	2.2	1.2
Commercial Refrigeration	1.3	1.6	1.2
Commercial Custom Measures	1.1	0.8	2.4
Commercial HVAC	1.0	1.4	0.9
Commercial Earth Power	0.9	1.2	1.4
Commercial New Buildings**	n/a	n/a	0.9
Power Smart Energy Manager**	n/a	n/a	2.7
Discontinued/Completed Programs	0.9	0.8	0.4
	2.1	1.5	2.0
INDUSTRIAL			
Performance Optimization	0.8	0.4	1.9
Emergency Preparedness	-	-	4.7
Discontinued/Completed Programs	-	1.1	
CUSTOMED SELE SENEDATION DOGGDAMS	0.9	0.6	2.5
CUSTOMER SELF-GENERATION PROGRAMS			
Bioenergy Optimization	1.7	1.6	1.9
OVERALL: PROGRAM COSTS	1.6	1.1	2.3
OVERALL: PROGRAM COSTS + SUPPORT COSTS^	1.9	1.4	2.5

<sup>\*</sup> Includes all Affordable Energy Fund expenditures.

<sup>\*\*</sup> Programs in the start-up phase are not evaluated using the average levelized utility costs metric because the results can be misleading.

<sup>&</sup>quot;Total" values represent the results of the program/portfolio since its inception.

Support costs contain customer service initiatives, basic information services and program support costs.

<sup>^^</sup> Plan estimates are from the 2010 Power Smart Plan.

Note: Average levelized utility cost analysis is not provided for rate/load management programs.

# 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 utility costs.

# 4.4.2.1 Annual Natural Gas Energy Savings

Natural gas savings achieved by incentive-based Power Smart programs in 2010/11 is displayed by sector and program in Exhibits 4.4.2.1-A and B respectively.

Exhibit 4.4.2.1-B also provides cumulative natural gas savings achieved by incentive-based Power Smart programs.

Exhibit 4.4.2.1 - A % of Annual Natural Gas Savings by Incentive-Based Programs

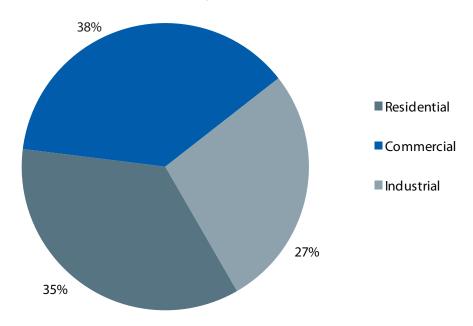


Exhibit 4.4.2.1 - B Annual Natural Gas Savings - Incentive-Based Programs

	2010/11 Actual	2010/11 Plan^	Total*	2024/25 Plan^
	<u> </u>	millions of cubic me	tres	
RESIDENTIAL				
Lower Income Energy Efficiency	1.6	1.1	2.3	2.5
Home Insulation**	1.4	1.3	9.0	8.0
Water & Energy Saver	0.8	0.4	0.8	2.7
New Home	0.1	0.1	0.5	4.8
Residential Discontinued/Completed Programs	-	-	7.1	0.2
	4.0	2.8	19.8	18.1
COMMERCIAL				
Commercial Building Envelope	2.5	1.8	6.2	24.6
Commercial HVAC	1.5	1.0	6.2	24.5
Commercial Building Optimization	0.1	0.1	0.4	3.9
Commercial Custom Measures	0.1	0.1	0.2	0.8
City of Winnipeg Power Smart Agreement	0.1	-	0.8	-
Commercial New Buildings	-	0.2	-	6.3
Commercial Kitchen Appliances	-	-	0.1	2.1
Power Smart Shops	-	-	-	0.1
Power Smart Energy Manager	-	-	-	
Commercial Washers	-	-	- 2.4	0.1
Commercial Discontinued/Completed Programs	-	0.1	2.4	-
INDUCTOIAL	4.3	3.3	16.2	62.5
INDUSTRIAL	2.4	1.0	0.0	100
Natural Gas Optimization	3.1	1.6	8.0	10.0
Industrial Discontinued/Completed Programs	3.1	- 16	- 0.0	10.0
	3.1	1.6	8.0	10.0
EFFICIENCY PROGRAMS SUBTOTAL	11.4	7.7	44.1	90.5
CUSTOMER SELF-GENERATION PROGRAMS				
Bioenergy Optimization	-	-	-	3.6
	-	-	-	3.6
INTERACTIVE EFFECTS WITH ELECTRICITY PROGRAMS				
RESIDENTIAL				
Compact Fluorescent Lighting	(1.7)	(1.7)	(8.2)	-
Refrigerator Recycling	-	(0.2)	-	(0.9)
Energy Efficient Light Fixtures	-	-	(0.2)	-
Lower Income Energy Efficiency	-	-	(0.1)	-
New Home	-	-	-	-
Residential Discontinued/Completed Programs	-	-	0.2	-
	(1.7)	(1.9)	(8.3)	(0.9)
COMMERCIAL				
Commercial Refrigeration	-	0.1	0.4	0.9
Commercial Lighting	(0.2)	(0.2)	(2.3)	(1.5)
Commercial Network Energy Management	-	(0.1)	-	-
Commercial Clothes Washers	-	-	-	-
City of Winnipeg Power Smart Agreement	-	-	(0.1)	-
Power Smart Shops	-	-	-	-
	(0.2)	(0.1)	(2.1)	(0.7)
	6.0	4		
INTERACTIVE EFFECTS SUBTOTAL	(1.9)	(2.1)	(10.4)	(1.6)
NET IMPACTS				
	2.2	0.0	11 F	17.2
Residential Programs	2.3	0.9	11.5	17.2
Commercial Programs	4.1	3.1	14.1	61.8
Industrial Programs	3.1	1.6	8.0	10.0
Customer Self-Generation Programs		-	-	3.6
NET IMPACT OVERALL	9.5	5.6	33.6	92.6
THE THINKS OF COURSE	9.5	5.0	33.0	72.0

Plan estimates are from the 2010 Power Smart Plan.

Note: Figures may not add due to rounding.

Savings include actual + persisting results., up to and including 2010/11. Includes market transformation.

Power Smart incentive-based efficiency program activity in 2010/11 provided 11.4 million cubic metres of natural gas savings, 48% above plan.

The positive variance of 3.7 million cubic metres can be attributed to the activity of the following Power Smart programs:

#### **Residential:**

- The residential sector, which contributed 4.0 million cubic metres in savings, accounted for 35% of total savings in 2010/11, surpassing planned savings of 2.8 million cubic metres by 43%.
- The Lower Income Energy Efficiency Program achieved 1.6 million cubic metres in savings, thereby delivering 45% more savings than planned.
- The Water & Energy Saver Program, in its first year of activity, delivered 0.8 million cubic metres in savings, doubling planned savings.

## Commercial:

- The Commercial HVAC Program contributed 1.5
  million cubic metres in savings, 50% above plan.
  This was primarily due to the variance in the
  program's actual product mix versus plan.
- The Commercial Building Envelope Program contributed 2.5 million cubic metres in savings or 39% above plan. This positive variance can be attributed to changes in the product mix of the Commercial Insulation Program which yielded a greater number of completed projects.
- The New Buildings Program did not claim any

savings in 2010/11, as no projects were completed during the evaluation year. As a result, the program fell 0.2 million cubic metres below plan.

#### **Industrial:**

• The Natural Gas Optimization Program contributed 3.1 million cubic metres of natural gas savings or 94% more savings than planned. This positive variance can be attributed to greater than anticipated per-project savings.

Some electric Power Smart programs result in an increase or decrease in natural gas consumption (interactive effects). 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, interactive effects are 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 2010/11, interactive effects increased consumption by 1.9 million cubic metres, reducing integrated incentive-based natural gas savings to 9.5 million cubic metres.

Interactive effects were lower than planned by 0.2 million cubic metres.

# 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. The calculation of the benefit/cost ratio was based on a 30-year evaluation period. Refer to APPENDIX F-'Summary of Evaluation & 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
2010/11 RIM - Natural Gas Incentive-Based Programs

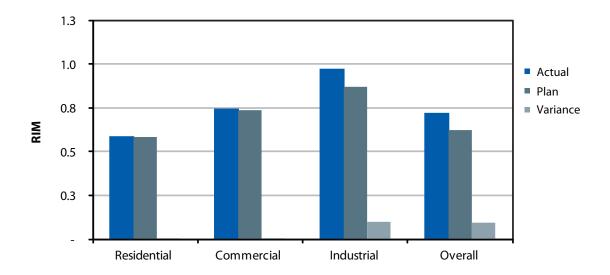


Exhibit 4.4.2.2 - B Rate Impact Cost Benefit/Cost Analysis - Natural Gas Incentive-Based Program

	2010/11 Actual	2010/11 Plan^^	Total*	2024/25 Plan^^
		RIM		
RESIDENTIAL				
New Home	0.8	0.7	0.7	0.9
Water & Energy Saver	0.7	0.6	0.7	0.7
Home Insulation	0.7	0.7	0.7	0.7
Lower Income Energy Efficiency**	0.6	0.4	0.5	0.4
	0.6	0.6	0.6	0.8
COMMERCIAL				
City of Winnipeg Agreement Power Smart Agreement†	1.0	-	1.0	-
Commercial HVAC	0.8	0.8	0.8	0.9
Commercial Custom Measures	0.7	0.7	0.7	0.7
Commercial Building Envelope	0.7	0.7	0.7	0.7
Commercial Building Optimization	0.6	0.6	0.4	0.7
Commercial Kitchen Appliances	0.7	0.6	0.6	0.9
Power Smart Shops	0.4	0.5	0.3	0.5
Commercial New Buildings	-	0.8	-	0.9
Power Smart Energy Manager	-	-	-	0.6
	0.7	0.7	0.8	0.8
INDUSTRIAL				
Natural Gas Optimization	1.0	0.9	1.0	0.9
DISCONTINUED/COMPLETED PROGRAMS	0.7	0.9	0.7	0.9
CUSTOMER SELF-GENERATION				
Bioenergy Optimization	-	0.3	-	0.9
OVERALL: PROGRAM COSTS	0.7	0.7	0.7	0.8
OVERALL: PROGRAM COSTS incl. INTERACTIVE EFFECTS	0.7	0.7	0.7	0.7
OVERALL: PROGRAM COSTS + SUPPORT COSTS incl. INTERACTIVE EFFECTS^	0.7	0.6	0.7	0.7

Support costs contain customer service initiatives, basic information services and program support costs.

Plan estimates are from the 2010 Power Smart Plan.

<sup>&</sup>quot;Total" values represent the results of the program/portfolio since its inception.

Includes all apportioned Affordable Energy Fund (AEF) and Furnace Replacement Program (FRP) expenditures. LIEEP's 'Actual' RIM, including apportioned AEF, without FRP was 0.6. LIEEP's 'Actual' RIM, with FRP only was 0.4. \*\*

Includes only natural gas bill reduction costs. All other costs were accounted for within electric cost elements. †

### 4.4.2.3 Natural Gas Average Levelized Utility Costs - ¢/m³ Saved

Exhibits 4.4.2.3-A and B highlight the average levelized utility cost of incentive-based programs implemented prior to 2010/11 in  $^{\cong m^3}$ . The calculation of  $^{\cong m^3}$  saved was based upon current program natural gas savings over a 30-year evaluation period. Refer to APPENDIX E - 'Summary of Evaluation & 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 2010/11 Levelized Utility Cost (¢/m³)

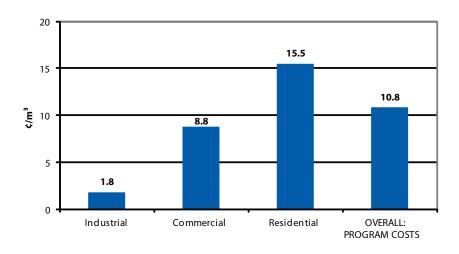


Exhibit 4.4.2.3 - B

Average Levelized Utility Cost - ¢/m³ saved by Power Smart Program

	2010/11 Actual	2010/11 Total***	2024/25 Plan^^
		¢/m3	
RESIDENTIAL			
Lower Income Energy Efficiency*	26.5	38.9	6.7
Home Insulation	10.5	9.6	13.6
Water & Energy Saver	7.9	8.4	16.0
New Home	6.6	9.2	0.2
	15.5	11.7	8.2
COMMERCIAL			
Power Smart Shops	41.7	66.8	30.6
Commercial Building Optimization	22.3	40.6	14.8
Commercial Custom Measures	15.6	13.6	15.4
Commercial Kitchen Appliances	10.7	20.4	3.7
Commercial Building Envelope	9.4	9.8	10.7
Commercial HVAC	6.0	5.9	3.0
Commercial New Buildings**	n/a	n/a	3.0
Power Smart Energy Manager**	n/a	n/a	23.1
	8.8	8.1	7.2
INDUSTRIAL			
Natural Gas Optimization	1.8	2.2	5.9
DISCONTINUED/COMPLETED PROGRAMS	10.0	8.1	0.4
OVERALL: PROGRAM COSTS	9.2	8.7	9.4
	3.2	3.7	
OVERALL: PROGRAM COSTS incl. INTERACTIVE EFFECTS†	9.8	9.9	10.0
OVERALL: PROGRAM COSTS + SUPPORT COSTS incl. INTERACTIVE EFFECTS^	10.8	12.3	11.0
OVERALL, FROGRAM COSTS + SUPPORT COSTS HIGH INTERACTIVE EFFECTS/	10.8	12.3	11.9

<sup>\*</sup> Includes all apportioned Affordable Energy Fund (AEF) and Furnace Replacement Program (FRP) expenditures. LIEEP's 'Actual' levelized utility cost, including apportioned AEF, without FRP was 18.6 ¢/m³. LIEEP's 'Actual' levelized utility cost with FRP only was 40.1 ¢/m³.

<sup>\*\*</sup> Programs in the start-up phase are not evaluated using the average levelized utility costs metric because the results can be misleading.

<sup>\*\*\* &</sup>quot;Total" values represent the results of the program/portfolio since its inception.

<sup>^</sup> Support costs contain customer service initiatives, basic information services and program support costs.

<sup>^^</sup> Plan estimates are from the 2010 Power Smart Plan.

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

### 4.4.3 Power Smart Combined Electric & 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 evaluation period.

Exhibit 4.4.3 - A 2010/11 TRC - Combined Electric & Gas Incentive - Based Programs

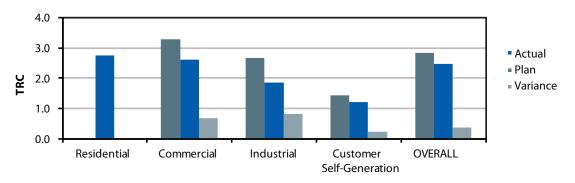


Exhibit 4.4.3 - B Total Resource Cost Benefit Analysis - Combined Electric & Gas Incentive-Based Program

	2010/11 Actual	2010/11 Plan^^	Total****	2024/25 Plan^^
		7	RC	
RESIDENTIAL MATERIAL CONTRACTOR OF THE PROPERTY OF THE PROPERT	11.0	4.6	10.0	5.0
Water & Energy Saver†	11.8 10.1	4.6 5.3	10.0 4.2	5.9 5.6
Compact Fluorescent Lighting** Energy Efficient Light Fixtures**	3.8	5.3 1.6	1.8	5.6 1.6
Home Insulation**	3.1	3.3	2.9	3.1
New Home	1.7	3.5 1.5	1.1	1.6
Lower Income Energy Efficiency*†	1.0	1.7	0.8	2.5
Refrigerator Recycling	1.0	1.1	-	1.2
Terrigerator necycling	2.7	2.8	2.4	2.5
COMMERCIAL	2.7	2.0	2,7	2.3
City of Winnipeg Agreement Power Smart Agreement***	16.9	9.6	1.5	10.9
Commercial Building Envelope	4.1	2.4	3.3	2.3
Commercial Refrigeration	4.0	3.5	3.8	4.4
Commercial Kitchen Appliances†	3.8	3.6	4.0	3.5
Commercial HVAC**	3.5	2.9	3.2	3.4
Commercial Earth Power**	3.5	2.8	2.0	2.9
Commercial Lighting	3.2	2.9	2.4	2.8
Commercial Building Optimization	2.1	2.0	0.8	2.8
Power Smart Shops†	2.1	2.9	1.2	3.3
Commercial Custom Measures	2.0	2.0	1.6	2.0
Internal Retrofit	1.8	1.3	2.4	1.0
Commercial Clothes Washers†	1.2	2.1	1.7	2.3
Commercial Network Energy Management	0.4	2.3	0.2	2.7
Commercial New Buildings	-	4.3	-	5.3
Power Smart Energy Manager	-	-	-	1.2
	3.3	2.6	2.4	2.7
INDUSTRIAL				
Performance Optimization	3.1	2.4	3.5	2.5
Natural Gas Optimization	2.2	1.4	2.4	1.4
Emergency Preparedness	-	-	-	2.7
	2.7	1.8	3.3	2.3
DICCONTINUED/COMPLETED DDOCDAMC**	6.0	F. C	2.4	5.2
DISCONTINUED/COMPLETED PROGRAMS**†	6.0	5.6	2.4	5.3
CLICTOMED CELE CENEDATION DOCCDAMC	6.0	5.0	2.4	
CUSTOMER SELF-GENERATION PROGRAMS	1.4	1.7	1.4	2.0
Bioenergy Optimization	1.4	1.2	1.4	2.0
	1.4	1.2	1.4	2.0
OVERALL: PROGRAM COSTS	2.8	2.5	2.5	2.6
OVERALL: PROGRAM COSTS + SUPPORT COSTS^	2.6	2.3	2.2	2.2

Includes all Affordable Energy Fund expenditures.

Includes market transformation.

Includes the present value of projected future commitment payment receipts.

<sup>&</sup>quot;Total" values represent the results of the program/portfolio since its inception.

Includes water savings benefits.
Support costs contain customer service initiatives, basic information services and program support costs.

 $<sup>\</sup>wedge \wedge$ Plan estimates are from the 2010 Power Smart Plan.

Increased or decreased natural gas benefits resulting from electric incentive-based programs have been included in the overall calculation. Note: Benefit/cost analysis is not calculated for rate/load management programs.

For 2010/11, the combined overall TRC benefit/cost ratio including support costs was 2.6, which is above the planned target. Results indicate that all evaluated Power Smart programs, with the exception of the Commercial

Network Energy Management Program, were costeffective under the TRC test in 2010/11.

### 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 the Power Smart programs.

Program costs are costs attributed to a specific program and include program administration costs and incentive costs, while 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 the programs cumulative to 2010/11. The reported utility costs cumulative to 2010/11 are presented in nominal dollars

and detail actual accounting expenditures to 2010/11 for all Power Smart initiatives and activities.

**Exhibit 5.1**Summary of Utility Costs Cumulative to 2010/11

UTILITY COSTS	Cumulative
	millions of nominal dollars
TOTAL UTILITY COSTS	
Program Cost	313.9
Support Cost	63.8
	377.7
TOTAL UTILITY COSTS	377.7

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 31st, 2011, Manitoba Hydro had invested nearly \$378 million in Power Smart. The highest component of this expenditure was the program utility costs at \$314 million, which is 83% of the total expenditures cumulative to 2010/11.

### 5.2 Utility Costs by Program

Exhibits 5.2-A and B outline the costs to the utility for April 1st, 1989 and March 31st, 2011.

Power Smart programs implemented between

Exhibit 5.2 - A
Utility Costs for Support. Basic Information Services. Customer Service Initiatives & Standard

	Actual 2010\$	Cumulative nominal
	thous	ands of dollars
CUSTOMER SERVICE INITIATIVES		
Customer Service Initiatives & Standards Electric Cost	166	2,263
Customer Service Initiatives & Standards Natural Gas Cost	-320	2,422
	-153	4,685
BASIC INFORMATION SERVICES		
Basic Information Services Electric Cost	1,374	17,484
Basic Information Services Gas Cost	363	4,061
	1,737	21,546
Discontinued/Completed Basic Information Services		
Discontinued/Completed Basic Information Services Electric Cost	1	2,885
Discontinued/Completed Basic Information Services Gas Cost	-	20
CURRORT COSTS	1	2,905
SUPPORT COSTS		
Power Smart Communications		
Power Smart Communications Electric Cost	794	14,127
Power Smart Communications Natural Gas Cost	529	3,284
	1,323	17,410
Residential Retrofit		440
Residential Retrofit Electric Cost	52	419
Residential Retrofit Natural Gas Cost	96	676
	147	1,095
Retrofit Demonstrations		40
Retrofit Demonstrations Electric Cost	-	48
Retrofit Demonstrations Natural Gas Cost	-	80
	-	128
ntegrated Plan/Targets		
Integrated Plan/Targets Electric Cost	166	3,318
Integrated Plan/Targets Natural Gas Cost	111	653
	277	3,971
DSM Administration		
DSM Administration Electric Cost	220	3,640
DSM Administration Natural Gas Cost	146	899
	366	4,540
DSM Tracking System	0.0	
DSM Tracking System Electric Cost	80	455
DSM Tracking System Natural Gas Cost	53	76
	133	532
Commercial Audits		122
Commercial Audits Electric Cost	-	133
Commercial Audits Natural Gas Cost	1	48
	1	181
Energy Efficiency Screening Studies	2.4	45
Energy Efficiency Screening Studies Electric Cost	34	47
Energy Efficiency Screening Studies Gas Cost	34	43
Decree Course Decidence of	69	90
Power Smart Residential Support	52	0.1
Power Smart Residential Support Electric Cost	53	81
Power Smart Residential Support Gas Cost	79	202
Sustainabilities & Standards	132	202
Sustainabilities & Standards Sustainabilities & Standards Electric Cost	166	590
Sustainabilities & Standards Electric Cost Sustainabilities & Standards Natural Gas Cost	111	692
Sustamaonnies & Standards Natural Gus Cost		
Power Smart for Business	277	1,282
Power Smart for Business Power Smart for Business Electric Cost	159	1 416
Power Smart for Business Natural Gas Cost	158	1,416
1 Ower Smart for Dustriess Natural Gus Cost	158 317	2.081
Discontinued/Completed Support Costs	31/	2,081
Discontinued/Completed Support Costs		2 157
Discontinued/Completed Support Costs Electric Cost	-	3,157
Discontinued/Completed Support Costs Natural Gas Cost	-	2 157
Total Supposet Costs CSI de Standards Floatwis Cost	2 264	3,157
Total Support Costs, CSI & Standards Electric Cost Total Support Costs, CSI & Standards Gas Cost	3,264	50,064
TOTAL SUPPORT COSTS, CUSTOMER SERVICE INITIATIVES & STANDARDS	1,362 4,626	13,740 63,804
	4,020	02,804

**Exhibit 5.2 - B**Utility Cost of Programs

	Actual 2010\$	Cumulative nominal \$
	thousa	nds of dollars
EFFICIENCY PROGRAMS		
RESIDENTIAL		
Home Insulation		
Home Insulation Electric Cost	1,365	11,032
Home Insulation Natural Gas Cost	2,230	13,083
	3,595	24,115
New Home		
New Homes Electric Cost	210	4,613
New Homes Natural Gas Cost	108	592
	318	5,205
High Efficiency Furnace/Boiler (Natural Gas)	26	8,624
Compact Fluorescent Lighting	1,004	7,285
Energy Efficient Light Fixtures	243	1,323
Energy Efficient Appliances	12	5,550
Lower Income Energy Efficiency		2,222
First Nations	57	122
Lower Income Energy Efficiency Electric Cost	131	726
Lower Income Energy Efficiency Natural Gas Cost	791	1,936
	980	2,783
Water & Energy Saver		
Water & Energy Saver Electric Cost	457	613
Water & Energy Saver Gas Cost	686	726
	1,143	1,340
Refrigerator Retirement	80	233
Residential Exploratory Programs		
Residential Exploratory Programs Electric Cost	4	24
Residential Exploratory Programs Gas Cost	7	7
	11	31
Discontinued/Completed Residential Programs Costs		
Discontinued/Completed Residential Programs Electric Cost	-	3,033
Discontinued/Completed Residential Programs Gas Cost	-	334
	-	3,367
Total Residential Program Electric Cost	3,568	34,559
Total Residential Program Gas Cost	3,849	25,302
RESIDENTIAL EFFICIENCY PROGRAM SUBTOTAL	7,417	59,855

	Actual 2010\$	Cumulativ nominal \$
	thousan	ds of dollars
OMMERCIAL		
Commercial Custom Measures		
Commercial Custom Measures Electric Cost	230	2,449
Commercial Custom Measures Natural Gas Cost	154 384	385 2,834
Commercial Insulation		_,
Commercial Insulation Electric Cost	260	1,470
Commercial Insulation Natural Gas Cost	2,212	5,256
Commercial Windows	2,471	6,726
Commercial Windows Electric Cost	1,214	3,826
Commercial Windows Natural Gas Cost	1,000	2,812
Convert IP II of a Contribution	2,215	6,638
Commercial Parking Lot Controllers	529	6,152
Commercial Earth Power	298	3,931
Commercial HVAC	242	1.534
Commercial HVAC Electric Cost  Commercial HVAC Natural Gas Cost	313 1,227	1,534 5,959
Commercial rivac Natural Gas Cost	1,540	7,494
Commercial CO2 Sensors		
Commercial CO2 Sensors Electric Cost	2	4
Commercial CO2 Sensors Gas Cost	32	69
Internal Retrofit*	1 8/18	73
	1,848	28,030
Commercial Lighting	6,650	61,548
Agricultural Heat Pads	99	985
City of Winnipeg Power Smart Agreement	79	10,697
Commercial Refrigeration	170	1,308
Commercial Rinse & Save	_	02
Commercial Rinse & Save Electric Cost  Commercial Rinse & Save Natural Gas Cost	5 21	93 355
Commercial mine a save radial dis Cost	26	447
Commercial Building Optimization		
Commercial Building Optimization Electric Cost	36	367
Commercial Building Optimization Natural Gas Cost	205	1,100
Power Smart Energy Manager	241	1,467
Power Smart Energy Manager Electric Cost	65	346
Power Smart Energy Manager Natural Gas Cost	43	334
	109	679
Commercial New Buildings		
Commercial New Buildings Electric Cost	290	698
Commercial New Buildings Natural Gas Cost	193	509
Commoverial Clather Wachers		1,207
Commercial Clothes Washers Commercial Kitchen Appliances	64	321
Commercial Kitchen Appliances  Commercial Kitchen Appliances Electric Cost	36	216
Commercial Kitchen Appliances Lieutre Cost  Commercial Kitchen Appliances Natural Gas Cost	29	141
	65	357
Power Smart Shops		
Power Smart Shops Electric Cost	142	445
Power Smart Shops Natural Gas Cost	95	191
Commorcial Natwork Energy Management	237	636
Commercial Network Energy Management	83	173
Commercial Exploratory Programs		
Commercial Exploratory Programs Electric Cost Commercial Exploratory Programs Gas Cost	35	- 57
	35	57
Discontinued/Completed Commercial Programs		
Discontinued/Completed Commercial Programs Electric Cost	-	8,797
	-	-
Discontinued/Completed Commercial Programs Gas Cost		
	12.414	8,797
Discontinued/Completed Commercial Programs Gas Cost  Total Commercial Program Electric Cost  Total Commercial Program Gas Cost	- 12,414 5,245	8,/9/ 133,387 17,169

### Exhibit 5.2 - B (Continued)

**Utility Cost of Programs** 

	Actual 2010\$	Cumulative nominal \$
	thousand	ls of dollars
INDUSTRIAL		
Performance Optimization	2,768	25,982
Natural Gas Optimization	700	2,098
Emergency Preparedness	7	158
	3,475	28,237
Industrial Exploratory Programs		
Industrial Exploratory Programs Electric Cost	-	-
Industrial Exploratory Programs Gas Cost	-	-
	-	-
Discontinued/Completed Industrial Programs		
Discontinued/Completed Industrial Programs Electric Cost	-	2,708
Discontinued/Completed Industrial Programs Gas Cost	-	-
	-	2,708
Total Industrial Program Electric Cost	2,775	28,847
Total Industrial Program Gas Cost	700	2,098
INDUSTRIAL EFFICIENCY PROGRAM SUBTOTAL	3,475	30,945
EFFICIENCY PROGRAM COSTS		
Total Efficiency Program Electric Cost	18,757	196,793
Total Efficiency Program Gas Cost	9,794	44,569
EFFICIENCY PROGRAM SUBTOTAL	28,551	241,362
CUSTOMER SELF-GENERATION		
Bioenergy Optimization		
Bioenergy Optimization Electric Cost	1,605	8,131
Bioenergy Optimization Natural Gas Cost	-	112
	1,605	8,243
RATE/LOAD MANAGEMENT PROGRAMS	,	ŕ
Curtailable Rates	5,741	64,304
	5,741	64,304
TOTAL PROGRAM COSTS	5,7 11	0 1,50 1
Total Program Electric Cost	26,103	269,228
Total Program Gas Cost  Total Program Gas Cost	9,794	44,681
TOTAL PROGRAM COSTS	35,897	313,909
TOTAL FROMINING COSTS	33,037	213,707

Note: As of April 1st, 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 Electric & Natural Gas Utility Costs

	Actual 2010\$	Cumulative nominal \$		
	millions of dollars			
ELECTRIC				
Program Cost	26.1	269.2		
Support Cost	3.3	50.1		
	29.4	319.3		
NATURAL GAS				
Program Cost	9.8	44.7		
Support Cost	1.4	13.7		
	11.2	58.4		
TOTAL UTILITY COSTS (ELECTRIC + NATURAL GAS)	40.5	377.7		

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

Total Power Smart electric initiatives represent 73% of total Power Smart Expenditures in 2010/11 and 85% 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, lower 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 Fund expenditures.

