

# 2010 Power Smart Plan



December 2010

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# Executive Summary

Manitoba Hydro's 2010 Power Smart Plan provides a roadmap for the future direction of the Corporation's energy conservation program. The Plan was developed through an intensive planning process which builds on the Corporation's experience and continuous involvement in energy management since 1989. The planning process involved research on energy management technologies and practices, research on activities of other leading-edge organizations delivering energy efficiency programs and the development of program design concepts.

The 2010 Power Smart Plan is a 15-year plan that forecasts Manitoba Hydro's energy savings and investments to the benchmark year of 2024/25 which will be achieved through electricity and natural gas Power Smart Programs. The plan sets out to realize electricity savings of 626 MW and 2,133 GW.h, natural gas savings of 106 million cubic meters and combined global greenhouse gas emission reductions of 1.6 million tonnes by 2024/25. These savings represent 4.2 percent of the estimated electric load forecast for 2024/25 and 4.1 percent of the natural gas load forecast for 2019/20.

The total cost of achieving the energy savings is \$572 million; \$414 million of the costs are funded through the Corporation's Power Smart electricity budget, \$130 million from the Power Smart natural gas budget, \$23 million from the Affordable Energy Fund created through provincial legislation, and \$5 million from the Lower Income Natural Gas Furnace Replacement budget for targeting furnace replacement.

Combined with energy savings achieved to date, total electrical savings of 918 MW and 3,408 GW.h and total natural gas savings of 149 million cubic meters will be realized by 2024/25. These combined energy savings are expected to result in an overall reduction of greenhouse gas emissions of 2.6 million tonnes by 2024/25.

By reducing electricity and natural gas consumption through innovative products, participating customers can expect to save \$100 million in 2024/25 and \$1 billion cumulatively by 2024/25. When combined with bill reductions achieved to date, programs are expected to save participating customers \$154 million in 2024/25 and over \$2 billion cumulatively.

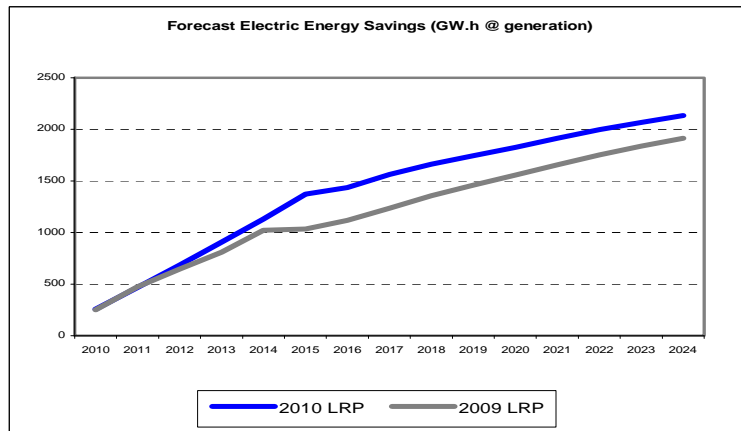
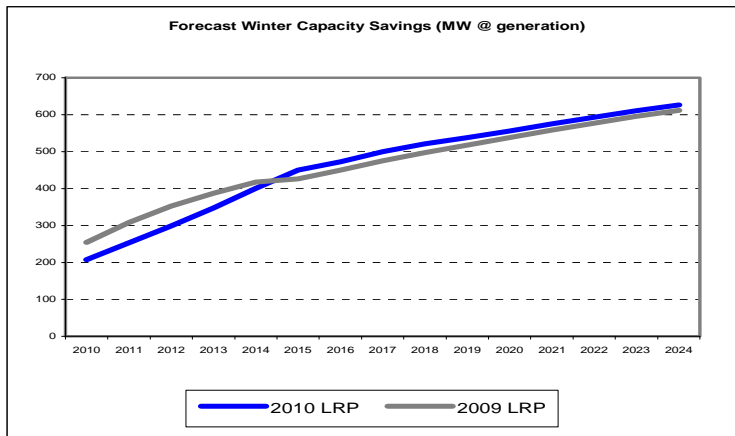
The overall Total Resource Cost (TRC) for the electric and natural gas Power Smart portfolio is 2.2. The electric Power Smart portfolio has an overall Rate Impact Measure (RIM) of 1.2 and an overall levelized utility cost of 2.5 cents per kilowatt-hour. The natural gas Power Smart portfolio has an overall RIM of 0.7 and an overall levelized utility cost of 11.9 cents per cubic meter.

## Changes from the 2009/10 Power Smart Plan

The following graphs outline changes in electric and natural gas energy savings and utility costs forecasted in the 2010 Power Smart Plan relative to those outlined in the 2009 Power Smart Plan.

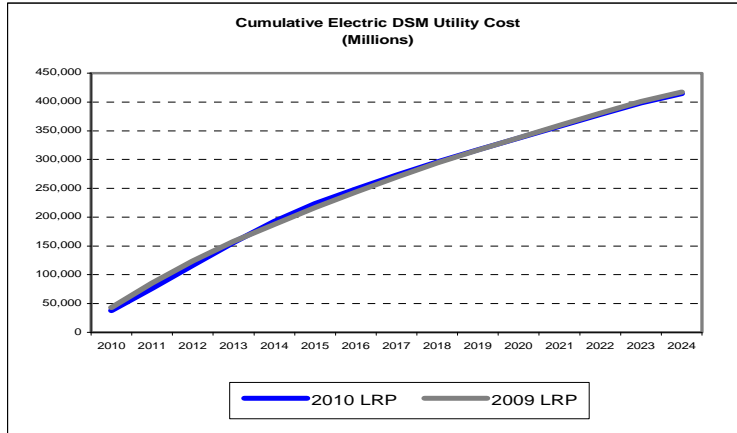
### Electric DSM Targets - Differences

Overall, winter capacity and electric energy savings are expected to increase from the 2009 Plan. The differences in estimated electrical energy savings reflect adjustments to existing and future programs based on updated market information. Most notably, revisions made to the New Homes program, Residential Earth Power program, Fridge Recycling program, Performance Optimization program, Curtailable Rates program and Federal Codes Savings from the Residential Lighting program resulted in a net increase in both capacity and electric energy planned savings.



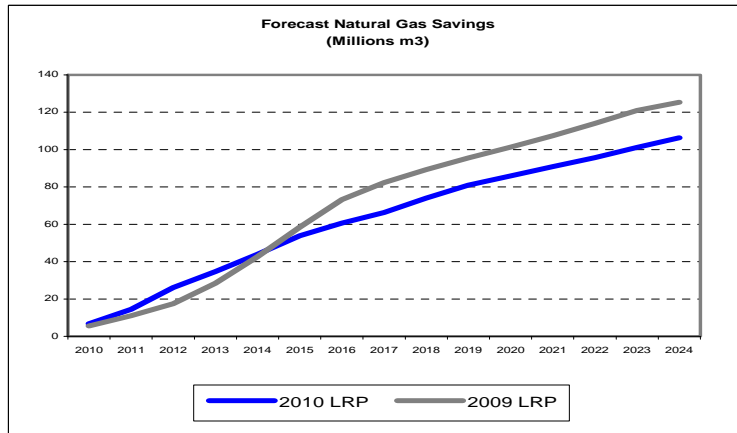
### Electric DSM Utility Costs - Differences

The difference in electric utility cost is mainly the result of decreased spending in the Curtable Rates program which is the result of lower incentives being paid to customers.



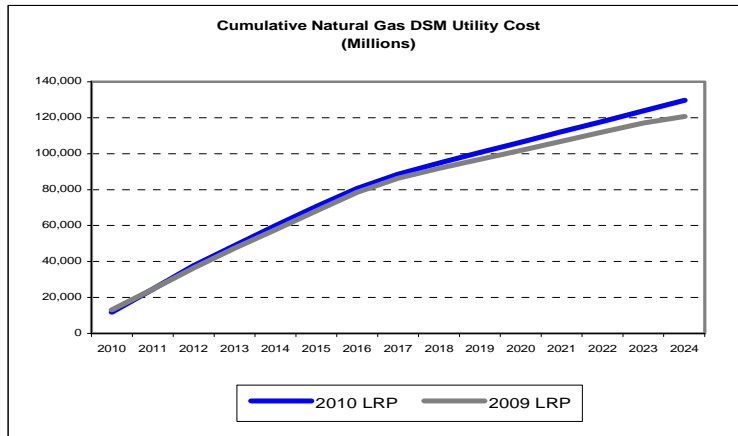
### Natural Gas DSM Targets - Differences

Overall, natural gas savings are expected to decrease from the 2009 Plan primarily due to revisions made to the Residential CFL program and to natural gas codes and standards relating to residential furnaces.



## Natural Gas DSM Utility Costs - Differences

As per the graph below, there are no significant differences between the 2010 and 2009 plans as it relates to natural gas utility costs.



<b>EXECUTIVE SUMMARY</b>	<b>2</b>
<b>1 THE 2010 POWER SMART PLAN</b>	<b>8</b>
1.1 Portfolio Strategy	8
1.2 Residential Portfolio	10
1.3 Commercial Portfolio	11
1.4 Industrial Portfolio	13
1.5 Load Management Portfolio	14
1.6 Customer Self-Generation Portfolio	14
<b>2 ELECTRIC DEMAND SIDE MANAGEMENT</b>	<b>15</b>
2.1 Electric DSM Targets	15
2.2 Electric DSM Utility Investment	18
2.3 Electric DSM Cost Effectiveness	19
<b>3 NATURAL GAS DEMAND SIDE MANAGEMENT</b>	<b>21</b>
3.1 Natural Gas DSM Targets	21
3.2 Natural Gas DSM Utility Investment	24
3.3 Natural Gas DSM Cost Effectiveness	25
<b>4 COMBINED DEMAND SIDE MANAGEMENT</b>	<b>27</b>
4.1 Combined DSM Utility Investment	27
4.2 Combined DSM Cost Effectiveness	28
4.3 Combined Global Greenhouse Gas Emissions Reduction	29
4.4 Combined Customer Bill Reductions	30
4.5 Combined Additional Non-Energy Benefits	31
<b>5 ENERGY EFFICIENT CODES AND STANDARDS</b>	<b>32</b>
5.1 Energy savings from Codes & Standards	32
5.2 Code, Standard & Regulation Descriptions	34
<b>6 OTHER INTERNAL DEMAND SIDE MANAGEMENT FUNDING</b>	<b>37</b>
6.1 Affordable Energy Fund	37
6.2 Lower Income Natural Gas Furnace Replacement	40
<b>7 TOTAL INTERNAL DEMAND SIDE MANAGEMENT BUDGET</b>	<b>41</b>
<b>8 OTHER EXTERNAL DEMAND SIDE MANAGEMENT FUNDING</b>	<b>42</b>

**APPENDIX A - 2010 Power Smart Plan Electric**

- Appendix A.1 - Winter Capacity Savings (MW)
- Appendix A.2 - Summer Capacity Savings (MW)
- Appendix A.3 - Annual Energy Savings (GW.h)
- Appendix A.4 - Annual Total Resource Cost
- Appendix A.5 - Annual Program Budgets (Utility Cost)
- Appendix A.6 - Annual Program Administration Budgets
- Appendix A.7 - Incentives

**APPENDIX B - Historical MW/GW.h Savings & Costs by Program (Savings to Date)**

- Appendix B.1 - Capacity Savings (MW)
- Appendix B.2 - Summer Capacity Savings (MW)
- Appendix B.3 - Annual Energy Savings (GW.h)
- Appendix B.4 - Annual Total Resource Cost
- Appendix B.5 - Annual Program Budgets (Utility Cost)
- Appendix B.6 - Annual Program Administration Budgets
- Appendix B.7 - Incentives

**APPENDIX C - 2010 Power Smart Plan Natural Gas**

- Appendix C.1 - Annual Energy Savings (m3)
- Appendix C.2 - Annual Total Resource Cost
- Appendix C.3 - Annual Program Budgets (Utility Cost)
- Appendix C.4 - Annual Program Administration Budgets
- Appendix C.5 - Incentives

**APPENDIX D - Historical Million m3 Savings & Costs by Program (Savings to Date)**

- Appendix D.1 - Annual Energy Savings (m3)
- Appendix D.2 - Annual Total Resource Cost
- Appendix D.3 - Annual Program Budgets (Utility Cost)
- Appendix D.4 - Annual Program Administration Budgets
- Appendix D.5 - Incentives

**APPENDIX E - Comparison to 2009 Power Smart Plan**

- Electric DSM Target and Utility Cost Comparison
- Electric DSM Targets - Differences
- Electric DSM Utility Costs - Differences
- Natural Gas DSM Target and Utility Cost Comparison
- Natural Gas DSM Targets - Differences
- Natural Gas DSM Utility Costs - Differences

**APPENDIX F - Lower Income Energy Efficiency Program**

- Program Objective
- Target Market/Eligibility
- Targeted DSM Measures
- Program Delivery
- Program Description and Incentives
- Community Groups
- Budget Forecast
- Cost-Effectiveness

**APPENDIX G - Program Evaluation Criteria**

- Nature of Electricity and Natural Gas Markets
- Program Categories
- Economic Effectiveness Ratios
- Other DSM Program Assumptions

# 1 The 2010 Power Smart Plan

Manitoba Hydro's 2010 Power Smart Plan provides a roadmap for the future direction of the Corporation's energy conservation program. The Plan was developed through an intensive planning process which builds on the Corporation's experience and continuous involvement in energy management since 1989. The planning process involved research on energy management technologies and practices, research on activities of other leading-edge organizations delivering energy efficiency programs and the development of program design concepts.

## 1.1 Portfolio Strategy

Power Smart Programs are designed through an in-depth technology and market research process. Energy efficient technologies or practices ("EE measure") are first screened to determine the economic viability to the end user. Inputs into the process include energy savings, demand savings, interactive effects, product life, product cost and persistence rates. The resulting marginal resource cost ratio is a guide to this process, however, other factors are also considered in determining whether an EE measure should continue into the program design phase. For example, emerging technologies often do not provide enough benefits to outweigh the costs but the target market may have a higher threshold for longer payback periods. In these instances a program may be pursued to assist in stimulating market activity which builds the market capability and helps deliver more cost effective savings in the future.

A thorough understanding of the market; both overall characteristics and drivers and detractors to the EE measure; is essential to ensure that the program design is addressing the proper target market and contains the tools and strategies that will address the barriers present. Market detail includes the target customers, current market share of the EE measure, alternatives to the EE measure including those that are considered the most standard practice, incremental costs of the measure including installation, channels through which the EE measure gets to the market and ancillary customer benefits to the EE measure. These details will guide the overall marketing mix to ensure that a meaningful message reaches the intended target market in order to drive participation in the program.

The overall life span of a program will vary by EE measure but generally is established by the length of time that is thought to be required to transform the market to that measure. Tools for permanent market transformation are considered with each design and most commonly come in the form of a regulation (most often for retrofit market) or a code (applies only to new construction opportunities). In addition to the active role Power Smart plays with the Provincial departments responsible for energy regulations and building codes (see section 5), Manitoba Hydro also partners with the Federal Government's Office of Energy Efficiency and the Canadian Standards Association to continually improve the energy performance of products. Manitoba Hydro staff also regularly monitor activities of other Provincial and Territorial Regulation and Code Authorities and the United States Department of Energy since regulatory activities in other jurisdictions may increase a timeline for a regulation locally or, alternatively, result in an influx of inefficient products into Manitoba.

The industrial and large commercial programs focus on an overall strategy of achieving optimal energy efficiency, net zero energy facilities, integrated manufacturing and sustainable net zero carbon communities. This sector's portfolio of programs and initiatives can include general information and education initiatives, incentive based program, codes and standards efforts and performance-based innovative rates and demand response offerings.



The strategic principles enabling each program to achieve its objectives are:

- General information and education initiatives increase awareness of the basic principles and behaviors associated with sustainability and conservation.
- Incentive based programs proactively transform a market from baseline to energy efficient conservation.
- Innovative rate structures stimulate energy and demand acquisition strategies and behavior changes of end users.
- Codes and standards influence market “laggards”, to support persistence of implemented measures and to set the baseline for new strategic load growth.

Industrial program strategies include:

- A suite of customer focused program elements that:
  - create awareness through the provision of facility level energy efficiency screenings and access to advanced energy management monitoring information;
  - create interest by initially focusing on how to improve operating and production problems in an energy efficient way;
  - create compelling customer focused business cases for attaining maximum impacts by following a “system approach” which firstly defines optimal requirements, reduces energy losses and waste, then delivers the actual energy needed via the most optimal energy efficient means; and
  - offer innovative market focused incentives based on a sliding scale to encourage maximum impacts, and use incentive caps to ensure good business controls.
- Engaging customers at multiple levels through proactive customer relationship management consisting of:
  - engaging senior executives with energy efficiency screenings that provide information to scope and prioritize their opportunities;
  - engaging operations level personnel through the creation of credible business cases complete with life cycle costing, identifying internal customer champions and energy management teams and integrating the mechanical sales and service industries where appropriate;
  - engaging shop floor personnel through targeted training and standardization of work processes and lean manufacturing procedures; and
  - engaging the customer’s external facilitators and influencers through codes and standards, collaborative Research and Development and the development of industry best practices.
- Providing credibility by positioning Manitoba Hydro personnel as experts and leading authorities in various sustainable and energy efficient end use technologies:
  - monitoring and development of emerging technologies;
  - building networks nationally;
  - supporting the development of local technical capacity of capabilities; and
  - collaborating with national stakeholders in areas of common interest.

## 1.2 Residential Portfolio

The **Power Smart Residential Portfolio** consists of the following programs:

### **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:

- Power Smart Do-It-Yourself Home Assessments
  - Mail-in Energy Assessment Survey
  - Online Home Comfort & Energy Assessment
- WISE (Wisdom In Saving Energy) Program
- Existing Homes Energy Workshops
- Consumer Information Services
- Power Smart “Energy Expert”
- Power Smart Residential Loan (Cost-Recovery program)^

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

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. The program attempts to mitigate the market barriers of low customer awareness, underdeveloped industry infrastructure and high capital costs. Mitigation of capital costs is achieved by offering residential consumers the opportunity to finance a geothermal heat pump installation through the cost-recovery based Earth Power Loan.

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

The Solar Water Heating Program promotes harnessing the sun’s power and transferring the energy to preheat water for water tanks. The program attempts to mitigate the market barriers of low customer awareness and high capital costs. Mitigation of capital costs is achieved through utilizing the cost-recovery based Earth Power Loan.

In addition to the above programs, Manitoba Hydro also provides customers with basic information on the energy saving opportunities via the following initiatives:

- Residential Seasonal LED Lighting
- Standby Power
- Consumer Electronics

Note: ^ Program impacts classified as Customer Service Initiative in Appendices.

### **Incentive Based Programs**

#### **New Home Program**

The New Home Program provides residential customers with incentives to incorporate energy savings features and construction techniques into the construction of new homes. These standards incorporate cost-effective energy upgrades to achieve maximum economically achievable opportunities of the baseline new home.

### **Home Insulation Program**

The Home Insulation Program encourages existing homeowners to upgrade the insulation in their attics, walls, and foundations to Power Smart recommended levels. Information and financial incentives are offered to encourage customer participation.

### **Water and Energy Saver Program**

The Water and Energy Saver Program encourages customers to replace their existing inefficient showerheads and faucet aerators with low-flow energy efficient showerheads and faucet aerators.

### **Compact Fluorescent Lighting (CFL) Program**

The CFL Program encourages the replacement of residential incandescent lights with CFLs. An instant rebate, bulk purchase for property managers and an educational give-away will be used to encourage customers to adopt this technology and advance the technology's market transformation.

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

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

Note: (See Appendix E for detail on the Lower Income Energy Efficiency Program)

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

The Energy Efficient Light Fixtures program encourages the replacement of residential incandescent and halogen fixtures with ENERGY STAR qualified fixtures and installation of other energy efficient devices including dimmer switches and LED night lights.

### **Refrigerator Recycling Program**

The Refrigerator Recycling Program will provide pick-up and recycling services for customers to remove their old and working secondary fridges and freezers earlier than their expected end of life. This will be supported by a marketing campaign promoting the benefits of removing the older working appliance as well as a financial incentive to encourage customers to give up their appliance. The program will be implemented through a third party service provider specializing in appliance removal and recycling.

## **1.3 Commercial Portfolio**

The **Power Smart Commercial Portfolio** consists of the following programs:

### **Incentive Based Programs**

#### **Commercial Lighting Program**

The Commercial Lighting Program encourages commercial, industrial and agricultural customers to install cost-effective energy efficient lighting systems in new construction and renovation projects as well as provide assistance to lighting distributors, installers, contractors and manufacturers with helping customers save electricity.

**Custom Measures Program**

The Commercial Custom Measures Program encourages commercial customers who are renovating, undergoing expansions 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 Building Envelope - Windows and Insulation Programs**

This 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.

**City of Winnipeg Power Smart Agreement**

The City of Winnipeg Power Smart Agreement (PSA) encourages, promotes and implements energy saving measures to improve the efficiency of City-owned facilities

**Commercial Refrigeration Program**

The Commercial Refrigeration 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.

**Commercial Earth Power Program**

The Commercial Earth Power 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 New Construction Program**

The Commercial New Construction Program promotes the integrated design, construction and commissioning of energy efficient commercial buildings through financial incentives and promotional activities while focusing heavily on increasing the training and education levels of local industry stakeholders.

**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 energy conservation opportunities with short payback periods.

**Internal Retrofit Program**

The Internal Retrofit Program encourages energy efficiency in Manitoba Hydro buildings by retrofitting existing and constructing new buildings to POWER SMART levels.

**Power Smart Energy Manager Program**

The Power Smart Energy Manager Program is designed to achieve savings by educating school divisions on the benefits of reducing their energy use through a comprehensive training program on how to identify energy savings in their facilities.

**Commercial Kitchen Appliance Program**

The Commercial Kitchen Appliance Program promotes the installation of ENERGY STAR commercial natural gas and electric steam cookers and natural gas fryers.

**Network Energy Management Program**

The Network Energy Management Program is a software-technology based program targeted at commercial customers utilizing personal computers (PCs) in a network setting.

### **Power Smart Shops Program**

The Power Smart Shops Program is a designation program that promotes energy efficiency to small independent commercial customers. The program encourages customers to fully convert their buildings to a Power Smart Shops efficiency level by providing expertise, competitive pricing and through the installation of no/low cost energy efficient products including lighting, refrigeration, hot water, and kitchen upgrades.

### **Commercial CO2 Sensor Program**

The Commercial CO2 Sensor Program promotes the installation of carbon dioxide demand-controlled ventilation sensors through financial incentives and promotional activities, as well as increasing the levels of education to customers and channel intermediaries.

### **Commercial Clothes Washers**

The Commercial Clothes Washer Program promotes ENERGY STAR® qualified front-loading commercial clothes washers (Washers) while raising awareness of lower operating costs and increased water savings.

In addition to the above programs, Manitoba Hydro also provides commercial customers with basic information on the energy saving opportunities via the following initiatives:

- Power Smart Recreation Facility Survey
- Religious Buildings Initiatives

## **1.4 Industrial Portfolio**

The **Power Smart Industrial Portfolio** consists of the following programs:

### **Incentive Based Programs**

#### **Performance Optimization Program**

The Performance Optimization Program encourages industrial and large commercial customers to study and implement energy efficient measures in their electro-technology processes and motor-driven systems. The program offers Custom Engineered Solutions (inclusive of compressed air, pump, fan and process system initiatives) Eco-efficiency Audits & Feasibility Studies, Energy Management Systems and Waste Stream Thermal Recovery systems.

#### **Emergency Preparedness Program**

The Industrial & Commercial Emergency Preparedness Program is intended to fulfill a two-fold purpose. The program will provide electrical demand and energy savings in support of the Corporation's Power Smart mandate while providing operational support during a crisis that impacts the availability of supply for the Corporation's customers in the Greater Winnipeg Area.

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

The Industrial Natural Gas Optimization Program provides industrial and large commercial customers with technical support and financial incentives necessary to identify, investigate and implement systematic efficiency improvements throughout their facility.

In addition to the above programs, the Industrial portfolio consists of the following Customer Service initiatives:

- Consumer Information Sheets
- High Efficiency Motor Market
- Industrial Technology Workshops
- Engineering Expertise
  - Managing customer energy strategically
  - Building envelope & infrastructure
  - Process & motive power systems
  - On-site generation & heat recovery
  - Power quality analysis

## 1.5 Load Management Portfolio

The **Power Smart Load Management Portfolio** consists of the following program:

### Incentive Based Programs

#### **Curtailable Rates Program**

Under the Curtailable Rate Program, qualifying customers receive a monthly credit on load (kW) which can be curtailed on notice from Manitoba Hydro.