**Exhibit 5.4**Summary of Affordable Energy Fund Expenditures

	2006/07	2007/08	2008/09	2009/10	2010/11	Cumulative
	thousands of nominal dollars					
Lower Income Expenditures						
Lower Income/Community Based Initiative	256	219	893	1,672	2,666	5,706
Community Support and Outreach	-	-	35	130	133	299
	256	219	928	1,802	2,799	6,004
Support Expenditures						
Geothermal Support	619	270	92	104	108	1,193
Oil and Propane Heated Residential Homes	-	75	85	31	32	222
Special Projects						
Residential Energy Assessment Service	-	61	241	85	119	506
Oil and Propane Furnace Replacement	-	-	6	36	42	84
Solar Water Heating	-	-	89	119	56	264
Power Smart Residential Loan	-	-		130	312	442
	619	406	513	506	669	2,712
Community Energy Development		-		750	-	750
TOTAL EXPENDITURES	875	625	1,441	3,058	3,468	9,466

### 5.5 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 lower income customers.

In 2010/11 alone, customers installed 445 furnaces and

16 boilers through the Furnace Replacement Program.

Cumulatively, 1,233 furnaces and 30 boilers have been installed to the end of 2010/11 as a result of the program.

Exhibit 5.5 outlines the Lower Income Furnace Replacement Expenditures.

**Exhibit 5.5**Summary of Lower Income Furnace Replacement Budget Expenditures

	2008/09	2009/10	2010/11	Cumulative			
		thousands of nominal dollars					
Natural Gas Furnace Replacement	264	815	1,312	2,391			
TOTAL EXPENDITURES	264	815	1,312	2,391			

### Appendix A

### Sources of Evaluation & Planning Estimates

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

### **Evaluation Estimate Sources**

### **Impact Evaluation Reports:**

Impact evaluation reports are prepared for the 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.

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

### **Planning Estimate Sources**

2010/11 Electric Planning Estimates:

The 2010/11 electric planning estimates were taken from the 2010 Power Smart Plan.

In all cases, the 2010 Power Smart Plan estimates were used regardless of delays in program launches or modifications. Consistent usage of the same plan helps reduce the probability of errors and provides a verifiable public target to compare against. Utilizing the same source information also helps ensure that a realistic and objective evaluation of the programs/portfolio is conducted, and improves the reliability and verifiability of the Power Smart Annual Review.

### Life-to-Date Expenditure Report:

The utility costs cumulative to 2010/11 are tracked annually from the Annual DSM Expenditure Report.

### **Engineering Estimates:**

Engineering expertise is used to quantify usage and savings data. Computer simulation and modeling may also be used.

### Sales & Market Data:

In-depth market knowledge, product specifications and ratings, sales and replacement data, etc. are used to determine market acceptance and uptake.

### 2010/11 Natural Gas Planning Estimates:

The 2010/11 natural gas planning estimates were taken from the 2010/11 Power Smart Plan.

In all cases the 2010/11 Power Smart Plan estimates were used regardless of delays in program launches and modifications. Consistent usage of the same plan helps reduce the probability of errors and provides a verifiable public target to compare against. Utilizing the same source information also helps ensure that a realistic and objective evaluation of the programs/portfolio is conducted, and improves the reliability and verifiability of the Power Smart Annual Review.

### 2024/25 Planning Estimates:

The 2024/25 electric planning targets for energy and demand savings are from the 2010 Power Smart Plan report which includes forecasts for 2010/11 through to 2024/25. The 1992/93 through to 2009/10 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 2024/25 natural gas planning targets are from the approved DSM option in the 2010 Power Smart Plan report which includes forecasts for 2010/11 through to 2024/25. Natural gas long range planning targets did not exist prior to 2005/06.

The 2010/11 to 2024/25 planning estimates for utility costs are included in the Integrated Financial Forecast report current during the evaluation year (IFF10-1). The planning estimates for the years 1990/91 through 2009/10 are included in the following Integrated Financial Forecast reports: 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, IFF04-1, IFF05-1, IFF06-1, IFF07-1, IFF08-1 and IFF09-1. The 2010/11 planning estimates are from the 2010 Power Smart Plan report.

### Appendix B

### Explanation of Benefit/Cost Ratios Used in DSM Economic Tests

### **Total Resource Cost (TRC) Test**

The Total Resource Cost (TRC) test is used to assess the benefits of an energy efficiency program irrespective of who realizes the benefits and who pays the costs. Any economic transfers between Manitoba Hydro and the participating customer are excluded from the calculation.

The TRC is calculated based on the following formula:

TRC	=	PV (Marginal Benefit)						
INC		PV (Total Program Administration + Incremental Product Cost)						

### Where:

- For electricity, the marginal benefit includes
  the revenue realized by Manitoba Hydro from
  conserved electricity being sold in the export
  market, the avoided cost of new infrastructure (i.e.
  electric transmission facilities) and measurable nonenergy benefits (i.e. water savings).
- For natural gas, the marginal benefit includes Manitoba Hydro's avoided cost of purchasing natural gas, avoided transportation costs, the value of reduced greenhouse gas emissions and measurable non-energy benefits (i.e. water savings).
- Total program administration costs include the administrative costs involved in program planning, design, marketing, implementation and evaluation.
   It includes all costs associated with offering the

Power Smart program except for customer incentive costs.

- o Note: The City of Winnipeg Power Smart
  Agreement evaluation treated commitment
  payments paid by Manitoba Hydro as
  administration costs. Projected future
  commitment payment cash inflows to
  Manitoba Hydro were netted against
  commitment payments made to the
  City of Winnipeg.
- Incremental product costs include the total incremental costs associated with implementing a Power Smart measure. It is the difference in costs between the energy efficient technology and the standard technology that would have beeninstalled in the absence of the

### Rate Impact Measure (RIM) Test

The Rate Impact Measure (RIM) test is used to provide an indication of the long term impact of an energy efficiency program on energy rates. The test indicates the cost-effectiveness of a program from the ratepayer's perspective. All program-related savings and costs incurred by the utility, including revenue loss and incentive payments, are taken into account.

The RIM is calculated based on the following formula:

RIM = PV (Utility Marginal Benefit)
PV (Revenue Loss + Utility Program Administration Costs + 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 new infrastructure (i.e. electric transmission facilities).
- For natural gas, the utility marginal benefit includes
   Manitoba Hydro's avoided cost of purchasing
   natural gas, avoided transportation costs and the
   value of reduced greenhouse gas emissions.
- Revenue loss includes Manitoba Hydro's lost revenue associated with the participants' reduced energy consumption (i.e. customer bill reductions).

- Utility program administration costs include the costs to Manitoba Hydro associated with program planning, design, marketing, implementation and evaluation. It includes all costs associated with offering the Power Smart program except for customer incentive costs.
- Incentives include the funds transferred from Manitoba Hydro to the participant associated with implementing the Power Smart measure.

### **Levelized Utility Cost (LUC)**

The Levelized Utility Cost (LUC) is used to provide an economic cost value for the energy saved through an energy efficiency program. The LUC provides the total cost of the conserved energy on a per unit basis levelized over a fixed time period. The cost value allows for a

comparison to other supply options and other DSM programs occurring over different time frames.

The LUC is calculated based on the following formula:

### Where:

- Utility program administration costs include the costs to Manitoba Hydro associated with program planning, design, marketing, implementation and evaluation. It includes all costs associated with offering the Power Smart program except for customer incentive costs.
- Incentives include the funds transferred from Manitoba Hydro to the participant associated with implementing the Power Smart measure.

 Energy includes the annual energy savings associated with the energy efficiency measure.

## Appendix C Total Power Smart Participation

1985   1992	Residential CSI Discontinue d'Complete d'Programs Residential CE to Toxon time d'Complete d'Programs Residential CSI Discontinued/Complete d'Programs RESIDENTIAL CSI TOTAL	Residential Incentive-Based Programs New Home Forgum  New Home forgum  The Program of Program  Compact Home Program  Compact Patient Light First new Program  Wat & Kenny Share Program  Wat & Kenny Share Program  Residential Incentive Forgum  Residential Incentive Forgum  Residential Incentive Forgum	Residential Incentive Based Discontinued/Completed Programs Programmable Thermost at Program Coulton Timer Hermost at Program Religious Counter Water Hand Water Storings Measures of the You Worny Plan' Energy Efficiency Function Water Hand Storings Measures of the You Worny Plan' Second LED Program From Efficiency Function Storings American Heigh Efficiency Function Science (American Programs Heigh Efficiency Function Florings American Programs Heigh Efficiency Function Florings American Programs Heigh Efficiency Function Florings American Florings Heigh Efficiency Function Florings Heigh Efficiency Florings Heigh Efficiency Heigh Efficie	Residential Incentive-Based TOTAL	Residential TOTAL Commercial Commercial CS Religious Saldings Instante Power Struct Microsofton Teath Survey Commercial CS SUSFORDAL	Commercial CSI Discontinued/Completed Programs Power Smart Energy Manager Commercial CSI Discontinued/Completed Programs	Commercial CSI TOTAL
1991/922   1992/949   1994/949   1994/949   1996/94   1996/949	0 0	0	6,169	6169	6,169	0	0
99293 199494 199495 1995/96 1996/99 1995/01 200101 200102 200103 200304 2005/05 2005/0	0 0	0	8,954	8,954	8,954	0	0
4,873 3,386 4,211 5,114 6,325 7,722 7,477 7,391 6,453 5,202 5,509 5,001 15,30	0 0	٥	8,134 474 8,608	8)608	809'8	0	0
4473     3,346     4,211     5,114     6,335     7,222     7,47     7,391     6,453     5,202       570     532     438     3,78     2,34     455     4,47     7,391     6,453     5,202       5,44     3,916     4,49     5,49     5,49     5,49     5,49     5,49     5,69     6,59     7,57     7,88     7,60     8,523       2,71     5,97     5,96     5,70     6,99     5,01     31,77     7,09     4,50     4,60       12     19     32     6,28     5,01     31,77     7,09     4,60     4,60     4,60     3,74     4,60     3,74     4,60     4,60     3,74     4,60     3,74     4,60     3,70     4,60     3,70     4,60     3,70     4,60     4,60     3,70     4,60     3,70     4,60     4,60     4,60     3,70     5,90     5,90     5,70     5,90     5,90     4,60     4,60     4,60     5,70     5,90     5,90     5,90     5,90     5,90     5,90     5,90     6,70     1,90     6,00     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0	0 0	٥	4,812	4,812	4,812	0	0
4873 3,286 4,211 5,114 6,525 7,222 7,427 7,391 6,453 5,522 7,427 7,391 6,453 5,522 7,427 7,391 6,453 5,522 7,427 7,391 6,453 7,522 7,427 7,391 6,453 5,523 7,441 3,591 6,459 5,459 5,459 7,477 7,89 7,89 7,89 7,89 7,89 7,89 7,89 7,	0 0	0	4,160	4,160	0 0	0	0
4873 3,386 4,211 5,114 6,325 7,222 7,427 7,391 6,453 5,262 5,742 7,742 7,391 6,453 5,262 5,742 7,742 7,391 6,453 5,262 5,742 7,742 7,391 6,453 5,743 5,743 7,742 7,742 7,742 7,742 7,743 7,743 7,743 7,742 7,743 7,744 7,743 7,743 7,743 7,744 7,743 7,744 7,743 7,744 7	0 0	0		0	0	0	0
4873 3.386 4,211 5,114 6,235 7,222 7,427 7,391 6,453 5,262 5,702 5,702 7,702 7,702 7,703 6,453 5,262 5,703 5	0 0	٥	٥		0	0	0
4,873 3,386 4,211 5,114 6,535 7,722 7,477 7,391 6,453 5,502 5,702 5,704 6,453 5,702 5,704 6,453 5,702 5,704 6,453 5,702 5,704 6,453 5,703 5,413 5,918 4,549 5,442 6,559 7,707 7,48 7,70 6,606 5,703 5,	0 0	0	201	201	0 0	0	0
44873 3.386 4.211 5.114 6.335 7.222 7.427 7.381 6.453 5.262 5.562	0 0	0	807	709	0	0	0
April   Apri	0 0	0	28 8	189	0	0	0
4873 3386 4,211 5,114 6,235 7,222 7,477 7,381 6,453 5,522 5,447 5,114 1,1064 4,468 5,289 6,299 5,001 3,126 4,291 1,126 4,29 1,125 1,13 1,14 6,235 1,14 1,1064 4,106 1,12 1,12 1,12 1,12 1,12 1,12 1,12 1,1	0 0	۰	0	0	0	0	0
AULULIS   Aulu	0 0	0	0	0	0	8 81	18
4 4211 5,114 6,235 7,222 7,427 7,391 6,453 5,262 5,522 5,524	0 6,261 7,5	0	0		6,261 7.6 14 30 44	0	44
Silid	0 0 0/7,033 9,897	0	0		7,033 9,897 6 25 5 6 11 31	20	31 3
4 6,335 7,222 7,427 7,391 6,453 5,262 2,562 2,563 2,56	150 0 150 97 12,650	36 459 21,663 0 22,158	0		8,48	0	31 18
7,222 7,427 7,391 6,453 5,502 455 421 251 153 763 5,001 312 425 542 612 312 425 450 3,428 613 32 42 114 66 610 39 20 114 16 11,047 13,522 14,389 9,491	0 475 0 475 0 15,427	6 126 99 1,419 33 26,623 8 28,168	1,900		08 46,723 13 34 5 4 18 38	0	18 38
7 7.391 6453 5.302 2 51 153 763 4 6606 5.253 2 45 450 460 1 2 7 7009 3.238 2 45 450 600 1 2 7 114 60 2 1 192 0 0 0 0 0 0 0 1 13.532 14389 9,491	63 63 14,164	217 5,211 17,296 1,047	4,948 10,880 10,374 7,028 33,230		71,165	0	89
1 6453 5,202 1 153 5,202 2 66606 5,525 5 7,009 3,428 5 459 460 7 114 60 1 192 0 0 0 0 0 1 18 18 2 14389 9,491	0 0	204 4,551 28,933 2,380 139 36,207	2,230 8,144 15,436 6,630 32,440	68,647	80,594 40 6	0	46
5,502 3 5,502 6 3,525 9 3,525 9 4,60 18 60 18 0 9 9,491	0 0	220 4,578 73,228 2,691 0 143 80,860	4,956 13,277 7,285 25,528	106,388	119,920	0	23
262 263 2525 428 460 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 14,389	205 5,093 99,817 1,126 0 716	0 0 0 2,451 5,190 7,641	114,598	128,987	0	10
	0 0 9,491	230 3,656 75,821 3,351 38,448 2,056	0 0	123,562	133,053	0	7
57,664 3,595 61,259 41,403 5,391 63 1,141 3,956 854 854 854	0 688 688	1,238 24,967 343,381 10,595 38,448 36,54 421,683	7,178 32,229 474 1,591 25,880 41,538 27,371	557,944	672/35 228 68 296	38	334

Power Smart Participants- Annual Increments*†	1989/90 19	1990/91	1991/92	1992/93 19	1993/94 19	194/95 195	95/96 199	76/97 1997	7/98 1998	1995/96 1996/97 1997/98 1998/99 1998/90 2000/01 2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2009/10	10 2000/01	2001/02	2002/03	2003/04	2004/05 2	005/06 20	06/07 200	30/08 2008	8/09 2009/	10 2010/	2010/11 Cumulative	ulative
Commercial Incentive-Based Programs Commercial Custom Measures**																	4	ю		13	80	29
Building Ervelope																	172	179		371	453	1,419
Commercial HVAC				٥	ij.		90	2	9						126	904	\$ 8	21.		) ()	60 02 00 02	1338
Commercial Lighting Program				129	634	556	488	564	235	384	178 122	2 152	184 5	373	742	87 T	8 86	1,116	1,292	1111	8 8	10,821
Building Optimization Program																				2	4	7
Commercial Earth Power Program																	88 5	15	= 1	23	19	96
City of Winniped Agreement iv													4	50	=	274	9 6	, _		4	3 2	317
Power Smart Energy Manager Program																			0	0	0	0
Commercial Kitchen Appliances																			21	27	91	2
Commercial Clothes Washers New Buildings Program																			ъ о	9 0	° 0	907
Network Energy Manager Program																			0	9	2	80
Power Smart Shops Commercial Incentive-Based Programs SUBTOTAL	0	0	0	137	649	22.2	518	288	284	444 2	215 174	4 194	243	409	888	1,570	1,382	1,491	0 1,796	330	378	15,570
Commercial Incentive-Based Discontinued/Completed Programs																						
Sentinel Lighting Conversion			99	63	0/																	199
Roadway Lighting Commercial Construction & Bancocation <sup>M</sup>				E,	E	22		44	17	9	2	43	74	88	102	333						199
Commercial construction a removation					129	8	22	₽	Ŧ						701	25						282
Agricultural Demand Controller					24	01																34
infrated Pleat Lamps Spray Valves					910'1												959	202	224	26	0	1,179
Parking Lot Controllers Aoricultural Heat Park										8	22	7	41	01	12	0	253	296	89	137	168	943
Commercial Incentive-Based Discontinued/Completed Programs SUBTOTAL	0	0	99	136	1,310	191	57	46	41		ľ				102	232	914	204	317	244	175	4,661
IATOT bood outine all discussion	<	<		02.0	1000	002	34.5	200	200						000	1 000	2000	1001		101	0770	100.00
Commercial incentive-based I OTAL	0	0	9	273	1,959	738	575	334	325	484	269 216	6 250	319	497	0 86	1,802	2,2%	1,995	2,113	2,481	2,249	20,231
Commercial TOTAL	0	0	99	273	1,959	738	575	334	325	484 2	269 234	4 294	350	528	1,008	1,840	2,364	2,041	2,136	2,491	2,256	20,565
Industrial Industrial Incentive-Based Programs Performance Ostrinztion Procenti					m	-	4	4	4	60	2	7	33	28	4	4	4	8	28	26	2	155
Natural Gas Optimization Program																		10	10	14	14	48
Industrial Incentive-Based Programs	0	0	0	0	3	-	4	4	4	80	2	7 15	22	28	44	46	#	26	94	111	98	599
Industrial Incentive-Based Discontinued/Completed Programs High Efficiency Motor			24	157	199	228	181	178	191													1,158
Industrial Incentive-Based Discontinued/Completed Programs	0	0	24	157	199	228	181	178	161	0	0	0	0 0	0	0	0	0	0	0	0	0	1,158
Customer Self Generation Programs Broneiny Optimization Program																	-	-	-	-	-	ιn
Customer Self Generation Programs	0	0	0	0	0	0	0	0	0	0	0	0 0	0 0	0	0	0	1	-	1	1	1	5
Rate Load Management Programs Curtalable Pates											2	2 2	3	4	4	4	4	4	4	4	3	5
Rate/Load Management Programs	0	0	0	0	0	0	0	0	0	0	2	2 2	2 3	4	4	4	4	4	4	4	3	2
Industrial TOTAL	0	0	24	157	202	229	185	182	195	89	4	71 6	25	32	48	88	49	18	66	116	06	1,802
CSI PROGRAMS ACTIVE & DISCONTINUED/COMPLETED SUBTOTAL	0	0	0	0	0	0	0	0	0	0	0	18 6,305	7,064	9,928	12,668	15,465	14,232	11,993	13,555 1-	14,399	9,498	115,125
INCENTIVE PROGRAMS ACTIVE & DISCONTINUED/COMPLETED SUBTOTAL	6,169	8,954	8,697	5,242	6,321	296	760	717	1,229	1,173	273 225	5 267	344	529	23,196	33,148	59,346	10,723	108,600	117,195	125,901	579,987
ALL PROGRAMS ACTIVE & DISCONTINUED/COMPLETED TOTAL	691'9	8,954	8,697	5,242	6,321	296	760	717	1,229	1,173 2	273 243	3 6,572	7,408	10,457	35,864	48,613	73,578	82,716 12	122,155 131	131,594 13	135,399	695,102

<sup>\*</sup>Participation is measured by completed projects and excludes free rides, free drivers and market transformation.

\*Customers may participate in more than one Power Snart Program.

\*Standing in Abords energy assessments prior to 2007/08 was known as the EmerGuide for Houses program.

\*Standing in 2004/05 the R2000 Program was squeed into the Power Snart West Home Program.

\*Amounal participation is measured by schools. Schools that joined the program in 2004/01 participated for 3 years.

\*Amounal participation represents the number of customers who participate each year, since most customers participate each year. Since most customers participate was after year, the cumulative number represents the atual number of customers who have participated to date.

\*\*Fromer's who wows have the mumber of customers with or necessarily correspond with the total participation to date. This is a result of the Curtaliable Rates Program participation (see footnote v).

\*\*Note: Participation in the CFL Program is defined as 1 household.

### Appendix D

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

### **Residential Programs**

### Outdoor Timer

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

### Refrigerator/Freezer Buy-Back Pilot

This pilot program encouraged the removal of older, inefficient second refrigerators and freezers in existing homes.

### Residential Showerhead Pilot

This pilot program encouraged the installation of energy efficient showerheads in existing homes.

### Energy Efficient Water Saving Measures Component of the "No Worry Plan".

This program encouraged participants 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 new water tanks.

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

This program encouraged residential customers with electric hot water heaters to purchase, finance or lease the most energy efficient water heater available when replacing or installing new electric water heaters.

### Seasonal LED Lighting

This program encouraged customers to replace their existing incandescent seasonal light strings with energy efficient LED light strings.

### Programmable Thermostat Pilot

This pilot program encouraged customers to replace non-programmable thermostats with ENERGY STAR programmable models.

### High Efficiency Furnace/Boiler

This program provided financial incentives to residential customers who replaced their existing natural gas furnaces or boilers with ENERGY STAR-qualified high efficiency natural gas furnaces or boilers.

Residential Appliances

This program provided financial incentives to residential customers how purchased ENERGY STAR-qualified clothes washers and chest freezers.

### Residential Appliances

This program provided financial incentives to residential customers how purchased ENERGY STAR-qualified clothes washers and chest freezers.

### **Commercial Programs**

### Roadway Lighting

This program converted existing incandescent and mercury vapour street lighting to the more energy efficient high pressure sodium variety.

### Sentinel Lighting Conversion

This program encouraged the conversion of yard lighting and sentinel lighting from mercury vapour and incandescent lighting to the more energy efficient high pressure sodium variety.

### Commercial Showerhead Pilot

This pilot program encouraged commercial operations to retrofit shower facilities with energy efficient showerheads.

### Infrared Heat Lamps

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

### Agricultural Demand Controller

This program encouraged large agricultural operations to install demand controllers to reduce peak demand consumption.

### Livestock Waterer

This program encouraged dairy and cattle operations to install energy efficient waterers to reduce energy and demand consumption.

### Commercial Construction – Air Barrier Component

This program encouraged commercial customers to install greater efficiency air barriers when retrofitting their building's envelope.

### Commercial Construction – Air Conditioning Component

This program encouraged commercial customers to replace their existing air conditioning system with a more energy efficient system.

### Commercial Parking Lot Controllers

This program encouraged customers to implement parking lot controller technology to effectively manage electricity usage in their parking lots.

### Agricultural Heat Pads

This program encouraged owners of swine barns to realize energy and demand savings by using energy efficient heat pads instead of traditional heat lamps in hog farrowing crates.

### Commercial Rinse & Save

The program offered operators of restaurants or food services businesses the free installation of a new low-flow pre-rinse spray valve. The old spray valves were recycled by Manitoba Hydro to ensure they did not re-enter the market.

### **Industrial Programs**

### High Efficiency Motor

This program encouraged the installation of high efficiency motors in industrial and commercial operations.

### Appendix E

### Curtailable Rates Program Information & Methodology

- The Curtailable 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.
- 2010/11 reported demand savings for the Curtailable Rates Program are based on a methodology where curtailments throughout the year are analyzed to determine the amount of curtailable 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.
- Curtailable Rates Program targets are from the current approved 2010 Power Smart Plan.
- Curtailable 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 Curtailable 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:

- o Re-establish contingency reserves;
- Maintain planning reserve obligations
- o 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 2010/11 Power Smart Annual Review, the Curtailable Rates Program has been treated as an incentive-based program. This is consistent with treatment in the current approved 2010 Power Smart Plan. As a rate/load management program, certain economic indicators such as TRC and RIM are not reported.

### Appendix F

## GW.h Energy Savings -Incentive- Based Programs

2010/11 Annual Energy Savings - GW.h

31.1 44.9 0.0 N/A 91.8 0.0 31.1 0.0 0.0 0.0 0.0 0.0 95.2 95.2 0.0 0.0 N/A 215.7 28.3 0.0 0.0 0.0 0.0 0.0 0.0 13.9 13.9 13.9 13.9 13.9 13.9 13.9 39.4 28.3 0.0 0.0 0.0 0.0 81.5 88.1 28.3 0.0 0.0 0.0 0.0 81.9 88.6 28.3 0.0 28.3 28.3 0.0 0.0 0.0 28.3 **Electric Incentive Based Programs** 194 2.56 2.76 2.74 2 283 0.0 0.0 0.0 0.0 0.0 0.0 41.9 84.7 19.4 28.3 28.3 28.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 28.3 000 000 000 000 000 000 000 000 84.9 28.3 0.0 0.0 0.0 0.0 0.0 28.3 28.3 28.3 0.0 0.0 0.0 0.0 0.0 CUSTOMER SELF-GENERATION PROGRAMS
Bloenergy Optimization Program COMMERCIAL TOTAL RESIDENTIAL TOTAL INDUSTRIAL TOTAL DISCONTINUED COMPLETED
Parking Lat Comoless
Agricultural Heat Pads
Spray Vales
Commercial Showethead
Infrinced Heat Lamp
Livescot Wate eer
Commercial And Banler
Commercial Art Banler
Commercial Art Banler
Commercial Art Conditioning
Alcondiguial Commercial
Accommercial
Accommencial
Accommercial
Accommercial
Accommercial
Accommercial
Accommercial
Accommercial
Accommercial
Accommercial
Accommencial
Accommercial
Accommer RATE/LOAD MANAGEMENT PROGRAMS
Curtailable Rates Commercial Refrigeration
Power Synats Tisopos
Commercial Belding Optimization
Revoke Energy Manages
Commercial Belding Optimization
Network Energy Manages
Commercial Richer Appliances
Commercial Richer Appliances
Commercial Richer Appliances
Hower Belding Optimization
Power Synat Energy Manager
Power Smart Energy Manager Appliances
Seasonal LID Lipting
Outdoor Timer
Residential Hot Water
Water Hear Rental
Themostat
Retrofit Demostation
Refrigeator Buy-back
High Efficiency Furnace & Böller DISCONTINUED/COMPLETED DISCONTINUED/COMPLETED GW.h IMPACTS (at meter) GW.h IMPACTS (at generation) RESIDENTIAL
Compact Fluorescent Lighting
Home Insulation
Water & Energy Saver EFFICIENCY PROGRAMS SUBTOTAL Energy Efficient Light Fixtures New Homes Refrigerator Retirement COMMERCIAL Commercial Lighting Commercial Insulation\* Internal Retrofit Commercial Windows\* Commercial Windows\* Commercial Earth Power HVAC-Chillers NDUSTRIAL
Performance Optimization
Emergency Preparedness

Note: Subtotals may not be exact due to rounding. Programs comprise the Commercial Building Envelope Program.