## 1.6 Customer Self-Generation Portfolio

The **Power Smart Customer Self-Generation Portfolio** consists of the following programs:

### Incentive Based Program

#### **Bioenergy Optimization Program**

The Bioenergy Optimization Program encourages customer self-generation through the use of cost-effective biomass to energy conversion systems. The program targets large agricultural and industrial customers with low-cost readily available sources of biomass, continual needs for heat and power and operation capability. As the market for biomass to energy conversion systems mature and customers become more focused on sustainable manufacturing and the impacts of climate change, the target market will be expanded. All customers billed at the General Service rate categories will be eligible for the program, however, only agricultural and industrial customers with readily available, low-cost sources of biomass are anticipated to actively participate in the program.

# 2 Electric Demand Side Management

## 2.1 Electric DSM Targets

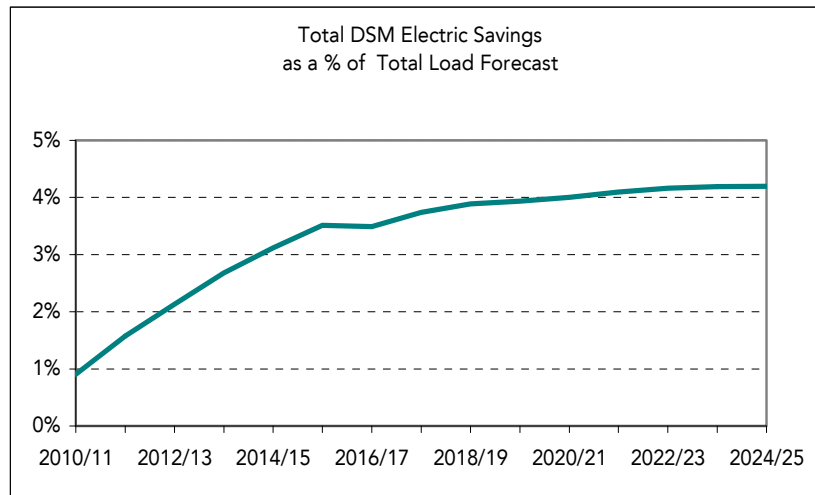
In summary, the 2010 Power Smart Plan forecasts achieving capacity savings of 626 MW, energy savings of 2,133 GW.h and a global greenhouse gas emission reduction of 1.4 million tonnes from 2010/11 to 2024/25 with a total utility investment of \$414 million.

In combination with savings to date, the 2010 Power Smart Plan forecasts achieving capacity savings of 918 MW, energy savings of 3,408 GW.h and a global greenhouse gas emission reduction of 2.3 million tonnes to 2024/25 at a total utility investment of \$747 million

Most notably, the Curtailable Rates Program offers the most significant demand reductions of all DSM programs with approximately 37% of demand savings, with the commercial sector accounting for approximately an additional 34%.

Moreover, the commercial sector provides the largest percentage of expected energy efficiency GW.h savings (54%). The industrial sector offers the second largest area for efficiency savings, followed by the residential sector.

This activity represents 4.2% of the estimated load forecast at the benchmark year.



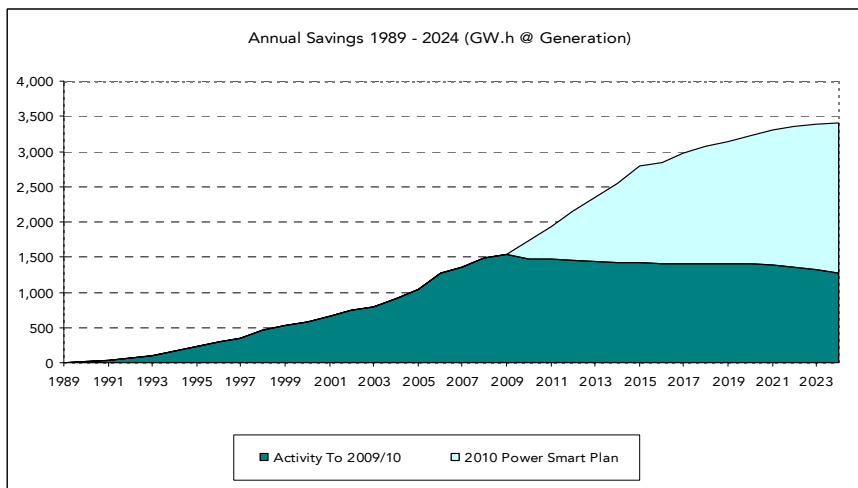
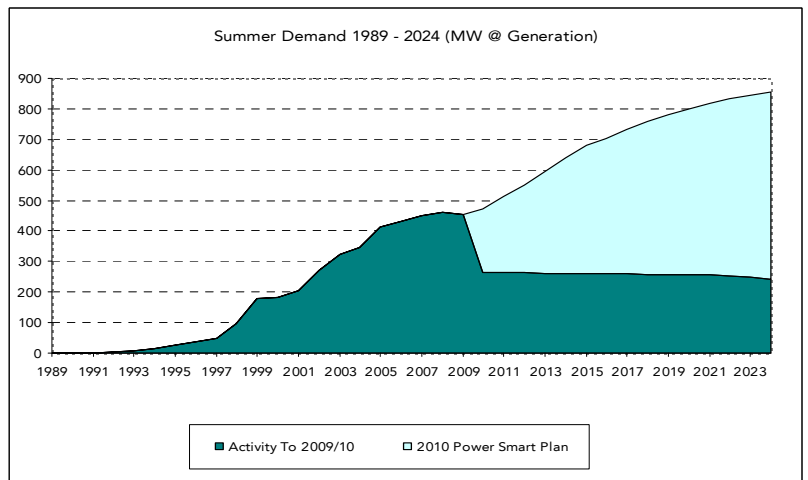
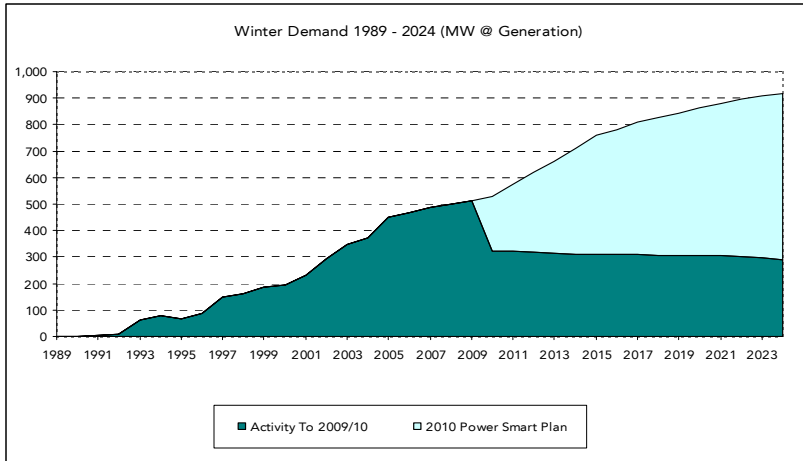
Note: Total DSM Electric savings per the above graph include savings from program impacts and exclude savings from Codes, Standards and Regulations

The following table shows detailed savings and costs associated with the Power Smart Plan by sector to 2024.

	Winter (MW)		Summer (MW)		Annual (GW.h)		Cumulative Utility Costs (Millions, 2010\$)	
<b>Residential</b>								
New Home Program	6.4		0.1		28.9		\$0.5	
Home Insulation Program	11.8		0.0		24.5		\$7.8	
Water and Energy Saver Program	3.8		2.1		24.0		\$5.6	
Lower Income Energy Efficiency Program	1.4		0.0		5.5		\$1.3	
EE Light Fixtures	0.1		0.0		0.4		\$0.3	
Residential CFL Program	0.0		0.0		0.0		\$3.0	
Fridge Recycling Program	1.1		2.3		13.0		\$9.5	
<b>Residential Programs Total (@ Meter)</b>	<b>24.6</b>	<b>6%</b>	<b>4.6</b>	<b>1%</b>	<b>96.3</b>	<b>10%</b>	<b>\$28.1</b>	<b>8%</b>
<b>Residential Market Effects</b>								
Residential Appliance Program	1.1	0%	1.2	0%	6.3	1%	\$0.8	0%
<b>Customer Service Initiatives</b>								
Power Smart Residential Loan Program	5.1		0.0		9.6		\$0.0	
ecoEnergy	0.0		0.0		0.0		\$0.1	
Residential Earth Power Program	9.7		0.0		31.1		\$2.7	
Solar Water Heaters	0.0		0.0		0.1		\$0.0	
<b>Customer Service Initiatives Total (@ Meter)</b>	<b>14.8</b>	<b>4%</b>	<b>0.0</b>	<b>0%</b>	<b>40.8</b>	<b>4%</b>	<b>\$2.8</b>	<b>1%</b>
<b>Commercial</b>								
Commercial Lighting Program	57.7		51.0		231.1		\$75.9	
Commercial Custom Measures Program	1.2		0.7		7.1		\$2.5	
Commercial Windows Program	10.7		0.7		26.4		\$6.9	
Commercial HVAC Program - Chiller	0.0		1.5		19.3		\$2.2	
Commercial Parking Lot Controller Program	0.0		0.0		0.4		\$0.1	
City of Winnipeg Power Smart Agreement	0.0		0.0		0.0		\$0.0	
Commercial Refrigeration Program	3.5		2.6		28.5		\$3.9	
Commercial Insulation Program	22.7		7.4		46.1		\$6.1	
Commercial Earth Power Program	7.3		0.8		19.4		\$3.8	
Commercial New Construction Program	17.5		26.0		91.3		\$13.2	
Commercial Building Optimization Program	5.6		2.8		16.7		\$2.6	
Internal Retrofit Program	6.1		3.3		27.6		\$17.8	
Agricultural Heat Pad Program	0.2		0.2		1.8		\$0.1	
Power Smart Energy Manager Program	0.0		0.0		0.0		\$0.8	
Commercial Kitchen Appliance Program	1.8		1.8		5.4		\$1.2	
Commercial Clothes Washers Program	1.2		1.2		1.6		\$0.7	
Network Energy Management Program	0.1		0.2		1.0		\$1.5	
Power Smart Shops	0.3		0.3		1.7		\$1.1	
CO2 Sensors	0.0		0.0		1.2		\$0.0	
<b>Commercial Programs Total (@ Meter)</b>	<b>135.7</b>	<b>34%</b>	<b>100.5</b>	<b>31%</b>	<b>526.4</b>	<b>54%</b>	<b>\$140.3</b>	<b>41%</b>
<b>Commercial Market Effects</b>								
Commercial Rinse & Save Program	0.0	0%	0.0	0%	0.0	0%	\$0.0	0%
<b>Industrial</b>								
Performance Optimization Program	29.3		29.3		193.5		\$42.1	
Emergency Preparedness Program	35.3		35.3		35.3		\$20.6	
<b>Industrial Programs Total (@ Meter)</b>	<b>64.5</b>	<b>16%</b>	<b>64.5</b>	<b>20%</b>	<b>228.8</b>	<b>23%</b>	<b>\$62.8</b>	<b>18%</b>
<b>Energy Efficiency - Subtotal (@ Meter)</b>								
	<b>240.7</b>	<b>61%</b>	<b>170.8</b>	<b>52%</b>	<b>898.5</b>	<b>92%</b>	<b>\$234.7</b>	<b>69%</b>
<b>Load Management</b>								
Curtable Rate Program	146.3		146.3		0.0		\$81.7	
<b>Load Management Programs Total (@ Meter)</b>	<b>146.3</b>	<b>37%</b>	<b>146.3</b>	<b>45%</b>	<b>0.0</b>	<b>0%</b>	<b>\$81.7</b>	<b>24%</b>
<b>Customer Self-Generation</b>								
BioEnergy Optimization Program	9.7		9.7		77.8		\$25.2	
<b>Self-Generation Programs Total (@ Meter)</b>	<b>9.7</b>	<b>2%</b>	<b>9.7</b>	<b>3%</b>	<b>77.8</b>	<b>8%</b>	<b>\$25.2</b>	<b>7%</b>
<b>Incentive Based Programs Total (@ Meter)</b>								
	<b>396.8</b>	<b>100%</b>	<b>326.9</b>	<b>100%</b>	<b>976.2</b>	<b>100%</b>	<b>\$341.6</b>	<b>100%</b>
<b>Codes, Standards and Regulations (@ Meter)</b>								
	160.4		218.0		905.6		\$72.6	
<b>Incremental Support and Contingency Costs</b>								
Power Smart 2010 to 2024 Impacts (@ Meter)	557.1		544.9		1,881.8		\$414.2	
<b>Power Smart 2010 to 2024 Impacts (@ Generation)</b>	<b>626.3</b>		<b>612.3</b>		<b>2,133.0</b>		<b>\$414.2</b>	
<b>Savings Achieved To 2009/10 (@ Meter)</b>								
	258.0		215.8		1,129.1		\$333.2	
<b>Savings Achieved To 2009/10 (@ Generation)</b>	<b>291.3</b>		<b>243.5</b>		<b>1,275.0</b>		<b>\$333.2</b>	
<b>Grand Total (@ Meter)</b>								
	<b>815.1</b>		<b>760.6</b>		<b>3,010.9</b>		<b>\$747.3</b>	
<b>Grand Total (@ Generation)</b>	<b>917.6</b>		<b>855.8</b>		<b>3,408.0</b>		<b>\$747.3</b>	



The following three charts graphically represent the demand and energy savings achieved to date and the savings anticipated from future DSM activity for the 2010 Power Smart Plan:



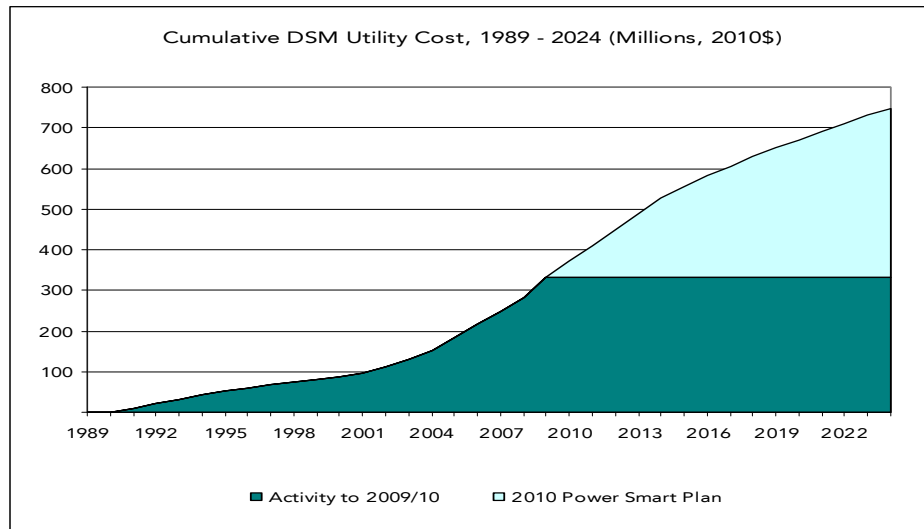
## 2.2 Electric DSM Utility Investment

The following table provides the projected annual electric DSM investment and cumulative totals to 2024/25 broken down by market sector and cost basis. It is expected that by 2024/25, a cumulative investment amount of \$747.3 million dollars will have been spent on Power Smart electric programs.

Electric Power Smart Utility Budget  
2010/11 - 2024/25  
(Millions, 2010 \$)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Residential	5.9	7.9	6.4	4.6	2.2	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Customer Service Initiatives	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Commercial	15.8	14.5	13.6	13.3	12.9	9.9	9.9	9.8	8.8	6.3	6.1	6.0	5.9	5.8	1.7
Industrial	3.1	3.8	5.4	7.0	8.4	4.9	3.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Rate/Load Management	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Customer Self-Generation	3.5	2.8	4.2	4.4	3.2	4.3	1.0	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
Support and Codes & Standards	3.7	4.1	3.7	3.7	3.7	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4
Contingency	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
Annual Costs	37.8	38.8	39.9	39.5	37.1	30.3	25.8	23.8	22.8	21.2	20.5	20.4	20.2	20.1	16.0
Cumulative Cost, 2010 - 2024	\$37.8	\$76.6	\$116.5	\$156.0	\$193.1	\$223.4	\$249.2	\$273.0	\$295.8	\$317.0	\$337.5	\$357.9	\$378.1	\$398.2	\$414.2
Cumulative Cost, 1989 - 2024	\$370.9	\$409.7	\$449.7	\$489.2	\$526.2	\$556.6	\$582.4	\$606.2	\$628.9	\$650.2	\$670.7	\$691.0	\$711.2	\$731.3	\$747.3

The following graph provides the cumulative electric DSM utility cost for electric DSM from 1989/90 through to 2024/25. Electric expenditures to date comprise 45% of the projected cumulative electricity expenditures for 2024/25.



## 2.3 Electric DSM Cost Effectiveness

The following table outlines the cost effectiveness of the electric program offerings provided in the 2010 Power Smart Plan.

Power Smart Plan Economic Cost Effectiveness Ratios and Levelized Costs  
2010/11 - 2037/38

	RIM	LUC (¢/kW.h)	PC	Customer Payback (years)
<b>Residential</b>				
New Home Program	1.6	0.1	1.2	7.9
Home Insulation Program	1.6	1.9	3.5	2.1
Water and Energy Saver Program	1.0	1.8	19.6	n/a ^
Lower Income Energy Efficiency Program (Power Smart & AEF Budget) >	0.9	4.9	6.0	n/a ^
Lower Income Energy Efficiency Program (Power Smart)	1.3	1.3	5.0	1.5
EE Light Fixtures	0.8	4.6	7.2	n/a ^
Residential CFL Program	1.3	1.0	10.6	0.0
Fridge Recycling Program	0.8	2.3	3.0	2.6
<b>Residential Programs Total</b>	<b>1.3</b>	<b>1.4</b>	<b>3.4</b>	<b>1.1</b>
<b>Residential Market Effects</b>				
<b>Residential Appliance Program</b>	<b>1.2</b>	<b>1.0</b>	<b>4.5</b>	<b>2.4 *</b>
<b>Commercial</b>				
Commercial Lighting Program	1.4	1.9	2.3	2.2
Commercial Custom Measures Program	1.3	2.4	2.7	2.9
Commercial Windows Program	1.7	1.7	3.6	1.5
Commercial HVAC Program - Chiller	1.0	1.0	1.6	4.6 *
Commercial Parking Lot Controller Program	1.2	1.9	3.0	1.1
City of Winnipeg Power Smart Agreement	1.6	0.0	7.6	0.1
Commercial Refrigeration Program	1.2	1.2	3.7	1.3
Commercial Insulation Program	2.0	0.9	4.4	1.9
Commercial Earth Power Program	1.9	1.4	1.7	7.4 *
Commercial New Construction Program	1.5	0.9	3.5	2.6 *
Commercial Building Optimization Program	1.7	1.4	3.9	1.3
Internal Retrofit Program	1.0	8.5	1.0	n/a ^
Agricultural Heat Pad Program	1.8	0.3	n/a	n/a * ^
Power Smart Energy Manager Program	1.0	2.7	1.4	2.9
Commercial Kitchen Appliance Program	1.3	2.2	6.5	n/a * ^
Commercial Clothes Washers Program	1.5	4.0	1.8	4.5 *
Network Energy Management Program	1.0	1.0	3.1	0.2 *
Power Smart Shops	0.9	3.3	73.1	0.0
CO2 Sensors	1.6	0.4	3.6	1.0 *
<b>Commercial Programs Total</b>	<b>1.4</b>	<b>2.0</b>	<b>2.4</b>	<b>2.2</b>
<b>Commercial Market Effects</b>				
<b>Commercial Rinse &amp; Save Program</b>	<b>1.5</b>	<b>0.0</b>	<b>n/a</b>	<b>n/a *</b>
<b>Industrial</b>				
Performance Optimization Program	1.2	1.9	2.3	3.1
Emergency Preparedness Program	1.2	4.7	2.4	1.0
<b>Industrial Programs Total</b>	<b>1.2</b>	<b>2.5</b>	<b>2.4</b>	<b>2.6</b>
<b>Energy Efficiency Total</b>	<b>1.3</b>	<b>2.0</b>	<b>2.6</b>	<b>1.9</b>
<b>Load Management</b>				
<b>Curtable Rate Program</b>	<b>0.9</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
<b>Customer Self-Generation</b>				
<b>BioEnergy Optimization Program</b>	<b>1.4</b>	<b>1.9</b>	<b>1.3</b>	<b>0.9</b>
<b>Overall Portfolio Ratio</b>	<b>1.2</b>	<b>2.5</b>	<b>2.7</b>	<b>0.9</b>

Notes:

\* Program assumption includes future Market Transformation and/or Participant Re-investment

^ Program with nil or negative net customer costs

> See section 6.1 for detail on Affordable Energy Fund Budget

1) Overall RIM, PC and Payback ratios includes Curtable Rates Program / Overall LUC does not include Curtable Rate Program

2) Overall benefit/cost ratios do not include savings due to Customer Service Initiatives

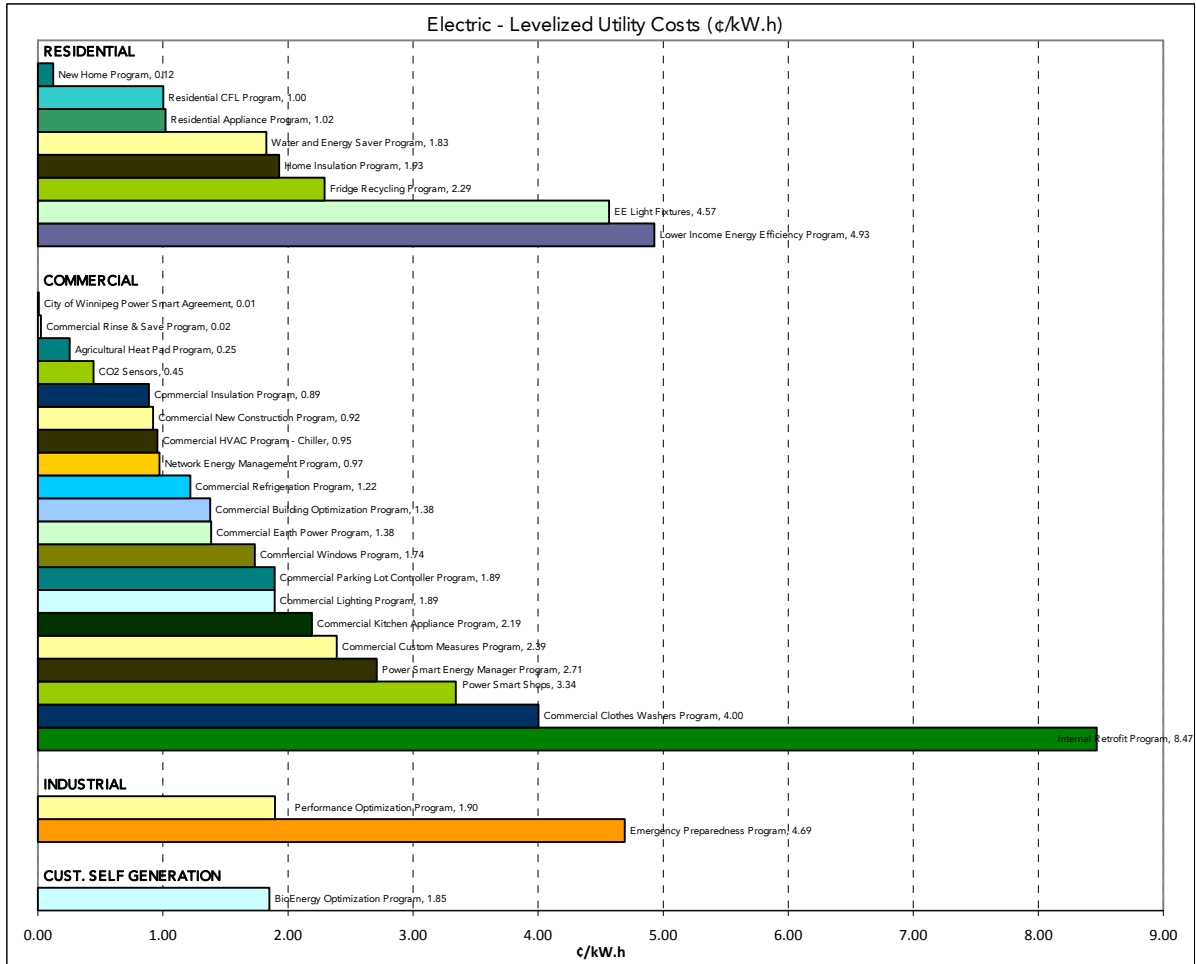
3) Overall benefit/cost ratios and utility costs include support and contingency costs

4) PC and Customer Payback tests include water savings benefits

5) Overall RIM and LUC includes funding from the Affordable Energy Fund

For electricity, the overall Rate Impact Measure (RIM) benefit/cost ratio is 1.2. The overall levelized utility cost for electric programs including support and contingency costs is 2.5 cents per kilowatt-hour.

The following chart compares the Levelized Utility Cost of the electric program offerings provided in the 2010 Power Smart Plan.



Note:  
1) LUC calculation includes all costs

# 3 Natural Gas Demand Side Management

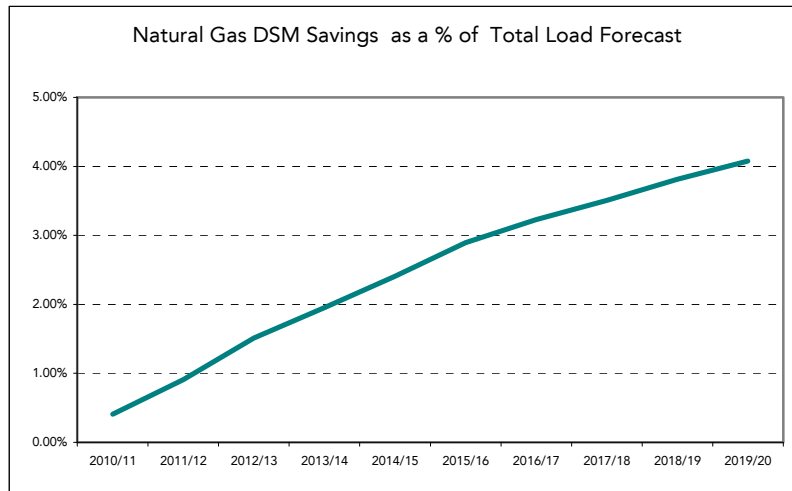
## 3.1 Natural Gas DSM Targets

In summary, the 2010 Power Smart Plan forecasts achieving natural gas savings of 106 million cubic meters and a global greenhouse gas emission reduction of 0.2 million tonnes from 2010/11 to 2024/25 at a total utility investment of \$130 million.

Most notably, the Commercial sector offers the most significant contribution with approximately 59% of natural gas savings, with the residential sector accounting for approximately an additional 28%.

In combination with savings to date, the 2010 Power Smart Plan forecasts achieving natural gas savings of 149 million cubic meters and global greenhouse gas emission reduction of 0.3 million tonnes to 2024/25 at a total utility investment of \$180 million.

This activity represents 4.1 % of the estimated load forecast by 2019/20.



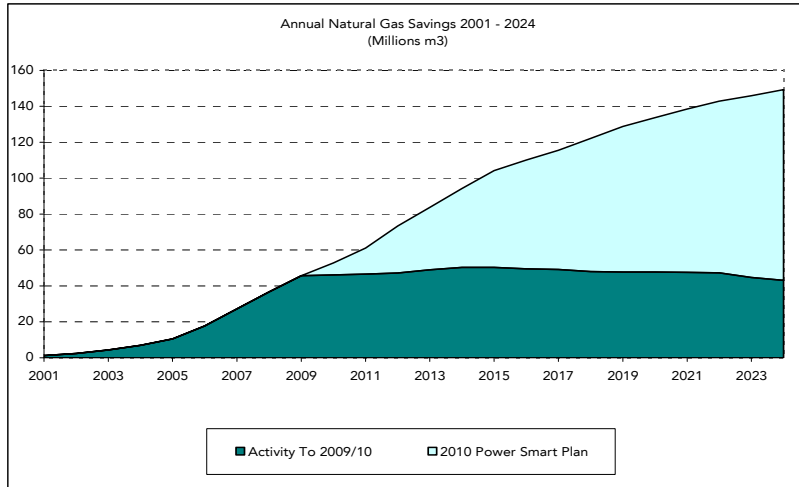
Note: Total DSM Natural Gas savings per graph include savings from program impacts and exclude savings from Codes, Standards and Regulations

The following table shows detailed savings and costs associated with the Power Smart Plan by sector to 2024:

	Annual (million m3)		Cumulative Utility Costs (Millions, 2010\$)	
<b>Residential</b>				
New Home Program	4.78		\$0.1	
Home Insulation Program	7.95		\$15.6	
Water and Energy Saver Program	2.69		\$4.2	
Lower Income Energy Efficiency Program	2.50		\$3.0	
<b>Residential Programs Total</b>	<b>17.92</b>	<b>17%</b>	<b>\$22.8</b>	<b>27%</b>
<b>Residential Market Effects</b>				
<b>Residential Appliance Program</b>	<b>0.17</b>	<b>0%</b>	<b>\$0.0</b>	<b>0%</b>
<b>Customer Service Initiatives</b>				
ecoEnergy	0.00		\$0.5	
Power Smart Residential Loan Program	7.50		\$0.0	
Residential Earth Power Program	4.13		\$0.0	
Solar Water Heaters	0.00		\$0.0	
<b>Customer Service Initiatives Programs Total</b>	<b>11.63</b>	<b>11%</b>	<b>\$0.5</b>	<b>1%</b>
<b>Commercial</b>				
Commercial Custom Measures Program	0.82		\$1.6	
Commercial Windows Program	3.80		\$8.1	
Commercial Insulation Program	20.79		\$26.3	
Commercial New Construction Program	6.30		\$2.5	
Commercial Building Optimization Program	3.87		\$5.7	
Power Smart Energy Manager Program	0.00		\$0.4	
Commercial Kitchen Appliance Program	2.13		\$0.8	
Commercial Clothes Washers Program	0.11		\$0.0	
Power Smart Shops	0.09		\$0.5	
Commercial Boiler Program	22.95		\$7.4	
CO2 Sensors	1.59		\$0.6	
<b>Commercial Programs Total</b>	<b>62.45</b>	<b>59%</b>	<b>\$53.9</b>	<b>63%</b>
<b>Commercial Market Effects</b>				
<b>Commercial Rinse &amp; Save Program</b>	<b>0.00</b>	<b>0%</b>	<b>\$0.0</b>	<b>0%</b>
<b>Industrial</b>				
Industrial Natural Gas Optimization Program	10.00		\$6.2	
<b>Industrial Programs Total</b>	<b>10.00</b>	<b>9%</b>	<b>\$6.2</b>	<b>7%</b>
<b>Energy Efficiency - Subtotal</b>	<b>102.17</b>	<b>97%</b>	<b>\$83.4</b>	<b>98%</b>
<b>Customer Self-Generation</b>				
BioEnergy Optimization Program	3.63		\$1.5	
<b>Self-Generation Programs Total</b>	<b>3.63</b>	<b>3%</b>	<b>\$1.5</b>	<b>2%</b>
<b>Incentive Based Programs Total</b>	<b>105.80</b>	<b>100%</b>	<b>\$85.0</b>	<b>100%</b>
Interactive Effects	-1.61		n/a	
Option 1 - Information, Codes and Standards	2.06			
Incremental Support and Contingency Costs			\$44.6	
<b>Power Smart 2010 to 2024 Impacts</b>	<b>106.24</b>		<b>\$129.6</b>	
Savings Achieved To 2009/10	43.03		\$50.2	
<b>Grand Total</b>	<b>149.28</b>		<b>\$179.8</b>	

Natural gas interactive effects have been accounted for in the following: Residential CFL Program, Residential Appliance Program, Energy Efficient Light Fixtures Program, New Home Program, Fridge Recycling Program, Network Energy Manager Program, and Commercial Lighting Program. In addition, the Commercial Refrigeration Program results in a net positive natural gas effects, reducing natural gas consumption by 0.86 million cubic meters (m3) by the year 2024/25.

The following chart graphically represents the natural gas savings achieved to date and the savings anticipated from future DSM activity for the 2010 Power Smart Plan:



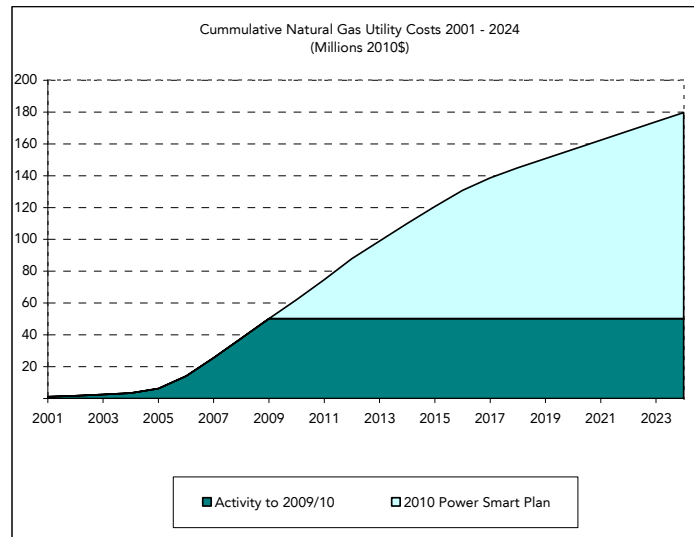
### 3.2 Natural Gas DSM Utility Investment

The following table provides the projected annual natural gas DSM investment and cumulative totals to 2024/25 broken down by market sector and cost basis. It is expected that by 2024/25, a cumulative investment amount of \$180 million dollars will have been spent on Power Smart natural gas programs.

Natural Gas Power Smart Utility Budget  
2010/11 - 2024/25  
(Millions, 2010 \$)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Residential	4.0	4.3	4.3	3.0	3.0	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Customer Service Initiatives	0.5	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
Commercial	4.2	4.1	4.2	4.2	4.2	4.3	4.4	4.3	3.3	2.8	2.8	2.8	2.8	2.8	2.8
Industrial	0.9	0.9	0.9	0.8	0.8	0.8	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Customer Self-Generation	0.2	0.0	0.6	0.0	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Support and Codes & Standards	2.1	2.4	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Contingency	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Annual Costs	11.9	12.7	13.1	11.1	11.0	10.7	10.1	7.9	6.3	5.8	5.8	5.8	5.8	5.8	5.8
Cumulative Cost, 2010 - 2024	\$11.9	\$24.6	\$37.7	\$48.8	\$59.8	\$70.5	\$80.6	\$88.5	\$94.8	\$100.6	\$106.4	\$112.2	\$118.0	\$123.8	\$129.6
Cumulative Cost, 2001 - 2024	\$62.1	\$74.8	\$87.8	\$99.0	\$110.0	\$120.7	\$130.8	\$138.7	\$145.0	\$150.8	\$156.6	\$162.4	\$168.2	\$174.0	\$179.8

The following graph provides the cumulative natural gas DSM utility cost for natural gas DSM from 2001/02 through to 2024/25. Natural expenditures to date comprise approximately 28% of the projected cumulative electricity expenditures for 2024/25.





### 3.3 Natural Gas DSM Cost Effectiveness

The following table outlines the cost effectiveness of the natural gas program offerings provided in the Power Smart Plan.

Power Smart Plan Economic Cost Effectiveness Ratios and Levelized Costs  
2010/11 - 2037/38

	RIM	LUC (¢/m <sup>3</sup> )	PC	Customer Payback (years)
<b>Residential</b>				
New Home Program	0.9	0.2	1.3	5.0
Home Insulation Program	0.7	13.6	3.3	1.9
Water and Energy Saver Program	0.7	16.0	10.5	n/a <sup>1</sup>
Lower Income Energy Efficiency Program (Power Smart, Furnace Replacement & AEF Budget) >	0.4	46.9	3.1	n/a <sup>1</sup>
Lower Income Energy Efficiency Program (Power Smart)	0.8	8.4	2.2	4.5
Lower Income Energy Efficiency Program (Power Smart & AEF Budget) >	0.5	44.5	3.3	n/a <sup>1</sup>
Lower Income Energy Efficiency Program (Furnace Replacement Program only) >	0.4	56.2	2.5	n/a <sup>1</sup>
Residential HE Furnace & Boiler Program	0.9	0.7	n/a	n/a <sup>1</sup> ^
<b>Residential Programs Total</b>	<b>0.8</b>	<b>8.0</b>	<b>1.9</b>	<b>5.8</b>
<b>Residential Market Effects</b>				
Residential Appliance Program	0.9	0.0	3.6	n/a *
<b>Commercial</b>				
Commercial Custom Measures Program	0.7	15.4	2.2	5.6
Commercial Windows Program	0.7	16.3	3.1	1.7
Commercial Rinse & Save Program	0.9	0.2	n/a	n/a <sup>1</sup> *
Commercial Insulation Program	0.7	9.7	1.6	8.1
Commercial New Construction Program	0.9	3.0	11.8	0.8 * ^
Commercial Building Optimization Program	0.7	14.8	2.8	1.9
Power Smart Energy Manager Program	0.6	23.1	2.4	1.5
Commercial Kitchen Appliance Program	0.9	3.7	2.4	1.9 *
Commercial Clothes Washers Program	1.0	0.0	n/a	n/a <sup>1</sup>
Power Smart Shops	0.5	30.6	89.3	n/a
Commercial Furnace Program	0.9	2.7	n/a	n/a <sup>1</sup> ^
Commercial Boiler Program	0.9	3.0	4.7	1.4 ^
CO2 Sensors	0.8	5.1	4.3	0.8 *
<b>Commercial Programs Total</b>	<b>0.8</b>	<b>7.1</b>	<b>2.5</b>	<b>4.3</b>
<b>Commercial Market Effects</b>				
Commercial Rinse & Save Program	0.9	0.2	n/a	n/a <sup>1</sup> *
<b>Industrial</b>				
Industrial Natural Gas Optimization Program	0.9	5.9	1.7	6.6
<b>Energy Efficiency Total</b>	<b>0.8</b>	<b>7.2</b>	<b>2.2</b>	<b>5.2</b>
<b>Customer Self-Generation</b>				
BioEnergy Optimization Program	0.9	3.5	8.0	4.2
<b>Portfolio Ratio</b>	<b>0.8</b>	<b>9.4</b>	<b>2.6</b>	<b>3.9</b>
<b>Portfolio Ratio (including interactive effects)</b>	<b>0.7</b>	<b>11.9</b>	<b>2.2</b>	<b>5.2</b>

Notes:

\* Program assumption includes future Market Transformation and/or Participant Re-investment

^ Includes savings from Codes & Standards

> See section 6.1 for detail on Affordable Energy Fund Budget and Section 6.2 for detail on Furnace Replacement Budget

<sup>1</sup> Program with nil or negative net customer costs

1) Overall benefit/cost ratios and utility costs include support and contingency costs.

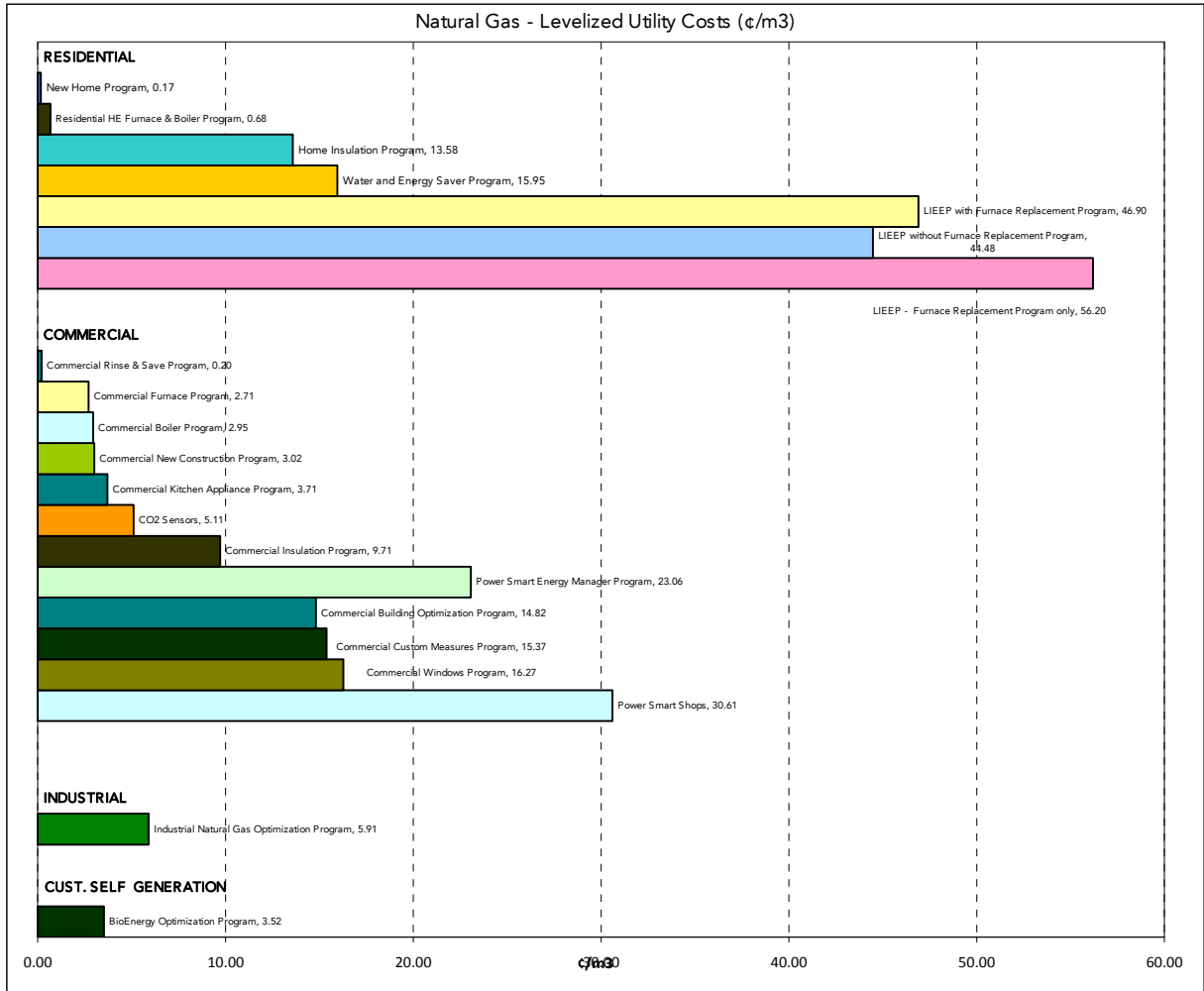
2) Overall PC and Customer Payback tests include revenue loss relating to energy efficiency and revenue gains relating to interactive effects

3) PC and Customer Payback tests include water savings benefits

4) Overall RIM and LUC includes funding from the Affordable Energy Fund and the Furnace Replacement Budget

For natural gas, the overall Rate Impact Measure (RIM) benefit/cost ratio is 0.7. The overall levelized utility cost for natural gas programs including support and contingency costs is 11.9 cents per cubic meter.

The following chart compares the Levelized Utility Cost of the natural gas program offerings provided in the 2010 Power Smart Plan.



Note:  
1) LUC calculation includes all costs

# 4 Combined Demand Side Management

## 4.1 Combined DSM Utility Investment

The following table provides the projected annual Power Smart investment and cumulative totals to 2024/25 for electric and natural gas DSM portfolios combined. Annual investment is broken down on a market sector and cost basis. It is expected that by 2024/25 a cumulative investment amount of \$927 million dollars will have been spent on all Power Smart programs.

Combined Power Smart Utility Budget  
2010/11 - 2024/25  
(Millions, 2010 \$)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Residential	9.9	12.2	10.7	7.6	5.2	3.1	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Customer Service Initiatives	0.8	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Commercial	20.0	18.6	17.8	17.5	17.1	14.2	14.3	14.1	12.1	9.0	8.9	8.8	8.7	8.6	4.5
Industrial	4.1	4.7	6.4	7.8	9.2	5.7	4.3	3.9	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Rate/Load Management	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Customer Self-Generation	3.7	2.9	4.8	4.4	3.3	4.9	1.1	0.6	0.6	0.6	0.0	0.0	0.0	0.0	0.0
Support and Codes & Standards	5.8	6.5	5.8	5.7	5.7	5.7	5.7	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4
Contingency	0.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0	3.0	3.0	3.0
Annual Costs	49.7	51.5	53.0	50.6	48.1	41.1	35.9	31.7	29.1	27.0	26.3	26.2	26.0	25.9	21.8
Cumulative Cost, 2010 - 2024	\$49.7	\$101.2	\$154.2	\$204.8	\$252.9	\$294.0	\$329.8	\$361.6	\$390.6	\$417.6	\$443.9	\$470.1	\$496.1	\$522.0	\$543.8
Cumulative Cost, 1989 - 2024	\$433.0	\$484.5	\$537.5	\$588.1	\$636.2	\$677.3	\$713.2	\$744.9	\$774.0	\$801.0	\$827.3	\$853.4	\$879.4	\$905.3	\$927.1

## 4.2 Combined DSM Cost Effectiveness

The following table outlines the cost effectiveness of all program offerings in the Power Smart Plan.

Due to future savings based on estimated impacts from market effects and/or Codes and Standards, the Residential HE Furnace and Boiler Program, Agriculture Heat Pad Program, Commercial Furnace program, Commercial Rinse & Save Program have high TRC ratios.

Incentives for both the Residential and Commercial furnace programs ended on December 31, 2009. Future savings are based on estimated impacts of Manitoba Hydro's strategy to affect change in Codes & Standards, with minimal administrative costs, thus resulting in a high TRC ratio.  
(See Section 5.2 for detail on Codes, Standards & Regulation)

Incentives for the Agriculture Heat Pad Program ended on March 31, 2010. Future savings are a result of pre-approved installations being completed. Additional future savings are achieved a result of Manitoba Hydro's Power Smart strategy of creating a sustainable market change where energy efficient technologies and practices become the market standard. (i.e. market transformation). These savings coupled with low costs result in a high TRC ratio.

Incentives for the Commercial Rinse and Save Program ended on March 31, 2010. Low administration costs, the inclusion of additional non-energy benefits (i.e. water savings), and future savings resulting from market effects result in a high TRC ratio.

The combined electric and natural gas Power Smart portfolio is cost-effective with an overall TRC of 2.2.