SOURCE: To populate this 2010-11 chart, take these figures from the Access report for In-year Energy and Costs

### 100

									Persi	isting Ener	Persisting Energy Savings - GW.h Electric Incentive Based Programs	GW.h grams									Ą	eneration A	t Generation
DECIDENTIAL	1989/90 19	1990/91 199	1991/92 199	1992/93 1993/94	3/94 1994/95	95 1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05 2	2005/06 20	2006/07 2	2007/08	60/8007	2009/10 20	11/010	010/11	2024/25
RESIDENTIAL  Compact Fluorescent Lighting							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8		20.6	28.1	49.9		70.4	80.3	0.0
New Homes							0.0	0.0	0.0	0.0	0.0	0.0	0.0	000	0.1		1.9	2.9	3.7		4.3	4.9	4.9
Energy Efficient Light Fixtures Low Income							0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0		0.0	0.6	1.1		2.6	3.0	7 81
Refrigerator Retirement Water & Energy Saver	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6		33.4	49.0	78.9		107.7	122.8	40.2
DISCONTINUED/COMPLETED Outdoor Timer							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	41.6	41.6
Appliances Sesconal I FD Lighting							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		3.6	7.6	12.1		12.7	14.5	1.2
High Efficiency Furnace & Boiler							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		13	1.4	4.1
Residential Hot Water Water Heater Rental							0.4	0.5	0.0	9.0	0.6	9.0	970	9.0	9.0		9.0	9.0	9.0		9.0	0.7	0.5
Thermostat							00	000	000	00 8	000	00	000	00	0:0		0.2	0.4	0.4		0.4	0.4	6.0
Retroit/Demonstration Refrigerator Buy-back	00	0.0	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.00	0.0	0.0	0.0	0.0	0.0	0.0
	2.0						35.1	37.2	37.5	37.6	37.6	37.6	37.6	37.6	37.6		42.7	47.8	53.1		55.2	62.9	49.4
RESIDENTIAL TOTAL	2.0	8.9	15.7 2	21.0 25.1	5.1 29.6	31.3	35.1	37.2	37.5	37.6	37.6	37.6	37.6	37.6	47.5	57.9	76.1	6.96	132.0	170.2	162.9	185.7	89.7
COMMERCIAL							613	7.27	2	9	0.00	001	9 301	116.3	137.6		175.0	0 201	0010		720.4	0 0.22	7.626
Commercial Earth Power							0.3	5 = 3	1.8	2.9	3.2	4.0	5.1	7.8	8.8		15.3	18.6	20.2		23.6	26.9	26.9
Internal Hetrofit Custom							3.8	0.4	2.6	10.0	5.9 10.8	11.7	6.9 12.2	9.4 12.8	12.2		17.0	18.0	15.9		21.5	24.5 19.8	18.7
City of Winnipeg Agreement							0.0	0.0	0.0	0.0	0.0	0.0	0.1	9.0	1.2		9.6	10.1	10.3		10.8	12.3	8.6
Commercial Windows* Commercial Insulation*							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		3.9 0.6	1.9	4.1		6.6	8.3 7.5	7.5
Commercial Refrigeration HVAC - Chillers							00 0	00 0	0.0	0 0	00 0	0.0	0'0	0.0	0.0		1.2	3.0	4.3		5.5	6.3	5.9
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	0.5		9.0	0.7	0.0
Commercial Kitchen Appliances 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		0.5	0.5	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		0.3	0.3	0.0
HVAC - CO2 Sensors	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Buildings 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
DISCONTINUED/COMPLETED							65.8	73.6	95.3	109.7	115.6	123.1	131.1	148.5	172.2		240.7	269.7	304.3		339.1	386.6	378.1
Parking Lot Controllers						0.0	0.8	1.6	3.7	4.1	4.4	5.9	6.8	8.8	11.5		27.9	30.5	32.4		34.9	39.8	31.6
Agricultural Heat Pads							0.0	0.0	3.5	5.5	6.7	9.2	11.6	12.9	15.4		17.0	21.8	24.3		25.4	29.0	183
Sentinel Lighting Spray Valves							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.9	2.9	4.8		5.2	5.9	0.0
Infrared Heat Lamp Commercial Showerhead							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	1.6
Commercial Air Barrier							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	0.9	6:0
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	0.3	0.4	0.3
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
COMMERCIAL TOTAL	00						109.6	1183	145.5	162.5	170.0	181.7	193.2	214.0	243.1		331.5	368.9	409.8		448.6	511.4	477.7
INDUSTRIAL																							
Performance Optimization Emergency Preparedness	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		249.3	276.4	294.9		319.6	354.8 0.0	268.6
DISCONTINUED/COMPLETED							35.1	43.5	85.9	107.7	110.8	142.9	170.5	181.5	207.6		249.3	276.4	294.9		319.6	354.8	268.6
Retrofit/Demonstration GSL High Efficiency Motors						32.7	32.7	32.7	33.1	33.1	33.1	33.1	33.1	33.1	33.1		33.1	33.0	33.0		33.0	36.3	36.3
Industrial (Basic) Efficient Motors (QMR)	0.00	000	000	0.0 0.0	0.0		000	000	0.0	0.00	0.00	0.0	00 00	00 00	0.00	0.0	0.00	0.0	0.00	0.0	0.0	0.0	0.0
	0.0						2000	7**6	0,40	0.4.0	0,40	0,40	0.4.0	0.40	04.0		0.4.0	04:0	C:+C		04.5	2,50	59.9
INDUSTRIAL TOTAL	0:0	0.0	0.4	4.9 8.3	.3 22.4	53.2	85.7	7.79	140.4	162.3	165.4	197.5	225.1	236.0	262.2	293.1	303.9	330.9	349.3	374.1	374.1	414.7	328.5
EFFICIENCY PROGRAMS SUBTOTAL	5.0	8.9 2	27.4 5	52.3 87.5	7.5 133.3	3 185.6	230.5	253.2	323.5	362.4	373.0	416.8	455.9	487.6	552.7	637.4	711.6	796.6	891.1	992.9	985.6	1111.8	895.9
CUSTOMER SELF-GENERATION PROGRAMS Bioeneray Optimization Program							00	00	00	00	00	00	0.0	00	0.0		120.1	84.2	94.0		00	0.0	00
RATE/I OAD MANAGEMENT PROGRAMS	0.0	0.0	0.0	0.0 0.0	0'0 0'	0.0	0.0	0.0	0:0	0.0	0:0	0.0	0:0	0.0	0:0		120.1	84.2	94.0		0.0	0.0	0:0
Curtailable Rates	0.0	0.0	0.0	0.0 0.0	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GW.h IMPACTS (at meter)							230.5	253.2	323.5	362.4	373.0	416.8	455.9	487.6	552.7		831.6	880.8	985.1		985.6	N/A	N/A
GW.h IMPACTS (at generation)	5.7	10.2	31.2 5	59.4 99.4	151.1	1 209.5	259.3	284.7	363.1	406.6	418.6	467.2	510.7	546.5	619.6	726.2	931.1	987.5	1105.3	1205.1	108.6	1250.8	1008.1

SOURCE: This sheet is formula driven and links to the TOTAL GW.h' sheet minus the 2010-11 sheet.

Note: Subtotals may not be exact due to rounding.

ر. آ	ams
٦	Progra
Savings	Based
Energy	centive
_	Incen
Persisting	lectric

											ElectricIn	centive B	ic Incentive Based Programs	ams													
DECIDENTIAL	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22 2	022/23 2v	2023/24 202	24/25 20.	2025/26 2026	6/27 2027	7/28 2028/	729 2029/30	50	2	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39
Residential  Compact Floorescent Lighting Home Insulation New Homes Flooregy Efficient Light Fixtures Low Income Reflection for Reflectment Water & Rinany Sawer Water & Rinany Sawer	65.2 28.4 4.3 2.6 2.0 0.0	57.7 28.4 4.3 2.6 2.0 0.0	35.9 28.4 4.3 2.6 1.9 0.0	28.4 2.6 2.6 1.8 0.0	28.4 2.6 2.6 1.8 0.0	0.0 28.4 4.3 2.6 1.8	0.0 28.4 4.3 1.2 1.8 0.0	0.0 28.4 1.2 1.8 0.0	0.0 28.4 4.3 1.2 0.0	0.0 28.4 4.3 1.2 1.8	0.0 28.4 4.3 1.2 1.8 0.0	0.0 28.4 4.3 1.2 0.0	284 284 43 12 112 116	28.4 2 2 28.4 1.0 11.0 11.6 11.6 11.6 11.6 11.6 11.6	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 28.4 4.3 0.0 1.6	0.0 28.4 4.3 0.0 0.0 0.0	0.0 28.4 4.3 0.0 0.0 0.0	0.0 2.8.4 4.3 0.0 1.6 0.0	0.0 28.4 4.3 0.0 0.0 0.0	26.7 26.7 4.2 0.0 0.0	242 242 3.6 0.0 0.0 0.0	00 24 00 10 00 00 00	00 11 4.1 00 00 00 00 00 00 00 00 00 00 00 00 00	0 5 0 0 0 0
DAD ARIEN DES	102.5	95.0	73.1	37.2	37.1	37.1	35.7	35.7	35.7	35.7	35.7	35.7								34.3	34.3	33.7	31.9	28.8	21.1	14.3	7.5
DISCOMPLETED Outdoor Timer Appliances Seasonal IED lighting High Efficiency Furnace & Boiler Residential her Water	36.5 12.7 3.2 1.3 0.6	36.5 12.7 3.2 1.3 0.6	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 12.7 3.2 1.3 0.5	36.5 9.3 3.2 1.3 0.5								36.5 0.1 0.0 1.3	36.5 0.1 0.0 1.3	36.5 0.1 0.0 1.3	36.5 0.1 0.0 0.0 0.5	36.5 0.1 0.0 0.0 0.5	36.5 0.0 0.0 0.5	36.5 0.0 0.0 0.0	36.5 0.0 0.0 0.0
Water Heater Rental Thermostat Retrofft/Demonstration Refrigerator Buy-back	0.0 0.0 0.0	0.0	0.5 0.0 0.0	0.0	0.0	0.5 0.0 0.0	0.5 0.0 0.0	0.0	0.0	0.5 0.0 0.0	0.5 0.0 0.0	0.5 0.0 0.0								0.5 0.0 0.0	0.0	00 00 00	0.0	000	0.0	00 00 00 00	0.0 0.0 0.0
RESIDENTIAL TOTAL	-	150.1	55.1	92.2	92.1	92.1	55.0	55.0	55.0	55.0	55.0	51.6								38.9	38.8	38.8	37.5	37.5	37.5	37.5	37.4
COMMERCIAL Commercial Lighting Commercial Earth Power	239.2	239.2	239.2	239.2	239.2	239.2	239.2	239.2	239.2	239.2	239.2					-				167.7	167.7	157.6	126.1	126.1	126.1	126.1	126.1
Internal Retrofit Custom City of Winnipeg Agreement	21.5 17.4 10.8	21.5 17.4 10.8	21.1 17.4 10.8	21.0 17.4 10.8	20.9 17.4 10.8	20.9 17.4 10.7	20.9 17.4 10.5	20.9 17.4 10.0	20.9 17.4 9.8	20.9 17.4 8.8	20.9 16.4 8.4									20.9 15.4 0.3	20.9 15.4 0.2	17.8 14.8 0.2	14.6 0.0	11.7 14.8 0.0	11.7 14.8 0.0	10.5 12.5 0.0	8.3 12.5 0.0
Commercial Windows* Commercial Insulation* Commercial Refrigeration	7.3 6.6 5.5	7.3 6.6 5.5	7.3 6.6 5.5	7.3 6.6 5.5	7.3 6.6 6.7	7.3 6.6 5.5	7.3 6.6 3.7	7.3 6.6 3.7	7.3 6.6 3.7	7.3 6.6 5.1	7.1 6.6 5.1									3.6 2.2 2.3	2.9 2.2	25 25 22	-1.5 22 22	0.9 2.2	2 8 8	0.0 2.2 2.2	000
HVAC - Chillers Commercial Building Optimization Commercial Kirchen Analances		5.3 0.6	5.3 0.6 5.5	5.3 0.0 7.0	5.3 0.0 7.0	5.3	5.3 0.6 5.0	5.3 0.0 5.5	5.3 -0.3 0.5	5.3	5.3									0.0	0.0	000	0.0	0.0	00 00	00 00	0.0
Commercial Clothes Washers Power Smart Shops Maturad Energy Manager	0.03	00 00	03	3 5 5 5	5 6 8 8	n n n o	5 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	n n o	0.04	F 0 0 0	0.0									8888	8 8 8 8	8 8 8 8	8 8 8 8	8 0 0 0	8 8 8 8	8 0 0 0	8888
HVAC-CO2 Sensors New Buildings Power Smart Eperor Manager	0 0 0	0000	000	0.00	0 0 0	0 0 0	000	0 0 0	0 0 0	0000	000	0.000	0000	0000	0.00	0.0	0000	8 8 8 8	8 8 8 8	8 8 8	8 8 8	8 0 0 0	8 8 8	0 0 0	8 8 8	0 0 0	8888
DISCONTINUED/COMPLETED	339.0	338.9	338.6	338.3	339.5	338.1	336.1	335.1	333.9	334.8	332.5					.,				235.5	233.4	213.6	168.3	1991	161.6	157.9	153.2
Parking Lot Controllers Roadway Lighting Agging Lighting	34.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9									21.0	21.0	18.7 29.9	163 29.9	16.3 29.9	163 29.9	16.3	163 29.9
Sentinel Lighting Spray Valves	5.2	5.2	5.2	5.2	5.2	3.3	2.3	0.4	0.0	0.0	0.0									0.0	27.5	0.0	0.0	000	0.0	0.0	0.0
Infrared Heat Lamp Commercial Showerhead Commercial Air Barrier	3.7 1.4 0.8	3.7 1.4 0.8	3.7 1.4 0.8	3.7 1.4 0.8	3.7 1.4 0.8	3.7 1.4 0.8	1.4	3.7 1.4 0.8	3.7 0.8	3.7 1.4 0.8	3.7 1.4 0.8									3.7 1.4 0.8	3.7 1.4 0.8	1.4	1.4	1.4	1.4	3.7 4.1 0.0	3.7 1.4 0.6
Livestock Waterer Commercial Air Conditioning	0.3	0.3	0.4	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0									0.0	00 00	0.0	8 5 8	00 00	0 7 8	00 00	8 5 8
Aboriginal Commercial	109.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.00									83.6	83.6	79.7	74.4	732	73.2	73.1	73.1
COMMERCIAL TOTAL	1L 448.4	448.4	448.1	447.6	448.7	445.3	442.3	439.4	437.8	438.7	436.5	428.5	423.2 4	119.0	32.6 381	1.1 358		1 299.3	321.2	319.1	317.0	293.3	242.7	239.3	234.8	231.0	226.3
INDUSTRIAL Performance Optimization Emergency Preparedness	319.6	319.6	319.6	319.6	319.6	318.6	318.6	317.7	317.7	317.7	317.9									251.7	251.7	239.0	210.1	195.0	195.0	195.0	195.0
DISCONTINUED/COMPLETED	319.6	319.6	319.6	319.6	319.6	318.6	318.6	317.7	317.7	317.7	317.9									251.7	251.7	239.0	210.1	195.0	195.0	195.0	195.0
Retrofit/Demonstration GSL High Efficiency Motors Industrial (Basic)	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 3 21.5 2 0.0 0	33.0 33. 21.5 21. 0.0 0.0	33.0 33.0 21.5 21.5 0.0 0.0	.0 33.0 5 21.5 0 0.0	33.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0	33.0 21.5 0.0
Efficient Motors (QMR)	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5									54.5	54.5	54.5	54.5	54.5	54.5	54.5	54.5
INDUSTRIAL TOTAL	374.1	374.1	374.1	374.1	374.1	373.1	373.1	372.1	372.1	372.1			322.3		305.1 305.1					306.2	306.2	293.5	264.6	249.4	249.4	249.4	249.4
EFFICIENCY PROGRAMS SUBTOTAL	980.2	972.6	950.3	913.9	914.9	910.6	906.2	902.2	2006	901.6	899.5	856.9	828.8 75	796.3 76	765.6 762.9	2.9 738.4	3.4 709.1	.1 675.2	700.8	698.4	696.2	659.2	576.6	555.1	542.8	532.2	520.7
CUSTOMER SELF-GENERATION PROGRAMS Bioenergy Optimization Program	000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0									0.0	000	000	000	0.0	000	0.0
RATE/LOAD MANAGEMENT PROGRAMS Curtailable Rates	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	000	00	8 00	00	00	00	0.0	00	00	00	00
	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0											0.0	0.0	0.0	0.0	0.0	0.0	0.0
GW.h IMPACTS (at meter) GW.h IMPACTS (at generation)	980.2 1102.5	972.6	950.3 1068.4	913.9	914.9	910.6	906.2	902.2	900.7	901.6	899.5 1010.6		828.8 75 931.9 85		765.6 762 860.6 857						781.4	659.2 739.8	576.6 646.8	555.1 622.8	542.8 608.8	532.2	520.7

RCE: This sheet is formula driven and links to the TOTAL GW.h' sheet minus the 2010-11 sh

Total Annual Energy Savings - GW.h Electric Incentive Based Programs

									Electric	Bas	sed Progra										At Generation	At Generation
BESIDENTIAL	1989/90	1990/91	1991/92	1992/93	1993/94 199	1994/95 1999	1995/96 1996/97	97 1997/98	1998/99	1999/00	2000/01	2001/02 200	2002/03 200:	2003/04 2004/05	/05 2005/06	2006/07	2007/08	2008/09	2009/10	2010/11		2024/25
	000	0.0	0.0	0.0					0'0	000	0.0						28.1	49.9	2.77	92.1	105.0	0.0
Home Insulation Water & Fremy Saver	00 0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00 0	8 8	0.0	000	0.0	0.0 1.7	4.2	10.7	16.5	22.1	28.4	33.8	38.5	38.5
New Homes	0.0	0.0	0'0	0.0					00	00	0.0						2.9	3.7	43	5.0	5.7	5.7
Low Income	0.0	0.0	0.0	0.0					00	0.0	0.0						9.0	1.1	2.0	4.2	4.8	3.7
Energy Efficient Light Fixtures Refrigerator Baticament	0.0	0.0	0.0	0.0					000	0 0	0.0						0.0	2.1	2,6	3.7	4.2	1.7
	0.0	0.0	000	0.0					000	000	0.0						49.0	78.9	115.0	144.1	164.2	56.0
DISCONTINUED/COMPLETED																						
Outdoor Imer	0.00	6.8	15.3	20.6		29.2			5.05	500	36.5						36.5	36.5	36.5	36.5	14.5	41.6
Seasonal LED Lighting	00	0.0	0.0	0.0					00	00	0.0						2.3	3.1	32	3.2	3.7	3.7
High Efficiency Furnace & Boiler	0.0	0.0	0.0	0.0					0.0	00	0.0						0.0	0.0	1.3	1.3	1.4	1.4
Residential Hot Water	0.0	0.0	0.3	0.3					9.0	9.0	9.0						9.0	9.0	90	9.0	0.7	0.5
Water neater nertal	8 8	0.0	0.0	000					* G	60 0	500						0.5	0.5	0.5	0.5	0.5	0.0
Retrofit/Demonstration	8 0	00	00	0.0					8 8	800	0.0						0.0	0.0	00	00	00	00
Refrigerator Buy-back	0.0	0.0	0.0	0.0	0.0		0.0 0.0		0.0	0.0	0.0						0.0	0.0	000	0.0	0.0	0.0
	5.0	8.9	15.7	21.0					37.5	37.6	37.6						47.8	53.1	55.2	55.2	62.9	49.4
LATOR INTERNACIONAL	C	G	10.3	010	1 10	200	200		25.0	226	226	220	220	274		9 90	0 90	0001	C 02.0	0000	1200	1000
NESIDENTIAL TOTAL		6.0	13.7	21.0					0.70	0.70	97:0						Y.8K	1320	7.0.7	7.661	1777	103.3
COMMERCIAL																						
	0.0	0.0	0.0	2.9					85.4	8'06							193.9	218.9	239.5	258.7	295.0	294.8
Commercial Earth Power	0.0	0.0	0.0	0.0					1.8	2.9							18.6	20.2	23.6	26.0	29.6	29.6
Internal Retrofit	0:0	0.0	0.0	0.2					4.9	5.4							18.0	19.8	21.5	24.0	27.4	26.8
Custom	0.0	0.0	0.0	0.0					2.6	10.0							15.4	15.9	17.4	18.8	21.5	20.4
City of Winnipeg PS Agreement	00 0	0.0	0.0	0.0					00 00	000							1.01	10.3	8.01	 	127	8.7
Commercial Windows*	000	000	0.0	000					90	0.0							45	- 6	23	7.6	- 01	106
HVAC - Chillers	00	0.0	00	0.0					00	00							43	4.8	53	77	8.1	8.1
Commercial Refrigeration	0.0	0.0	0.0	0.0					0.0	0.0							3.0	4.3	5.5	7.0	7.9	5.9
Commercial Building Optimization	0.0	0.0	0.0	0.0					0.0	0.0							0.0	0.5	9'0	6.0	1.0	0.0
Power Smart Shops	0.0	0.0	0.0	0.0					0.0	0.0							0.0	0.0	0.3	0.7	8.0	0.0
Commercial Kitchen Appliances	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	9.0	0.7	0.0
Notice Commercial Clothes Washers	0.0	00 0	0.0	0.0					00 0	00 00							0.0	0.0	00	# C	4, 0	0.0
HVAC - CO2 Sensors	0.0	00	0.0	00					8 0	8 0							00	0.0	80	0.0	0.0	0.0
New Buildings	0.0	0.0	00	0.0					00	00							0.0	0.0	000	0.0	0.0	0.0
Power Smart Energy Manager	0.0	0:0	0.0	0.0					000	0:0							0.0	0.0	000	0:0	0:0	0.0
	0.0	0.0	0.0	3.1					95.3	109.7							269.7	304.3	339.2	375.0	427.5	415.9
DISCONTINUED/COMPLETED	ć	c c	Ġ	G					ŗ	;							e.	* 66		* 00	,	
Roadway Lighting	0.0	0.0	3.9	13.5					200	- 600							5000	32.4	2,58	200	340	35.2
Agricultural Heat Pads	00	0.0	0.0	0.0					3.5	5.5							21.8	24.3	25.4	28.4	32.3	21.7
Sentinel Lighting	0.0	0.0	2.3	4.7	7.5	7.5 7.	7.5 7.5		7.5	7.5							7.5	7.5	7.5	7.5	8.5	8.5
Spray valves	88	0.0	9.7	0.0					3.7	3.7							2.2 7.5	8, t	3.7	2.6	y . c	0.0
Commercial Showerhead	00	0.0	1.4	4.1					1.4	1.4							1.4	1.4	1.4	1.4	1.6	1.6
Commercial Air Barrier	0.0	0.0	0.0	0.0					0.2	0.3							8.0	8.0	8'0	8.0	6:0	6'0
Livestock Waterer	0.0	0.0	0.0	0.0					0.4	0.4							0.4	0.4	0.4	0.4	0.4	0.0
Commercial Air Conditioning	0.0	0.0	0.0	0.0					00	0.0							0.3	0.3	03	0.3	0.4	0.3
Agricultural Demand Controller Abodolinal Commercial	88	0.0	0.0	8.0					80	88							0.0	0.0	00	9 6	0.0	0.0
	0.0	0.0	11.3	23.4			ľ		50.3	52.8	l	l					1.66	105.6	109.5	115.7	131.9	106.7
COMMERCIAL TOTAL	0:0	0:0	11.3	26.5	54.0	81.3 10	101.1 109.6	118.3	145.5	162.5	1700	181.7 19	193.2 21	214.0 243.1	.1 286.3	331.5	368.9	409.8	448.7	490.7	559.4	522.6
INDUSTRIAL																						
Performance Optimization	0.0	0:0	0.0	0.0	000	2.4 7.	7.2 35.1		85.9	107.7	110.8		170.5 18		.6 238.6		276.4	294.9	319.6	347.9	382.7	299.6
Emergency Preparegness	0.0	0.0	80	000					859	107 7	1108						2764	2949	319.6	347.9	382.7	2996
DISCONTINUED/COMPLETED																		1				
Retrofit/Demonstration GSL	0.0	0:0	0.0	0.1	0.7	9.7 32	32.7		33.1	33.1	33.1						33.0	33.0	33.0	33.0	36.3	36.3
rign Efficiency Motors Industrial (Basic)	0.00	0.0	* O	8.0					213	517 00	51.5						0.0	2.1.2 0.0	213	0.0	0.0	0.0
Efficient Motors (QMR)	00	0.0	00	0.0					00	00	0.0						0.0	0.0	00	0.0	0.0	0.0
	0.0	0.0	0.4	4.9		ľ		54.2	54.6	54.6	54.6	54.6 54		54.6 54.6	6 54.6	54.6	54.5	54.5	54.5	54.5	59.9	59.9
INDUSTRIAL TOTAL	000	0.0	0.4	4.9	8.3 2	22.4 53	53.2 85.7	2.7.6	140.4	162.3	165.4	197.5 22	225.1 23	236.0 262.2	.2 293.1	303.9	330.9	349.3	374.1	402.4	442.6	359.6
EFFICIENCY PROGRAMS SUBTOTAL	2.0	8.9	27.4	52.3	87.5	133.3 18	185.6 230.5	5 253.2	323.5	362.4	373.0	416.8 45	455.9 48	487.6 552.7	.7 637.4	4 711.6	796.6	891.1	992.9	1092.3	1229.1	987.6
CUSTOMER SELF-GENERATION PROGRAMS																						
Bioenergy Optimization Program	000	0:0	0'0	0.0	0.0		0.0		00	000	0.0						84.2	94.0	80.1	86.6	95.2	0.0
RATE/LOAD MANAGEMENT PROGRAMS	00	0.0	0.0	00		0.0			00	00	0.0						24.7	94.0	1.08	80.0	72.5	0.0
Curtailable Rates	000	0:0	0.0	0:0	00	0.0	0.0 0.0	0:0	000	000	0.0	0.0	0.0	0.0 0.0	0.0	000	0.0	0.0	000	0:0	0.0	0.0
	00	0.0	0.0	0.0					000	000							0.0	0.0	00	0.0	0.0	0.0
GW.h IMPACTS (at meter)	200	8.9	27.4	52.3	11 278	133.3 18	185.6 230.5	5 253.2	323.5	362.4	373.0	416.8 45	455.9 48	487.6 552.7	7. 647.6	831.6	880.8	985.1	1073.0	1178.8	N/A	N/A
GW.h IMPAC IS (at generation)	à	10.2	31.2	59.4			ı	ı	393.1	406.6	ı	ı					387.5	1105.3	1,205.1	1324.3	1324.3	98/39
Manney Contraction of the contract of the cont	naipulion																					

Note: Subtotals may not be exact due to rounding.

\* Programs comprise the Commercial Building Envelope Program.

SOURCE: To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

Total Annual Energy Savings - GW.h Electric Incentive Based Programs

												Electric	icentive Basec	ed Programs								
RESIDENTIAL	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18 2	2018/19 20	2019/20 202		2021/22 2022/23	/23 2023/24	24 2024/2	5 2025/26	2026/27	2027/28	2028/29	2029/30	2030/31 2	2031/32 20	032/33 203	2033/34
Compact fluorescent Lighting Home Insulation Water & George Saver New Home regy Saver New Home regy Saver Energy Efficient Light Fixtures Energy Efficient Light Fixtures Refrigerator Retirement	86.9 33.8 5.3 5.0 4.2 3.7 0.0	79.4 33.8 5.3 5.0 4.2 3.7 0.0	57.5 33.8 5.3 5.0 4.2 4.2 3.7 0.0	21.7 33.8 5.3 5.0 4.1 3.7 0.0	0.0 33.8 5.3 5.0 4.1 3.7 0.0	33.8 33.8 5.3 5.0 4.1 3.7 0.0	0.0 33.8 5.3 5.0 4.1 2.0 0.0							0.0 33.8 0.0 5.0 2.9 0.0 0.0	0.0 33.8 0.0 5.0 2.9 0.0 0.0	0.0 33.8 0.0 5.0 1.0 0.0	0.0 33.8 0.0 2.9 0.0 0.0	0.0 33.8 0.0 2.9 0.0 0.0 0.0	0.0 33.8 0.0 5.0 0.0 0.0			0.0 0.0 0.0 2.4 0.0 0.0
DISCONTINUED COMPLETED Outdoor Times Appliance Leginese Registrate Leginese Registrate R	36.5 36.5 12.7 11.3 0.6 0.6 0.0	13.14 36.5 12.7 13 0.6 0.0 0.0	36.5 36.5 32.2 12.7 1.3 0.5 0.6	36.5 36.5 3.2 3.2 1.3 0.5 0.0	36.5 36.5 12.7 1.3 1.3 0.5 0.0	318 365 127 13 13 05 06	36.5 12.7 3.2 3.2 0.5 0.5	49.5 33.2 12.7 0.5 0.0	336.5 3 3 36.5 112.7 1 1 1.3 1.1 1.3 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	38.5 36.5 36.5 36.5 37.0 12.7 12.7 12.7 12.0 0.05 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	36.5 36.5 36.5 12.7 9.3 3.2 1.3 1.3 1.3 0.5 0.5 0.5 0.5 0.4 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	36.5 3.2 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	36.5 3.2 1.1 1.3 0.5 0.6 0.0 0.0	43.5 36.5 0.4 1.3 0.5 0.6	365 365 0.4 1.3 0.5 0.0 0.0	36.5 36.5 0.9 0.5 0.5 0.0	42.0 36.5 0.3 1.3 1.3 0.5 0.0	425 36.5 0.1 0.0 1.3 0.5 0.5	36.5 0.1 0.0 0.5 0.5 0.0	386.5 0.0 11.3 0.5 0.0	3.65 0.00 0.00 0.05 0.05 0.00	36.5 0.0 0.0 1.3 0.5 0.0
Remgerator buy-back RESIDENTIAL TOTAL		55.1 186.5	55.1 164.5	55.0 128.6	55.0 106.9	55.0 106.9	55.0 105.2						Ш	42.6 86.2	41.4 84.9	40.4 83.1	39.5	39.2	39.1			38.8
Commercial Lighting Commercial Lighting Commercial Earth Power Internal Retrofit	258.6 26.0 24.0	258.6 26.0 24.0	258.6 26.0 23.7	258.6 26.0 23.6	258.6 26.0 23.5	258.6 26.0 23.5	258.6 26.0 23.5							235.3 23.4 23.5	235.3 23.4 23.5	216.5 19.6 23.5	190.5 17.9 23.5	167.7 14.1 23.5	167.7 14.1 23.5			11.2
Clity of Winnipeg PS Agreement Commercial Insulation* Commercial Windows* HAAC. Chillers Commercial Refrigeration	9.7 9.7 7.1 7.0 7.0	11.1 9.7 9.7 7.0 7.0	9.7 9.7 7.0 7.0	9.7 9.7 7.0 7.0 7.0	9.7 1.1.1 1.7 8.2	9.7 9.7 7.0 7.0 7.0	9.7 7.2 7.7 5.1							2 2 2 2 2 2 3	7.5 9.7 1.7 3.4	7.7 9.7 9.7 3.4 3.4	7.0 9.7 7.1 3.4	13.4 9.7 7.1 3.4	15.4 0.8 7.0 7.1			7.7 7.1 3.4
Commercial aduling Optimization Rower Snart Stops Commercial Striken Appliances Commercial Cottles Nikoshers Hower Cottles Strikens HWAC - COZ Sersons Rower Strikens Strikens Rower Strikens Strikens Rower Strikens	20 20 20 20 20 20 20 20 20 20 20 20 20 2	0.0 0.7 0.0 0.0 0.0 0.0 0.0	0.9 0.7 0.0 0.0 0.0 0.0	6.0 7.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	0.0 0.0 0.0 0.0 0.0 0.0	e 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.9 0.7 0.0 0.0 0.0 0.0		000000000000000000000000000000000000000	000000000000000000000000000000000000000	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		88888888	00000000	00 00 00 00 00 00 00 00 00 00 00 00 00	888888888	0000000000	9999999999	000000000000000000000000000000000000000	99999999	000000000000000000000000000000000000000	0000000000
DISCONTINUED/COMP LETED Parking Lot Commoles Roadway Lighting Apricultual Heat Pads Sentined Lighting Spany Valves Spany Valves	3748 38.1 29.9 28.4 7.5	374.8 38.1 29.9 28.4 7.5 5.2	374.5 38.1 29.9 28.4 7.5 5.2	374.2 38.1 29.9 28.4 7.5	375.3 38.1 29.9 28.4 7.5 5.2	373.9 38.1 29.9 28.4 7.5 3.3	371.9 38.1 29.9 28.4 7.5 2.3							331.5 21.6 29.9 19.0 7.5 0.00	330.0 21.6 29.9 119.0 7.5 0.0	307.3 21.6 29.9 19.0 7.5 0.0	279.0 21.6 29.9 19.0 7.5 0.00	250.1 21.0 29.9 19.0 7.5 0.0	248.8 21.0 29.9 19.0 7.5			224.8 118.7 29.9 17.5 7.5 0.0
Commercial Stouchhead Commercial At Burner Commercial At Burner Commercial At Conditioning Agricultural Demand Controller 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	0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 115.4	0.0 0.0 0.0 0.0 0.0 0.0 113.4	0.0 0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00						0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0	00 00 00 00 00 00 00 00 00 00	0.0 0.0 0.0 0.0 0.0 84.3	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0			0.0 0.0 0.0 0.0 0.0 0.0
COMMERCIAL TOTAL INDUSTRIAL Performance Optimization Emergency Department of Emergency Properties of E	347.9	490.5 347.9	347.9	347.9	347.9	346.9	346.9							415.8	414.3	391.6	363.3 256.1	333.7	332.4			240.8
DISCONTINGED/COMPLETED Retrof/Demonstration GSL High Efficiency Motors Industrial (Basc) Efficient Motors (OMR)	347.9 33.0 21.5 0.0 0.0 54.5	347.9 33.0 21.5 0.0 0.0 54.5	347.9 33.0 21.5 0.0 0.0 54.5	347.9 33.0 21.5 0.0 0.0 54.5	347.9 33.0 21.5 0.0 0.0 54.5	346.9 33.0 21.5 0.0 0.0	346.9 33.0 21.5 0.0 0.0	346.0 :: 346.0 :: 5 :: 5 :: 5 :: 5 :: 5 :: 5 :: 5 ::	346.0 34.0 34.0 34.0 34.0 34.0 34.0 34.0 34	33.0 34 21.5 21 0.0 0 54.5 54	33.0 33.0 21.5 21.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	296.1 0 33.0 5 21.5 0.0 0.0 0.0	272.4 33.0 21.5 0.0 0.0 54.5	256.1 33.0 21.5 0.0 0.0 54.5	256.1 33.0 21.5 0.0 0.0 54.5	256.1 33.0 21.5 0.0 0.0	256.1 33.0 21.5 0.0 0.0 54.5	253.5 33.0 21.5 0.0 0.0 54.5	253.5 33.0 21.5 0.0 54.5	253.5 2 233.0 3 21.5 0.0 0.0 0.0	253.5 2, 253.5 2, 253.6 2, 215.5 2, 20.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	240.8 33.0 21.5 0.0 0.0 54.5
INDUSTRIAL TOTAL	10869	402.4	402.3	402.3	402.3	401.4	401.4							310.5	310.5	310.5	310.5	308.0	308.0			295.3
CUSTOMER SELF-GENERATION PROGRAMS Bloenergy Optimization Program	0.0	0.0	0.0	0.0	000	000	000							000	000	000	0.0	0.0	0.0			000
RATE/LOAD MANAGEMENT PROGRAMS Curtailable Rates	0.0	0.0	0.0	0.0	000	000	000							000	000	000	0.0	0.0	0.0	0.0		000
GW.h IMPACTS (at meter) GW.h IMPACTS (at generation)	1223.0	1079.4	1188.9	1020.6	999.9	995.5	1113.5	986.3	984.7 98	983.5 98	981.5 938.4	5.0 1023.7	8.778 7	812.5 913.8	910.7	785.2 882.7	756.0	723.3	721.2		716.6 6.	63.0