Combined DSM Cost Effectiveness TRC Ratios 2010/11 - 2038/39		Combined TRC Ratio
<b>Residential</b>		
New Home Program		1.6 * <sup>1</sup>
Home Insulation Program		3.1
Water and Energy Saver Program		5.9 ^
Lower Income Energy Efficiency Program (Power Smart, Furnace Replacement & AEF Budget)		1.9 ^
Lower Income Energy Efficiency Program (Power Smart)		2.8 ^
Lower Income Energy Efficiency Program (Power Smart & AEF Budget) >		2.2 ^
Lower Income Energy Efficiency Program (Furnace Replacement Program only)		0.7
Residential HE Furnace & Boiler Program		57.0 <sup>1</sup>
EE Light Fixtures		1.6 *
Residential CFL Program		5.6 *
Fridge Recycling Program		1.2 *
<b>Residential Program Total</b>		<b>2.6</b>
<b>Residential Market Effects</b>		
Residential Appliance Program		4.2 *^
<b>Commercial</b>		
Commercial Lighting Program		2.8 *
Commercial Custom Measures Program		2.0
Commercial Windows Program		3.5
Commercial HVAC Program - Chiller		1.6
Commercial Parking Lot Controller Program		3.0
City of Winnipeg Power Smart Agreement		10.9
Commercial Refrigeration Program		4.4
Commercial Insulation Program		2.0
Commercial Earth Power Program		2.9
Commercial New Construction Program		5.3 <sup>1</sup>
Commercial Building Optimization Program		2.8
Internal Retrofit Program		1.0
Agricultural Heat Pad Program		74.6
Power Smart Energy Manager Program		1.2
Commercial Kitchen Appliance Program		3.5 ^
Commercial Clothes Washers Program		2.3 ^
Network Energy Management Program		2.7 *
Power Smart Shops		3.3 *^
CO2 Sensors		3.1
Commercial Furnace Program		13.5 <sup>1</sup>
Commercial Boiler Program		3.9
<b>Commercial Total</b>		<b>2.7</b>
<b>Commercial Market Effects</b>		
Commercial Rinse & Save Program		507.6 ^
<b>Industrial</b>		
Performance Optimization Program		2.5
Emergency Preparedness Program		2.7
Industrial Natural Gas Optimization Program		1.4
<b>Industrial Total</b>		<b>2.3</b>
<b>Energy Efficiency Total</b>		<b>2.6</b>
<b>Load Management</b>		
Curtable Rates Program		n/a
<b>Customer Self-Generation Total</b>		
BioEnergy Optimization Program		2.0
<b>Overall Benefit Cost Ratio</b>		<b>2.2</b>

Note:

\* Includes Natural Gas interactive effects

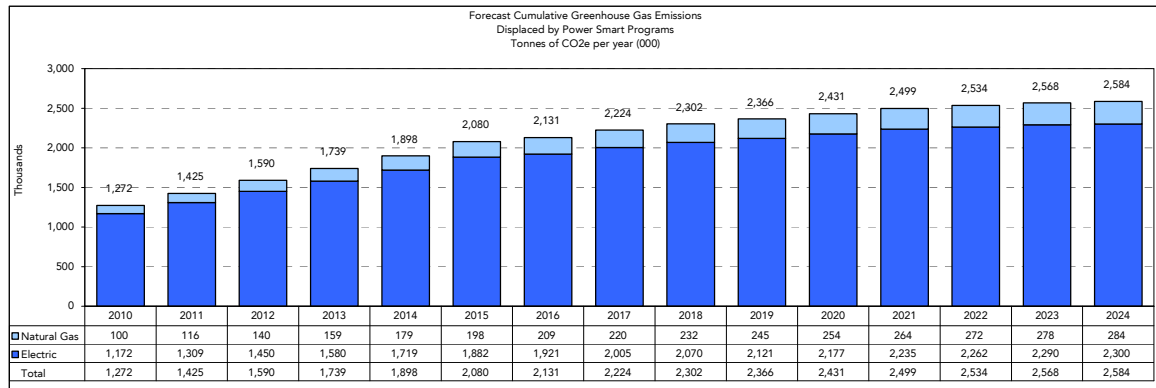
^ Includes Water Saving Benefits

<sup>1</sup> Includes savings from Codes & Standards

### 4.3 Combined Global Greenhouse Gas Emissions Reduction

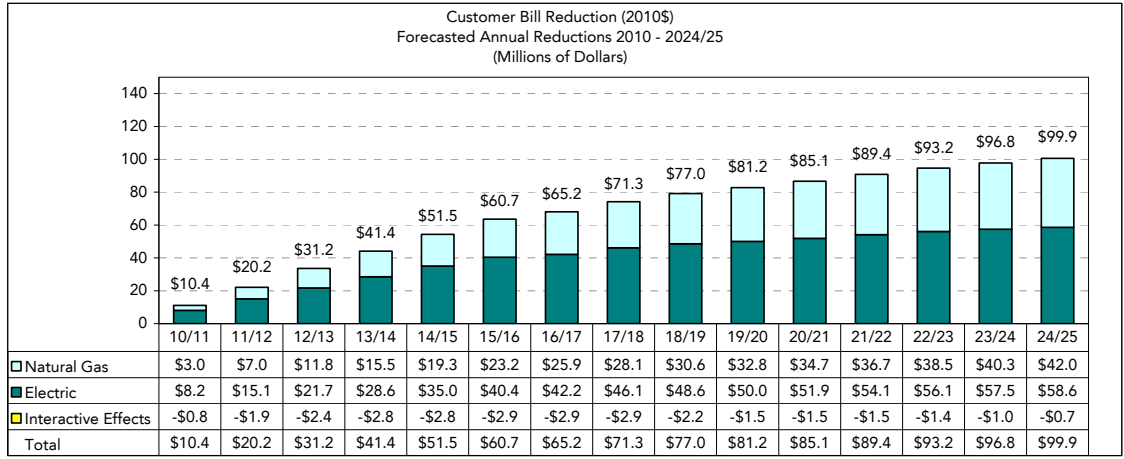
The following chart and graph depict the aggregate global greenhouse gas emissions reductions resulting from the electricity and natural gas DSM programs outlined in the 2010 Power Smart Plan, including greenhouse gas emission reductions resulting from Manitoba Hydro’s Power Smart efforts since 1989. Global greenhouse gas emission reductions of 1.6 million tonnes are forecast to be achieved due to energy savings outlined in the Power Smart Plan. Including reductions achieved to date, approximately 2.6 million tonnes are forecast to be realized due to Manitoba Hydro’s Power Smart efforts by 2024/25.

	Annual CO2 Reductions (Tonnes)
C02 Reductions - Electric	1,439,743
C02 Reductions - Natural Gas	202,141
<b>2010 Power Smart Plan (2010-2024)</b>	<b>1,641,884</b>
C02 Reductions Achieved to Date - Electric	860,646
C02 Reductions Achieved to Date - Natural Gas	81,874
Savings Achieved to 2008/09 (1989-2024)	942,520
<b>Totals Projected to 2024/25</b>	<b>2,584,404</b>

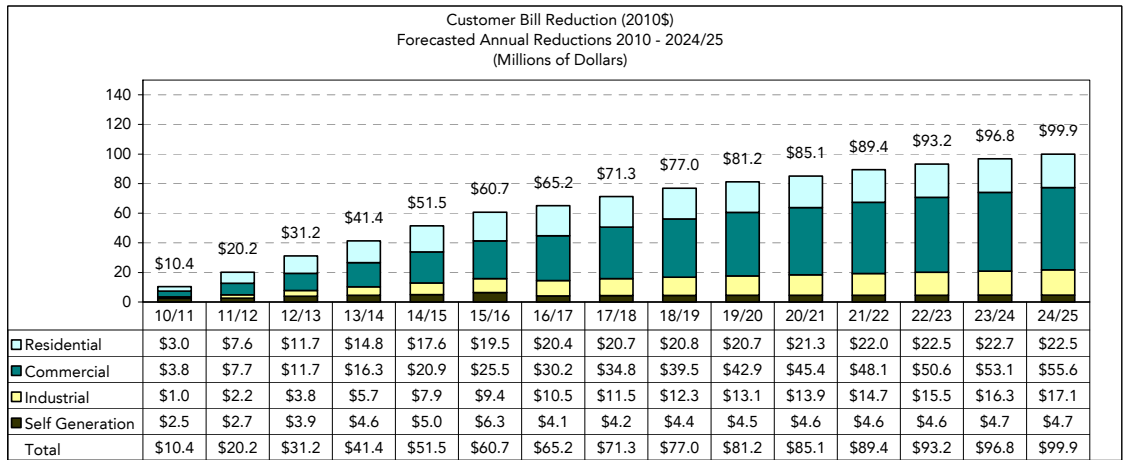


### 4.4 Combined Customer Bill Reductions

The following graph depicts customer bill reductions resulting from electric and natural gas programs outlined in the 2010 Power Smart Plan. Power Smart programs are expected to save participating customers \$100 million dollars in 2024/25 and \$1 billion cumulatively by 2024.



The following graph depicts customer bill reductions resulting from electric and natural gas programs outlined in the 2010 Power Smart Plan by sector:



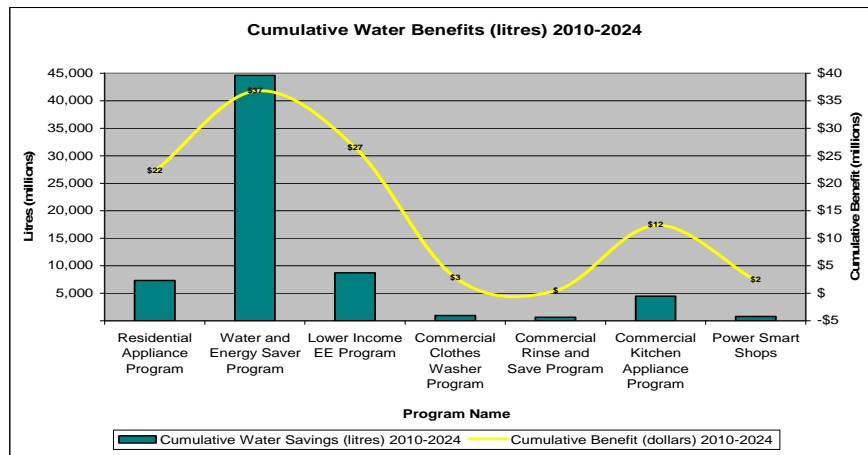
When combined with bill reductions to date, Power Smart programs are expected to save participating customers \$154 million in 2024/25 and over \$2 billion dollars cumulatively by 2024/25.

## 4.5 Combined Additional Non-Energy Benefits

As part of the 2010 Long Range Plan, the following residential and commercial programs are expected to capture additional water saving benefits:

- Residential Appliance Program
- Water and Energy Saver Program
- Lower Income Energy Efficiency Program
- Commercial Clothes Washer Program
- Commercial Rinse and Save Program
- Commercial Kitchen Appliance Program
- Power Smart Shops Program

The following graph depicts cumulative water savings in litres and cumulative customer dollar savings from each of the above programs. It is estimated that savings of approximately 68 billion liters of water and \$104 million in bill savings will be achieved from 2010/11 to 2024/25.



When combined with savings to date, Power Smart programs are expected to save approximately 75 billion liters of water and \$162 million.

## 5 Energy Efficient Codes and Standards

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. The focus of Manitoba Hydro's efforts on these committees is towards developing new energy-efficient technologies, developing energy efficient codes and standards and facilitating market acceptance of new technologies and building design practices.

### 5.1 Energy savings from 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 is complex and politically sensitive due to three factors:

1. **Governance:** The provincial government department responsible for energy is separate from the department responsible for building codes. Canada's national model code development process historically only engages with provinces and territories via the department responsible for building codes;
2. **Applicability:** Building codes are minimum requirements for health and life-safety in buildings. Historically, energy efficiency has not been viewed by the code community as a necessary minimum requirement. This is changing however, and Manitoba will be incorporating both energy and water efficiency requirements into the Provincial Building Code in late 2010. Furthermore, both a National Energy Code and the National Energy Code for Homes are being developed for release in 2011 and 2012 respectively. However, it remains to be seen if the provinces will accept these codes in full or even in part when they are released.
3. **Market Acceptance:** These changes impact building design and construction, as well as industry manufacturing processes, and therefore do not always receive strong industry support.



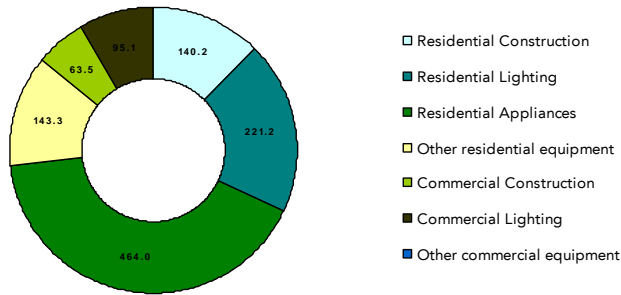
As a result of Energy Efficient Codes and Standards, the 2010 Power Smart Plan forecasts achieving capacity savings of 201.8 MW, energy savings of 1,127 GW.h and 11 million cubic meters of natural gas annually by 2024/25. As a result of these savings, a greenhouse gas emissions reduction of 0.8 million tonnes is expected by 2024/25.

The following table provides a summary of the planned energy savings in 2024/25 from codes and standards. Future DSM plans will provide updated forecasts of savings from codes and standards based on new information.

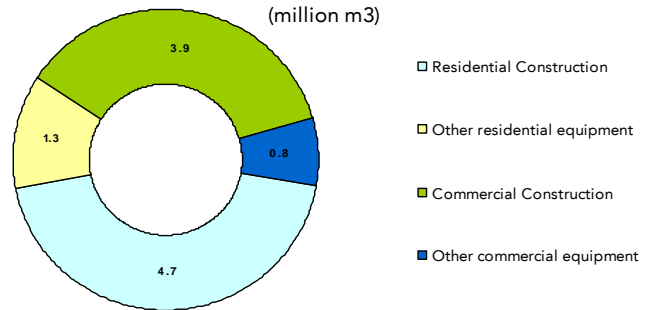
Energy Savings from Codes & Standards (2024/25)							
Code Category	Technology / Measure	Initiative supporting Codes & Standards	Winter MW	Energy and Demand Savings	Annual GW.h	Natural Gas	CO2 Reductions
			(2024/25)	Summer MW (2024/25)	(2024/25)	Annual Millions m3 (2024/25)	Annual Tonnes (2024/25)
Residential Construction	Home Insulation, Heat Recovery Ventilators	New Homes Program	45.1	-5.8	140.2	4.7	103,617
Residential Lighting	Residential Lighting products		37.4	12.4	221.16		149,283
Residential Appliances	Dishwashers, Clothes Washers, Clothes Dryers, Refrigerators, Freezers, Ranges, Stoves, Cooktops		66.6	64.9	464.0		313,187
Other residential equipment	Hot Water Tank Standby losses, Central Air Conditioning	Residential High Efficiency Furnace Program	9.0	145.5	143.3	1.3	99,200
Commercial Construction		Commercial New Construction Program	12.2	18.1	63.5	3.9	50,285
Commercial Lighting	Commercial Lighting products		31.6	31.6	95.1		64,176
Other commercial equipment		Commercial Furnace Program				0.8	1,446
<b>Total *</b>			<b>201.8</b>	<b>266.6</b>	<b>1,127.3</b>	<b>10.7</b>	<b>781,194</b>

\* Totals per above include savings attributed to specific Power Smart programs and thus differ from Codes and Standards savings reported in Appendices A.1, A.2, A.3 and C.1

Electric Codes & Standards By Category (GW.h)



Natural Gas Codes & Standards By Category (million m3)



## 5.2 Code, Standard & Regulation Descriptions

The following section describes each of the codes and standards listed in the Summary Table noted above.

### Residential Construction

#### New Home Insulation

This includes codes and standards for electric space heating for new single detached homes, new duplexes and new townhouses. In addition, Manitoba Hydro influenced the Manitoba Building Code to shore up existing insulation practices that had begun to erode and improve insulation practices in new housing north of the 53<sup>rd</sup> parallel, and worked with the Manitoba Building Standards Board to adopt a minimum rating of R20 for all basement foundations in Manitoba.

#### New Home Heat Recovery Ventilators

This includes codes and standards for heat recovery ventilators (HRVs) installed in new homes. In 1997/98, HRVs were installed in approximately 12% of new standard homes. This is assumed to have grown to 25% by 2000/01 with the increased ventilation requirements of the National Building Code. Then it will rise to 75% in 2015/16 and to 95% in 2016/17 due to its requirement by the National Energy Code.

#### New Home Program (Power Smart initiative)

The program will support the voluntary adoption of the Power Smart standards which helps to transform the Manitoba housing market and increases consumer acceptance of energy efficient technologies and standards. Every customer who builds a certified Power Smart Gold Home will receive a financial incentive. Technologies include building envelope measures and high-efficiency furnaces (ie. 92% AFUE). Code & Regulation savings have been attributed to the New Homes Program.

### Residential Lighting

The Residential Lighting program will continue to interact with the groups/agencies involved with regulating Canada's Minimum Energy Performance Standards (MEPS) for general service lighting forecasted to come into effect in 2012. Manitoba hydro will continue to actively participate on the Strategic Lighting Initiatives Committee (SLIC) and the Canadian Lighting Industry Committee (CLIC).

### Residential Appliances

Manitoba Hydro is a key player on the Canadian Standards Association's Strategic Steering Committee on Performance, Energy Efficiency and Renewables (SCOPEER). SCOPEER is responsible for changes to provincial and national performance standards and legislation which have resulted in the improvement of energy utilization of numerous appliances.

#### Dishwashers

Includes the motor load and heat boost of dishwashers. The Department of Energy (DOE) standard is to reduce the motor and water heating requirements by 10% by 2027/28. Canadian standards have been proposed to increase the energy efficiency for dishwashers in 2010, based on CAN/CSA-C373-04, Energy Consumption Test Methods and Limits for Household Dishwashers.

#### Clothes Washers

Includes only the motor load of clothes washers. The DOE standard is to reduce the motor and water heating requirements by 10% by 2027/28. Canadian standards have been harmonized with American standards since 2004.

### Clothes Dryers

Includes standards for electric clothes dryers.

### Refrigerators

Includes all refrigerators in use at a residence. This forecast assumes that new fridges use an average of 664 kW.h per year and that this will decrease by approximately 2 kW.h per year until 2029/30.

### Freezers

Includes all freezers that are in use at a residence. This forecast assumes that new freezers use an average of 565 kW.h per year and that this will decrease by approximately 4 kW.h per year until 2029/30.

### Ranges/Stoves/Cooktops

Some improvement in insulation and heating element conductivity is still expected to be possible, and a 5% reduction in annual use of new stoves is assumed by the end of the forecast.

### Other Residential Equipment

#### Hot Water Tank Standby Losses

This includes the water heated for use by dishwashers and clothes washers. A higher insulation standard is expected to take effect in 2010/11. This C191 standard will reduce standby losses to 527 kW.h per year for a 40 gallon tank and to 670 kW.h per year for a 60 gallon tank.

#### Central Air Conditioning

This category includes the outdoor compressor of central air-conditioning units. The furnace fan usage while the air-conditioning is running is not included. SEER rating requirements increased from 9 to 10 in 1998/99 and to 13 in November of 2006.

#### Residential High Efficiency Furnace Program (Power Smart initiative)

A Provincial regulation requiring a minimum efficiency of 92% AFUE for furnaces is came into effect December 31, 2009. Manitoba Hydro's incentive program will end upon introduction of efficiency regulations. A federal regulation requiring high efficiency furnaces with a minimum AFUE of 90% was also instated on December 31, 2009.

### Commercial Construction

#### Commercial New Construction Program (Power Smart initiative)

In 2011, it is anticipated that energy and water efficiency amendments to the Manitoba building code will be implemented. These amendments are intended to prepare the way for possible adoption of the upcoming National Energy Code (NEC). The NEC is expected to be released for adoption in 2012 and it would require all new commercial buildings meet a minimum efficiency of 25% above MNEC. At this time, the Commercial New Construction Program requirements will be changed requiring eligible buildings to meet a minimum efficiency of 40% above MNEC. Savings between 2013 and 2017 represent the difference between 25% and 40%. Code & Regulation savings have been attributed to the New Commercial Construction Program.

### Commercial Lighting

Activities involved in developing lighting standards include:

- In collaboration with other utilities, identify necessary research
- Work with Canadian Electrical Association
- Liaise with manufacturers to encourage the development and improvement of energy efficient lighting
- Product testing

- Liaise with National Research Council
- Participation on the CSA Standards Setting Committee
- Participation on the Canadian Lighting Industry Collaborative

In 1992, the Power Smart lighting initiative influenced the Federal Code change improving efficiency of T12 lights from 40 watts to 34 watts. In the area of LED lighting, the program supported the minimum efficiency levels for new exit signs with signs set at a level that only LED exit signs could meet. In addition, Manitoba Hydro's lighting initiative helped support the Federal code change that required fluorescent lamp ballasts meet a prescribed minimum energy performance standard in the renovation market in 2006 and the new construction market in 2010.

### **Other Commercial Equipment**

Commercial Furnace Program (Power Smart initiative)

A Provincial regulation requiring a minimum efficiency of 92% AFUE for furnaces came into effect December 31, 2009. Manitoba Hydro's incentive program ended upon introduction of efficiency regulations. A federal regulation requiring high efficiency furnaces with a minimum AFUE of 90% was also instated on December 31, 2009.

## 6 Other Internal Demand Side Management Funding

### 6.1 Affordable Energy Fund

The Affordable Energy Fund is an internal fund established as a result of the Winter Heating Cost Control Act. The purpose of the Fund is to provide support for programs and services that achieve specific objectives outlined under the Act including encouraging energy efficiency and conservation through programs and services for rural and northern Manitobans, low income customers and seniors and encouraging the use of alternative energy sources such as renewable energy.

#### Affordable Energy Fund - Budget

Manitoba Hydro established the Affordable Energy Fund following the passing of the Winter Heating Cost Control Act on November 20, 2006 in the Manitoba Legislature. The Affordable Energy Fund supports Manitoba Hydro's sustainable development initiatives.

The following projects and associated funding levels have been approved for support by the Affordable Energy Fund:

	Total Budget
Lower Income Program	19.0
Geothermal Support	6.0
Community Support and Outreach	0.8
Oil and Propane Heated Homes	0.3
Special Projects	
Residential ecoEnergy Audits	0.5
Oil and Propane Furnace Replacement	0.2
Solar Water Heaters	0.3
Residential Loan	1.4
AEF Energy Efficiency Sub-total	28.4
Community Energy Development	8.0
<b>TOTALS</b>	<b>\$36.4</b>

As of March 31<sup>st</sup>, 2010 approximately \$6 million of the Affordable Energy Fund had been spent, leaving the remaining \$30 to be allocated over the 2010/11 to 2024/25 horizon.

	Total Budget	Expenditures to Date	Remaining Budget
Lower Income Program	19.0	3.0	16.0
Geothermal Support	6.0	1.1	4.9
Community Support and Outreach	0.8	0.2	0.6
Oil and Propane Heated Homes	0.3	0.2	0.1
Special Projects			
Residential ecoEnergy Audits	0.5	0.4	0.2
Oil and Propane Furnace Replacement	0.2	0.0	0.1
Solar Water Heaters	0.3	0.2	0.1
Residential Loan	1.4	0.1	1.3
AEF Energy Efficiency Sub-total	28.4	5.2	23.2
Community Energy Development	8.0	0.8	7.3
<b>TOTALS</b>	<b>\$36.4</b>	<b>\$6.0</b>	<b>\$30.4</b>

The following table identifies the programs and associated funding levels that the Affordable Energy Fund will support over the Power Smart Planning horizon.

	Affordable Energy Fund Budget (Millions, 2010 \$)							Total
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	
Lower Income Program	3.5	6.2	6.2	0.0	0.0	0.0	0.0	16.0
Geothermal Support	0.1	0.1	0.1	2.3	2.3	0.1	0.0	4.9
Community Support and Outreach	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.6
Oil and Propane Heated Homes	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Special Projects								
Residential ecoEnergy Audits	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Oil and Propane Furnace Replacement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Solar Water Heaters	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Residential Loan	0.5	0.4	0.3	0.1	0.0	0.0	0.0	1.3
AEF Energy Efficiency Sub-total	4.6	6.8	6.7	2.5	2.4	0.1	0.1	23.2
Community Energy Development	0.0	3.6	3.6	0.0	0.0	0.0	0.0	7.3
Annual Budget	4.6	10.4	10.3	2.5	2.4	0.1	0.1	30.4
Cumulative Budget, 2010 - 2024	\$4.6	\$15.0	\$25.3	\$27.8	\$30.2	\$30.3	\$30.4	\$30.4

The Affordable Energy Fund supports the Lower Income Energy Efficiency Program with a cumulative investment of \$16 million for the period of 2010/11 to 2012/13.

The Affordable Energy Fund provides funding to subsidize the interest rate for Residential Earth Power Loan participants. The Fund is being used to reduce the interest rate for program participants from 6.5 to 4.9 percent for the first five years of the loan term. The Fund is expected to provide a cumulative investment of \$5 million over the period of 2010/11 to 2016/17.

The Affordable Energy Fund provides support for community energy development. This project will encourage the development of 5 MW of community-based energy projects in Manitoba and is expected to provide a cumulative investment of \$7 million over the period of 2011/12 to 2012/13.

The Affordable Energy Fund provides funding for additional resources for the purpose of encouraging rural and northern customers to participate in Power Smart initiatives. The Fund is expected to provide a cumulative investment of \$0.6 million over the period of 2010/11 to 2015/16.

The Affordable Energy Fund provides incentives to customers with wood, oil or propane heating who install insulation in their homes. The incremental costs associated with these customers participating in the Home Insulation Program will be allocated to the Affordable Energy Fund. The Fund is expected to provide a cumulative investment of \$0.1 million in 2010/11. The estimated savings of the other fuel types resulting from the installation of insulation in customer homes are provided in the next section of this report.

The Affordable Energy Fund contributes the incremental costs associated with providing Manitoba Hydro's In-home Energy Assessment service under the Federal ecoENERGY Retrofit program to rural and northern Manitobans. The Fund is expected to provide a cumulative investment of \$0.2 million in 2010/11.

Manitoba Hydro extended the eligibility for the Power Smart Furnace Replacement Program to those customers upgrading an oil or propane furnace to a high efficiency electric or natural gas

furnace. The Affordable Energy Fund will contribute \$0.1 million to support the extension of this program over the period of 2010/11 to 2013/14.

Manitoba Hydro is partnering with Natural Resources Canada to deliver a residential solar water heating initiative in Manitoba. The Affordable Energy Fund will contribute \$0.1 million to this initiative in 2010/11.

The interest rate for the Power Smart Residential Loan has been reduced from a cost recovery rate of 5.5% to a rate of 4.9% for a one-year period. The Affordable Energy Fund will contribute funding of \$1 million to subsidize the reduced interest rate over the period of 2010/11 to 2014/15.

### Affordable Energy Fund - Other Fuel Savings

Through funding from the Affordable Energy Fund, residential customers using heating sources other than natural gas and electricity are eligible to participate in the Home Insulation and Oil & Propane Furnace Replacement programs. The following table provides the oil and propane fuel savings estimated to be achieved through this funding.

It is estimated that savings of 695,200 litres of fuel oil and 190,900 litres of propane will be achieved from 2010/11 to 2024/25.

Affordable Energy Fund Other Fuel Savings  
2010/11 - 2024/25  
(000s, litres)

	2010/11	2011/12	2012/13 - 2024/25
<b>Fuel Oil Savings</b>			
Home Insulation Program	16.1	0.0	0.0
Oil & Propane Furnance Replacement	165.6	165.6	347.9
<b>Annual Fuel Oil Savings</b>	<b>181.7</b>	<b>165.6</b>	<b>347.9</b>
<b>Cumulative Fuel Oil Savings, 2010-2024</b>	<b>181.7</b>	<b>347.3</b>	<b>695.2</b>
<b>Propane Savings</b>			
Home Insulation Program	3.6	0.0	0.0
Oil & Propane Furnance Replacement	45.7	45.7	95.9
<b>Annual Propane Savings</b>	<b>49.3</b>	<b>45.7</b>	<b>95.9</b>
<b>Cumulative Popane Savings, 2010-2024</b>	<b>49.3</b>	<b>95.0</b>	<b>190.9</b>

## 6.2 Lower Income Natural Gas Furnace Replacement

The Lower Income Natural Gas Furnace Replacement budget is an internal allocation established as a result of Public Utility Board Order 99/07. The purpose of the allocation is to establish and administer a Furnace Replacement Program for low income customers.

### Lower Income Natural Gas Furnace Replacement - Budget

The following table outlines the planned expenditures totalling \$5 million over the next three years

Lower Income Natural Gas Furnace Replacement Budget  
(Millions, 2010\$)

	2010/11	2011/12	2012/13
Lower Income Program			
Annual Budget Furnace Replacement	1.4	1.9	1.9
Cumulative Budget, 2010-2024	\$1.4	\$3.3	\$5.2



## 7 Total Internal Demand Side Management Budget

The Total Internal Demand Side Management Budget includes the following internal sources:

- Electric Power Smart Utility Budget - \$414 million (as outlined in Section 2.2)
- Natural Gas Power Smart Utility Budget- \$130 million (as outlined in Section 3.2)
- Affordable Energy Fund Budget - \$23 million (as outlined in Section 6.1)
- Lower Income Furnace Replacement Budget - \$5 million (as outlined in Section 6.2)

The following table outlines the total projected DSM budget including all internal sources of funding to 2024/25. A total investment of \$ 572 million is planned for the period of 2010/11 to 2024/25.

		Total DSM Budget 2010/11 - 2024/25 (Millions, 2010 \$)															
		2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Electric DSM																	
	Electric Power Smart	37.8	38.8	39.9	39.5	37.1	30.3	25.8	23.8	22.8	21.2	20.5	20.4	20.2	20.1	16.0	414.2
	Affordable Energy Fund	1.3	1.5	1.6	2.4	2.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4
	Annual Electric Budget	\$39.1	\$40.3	\$41.5	\$41.9	\$39.4	\$30.5	\$25.9	\$23.8	\$22.8	\$21.2	\$20.5	\$20.4	\$20.2	\$20.1	\$16.0	\$423.5
Natural Gas DSM																	
	Natural Gas Power Smart	11.9	12.7	13.1	11.1	11.0	10.7	10.1	7.9	6.3	5.8	5.8	5.8	5.8	5.8	5.8	129.6
	Affordable Energy Fund	3.2	5.2	5.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.7
	Lower Income Furnace Replacement Budget	1.4	1.9	1.9	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
	Annual Natural Gas Budget	\$16.4	\$19.8	\$20.1	\$11.2	\$11.1	\$10.7	\$10.1	\$7.9	\$6.3	\$5.8	\$5.8	\$5.8	\$5.8	\$5.8	\$5.8	\$148.4
Oil and Propane DSM																	
	Affordable Energy Fund	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	0.2
	Annual Oil and Propane Budget	\$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	\$0.2
	Manitoba Hydro Annual Budget	\$55.6	\$60.2	\$61.6	\$53.1	\$50.5	\$41.2	\$35.9	\$31.8	\$29.1	\$27.0	\$26.3	\$26.2	\$26.0	\$25.9	\$21.8	
	Cumulative Budget 2010-2024	\$55.6	\$115.8	\$177.4	\$230.5	\$281.0	\$322.2	\$358.2	\$389.9	\$419.0	\$446.0	\$472.3	\$498.5	\$524.4	\$550.3	\$572.1	\$572.1

## 8 Other External Demand Side Management Funding

Manitoba Hydro's Power Smart programs are supported by funding from external organizations as outlined in the following table.

External funding is provided by the Provincial Government to support the cost of providing residential home audits under the ecoENERGY Audit Program. This funding is expected to total \$135,000 over the period of 2010/11 to 2024/25

External funding is provided by the Provincial Government to support the Water & Energy Saver Program. This funding is expected to total \$172,500 over the period of 2010/11 to 2024/25.

External funding is provided by the Federal Government through Natural Resources Canada to support Bioenergy Optimization demo projects. This funding is expected to total \$2.4 million over the period of 2010/11 to 2024/25. Energy savings associated with the aforementioned demo projects have not been included in the 2010 Power Smart Plan.

### EXTERNAL FUNDING BUDGET

2010/11 - 2024/25

(Millions, 2010 \$)

	2010/11	2011/12	2012/13	Cumulative, 2010-2024
External Funding				
Water & Energy Saver Program	0.2	0.0	0.0	0.2
ecoEnergy Audits	0.1	0.0	0.0	0.1
Bioenergy Optimization Program	1.3	1.0	0.2	2.4
Total External Funding	\$1.6	\$1.0	\$0.2	\$2.7
Cumulative Budget, 2010-2024	\$1.6	\$2.6	\$2.7	\$2.7

## **APPENDIX A - 2010 Power Smart Plan Electric**

Appendix A.1 - Winter Capacity Savings (MW)

Appendix A.2 - Summer Capacity Savings (MW)

Appendix A.3 - Annual Energy Savings (GW.h)

Appendix A.4 - Annual Total Resource Cost

Appendix A.5 - Annual Program Budgets (Utility Cost)

Appendix A.6 - Annual Program Administration Budgets

Appendix A.7 - Incentives

**Winter Capacity Savings (MW)  
2010 Option 2**

APPENDIX A.1

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	6%	MW at Generation 2024/25
<b>RESIDENTIAL</b>																	
<b>Incentive Based</b>																	
New Home Program	0.2	1.4	2.7	3.9	5.2	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4		7.3
Home Insulation Program	2.3	4.3	6.2	7.8	9.3	10.6	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8		13.4
Water and Energy Saver Program	0.7	1.6	2.8	3.6	4.4	4.4	4.4	4.4	4.3	4.1	3.8	3.8	3.8	3.8	3.8		4.3
Residential CFL Program	3.9	8.2	8.2	8.2	8.2	8.2	8.2	8.2	4.3	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Lower Income Energy Efficiency Program	0.4	1.0	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4	1.4	1.4	1.4	1.4		1.6
EE Light Fixtures	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.1
Fridge Recycling Program	0.3	1.5	2.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.2	3.2	2.2	1.1		1.3
Subtotal	7.9	18.1	24.2	28.7	32.3	34.9	36.1	36.1	31.9	27.3	27.0	27.0	26.7	25.7	24.6	6%	28.1
<b>Market Effects</b>																	
Residential Appliance Program	0.2	0.4	0.6	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1		1.2
Subtotal	0.2	0.4	0.6	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0%	1.2
<b>Customer Service Initiatives</b>																	
Power Smart Residential Loan Program	0.3	0.7	1.0	1.4	1.7	2.0	2.4	2.7	3.1	3.4	3.7	4.1	4.4	4.8	5.1		5.8
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
Residential Earth Power Program	0.5	1.1	1.6	2.3	2.9	3.5	4.2	4.9	5.6	6.4	7.2	8.0	8.8	9.7	9.7		11.0
Solar Water Heaters	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Subtotal	0.8	1.7	2.7	3.6	4.6	5.6	6.6	7.6	8.7	9.8	10.9	12.1	13.2	14.4	14.8	4%	16.8
<b>COMMERCIAL</b>																	
Commercial Lighting Program	7.4	13.4	18.7	23.8	28.7	33.2	37.4	41.4	45.2	48.7	50.1	52.2	54.3	56.3	57.7		65.8
Commercial Custom Measures Program	0.1	0.2	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.2		1.3
Commercial Windows Program	1.0	1.7	2.4	3.1	3.8	4.5	5.2	5.9	6.6	7.2	7.9	8.6	9.3	10.0	10.7		12.2
Commercial HVAC Program - Chiller	0.0	0.0	0.0	0.0	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 Parking Lot Controllor 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
City of Winnipeg Power Smart Agreement	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0		0.0
Commercial Refrigeration Program	0.2	0.4	0.6	0.8	1.0	1.3	1.6	1.9	2.2	2.5	2.7	2.8	3.0	3.3	3.5		4.0
Commercial Insulation Program	1.6	3.2	4.7	6.3	7.8	9.4	10.9	12.4	13.9	15.4	16.9	18.3	19.8	21.3	22.7		25.9
Commercial Earth Power Program	0.8	1.7	2.6	3.5	4.4	5.3	6.3	7.3	8.3	9.3	10.3	11.3	12.3	13.3	14.3		16.3
Commercial New Construction Program	0.6	1.4	2.6	4.7	7.0	9.5	12.1	14.7	17.5	17.5	17.5	17.5	17.5	17.5	17.5		19.9
Commercial Building Optimization Program	0.2	0.5	0.9	1.3	1.7	2.1	2.8	3.3	3.8	4.2	4.5	4.7	4.9	5.2	5.6		6.3
Internal Retrofit Program	0.5	5.0	5.4	5.8	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1		6.9
Agricultural Heat Pad Program	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2
Power Smart Energy Manager Program	0.0	0.0	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0		0.0
Commercial Kitchen Appliance Program	0.1	0.1	0.2	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.0	1.9	1.8		2.1
Commercial Clothes Washers Program	0.1	0.2	0.3	0.4	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.2	1.2	1.2	1.2		1.4
Network Energy Management Program	0.2	0.3	0.5	0.7	0.9	0.9	0.9	0.9	1.0	1.0	0.8	0.6	0.4	0.2	0.1		0.1
Power Smart Shops	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3		0.3
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
Subtotal	13.0	28.5	39.7	51.8	63.7	75.0	86.5	97.5	107.5	114.3	118.4	123.2	127.5	131.8	135.7	34%	154.8
<b>Market Effects</b>																	
Commercial Rinse & Save Program	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0		0.0
Subtotal	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0%	0.0
<b>INDUSTRIAL</b>																	
Performance Optimization Program	2.0	3.9	5.9	7.8	9.8	11.7	13.7	15.6	17.6	19.5	21.5	23.4	25.4	27.3	29.3		32.2
Emergency Preparedness Program	0.0	1.5	6.0	13.5	24.0	27.8	29.3	30.0	30.8	31.5	32.3	33.0	33.8	34.5	35.3		38.8
Subtotal	2.0	5.4	11.9	21.3	33.8	39.5	42.9	45.6	48.3	51.0	53.7	56.4	59.1	61.8	64.5	16%	71.0
<b>CONSERVATION SUBTOTAL</b>	<b>23.9</b>	<b>54.2</b>	<b>79.0</b>	<b>106.2</b>	<b>135.5</b>	<b>156.1</b>	<b>173.1</b>	<b>187.9</b>	<b>197.5</b>	<b>203.6</b>	<b>211.1</b>	<b>219.7</b>	<b>227.7</b>	<b>234.8</b>	<b>240.7</b>	<b>61%</b>	<b>271.8</b>
<b>LOAD MANAGEMENT</b>																	
Curtailable Rate Program	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3		160.9
<b>LOAD MANAGEMENT SUBTOTAL</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>146.3</b>	<b>37%</b>	<b>160.9</b>
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	7.6	8.1	10.0	12.1	13.2	15.3	8.7	9.0	9.4	9.7	9.7	9.7	9.7	9.7	9.7		10.7
<b>CUSTOMER SELF-GENERATION SUBTOTAL</b>	<b>7.6</b>	<b>8.1</b>	<b>10.0</b>	<b>12.1</b>	<b>13.2</b>	<b>15.3</b>	<b>8.7</b>	<b>9.0</b>	<b>9.4</b>	<b>9.7</b>	<b>9.7</b>	<b>9.7</b>	<b>9.7</b>	<b>9.7</b>	<b>9.7</b>	<b>2%</b>	<b>10.7</b>
Program Impacts (at meter)	178	209	235	265	295	318	328	343	353	360	367	376	384	391	397	100%	
Program Impacts (at generation)	197	231	262	295	328	354	366	383	395	402	410	420	429	437	443		
Codes, Standards & Regulations (at meter)	10	19	33	47	63	84	93	102	111	120	128	136	145	153	160		
Codes, Standards & Regulations (at generation)	11	22	38	53	72	96	106	117	127	137	146	156	165	174	183		
POWER SMART 2010 to 2024 Impacts (at meter)	188	228	268	311	358	402	422	446	464	479	495	512	528	543	557		
POWER SMART 2010 to 2024 Impacts (at generation)	208	253	299	348	401	450	473	500	521	538	556	575	594	611	626		
<b>POWER SMART SAVINGS TO DATE</b>																	
Incentive Based Program Impacts (at meter)	201	200	198	193	189	189	189	188	187	186	186	186	182	179	173		
Incentive Based Program Impacts (at generation)	225	224	222	217	212	212	212	211	210	209	209	209	204	201	195		
Customer Service Initiatives Program Impacts (at meter)	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8		
Customer Service Initiatives Program Impacts (at generation)	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		
Impacts of Codes & Standards (at meter)	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79		
Impacts of Codes & Standards (at generation)	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90		
<b>TOTAL MW (at meter)</b>	<b>474</b>	<b>513</b>	<b>552</b>	<b>590</b>	<b>632</b>	<b>676</b>	<b>695</b>	<b>719</b>	<b>737</b>	<b>751</b>	<b>767</b>	<b>783</b>	<b>795</b>	<b>807</b>	<b>815</b>		
<b>TOTAL MW (at generation)</b>	<b>531</b>	<b>575</b>	<b>619</b>	<b>662</b>	<b>710</b>	<b>760</b>	<b>782</b>	<b>808</b>	<b>828</b>	<b>845</b>	<b>863</b>	<b>881</b>	<b>895</b>	<b>909</b>	<b>918</b>		

NOTE: Figures may not add due to rounding.

**Summer Capacity Savings (MW)  
2010 Option 2**

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	MW at Generation 2024/25
<b>RESIDENTIAL</b>																
<b>Incentive Based</b>																
New Home Program	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Home Insulation 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
Water and Energy Saver Program	0.4	0.9	1.5	1.9	2.4	2.4	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.4
Residential CFL Program	1.7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lower Income Energy Efficiency Program	0.0	0.1	0.2	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
EE Light Fixtures	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fridge Recycling Program	0.6	3.0	5.4	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	6.7	6.7	4.5	2.3	2.7
Subtotal	2.8	7.6	10.7	12.9	13.4	13.4	13.4	13.4	11.6	9.6	9.5	9.5	8.9	6.7	4.6	1%
<b>Market Effects</b>																
Residential Appliance Program	0.2	0.4	0.6	0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.4
Subtotal	0.2	0.4	0.6	0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0%
<b>Customer Service Initiatives</b>																
Power Smart Residential Loan 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
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
Residential Earth Power 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 Water Heaters	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
<b>COMMERCIAL</b>																
Commercial Lighting Program	7.0	12.6	17.4	22.0	26.3	30.4	34.2	37.8	41.1	44.3	45.0	46.6	48.3	49.9	51.0	58.1
Commercial Custom Measures Program	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8
Commercial Windows Program	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8
Commercial HVAC Program - Chiller	0.1	0.2	0.2	0.3	0.4	0.4	0.5	0.6	0.7	0.9	1.0	1.1	1.3	1.4	1.5	1.7
Commercial Parking Lot Controller 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
City of Winnipeg Power Smart Agreement	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Commercial Refrigeration Program	0.1	0.3	0.4	0.6	0.8	0.9	1.2	1.4	1.6	1.8	2.0	2.1	2.2	2.4	2.6	3.0
Commercial Insulation Program	0.5	1.0	1.5	2.1	2.6	3.1	3.6	4.0	4.5	5.0	5.5	6.0	6.5	6.9	7.4	8.5
Commercial Earth Power Program	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.0
Commercial New Construction Program	1.0	2.1	3.8	7.0	10.5	14.1	18.0	21.9	26.0	26.0	26.0	26.0	26.0	26.0	26.0	29.6
Commercial Building Optimization Program	0.1	0.2	0.5	0.7	0.9	1.1	1.4	1.6	1.9	2.1	2.2	2.4	2.4	2.6	2.8	3.2
Internal Retrofit Program	0.3	2.7	2.9	3.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.7
Agricultural Heat Pad Program	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Power Smart Energy Manager Program	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Commercial Kitchen Appliance Program	0.1	0.1	0.2	0.4	0.5	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.0	1.9	1.8	2.1
Commercial Clothes Washers Program	0.1	0.2	0.3	0.4	0.6	0.7	0.8	0.9	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.4
Network Energy Management Program	0.5	1.0	1.5	2.1	2.6	2.7	2.8	2.8	2.9	2.9	2.3	1.8	1.3	0.7	0.2	0.2
Power Smart Shops	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.3	0.4
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
Subtotal	10.2	21.2	30.0	40.0	50.1	59.5	68.9	78.0	87.1	91.8	93.1	95.4	97.3	99.1	100.5	31%
<b>Market Effects</b>																
Commercial Rinse & Save Program	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal	0.0	0.0	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%
<b>INDUSTRIAL</b>																
Performance Optimization Program	2.0	3.9	5.9	7.8	9.8	11.7	13.7	15.6	17.6	19.5	21.5	23.4	25.4	27.3	29.3	32.2
Emergency Preparedness Program	0.0	1.5	6.0	13.5	24.0	27.8	29.3	30.0	30.8	31.5	32.3	33.0	33.8	34.5	35.3	38.8
Subtotal	2.0	5.4	11.9	21.3	33.8	39.5	42.9	45.6	48.3	51.0	53.7	56.4	59.1	61.8	64.5	20%
<b>CONSERVATION SUBTOTAL</b>	15.2	34.6	53.2	75.2	98.6	113.6	126.5	138.4	148.3	153.7	157.6	162.5	166.5	168.9	170.8	52%
<b>LOAD MANAGEMENT</b>																
Curtable Rate Program	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	160.9
<b>LOAD MANAGEMENT SUBTOTAL</b>	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	146.3	45%
<b>CUSTOMER SELF-GENERATION</b>																
Bioenergy Optimization Program	7.3	7.8	9.7	11.8	12.9	15.0	8.7	9.0	9.4	9.7	9.7	9.7	9.7	9.7	9.7	10.7
<b>CUSTOMER SELF-GENERATION SUBTOTAL</b>	7.3	7.8	9.7	11.8	12.9	15.0	8.7	9.0	9.4	9.7	9.7	9.7	9.7	9.7	9.7	3%
Program Impacts (at meter)	169	189	209	233	258	275	281	294	304	310	314	319	323	325	327	100%
Program Impacts (at generation)	186	209	232	259	286	305	313	327	338	345	349	355	359	362	364	
Codes, Standards & Regulations (at meter)	17	34	50	65	82	100	115	128	142	156	169	181	194	206	218	
Codes, Standards & Regulations (at generation)	19	38	57	75	94	115	131	146	162	177	192	207	221	235	249	
POWER SMART 2010 to 2024 Impacts (at meter)	186	222	259	299	340	375	396	422	446	465	482	500	517	531	545	
POWER SMART 2010 to 2024 Impacts (at generation)	205	247	288	333	380	420	444	473	500	522	541	561	580	597	612	
<b>POWER SMART SAVINGS TO DATE</b>																
Incentive Based Program Impacts (at meter)	156	156	155	153	152	152	151	151	150	150	150	149	145	142	137	
Incentive Based Program Impacts (at generation)	175	175	174	172	170	170	170	169	169	168	168	167	163	160	154	
Customer Service Initiatives Program Impacts (at meter)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Customer Service Initiatives Program Impacts (at generation)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Impacts of Codes & Standards (at meter)	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
Impacts of Codes & Standards (at generation)	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	
<b>TOTAL MW (at meter)</b>	421	457	493	530	570	606	626	652	675	694	711	728	741	752	761	
<b>TOTAL MW (at generation)</b>	471	512	552	595	640	680	703	732	759	780	799	819	833	846	856	

NOTE: Figures may not add due to rounding.