Note: Subtotals may not be exact due to rounding.

\*Programs comprise the Commercial Building Envelope Program.

\*SOURCE To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

# Appendix G Average Winter MW Savings – Incentive– Based Programs

## 2010/11 Average Winter MW Electric Incentive-Based Programs

	2010/11	2011/12	2012/13	2013/14	2014/15 2	2015/16 20	2016/17 20	2017/18 201	2018/19 2019/20	/20 2020/21	1 2021/22	2022/23	2023/24	2024/25	At Generation 2010/11	At Generation 2024/25
RESIDENTIAL CFL Home Insulation Lower Income Water & Energy Saver New Homes Energy Efficient Light Fixtues Refrigerator Retrement	5.1 2.6 0.8 0.2 0.0	5.1 2.6 0.8 0.3 0.0	5.1 2.6 0.8 0.3 0.0	5.1 2.6 0.8 0.7 0.3	5.1 2.6 0.8 0.7 0.2	0.0 2.6 0.8 0.7 0.3	0.0 2.6 0.8 0.7 0.3	0.0 0.0 0 0.8 0 0.0 0.7 0 0.3 0 0.1 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 2.6 2.6 0.7 0.7 0.7 0.7 0.3 0.3 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 2.6 0.7 0.7 0.7 0.1	0.0 2.6 0.7 0.7 0.3 0.0	0.0 2.6 0.7 0.3 0.1	0.0 2.6 0.7 0.3 0.1	0.0 2.6 0.7 0.7 0.3	5.8 1.0 0.8 0.3 0.0	0.0 3.0 0.8 0.8 0.3 0.0
RESIDENTIAL TOTAL	9.7	9.7	5.6	5.7	2.6	4.6					4.4	4.4	4.4	4.4	0.11	5.0
COMMERCIAL Commercial Lighting Program Commercial Insulation	3.5	3.5	3.5	3.5	3.5	3.5	3.5				3.5	3.5	3.5	3.5	4.0	0.4.0
Commercial Windows Commercial Earth Power	0.9	0.0	0.9	0.9	0. 6. 6	0.9	0.9				0.9	0.9	0.9	0.0	7 = 3	7 - 7
Internal Retront Commercial Refrigeration	0.3	0.0 0.3	0.3	0.3	0.00	0.3	0.3				0.0	0.0	0.0	0.0	0.3	9:00
City Offinnipeg PS Agreement Power Smart Shops	- 6	1.0	1.0	1.0	5 - 5	0.1	0.1				0.0	0.00	9 8	0:0	155	0.0
Commercial Clothes Washers 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
Commercial Kitchen Appliances 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
HVAC - Chillers New Buildings	0.00	0 0 0	0.00	0.0	0.0	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.0
PS Energy Manager	8.3	8.3	8.3	8.3	8.3	8.3	8.3				0.0	7.8	7.8	7.8	9.5	8.9
DIS CONTINUED/COMPLETED																
Agricultural Heat Pads Spray Valves	0.0	0.3	0.3	0.0	0.0	0.0	0.3				0.3	0.3	0.0	0.3	0.0	0.3
Commercial Showerhead Infrared Heat I amp	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0:0	0.0	0:0	0.0
Livestock Waterer	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0:0	0:0	0.0	0.0
Roadway Lighting Sentinel 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
Commerical Air Barrier 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
Commerical Air Conditioning 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
Parking Lot Controllers	0.0	0.0	0.3	0.3	0.3	0.3	0.0				0.0	0.3	0.0	0.3	0.0	0.0
COMMERCIAL TOTAL	8.6	9.8	9.6	8.6	9.8	9.6	8.6	8.6 8	8.6 8.6	8.2	8.2	8.1	8.1	8.1	9.8	9.2
INDUSTRIAL Performance Optimization	3.5	3.5	3.5	3.5	3.5	3.5	3.5				3.5	3.5	3.5	3.5	3,8	3.8
Emergency Preparedness	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5 3	3.5 3.5	3.5	3.5	3.5	3.5	3.5	3.8	3.8
DISCONTINUED/COMPLETED 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
nevious/Demoissatation GSL High Efficienty Motors Efficient Motors (OMR)	0.0	0.0	0.0	0.0	2 0 0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.00
	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
INDUSTRIAL TOTAL	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5 3	3.5 3.5	3.5	3.5	3.5	3.5	3.5	3.8	3.8
EFFICIENCY PROGRAMS SUBTOTAL	21.7	21.7	21.7	21.7	21.7	16.7	16.7	16.6	16.5 16.5	5 16.1	16.1	16.0	16.0	16.0	24.6	18.0
CUSTOMER SELF-GENERATION PROGRAMS Bioenergy	14.3	0.0	0.0	0.0	0.0	0:0	0:0	0.0	0.0	0.0	0.0	0.0	0:0	0.0	15.7	0.0
RATE/LOAD MANAGEMENT PROGRAMS	14.3	0:0	0.0	0.0	0.0	0.0	0.0			_	0.0	0.0	0.0	0.0	15.7	0:0
Curtailable Rates	154.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0	0.0	0.0	170.0	0:0
MW IMPACTS (at meter) MW IMPACTS (at generation)	190.6	21.7	21.7	21.7	21.7	16.7	16.7	16.6	16.5 16.5	16.1	16.1	16.0	16.0	16.0	N/A 210.3	N/A 18.0
Note: Subtratels may not be exact du	e to rounding															

Note: Subtotals may not be exact due to rounding.
\* Programs comprise the Commercial Building Envelope Program.

### Persisting Average Winter MW Electric Incentive-Based Programs

16	1991/92 19	1992/93 199:	1/94 1994/9	5 1995/96	1996/97	1997/98	66	8	10 20	02 2002/	03 2003/0	2004/05	3.1	2006/07	2007/08	2008/09	2009/10 20	At de	ation At	Generation 2024/25
00					00	0.0									2.3	,				
				0.0	2.2							1.6	-	4.2	/′0	70.7			8.5	0'0
0.0	0.0	0.0		0.0	0.0	0.0						0.8	2.0	5.2	8.0	10.7			15.7	15.7
0.0				0.0	0.0	0.0						0.0	0.2	0.4	0.7	0.1			1.3	1.3
0.0				0.0	000	0.0						0.0	0.0	0.0	0.0	4. 0			0.8	0.7
0.0				000	8 6	000						000	000	000	7.0	5 0			5 0	700
0.0				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0			0.0	0.0
0.0	0.0			0.0	0.0	0.0						52	5.3	8.6	14.7	22.5		.,	6.9	18.0
0.5				2.0	2.3	2.4						2.4	2.4	2.4	2.4	2.4			2.7	2.7
0.0				0.0	0.0	0.0						0.0	0.0	0.5	1.0	1.6			1.9	0.2
0.0				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0			0.5	0.5
0.0				0.0	0.0	0.0						0.0	. c	. c	7 0	7.0			7.0	0.7
0.0				0.0	00	0.0						0.0	0.0	0.0	0.0	0.0			0.0	0.0
0.0				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0			0.0	0.0
0.0				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0			0.0	0.0
0.0				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0			0.0	0.0
0.5				7.7	2.4	52						52	5.6	3.1	3.7	4.3			5.5	99
0.5	1.0	1.3	6.1 9	2.1	2.4	2.5	2.5		6 2.6		2.5	5.0	7.9	12.9	18.4	26.8	38.7	37.2	12.4	21.7
00	00			6.5	10.8	11.6						24.2	77.7	31.1	34.1	38.5	42.3		18.2	47.2
0.0	00			0.0	0.1	0.8						4.2	5.4	7.4	8.7	9.3	10.3		1.8	11.8
0.0	0.0			9.0	0.7	6.0						2.2	2.4	2.8	3.0	3.2	3.5		4.0	4.0
0.0	0.0			0.0	0.0	0.0						0.0	0.0	0.2	0.7	1.8	3.2		3.6	3.6
0.0	0.0			0.0	0.0	0.2						1.1	7.5	7.7	8: -	2.7	3.0		3.4	3.3
000	0.00			0.0	8 8	0.0						000	9.0	0.7	0.8	13	1.6		1.7	1.5
0.0	0.0			0.0	0.0	0.0						6'0	6.0	1.0	=	1.2	1.2		1.4	1.4
0.0	0.0			0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.2		0.3	0.0
0.0	0.0			0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	1.0		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		0.1	0.0
0.0	00			0.0	00	0.0						000	0.0	00	000	0.0	0.0		000	000
0.0	0.0			0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
0.0	0.0			0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
00	000			0.0	11.8	13.5						32.8	39.4	0.0	52.4	0.0	0.0		7.4	0.0
					e e									e e				0		
0.0				0. 0	0, 0	0, 6						0.7	0.7	0, 0	0.7	3.5	0.7	0.7	6.7	7.9
0.0				1,8	1.8	1.8						1.8	9.1	1.8	1.8	1.8	1.8	1.8	2:0	2.0
0.0				1.0	0.5	0.1						1.0	0.7	1.0	0.5	0.7	0. 5	1.0	11	- :
0.0				0.0	0.0	0.1						0.3	0.0	0.0	0.3	0.0	0.3	0.3	0.3	0.7
0.0				0.0	0'0	0.0						0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0'0
0.0				0.7	0.7	0.7						7.0	0.7	0.7	700	7.0	7.0	0.7	7.0	7.0
0.0				0.0	00	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0				10.7	10.8	10.8	ľ	ľ	ľ		ľ	13.6	13.7	13.7	14.2	14.7	14.8	14.8	6.9	15.4
00				20.5	22.5	24.7						46.4	53.1	109	999	74.5	82.7	82.7	24.3	40.2
																!				
0.0	0.0			1.1	4.6	5.8							61.7	63.2	66.2	68.7	72.0	72.0	79.2	8.69
0:0	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				:	2	9								3						
0.0				4.3	4.3	4.3						4.3	4.3	4.3 8.8	4.3 8.8	4.3 8.8	4.3	3.8	4.8	4.6
0.0				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
000				0.0	0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
						;						!			!					
0:0	0.1			7.7	12.0	13.9						65.8	8.69	71.3	74.4	76.9			38.2	78.6
9.0	3.3	8.6 15		30.3	36.9	40.6							130.9	144.3	159.4	178.1	Н		24.9	190.5
0.0				0.0	0.0	0.0						0.0	14.3	14.3	14.3	14.3	14.3		0.0	0.0
} ;				}	}														} ;	
000				24.7	32.7	80.0							189.1	183.3	180.6	172.8	149.2		0.0	0.0
0.5				55.0	9'69	120.6							334.2	341.9	354.3	365.2			4/A	N/A
9.0				61.4	77.5	133.8							370.1	379.1	393.2	405.8			24.9	190.5
			100 100 100 100 100 100 100 100	100 00 00 00 00 00 00 00 00 00 00 00 00	100 00 00 00 00 00 00 00 00 00 00 00 00	10	10	10	10	10	10	10	10	10	10	10   12   15   15   15   15   15   15   15	10	1	1	1

Note: Subtotals may not be exact due to rounding. \* Programs comprise the Commercial Building Envelope Program.

SOURCE. To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

Persisting Average Winter MW Electric Incentive-Based Programs

HESIDENTIAL   COUNTY	13.0 13.0 13.8 13.8 11.2	₹	3	₹	000	00	0.0	0.0		3	q .	5	0.0	0.0	0.0	0.0	0.0	000	000	0.0	0.0	0.0	00	ς λ	8 00
Home househout Home househout New Homes Lowe Troome Lowe Troome There of the There Water & Energy Sweet Reit/parant Retirement Reit/parant Retirement Outdoor Times to Residential Applances		7.0	7.0	0.0	0.0	00	0.0	0.0					0.0	0.0	0.0	0.0	0.0	000	0.0	0.0	0.0	0.0			0.0
"		13.8 1.2 0.7 0.0	13.8 1.2 0.6 0.0	13.8 1.2 0.6 0.0	13.8 1.2 0.6 0.0	13.8 0.0 0.0	13.8 1.2 0.2 0.0	00 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					13.8 0.7 0.0 0.0	138 1.2 0.7 0.0	13.8 1.2 0.7 0.0	13.8 1.2 0.7 0.0	13.8 0.7 0.0 0.0	13.8 1.2 0.0 0.0	0.7 0.0 0.0	13.8 1.2 0.0 0.0	13.8 0.4 0.0	12.8 1.2 0.0			0 9 4 0 0
		23.1	23.0	0.0	0.0	15.8	15.9	15.9					15.8	15.8	15.6	15.5	15.5	15.6	0.0	0.0	15.4	0.0			0.0
& Boiler	2.4 1.7 0.0 0.0 0.0 0.0 0.0	2.4 0.4 0.0 0.0 0.0 0.0 0.0 0.0	2.4 1.7 0.4 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0	2.4 1.7 0.4 0.0 0.0 0.0 0.0	2.4 0.4 0.2 0.0 0.0 0.0 0.0	24 1.7 0.4 0.0 0.0 0.0 0.0	2.4 1.7 0.4 0.0 0.0 0.0 0.0	2.4 11.7 0.0 0.0 0.0 0.0 0.0	224 004 000 000 000 000 000 000 000 000	2.4 2.4 0.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	4,7 4,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0 0,0	2.4 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0	2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0	24 00 00 00 00 00 00 00	24 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0	2.4 0.0 0.0 0.0 0.0 0.0 0.0
		4.9	4.9	4.9	4.9	4.9	4.9	4.9					3.1	3.1	3.0	3.0	2.9	2.9	2.9	5.9	5.9	2.5			5.5
RESIDENTIAL TOTAL 35.9	9 33.9	27.9	27.9	20.8	20.8	50.6	20.8	20.8	20.8	20.8 20	20.3 19.7	19.1	18.9	18.9	18.6	18.5	18.5	18.6	18.6	18.6	18.3	16.9	15.3	5.3	1.6
COMMERCIAL Commercial Lighting Program 423		423	423	423	414	414	414	414					37.4	37.4	34.1	24.2	253	288	28.8	28.8	27.0	23.5			5
th Power		10.3	10.3	10.3	10.3	10.3	10.3	10.3					9.1	9.1	7.4	9.9	5.0	0.0	0.0	6.0	3.2	2.1			0 1
Commercial Insulation 3.2	3.2	32	3.2	3.2	3.2	3.2	3.2	3.2					3.2	3.2	3.2	3.2	3.2	3.2	2.6	1.5	0.0	0.0			t 0
ment		2.4	3.0	2.4	2.3	3.0 2.3	3.0	3.0					2.7 0.5	0.2	0.2	2.7	0.2	0.2	0.1	0.1	0.1	6.0			- 0
Commercial Refrigeration 1.6		1.6	1.6	2.1	1.6	0.1	0.1	0,1					0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	8.0	8.0			8. 5
		0.2	0.2	0.2	07	0.2	0.2	0.2					0.0	00	00	0.0	0:0	0.0	0.0	0.0	0.0	0.0			. 0.
1 Appliances		0.1	0.1	1.0	0.1	0.1	1.0	0.1					0.0	0.0	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0			0.0
Network Energy Manager 0.0		0.0	0.0	00	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0	0.0			2 9
		00	000	0.0	0.0	0.0	0.0	0.0					0.0	0.0	000	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0	00	8 00	0.0	0.0			2 0
		67.9	67.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0 0.0 65.8 65.7	0.0	58.4	58.2	53.2	47.5	41.8	0.0	0.0	0.0	37.1	0.0	0.0	0.0	0.0
ETED																									
	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6 3.	3.1 2.8	2.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.7	2.3	7.0	7.0	7.0
ante of the state		1.8	1.8	1.8	8 0	1.8	8.1	8 0					8: 5	1.8	1.8	1.8	1.8	8.1	1.8	1.8	8.1	8 0		8 9	œ c
		9.0	0.6	9.0	9:0	9.0	9.0	9.0					90	9.0	9.0	9.0	9.0	9.0	9.0	9.0	90	9.0		90	9.
Commercial Air Barrier 0.3		0.3	0.3	0.3	0.3	03	03	0.3					0.3	0.3	0.3	0.3	0.3	0.3	03	03	0.3	0.2		20	7 9
erhead		0.2	0.2	0.2	0.2	0.2	0.2	0.2					0.2	0.2	0.2	07	0.2	0.2	07	0.2	0.2	0.2		27	2
Livestock Waterer 0.1 Commercial Air Conditioning 0.0		0.0	0.0	0.0	0.0	0.0	00 00	00 00					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		9 9	2 0
Aboriginal Commercial 0.0		0.0	0.0	0.0	0.0	000	0.0	0.0					0.0	0.0	0.0	0.0	0.0	000	00	0.0	0.0	0.0		0.0	0.0
		14.8	14.8	14.7	14.7	14.7	14.5	14.4					13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.6	13.1	ľ	3.0	3.0
COMMERCIAL TOTAL 82.7	7 82.7	82.7	82.7	83.1	81.7	81.1	2:08	90.08	8 9.08	80.2 79	79.7 79.3	3 79.1	72.2	72.0	67.0	61.3	55.6	1.09	59.5	58.1	9:05	41.9	42.1	42.0	41.6
INDUSTRIAL																									
Performance Optimization 72.0 Emergency Preparedness 0.0	72.0	72.0	720	72.0	71.9 0.0	0.0	71.7	7.17	7.1.7	71.7 68	58.6 66.5	63.5	64.4	64.4	64.4	64.4	63.7	0.0	0.0	0.0	62.2	58.5	0.0	0.0	0.0
72.0		72.0	72.0	72.0	71.9	71.9	71.7	71.7					64.4	64.4	64.4	64.4	63.7	64.2	64.2	64.2	62.2	58.5	- ·	- ·	6.3
GSL		4.2	4.2	4.2	4.2	4.2	4.2	4.2					42	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2			1.2
		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	3.8	3.8	3.8			8 9
Industrial (Basic) 0.0 Efficient Motors (QMR) 0.0	8 8	0.0	00	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0	8 00	0.0	0.0	0.0	0.0	0.0	0.0			2 0
8.2		67	7.9	7.9	7.9	7.9	7.9	7.9					7.9	67	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9			7.9
INDUSTRIAL TOTAL 80.2	2 80.0	80.0	80.0	80.0	79.9	79.9	9'62	79.6	7 9.67	79.6 76	76.6 74.5	71.4	72.3	72.3	72.3	72.3	71.7	72.1	72.1	72.1	70.2	66.4	64.2 (	64.2 (	64.2
EFFICIENCY PROGRAMS SUBTOTAL 198.8	.8 196.6	190.6	190.5	183.9	182.4	181.6	181.1	180.9	181.0	180.6 176	176.5 173.5	.5 169.6	163.5	163.2	157.9	152.1	145.8	150.8	150.1	148.8	139.1	125.2	121.6	121.5	117.4
ATION PROGRAMS					;	:	;							:	:	:	:	:	:						
Bioenergy 0.0	00	0.0	0.0	0.0	00	00	0.0	0.0			0.0			0.0	0.0	0.0	0.0	00	00	0.0	0.0	0.0			9 0
s			4	;	;		;								;		;		;						
Industrial Curtailable Kate 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0.0	0.0	0.0	0.0
MW IM DACTS (we have an a second	1066			183.0	182.4	181.6	1811							163.2	1570	1531	145.8	8 02 1	1601	1.48.8	1301				7.4
tion)		214.1	214.0	206.5	204.8	203.8	203.3				8.2 194.8			183.2	177.1	170.5	163.3	169.0	168.3	166.7	155.8				27.2

Note: Subtotals may not be exact due to rounding. \* Programs comprise the Commercial Building Envelope Program.

SOURCE: To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

Total 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 2	2000/01 2	001/02 2	002/03 2	003/04 2	2004/05 20	2005/06 20	006/07 26	02/08 20	008/09 20	00/10 20	At Ge	Seneration At C 2010/11	Seneration 2024/25
REDIDENTIAL CFL Hone Insulation Lower Income New Homes Water & Energ Saver Energy Bildent Light Fittures Refrigerator Retriement	000000000000000000000000000000000000000	0 0 0 0 0 0 0	000000000000000000000000000000000000000	000000000000000000000000000000000000000	0 0 0 0 0 0 0	000000000000000000000000000000000000000	0.0000000000000000000000000000000000000	0 0 0 0 0 0 0	000000000000000000000000000000000000000	0 0 0 0 0 0 0	0.0000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	1.6 0.0 0.0 0.0 0.0 0.0	3.1 2.0 0.0 0.0 0.0 0.0 0.0 5.3	9.8 0.0 0.0 0.0 0.0 0.0 0.0 9.8		10.2 10.7 0.4 1.0 0.0 0.0 0.0			4.3 8.7 1.8 1.7 0.8 0.0 7.9	0.0 18.7 1.5 1.7 0.8 0.0 23.0
DISCONTINUED/COMPLETED OUtdoor/Interes Residential Appliances Residential Appliances Seasonal LED Leghting Seasonal LED Leghting Water Heater Rental Retrofit/Demonstration Thermostat Refrigerator Buyb-back		3 00 00 00 00 00 00 00 00 00 00 00 00 00	2 600 000 000 000 000 000 000 000 000 00	13 000000012 50000000000000000000000000000	23 115 000 000 000 000 000 000 000 000 000	6.1.9 0.00	2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.1	23 23 25 23 25 25 25 25 25 25 25 25 25 25 25 25 25	2.5 00 00 00 00 2.5 5.5 00 00 00 00 00 00 00 00 00 00 00 00 00	2.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 2.6	24 24 25 25 26 26 26 26 26 26 26 26 26 26 26 26 26	25 24 25 25 25 26 26 26 26 26 26 26 26 26 26 26 26 26	25 000 000 000 000 000 000 000 000 000 0	2.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5 6 00 00 00 00 00 00 00 00 00 00 00 00 0	2.4 2.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	`	2.4 1.6 0.0 0.0 0.0 0.0 0.0 0.0	2.4 1.7 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		2.7 0.05 0.00 0.00 0.00 0.00 0.00 0.00	2.7 2.7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0
RESIDENTIAL TOTAL COMMERCIAI	<b>AL</b> 0.3	0.5	0.1	13	1.6	1.9	2.1	2.4	2.5	2.5	5.6	5.6	5.6	5.6	2.5	5.0	7.9	12.9	18.4	26.8	38.7	46.9	53.4	26.8
	0.0	000	000	0.0	2.6 0.0 0.0	5.7 0.0 0.0	9.2 0.0 0.0	10.8 0.0	11.6 0.8 0.0	15.1 1.1 0.0	16.4 1.5 0.0	17.4 1.7 0.0	18.5 2.0 0.0	19.7 2.4 0.0	21.7 3.8 0.0	24.2 4.2 0.0	27.7 5.4 0.0	31.1 7.4 0.2	34.1 8.7 0.7	38.5 9.3 1.8			2.2 2.8 5.5	51.2 12.8 5.5
Internal Retrofit Commercial Windows City of Winnipea PS Agreement	0.00	0 0 0	0000	0:0:0	E 0 0	9:00	9 0 0	0.7	0.9 0.0 0.0	0.3 0.0	1.1 0.3	0.0	1.3 0.0	1.4 0.0	1.7 0.8 0.1	22 1.1 0.3	2.4 1.5	2.8 1.7 2.0	3.0 2.1	3.2 2.1 2.2			4.6 2.8 2.8	4.6 2.0
Commercial Refrigeration Custom	0.0	0.0	000	0.0	0.0	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	0.8	1.2			2.2	5.1. 6.
Commercial Licines Washers Power Smart Shops Commercial Kitchen Appliances Commercial Licines Ominication		8 8 8	8 8 8	3 8 8 8	8 8 8 8	00 00 00	0.00	8 8 8 8	8 8 8	0000	0 0 0	8 8 8 8	8 8 8	8 0 0 8	00 00 00	0.00	8 8 8 8	0 0 0	8 0 0 0	00 00			2228	0.00
Network Energy Manager HVAC - Chillers Commercial New Buildings	00 00 00	0 0 0	0000	8 0 0 0	8 8 8 8	00000	0000	0000	8 0 0 0	0000	0.00	0 0 0	0000	0000	0000	0.0	0 0 0	8 0 0 0	0000	0.0	0000	0000	000	0.00
PS Energy Manager	0.0	0.0	0.0	0.0	2.9	6.3	9.8	11.8	13.5	17.6	0.0	21.1	22.7	24.6	29.0	32.8	39.4	46.3	52.4	0.0			0.0	83.6
DISCONTINUED/COMPLETED Roadway Lighting Agricultural Heat Pads Sentine Lighting Agricultural Demand Controller	0.00	0.0000	0.0	3.1 0.0 1.1 0.7	5.4 0.0 1.8	7.0 0.0 1.8	7.0 0.0 1.8 1.0	7.0 0.0 1.8 1.0	7.0 0.0 1.8	7.0 0.7 1.8	7.0 1.0 1.8	7.0 1.2 1.8	7.0 1.6 1.0	7.0 2.0 1.8	7.0 2.2 1.8	7.0 2.6 1.8	7.0 2.7 1.8	7.0 2.8 1.8	7.0 1.8 1.0	7.0 3.5 1.8	7.0 3.6 1.8		7.9 4.4 1.1	7.9 3.4 1.1
Infrared Hear Lamp Commercial Air Barrier Spray Valves Commercial Showerhead	0 0 0 0	0 0 0 0	0.0 0.0 0.2	9 0 0 0	9 0 0 0	0.0 0.0 0.2	00 0 0 00 0 0	0.0 0.0 0.2	0.0 0.0 0.0 0.0	0.0 0.0 0.2	0.0 0.0 0.2	0.0 0.0 0.0	0.0 0.0 0.2	0.0 0.0 0.0	0.6 0.0 0.2	0.6 0.0 0.2	0.0	0.0 0.3	0.0 0.0 0.2	0.6 0.2 0.2	0.3 0.3 0.2		) 3 3 3 3 3 3 3 3	0.7 0.0 0.2
Livestock Waterer Commercial Air Conditioning Aboriginal Commercial Parking Lot Controllers	00000	00000	00000	000000	0 0 0 0	000000	0.0	0.00 0.00	1.00000 0000000000000000000000000000000	100000	0.0 0.0 8	00000	1.00000	0.0000	1.0000 E	0.0	0.00 0.	0.00 0.00 5.00 5.00 5.00 5.00 5.00 5.00	20000	0.0	000 00 84	0.00	0.0	0.0 0.0 0.0 8 5
COMMERCIAL TOTAL		0.0	22	63	11.9	16.9	20.5	22.5	24.2	29.1	31.5	33.2	35.2	37.5	42.1	46.4	53.1	60.1	9.99	74.5		-	04.1	99.4
INDUSTRIAL Performance Optimization Emergency Preparedness	000	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		0.0	0.0	0.0	75.5	3.0	73.6
DISCONTINUED/COMPLETED Retrofit/Demonstration GSL High Efficiency Motors	00 00	0 0	0.0	0.3	0.0	6.9	2.3	3.0	5 4 5 8 8 8	3,8	3.8	3.8.5 3.8.5 3.8.5	46.4 3.8	3.8 3.8	3.8	6, 4,8 8,8	3.8	3.8		3.8	3.8	3.8	4.8	73.6 4.6 4.2
Industrial (Basic) Efficient Motors (QMR)	0.0	8 8 8	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
INDUSTRIAL TOTAL		0.0	1.0	0.1	17	3.7	7.7	12.0	13.9	45.5	47.3	47.6	56.6	61.1	62.2	65.8	8.69	71.3		6.9			92.0	82.4
EFFICIENCY PROGRAMS SUBTOTAL	0.3	0.5	3.3	9'8	15.2	22.6	30.3	36.9	40.6	77.1	81.4	83.4	94.4	101.2	106.9	117.2	130.9	144.3	159.4	1.871	201.6	221.9	249.6	208.5
CUSTOMER SELF-GENERATION PROGRAMS Bioenergy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	000	0.0	0.0	0.0	0.0	14.3	14.3	14.3	14.3	14.3	14.3	5.7	0.0
RATE/LOAD MANAGEMENT PROGRAMS  Curtallable Rates	0.0	0.0	0.0	0.0	40.7	46.4	24.7	32.7	80.0	48.2	58.0	57.1	68.0	110.3	148.5	153.8	189.1	183.3 1	10 10	172.8			170.0	0.0
MW IMPACTS (at meter) MW IMPACTS (at generation)	0.3	970	3.3	9.8	55.9 62.1	69.0 76.6	55.0 61.4	69.6	120.6	125.3	139.4	140.5 155.9	162.4	211.4	255.4	300.1	334.2	341.9 3 379.1 3	354.3 3	365.2	365.1 3	390.7	N/A 35.27	N/A 208.5
Appearance Subtother as we also be to be a subtother as a subtothe	odibana ot on																							

Note: Subtotals may not be exact due to rounding.