**Annual Total Resource Costs**  
**2010 Option 2**  
**(000's in 2010 \$)**

APPENDIX A.4

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total	
<b>RESIDENTIAL</b>																	
Incentive Based																	
New Home Program	\$746	\$4,640	\$4,732	\$4,824	\$4,867	\$4,914	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,724	
Home Insulation Program	\$2,018	\$1,850	\$1,691	\$1,543	\$1,422	\$1,306	\$1,197	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,028	
Water and Energy Saver Program	\$914	\$1,111	\$1,302	\$1,038	\$1,055	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,422	
Residential CFL Program	\$1,518	\$1,562	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,081	
Lower Income Energy Efficiency Program	\$741	\$1,131	\$1,131	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,003	
EE Light Fixtures	\$122	\$122	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$245	
Fridge Recycling Program	\$1,473	\$5,420	\$5,399	\$3,925	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,218	
Subtotal	\$7,535	\$15,838	\$14,256	\$11,331	\$7,344	\$6,220	\$1,197	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$63,721	
Market Effects																	
Residential Appliance Program	\$928	\$859	\$937	\$1,151	\$1,374	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,249	
Subtotal	\$928	\$859	\$937	\$1,151	\$1,374	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,249	
Customer Service Initiatives																	
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ecoEnergy	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130	
Residential Earth Power Program	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$2,669	
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Subtotal	\$307	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$2,798	
<b>COMMERCIAL</b>																	
Commercial Lighting Program	\$11,629	\$9,672	\$8,745	\$8,465	\$8,214	\$7,829	\$7,498	\$7,181	\$6,863	\$6,574	\$6,293	\$6,032	\$5,788	\$5,545	\$3,205	\$109,533	
Commercial Custom Measures Program	\$235	\$235	\$235	\$235	\$235	\$207	\$207	\$207	\$207	\$207	\$179	\$179	\$179	\$179	\$179	\$3,102	
Commercial Windows Program	\$811	\$590	\$590	\$590	\$590	\$590	\$590	\$590	\$590	\$590	\$590	\$590	\$590	\$578	\$578	\$9,046	
Commercial HVAC Program - Chiller	\$408	\$391	\$380	\$390	\$391	\$393	\$412	\$414	\$693	\$672	\$670	\$659	\$648	\$636	\$634	\$7,790	
Commercial Parking Lot Controllor Program	\$104	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$104	
City of Winnipeg Power Smart Agreement	\$23	\$19	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$44	
Commercial Refrigeration Program	\$297	\$292	\$322	\$338	\$362	\$379	\$404	\$430	\$417	\$455	\$479	\$514	\$550	\$599	\$660	\$6,486	
Commercial Insulation Program	\$817	\$811	\$806	\$800	\$793	\$789	\$783	\$776	\$774	\$767	\$767	\$759	\$758	\$750	\$742	\$11,690	
Commercial Earth Power Program	\$1,351	\$1,354	\$1,405	\$1,408	\$1,460	\$1,511	\$1,563	\$1,614	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,667	
Commercial New Construction Program	\$1,228	\$1,342	\$2,008	\$2,257	\$3,041	\$3,716	\$4,635	\$4,770	\$5,310	\$0	\$0	\$0	\$0	\$0	\$0	\$28,307	
Commercial Building Optimization Program	\$161	\$175	\$259	\$259	\$245	\$245	\$358	\$274	\$262	\$247	\$276	\$276	\$283	\$344	\$353	\$4,018	
Internal Retrofit Program	\$3,958	\$3,993	\$3,445	\$3,429	\$3,347	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,172	
Agricultural Heat Pad Program	\$24	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29	
Power Smart Energy Manager Program	\$0	\$216	\$216	\$263	\$357	\$352	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,403	
Commercial Kitchen Appliance Program	\$87	\$98	\$113	\$126	\$142	\$158	\$174	\$198	\$282	\$281	\$281	\$280	\$0	\$0	\$0	\$2,221	
Commercial Clothes Washers Program	\$200	\$208	\$217	\$226	\$235	\$244	\$254	\$167	\$147	\$96	\$67	\$37	\$201	\$208	\$215	\$2,721	
Network Energy Management Program	\$391	\$397	\$400	\$402	\$361	\$355	\$356	\$355	\$352	\$364	\$27	\$22	\$17	\$16	\$15	\$3,829	
Power Smart Shops	\$125	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$0	\$0	\$0	\$0	\$0	\$0	\$1,071	
CO2 Sensors	\$4	\$7	\$7	\$7	\$7	\$7	\$7	\$7	\$14	\$13	\$12	\$11	\$11	\$11	\$10	\$133	
Subtotal	\$21,847	\$19,923	\$19,266	\$19,312	\$19,896	\$16,893	\$17,359	\$17,100	\$16,020	\$10,266	\$9,642	\$9,359	\$9,025	\$8,866	\$6,591	\$221,366	
Market Effects																	
Commercial Rinse & Save Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	
<b>INDUSTRIAL</b>																	
Performance Optimization Program	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$4,503	\$67,541	
Emergency Preparedness Program	\$325	\$1,150	\$3,175	\$5,200	\$7,075	\$2,925	\$1,513	\$1,063	\$1,075	\$1,088	\$1,100	\$1,113	\$1,125	\$1,138	\$1,150	\$30,213	
Subtotal	\$4,828	\$5,653	\$7,678	\$9,703	\$11,578	\$7,428	\$6,015	\$5,565	\$5,578	\$5,590	\$5,603	\$5,615	\$5,628	\$5,640	\$5,653	\$97,753	
<b>CONSERVATION SUBTOTAL</b>	<b>\$35,445</b>	<b>\$42,451</b>	<b>\$42,315</b>	<b>\$41,675</b>	<b>\$40,370</b>	<b>\$30,719</b>	<b>\$24,749</b>	<b>\$22,843</b>	<b>\$21,776</b>	<b>\$16,034</b>	<b>\$15,422</b>	<b>\$15,152</b>	<b>\$14,831</b>	<b>\$14,684</b>	<b>\$12,421</b>	<b>\$390,888</b>	
<b>LOAD MANAGEMENT</b>																	
Curtailable Rate Program	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$63	
<b>LOAD MANAGEMENT SUBTOTAL</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$63</b>	
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	\$5,731	\$5,311	\$8,917	\$9,515	\$6,816	\$9,657	\$2,581	\$1,714	\$1,747	\$1,781	\$778	\$778	\$778	\$778	\$778	\$57,656	
<b>CUSTOMER SELF-GENERATION SUBTOTAL</b>	<b>\$5,731</b>	<b>\$5,311</b>	<b>\$8,917</b>	<b>\$9,515</b>	<b>\$6,816</b>	<b>\$9,657</b>	<b>\$2,581</b>	<b>\$1,714</b>	<b>\$1,747</b>	<b>\$1,781</b>	<b>\$778</b>	<b>\$778</b>	<b>\$778</b>	<b>\$778</b>	<b>\$778</b>	<b>\$57,656</b>	
<b>Subtotal of Programs</b>	<b>\$41,181</b>	<b>\$47,766</b>	<b>\$51,236</b>	<b>\$51,194</b>	<b>\$47,190</b>	<b>\$40,380</b>	<b>\$27,334</b>	<b>\$24,561</b>	<b>\$23,527</b>	<b>\$17,819</b>	<b>\$16,204</b>	<b>\$15,934</b>	<b>\$15,613</b>	<b>\$15,466</b>	<b>\$13,203</b>	<b>\$448,607</b>	
Incremental Support Activity	\$1,035	\$1,406	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$16,427	
Contingency	\$0	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$19,000	
Incremental Total Resource Costs (2010 to 2024)	\$42,215	\$49,172	\$53,312	\$53,270	\$49,266	\$42,456	\$29,410	\$26,637	\$25,603	\$20,894	\$19,280	\$19,010	\$18,689	\$18,542	\$16,279	\$484,034	
Customer Service and Standards Support	\$2,980	\$2,908	\$2,792	\$2,753	\$2,752	\$2,741	\$2,740	\$2,587	\$2,576	\$2,558	\$2,550	\$2,538	\$2,489	\$2,489	\$2,489	\$39,945	
Total Resource Costs (2010 to 2024)	\$45,195	\$52,080	\$56,104	\$56,023	\$52,018	\$45,197	\$32,150	\$29,224	\$28,179	\$23,452	\$21,830	\$21,548	\$21,178	\$21,031	\$18,768	\$523,980	
Committed To Date																	
Activity cumulative to 2008/09	\$364,193	\$1,901	\$1,445	\$2,828	\$3,729	\$2,730	\$3,971	\$8,708	\$4,356	\$5,689	\$10,390	\$4,497	\$5,105	\$3,142	\$5,945	\$9,225	
Current Year Estimate (2009/10)	\$57,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$57,107	
TOTAL RESOURCE COSTS (1989 to 2024)	\$421,300	\$47,096	\$53,525	\$58,932	\$59,752	\$54,748	\$49,169	\$40,858	\$33,580	\$33,868	\$33,842	\$26,327	\$26,653	\$24,320	\$26,976	\$27,993	\$1,018,940

NOTE: Figures may not add due to rounding.

**Annual Program Budgets (Utility Costs)  
2010 Option 2  
(000's in 2010 \$)**

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total	
<b>RESIDENTIAL</b>																	
<b>Incentive Based</b>																	
New Home Program	\$493	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$493
Home Insulation Program	\$1,394	\$1,289	\$1,191	\$1,100	\$1,023	\$950	\$881	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,829
Water and Energy Saver Program	\$968	\$1,176	\$1,381	\$1,043	\$1,059	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,627
Residential CFL Program	\$1,499	\$1,540	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,038
Lower Income Energy Efficiency Program	\$382	\$468	\$468	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,317
EE Light Fixtures	\$131	\$131	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$262
Fridge Recycling Program	\$914	\$3,183	\$3,163	\$2,248	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,508
Subtotal	\$5,780	\$7,787	\$6,202	\$4,391	\$2,082	\$950	\$881	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,074
<b>Market Effects</b>																	
Residential Appliance Program	\$160	\$160	\$160	\$160	\$160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800
Subtotal	\$160	\$160	\$160	\$160	\$160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800
<b>Customer Service Initiatives</b>																	
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ecoEnergy	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130
Residential Earth Power Program	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$2,669
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$307	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$2,798
<b>COMMERCIAL</b>																	
Commercial Lighting Program	\$8,061	\$6,755	\$5,998	\$5,842	\$5,708	\$5,486	\$5,305	\$5,127	\$4,955	\$4,793	\$4,637	\$4,497	\$4,362	\$4,232	\$102	\$75,862	
Commercial Custom Measures Program	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$164	\$2,462
Commercial Windows Program	\$602	\$448	\$448	\$448	\$448	\$448	\$448	\$448	\$448	\$448	\$448	\$448	\$448	\$439	\$439	\$6,851	
Commercial HVAC Program - Chiller	\$262	\$260	\$254	\$263	\$272	\$282	\$301	\$312	\$42	\$0	\$0	\$0	\$0	\$0	\$0	\$2,208	
Commercial Parking Lot Controller Program	\$87	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$87	
City of Winnipeg Power Smart Agreement	\$23	\$17	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$40	
Commercial Refrigeration Program	\$193	\$187	\$201	\$209	\$222	\$230	\$241	\$252	\$261	\$278	\$291	\$310	\$329	\$353	\$383	\$3,939	
Commercial Insulation Program	\$425	\$422	\$420	\$417	\$413	\$412	\$408	\$405	\$403	\$400	\$399	\$395	\$395	\$391	\$387	\$6,094	
Commercial Earth Power Program	\$432	\$447	\$461	\$464	\$479	\$494	\$497	\$512	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,785	
Commercial New Construction Program	\$751	\$885	\$1,237	\$1,087	\$1,331	\$1,646	\$1,935	\$2,070	\$2,250	\$0	\$0	\$0	\$0	\$0	\$0	\$13,191	
Commercial Building Optimization Program	\$113	\$121	\$151	\$164	\$157	\$157	\$216	\$199	\$193	\$179	\$194	\$194	\$188	\$201	\$216	\$2,644	
Internal Retrofit Program	\$3,924	\$3,959	\$3,411	\$3,295	\$3,178	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,768	
Agricultural Heat Pad Program	\$62	\$11	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$72	
Power Smart Energy Manager Program	\$0	\$144	\$144	\$176	\$177	\$192	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$832	
Commercial Kitchen Appliance Program	\$90	\$103	\$120	\$135	\$153	\$171	\$189	\$215	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,176	
Commercial Clothes Washers Program	\$79	\$84	\$90	\$96	\$103	\$109	\$116	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$678	
Network Energy Management Program	\$360	\$367	\$371	\$374	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,472	
Power Smart Shops	\$125	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$118	\$0	\$0	\$0	\$0	\$0	\$0	\$1,069	
CO2 Sensors	\$5	\$6	\$6	\$5	\$5	\$5	\$5	\$4	\$4	\$1	\$0	\$0	\$0	\$0	\$0	\$46	
Subtotal	\$15,757	\$14,497	\$13,593	\$13,256	\$12,928	\$9,913	\$9,943	\$9,826	\$8,799	\$6,263	\$6,134	\$6,008	\$5,885	\$5,782	\$1,693	\$140,277	
<b>Market Effects</b>																	
Commercial Rinse & Save Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1
<b>INDUSTRIAL</b>																	
Performance Optimization Program	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$2,809	\$42,131
Emergency Preparedness Program	\$325	\$975	\$2,625	\$4,225	\$5,625	\$2,088	\$875	\$488	\$488	\$488	\$488	\$488	\$488	\$488	\$488	\$488	\$20,638
Subtotal	\$3,134	\$3,784	\$5,434	\$7,034	\$8,434	\$4,896	\$3,684	\$3,296	\$3,296	\$3,296	\$3,296	\$3,296	\$3,296	\$3,296	\$3,296	\$3,296	\$62,768
<b>CONSERVATION SUBTOTAL</b>																	
	\$25,139	\$26,407	\$25,567	\$25,018	\$23,782	\$15,937	\$14,686	\$13,300	\$12,273	\$9,737	\$9,608	\$9,482	\$9,359	\$9,256	\$5,167	\$234,718	
<b>LOAD MANAGEMENT</b>																	
Curtable Rate Program	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$81,724
LOAD MANAGEMENT SUBTOTAL	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$5,448	\$81,724
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	\$3,464	\$2,818	\$4,242	\$4,369	\$3,190	\$4,322	\$1,036	\$567	\$571	\$575	\$0	\$0	\$0	\$0	\$0	\$0	\$25,154
CUSTOMER SELF-GENERATION SUBTOTAL	\$3,464	\$2,818	\$4,242	\$4,369	\$3,190	\$4,322	\$1,036	\$567	\$571	\$575	\$0	\$0	\$0	\$0	\$0	\$0	\$25,154
<b>Subtotal of Programs</b>																	
	\$34,052	\$34,673	\$35,258	\$34,836	\$32,420	\$25,707	\$21,170	\$19,316	\$18,292	\$15,760	\$15,056	\$14,930	\$14,807	\$14,704	\$10,615	\$341,596	
<b>Incremental Support Activity</b>																	
Contingency	\$1,035	\$1,406	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$1,076	\$16,427
Utility Costs (2010 to 2024)	\$0	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$19,000
Customer Service and Standards Support	\$2,673	\$2,731	\$2,614	\$2,575	\$2,574	\$2,563	\$2,562	\$2,409	\$2,398	\$2,380	\$2,372	\$2,360	\$2,311	\$2,311	\$2,311	\$2,311	\$37,147
Total Utility Costs (2010 to 2024)	\$37,759	\$38,809	\$39,948	\$39,487	\$37,070	\$30,346	\$25,808	\$23,801	\$22,766	\$21,216	\$20,504	\$20,367	\$20,195	\$20,091	\$16,002	\$414,170	
<b>Committed To Date</b>																	
Activity cumulative to 2008/09	\$282,835	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$325,829
Current Year Estimate	\$50,317	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,317
Total Committed to Date	\$333,152	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$333,152
<b>TOTAL UTILITY COSTS (1)</b>	<b>\$333,152</b>	<b>\$37,759</b>	<b>\$38,809</b>	<b>\$39,948</b>	<b>\$39,487</b>	<b>\$37,070</b>	<b>\$30,346</b>	<b>\$25,808</b>	<b>\$23,801</b>	<b>\$22,766</b>	<b>\$21,216</b>	<b>\$20,504</b>	<b>\$20,367</b>	<b>\$20,195</b>	<b>\$20,091</b>	<b>\$16,002</b>	<b>\$747,322</b>

NOTE: Figures may not add due to rounding.



**Annual Program Administration Budgets  
2010 Option 2  
(000's in 2010 \$)**

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total	
<b>RESIDENTIAL</b>																	
<b>Incentive Based</b>																	
New Home Program	\$433	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$433	
Home Insulation Program	\$340	\$340	\$339	\$339	\$338	\$338	\$337	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,371	
Water and Energy Saver Program	\$646	\$760	\$866	\$689	\$695	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,655	
Residential CFL Program	\$642	\$642	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,285	
Lower Income Energy Efficiency Program	\$36	\$47	\$47	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130	
EE Light Fixtures	\$93	\$93	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$187	
Fridge Recycling Program	\$720	\$2,408	\$2,388	\$1,667	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,183	
<b>Subtotal</b>	<b>\$2,911</b>	<b>\$4,291</b>	<b>\$3,639</b>	<b>\$2,694</b>	<b>\$1,033</b>	<b>\$338</b>	<b>\$337</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$15,243</b>	
<b>Market Effects</b>																17%	
Residential Appliance Program	\$160	\$160	\$160	\$160	\$160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800	
<b>Subtotal</b>	<b>\$160</b>	<b>\$160</b>	<b>\$160</b>	<b>\$160</b>	<b>\$160</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$800</b>	
<b>Customer Service Initiatives</b>																1%	
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ecoEnergy	\$130	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$130	
Residential Earth Power Program	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$178	\$2,669	
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Subtotal</b>	<b>\$307</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$178</b>	<b>\$2,798</b>	
<b>COMMERCIAL</b>																	
Commercial Lighting Program	\$1,697	\$1,692	\$1,692	\$1,692	\$1,692	\$1,679	\$1,679	\$1,679	\$1,679	\$1,679	\$1,679	\$1,679	\$1,679	\$1,679	\$102	\$23,676	
Commercial Custom Measures Program	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$67	\$1,005	
Commercial Windows Program	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$102	\$1,527	
Commercial HVAC Program - Chiller	\$21	\$19	\$18	\$16	\$14	\$12	\$10	\$8	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$122	
Commercial Parking Lot Controller Program	\$26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26	
City of Winnipeg Power Smart Agreement	\$2	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4	
Commercial Refrigeration Program	\$95	\$80	\$82	\$82	\$83	\$83	\$82	\$82	\$83	\$83	\$83	\$84	\$84	\$84	\$85	\$1,252	
Commercial Insulation Program	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$45	\$671	
Commercial Earth Power Program	\$139	\$142	\$145	\$148	\$151	\$154	\$157	\$160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,196	
Commercial New Construction Program	\$257	\$232	\$206	\$232	\$206	\$206	\$180	\$180	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$1,878	
Commercial Building Optimization Program	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$62	\$40	\$32	\$25	\$841	
Internal Retrofit Program	\$3,924	\$3,959	\$3,411	\$3,295	\$3,178	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,768	
Agricultural Heat Pad Program	\$24	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29	
Power Smart Energy Manager Program	\$0	\$103	\$103	\$95	\$76	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$447	
Commercial Kitchen Appliance Program	\$17	\$16	\$16	\$16	\$15	\$15	\$14	\$14	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$123	
Commercial Clothes Washers Program	\$40	\$40	\$40	\$40	\$40	\$40	\$40	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$279	
Network Energy Management Program	\$79	\$79	\$79	\$79	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$316	
Power Smart Shops	\$121	\$113	\$113	\$113	\$113	\$113	\$113	\$113	\$113	\$0	\$0	\$0	\$0	\$0	\$0	\$1,028	
CO2 Sensors	\$4	\$4	\$4	\$3	\$3	\$2	\$2	\$2	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$26	
<b>Subtotal</b>	<b>\$6,721</b>	<b>\$6,762</b>	<b>\$6,184</b>	<b>\$6,086</b>	<b>\$5,846</b>	<b>\$2,650</b>	<b>\$2,554</b>	<b>\$2,514</b>	<b>\$2,334</b>	<b>\$2,038</b>	<b>\$2,037</b>	<b>\$2,038</b>	<b>\$2,016</b>	<b>\$2,008</b>	<b>\$426</b>	<b>\$52,214</b>	
<b>Market Effects</b>																57%	
Commercial Rinse & Save Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1</b>	
<b>INDUSTRIAL</b>																	
Performance Optimization Program	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$983	\$14,741	
Emergency Preparedness Program	\$325	\$200	\$300	\$350	\$200	\$150	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$100	\$2,425	
<b>Subtotal</b>	<b>\$1,308</b>	<b>\$1,183</b>	<b>\$1,283</b>	<b>\$1,333</b>	<b>\$1,183</b>	<b>\$1,133</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$1,083</b>	<b>\$17,166</b>	
<b>CONSERVATION SUBTOTAL</b>	<b>\$11,408</b>	<b>\$12,574</b>	<b>\$11,445</b>	<b>\$10,450</b>	<b>\$8,399</b>	<b>\$4,298</b>	<b>\$4,152</b>	<b>\$3,775</b>	<b>\$3,594</b>	<b>\$3,298</b>	<b>\$3,298</b>	<b>\$3,298</b>	<b>\$3,277</b>	<b>\$3,269</b>	<b>\$1,687</b>	<b>\$88,222</b>	
<b>LOAD MANAGEMENT</b>																	
Curtable Rate Program	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$4	\$63	
<b>LOAD MANAGEMENT SUBTOTAL</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$4</b>	<b>\$63</b>	
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	\$1,405	\$571	\$383	\$189	\$175	\$204	\$142	\$121	\$124	\$128	\$0	\$0	\$0	\$0	\$0	\$3,441	
<b>CUSTOMER SELF-GENERATION SUBTOTAL</b>	<b>\$1,405</b>	<b>\$571</b>	<b>\$383</b>	<b>\$189</b>	<b>\$175</b>	<b>\$204</b>	<b>\$142</b>	<b>\$121</b>	<b>\$124</b>	<b>\$128</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,441</b>	
<b>Subtotal of Programs</b>	<b>\$12,817</b>	<b>\$13,149</b>	<b>\$11,832</b>	<b>\$10,643</b>	<b>\$8,578</b>	<b>\$4,507</b>	<b>\$4,298</b>	<b>\$3,899</b>	<b>\$3,723</b>	<b>\$3,430</b>	<b>\$3,302</b>	<b>\$3,303</b>	<b>\$3,281</b>	<b>\$3,273</b>	<b>\$1,691</b>	<b>\$91,726</b>	
<b>Incremental Support Activity</b>	<b>\$1,038</b>	<b>\$1,406</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$1,076</b>	<b>\$16,427</b>	
<b>Contingency</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$1,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$19,000</b>	
Administration Cost (2010 to 2024)	\$13,852	\$14,555	\$13,907	\$12,719	\$10,654	\$6,583	\$6,374	\$5,975	\$5,799	\$6,506	\$6,378	\$6,378	\$6,357	\$6,349	\$4,767	\$35,427	
Customer Service and Standards Support	\$2,673	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$2,808	\$41,979	
Total Administration Costs (2010 to 2024)	\$16,524	\$17,362	\$16,715	\$15,527	\$13,462	\$9,390	\$9,182	\$8,783	\$8,606	\$9,314	\$9,186	\$9,186	\$9,165	\$9,156	\$7,574	\$169,132	
Committed To Date	\$129,784	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$2,866	\$42,995	
Activity cumulative to 2008/09	\$8,721	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Current Year Estimate	\$138,505	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL ADMINISTRATION COSTS (1989 to 2024)</b>	<b>\$138,505</b>	<b>\$16,524</b>	<b>\$17,362</b>	<b>\$16,715</b>	<b>\$15,527</b>	<b>\$13,462</b>	<b>\$9,390</b>	<b>\$9,182</b>	<b>\$8,783</b>	<b>\$8,606</b>	<b>\$9,314</b>	<b>\$9,186</b>	<b>\$9,186</b>	<b>\$9,165</b>	<b>\$9,156</b>	<b>\$7,574</b>	<b>\$307,637</b>

NOTE: Figures may not add due to rounding.

**Annual Program Incentives  
2010 Option 2  
(000's in 2010 \$)**

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total	
<b>RESIDENTIAL</b>																	
<b>Incentive Based</b>																	
New Home Program	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60	
Home Insulation Program	\$1,054	\$950	\$852	\$762	\$685	\$612	\$544	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,458	
Water and Energy Saver Program	\$322	\$416	\$515	\$354	\$365	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,972	
Residential CFL Program	\$856	\$897	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,754	
Lower Income Energy Efficiency Program	\$345	\$421	\$421	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,187	
EE Light Fixtures	\$37	\$38	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75	
Fridge Recycling Program	\$194	\$775	\$775	\$581	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,325	
Subtotal	\$2,869	\$3,497	\$2,563	\$1,697	\$1,049	\$612	\$544	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,831	5%
<b>Market Effects</b>																	
Residential Appliance Program	\$0	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0	
<b>Customer Service Initiatives</b>																	
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ecoEnergy	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Residential Earth Power Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Solar Water Heaters	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0	0%
<b>COMMERCIAL</b>																	
Commercial Lighting Program	\$6,364	\$5,064	\$4,306	\$4,151	\$4,016	\$3,807	\$3,626	\$3,448	\$3,276	\$3,115	\$2,958	\$2,818	\$2,683	\$2,554	\$0	\$52,186	
Commercial Custom Measures Program	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$97	\$1,457	
Commercial Windows Program	\$501	\$346	\$346	\$346	\$346	\$346	\$346	\$346	\$346	\$346	\$346	\$346	\$346	\$338	\$338	\$5,324	
Commercial HVAC Program - Chiller	\$241	\$240	\$235	\$247	\$258	\$270	\$291	\$303	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,086	
Commercial Parking Lot Controller Program	\$61	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$61	
City of Winnipeg Power Smart Agreement	\$21	\$15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36	
Commercial Refrigeration Program	\$99	\$107	\$120	\$126	\$140	\$147	\$158	\$170	\$178	\$195	\$208	\$226	\$245	\$269	\$298	\$2,686	
Commercial Insulation Program	\$380	\$378	\$375	\$372	\$369	\$367	\$364	\$360	\$359	\$355	\$355	\$351	\$350	\$347	\$343	\$5,423	
Commercial Earth Power Program	\$293	\$305	\$316	\$316	\$328	\$340	\$340	\$351	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,589	
Commercial New Construction Program	\$493	\$653	\$1,031	\$855	\$1,125	\$1,440	\$1,755	\$1,890	\$2,070	\$0	\$0	\$0	\$0	\$0	\$0	\$11,313	
Commercial Building Optimization Program	\$51	\$59	\$89	\$102	\$95	\$95	\$154	\$137	\$131	\$117	\$132	\$132	\$147	\$170	\$191	\$1,803	
Internal Retrofit Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Agricultural Heat Pad Program	\$38	\$6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43	
Power Smart Energy Manager Program	\$0	\$41	\$41	\$81	\$101	\$122	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$385	
Commercial Kitchen Appliance Program	\$73	\$87	\$104	\$119	\$138	\$156	\$175	\$201	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,053	
Commercial Clothes Washers Program	\$39	\$45	\$50	\$57	\$63	\$70	\$76	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$400	
Network Energy Management Program	\$281	\$288	\$292	\$295	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,156	
Power Smart Shops	\$4	\$4	\$4	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$5	\$41	
CO2 Sensors	\$1	\$2	\$2	\$2	\$2	\$3	\$3	\$3	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$20	
Subtotal	\$9,036	\$7,735	\$7,409	\$7,170	\$7,082	\$7,263	\$7,389	\$7,312	\$6,465	\$4,225	\$4,097	\$3,970	\$3,869	\$3,774	\$1,267	\$88,063	35%
<b>Market Effects</b>																	
Commercial Rinse & Save Program	\$0	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0	
<b>INDUSTRIAL</b>																	
Performance Optimization Program	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$1,826	\$27,390	
Emergency Preparedness Program	\$0	\$775	\$2,325	\$3,875	\$5,425	\$1,938	\$775	\$388	\$388	\$388	\$388	\$388	\$388	\$388	\$388	\$18,213	
Subtotal	\$1,826	\$2,601	\$4,151	\$5,701	\$7,251	\$3,764	\$2,601	\$2,214	\$2,214	\$2,214	\$2,214	\$2,214	\$2,214	\$2,214	\$2,214	\$45,603	18%
<b>CONSERVATION SUBTOTAL</b>	\$13,731	\$13,833	\$14,123	\$14,568	\$15,383	\$11,639	\$10,534	\$9,525	\$8,678	\$6,439	\$6,310	\$6,184	\$6,082	\$5,987	\$3,480	\$146,496	59%
<b>LOAD MANAGEMENT</b>																	
Curtable Rate Program	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$81,661	
LOAD MANAGEMENT SUBTOTAL	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$5,444	\$81,661	33%
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	\$2,059	\$2,247	\$3,859	\$4,180	\$3,015	\$4,118	\$894	\$447	\$447	\$447	\$0	\$0	\$0	\$0	\$0	\$21,713	
CUSTOMER SELF-GENERATION SUBTOTAL	\$2,059	\$2,247	\$3,859	\$4,180	\$3,015	\$4,118	\$894	\$447	\$447	\$447	\$0	\$0	\$0	\$0	\$0	\$21,713	9%
<b>Total Incentive Costs (2010 to 2024)</b>	\$21,234	\$21,524	\$23,426	\$24,192	\$23,842	\$21,200	\$16,872	\$15,416	\$14,569	\$12,330	\$11,754	\$11,628	\$11,526	\$11,431	\$8,924	\$249,870	100%
<b>Committed To Date</b>																	
Activity cumulative to 2008/09	\$151,298	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$151,298	
Current Year Estimate	\$19,399	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,399	
	\$170,698	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$170,698	
<b>TOTAL INCENTIVE COSTS (1989 to 2024)</b>	\$170,698	\$21,234	\$21,524	\$23,426	\$24,192	\$23,842	\$21,200	\$16,872	\$15,416	\$14,569	\$12,330	\$11,754	\$11,628	\$11,526	\$11,431	\$8,924	\$420,568

NOTE: Figures may not add due to rounding.