\* Programs comprise the Commercial Building Envelope Program.

\* SOURCE: To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

Total Average Winter MW Electric Incentive Based Programs

										Elect	ric Incent	tive Base	d Program	S													
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17 2	2017/18 2	2018/19 24	02/610	20/21 20	21/22 20:	22/23 2023/24	3/24 2024/2	5 2025/26	5 2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35 2	035/36 20	36/37 203	37/38 20	5038/39
CFI Home insulation Lover income New Horms West Drings Steer Water & Erings Saver Farings Affaires Religious do Retirement Religious do Retirement	20.1 16.4 11.5 0.7 0.0	18.0 16.4 1.5 0.7 0.0 0.0	12.1 16.4 1.5 1.5 0.7 0.0	12.1 16.4 1.4 1.5 0.7 0.0	0.0 16.4 1.4 1.5 0.7 0.0	0.0 16.4 1.4 1.5 0.7 0.0	0.0 16.4 1.4 1.5 0.7 0.0	0.0 16.4 1.4 1.5 0.7 0.0	0.0 16.4 11.4 11.5 0.7 0.0					0.0 16.4 1.3 1.5 0.0 0.0	0.0 16.4 1.3 1.5 0.0 0.0	0.0 11.3 1.5 0.0 0.0	0.0 16.4 1.3 0.0 0.0	0.0 16.4 1.3 1.5 0.0	0.0 16.4 11.3 11.5 0.0 0.0	0.0 16.4 1.3 1.5 0.0 0.0	0.0 16.4 1.3 0.0 0.0	0.0 1.1 1.5 0.0 0.0	0.0 15.4 1.1 0.0 0.0	0.0 1.1 0.0 0.0 0.0	-	0.0 0.7 0.0 0.0 0.0 0.0	000 000 000 000 000
DISCONTINUED/COMPLETED OUtdoor Title Residential Appliances Residential Appliances Support Purrace & Bolter Support Purrace & Bolter Water Please Remail Water Please Remail	407 2.4 0.4 0.0 0.0	38.7 2.4 0.4 0.2 0.0 0.0	32.7 2.4 1.7 0.0 0.0	32.7 2.4 1.7 0.2 0.0	20.6 2.4 1.7 0.2 0.0	20.6 2.4 0.7 0.0 0.0	20.3 2.4 1.7 0.4 0.1	20.3 2.4 1.7 0.4 0.1	20.3 2.4 1.7 0.4 0.0	20.3 2.4 1.7 0.4 0.0	20.3 2 2.4 1.7 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	20.3 20 2.4 2.4 2 0.4 0 0.1 0 0.0 0 0.0 0	20.2 20.2 20.2 2.4 2.4 2.4 0.7 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	19.5 0.0 0.7 0.1 0.0	19.5 2.4 0.0 0.1 0.1	19.2 2.4 0.0 0.0 0.1	19.2 0.0 0.0 0.1	19.2 2.4 0.0 0.0 0.1	192 2.4 0.0 0.0 0.1	19.2 2.4 0.0 0.0 0.1	192 2.4 0.0 0.0 0.1	18.9 0.0 0.0 0.1	17.9 2.4 0.0 0.0 0.1	16.3 2.4 0.0 0.0 0.1	163 1 224 2 0.0 0.0 0.0 0.0	2.6 0.0 0.0 0.0 0.0	8.8 0.0 0.0 0.0 0.0 0.0 0.0
Retrofit/Demonstration Thermostar Thermostar Refrigerator Buy-back RESIDENTIAL TOTAL		0.0 0.0 4.9	0.0 0.0 0.0 37.6	0.0 0.0 0.0 4.9 37.5	0.0 0.0 4.9	0.0 0.0 4.9	000 000 4.9	0.0 0.0 0.0 25.2	0.0 0.0 4.9					0.0 0.0 0.0 3.1 3.1	0.0 0.0 0.0 3.1	0.0 0.0 3.0 22.3	00 00 30 222	000 000 222	0.0 0.0 22 122	0.0 0.0 22.1 22.1	000 000 22.1	0.0 0.0 2.9 21.9	00 00 25 204	0.0 0.0 2.5		0.0 0.0 2.5 15.1	000 000 2.5 1.1
COMMERCIAL Commercial Lighting Program Commercial Earth Power Commercial Instaltion Internal Retrofit Commercial Windows City of Winnipag PS Agreement City of Winnipag PS Agreement	45.7 11.2 4.8 4.0 4.0	45.7 11.2 4.8 4.0 4.0	45.7 11.2 4.8 4.0 4.0	45.7 11.2 4.8 4.0 4.0	45.7 11.2 4.8 4.0 2.5	44.9 11.2 4.0 4.0 2.4	44.9 11.2 4.8 4.0 2.4	44.9 11.2 4.8 4.0 2.3	44.9 11.2 4.8 4.0 2.2	•		•		40.8 10.0 4.0 4.0 3.8 0.5	40.8 10.0 4.8 3.8 0.3	37.6 8.3 4.8 4.0 3.8	32.7 7.6 4.8 4.0 3.8	28.8 6.0 4.8 3.6 0.2	28.8 6.0 4.8 4.0 3.5	28.8 6.0 4.0 3.5 0.1	28.8 6.0 3.1 4.0 3.3	27.0 3.2 1.7 3.6 3.1	23.5 2.1 1.7 2.8 0.1	23.5 2.1 2.2 0.0 0.1			2.0 0.0 0.1 0.1
Commercal Methygeration Custom Custom Commercal Commercal Order-Washers Power Smart Shops Commercial Richer Appliances Commercial Building Optimization Network Creany Manager HMAC. Child Energy Manager Commercial Netw Buildings PS Energy Manager	1.9 1.4 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.9 0.3 0.1 0.0 0.0 0.0 0.0 0.0 0.0	1.9 0.3 0.1 0.0 0.0 0.0 0.0 0.0 0.0	1.9 1.4 0.3 0.1 0.0 0.0 0.0 0.0 0.0	24 114 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1.9 1.4 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	113 003 001 000 000 000 000	1.3 0.3 0.1 0.0 0.0 0.0 0.0 0.0 746	1.3 0.3 0.0 0.0 0.0 0.0 0.0 0.0 74.4	113 003 000 000 000 000 000 741 741	113 000 000 000 000 000 000 000 000	1.3 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	113 113 113 114 114 114 114 114 114 114	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	000 000 000 000 000 000 000 000 000 00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 3.20	0.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 29.6	0.08 0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 0.00
DISCONTINUED/COMPLETED Readownly Lighting Readownly Lighting Agricultural frees Pack Servined Information of Commonler of Margardura Demand Commonler of Margardura Demand Commonler Commonler Adversarian Servine And Emiric Servine And Adversarian Advoignal Commonler Advoignal Commonler Readownly Commonlered Advoignal Commonler Readownly Commonlered	7.0 7.0 1.8 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.0 7.0 1.8 1.16 1.0 0.3 0.3 0.0 0.0 0.0 0.0	7.0 3.9 3.9 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.0 3.9 1.8 1.0 0.6 0.3 0.3 0.0 0.0 0.0 0.0 0.0	7.0 1.8 1.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.0 3.9 1.18 1.10 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	7.0 3.9 1.18 0.05 0.03 0.00 0.00 0.00 0.00	70 118 118 110 00 00 00 00 00 00 00 00	7.0 1.8 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.0 3.39 1.1.0 0.06 0.00 0.00 0.00 0.00 0.00 0.0	7.0 1.18 0.06 0.00 0.00 0.00 0.00 0.00 0.00 0.0	7.0 7.7 7.1 1.18 1.1.18 1.1.10 1.1.0	70 70 70 70 70 70 70 70 70 70 70 70 70 7	7.0 3.0 1.8 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.0 3.0 1.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	7.0 3.0 1.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	7.0 3.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	7.0 1.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	7.0 3.0 3.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	7.0 3.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.0 3.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	7.0 2.7 2.7 1.18 0.00 0.00 0.00 0.00 0.00 0.00 0.00	23 23 23 23 20 20 20 20 20 20 20 20 20 20 20 20 20	7.0 2.2 2.2 2.2 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.0 2.2 2.2 2.2 2.2 2.2 2.0 0.0 0.0 0.0 0	2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2	30 00 00 00 00 00 00 00 00 00 00 00 00 0
COMMERCIAL TOTAL	1	91.3	91.3	91.3	7.16	90.3	89.7	89.3	89.2					80:0	79.8	74.8	1.69	63.4	63.3	62.6	61.3	53.8	45.1	42.6			10.4
INDUSTRIAL Performance Optimization Emergency Preparedness	75.5 0.0 75.5	75.5	75.5	75.5 0.0 75.5	0.0	75.4	75.4	75.1	75.1 0.0 75.1		75.2		00 000	0.0	0.0	0.0	0.0	64.3 0.0 64.3	0.0	64.3 64.3 64.3	64.3 64.3	62.3 0.0 62.3	0.0 58.6 58.6	56.3 56.3	56.3 5	56.3	0.0
DISCONTINUED/COMELETED Retrofit/Demonstration GSI, High Efficiency Motors Industrial (Basic) Efficient Motors (QMR)	43 3.8 0.0 0.0 8.2	4.2 3.8 0.0 0.0 8.0	4.2 3.8 0.0 0.0 7.9	4.2 3.8 0.0 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 7.9	4.2 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 7.9					4.2 3.8 0.0 0.0 7.9	4.2 3.8 0.0 0.0 7.9	4.2 3.8 0.0 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 7.9	4.2 3.8 0.0 7.9			3.8 0.0 0.0 7.9
INDUSTRIAL TOTAL	AL 83.7	83.5	83.4	83.4	83.4	83.3	83.3	83.1	83.1	83.1 8	83.1 8	77 0.08	77.9 74.9	72.9	72.9	72.9	72.9	72.2	72.2	72.2	72.2	70.3	999	64.2	64.2 6	64.2 (	64.2
CUSTOMER SELF-GENERATION PROGRAMS Bioenergy	000	00	00	000	000	000	000	00	0.0						000	00	00	000	000	000	000	000	00	0.0			00
RATE/LOAD MANAGEMENT PROGRAMS Curtallable Rates	8 88	00 00	00 00	0.00	8 88	00 00	00 00	00 00	0.0	00 00	00 00	0 00	0.0 0.0	000	00 00	00 00	00 00	8 00	0.00	8 88	00 00	8 8 8	00 00	0.00	00 00	00 00	0 00
MW IMPACTS (atmeter) MW IMPACTS (atgeneration)	220.6 248.1	218.4	212.4	212.2	200.6	199.1	198.2 222.6	۰	197.4			10.01	- 7		175.2	169.9	164.1	157.8 177.0	157.6	157.0	155.6	146.0	132.1		10.10		15.8

Note's ubroals may not be exest due to rounding.

\* Programs comprise the Commercial Building Envelope Program.

SOURCE. To populate this 2010 11 chart, take these figures from the Access report for Camulative Energy

# **Appendix H**Natural Gas Savings (m3) - Incentive-Based Programs

2010/11 Annual Gas Savings - million m3 Natural Gas Incentive Based Programs

										Natr	al Gas	Natural Gas Internave Based Frograms	Dased :		n														
DECIDENTIAL	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19 2	2019/20	2020/21 20	202 1/22 202	2022/23 202	2023/24 202	2024/25 202	2025/26 202	202 6/27 202	2027/28 202	2028/29 2029	2029/30 2030/31	3/31 2031/32	/32 2032/33	/33 2033/34	/34 2034/35	/35 2035/36	36 2036/37	37 2037/38	8 2038/39	22
NEADERINAL LOW INCOME (LEEP) Home Insulation Water & Pregry Saver New Home Program	1.6 0.8 0.1 4.0	1.6 1.4 0.1 4.0	0.1 1.4 0.0 0.0 4.0	1.6 1.4 0.1 4.0	1.6 1.4 0.8 0.1	0.9 1.4 0.8 3.3	0.9 1.4 0.8 0.1	0.9 1.4 0.1 3.3	0.9	0.9 1.4 0.1 3.3	0.9 1.4 0.8 3.3	0.09	0.9 0.8 0.1 0.1 3.3 3.3	0.9	0.9 0 1.4 1 0.8 0 0.1 0	0.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.9 0 1.4 1 0.0 0 0.1 0	0.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.9 0.9 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1	99 0.9 1 14 1.4 1 0.1 1 0.1	9 0.9 0 0.0 1 0.1 4 2.4	9 0.9 1.4 1.4 0.0 1 0.1	9 0.9 1.4 1.4 0.0 1 0.1	114	144 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0.0 0.0 0.0 2.4	0.0	0.0 0.0 0.0 2.4	I
DISCONTINUED/COMPLETED Res HE Gas Furnace - Boiler Thermostal	0.0	0.0	0.0	0.0	0.00	000	000	000	00 00	000	0.00	0000	0000	000	0.00	000	000	0000	0.0	000	000	000	000	000	000	0000	000	0.00	1
RESIDENTIAL TOTAL	4.0	4:0	4.0	4.0	4.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4 2	2.4 2	2.4 2	2.4 2.4	4 2.4	4 2.4	4 2.4	1 2.4	1 2.4	1 2.4	2.4	2.4	2.4	ı
COMMERCIAL Commercial insulation HVAC Commercial windows COMMERCIAL COMMERCIA	22 03 00 00 00 00 00 00 00 00 00 00 00 00	21.1 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.1 0.3 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	4.3 000000000000000000000000000000000000	2.1 0.3 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	43 60 60 60 60 60 60 60 60 60 60 60 60 60	1.5 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	43 60 60 60 60 60 60 60 60 60 60 60 60 60	4.3 000 000 1.5 1.0 000 000 000 000 000 000 000 000 000	2.1 1.15 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	2.1.1.2.1.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2	22.1 1.15 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.0	22.1.1.5.1.1.5.00.00.00.00.00.00.00.00.00.00.00.00.0	12.000000000000000000000000000000000000	22.1.1.5.1.1.5.1.0.0.0.0.0.0.0.0.0.0.0.0.0	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	1.	2.1 1.15 1.15 0.00 0.00 0.00 0.00 0.00 0.	1	2.2 2.2 2.2 2.4 4.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.7 2.7 2.7 2.7 3.7 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	2.1.00000000000000000000000000000000000	22.500000000000000000000000000000000000		000000000000000000000000000000000000000	000000000000000000000000000000000000000	888888888888888888888888888888888888888	1
DISCONTINUED/COMPLETED Commercial Rinse and Save	0.0	0.0	0.0	0:0	0.0	0:0	000	0.0	0.0	0.0	0.0	0:0	0.0	000	0 00	0.0	0.0	0.0	000	0.0 0.0	0.0 0.0	0.0	0.0	000	000	000	0.0	0.00	
COMMERCIAL TOTAL INDUSTRIAL Industrial Natural Cas Optimization INDUSTRIAL TOTAL	4.3 3.1 3.1	4.3 3.1	4.3 3.1 3.1	4.3 3.1 3.1	3.1	4.3 3.1 3.1	4.3 3.1 3.1	3.1	3.1	4.3 3.1	3.1	3.1 3.1 3	4.1 4 3.1 3	3.1	4.1 4 3.1 3 3.1 3	4.1 4 3.0 3 3.0 3	4.1 4 3.0 3 3.0 3	4.1 4 3.0 3 3.0 3	4.1 4.1 3.0 3.0 3.0 3.0	4.1 4.0 3.0 0.3 3.0 0.3	3 0.3	3 0.3	3 0.3	3 0.3	0.00	00 00	0.0	00 00	1 1
EFFICIENCY PROGRAMS SUBTOTAL	11.4	11.4	11.4	11.4	11.4	10.7	10.7	10.7	10.7	10.7	10.5	10.5	10.5	10.5	0.5	9.5	6.5	9.5	9.5 9.5	5 6.7	7 6.7	7 6.7	7 6.7	7 6.7	7 2.4	2.4	2.4	2.4	1.1
CUSTOMER SELF.GENERATION Bloenergy Optimization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	000	0.0	000	0 00	000	0.00	000	0.0	0.00	00 00	0.0	0.0	000	000	0.0	0.0	000	0.0	0.0	
LESS: INTERACTIVE EFFECTS	-1.9	-1.9	-1.9	-1.9	-19	0.0	0.0	0.0	0.0	0:0	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0:0	0:0	
NET IMPACT: OVERALL	9.5	9.5	9.5	9.5	9.5	10.6	10.6	10.6	10.7	10.7	10.5	10.5	10.5	10.5	9 2:01	9.5	9.5	9.5	9.5 9.5	.5 6.7	7 6.7	7 6.7	7 6.7	7 6.7	7 2.4	2.4	2.4	2.4	-
Note: Subtotals may not be exact due to rounding. * Programs comprise Commercial Building Envelope Program.	rounding.	'rogram.																											

Persisting Gas Savings - million m3 Natural Gas Incentive Based Programs

2024/25	7.6 0.4 0.0 8.4	6.9 0.2 7.1	15.5	3.2 0.6 0.5	0.00	0.0 0.0 0.0	r:6 00	0.0	8. 8.	26.3	0.0	-1.8	24.5
2023/24	7.6 0.4 0.0 8.4	6.9	15.5	4.7 3.2 0.6 0.5	0.0	0.0000	1.6	0.0	2.7	27.3	0.0	-2.3	25.0
2022/23	7.6 0.5 0.0 8.5	6.9	15.6	3.2 0.6 0.5	0.0 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	4.7	29.4	0.0	-2.2	27.2
2021/22	7.6 0.5 0.0 8.5	6.9	15.6	3.2 0.7 0.5	0.0	0.0 0.0 0.0	0.0	0.0	4.9	29.7	0.0	-2.1	27.6
2020/21	7.6 0.5 0.0 8.5	6.9	15.6	4.7 3.2 0.7 0.5	0.0	0 0 0 0	6 00	0.0	4.9	29.7	0.0	-2.1	27.6
2019/20	7.6 0.5 0.0 8.5	6.9	15.6	3.2 0.7 0.5	8 0 0 1 0 0	0.0000	6.9	0.0	4.9	29.8	0.0	-2.1	27.7
2018/19	7.6 0.5 0.0 8.5	6.9	15.6	3.2 0.8 0.5	0.0	0.0 0 0 0	9.4	0.3	4.9	30.2	0.0	-2.1	28.1
2017/18	7.6 0.5 0.0 8.5	6.9 0.2 7.1	15.6	3.2 0.8 0.5 0.5	0.0	0.0000	9.5	10.8	4.9	31.3	0:0	-2.1	29.2
2016/17	7.6 0.5 0.0 8.5	6.9	15.6	3.2 0.8 0.5	0.0	0.0000	9.5	11.	4.9	31.6	0.0	-2.1	29.5
2015/16	7.6 0.5 0.0 8.5	6.9	15.6	3.2 0.8 0.5	0.0	0.0 0 0 0	2. 4.5	2.4	4.9	32.4	0.0	-2.1	30.4
2014/15	7.6 0.5 0.0 8.5	6.9 0.2 7.1	15.6	4.7 0.8 0.5	0.0	0.0 0 0 0	2.4	2.4	4.9	32.4	0.0	-1.9	30.6
2013/14	7.6 0.7 0.0 8.7	6.9	15.8	3.2 0.8 0.5	0.0	0.0 0 0	2 9.5	2.4	4.9	32.6	0.0	-5.0	27.6
2012/13	7.6 0.7 0.0 8.7	6.9	15.8	3.2 0.8 0.5	0.0	0.0 0.0 0	9.5	2.4	4.9	32.6	0.0	-7.0	25.7
2011/12	7.6 0.7 0.0 8.7	6.9	15.8	3.2 0.8 0.5	0.0	0.0000	2.4	2.4	4.9	32.6	0.0	9.7-	25.0
2010/11	7.6 0.7 0.0 8.7	6.9 0.2 7.1	4.0	3.4.7 0.05 0.05	0.0	00000	9.5	2.4	4.9	32.6	0.0	-8-	24.6
2009/10	7.6 0.7 0.0 8.7	6.9 0.2 7.1	15.8	6.2 0.7 0.5	0.0	0.0000	2.4	2.4	4.9	34.1	0.0	-8.5	25.6
2008/09	5.6 0.3 0.0 6.0	5.8	11.9	8.4 2.1 0.7 0.2	000	0.0000	2. 8.0	10.1	3.8	25.9	0:0	-5.9	20:0
2007/08	3.9 0.0 0.0 1.1	4.0	8.3	2.5 1.1 0.7	000	0 0 0 0	4.4 L.1	1.1	1.7	15.5	0.0	-3.8	11.7
2006/07	500 500 500 500 500 500 500 500 500 500	2.6	2.0	0.0.0.0 4.8.7.00.0	000	0.0000	4. 0.8	0.8	0.0	7.3	0.0	-3.0	4.3
2005/06	0.00 0.0	9:0	1:0	0.0000	800	0.0000	9 00	0.0	0.0	1.6	0:0	-2.6	-1.0
2004/05	00000	0.00	0:0	00000	000	0 0 0 0	00 07	0.0	0.0	0.2	0.0	-1.2	-1.0
2003/04	00000	0:0	0:0	0.0.0.0.0	800	0.0000	- 0 - 0	0.0	0:0	0.1	0:0	0:0	0.1
2002/03	00000	0.00	0.0	0.0.0.0.0	000	0.0000	L:0 0	0.0	0.0	0.1	0.0	0.0	0.1
2001/02	00000	0.0	0.0	00000	000	0 0 0 0	0 0	000	0.0	0.0	0.0	0.0	0.0
PICCIPINITIAL	KESILEN I MA Home insulation Low Income (LEEP) New Home Program Water & Energy Saver	DISCONTINUED/COMPLETED Res HE Gas Furnace - Boiler Thermostat	RESIDENTIAL TOTAL	COMMERCIAL HVAC Commercial Insulation City of Winning Agreement Commercial Windows	CBUP Commercial Custom Measures Power Smart Shops	Commercial New Buildings Commercial Washers Network Energy Manager Commercial Kitchen Appliances	DISCONTINUED/COMPLETED Commercial Rinse and Save	COMMERCIAL TOTAL	INDUSTRIAL Industrial Natural Gas Optimization INDUSTRIAL TOTAL	EFFICIENCY PROGRAMS SUBTOTAL	CUSTOMER SELF-GENERATION Bloenergy Optimization	LESS: INTERACTIVE EFFECTS	NET IMPACT; OVERALL

Note: Subtotals may not be exact due to rounding. \* Programs comprise Commercial Building Envelope Program.

SOURCE: To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

Persisting Gas Savings - million m3 Natural Gas Incentive Based Programs

	70, 1000	2000					914113	0000	7000	107 7 000	2000	7 200	007.000	
RESIDENTIAL	7072/70	707977	707/178	67/8707	2029//30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/3/	2037/38	2038/39
Home Insulation	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.3	5.4	3.7	2.0
Low Income (LIFED)	); C	); C	). C	); C	) <u>_</u>		); C	) <	. c		S: C	; c	. c	) i C
New Home Program				. 0	. 6	; c	. O	; c	. O	. c	. c	. c	0000	5.0
Water & Finerroy Saver	±:0	t C	+ O	t: 0	t 0	t: 0	: C	t 0	t 0	0.0	0.0	000	7.0	- 0
	200	0.00	S 8	0.00	2 0	0 00 V	8.0	8 8	0 c	o co	0.00	09	A 3	2.6
	r o	r o	r o	r o	r S	r o		r j	ò	9	9	9	P.	1:7
DISCONTINUED/COMPLETED														
Res HE Gas Furnace - Boiler	6.9	6.9	6.9	6.9	6.9	6.3	4.3	2.9	1.2	0:0	0:0	0:0	0.0	0:0
Thermostat	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
	7.1	7.1	7.1	7.1	7.1	6.5	4.4	2.9	1.2	0:0	0:0	0.0	0:0	0.0
RESIDENTIAL TOTAL	15.5	15.5	15.5	15.5	15.5	14.8	12.7	11.2	9.5	8.3	8.0	0.9	4.3	2.4
COMMERCIAL														
HVAC	4.7	4.7	4.7	4.7	4.7	4.7	4.3	2.2	-0.1	-1.5	0.0	0:0	0.0	0.0
Commercial Insulation	3.2	3.2	3.2	3.2	3.2	3.2	3.0	2.2	1.1	0.0	0.0	0.0	0.0	0.0
City of Winnipg Agreement	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Commercial Windows	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0
CBOP	0.0	0.0	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 Measures	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
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
Commercial New Buildings	0.0	0.0	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 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
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
Commercial Kitchen Appliances	-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
	8.7	8.7	8.7	8.7	8.5	8.5	7.8	4.8	1.3	-1.5	0.0	0.0	0.0	0.0
DISCONTINUED/COMPLETED														
Commercial Rinse and Save	0.0	0.0	0:0	0.0	0:0	0:0	0:0	0.0	0:0	0:0	0:0	0.0	0:0	0.0
-	0.0	0.0	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 TOTAL	8.7	8.7	8.7	8.7	8.5	8.5	7.8	4.8	1.3	-1.5	0.0	0:0	0.0	0.0
INDUSTRIAL Inchestrial Natural Gae Ontimization	σ.	α	0	0.3	0.0	0.0	0.0	0.0	0	0	0	0	0	0
INDUSTRIAL TOTAL	2. 6.	8:	0.3	0.3	0.2	0.2	0.2	0.2		0:0	0:0	0:0	0:0	0.0
EFFICIENCY PROGRAMS SUBTOTAL	25.9	25.9	24.4	24.4	24.2	23.6	20.7	16.3	10.8	6.9	8.0	6.1	4.3	2.4
CUSTOMER SELF-GENERATION														
Bioenergy 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	0.0	0.0	0.0	0.0	0:0
LESS: INTERACTIVE EFFECTS	-1.0	-1.1	6:0-	9:0-	-0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0.1
NET IMPACT: OVERALL	25.0	24.8	23.6	23.8	23.8	23.5	20.6	16.2	10.7	89	7.9	62	4.4	2.5

Note: Subtotals may not be exact due to rounding. \* Programs comprise Commercial Building Envelope Program.