## **APPENDIX B - Historical MW/GW.h Savings & Costs by Program (Savings to Date)**

- Appendix B.1 - Winter Capacity Savings (MW)
- Appendix B.2 - Summer Capacity Savings (MW)
- Appendix B.3 - Annual Energy Savings (GW.h)
- Appendix B.4 - Annual Total Resource Cost
- Appendix B.5 - Annual Program Budgets (Utility Cost)
- Appendix B.6 - Annual Program Administration Budgets
- Appendix B.7 - Incentives









Annual Program Budgets (Utility Costs)

Savings To Date (1989/90 - 2009/10) (000's in 2010 \$)

Table with columns for years 1989/90 to 2009/10, Interim Estimate 2009/10, Cumulative Total 2009/10, and Cumulative Total 2024/25. Rows include Residential (Existing Homes Program, CFL Program, etc.), Commercial (Commercial Lighting Program, Commercial HVAC, etc.), Industrial (Performance Optimization Program, Motors, etc.), and Self Generation (Biorenergy Optimization Program). A final summary row for Total Utility Costs shows savings from 1989/90 to 2009/10 as \$333,460 and projected savings to 2024/25 as \$333,460.

NOTE: Figures may not add due to rounding. NOTE: City of Winnipeg Power Smart Agreement costs include commitment payments to the City of Winnipeg.







## **APPENDIX C - 2010 Power Smart Plan Natural Gas**

Appendix C.1 - Annual Energy Savings (m3)

Appendix C.2 - Annual Total Resource Cost

Appendix C.3 - Annual Program Budgets (Utility Cost)

Appendix C.4 - Annual Program Administration Budgets

Appendix C.5 - Incentives

**Annual Energy Savings (m3)  
2010 Option 2  
in '000,000**

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25		
<b>RESIDENTIAL</b>																	
Incentive Based																	
New Home Program	0.07	0.98	1.91	2.86	3.81	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	
Home Insulation Program	1.25	2.46	3.63	4.77	5.86	6.93	7.95	7.95	7.95	7.95	7.95	7.95	7.95	7.95	7.95	7.95	
Water and Energy Saver Program	0.36	0.80	1.32	1.88	2.42	2.42	2.42	2.42	2.49	2.58	2.69	2.69	2.69	2.69	2.69	2.69	
Lower Income Energy Efficiency Program	1.10	2.78	4.47	4.47	4.47	3.96	3.19	2.41	2.43	2.47	2.50	2.50	2.50	2.50	2.50	2.50	
Subtotal	2.78	7.02	11.33	13.97	16.57	18.09	18.34	17.56	17.65	17.78	17.92	17.92	17.92	17.92	17.92	17.92	17%
Market Effects																	
Residential Appliance Program	0.03	0.06	0.09	0.12	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0%
Subtotal	0.03	0.06	0.09	0.12	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0%
Customer Service Initiatives																	
Power Smart Residential Loan Program	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	7.50	
ecoEnergy	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	0.00	0.00	
Residential Earth Power Program	0.22	0.45	0.70	0.96	1.23	1.51	1.80	2.10	2.41	2.73	3.06	3.41	3.76	4.13	4.13	4.13	
Solar Water Heaters	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	0.00	0.00	
Customer Service Initiatives Subtotal	0.72	1.45	2.20	2.96	3.73	4.51	5.30	6.10	6.91	7.73	8.57	9.41	10.26	11.13	11.63	11%	
<b>COMMERCIAL</b>																	
Commercial Custom Measures Program	0.06	0.12	0.19	0.25	0.30	0.35	0.40	0.45	0.51	0.56	0.61	0.66	0.71	0.76	0.82	0.82	
Commercial Windows Program	0.35	0.60	0.85	1.09	1.34	1.59	1.83	2.08	2.32	2.57	2.82	3.06	3.31	3.56	3.80	3.80	
Commercial Insulation Program	1.40	2.80	4.21	5.61	7.01	8.40	9.80	11.18	12.56	13.94	15.32	16.69	18.06	19.43	20.79	20.79	
Commercial New Construction Program	0.22	0.47	0.87	1.65	2.50	3.38	4.34	5.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30	
Commercial Building Optimization Program	0.14	0.31	0.60	0.88	1.14	1.40	1.82	2.14	2.48	2.79	3.02	3.22	3.36	3.59	3.87	3.87	
Power Smart Energy Manager Program	0.00	0.04	0.09	0.20	0.31	0.42	0.38	0.33	0.22	0.11	0.00	0.00	0.00	0.00	0.00	0.00	
Commercial Kitchen Appliance Program	0.03	0.07	0.12	0.18	0.25	0.34	0.44	0.56	0.96	1.36	1.76	2.17	2.16	2.15	2.13	2.13	
Commercial Clothes Washers Program	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.09	0.10	0.10	0.10	0.10	0.10	0.11	
Power Smart Shops	0.02	0.04	0.06	0.09	0.11	0.13	0.15	0.18	0.20	0.20	0.18	0.16	0.13	0.11	0.09	0.09	
CO2 Sensors	0.04	0.09	0.15	0.22	0.30	0.39	0.47	0.56	0.66	0.89	1.08	1.23	1.37	1.49	1.59	1.59	
Commercial Boiler Program	0.96	2.27	3.55	4.86	6.25	7.69	9.18	10.74	12.43	14.13	15.86	17.63	19.40	21.17	22.95	22.95	
Subtotal	3.22	6.85	10.71	15.07	19.54	24.14	28.89	33.60	38.73	42.94	47.04	51.22	54.91	58.67	62.45	59%	
Market Effects																	
Commercial Rinse & Save Program	0.08	0.16	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.16	0.08	0.00	0.00	0.00	0.00	
Subtotal	0.08	0.16	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.16	0.08	0.00	0.00	0.00	0.00	0%
<b>INDUSTRIAL</b>																	
Industrial Natural Gas Optimization Program	1.60	3.20	4.80	6.00	7.20	8.40	9.20	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	
Industrial Subtotal	1.60	3.20	4.80	6.00	7.20	8.40	9.20	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	9%
<b>CONSERVATION SUBTOTAL</b>	<b>8.43</b>	<b>18.74</b>	<b>29.37</b>	<b>38.37</b>	<b>47.45</b>	<b>55.55</b>	<b>62.14</b>	<b>67.68</b>	<b>73.70</b>	<b>78.87</b>	<b>83.86</b>	<b>88.80</b>	<b>93.26</b>	<b>97.88</b>	<b>102.17</b>	<b>97%</b>	
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	0.03	0.03	1.75	1.77	1.88	3.60	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	
CUSTOMER SELF-GENERATION SUBTOTAL	0.03	0.03	1.75	1.77	1.88	3.60	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3%
<b>Program Impacts</b>	<b>8</b>	<b>19</b>	<b>31</b>	<b>40</b>	<b>49</b>	<b>59</b>	<b>66</b>	<b>71</b>	<b>77</b>	<b>82</b>	<b>87</b>	<b>92</b>	<b>97</b>	<b>102</b>	<b>106</b>	<b>100%</b>	
Interactive Effects	-2.11	-4.92	-5.94	-6.73	-6.86	-6.92	-6.96	-6.98	-5.32	-3.58	-3.56	-3.54	-3.31	-2.48	-1.61	-1.61	
Subtotal after Interactive Effects	6	14	25	33	42	52	59	64	72	79	84	89	94	99	104	104	
Codes, Standards & Regulations	0.37	0.71	1.01	1.27	1.50	1.69	1.84	1.95	2.02	2.05	2.05	2.05	2.06	2.06	2.06	2.06	
Power Smart 2010 to 2024 Impacts	7	15	26	35	44	54	61	66	74	81	86	91	96	101	106	106	
Total Savings To Date	34.10	34.10	34.10	34.08	34.08	34.08	33.25	32.96	31.84	31.60	31.59	31.49	31.19	28.94	27.04	27.04	
Incentive -Based Programs	18.32	18.34	18.27	18.14	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	17.95	17.86	17.51	17.51	
CSI Program Impacts	-6.34	-5.91	-5.23	-3.23	-1.80	-1.80	-1.80	-1.81	-1.81	-1.88	-1.87	-1.87	-1.92	-2.01	-1.52	-1.52	
Interactive Effects	46.07	46.52	47.14	49.00	50.29	50.29	49.46	49.15	48.03	47.72	47.72	47.63	47.22	44.78	43.03	43.03	
Savings To Date Total																	
<b>Total m3</b>	<b>53</b>	<b>61</b>	<b>73</b>	<b>84</b>	<b>94</b>	<b>104</b>	<b>110</b>	<b>115</b>	<b>122</b>	<b>129</b>	<b>134</b>	<b>139</b>	<b>143</b>	<b>146</b>	<b>149</b>		

NOTE: Figures may not add due to rounding.

**Annual Total Resource Cost  
2010 Option 2  
(000's in 2010 \$)**

APPENDIX C.2

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total
<b>RESIDENTIAL</b>																
<b>Incentive Based</b>																
New Home Program	\$222	\$4,281	\$4,365	\$4,451	\$4,491	\$4,537	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,346
Home Insulation Program	\$3,311	\$3,221	\$3,133	\$3,046	\$2,962	\$2,880	\$2,799	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,351
Water and Energy Saver Program	\$744	\$854	\$937	\$817	\$787	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,140
Lower Income Energy Efficiency Program	\$3,597	\$5,500	\$5,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,596
<b>Subtotal</b>	\$7,874	\$13,855	\$13,935	\$8,313	\$8,239	\$7,416	\$2,799	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$62,433
<b>Market Effects</b>																
Residential Appliance Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Customer Service Initiatives</b>																
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ecoEnergy	\$518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$518
Residential Earth Power Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	\$518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$518
<b>COMMERCIAL</b>																
Commercial Custom Measures Program	\$224	\$224	\$224	\$224	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$200	\$3,090
Commercial Windows Program	\$920	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$686	\$10,520
Commercial Insulation Program	\$5,868	\$5,909	\$5,900	\$5,878	\$5,872	\$5,850	\$5,860	\$5,814	\$5,793	\$5,793	\$5,769	\$5,760	\$5,735	\$5,711	\$5,711	\$87,328
Commercial New Construction Program	\$286	\$283	\$341	\$387	\$459	\$534	\$621	\$636	\$696	\$0	\$0	\$0	\$0	\$0	\$0	\$4,244
Commercial Building Optimization Program	\$341	\$380	\$534	\$534	\$496	\$496	\$727	\$573	\$611	\$573	\$650	\$650	\$675	\$770	\$793	\$8,801
Power Smart Energy Manager Program	\$0	\$100	\$100	\$156	\$143	\$139	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$639
Commercial Kitchen Appliance Program	\$91	\$116	\$133	\$145	\$174	\$215	\$276	\$953	\$966	\$979	\$992	\$0	\$0	\$0	\$0	\$5,290
Commercial Clothes Washers Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Power Smart Shops	\$57	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$52	\$476
CO2 Sensors	\$82	\$94	\$95	\$95	\$98	\$96	\$94	\$91	\$88	\$181	\$167	\$157	\$149	\$144	\$136	\$1,767
Commercial Boiler Program	\$1,433	\$1,719	\$1,637	\$1,645	\$1,700	\$1,729	\$1,761	\$1,804	\$2,049	\$2,013	\$2,053	\$2,094	\$2,100	\$2,105	\$2,110	\$27,954
<b>Subtotal</b>	\$9,303	\$9,563	\$9,701	\$9,803	\$9,879	\$9,996	\$10,251	\$10,135	\$11,150	\$10,410	\$10,527	\$10,547	\$9,569	\$9,639	\$9,636	\$150,109
<b>Market Effects</b>																
Commercial Rinse & Save Program	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
<b>Subtotal</b>	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
<b>INDUSTRIAL</b>																
Industrial Natural Gas Optimization Program	\$3,960	\$3,960	\$3,960	\$3,040	\$3,040	\$3,040	\$2,120	\$2,120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,240
<b>Subtotal</b>	\$3,960	\$3,960	\$3,960	\$3,040	\$3,040	\$3,040	\$2,120	\$2,120	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,240
<b>CONSERVATION SUBTOTAL</b>	\$21,657	\$27,379	\$27,597	\$21,156	\$21,159	\$20,453	\$15,171	\$12,255	\$11,150	\$10,410	\$10,527	\$10,547	\$9,569	\$9,639	\$9,636	\$238,303
<b>CUSTOMER SELF-GENERATION</b>																
Bioenergy Optimization Program	\$224	\$40	\$982	\$80	\$262	\$953	\$63	\$11	\$12	\$14	\$0	\$0	\$0	\$0	\$0	\$2,641
<b>CUSTOMER SELF-GENERATION SUBTOTAL</b>	\$224	\$40	\$982	\$80	\$262	\$953	\$63	\$11	\$12	\$14	\$0	\$0	\$0	\$0	\$0	\$2,641
<b>Subtotal of Programs</b>	\$21,881	\$27,419	\$28,580	\$21,236	\$21,421	\$21,406	\$15,233	\$12,266	\$11,161	\$10,424	\$10,527	\$10,547	\$9,569	\$9,639	\$9,636	\$240,944
Incremental Support Activity	\$833	\$1,137	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$13,236
Contingency	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$14,000
<b>Incremental Total Resource Costs</b>	\$22,714	\$29,556	\$30,446	\$23,102	\$23,288	\$23,273	\$17,100	\$14,133	\$13,028	\$12,290	\$12,394	\$12,413	\$11,435	\$11,506	\$11,503	\$268,180
Customer Service and Standards Support	\$1,228	\$1,222	\$1,216	\$1,185	\$1,177	\$1,170	\$1,163	\$1,155	\$1,145	\$1,128	\$1,125	\$1,125	\$1,116	\$1,116	\$1,116	\$17,388
<b>Total Resource Costs (2009 to 2024)</b>	\$23,942	\$30,778	\$31,662	\$24,287	\$24,465	\$24,443	\$18,263	\$15,288	\$14,173	\$13,418	\$13,519	\$13,538	\$12,552	\$12,622	\$12,619	\$285,568
<b>Committed To Date</b>																
Activity cumulative to 2008/09	\$60,183	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60,183
Current Year Estimate 2009/10	\$18,884	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,884
<b>Subtotal</b>	\$79,067	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$79,067
<b>TOTAL RESOURCE COSTS (1989 to 2024)</b>	\$79,067	\$23,942	\$30,778	\$31,662	\$24,287	\$24,465	\$24,443	\$18,263	\$15,288	\$14,173	\$13,519	\$13,538	\$12,552	\$12,622	\$12,619	\$364,636

NOTE: Figures may not add due to rounding.

**Annual Program Budgets (Utility Costs)  
2010 Option 2  
(000's in 2010 \$)**

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total	
<b>RESIDENTIAL</b>																	
<b>Incentive Based</b>																	
New Home Program	\$97	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$97	
Home Insulation Program	\$2,399	\$2,337	\$2,278	\$2,219	\$2,162	\$2,106	\$2,051	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,552	
Water and Energy Saver Program	\$747	\$858	\$941	\$821	\$790	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,156	
Lower Income Energy Efficiency Program	\$755	\$1,100	\$1,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,954	
Subtotal	\$3,999	\$4,295	\$4,318	\$3,039	\$2,951	\$2,106	\$2,051	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,760	27%
<b>Market Effects</b>																	
Residential Appliance Program	\$0	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0	
<b>Customer Service Initiatives</b>																	
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ecoEnergy	\$518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$518	
Residential Earth Power Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Subtotal	\$518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$518	1%
<b>COMMERCIAL</b>																	
Commercial Custom Measures Program	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$104	\$1,559	
Commercial Windows Program	\$697	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$529	\$8,106	
Commercial Insulation Program	\$1,770	\$1,781	\$1,778	\$1,772	\$1,770	\$1,764	\$1,767	\$1,754	\$1,753	\$1,747	\$1,746	\$1,740	\$1,737	\$1,730	\$1,723	\$26,332	
Commercial New Construction Program	\$229	\$226	\$244	\$257	\$269	\$304	\$321	\$336	\$356	\$0	\$0	\$0	\$0	\$0	\$0	\$2,542	
Commercial Building Optimization Program	\$248	\$268	\$349	\$349	\$329	\$329	\$449	\$369	\$389	\$389	\$429	\$429	\$417	\$456	\$461	\$5,656	
Power Smart Energy Manager Program	\$0	\$76	\$76	\$103	\$83	\$86	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$424	
Commercial Kitchen Appliance Program	\$66	\$72	\$75	\$86	\$95	\$108	\$117	\$132	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$751	
Commercial Clothes Washers Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Power Smart Shops	\$57	\$52	\$52	\$53	\$53	\$53	\$53	\$53	\$52	\$0	\$0	\$0	\$0	\$0	\$0	\$477	
CO2 Sensors	\$72	\$75	\$75	\$72	\$70	\$66	\$62	\$58	\$54	\$9	\$0	\$0	\$0	\$0	\$0	\$614	
Commercial Boiler Program	\$972	\$912	\$879	\$889	\$911	\$924	\$949	\$965	\$42	\$0	\$0	\$0	\$0	\$0	\$0	\$7,444	
Subtotal	\$4,215	\$4,096	\$4,162	\$4,212	\$4,212	\$4,267	\$4,350	\$4,300	\$3,280	\$2,778	\$2,808	\$2,801	\$2,787	\$2,819	\$2,817	\$53,905	63%
<b>Market Effects</b>																	
Commercial Rinse & Save Program	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4	0%
Subtotal	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4	
<b>INDUSTRIAL</b>																	
Industrial Natural Gas Optimization Program	\$920	\$920	\$920	\$760	\$760	\$760	\$600	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,240	7%
Subtotal	\$920	\$920	\$920	\$760	\$760	\$760	\$600	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,240	
<b>CONSERVATION SUBTOTAL</b>	\$9,653	\$9,312	\$9,402	\$8,012	\$7,923	\$7,133	\$7,001	\$4,900	\$3,280	\$2,778	\$2,808	\$2,801	\$2,787	\$2,819	\$2,817	\$83,427	98%
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	\$189	\$40	\$572	\$45	\$81	\$543	\$28	\$11	\$12	\$14	\$0	\$0	\$0	\$0	\$0	\$1,533	
CUSTOMER SELF-GENERATION SUBTOTAL	\$189	\$40	\$572	\$45	\$81	\$543	\$28	\$11	\$12	\$14	\$0	\$0	\$0	\$0	\$0	\$1,533	2%
<b>Subtotal of Programs</b>	\$9,842	\$9,352	\$9,974	\$8,056	\$8,004	\$7,675	\$7,029	\$4,912	\$3,291	\$2,791	\$2,808	\$2,801	\$2,787	\$2,819	\$2,817	\$84,960	100%
<b>Incremental Support Activity</b>	\$833	\$1,137	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$13,236	
<b>Contingency</b>	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$14,000	
<b>Utility Costs (2010 to 2024)</b>	\$833	\$2,137	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$27,236	
<b>Customer Service and Standards Support</b>	\$1,228	\$1,222	\$1,216	\$1,185	\$1,177	\$1,170	\$1,163	\$1,155	\$1,145	\$1,128	\$1,125	\$1,125	\$1,116	\$1,116	\$1,116	\$17,388	
<b>Total Utility Costs (2010 to 2024)</b>	\$11,904	\$12,711	\$13,057	\$11,108	\$11,048	\$10,712	\$10,058	\$7,934	\$6,303	\$5,785	\$5,800	\$5,793	\$5,770	\$5,802	\$5,801	\$129,584	
<b>Committed To Date</b>	\$37,820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$37,820	
<b>Activity cumulative to 2008/09</b>	\$12,357	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,357	
<b>Committed To Date Total</b>	\$50,177	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,177	
<b>TOTAL UTILITY COSTS (1989 to 2024)</b>	\$50,177	\$11,904	\$12,711	\$13,057	\$11,108	\$11,048	\$10,712	\$10,058	\$7,934	\$6,303	\$5,785	\$5,800	\$5,793	\$5,770	\$5,802	\$179,762	

NOTE: Figures may not add due to rounding.