SOURCE: To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

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

ις.																					
2024/25	9.0 1.3 0.8 0.5	11.6	7.0	7.1	18.8	6.2 5.4 0.8	0.6	0.5	0.0	0.00	13.1	0.0	0:0	13.1	4.9	4.9	36.8	0.0	0:0	-1.8	35.0
2023/24	9.0 1.3 0.8 0.5	11.6	7.0	7.1	18.8	5.4	9:0	0.2	0.0	0 0 0	13.2	0:0	0:0	13.2	5.8	5.8	37.8	0:0	0:0	-2.3	35.5
2022/23	9.0 1.4 0.8 0.5	11.7	7.0	7.1	18.9	6.2 5.4 0.8	0.7	0.2	0.0	000	13.2	0:0	0:0	13.2	7.8	7.8	39.9	0:0	0.0	-2.2	37.7
2021/22	9.0 1.4 0.8 0.5	11.7	7.0	7.1	18.9	5.4	0.7	0.2	0.0	8 8 8	13.3	0:0	0:0	13.3	8.0	8:0	40.2	0.0	0.0	-2.1	38.1
2020/21	9.0 1.4 0.8	11.7	7.0	7.1	18.9	5.4	0.7	0.2	0.0	0.00	13.3	0.0	0:0	13.3	8.0	8:0	40.3	0:0	0:0	-2.1	38.1
2019/20	9.0 1.4 0.8 0.5	11.7	7.0	7.1	18.9	5.4	0.8	0.5	0:0	0 0 0	13.5	0:0	0:0	13.5	8:0	8:0	40.5	0:0	0:0	-2.1	38.4
2018/19	9.0 1.4 0.8 0.5	11.7	7.0	7.1	18.9	6.2 5.4 0.8	0.8	0.2	0.0	0 0 0	13.7	0.3	0.3	13.9	8.0	8.0	40.9	0:0	0.0	-2.1	38.8
2017/18	9.0 1.4 0.8	11.7	7.0	7.1	18.9	6.2 5.4 0.8	0.8	0.2	0.0	000	13.8	1.2	1.2	15.1	8.0	8.0	42.0	0.0	0.0	-2.1	39.9
2016/17	9.0 1.4 0.8 0.5	11.7	7.0	7.1	18.9	6.2 5.4 0.8	0.8	0.2	D:00	000	13.8	1.5	1.5	15.4	8.0	8:0	42.3	0:0	0.0	-2.1	40.2
2015/16	9.0 1.4 0.8	11.7	7.0	7.1	18.9	5.4	0.8	0.2	0.0	0 0 0	13.8	2.4	2.4	16.2	8.0	8:0	43.1	0:0	0.0	-2.1	41.0
2014/15	9.0 2.1 0.8 0.5	12.5	7.0	7.1	19.6	5.4	0.8	0.2	0.0	0.0.0	13.8	2.4	2.4	16.2	8:0	8:0	43.8	0.0	0.0	-3.8	40.1
2013/14	9.0 2.3 0.8 0.5	12.7	7.0	7.1	19.8	6.2 5.4 0.8	0.8	0.2	0.0	0 0 0	13.8	2.4	2.4	16.2	8.0	8:0	44.0	0:0	0.0	6.9-	37.1
2012/13	9.0 2.3 0.8 0.5	12.7	7.0	7.1	19.8	6.2 5.4 0.8	0.8	0.2	0.0	0 0 0	13.8	2.4	2.4	16.2	8.0	8.0	44.0	0:0	0.0	-8.9	35.2
2011/12	9.0 2.3 0.8	12.7	7.0	7.1	19.8	6.2 5.4 0.8	0.8	0.2	0.0	0 0 0	13.8	2.4	2.4	16.2	8.0	8.0	44.0	0:0	0:0	-9.5	34.5
2010/11	9.0 2.3 0.8 0.5	12.7	7.0	7.1	4.0	5.4	0.8	0.2	L:0	000	13.8	2.4	2.4	16.2	8:0	8:0	44.0	0:0	0:0	-10.0	34.1
2009/10	7.6 0.7 0.0	8.7	6.9	7.1	15.8	3.2	0.7	10.0	0.0	0.00	11.0	2.4	2.4	13.4	4.9	4.9	34.1	0.0	0.0	-8.5	25.6
2008/09	5.6 0.0 0.3	0.9	5.8	5.9	11.9	2.1	0.7	0.0	0.0	0.00	8.0	2.1	2.1	10.1	3.8	3.8	25.9	0.0	0.0	-5.9	20.0
2007/08	3.9 0.0 0.2 0.2	4.1	4.0	4.2	8.3	2.5	0.7	000	0.0	000	4.4	1.1	11	5.5	1.7	1.7	15.5	0.0	0.0	3.8	11.7
2006/07	0.0	2.3	2.6	2.7	5.0	0.3	0.7	0.0	0.0	0 0 0	1.4	0.8	8:0	2.2	0.0	0:0	7.3	0:0	0.0	-3.0	4.3
2005/06	0.0	0.4	9:00	9:0	1.0	0.00	9:0	0.0	0.0	0 0 0	9:0	0.0	0:0	9:0	0.0	0:0	1.6	0:0	0.0	-2.6	-1.0
2004/05	00000	0.0	0.0	0:0	0:0	0000	07	000	0:0	0 0 0	0.2	0:0	0:0	0.2	0.0	0:0	0.2	0:0	0.0	-12	-1.0
2003/04	0.0000	0.0	0.0	0:0	0:0	0.00	0.1	0.0	0.0	0 0 0	0.1	0:0	0:0	0.1	0.0	0.0	0.1	0:0	0:0	0:0	0.1
2002/03	0.0000	0:0	0.0	0:0	0:0	0.00	0.1	0.0	0.0	000	0.1	0:0	0:0	1.0	0.0	0:0	0.1	0:0	0.0	0.0	0.1
2001/02	00000	0:0	0.0	0:0	0:0	0.00	0:0	0.0	0.0	0 0 0	0.0	0:0	0:0	0:0	0.0	0:0	0:0	0:0	0:0	0:0	0.0
3ESIDENTIAL	Home Insulation Low Income (LIEEP) Water & Energy Saver New Horne Program	,	DISCONTINUED/COMPLETED Res HE Gas Furnace - Boiler Thermostat		RESIDENTIAL TOTAL	COMMERCIAL HVAC Commercial Insulation* Commercial Windows*	City of Winnipg Agreement	Commercial Custom Measures	Commercial Kitchen Appliances Power Smart Shops	Commercial Washers Commercial New Buildings Materials Forces Managed	ואלניטיטה בוימישאן ואימוומשמים	DISCONTINUED/COMPLETED Commercial Rinse and Save		COMMERCIAL TOTAL	INDUS I RIMAL Industrial Natural Gas Optimization	INDUSTRIAL TOTAL	EFFICIENCY PROGRAMS SUBTOTAL	SUSTOMER SELF-GENERATION Bioenergy Optimization		LESS: INTERACTIVE EFFECTS	NETIMPACT: OVERALL

Note: Subtotals may not be exact due to rounding.
\* Programs comprise Commercial Building Envelope Program.

SOURCE: To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

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

			5	)			2							
י אובי אובי אובי אובי אובי אובי אובי אוב	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
KESIDENIIAL	(	4	(	4	(	4	(	0	0	0				
Home Insulation	9:0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	7.8	6.9	5.2	3.4
Water & Energy Saver	0.0	0.0	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 Home Program	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.2
	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.7	10.7	10.4	8.4	6.7	4.8
DISCONTINUED/COMPLETED														
Res HE Gas Furnace - Boiler	7.0	7.0	7.0	7.0	7.0	6.4	4.4	2.9	1.2	0:0	0:0	0:0	0.0	0:0
- Inermostat	7.7	7.0	0.7	7.0	7.7	7.0	- O	0.0	0:0	0:0	0:0	0.0	0.0	0:0
			1.7	1.7	1.7	0.0	4.4	6.3	7:1	0.0	0.0	0:0	0.0	0.0
RESIDENTIAL TOTAL	17.9	17.9	17.9	17.9	17.9	17.3	15.2	13.7	11.9	10.7	10.4	8.4	6.7	4.8
COMMERCIAL														
HVAC	6.2	6.1	6.1	6.1	6.1	6.1	5.8	3.7	1.4	0.0	0:0	0.0	0.0	0:0
Commercial Insulation*	5.4	5.4	5.4	5.4	5.4	5.4	5.1	4.3	3.2	2.1	0.0	0.0	0:0	0:0
Commercial Windows*	0.8	0.8	0.8	0.8	8.0	0.8	0.8	0.7	9.0	0.3	0.0	0.0	0.0	0.0
City of Winnipg Agreement	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0:0	0.0
CBOP	0.0	0.0	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 Measures	0.2	0.2	0.2	0.2	0.1	0.0	0:0	0:0	0.0	0.0	0.0	0:0	0.0	0.0
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
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
Commercial 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
Commercial New Buildings	0.0	0.0	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
	12.8	12.8	12.8	12.8	12.6	12.6	11.8	<u>ω</u>	5.3	2.5	0.0	0.0	0:0	0:0
DISCONTINUED/COMPLETED Commercial Rinse and Save	00	0	00	00	0	00	0.0	00	0	0	00	0	00	0
	0:0	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0:0	0.0	0.0	0.0
COMMAEDCIALTOTAL	128	128	12.8	128	12.6	12.6	118	α	т. С.	25	00	C	00	
INDUSTRIAL		i i		2	) i	2	) :	9	5	) į	5	5	9	5
Industrial Natural Gas Optimization	4.8	4.8	3.3	3.3	3.2	0.5	0.5	0.5	0.3	0.3	0:0	0:0	0.0	0.0
INDUSTRIAL TOTAL	4.8	4.8	3.3	3.3	3.2	0.5	0.5	0.5		0.3	0:0	0.0	0.0	0:0
EFFICIENCY PROGRAMS SUBTOTAL	35.5	35.4	33.9	33.9	33.7	30.3	27.4	23.0	17.5	13.6	10.4	8.5	6.7	4.8
CUSTOMER SELF-GENERATION														
Bioenergy 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	0:0	0:0	0.0	0:0	0:0
LESS: INTERACTIVE EFFECTS	-1.0	<u>-</u>	6:0-	-0.7	-0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0:0
NET IMPACT: OVERALL	34.5	34.3	33.1	33.3	33.3	30.2	27.3	22.8	17.4	13.5	10.3	8.5	8.9	4.9

Note: Subtotals may not be exact due to rounding. \* Programs comprise Commercial Building Envelope Program.

SOURCE: To populate this 2010-11 chart, take these figures from the Access report for Cumulative Energy

#### Appendix I

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

2010/11 Annual Energy Savings - GW.h Electric CSI Programs

#### Power Smart Residential Loan Residential Earth Power Loan RESIDENTIAL

R-2000 Component of the New Home Program Solar Hot Water Heating ecoENERGY

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 0.0

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.5 0.0 0.0 1.2

0.0 0.0 1.2

2023/24

2022/23

2021/22

2020/21

2019/20

2018/19

2017/18

2016/17

2015/16

2014/15

2013/14

2012/13

2011/12

2010/11

0.0

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<u>1.</u> 2. ε.

2 t.

#### DISCONTINUED/COMPLETED PSEM

GW.h IMPACTS (at meter) GW.h IMPACTS (at generation)

Note: Subtotals may not be exact due to rounding.

## 2010/11 Annual Energy Savings - GW.h Electric CSI Programs

					i											
	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 2010/11	At Generation 2024/25
'IAL Power Smart Residential Loan	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	9.0	9.0
Residential Earth Power Loan	9.0	9.0	9.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7
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
R-2000 Component of the New Home 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
Solar Hot Water Heating	0.0	0.0	0.0	0.0	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	1.2	1.2	1.2	1.2	9.0	9.0	9.0	9.0	0.5	0.5	0.5	0.0	0.0	1.3	1.3
:CONTINUED/COMPLETED																
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0:0	0.0
GW h IMDACTS (st meter)	-	6	7	7	6	9	9	9	9	и С	и С	<b>u</b>	c	c	Δ/N	Ø/N
GW.h IMPACTS (at generation)	<u>ί</u> 6.	. <del>L</del>	<u>i</u> ξ.	<u>i</u> ξ.	i (C.	9:0	0.0	0.0	9.0	0.6	0.6	9:0	0:0	0.0	1.3	1.3

Note: Subtotals may not be exact due to rounding.

GW.h IMPACTS (at meter) GW.h IMPACTS (at generation)

DISCONTINUED/COMPLETED PSEM

RESIDENTIAL

Persisting Energy Savings - GW.h Electric CSI Programs

1000		1989/90	1990/91	1989/90 1990/91 1991/92 1992/93 1993/94 1994/95	1992/93	1993/94	-	995/96 19	996/97 190	997/98 196	998/99 199	999/00 2000/01	0/01 2001/02	1/02 2002/03	03 2003/04	4 2004/05	5 2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	kt Generation 2010/11	At Generation 2024/25
RESIDENTIAL	Power Smart Residential Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0								2.7	3.2	3.9	4.6	5.2	6.9	6.9	7.8	7.8
	Residential Earth Power Loan	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0					1.0	2.8	4.8	6.1	8.8	10.2	11.2	11.2	12.8	7.3
	ecoENERGY	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.8	0.8	0.8	0.8	0.8	8.0	8.0	6.0	6.0
	R-2000 Component of the New Home 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 0.1	1 0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Solar Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.0	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	0 2.2	3.6	6.5	8.9	11.0	14.4	16.3	19.0	19.1	21.7	16.3
DISCONT	DISCONTINUED/COMPLETED																							
	PSEM	0.0		0.0	0.0	0.0	0.0	0.0	0.0					6 1.2		2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.2	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0 0.0	9.0 0	6 1.2	2.4	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.2	0.0
	GW.h IMPACTS (at meter) GW.h IMPACTS (at generation)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0 0 0 0	3.4	6.0	9.3	11.7	13.8	19.6	19.1	24.9	24.9	A/A 9.49	N/A 16.3
	· · · · · · · · · · · · · · · · · · ·																							

Persisting Energy Savings - GW.h Electric CSI Programs

2011/112 2012/13 2013/14 2014/15 2015/16 2016/17 2017/18 2018/19 2018/	RESIDENTIAL	Power Smart Residential Loan	Residential Earth Power Loan	ecoENERGY	R-2000 Component of the New Home Program	Solar Hot Water Heating		DISCONTINUED/COMPLETED	PSEM		GW.h IMPACTS (at meter) GW.h IMPACTS (at generation)
2017/18 2018/19 2018/20 2020/21 2021/22 2022/2	2011	6.3	11.	0.0		0.0	19		2	2	2.42
2017/18 2018/19 2018/20 2020/21 2021/22 2022/2	1/12 2012/	6.9	2 11.2	9 0.8		0.0					
2017/18 2018/19 2018/20 2020/21 2021/22 2022/2	13 2013/1	6.9		0.8		0.0					
2017/18 2018/19 2018/20 2020/21 2021/22 2022/2	4 2014/15	6.9	11.2	0.8	0.2	0.0	19.1		0.0	0.0	19.1
2017/18 2018/19 2018/20 2020/21 2021/22 2022/2	2015/16	6.9	11.2	0.8	0.2	0.0	19.1		0.0	0.0	19.1
2017/18 2018/19 2018/20 2020/21 2021/22 2022/2	2016/17	6.9	11.2	0.8	0.2	0.0	19.1		0.0	0.0	19.1
2019/20   2020/21   2021/22   2022/23   2023/24   2026/26   2026/27   2021/28   2029/29   2029	2017/	6.9	11.2	0.8	0.2	0.0	19.1		0.0	0.0	19.1
10   10   10   10   10   10   10   10	2018/19	6.9	11.2	0.8	0.2	0.0	19.1		0.0	0.0	19.1
2021 22 2022 23 2023 24   2024 26 2026 27 2026 27 2026 29 2026 29 2026 29   2026 23 2026 24   2026 26   2026 27   2027 28   2026 29	2019/20	6.9	11.2	0.8	0.2	0.0	19.1		0.0	0.0	19.1
6.9         6.9 <td>2020/21</td> <td>6.9</td> <td>11.2</td> <td>0.8</td> <td>0.2</td> <td>0.0</td> <td>19.1</td> <td></td> <td>0.0</td> <td>0.0</td> <td>19.1</td>	2020/21	6.9	11.2	0.8	0.2	0.0	19.1		0.0	0.0	19.1
02324         DRAMS         CODE         <		6.9	11.2	8.0	0.2	0.0	19.1		0.0	0.0	19.1
6.9         6.9         6.9         6.9         6.9         6.9         6.9         6.9         6.9         6.9         6.0         6.9         6.0 <td></td> <td>6.9</td> <td>10.9</td> <td>0.8</td> <td>0.2</td> <td>0.0</td> <td>18.7</td> <td></td> <td>0.0</td> <td>0.0</td> <td>18.7</td>		6.9	10.9	0.8	0.2	0.0	18.7		0.0	0.0	18.7
CODE/DE         CODE/DE <t< td=""><td>#</td><td>6.9</td><td>10.2</td><td>8.0</td><td>0.2</td><td>0.0</td><td>18.1</td><td></td><td>0.0</td><td>0.0</td><td>18.1</td></t<>	#	6.9	10.2	8.0	0.2	0.0	18.1		0.0	0.0	18.1
6.6         6.9         6.9         6.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.0</td> <td>0.0</td> <td>14.3</td>									0.0	0.0	14.3
6.9         6.0         6.0 <td></td> <td>16.3</td>											16.3
1, 2026/29         2026/30         2039/31         2039/32         2032/34         2034/35         2038/35         2038/37         2037/38         3         0           6,5         6,6         6,6         6,6         6,3         4,7         3,7         3,7         3,0         0         0           0,6         0,6         0,0         0,0         0,0         0,0         0,0         0,0         0											
1, 2028/30 2030/31 2031/32 2022/33 2039/34 2034/35 2038/36 2038/37 2037/38 3	_										
2030/31   2031/32   2022/33   2029/34   2034/35   2038/36   2038/37   2037/38   3   3   3   3   3   3   3   3   3	_										
2034/32   2002/53   2038/94   2034/55   2038/57   2037/58   5   5   5   5   5   5   5   5   5	_										
(a) 2024/33 2039/34 2024/35 2036/36 2036/37 2037/38 (b) 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	_										
1. 2003/34. 2004/35. 2008/36. 2008/37. 2003/38. 3. 4. 4. 3.											
2024/35 2026/36 2026/37 2037/38 3 37 37 30 00 00 00 00 00 00 00 00 00 00 00 37 37 30 00 00 00 00 00 00 00 00 00 00 00 00 00											5.2
2008-598 2008-573 2007/598 3 3.7 3.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0									0.0	0.0	3.7
3.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		3.7	0.0	0.0	0.0	0.0	3.7		0.0	0.0	3.7
2037/38 0.00 0.00 0.00 0.00 0.00 0.00		3.0	0.0	0.0	0.0	0.0	3.0		0.0	0.0	3.4
2038/3i		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
	203(	0.0	0.0	0.0	0.0	0.0	0:0		0.0	0.0	0.0

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

																							At Generation	At Generation
		1989/90	1990/91	1991/92	1989/90 1990/91 1991/92 1992/93 1993/94	1993/94	1994/95	1995/96	1996/97	1997/98 1	1998/99 1	1999/00 20	2000/01 20	2001/02 200	2002/03 2003	2003/04 200	2004/05 2005/06	/06 2006/07	07 2007/08	8 2008/09	9 2009/10	0 2010/11		2024/25
RESIDENTIAL																								
Power Smart Residential Loan	dential 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							5.2			8.5	8.5
Residential Earth Power Loan	Power 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							10.2			13.5	8.0
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	0.1	0.3 0.	0.8 0.8	3 0.8	0.8	0.8	0.8		0.9	6.0
R-2000 Componen	R-2000 Component of the New Home 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							0.2			0.2	0.2
Solar Hot Water Heating	eating	0.0	0.0	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
		0.0	0.0	0.0	0.0	0.0	0:0	0.0	0.0	0.0	0:0	0.0	0.0	1.0	2.2 3.	3.6 6.5	.5 8.9	9 11.0	14.4	16.3	19.1	20.2	23.1	17.6
DISCONTINUED/COMPLETED	Q.																							
PSEM		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									2.8	2.8	3.2	0.0
		0.0	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	3 2.8	2.8	2.8	2.8	2.8	3.2	0.0
GW.h IMPACTS (at meter)	at meter)	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.	6.0 9.	9.3 11.7	7 13.8	17.2	19.1	21.9	23.0	A S	Y S
GW.n IMPACIS (at generation)	at generation)	0.0	0.0	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	l	l	l	l	1	1	1	1	1	۱	20.3	17.6
Note: Subtotals ma	Note: Subtotals may not be exact due to rounding																							

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

RESIDENTIAL   Prove Smart Residential Law   Prove Smart Resident														,														
Provincional Legistry Provincional Legistry   Provin	RESIDENTIAL		2011/12		2013/14	2014/15	2015/16	2016/17	80						_					_								38
rer Loan 18 118 118 118 118 118 118 118 118 118		Residential Loan	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4																_
10.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8	Residential E	arth Power Loan	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8																_
The New Home Program 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	ecoENERGY		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8																_
Ing	R-2000 Comp	conent of the New Home Program	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2																_
202 202 202 202 202 202 202 202 202 202	Solar Hot Wa	ter Heating	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1																_
2.2 1.6 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2																L
22 1.6 0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	DISCONTINUED/COMPI PSEM	LETED	2.2	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0																
224 218 207 202 202 202 202 202 202 202 202 202			2.2	1.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0																_
256 24.9 236 23.1 23.1 23.1 23.1 23.1 23.1 23.1 23.1	GW.h IMPAC	TS (at meter)	22.4	21.8	20.7	20.2	20.2	20.2	20.2	20.2	20.2	20.2																_
	GW.h IMPAC	STS (at generation)	25.6	24.9	23.6	23.1	23.1	23.1	23.1	23.1	23.1	23.1	1	1	١	1	1	1	1	1	1	1	1	1	1	1	1	

#### Appendix J

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

## 2010/11 Average Winter MW Electric CSI Programs

2024/25

2023/24

2021/22 2022/23

2020/21

0.0

0.0 0.0 0.0 0.0 0.0

0.3 0.0 0.0 0.0 0.0

0.0

0.3 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

0.6

Power Smart Residential Loan         0.3			i	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
ntial Loan         0.3         0.3         0.3         0.3         0.3         0.3         0.3         word state         0.3         0.3         0.3         0.3         0.3         0.3         word state         0.3 <th></th>										
wer Loan  0.3  0.3  0.3  0.3  0.3  0.3  0.3  0.			0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
of the New Home Program  0.0  0.0  0.0  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
of the New Home 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
tring 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
eter) 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6 0.6			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
eter) 0.6 0.6 0.6 0.6 0.6 0.6 0.0 0.0 0.0 0.0	9.0		9.0	9.0	9.0	9.0	9.0	9.0	9.0	0.6
(at meter)         0.6         0.7			0.0	0.0	0.0	0.0	0:0	0.0	0.0	0:0
(at meter)         0.6         0.6         0.6         0.6         0.6         0.6         0.6         0.6         0.6         0.6         0.6         0.7	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.6	0.6	9.0	0.6	9.0	9.0	0.6	0.6	0.6

### 2010/11 Average Winter MW Electric CSI Programs

	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 2010/11	At Generation At Generation 2010/11 2024/25
RESIDENTIAL Demon Smort Desidential Leas	c	ć	ć	o c	c c	ć	c c	c	ć	c c	c c	ć	ć	ć	c	6
Powel Office the Confidence of Power Loan	0.0 5.0	0.0	. c	0.0	5.0	5.0	5.0	5.0	0.0	5.0	5.0	5.0	0.0	0.0	o. c	0.3
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
R-2000 Component of the New Home 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
Solar Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	0.8	0.8	0.8	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.7	0.7
<b>DISCONTINUED/COMPLETED</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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MW IMPACTS (at meter)	0.8	0.8	0.8	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	N A/A	<b>∀</b> Z
MW IMPACTS (at generation)	6.0	6.0	6.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.7	0.7
Note: Subtods may not be exact due to rounding																

#### Persisting Average Winter MW Electric CSI Programs

																									-
		1989/90	1990/91	1989/90 1990/91 1991/92 1992/93	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04 2	2004/05 20	2005/06 20	2006/07 20	2007/08 200	2008/09 200	2009/10 20	At Generat 2010/11 2010/11	5	At Generation 2024/25
RESIDENTIAL																									
	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	9.0	1.	4.1							2	4.5
	Residential Earth Power 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	0.0	0.1	0.2	9.0							8	2.7
	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
	R-2000 Component of the New Home 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							_	0.1
	Solar Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						0.0	0	0.0
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	6.0	1.4	2.1	2.7	3.5	4.9	4.9	5.6	7.0 6.	3	7.2
DISCONT	DISCONTINUED/COMPLETED																								
	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	2	0.0
		0.0	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	2	0.0
	MW IMPACTS (at meter) MW IMPACTS (at generation)	0.0	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. 2.	d: 1 7:1	222	3.8	3.6	5.0	5.0	5.7	7.1 N/A 8.1 6.5	<b>Ω</b> Σ	N/A 7.2
																						ľ			
	Note: Subtotals may not be exact due to rounding.																								

Persisting Average Winter MW Electric CSI Programs

Home Program  Out			0044.40	0040740	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, 24/45	. 04/2/00		0047740	0040400				20,000	A CLCCCC	20,4000								٠,	00/2000
Mile Loam 3 9 3 9 3 9 3 9 3 9 3 9 3 9 3 9 3 9 3	RESIDENTIAL		7 1 1 2		1 20 07	2	20.00															•	2	2030	2030131 2031
werlcham 30 30 30 30 30 30 30 30 30 30 30 30 30 3	Power Smart Residential Loan		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									6.	
The New Hane Program 00 000 000 000 000 000 000 000 000 00	Residential Earth Power Loan		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.8	2.7	2.7									0.0	0.0
Trib New Home-Program 00 00 00 00 00 00 00 00 00 00 00 00 00	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	
ing 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	R-2000 Component of the New	v Home 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	
70 70 70 70 70 70 70 70 70 70 70 68 67 67 63 64 58 47 47 44 39 36 33 30 80 80 80 80 80 80 80 80 80 80 80 80 80	Solar Hot Water Heating		0.0	0.0	0.0	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 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0		6.8	6.7	6.7								1.9		
0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	DISCONTINUED/COMPLETED PSEM		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
7.1 7.1 7.0 7.0 7.0 7.0 7.0 7.0 6.8 6.7 6.7 6.3 6.1 5.8 4.7 4.7 4.7 4.4 3.9 3.6 3.3 3.0			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
	MW IMPACTS (at meter)	4	7.1	1.7	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.8	6.7	6.7	6.3	6.1	4.7	7.7				0.1		0.0

#### Total Average Winter MW Electric CSI Programs

																						At Generation	ation At Generation	eration
	1989/90	1990/91	1991/92	1989/90 1990/91 1991/92 1992/93 1993/94 1994/95	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99 1	1999/00 2	2000/01 20	2001/02 2	2002/03 20	2003/04 20	2004/05 200	2005/06 200	2006/07 200	2007/08 200	2008/09 2009	2009/10 2010/11	11/1 2010/11	1 2024/25	1/25
RESIDENTIAL																								
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		1.1								4	8
Residential Earth Power 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	0.0		0.2								ë	0
900ENERGY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		Ö	0
R-2000 Component of the New Home 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	_
Solar Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0						0.0	0.0	Ö	0.0
	0.0	0.0	0.0	0:0	0.0	0:0	0.0	0.0	0.0	0.0	0.0	0:0	0.5	6:0	4.1	2.1 2	2.7 3	3.5 4	6.9	5.6 7.	7.0 7.5		.7	6
DISCONTINUED/COMPLETED																								
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			0.1 0.1	1 0.2	0	0.0
	0.0	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	0.1 0	0.1 0	0.1	0.1 0.	.1 0.1		0	0
MW IMPACTS (at meter)	0.0	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 2.2	2.9 3	3.6 5	5.0 5.	5.7 7.	7.7 7.7	A/N	ž	A/A
MW IMPACTS (at generation)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0										7.	6

#### Total Average Winter MW Electric CSI Programs

Procession International Program         42	Parisity of the parisity of													•																
Power Strant Residential Loss         42	Power Shared Residential Loan         42		2011/12			2014/15	2015/16			2018/19	2019/20	2020/21	2021/22	2022/23						_	_			_					037/38	2038/39
Tion 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Tribon 33 33 33 33 33 33 33 33 33 33 34 34 35 34 34 35 34 34 34 35 34 34 34 34 34 34 34 34 34 34 34 34 34		4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2			3.4	,	86	90	2.3	0	0
Parameter Program 00 00 00 00 00 00 00 00 00 00 00 00 00	Park Home Program 00 00 00 00 00 00 00 00 00 00 00 00 00	Residential Earth Power Loan	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.1	3.0	3.0	2.7	2.7	2.3	1 2	0.7	0.7			4.0	0.4	0.4	0.0	0.0	0.0	0.0
9 Complete Mark-Horse-Program 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	9 Color of the New Horse Program of the New Ho	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
9 00 00 00 00 00 00 00 00 00 00 00 00 00	g 00 00 00 00 00 00 00 00 00 00 00 00 00	R-2000 Component of the New Home 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	0.0	0.0	0.0
75 75 75 75 75 75 75 75 75 75 75 75 77 74 73 73 69 66 65 55 50 50 47 42 38 35 26 22 00  0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	Solar Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	01 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0		7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.4	7.3	7.3	6.9	6.9	9.9	5.5	5.0	5.0	4.7	4.2	3.8	3.5	3.3	5.6	2.2	0.0	0.0
0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	DISCONTINUED/COMPLETED PSEM	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
77 76 76 75 75 75 75 75 75 75 74 73 73 69 66 65 55 50 50 47 42 38 35 33 26 22 00 88 87 87 86 86 86 86 86 88 83 83 79 75 75 63 57 57 54 48 44 40 37 29 25 00	7.7 7.6 7.6 7.5 7.5 7.5 7.5 7.5 7.5 7.4 7.3 7.3 6.9 6.6 6.5 5.0 5.0 4.7 4.2 3.8 3.5 3.3 8.8 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7 8.7		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	9
0.0 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0	0.0 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0	MW IMPACTS (at meter)	7.7	7.6	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.4	7.3	7.3	6.9	6.9	6.6	5.5	5.0	5.0			3.8	3.5	3.3	2.6	2.2	0.0	0 0
	Note Schröde mound he exert due in mundim	MW IMPACIS (at generation)	0.0	9	00.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	6.9	6.9	6.7	8.	67	5.0	0.7	201			4.	4.0	); (	6.7	2.2	0.0	1

#### Appendix K

# Natural Gas Savings (m3) -Customer Service Initiatives (CSI)

2010/11 Natural Gas Savings - million m3 Natural Gas CSI Programs

Columbia C	Fig. 1. Since the location of the control of the co		2001/02	50/5005	1000000	2004/06	3005	70/9006	90/2/000	00/0000	0000000	2040/44	2044/42	2042/43	204 2/44	2014/45	2015/16	2012/17	2017/10	2010/10	00/000	10,000	2024 /22	00/0000	10/0000	3077700
n	n         0.0	RESIDENTIAL	25024				00000	0007	2007004	20007	2007	200	711107	2 7 7	200	2	2	2007	2017107	2	03/01/03	20202	2021202	27.77	12/07/07	
n	aw Home Program 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Power Smart Residential Loan	0.0	0.0	0.0	0.0	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	0.3	0.3	0.3	0.3	
8 WHOME Program 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	60 00 00 00 00 00 00 00 00 00 00 00 00 0	Residential Earth Power Loan	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
8 WHOME Program 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	aw Home Program         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 0.0 0.0 0.0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	R-2000 Component of the New Home Pro			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 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 Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
00 00 00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00 00 00		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	9.0	8.0	8.0	8.0	0.8	8.0	8.0	8.0	
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	00 00 00 00 00 00 00 00 00 00 00 00 00	DISCONTINUED/COMPLETED	;		:	;	:	:	:	;				:	;	:	;	;	;	;	;	;	;	;		
00 00 00 00 00 00 00 00 00 00 00 00 00	00 00 00 00 00 00 00 00 00 00 00 00 00	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 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	9.0	9.0	8:0	9.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	

#### 2010/11 Natural Gas Savings - million m3 Natural Gas CSI Programs

2038/39	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
2037/38	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
2036/37	0.3	0.0	0.0	0.0	0.0	0.3		0.0	0.0	0.3
2035/36	0.3	0.0	0.0	0.0	0.0	0.3		0.0	0.0	0.3
2034/35	0.3	0.4	0.0	0.0	0.0	9.0		0.0	0.0	0.8
2033/34	0.3	0.4	0.0	0.0	0.0	8.0		0.0	0.0	0.8
2032/33	0.3	0.4	0.0	0.0	0.0	0.8		0.0	0.0	0.8
2031/32	0.3	0.4	0.0	0.0	0.0	0.8		0.0	0.0	0.8
2030/31	0.3	0.4	0.0	0.0	0.0	0.8		0.0	0.0	0.8
2029/30	0.3	0.4	0.0	0.0	0.0	0.8		0.0	0.0	0.8
2028/29	0.3	0.4	0.0	0.0	0.0	8.0		0.0	0.0	0.8
2027/28	0.3	0.4	0.0	0.0	0.0	8.0		0.0	0.0	0.8
2026/27	0.3	0.4	0.0	0.0	0.0	8.0		0.0	0.0	0.8
2025/26	0.3	0.4	0.0	0.0	0.0	8.0		0.0	0.0	0.8
RESIDENTIAL	Power Smart Residential Loan	Residential Earth Power Loan	ecoENERGY	R-2000 Component of the New Home Program	Solar Hot Water Heating		DISCONTINUED/COMPLETED	PSEM		TOTAL_

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 2	2016/17 2	2017/18 20	2018/19 2	2019/20 20	2020/21 20	2021/22 20	2022/23 20	2023/24 2024	2024/25
RESIDENTIAL																								
Power Smart Residential Loan	1.2	2.1	3.5	5.6	7.8	9.6	11.3	12.3	13.9	13.9	14.0	14.0	14.0	14.0	14.0	14.0		14.0	14.0		14.0			4.0
Residential Earth Power Loan	0.0	0.1	0.1	0.5	0.8	1.0	1.3	1.4	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7		1.7	1.7		1.7			.2
ecoENGERY	0.0	0.1	4.0	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			5.3
R-2000 Component of the New Home Program	n 0:0	0.0	0.0	0:0	0.0	0.0	0.0	0.0	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 Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	2.3	4.1	7.4	10.9	12.9	15.0	16.1	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0		18.0	18.0	18.0	0.81			7.5
<b>DISCONTINUED/COMPLETED</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	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	0.0
TOTAL		1.2 2.4 4.3	4.3	7.7	11.3	13.2	15.3	16.4	18.3	18.3	18.3	18.3	18.1	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0		17.8 17	17.5
Note: Subtotals may not be exact due to rounding.	Jing.																							

Persisting Natural Gas Savings - million m3 Natural Gas CSI Programs

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

	2001/02	2 2002/03	3 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 2	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 21	2023/24 20	2024/25
RESIDENTIAL																								
Power Smart Residential Loan	1.2	2.1	3.5	5.6	7.8	9.6	11.3	12.3	13.9	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3		14.3
Residential Earth Power Loan	0.0	0.1	0.1	0.5	0.8	1.0	1.3	1.4	1.7	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		1.6
ecoENERGY	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
R-2000 Component of the New Home Program	ram 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 Hot Water Heating	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	2.3	4.1	7.4	10.9	12.9	15.0	16.1	18.0	18.7	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.7		18.3
DISCONTINUED/COMPLETED																								
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	0.0
	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	0.0
,-	TOTAL 1.2 2.4 4.3 7.7	2.4	4.3	7.7	11.3	13.2	15.3	16.4	18.3	19.0	19.1	19.0	18.9	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.7	18.6	18.3

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

2037/38 2038/39		0.0 0.0 0.0 0.0 0.0	0.0 0.0	0.0 0.0
2036/37 20	3.0		0.0	
2035/36	6.5 0.8 0.0	0.0	0.0	0.0
2034/35	8.7 0.8 1.1	0.0 0.0	0.0	0.0
2033/34	10.8 0.8 1.9	0.0	0.0	0.0
2032/33	12.1 0.8 2.2	0.0 0.0	0.0	0.0
2031/32	13.0 0.8 2.3	0.0 0.0	0.0	0.0
2030/31	14.3 0.8 2.3	0.0 0.0	0.0	0.0
2029/30	14.3 0.8 2.3	0.0 0.0	0.0	0.0
2028/29	14.3 0.8 2.3	0.0 0.0	0.0	0.0
2027/28	14.3 0.8 2.3	0.0 0.0	0.0	0.0
2026/27	14.3 1.1 2.3	0.0 0.0	0.0	0.0
2025/26	14.3 1.3 2.3	0.0	0.0	0.0
RESIDENTIAL	Power Smart Residential Loan Residential Earth Power Loan ecoENERGY	R-2000 Component of the New Home Program Solar Hot Water Heating	DISCONTINUED/COMPLETED PSEM	0.0 TOTAL 18.0

#### Appendix L

# Annual Energy Savings- Codes and Standards (GW.h, MW, and m³)

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

1992/93 1993/94 1994/95 1995/96	0.4 -0.2 -0.1 0.1	0.0 0.1 0.2 0.4	-0.3 -0.3 0.1 0.1	0.1 0.1 0.4 0.4	2.0 4.7 6.1 7.1	-0.3 0.3 0.4 0.5	0.0 0.0 0.0 0.0	0.0 0.0 0.0 0.0	Commercial Lighting - T12 & T8 Lighting 0.0 0.0 0.0 0.0	Industrial Equipment - High Efficiency Motors 0.0 0.0 0.0 0.0 0.0	<b>Subtotal</b> 1.9 4.6 7.1 8.6	1.9 4.6 7.1 8.6	2.2 5.3 8.1 9.8
. 1996/97 1997/98					7.0 7.2			0.0 0.0		0.0	12.8 20.3	12.8 20.3	
1998/99 1999/00								0.0 0.0		1.6 1.6	26.0 28.6	26.0 28.6	
2000/01	-0.3	0.7	8.0	0.1	7.8	0.5	1.0	0.0	14.9	1.6	27.2	27.2	30.9
2001/02 200:								0.0			29.2 34	29.2 34	,
2002/03 2003/04					10.1 11.0			0.0 0.0			34.2 16.9	34.2 16.9	
4 2004/05	0.0	2.0	3.0	1.0	12.9	0.5	1.5	0.0	0.4	1.6	22.9	22.9	26.1
2005/06 2	0.1	2.0	3.1	1.0	13.2	-0.8	8.0	0.0	0.3	1.6	21.4	21.4	24.3
2006/07 20								0.0			22.5	22.5	
2007/08 2008/09								0.0 0.0			24.8 26.1	24.8 26.1	
9 2009/10	3.4	0.2	0.2	14.0	18.7	3.1	2.8	0.0	0.4	0.0	42.6	42.6	
2010/11	3.2	0.2	0.2	15.8	10.9	5.6	2.9	9.0	0.4	0.0	45.0	45.0	51.3

### Annual Energy Savings - MW Codes & Standards

	1992/93	1993/94	1992/93 1993/94 1994/95 1995/96	1995/96	26/9661	1 997/98	1 66/866	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
	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	1.3	1.2
	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	9.0	8.0	6.0	0.0	0.0
	-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	8.0	1.0	6.0	6.0	0.0	0.0
	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	8.1	2.1
	0.5	1.1	1.5	1.7	1.7	9.1	1.7	1.8	1.9	1.9	2.5	2.7	3.1	3.2	3.1	4.0	4.2	2.1	1.2
	-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	0.3	0.3
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	9.0	0.4	0.5	0.3	9.4	0.5	0.5	1.2	2.2
Other Residential Equipment <sup>1</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Commercial Lighting - T1 2 & T8 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	0.1	0.1
Industrial Equipment - High Efficiency Motors	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	0.0	0.0
Subtotal	0.5	1.1	1.7	2.1	3.0	5.2	8.9	9.7	7.2	7.8	9.1	4.1	5.6	5.2	5.5	6.2	6.5	6.9	7.5
MW IMPACTS (at meter)	0.5	1:	1.7	2.1	3.0	5.2	8.9	9.7	7.2	7.8	9.1	4.1	5.6	5.2	5.5	6.2	6.5	6.9	7.5
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	7.9	8.5

Note: Subtotals may not be exact due to rounding. <sup>1</sup>Category includes: Central air conditioning, electric hot water tank, furnace.

Note: Subtotals may not be exact due to rounding. <sup>1</sup>Category includes: Central air conditioning, electric hot water tank furnace.

#### Annual Energy Savings - millions m³ Codes & Standards

98 1998/99 1999/00 2000/01 2001/02 2002/03 2003/04 2 0.0 0.0 0.0 0.1 0.1 0.1 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1996/97         1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         20           0.0         0.0         0.0         0.0         0.1         0.1         0.2         0.2         0.2           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0 <td< th=""><th>1996/97 1997/98 1998/99 1999/00 2000/01 2001/02 2002/03 2003/04 2004/05 2005/06 20   0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0</th><th>1996/97         1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2           0.0         0.0         0.0         0.0         0.0         0.1         0.1         0.1         0.2<!--</th--><th>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 20 20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0</th></th></td<>	1996/97 1997/98 1998/99 1999/00 2000/01 2001/02 2002/03 2003/04 2004/05 2005/06 20   0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1996/97         1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2           0.0         0.0         0.0         0.0         0.0         0.1         0.1         0.1         0.2 </th <th>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 20 20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0</th>	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 20 20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0
1997/98 1998/99 1999/00 2000/01 2001/02 2002/03 2003/04 2 0.0 0.0 0.0 0.0 0.0 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	1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2           0.0         0.0         0.0         0.0         0.1         0.1         0.2         0.2           0.0         0.0         0.0         0.0         0.2         0.2         0.2         0.2           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         <	1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2           0.0         0.0         0.0         0.0         0.1         0.1         0.2         0.2         0.2         0.2           0.0         0.0         0.0         0.0         0.2 <t< td=""><td>1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2           0.0         0.0         0.0         0.0         0.1         0.1         0.2</td><td>1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2008/09         2           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         0.2         0.2         0.2         0.1         0.1         0.1         0.2<!--</td--></td></t<>	1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2           0.0         0.0         0.0         0.0         0.1         0.1         0.2	1997/98         1998/99         1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2008/09         2           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         0.2         0.2         0.2         0.1         0.1         0.1         0.2 </td
1999/00 2000/01 2001/02 2002/03 2003/04 2 0.0 0.0 0.1 0.1 0.1 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1999/00 2000/01 2001/02 2002/03 2003/04 2004/05 2 0.0 0.0 0.1 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2           0.0         0.0         0.1         0.1         0.2         0.2         0.2         0.2           0.0         0.0         0.2         0.2         0.2         0.2         0.2         0.2           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0	1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2           0.0         0.0         0.1         0.1         0.2         0.2         0.2         0.2         0.2         0.2           0.0         0.0         0.2 <t< td=""><td>1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2008/09         2           0.0         0.0         0.1         0.1         0.1         0.2         0.2         0.2         0.2         0.2         0.1           0.0         0.0         0.0         0.2         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         <t< td=""></t<></td></t<>	1999/00         2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2008/09         2           0.0         0.0         0.1         0.1         0.1         0.2         0.2         0.2         0.2         0.2         0.1           0.0         0.0         0.0         0.2         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 <t< td=""></t<>
2000/01 2001/02 2002/03 2003/04 2 0.0 0.1 0.1 0.2 0.0 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2000/01 2001/02 2002/03 2003/04 2004/05 2 0.0 0.1 0.1 0.2 0.2 0.2 0.0	2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2           0.0         0.1         0.1         0.2         0.2         0.2         0.2           0.0         0.2         0.2         0.2         0.2         0.2         0.2           0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0	2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2           0.0         0.1         0.1         0.2         0.2         0.2         0.2         0.2           0.0         0.2         0.2         0.2         0.2         0.2         0.2         0.2           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0           0.0	2000/01         2001/02         2002/03         2003/04         2004/05         2005/06         2006/07         2007/08         2008/09         3           0.0         0.1         0.1         0.2         0.2         0.2         0.2         0.1         0.1           0.0         0.2         0.2         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.
2002/03 2003/04 2 0.1 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2002/03 2003/04 2004/05 2 0.1 0.2 0.2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2002/03 2003/04 2004/05 2005/06 2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2 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 0.0	2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2 0.1 0.2 0.2 0.2 0.2 0.2 0.1 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
2003/04 2 0.2 0.2 0.0 0.0 0.0 0.0	2003/04 2004/05 2 0.2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2003/04 2004/05 2005/06 2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2003/04 2004/05 2005/06 2006/07 2007/08 2 02 0.2 0.2 0.2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2 02 0.2 0.2 0.2 0.2 0.1 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	. 2004/05 2 0.2 0.2 0.0 0.0 0.0 0.0	. 2004/05 2005/06 2 0.2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.2 0.04/05 2005/06 2006/07 2007/08 2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	02 0.04/05 2005/06 2006/07 2007/08 2008/09 2 02 0.2 0.2 0.2 0.1 02 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	7	2005/06 2 0.2 0.2 0.0 0.0 0.0 0.0	2005/06 2006/07 2007/08 2 0.2 0.2 0.2 0.2 0.2 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2005/06 2006/07 2007/08 2008/09 2 0.2 0.2 0.2 0.1 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0

Note: Subtotals may not be exact due to rounding.

#### Appendix M

# Electric Incentive Based TRC, Utility, Administration and Incentive Costs

Total Resource Cost (1000s in 2010\$) Electric Incentive-Based Programs

								ğ	III CIII CIII	Ive-Dased	TIOGL ALLS											Cumulative
	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	998/99 199	99/00 200	200	2001/02 2002	2003/04	704 2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2010/11
RESULPE IN INTERPRETATION FROM THE PROPERTY OF	000000	000000	000000	00%0000	250 0 0 0 0 0	280 380 000	238	2700000	0 0 0 0 0 0	93333	40-0000	\$ 0 \$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	E 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	70 136 290 221 20 20 1	366	1,177 43 798 798 1,034 0	2,285 103 1,221 780 0 0 138	2,022 212 212 880 972 0 529	2,105 1,429 978 1,250 80 3,77	2,205 1,932 906 881 50 130	2,038 1,335 847 683 457 223 89	14,475 5,055 7,370 6,955 605 1,398
Well got diet Well will fail.	0	0	0	36	400	476	452	344	463								4,525	4,615	6,218	6,115	5,663	35,949
DECOMPULIDODAPLETED Reddert Myder DOGAPLETED Reddert Myder DOGAPLETED Reddert Myder Dogarlang Water Hell Reddert Reddert High Efficiency Furnoso/Boles	303	752	0 0 1189 1,096 91 27 0 0	0 0 0 810 120 12 0 0 0	000000000000000000000000000000000000000	0000380000138	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 61 61 578 0 0 0 0	0 0 22 276 0 0 0 0 0 0 0 0	0 0 0 0 760 0 0 0 0 860 5	5535 5544 644	912 65	655	20 14 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 0 0 261 14 5 5 0 0	96 8 8 0 575 46 65 0 0	2.632 80 233 25 25 267 0 0 3.261	4,128 39 251 0 755 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1,175 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2,540 2,777 2,777 0 0 0 0 0 3,356	531 0 0 0 0 912 0 0 0 0 2,747 4,192	E0000000E	9,983 144 816 229 12,688 275 1179 833 2,747 2,8045
EXPLORATORY PROGRAMS	0	0	0	0	0	0	0	0	0							0	0	0	0	20	0	20
RESIDENTIAL TOTAL	AL 903	752	1,403	981	1,015	1,137	756	1,375	1,154	937 5	6 059	975 86	857 94	948 430	2,776	3,914	7,787	67.6	9,575	10,327	5,674	64,014
COMMERCIAL Commercial Lighting Internal Retrofit	00	00	107	1,320	2.617	3,043 562	3,017	1,619	1-7				_		-		10,222	10,468	13,016	7,716	6,848	98,867 11,026
Commercial Windows Commercial Earth Power Commercial Custom	000	000	000	000	8 41 61	92 48 95	28 to 105	127 164 196									383 4,654 392	363 1,936 957	304 349	990 2,055 1,069	1,7186	6,127 18,123 9,023
Commercial HVAC Commercial Insulation	000	000	000	000	000	000	000	000									286 286 41 41 41 41 41 41 41 41 41 41 41 41 41	341	452	274 531 457	621	2,147
Commercial Clothes Washers Commercial New Buildings	000	000	000	00	000	000	000	000									0 6	38 至	382	514	8 8	849 583
Power Smart Shops Power Smart Energy Manager	000	000	000	000	000	000	000	000									0 - 0	- 18	115	247	55 6 8	455 392 174
Confined a verwal servage confined to Whinlipeg Dower Smart Agreement Commercial Kitchen Appliances Commercial Building Ontinization	000	000	0000	0000	0000	0000	0000	0000	0000	0000	0000		000	154 2,503	1,808	4,755	0 0	228	8 2 2 3	70 S S	8 & & %	11.548 250 503
Supplied Burning	0	0	223	1,595	3,117	3.735	3,402	2,313				2					19,463	15,929	18,119	15,661	14,241	164,414
DISCONTINUE DYCOMPLETED Commercial Parking Lot Controllers Agricultural Heat Pads	00	00	00	00	<b>%</b> 0	131	210	191	207							_	1,259	38	537	734	812	8,356 598
Commercial Rinse & Save Commercial Air Conditioners Commercial Air Barriers	000	000	000	000	0 - 8	28 5 0	0 & \$	0 11 12	0 25 55								£00	32 0 28	200	۰00	-00	202 48
Livestock Waterer Roadway Lighting	000	o	2,028	3,648	3,443	2,590	89 t c	200	23 4 0								000	000	000	000	000	445 11,883 2,531
Serticular al Demonstration Agricultural Demond Controller Commercial Showerheads Infrared Healt Jamps	000	2025	32 151 154	150 × 2	371	0 1100	> o o -	000-	000-	000-	000-	000-	000-	000-	000-	00-	00%-	0 605	212	000-	000	2,271 433 227
Aboriginal Commercial	0 0	224	3,661	5,854	4,986	3,028	0 447	0 241	0 4466								1,401	1,534	0 802	0 776	0 698	28,573
COMMERCIAL TOTAL	AL 0	224	3,884	7,449	8,103	6,763	3,848	2,854	2,642 5	5,880 3,	3,616 2,3	2,332 2,9	2,972 3,6	3,682 12,103	14,094	4 23,812	20,865	17,463	18,921	16,437	15,110	192,987
INDUSTRIAL Performance Optimization Emergency Preparechness	000	000	808	88 0 88	0 0 236	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 1,167	3,651	1,713	0 2	297 9	943 7.3 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10,662 2,800 0 0 0 10,662 2,800	88999 0	8 4,192 0 0	2.719	0 0	5,034 82 5,116	5,492	7,481 325 7,806	79.251 478 79,728
DISCONTINUED/COMPLETED High Efficierry/Motors Industrial Retroft/Demonstration Efficient Motors (QMR)	000	0 0 5	316 62 0	827 375 22	735 372 52	552 2,035 19	483 3,593 4	607 352 0	711 323 0	46 0	£ E O	040	000	000		000	080	487 35 0	472	321	000	5,582 7,336 97
	0	22	378	1,224	1,159	2,606	4,079										98	522	472	321	0	13,015
INDUSTRIAL TOTAL	0 7	22	465	1,409	1,395	3,706	5,246							0,662 2,800	889'9 0		2,757	7,460	5,588	5,884	7,806	92,743
EFFICIENCY PROGRAMS SUBTOTAL	903	866	5,752	9,838	10,513	11,605	9,851	8,840	6,543 1	7,538 4,	1,476 4,2	1,255 11,7	11,158 15,2	15,291 15,332	32 23,558	31,917	31,408	34,712	34,083	32,648	28,590	349,744
CUSTOMER SELF-GENERATION PROGRAMS Bioener gy Optimization	00	0 0	0 0	0 0	0 0	00	00	00	0 0	0 0	00	00	00	0 0	0 0	576	6,623	4,805	5,190	4,616	4,937	26.749
RATE/LOAD MANAGEMENT PROGRAMS Cutalable Rates	00	00	00	8 8	121	213	73	22 22	47	88	34 3	33 9	00	9 9	17	٥٥	∞ ∞	01 01	es es			786
Support Costs	0	350	3,371	4,050	2,878	1,601	1,902	1,528			9		7	3	3	(3)	2,635	2,586	4,246	4,315	3,933	57,874
TOTAL RESOURCE COST	806	1,349	9,123	13,974	13,511	13,419	11,826	10,418						-	2	.,	40,674	42,112	43,524	41,586	37,467	435,152
Note: Subtotals may not be exact due to rounding	1 7																					

Total Power Smart Utility Costs - (1000s in 2010\$) Electric Incentive-Based Programs

1991/92
214 0 0 0 452
243 190 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 496
2,8837 100 100 100 100 100 100 100 100 100 10
0 0 38 131 270 111 0 0 0 0 0 0 0 0 0 0 0 0 1 2 2 44 979 0 0 0 18 28 44 979 1,471 2076 1896 1,440 17 0 1,288 1,087 1,115 0 0 1,28 2,00 1,115 0 0 1,28 4 4 119 0 0 1,28 5,00 1,115 0 0 1,28 5,00 1,115 0 0 2,20 6,00 1,115 0 0 2,20 6,00 1,115 0 0 2,20 6,00 1,115 0 0 2,20 7,20 1,115 0 0 2,20 7,2
5,453 3,630
86         185         236         487         493         444           0         0         0         0         0         0           86         185         236         487         493         444
30b         743         596         473         433         470           6.2         315         327         66         100         382           0         22         22         19         4         0           3.68         1,080         963         1,098         1,477         822
1,584 1,970
4,373 6,891 7,940 7,568 6,096 4,168
0 65 626 1,538 1,384 1,356 0 85 626 1,538 1,384 1,356
1,601 1,902
10,707 9,381

Administration Cost (1000s in 2010\$) Electric Incentive-Based Programs

Cumulative Total	2010/11 2010/11			11 1849 0 98 0 876 0 270 0 270 0 154			779 2.535 27 547 1 140 0 287 0 283 0 7.057 0 3331 0 3331 0 3301 0 208	LC C	398 7,775 325 478 723 8,252	.,,	723 12,377	306 670		
	2009/10	515 189 123 467 50 11 1,174	20	80000000	011	2,000 1,911 1,911 1,63 2,41 1,16 1,17 1,17 1,17 1,17 1,17 1,17 1,1	146 32 6 6 0 0 0 0 0 0 0 0 0 0 0	3,505	446 70 516	0000	516	289	7 289	7
	2008/09	635 214 316 543 80 0	0 0	2777 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	993	1,859 97 529 61 101 115 132 209 95 20 209 95 20 44 41 13 44 44 44 44 44 44 44 44 44 44 44 44 44	144 19 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3,609	588 82 671	0000	671	75	35 25	ш
	2007/08	684 214 395 537 0 0	0 0	24 251 251 0 0	888	2065 0 0 0 0 162 162 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	118 28 15 0 0 0 0 0 0 0 0 0	3,354	503	0000	503	0 0	0 01	9
	5 2006/07	587 288 62 778 778 0	0 0	564 49 233 0 0 0	846	23/69 0 0 0 22/89 0 1155 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	179 42 13 13 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3,945	398	38 0 38	435	0 0	0 0	
	5 2005/06	761 429 0 539 18 0 43	0	\$ 8 £ 0 0 9 \$ 9 0 0	273	,	494 44 44 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0	4,281	338	0000	338	0 0	0 6	
	34 2004/0	272 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0	01 4 0 0 0 0 4 1 0 0 0 0 0 0 0 0 0 0 0 0	33 0		283 80 80 11 11 11 0 0 0 0 0 0 0 379	(*)				0 0	0 41	
	03 2003/0	22136				3 2 2 3	215 27 27 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					0 0		
	8					2 814 103 103 104 104 104 104 104 104 104 104 104 104	4 847 0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					8 3,645		
	1/01 2001/02	0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				402 402 403 403 403 403 403 403 403 403 403 403						2 1,318		
ograms	3000 3000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					5 5 31 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					992		
/e-Based Proc	199	0 \$ 0 \$ 0 0 0					67 440 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					1.180		
Incentive-E	98 19			25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		,	335 0 0 0 0 0 0 0 0 0 0 0					318		
Electric Ir	996/97 19	0 222 0 1122 0 0	0 0	00058008	457	558 658 658 658 658 658 658	78 647 0 0 78 81 81 0 0 0 0 0 0 0 381	1,039	295 0 295	268 352 0 620	915	0 0	20 0	
	995/96	238 238 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	727	000250081	8	628 628 642 642 642 643 643 643 643 643 643 643 643 643 643	210 3 3 3 44 44 114 17 0 0 0 0 391	1,305	251	247 389 4 641	892	6807	o &	
	1994/95 1	000380	8, 0	0000%0000	54	777 777 777 777 777 777 777 777 777 77	131 0 0 2 2 28 132 1,440 0 0 0 0 0	2,945	342	231 209 19 459	188	0	0 213	
	1993/94	0 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	00	00004000	. 49	938 938 938 938 938 938 938 938 938 938	38 0 0 0 1 1 1 1,115 1,115 1,52 4 4 5 3,218	4,399	236 0 236	264 283 52 599	832	0 0	0 121	
	1992/93	000%000	£ 00	0 0 0 12 12 0 0	287	842 224 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 1.087 446 34 32 375 375	4,742	185	340 278 22 641	826	0 0	0 82	
	1991/92	000000	- 00	0 0 0 164 27 27	401	107 107 107 107 107 107 107 107 107 107	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3,265	808	270 62 0 332	418	0 0	0 0	
	1990/91	000000		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	282		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	224	000	22 0 0 22	22	0 0	0 0	
	1989/90	0000000		000040000		000000000000000000000000000000000000000	0 00000000	0	000	0000		0 0	0 0	
	D COLD CAMERA	RESIDENTIAL Compact Fluorescent Lighting Home Flusten How Homes New Homes Ne	EXPLORATORY PROGRAMS	DISCONTINUED/COMPLETED Resident is Appliances Programmable Thermostals Seasons ILED Lighting Resident is Het Water Outdoor Time Restrict Demonstration Resident Heat Research In-	ingritation by a maconion	COMMECAL  Commercial Lighting  Commercial Lighting  Forest Start Stope  Forest Start Stope  Commercial Michael  Commercial Mic	DISCONTINUEDCOMPLETED  Commental Picking Ld Controllers  Agricultural Hear Peck  Commental Rinke a Sase  Commental Rinke a Sase  Commental Rinke a Sase  Commental Rinke a Sase  Commental Rinke and Controller  Readway Lighting  Agricultural Dismantal Controller  Commental Robins and Controller  Commental Biowenheads  Infrared Heart Lamps	COMMERCIAL TOTAL	INDUSTRIAL Performance Optimization Emergency Preparedness	DISCONTINUED/COMPLETED High Efficiency Motors Instate il Reconfr/Demonstration Efficient Motors (OA/R)	INDUSTRIAL TOTAL	EFFICIENCY PROSEWAYS SUBTOTAL. CUSTOMER SELF-GENERATION PROGRAMS Bloenergy Optimization	RATE/LOAD MANAGEMENT PROGRAMS Curtaliable Rates	

Note: Subtotals may not be exact due to rounding.

\* Programs comprise the Commercial Building Envelope Program.

\*\*Administrative costs are negative since they are outwelphed by the

Incentive Cost (1000s in 2010\$) Electric Incentive-Based Programs

									Electric	ncentive-l	Based Pro	grams											Sumulative
		1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1 76/966	1 86/766	998/99 19	99,00 2000	7001 2001	/02 2002	A03 2003	04 2004/0	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2010/11
RESIDEN I IAI. Herne Insulation Compact To leavescont lighting Compact To leavescont lighting Rengg Ticles not Light Fintures Lower Income Energy Efficiency New Home Renfigerator Retriement	Home Insulation Operate Insulation Where & Energy Save Where & Energy Save Cover income Energy Efficiency New Home Redigerator Retreement	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	0000000	480 157 0 0 0 0 111 0	691 264 0 0 0 67 0 1,022	1622 232 0 32 0 128 0	1,326 254 0 104 41 113 0	1,489 658 0 70 303 102 0	1,503 1,079 0 63 759 114 0	1,152 597 272 148 109 83 0	8263 3242 272 419 1,211 618 0 14,025
DISCONTINUED/COMPLETED REACHMIA APPLIANCES PROGRAMMABO HERMOSEIS SERGENT LED LEGINGS REACHMIA HOT Water Outdoor Timer Reachmits Hot Water Outdoor Timer Reachmit Hot Water Water Hotaler Remits Water Hotaler Remits High Efficiency Furnace/Boiler	82 m - 5 % 0	0000840000	000000000000000000000000000000000000000	55 55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2 0 0 0 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0000%0000	000000000	0000040004	000000000	000000000	000000000			000000000		000000000	3,000003,000	983 22 22 159 0 0 0 0 0 0 0 0 1,163	1,354	1,337 6 6 6 6 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	292 292 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000000000	3,966 38 39 9 9 237 4 4 4 4 4 4 4 4 4 4 4 4 7 0 0 0
NO STATE OF	RESIDENTIAL TOTAL	8	/0	43	35	₹	Þ	4	D	Þ	5						1,053	3,178	3,316	4,034	3,793	7,30	18,697
COMMERCIAL  Commercial Lighting  Commercial History  Commercial History  Commercial Results for  Comme	Commercial Lighting Commercial Lighting Commercial Michols Commercial HWLC Commercial HWLC Commercial HWLC Commercial HWLC Commercial Result for Power Smart Agreement Commercial Result for Power Smart Result Power Smart Res	000000000000000000000000000000000000000			301 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1512 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2113 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.209 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	749 48 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	445	55 53 60 60 60 60 60 60 60 60 60 60 60 60 60	57.9 33.7 4.2 5.5 5.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	220 664 551 54 67 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2 88 88 88 89 99 99 99 99 99 99 99 99 99	9 3417 180 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4.55.8 266 266 106 0 3.3682 7 7 7 7 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5,159 241 183 74 432 1,406 42 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5.507 224 59 116 118 118 116 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5,996 347 202 202 203 93 93 82 82 82 9 9 45 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5,415 902,902,902,902,903,903,903,903,903,903,903,903,903,903	4,787 1,100 2,35 2,35 2,00 1,10 1,10 1,10 1,10 1,10 1,10 1,10	47.193 3800 991 808 7.109 1.313 1.10 1.10 1.10 1.10 1.10 1.10 1.0 1.0 1
DISCONTINUED/COMPLETED Commercial Perhapitation Control Agricultural Heat Peds Commercial Rieses, Save Commercial All Conditiones Commercial All Conditiones Commercial All Conditiones Liberatory United The Persister Rededung Lighting Sentine Lighting Sentine Lighting Agricultural Denaired Commercial Showsmeass Infrared Heat Lamps	NUED/COMPLETED  Agricultural Heat Place Agricultural Heat Place Commercial African Save Commercial Africantioners Commercial Africantioners Commercial Africantioners Commercial Africantioners Sentinel Lighting Sentinel Lighting Sentinel Lighting Commercial Showatheads Influence of Agricultural Demante Controller Commercial Showatheads Influence of Agricultural Demante Controller Commercial Showatheads	00000000000	0000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000000000000000000000000000000000000000	20000008008	8 00000800000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	34	\$8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	121 449 0 0 0 0 0 0 0 0	16 00 00 00 00 00 00 00 00 00 00 00 00 00	22 24 48 27 27 26 27 27 26 27 27 26 27 27 26 27 27 26 27 27 27 27 27 27 27 27 27 27 27 27 27		33 33 33 34 4 4 4 4 4 4 4 4 4 4 4 4 4 4	78 49 49 125 2 2 0 0 0 0 0 0 2 5 2 2 2 2 2 2 2 2 2	575 30 0 0 0 0 0 0 0 0	745 24 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	476 33 112 0 0 0 0 0 0 0 0	240 25 117 117 0 0 0 0 0 0 0	368 84 84 3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	450 72 72 5 0 0 0 0 0 0 0 5 7 7 8	3.288 557 657 172 172 86 48 0 0 0 233 29 29 29 46 48
	COMMERCIAL TOTAL	0	0	159	525	1,829	2,508	2,324	1,062	814	1, 171,2				(0)		9,953	8,424	6,981	7,297	7,744	7,710	72,429
INDUSTRIAL Performance Optimization Emergency Preparedness	ptimization	000	000	000	000	000	144	241	149 0 149	381	188 0 188	42 197 0 0 42 197	7 728	8 1272 0 0 8 1272	72 806 72 806	1,444	1,367	969	2,767	1,958	2,493 0 2,493	2,370	17,245 0 17,245
DISCONTINUED/COMPLETED High Efficiency Mato industrial Retrofit/De Efficient Motors (QM	INUED/COMPLETED High Efficiency Mators Indust isi Retroft/Demonstration Efficient Motors (OMR)	0000	0000	37	403 36 0 439	331 53 0 385	242 397 0 639	186 651 0	202	294 0 0 294	37 0	0000	0 0 0	0000	0000	0000	0000	0000	0000	0000	0000	0000	1,694 1,175 0 2,869
	INDUSTRIAL TOTAL	0	0	37	439	385	783	1,078	351	674	226			8 1,272		1,444	1,367	969	2,767	1,958	2,493	2,370	20,114
EFFICIENCY PROGRAMS SUBTOTAL	TAL	48	29	589	666	2,242	3,291	3,406	1,413	1,489	1 1	368 951	7,1 1,7	10 2.2	00 4,30	5 7,531	12.373	12,298	13,065	13,289	14,068	12,442	111,240
CUSTOMER SELF-GENERATION PROGRAMS Bloenergy Optimization	PROGRAMS mization	0 0	00	00	0 0	00	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	149	1,712	1,542	1,673	1,213	1,298	7,588
RATE/LOAD MANAGEMENT PROGRAMS Curtailable Rates	JGRAMS	00	00	00	00	506	1,325	1,310	1,306	1,126	1,466 1	1,820 2,345 1,820 2,345	45 3,124	24 4,716	16 6,174	4 6,187	706'9	6.759	869'9	6,486	5,818	5,734	708,99
Support Costs		0	0	0	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	0
Total Program.	Total Program Incentive Budgets	48	29	289	666	2,748	4,616	4,717	2,719	2,615	3,863 3				10,479	9 13,718	19,429	20,768	21,305	21,449	21,099	19,474	188,635

Total Program Incentive Budgets 48 67

Note: Subtotals may not be exact due to rounding.

\* Programs comprise the Commercial Building Envelope Program.

#### Appendix N

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

Total Resource Cost (1000s in 2010\$) Natural Gas Incentive Based Programs

Cumulative

											California
DECIDENTIAL	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Total 2010/11
Lower Income	0	0	0	0	8	0	167	275	1,707	9,137	11,367
Home Insulation	C	C	C	C	807	4 401	3 774	4 827	6 136	4 402	24 346
Water & Energy Saver	0	0		· C	jo	c f		j	4	686	726
New Homes	0	5 5	1	174	119	271	429	249	200	457	2,489
	0	13	77	174	1,007	4,671	4,370	5,351	8,585	14,682	38,929
DISCONTINUED/COMPLETED											
HE Gas Fumace Thermostat	0 0	00	00	00	2,119	6,362	4,755	5,420	3,654	71	22,328
	0	0	0	0	2,119	6,597	4,905	5,438	3,655	17	22,731
	d	Ş	ŀ	į						4.4	
RESIDENTIAL TOTAL	0	13	1	174	3,126	11,268	9,275	10,789	12,240	14,698	46,962
COMMERCIAL											
Commercial Insulation*	0 0	0 0	0 0	0 0	0 0	580	1,379	1,359	2,431	3,128	8,878
Commercial Windows*	o c	<b>&gt;</b>	o c	<b>&gt;</b> C	<u>8</u> c	432	010,7	358	1,32,1	1,023	10,333
Commercial Clistom	0 0	0 0	0 0	0 0	0 0	2 0	ţ	8 0	392	334	727
Commercial Building Optimization	0	0	0	0	78	235	161	118	214	205	1,010
New Buildings	0	0	0	0	0	0	0	145	109	120	374
Power Smart Shops	0	0	0	0	0	0	_	15	81	92	193
Commercial Kitchen Appliance	0	0	0	0	0	0	0	27	<b>4</b> i	45	115
Power Smart Energy Manager	0 0	0 0	0 0	0 0	0 0	0 0	121	96 6	₽ 8	0 0	286
City of Wissians Agreement	<b>&gt;</b> 0	> 0	<b>&gt;</b>	> 0	<b>&gt;</b>	> 0	> 0	<b>&gt;</b>	7 <	<b>-</b>	77
Commercial Clothes Washers	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	186	1,902	4,523	5,118	6,122	992'9	24,617
DISCONTINUED/COMPLETED	c	c	c	c	c	. 6	. 4				. 6
Spiray valves						061	oc	124	/7	7	040
	0	0	0	0	0	130	26	124	27	7	340
COMMERCIAL TOTAL	0	0	0	0	186	2,033	4,579	5,242	6,149	6,768	24,957
INDUSTRIAL Industrial Natural Gas Optimization	0	0	0	0	105	38	1.909	2.362	2.289	5.783	12.485
	0	0	0	0	105	38	1,909	2,362	2,289	5,783	12,485
EFFICIENCY PROGRAMS SUBTOTAL	0	13	11	174	3,417	13,338	15,764	18,393	20,677	27,250	84,404
CUSTOMER SELF-GENERATION Bioeneray Optimization	0	0	0	0	0	0	4	œ	0	0	22
	0	0	0	0	0		7	α	c		22
	>	Þ	0	0	0	>	<u> </u>	0	0	>	7
PROGRAMS SUBTOTAL	0	13	1.1	174	3,417	13,338	15,777	18,401	20,677	27,250	84,426
Support Costs**	203	225	243	536	1,249	1,655	1,624	1,960	1,998	2,674	11,054
TOTAL RESOURCE COST OF PROGRAMS	203	238	320	710	4,666	14,993	17,401	20,361	22,675	29,924	95,480

## Utility Cost (1000s in 2010\$) Natural Gas Incentive Based Programs

	Natu	rai Gas	Natural Gas Incentive Dased Programs	ve base	a Progr	alls					Cumulative
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Total 2010/11
RESIDENTIAL											
Home Insulation	0 0	0 0	0 0	0 0	388	1,892	3,031	2,798	2,975	2,230	13,313
Lower Income	<b>&gt;</b> 0	<b>&gt;</b> 0	0 0	<b>&gt;</b> 0	~ œ	c	/9.	4//	,268	2,103	4,390
water & Energy Saver New Homes	0	o £	o	92	0 83	o 96	o <del>1</del>	0	- 88 - 88	108	07/ 089
	0	13	11	92	531	1,988	3,339	3,275	4,671	5,127	19,115
DISCONTINUED/COMPLETED	,	,		,						;	
HE Gas Furnace	0	0	0	0	299	1,356	2,158	3,220	1,547	3	8,911
Thermostat	0	0	0	0	0	198	133	33	-	0	371
	0	0	0	0	299	1,554	2,292	3,258	1,547	31	9,282
RESIDENTIAL TOTAL	0	13	77	92	1,131	3,542	5,631	6,533	6,219	5,158	23,239
COMMERCIAL											
Commercial Insulation**	0	0	0	0	0	431	840	1,027	1,255	2,205	5,758
HVAC	0	0	0	0	108	622	1,686	1,403	1,131	1,227	6,175
Commercial Windows**	0	0	0	0	0	132	286	470	787	266	2,671
Commercial Building Optimization	0	0 (	0 (	0	8 ,	235	161	160	236	205	1,075
New Buildings	0	0 (	0 (	0	0 (	0	0 (	145	69 :	193	447
Commercial Custom	0 0	0 0	0 0	0 0	0 0	0 0	0 1	o ;	<del>4</del> 5	154	295
Power Smart Snops	<b>&gt;</b> 0	<b>&gt;</b> 0	<b>&gt;</b> 0	<b>&gt;</b> 0	<b>&gt;</b> 0	<b>&gt;</b> 0	- 0	<u>ნ</u> ი	<u>.</u> 6	S 6	193
Commercial Hot water	<b>&gt;</b>	> 0	> 0	<b>&gt;</b>	> 0	<b>&gt;</b>	> 0	o 4	7 4	ري د	S 5
Dougt Smort English Managar	> <	> <	0 0	> <	> <	> <	> 5	9 90	3 5	8 0	100
City of Minnings Agreement	o c	o c	o c	o c	o c	o c	N C	8 <	<u> </u>	o c	007
Commercial Clothes Washers	0	0	0	0	0	0	0	0	0	0	0
	c	c	c	0	186	1 420	3 094	3 333	3 890	5 135	17.057
DISCONTINUED/COMPLETED	>	>	>	>	2	074,-	t 6000	5,5	2,000	5	20,
Spray Valves	0	0	0	0	0	132	26	124	27	21	329
	0	0	0	0	0	132	56	124	27	21	329
COMMERCIAL TOTAL	0	0	0	0	186	1,551	3,150	3,457	3,917	5,155	17,416
INDUSTRIAL Inclustrial Natural Gas, Ontimization	c	c	c	c	105	œ	295	339	603	700	2.080
INDUSTRIAL TOTAL	0	0	0	0	105	38	295	339	603	2002	2,080
EFFICIENCY PROGRAMS SUBTOTAL	0	13	11	92	1,421	5,131	9,076	10,329	10,739	11,014	42,735
CUSTOMER SELF-GENERATION Bioeneray Optimization	0	0	0	0	0	0	4	∞	0	0	0
			0				7	α			
	>	>	>	>	>	)	<u> </u>	0	>	>	>
PROGRAMS SUBTOTAL	0	13	11	92	1,421	5,131	680'6	10,337	10,739	11,014	42,735
Support Costs***	203	225	243	536	1,249	1,655	1,624	1,960	1,998	2,674	11,054
UTILITY COST OF PROGRAMS	203	238	320	630	2,670	6,785	10,713	12,297	12,737	13,688	53,790

Note: Subtotals may not be exact due to rounding.
\* Includes Lower Income Furnace Replacement Expenditures.
\*\* Programs comprise the Commercial Building Envelope Program.
\*\*\* Support Costs include Affordable Energy Fund Spending.

## Administration Cost (1000s in 2010\$) Natural Gas Incentive Based Programs

					5	2					Cumulative
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Total 2010/11
RESIDENTIAL											
Lower Income	0	0	0	0	8	0	144	131	182	915	1,456
Home Insulation	0 0	0 0	0 0	0 0	176	541	111	909	476	498	3,075
water & Energy Saver New Homes	00	o <u>6</u>	o	0 82	2 0	35 0	20 0	00	15	0 0	167 286
	0	13	77	78	278	573	971	738	717	1,539	4,983
DISCONTINUED/COMPLETED HE Gas Fumace	0	0	0	0	270	297	457	361	197	17	1,600
Thermostats	0	0	0	0	0	113	96	18	-	0 !	228
	0	0	0	0	270	410	553	380	198	17	1,828
RESIDENTIAL TOTAL	0	13	11	78	548	983	1,525	1,117	915	1,556	6,811
COMMERCIAL											
HVAC	0	0	0	0	108	291	302	255	320	261	1,566
Commercial Insulation*	0	0	0	0	0	11	11	176	177	219	726
Commercial Windows*	0	0	0	0	0	84	87	124	142	168	909
Commercial Building Optimization	0	0	0	0	78	235	161	118	156	153	006
New Buildings	0	0	0	0	0	0	0	145	109	120	374
Power Smart Shops	0 0	0 0	0 0	0 (	0 0	0 (	- 0	15	& i	ဗ မ	190
Commercial Custom	<b>&gt;</b> (	<b>&gt;</b> (	0 (	<b>&gt;</b> (	0 (	0 (	0 (	<b>&gt;</b> (	8 6	2 2	71,
Commercial Hot Water	<b>&gt;</b> c	<b>&gt;</b> 0	<b>&gt;</b> 0	<b>&gt;</b> 0	<b>o</b> c	<b>&gt;</b> 0	<b>o</b> c	<b>&gt;</b> •	22 6	31	53
Down Smort Engrav Manager	> <	<b>&gt;</b>	0 0	<b>&gt;</b>	> <	> <	o ţ	5 ٥	2 7	2 ∈	74.7 206
City of Winniped Agreement	> <	o c	o c	o c	o c	> <	<u> </u>	; ⊂	_ c	o c	900
Commercial Clothes Washers	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	186	989	749	935	1,190	1,114	4,860
DISCONTINUED/COMPLETED											<u>!</u>
Spray Valves	0	0	0	0	0	24	31	56	18	2	131
	0	0	0	0	0	54	31	26	18	2	131
COMMERCIAL TOTAL	0	0	0	0	186	740	781	961	1,208	1,117	4,991
INDUSTRIAL Industrial Natural Gas Optimization	0	0	0	0	105	38	94	88	167	117	609
	0	0	0	0	105	38	94	88	167	117	609
EFFICIENCY PROGRAMS SUBTOTAL_	0	13	11	78	839	1,760	2,399	2,166	2,289	2,790	12,412
CUSTOMER SELF-GENERATION Riceparty Optimization	c	c	c	c	c	c	4	α	c	c	33
			0 0		0 0	0 0		ο	0 0	0 0	22
	>	>	0	>	>	>	<u>†</u>	0	>	>	77
PROGRAMS SUBTOTAL_	0	13	11	78	839	1,760	2,413	2,174	2,289	2,790	12,433
Support Costs**	203	225	243	536	1,249	1,655	1,624	1,960	1,998	2,674	11,054
ADMINISTRATION COSTS OF PROGRAMS	203	238	320	613	2.088	3.415	4.037	4.134	4.287	5.464	23.488
	ı		1			1					

Note: Subtotals may not be exact due to rounding.

\* Programs comprise the Commercial Building Envelope Program.

\*\* Support Costs include Affordable Energy Fund Spending.

Incentive Costs (1000s in 2010\$)
Natural Gas Incentive Based Programs

		5				2					Cumulative
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Total 2010/11
RESIDENTIAL											
Home Insulation	0	0 (	0 (	0	212	1,350	2,254	2,191	2,499	1,732	10,238
Lower Income Mater & Engray Saver	<b>o</b> c	<b>o</b> c	0 0	0 0	<b>&gt;</b>	c	£, c	346	1,383	1,188 408	2,940
water a cried by caver New Homes	0	0	0	1 2	4 5	64	6	0	72	8 8	370
	0	0	0	17	254	1,415	2,368	2,537	3,954	3,412	13,956
DISCONTINUED/COMPLETED HE Gas Furnace	0	0	0	0	329	1,059	1,701	2,858	1,350	4	7,311
Thermostats	0	0	0	0	0	82	37	70	0	0	143
	0	0	0	0	329	1,144	1,739	2,879	1,350	14	7,454
RESIDENTIAL TOTAL	0	0	0	17	582	2,559	4,106	5,416	5,304	3,426	21,410
COMMERCIAL											
Commercial Insulation*	0	0	0	0	0	354	292	852	1,078	1,986	5,032
HVAC	0	0	0	0	0	331	1,384	1,148	781	920	4,613
Commercial Windows*	0	0	0	0	0	48	199	346	645	829	2,066
Commercial Custom	0	0	0	0	0	0	0	0	83	94	178
New Buildings	0	0	0	0	0	0	0	0 !	0 ;	73	23
Commercial Building Optimization	0 0	0 (	0 (	0 (	0 (	0 (	0 (	43	88	25	175
Commercial Kitchen Appliances	0 0	0 (	0 (	0 (	0 (	0 (	0 (	∞ (	35	19	59
Power Smart Shops	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	<del>-</del> (	7 0	ကေ
Power Smart Energy Manager	<b>&gt;</b> c	<b>-</b>	0	<b>&gt;</b> 0	0 0	<b>&gt;</b> 0	<b>&gt;</b> 0	N C	<b>&gt;</b>	<b>&gt;</b> 0	N C
City of Winning Agreement	<b>&gt;</b>	<b>&gt;</b>	<b>&gt;</b>	<b>&gt;</b> C	<b>&gt;</b> C	<b>&gt;</b> C	<b>&gt;</b>	>	o c	<b>&gt;</b> C	o c
Commercial Clothes Washers	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	734	2.345	2.398	2.700	4.025	12.201
DISCONTINUED/COMPLETED	,	,	,	,	,		) 	ì	i		i Î
Spray Valves	0	0	0	0	0	78	22	86	6	18	228
	0	0	0	0	0	78	25	86	o	18	228
COMMERCIAL TOTAL	0	0	0	0	0	811	2,370	2,496	2,709	4,043	12,429
INDUSTRIAL INDUSTRIAL Industrial Natural Gas Optimization	0	0	0	0	0	0	201	251	437	583	1,471
	0	0	0	0	0	0	201	251	437	583	1,471
EFFICIENCY PROGRAMS SUBTOTAL	0	0	0	17	582	3,370	6,677	8,162	8,449	8,052	35,310
CUSTOMER SELF-GENERATION  Biography Optimization	c	c	c	c	c	c	c	c	c	c	c
		0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	<b>ɔ</b>	<b>ɔ</b>	0
PROGRAMS SUBTOTAL	0	0	0	17	582	3,370	6,677	8,162	8,449	8,052	35,310
Support Costs	0	0	0	0	0	0	0	0	0	0	10
ADMINISTRATION COSTS OF PROGRAMS	0	0	0	17	582	3,370	6,677	8,162	8,449	8,052	35,320

#### Appendix O

## Electric Customer Service Initiatives-Utility Costs

Utility Costs (1000s in 2010\$) Electric Customer Service Initiatives

												Cumulative
												Total
	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2024/25
RESIDENTIAL												
Residential Earth Power Loan	0	2	47	26	347	881	-93	71	209	162	102	1,826
ecoENERGY	0	0	0	0	-10	-43	72	165	-19	143	101	408
Solar Hot Water Heating	0	0	0	0	0	0	0	0	0	7	0	7
R-2000 Component of the New Home Program	0	0	0	0	0	0	0	0	0	0	0	0
Power Smart Residential Loan	45	77	70	6	0	_	10	7	φ	-74	-37	44
Subtotal	45	62	29	106	336	839	-12	235	184	238	166	2,284
DISCONTINUED/COMPLETED PROGRAMS												
PSEM	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
CSI PROGRAMS SUBTOTAL	45	79	29	106	336	839	-12	235	184	238	166	2,284

Note: Subtotals may not be exact due to rounding.

Utility Costs for Support, Basic Information Services & Customer Service Initiatives and Standards (1000s in 2010\$)

Electric Customer Service Initiatives

																					Cumu	ative
	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1 996/97	. 86/2661	1998/99	1999/00 20	2000/01 20	2001/02 20	2002/03 200	2003/04 200	2004/05 200	2005/06 2006/07	3/07 2007/08		2008/09 2009/10	/10 2010/1	Total 711 2010/11	tal )/11
CUSTOMER SERVICE INITIATIVES																						
Customer Service Initiatives & Standards	0	0	0	0	0	0	0	0	0	0	45	79	67 1	106 3	336 8	839 -1	-12 23	235 18	184 238	8 166	3 2,284	84
	0	0	0	0	0	0	0	0	0	0	45	79										84
BASIC INFORMATION SERVICES  Basic Information Services	0	13	9	93	22	=	13	158	478	. 264			•	_	,599 1,					1,374		17,645
	0	13	9	93	22	11	13	158	478	. 264	1,304	1,326 1	1,318 1,	1,683 1,	ľ	1,614 1,3	1,313 1,3	7,1 016,1	1,713 1,701			345
Discontinued/Completed Basic Information Services	0	0	0	4	23	160	141	-	75	253	312	406	298	378 4	434 3	391 11	4-		0 0	-	2,8	2,885
	0	0	0	4	23	160	141	-	75	253						11 11	1 -4		0	1	2,8	85
SUPPORT COSTS																						
Power Smart Communications	6	705	1,509	1,075	525	693	654	572	495	703	628	175						_			_	560
Residential Retrofit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	43 3	34 12	125 7	74 83	52		423
Retrofit Demonstrations	0	0	0	0	0	0	0	0	0	0	0	0										•
Integrated Plans/Targets	20	479	237	216	207	210	64	32	83	163	26	35										20
DSM Administration	208	212	180	131	96	117	186	73	40	101	131	188										74
DSM Tracking System	0	0	13	23	144	150	13	<del>-</del>	-	3	0	0										œ,
Commercial Audits	0	0	0	0	0	0	0	0	0	0	0	16										ď
Energy Efficient Screening Studies	0	0	0	0	0	0	0	0	0	0	0	0										_
Power Smart Residential Support	0	0	0	0	0	0	0	0	0	0	0	0										_
Sustainability & Standards	0	0	0	0	0	0	0	0	0	0	0	0										4
Power Smart for Business	0	0	141	139	88	51	0	0	0	0	0	0										59
Discontinued/Completed Support Costs	0	954	807	425	51	54	120	128	86	09	9/	155										89
	237	2,350	2,886	2,007	1,111	1,275	1,037	802	716	1,029	932	569	1,400 1,	,012 1,	,272 1,	,119 1,1	1,181 1,2					287
TOTAL SUPPORT/CSIs/STANDARDS	237	2,364	2,893	2,105	1,189	1,447	1,191	964	1,268	1,846	2,593 2	2,380	3,083 3,	3,180 3,	3,641 3,	964 2,492	92 2,814	14 3,784	84 3,803	3,264		50,502

Note: Subtotals may not be exact due to rounding.

#### Appendix P

# Natural Gas Customer Service Initiatives - Utility Costs

Utility Costs (1000s in 2010\$) Electric Customer Service Initiatives

												Cumulativ
												-
	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2024/25
RESIDENTIAL												
Residential Earth Power Loan	0	2	47	26	347	881	-93	71	209	162	102	1,82
ecoENERGY	0	0	0	0	-10	-43	72	165	-19	143	101	408
Solar Hot Water Heating	0	0	0	0	0	0	0	0	0	7	0	7
R-2000 Component of the New Home Program	0	0	0	0	0	0	0	0	0	0	0	0
Power Smart Residential Loan	45	77	20	6	0	-	10	7	9	-74	-37	44
Subtotal	45	79	29	106	336	839	-12	235	184	238	166	2,284
DISCONTINUED/COMPLETED PROGRAMS PSEM	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
CSI PROGRAMS SUBTOTAL	45	62	29	106	336	839	-12	235	184	238	166	2,284

Note: Subtotals may not be exact due to rounding.

Utility Costs for Support, Basic Information Services & Customer Service Initiatives and Standards (1000s in 2010\$)

Natural Gas Customer Service Initiatives

Cumulative

OTWENTEN TOWARD GENECATION	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	Total 2010/11
Customer Service Initiatives & Standards	989	402	343	345	2	825	472	-219	68-	-320	2,450
	989	402	343	345	2	825	472	-219	68-	-320	2,450
BASIC INFORMATION SERVICES  Basic Information Services	175	198	216	489	517	672	463	517	488	363	4,098
	175	198	216	489	517	672	463	517	488	363	4,098
Discontinued/Completed Basic Information Services	0	0	0	0	4	56	-10	0	0	0	20
	0	0	0	0	4	26	-10	0	0	0	20
SUPPORT COSTS											
Power Smart Communications	0	0	0	0	335	396	414	927	402	529	3,311
Residential Retrofit	0	0	0	0	0	62	232	137	155	96	682
Retrofit Demonstrations	0	0	0	0	75	0	2	0	0	0	80
Integrated Plans/Targets	0	0	0	0	72	62	61	142	210	1	629
DSM Administration	0	0	0	0	140	140	107	204	170	146	206
DSM Tracking System	0	0	0	0	0	7	4	_	16	23	92
Commercial Audits	0	0	0	0	17	20	10	0	_	_	48
Energy Efficient Screening Studies	0	0	0	0	0	0	0	0	æ	34	43
Power Smart Residential Support	0	0	0	0	0	0	0	0	42	62	122
Sustainability & Standards	0	0	0	0	83	155	06	103	156	11	869
Power Smart for Business	0	0	0	0	0	104	142	133	132	158	029
Discontinued/Completed Support Costs	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	722	942	1,065	1,647	1,600	1,319	7,296
TOTAL SUPPORT COSTS & CSIS & STANDARDS	861	009	559	834	1,249	2,465	1,990	1,946	1,998	1,362	13,864

Note: Subtotals may not be exact due to rounding.