**Annual Program Administration Budgets  
2010 Option 2  
(000's in 2010 \$)**

APPENDIX C.4

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total
<b>RESIDENTIAL</b>																
Incentive Based																
New Home Program	\$13	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13
Home Insulation Program	\$480	\$479	\$479	\$478	\$478	\$477	\$477	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,347
Water and Energy Saver Program	\$543	\$607	\$647	\$564	\$539	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,901
Lower Income Energy Efficiency Program	\$145	\$187	\$187	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$520
Subtotal	\$1,181	\$1,274	\$1,313	\$1,042	\$1,017	\$477	\$477	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,782 29%
Market Effects																
Residential Appliance Program	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0 0%
Customer Service Initiatives																
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ecoEnergy	\$518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$518
Residential Earth Power Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$518	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$518 2%
<b>COMMERCIAL</b>																
Commercial Custom Measures Program	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$80	\$1,197
Commercial Windows Program	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$152	\$2,274
Commercial Insulation Program	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$209	\$3,131
Commercial Earth Power Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial New Construction Program	\$180	\$162	\$144	\$162	\$144	\$144	\$126	\$126	\$126	\$0	\$0	\$0	\$0	\$0	\$0	\$1,315
Commercial Building Optimization Program	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$148	\$96	\$76	\$61	\$2,014
Power Smart Energy Manager Program	\$0	\$63	\$63	\$62	\$49	\$45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$282
Commercial Kitchen Appliance Program	\$40	\$36	\$32	\$32	\$30	\$30	\$24	\$24	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246
Commercial Clothes Washers Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Power Smart Shops	\$55	\$51	\$51	\$51	\$51	\$51	\$51	\$51	\$51	\$0	\$0	\$0	\$0	\$0	\$0	\$463
CO2 Sensors	\$55	\$52	\$49	\$44	\$38	\$33	\$27	\$22	\$16	\$9	\$0	\$0	\$0	\$0	\$0	\$346
Commercial Boiler Program	\$335	\$302	\$268	\$235	\$201	\$168	\$144	\$111	\$42	\$0	\$0	\$0	\$0	\$0	\$0	\$1,806
Subtotal	\$1,254	\$1,254	\$1,196	\$1,174	\$1,102	\$1,059	\$961	\$922	\$824	\$597	\$589	\$589	\$537	\$516	\$501	\$13,074 57%
Market Effects																
Commercial Rinse & Save Program	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4
Subtotal	\$1	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4 0%
<b>INDUSTRIAL</b>																
Industrial Natural Gas Optimization Program	\$280	\$280	\$280	\$280	\$280	\$280	\$280	\$280	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,240
Subtotal	\$280	\$280	\$280	\$280	\$280	\$280	\$280	\$280	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,240 10%
<b>CONSERVATION SUBTOTAL</b>	<b>\$3,235</b>	<b>\$2,810</b>	<b>\$2,790</b>	<b>\$2,496</b>	<b>\$2,399</b>	<b>\$1,816</b>	<b>\$1,718</b>	<b>\$1,202</b>	<b>\$824</b>	<b>\$597</b>	<b>\$589</b>	<b>\$589</b>	<b>\$537</b>	<b>\$516</b>	<b>\$501</b>	<b>\$22,618 98%</b>
<b>CUSTOMER SELF-GENERATION</b>																
Bioenergy Optimization Program	\$174	\$40	\$56	\$30	\$12	\$26	\$13	\$11	\$12	\$14	\$0	\$0	\$0	\$0	\$0	\$387
<b>CUSTOMER SELF-GENERATION SUBTOTAL</b>	<b>\$174</b>	<b>\$40</b>	<b>\$56</b>	<b>\$30</b>	<b>\$12</b>	<b>\$26</b>	<b>\$13</b>	<b>\$11</b>	<b>\$12</b>	<b>\$14</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$387 2%</b>
Subtotal Of Programs	\$3,409	\$2,849	\$2,846	\$2,526	\$2,411	\$1,843	\$1,730	\$1,213	\$836	\$611	\$589	\$589	\$537	\$516	\$501	\$23,005 100%
Incremental Support Activity	\$833	\$1,137	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$867	\$13,236
Contingency	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$14,000
Incremental Total Administration Costs	\$833	\$2,137	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$1,867	\$27,236
Customer Service and Standards Support	\$1,228	\$1,222	\$1,216	\$1,185	\$1,177	\$1,170	\$1,163	\$1,155	\$1,145	\$1,128	\$1,125	\$1,125	\$1,116	\$1,116	\$1,116	\$17,388
Total Administration Costs (2009 to 2024)	\$5,470	\$6,208	\$5,929	\$5,577	\$5,455	\$4,879	\$4,760	\$4,235	\$3,847	\$3,605	\$3,580	\$3,580	\$3,520	\$3,499	\$3,484	\$67,629
Committed To Date																
Activity cumulative to 2008/09	\$18,598	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,598
Current Year Estimate 2009/10	\$4,093	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,093
	\$22,691	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,691
<b>TOTAL ADMINISTRATION COSTS (1989 to 2024)</b>	<b>\$22,691</b>	<b>\$5,470</b>	<b>\$6,208</b>	<b>\$5,929</b>	<b>\$5,577</b>	<b>\$5,455</b>	<b>\$4,879</b>	<b>\$4,760</b>	<b>\$4,235</b>	<b>\$3,847</b>	<b>\$3,605</b>	<b>\$3,580</b>	<b>\$3,580</b>	<b>\$3,520</b>	<b>\$3,499</b>	<b>\$90,321</b>

**Incentives  
2010 Option 2  
(000's in 2010 \$)**

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	Cumulative Total	
<b>RESIDENTIAL</b>																	
Incentive Based																	
New Home Program	\$84	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84	
Home Insulation Program	\$1,919	\$1,858	\$1,799	\$1,740	\$1,684	\$1,629	\$1,575	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,205	
Water and Energy Saver Program	\$204	\$250	\$294	\$257	\$251	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,255	
Lower Income Energy Efficiency Program	\$610	\$912	\$912	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,434	
Subtotal	\$2,817	\$3,021	\$3,005	\$1,997	\$1,935	\$1,629	\$1,575	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,978	26%
Market Effects																	
Residential Appliance Program	\$0	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0	0%
Customer Service Initiatives																	
Power Smart Residential Loan Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
ecoEnergy	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Residential Earth Power Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Solar Water Heaters	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0	0%
<b>COMMERCIAL</b>																	
Commercial Custom Measures Program	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$24	\$362	
Commercial Windows Program	\$545	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$378	\$5,832	
Commercial Insulation Program	\$1,561	\$1,572	\$1,570	\$1,563	\$1,561	\$1,555	\$1,558	\$1,546	\$1,544	\$1,538	\$1,538	\$1,531	\$1,529	\$1,521	\$1,515	\$23,201	
Commercial New Construction Program	\$49	\$64	\$100	\$95	\$125	\$160	\$195	\$210	\$230	\$0	\$0	\$0	\$0	\$0	\$0	\$1,227	
Commercial Building Optimization Program	\$100	\$120	\$200	\$200	\$180	\$180	\$300	\$220	\$240	\$240	\$280	\$280	\$320	\$380	\$400	\$3,642	
Power Smart Energy Manager Program	\$0	\$14	\$14	\$41	\$34	\$41	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$142	
Commercial Kitchen Appliance Program	\$26	\$36	\$44	\$54	\$65	\$79	\$93	\$108	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$505	
Commercial Clothes Washers Program	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Power Smart Shops	\$1	\$1	\$1	\$2	\$2	\$2	\$2	\$2	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$13	
CO2 Sensors	\$17	\$23	\$25	\$28	\$32	\$33	\$35	\$36	\$38	\$0	\$0	\$0	\$0	\$0	\$0	\$268	
Commercial Boiler Program	\$637	\$610	\$611	\$654	\$710	\$757	\$805	\$855	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,639	
Subtotal	\$2,961	\$2,842	\$2,966	\$3,038	\$3,110	\$3,208	\$3,389	\$3,378	\$2,456	\$2,180	\$2,219	\$2,213	\$2,250	\$2,303	\$2,317	\$40,831	66%
Market Effects																	
Commercial Rinse & Save Program	\$0	\$0	\$0	\$0	\$0	\$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	\$0	\$0	\$0	\$0	0%
<b>INDUSTRIAL</b>																	
Industrial Natural Gas Optimization Program	\$640	\$640	\$640	\$480	\$480	\$480	\$320	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000	
Subtotal	\$640	\$640	\$640	\$480	\$480	\$480	\$320	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000	6%
<b>CONSERVATION SUBTOTAL</b>	<b>\$6,418</b>	<b>\$6,503</b>	<b>\$6,612</b>	<b>\$5,515</b>	<b>\$5,524</b>	<b>\$5,317</b>	<b>\$5,284</b>	<b>\$3,698</b>	<b>\$2,456</b>	<b>\$2,180</b>	<b>\$2,219</b>	<b>\$2,213</b>	<b>\$2,250</b>	<b>\$2,303</b>	<b>\$2,317</b>	<b>\$60,809</b>	<b>98%</b>
<b>CUSTOMER SELF-GENERATION</b>																	
Bioenergy Optimization Program	\$15	\$0	\$516	\$15	\$69	\$516	\$15	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,146	
<b>CUSTOMER SELF-GENERATION SUBTOTAL</b>	<b>\$15</b>	<b>\$0</b>	<b>\$516</b>	<b>\$15</b>	<b>\$69</b>	<b>\$516</b>	<b>\$15</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,146</b>	<b>2%</b>
Subtotal Of Programs	\$6,433	\$6,503	\$7,128	\$5,530	\$5,593	\$5,833	\$5,299	\$3,698	\$2,456	\$2,180	\$2,219	\$2,213	\$2,250	\$2,303	\$2,317	\$61,955	100%
Committed To Date																	
Activity cumulative to 2008/09	\$19,221	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,221	
Current Year Estimate 2009/10	\$8,265	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,265	
	\$27,486	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,486	
<b>TOTAL INCENTIVES (1989 to 2024)</b>	<b>\$27,486</b>	<b>\$6,433</b>	<b>\$6,503</b>	<b>\$7,128</b>	<b>\$5,530</b>	<b>\$5,593</b>	<b>\$5,833</b>	<b>\$5,299</b>	<b>\$3,698</b>	<b>\$2,456</b>	<b>\$2,180</b>	<b>\$2,219</b>	<b>\$2,213</b>	<b>\$2,250</b>	<b>\$2,303</b>	<b>\$2,317</b>	<b>\$89,441</b>

NOTE: Figures may not add due to rounding.



**APPENDIX D - Historical Million m3 Savings & Costs by Program (Savings to Date)**

Appendix D.1 - Annual Energy Savings (m3)

Appendix D.2 - Annual Total Resource Cost

Appendix D.3 - Annual Program Budgets (Utility Cost)

Appendix D.4 - Annual Program Administration Budgets

Appendix D.5 - Incentives

**Energy Savings (millions m3)  
Savings To Date (2001/02 - 2009/10)**

APPENDIX D.1

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Interim Estimate 2009/10	Benchmark 2024/25
<u>Residential</u>										
Residential Furnace	0.00	0.00	0.00	0.00	0.61	2.60	4.04	5.77	6.74	6.74
Residential Thermostats	0.00	0.00	0.00	0.00	0.00	0.11	0.17	0.17	0.17	0.17
H2O NRG Saver	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar Water Heaters	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Home Insulation	0.00	0.00	0.00	0.00	0.30	2.15	3.85	5.58	7.23	7.23
New Homes	0.00	0.00	0.00	0.03	0.08	0.15	0.23	0.34	0.42	0.42
Residential Appliances	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
Low Income	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.87	0.86
CFL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fridge Recycle	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EE Light Fix	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SLED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.03	0.99	5.02	8.31	11.92	15.46	15.42
<u>Commercial</u>										
PSEM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial Insulation	0.00	0.00	0.00	0.00	0.00	0.29	1.05	2.15	3.37	3.37
Commercial Windows	0.00	0.00	0.00	0.00	0.00	0.03	0.11	0.23	0.45	0.45
CBOP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.21	0.00
Commercial Custom	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09
Commercial Spray Valves	0.00	0.00	0.00	0.00	0.00	0.83	1.12	2.11	2.27	0.00
Commercial Furnaces	0.00	0.00	0.00	0.00	0.00	0.42	2.52	4.81	4.85	4.85
Commercial Boiler	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	1.09
City of Wpg PSA	0.00	0.05	0.11	0.38	0.70	0.82	0.82	0.82	0.84	0.14
New Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial Kitchen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00
Commercial Lighting	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Commercial Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Commercial Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Network Energy Manager	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PS Shops	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
CO2 Sensors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.05	0.11	0.38	0.70	2.39	5.64	10.27	13.22	9.98
<u>Industrial</u>										
Industrial Gas Optimization Program	0.00	0.00	0.00	0.00	0.00	0.00	1.69	3.85	5.42	1.65
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	1.69	3.85	5.42	1.65
<u>Self Generation</u>										
Bioenergy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Incentive Based Subtotal	0.00	0.05	0.11	0.41	1.69	7.41	15.63	26.03	34.10	27.04
<u>Customer Service Initiatives</u>										
Conservation Subtotal	1.23	2.38	4.25	7.67	11.26	13.20	15.28	16.40	18.32	17.51
Interactive Effects	0.00	0.00	0.00	-1.18	-2.46	-2.89	-3.69	-5.82	-6.78	-1.52
<b>m3 Impacts (Millions)</b>	<b>1.23</b>	<b>2.43</b>	<b>4.36</b>	<b>6.90</b>	<b>10.49</b>	<b>17.71</b>	<b>27.23</b>	<b>36.61</b>	<b>45.64</b>	<b>43.03</b>

NOTE: Figures may not add due to rounding.

**Total Resource Costs  
Savings To Date (2001/02 - 2009/10)  
(000's in 2010 \$)**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	Interim Estimate	Cumulative Total 2009/10	Cumulative Total 2024/25
<b>Residential</b>												
Residential Furnace	\$0	\$0	\$0	\$0	\$2,166	\$6,502	\$4,860	\$5,539	\$3,035	\$199	\$22,101	\$22,101
Residential Thermostats	\$0	\$0	\$0	\$0	\$0	\$239	\$153	\$19	\$0	\$0	\$411	\$411
H2O NRG Saver	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45	\$45	\$45
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Insulation	\$0	\$0	\$0	\$0	\$824	\$4,497	\$3,857	\$4,933	\$3,314	\$719	\$17,425	\$17,425
New Homes	\$0	\$13	\$79	\$178	\$122	\$277	\$439	\$254	\$0	\$0	\$2,080	\$2,080
Residential Appliances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Income	\$0	\$0	\$0	\$0	\$82	\$0	\$171	\$281	\$2,260	\$0	\$2,795	\$2,795
CFL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fridge Recycle	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EE Light Fix	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLED	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$0</b>	<b>\$13</b>	<b>\$79</b>	<b>\$178</b>	<b>\$3,195</b>	<b>\$11,515</b>	<b>\$9,479</b>	<b>\$11,026</b>	<b>\$9,374</b>		<b>\$44,858</b>	<b>\$44,858</b>
<b>Commercial</b>												
PSEM	\$0	\$0	\$0	\$0	\$0	\$0	\$123	\$96	\$49	\$0	\$268	\$268
Commercial Insulation	\$0	\$0	\$0	\$0	\$0	\$593	\$1,410	\$1,389	\$2,511	\$660	\$5,902	\$5,902
Commercial Windows	\$0	\$0	\$0	\$0	\$0	\$135	\$351	\$366	\$150	\$150	\$1,512	\$1,512
CBOP	\$0	\$0	\$0	\$0	\$80	\$240	\$164	\$120	\$362	\$150	\$754	\$754
Commercial Custom	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33	\$33	\$362	\$362
Commercial Spray Valves	\$0	\$0	\$0	\$0	\$0	\$133	\$57	\$127	\$87	\$87	\$350	\$350
Commercial Furnaces	\$0	\$0	\$0	\$0	\$110	\$976	\$2,573	\$3,068	\$997	\$997	\$6,814	\$6,814
Commercial Boiler	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$997	\$997
City of Wpg PSA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$148	\$219	\$64	\$368	\$368
Commercial Kitchen	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27	\$0	\$0	\$91	\$91
Commercial Lighting	\$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
Commercial Refrigeration	\$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
PS Shops	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$16	\$163	\$163	\$180	\$180
CO2 Sensors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33	\$33	\$33	\$33
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$190</b>	<b>\$2,077</b>	<b>\$4,680</b>	<b>\$5,357</b>	<b>\$5,328</b>		<b>\$17,632</b>	<b>\$17,632</b>
<b>Industrial</b>												
Industrial Gas Optimization Program	\$0	\$0	\$0	\$0	\$107	\$39	\$1,951	\$2,413	\$3,638	\$0	\$8,149	\$8,149
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$107</b>	<b>\$39</b>	<b>\$1,951</b>	<b>\$2,413</b>	<b>\$3,638</b>		<b>\$8,149</b>	<b>\$8,149</b>
<b>Self Generation</b>												
Bioenergy	\$0	\$0	\$0	\$0	\$0	\$0	\$14	\$8	\$31	\$31	\$53	\$53
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$14</b>	<b>\$8</b>	<b>\$31</b>		<b>\$53</b>	<b>\$53</b>
<b>Incentive Based Subtotal</b>	<b>\$0</b>	<b>\$13</b>	<b>\$79</b>	<b>\$178</b>	<b>\$3,492</b>	<b>\$13,631</b>	<b>\$16,123</b>	<b>\$18,805</b>	<b>\$18,371</b>		<b>\$70,691</b>	<b>\$70,691</b>
<b>Customer Service Initiatives</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$513</b>		<b>\$513</b>	<b>\$513</b>
<b>Conservation Subtotal</b>	<b>\$0</b>	<b>\$13</b>	<b>\$79</b>	<b>\$178</b>	<b>\$3,492</b>	<b>\$13,631</b>	<b>\$16,123</b>	<b>\$18,805</b>	<b>\$18,884</b>		<b>\$71,204</b>	<b>\$71,204</b>
<b>Support Costs</b>	<b>\$208</b>	<b>\$230</b>	<b>\$248</b>	<b>\$547</b>	<b>\$1,276</b>	<b>\$1,691</b>	<b>\$1,660</b>	<b>\$2,003</b>	<b>\$0</b>		<b>\$7,863</b>	<b>\$7,863</b>
<b>Contingency Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>		<b>\$0</b>	<b>\$0</b>
<b>Incremental Total Resource Costs</b>	<b>\$208</b>	<b>\$243</b>	<b>\$327</b>	<b>\$725</b>	<b>\$4,768</b>	<b>\$15,322</b>	<b>\$17,783</b>	<b>\$20,807</b>	<b>\$18,884</b>		<b>\$79,067</b>	<b>\$79,067</b>

NOTE: Figures may not add due to rounding.

**Annual Program Budgets (Utility Cost)**  
**Savings To Date (2001/02 - 2009/10)**  
(000's in 2010 \$)

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Interim Estimate 2009/10	Cumulative Total 2009/10	Cumulative Total 2024/25
<b>Residential</b>											
Residential Furnace	\$0	\$0	\$0	\$0	\$612	\$1,385	\$2,206	\$3,290	\$1,679	\$9,173	\$9,173
Residential Thermostats	\$0	\$0	\$0	\$0	\$0	\$203	\$136	\$40	\$0	\$379	\$379
H2O NRG Saver	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45	\$45	\$45
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Insulation	\$0	\$0	\$0	\$0	\$396	\$1,933	\$3,098	\$2,859	\$2,441	\$10,727	\$10,727
New Homes	\$0	\$13	\$79	\$97	\$64	\$98	\$144	\$0	\$411	\$906	\$906
Residential Appliances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Income	\$0	\$0	\$0	\$0	\$82	\$0	\$171	\$488	\$2,260	\$3,001	\$3,001
CFL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fridge Recycle	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EE Light Fix	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLED	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$13	\$79	\$97	\$1,156	\$3,619	\$5,754	\$6,676	\$6,837	\$24,231	\$24,231
<b>Commercial</b>											
PSEM	\$0	\$0	\$0	\$0	\$0	\$0	\$123	\$98	\$49	\$271	\$271
Commercial Insulation	\$0	\$0	\$0	\$0	\$0	\$440	\$858	\$1,050	\$1,354	\$3,703	\$3,703
Commercial Windows	\$0	\$0	\$0	\$0	\$0	\$135	\$292	\$480	\$837	\$1,744	\$1,744
CBOP	\$0	\$0	\$0	\$0	\$80	\$240	\$164	\$164	\$155	\$803	\$803
Commercial Custom	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$140	\$140	\$140
Commercial Spray Valves	\$0	\$0	\$0	\$0	\$0	\$134	\$57	\$127	\$33	\$352	\$352
Commercial Furnaces	\$0	\$0	\$0	\$0	\$110	\$636	\$1,723	\$1,434	\$31	\$3,932	\$3,932
Commercial Boiler	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,166	\$1,166	\$1,166
City of Wpg PSA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$148	\$219	\$368	\$368
Commercial Kitchen	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17	\$31	\$48	\$48
Commercial Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Washers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Refrigeration	\$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
PS Shops	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$16	\$163	\$180	\$180
CO2 Sensors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33	\$33	\$33
Subtotal	\$0	\$0	\$0	\$0	\$190	\$1,585	\$3,219	\$3,532	\$4,211	\$12,738	\$12,738
<b>Industrial</b>											
Industrial Gas Optimization Program	\$0	\$0	\$0	\$0	\$107	\$39	\$301	\$347	\$765	\$1,559	\$1,559
Subtotal	\$0	\$0	\$0	\$0	\$107	\$39	\$301	\$347	\$765	\$1,559	\$1,559
<b>Self Generation</b>											
Bioenergy	\$0	\$0	\$0	\$0	\$0	\$0	\$14	\$8	\$31	\$53	\$53
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$14	\$8	\$31	\$53	\$53
Incentive Based Subtotal	\$0	\$13	\$79	\$97	\$1,453	\$5,243	\$9,289	\$10,564	\$11,844	\$38,581	\$38,581
Customer Service Initiatives	\$814	\$467	\$394	\$386	\$6	\$884	\$496	-\$225	\$513	\$3,733	\$3,733
Conservation Subtotal	\$814	\$480	\$472	\$482	\$1,458	\$6,127	\$9,785	\$10,339	\$12,357	\$42,314	\$42,314
Support Costs	\$208	\$230	\$248	\$547	\$1,276	\$1,691	\$1,660	\$2,003	\$0	\$7,863	\$7,863
Contingency Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Utility Costs</b>	<b>\$1,022</b>	<b>\$709</b>	<b>\$720</b>	<b>\$1,030</b>	<b>\$2,735</b>	<b>\$7,818</b>	<b>\$11,444</b>	<b>\$12,342</b>	<b>\$12,357</b>	<b>\$50,177</b>	<b>\$50,177</b>

NOTE: Figures may not add due to rounding.

**Annual Program Administration Budgets  
Savings To Date (2001/02 - 2009/10)  
(000's in 2010 \$)**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Interim Estimate 2009/10	Cumulative Total 2009/10	Cumulative Total 2024/25
<b>Residential</b>											
Residential Furnace	\$0	\$0	\$0	\$0	\$276	\$303	\$467	\$369	\$213	\$1,629	\$1,629
Residential Thermostats	\$0	\$0	\$0	\$0	\$0	\$115	\$98	\$19	\$0	\$233	\$233
H2O NRG Saver	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45	\$45	\$45
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Insulation	\$0	\$0	\$0	\$0	\$180	\$553	\$794	\$620	\$482	\$2,629	\$2,629
New Homes	\$0	\$13	\$79	\$79	\$22	\$32	\$52	\$0	\$307	\$583	\$583
Residential Appliances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Income	\$0	\$0	\$0	\$0	\$82	\$0	\$147	\$134	\$1,054	\$1,418	\$1,418
CFL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fridge Recycle	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EE Light Fix	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLED	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$0</b>	<b>\$13</b>	<b>\$79</b>	<b>\$79</b>	<b>\$560</b>	<b>\$1,004</b>	<b>\$1,558</b>	<b>\$1,142</b>	<b>\$2,102</b>	<b>\$6,537</b>	<b>\$6,537</b>
<b>Commercial</b>											
PSEM	\$0	\$0	\$0	\$0	\$0	\$0	\$123	\$96	\$49	\$268	\$268
Commercial Insulation	\$0	\$0	\$0	\$0	\$0	\$78	\$79	\$180	\$128	\$465	\$465
Commercial Windows	\$0	\$0	\$0	\$0	\$0	\$85	\$89	\$127	\$125	\$426	\$426
CBOP	\$0	\$0	\$0	\$0	\$80	\$240	\$164	\$120	\$118	\$722	\$722
Commercial Custom	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53	\$53	\$53
Commercial Spray Valves	\$0	\$0	\$0	\$0	\$0	\$55	\$32	\$26	\$19	\$133	\$133
Commercial Furnaces	\$0	\$0	\$0	\$0	\$110	\$297	\$309	\$261	\$12	\$989	\$989
Commercial Boiler	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$345	\$345	\$345
City of Wpg PSA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$148	\$219	\$368	\$368
Commercial Kitchen	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8	\$19	\$27	\$27
Commercial Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Washers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Refrigeration	\$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
PS Shops	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$16	\$162	\$179	\$179
CO2 Sensors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33	\$33	\$33
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$190</b>	<b>\$756</b>	<b>\$798</b>	<b>\$982</b>	<b>\$1,283</b>	<b>\$4,009</b>	<b>\$4,009</b>
<b>Industrial</b>											
Industrial Gas Optimization Program	\$0	\$0	\$0	\$0	\$107	\$39	\$96	\$90	\$164	\$496	\$496
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$107</b>	<b>\$39</b>	<b>\$96</b>	<b>\$90</b>	<b>\$164</b>	<b>\$496</b>	<b>\$496</b>
<b>Self Generation</b>											
Bioenergy	\$0	\$0	\$0	\$0	\$0	\$0	\$14	\$8	\$31	\$53	\$53
<b>Subtotal</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$14</b>	<b>\$8</b>	<b>\$31</b>	<b>\$53</b>	<b>\$53</b>
<b>Incentive Based Subtotal</b>	<b>\$0</b>	<b>\$13</b>	<b>\$79</b>	<b>\$79</b>	<b>\$857</b>	<b>\$1,799</b>	<b>\$2,466</b>	<b>\$2,222</b>	<b>\$3,580</b>	<b>\$11,095</b>	<b>\$11,095</b>
<b>Customer Service Initiatives</b>	<b>\$814</b>	<b>\$467</b>	<b>\$394</b>	<b>\$386</b>	<b>\$6</b>	<b>\$884</b>	<b>\$496</b>	<b>-\$225</b>	<b>\$513</b>	<b>\$3,733</b>	<b>\$3,733</b>
<b>Conservation Subtotal</b>	<b>\$814</b>	<b>\$480</b>	<b>\$472</b>	<b>\$465</b>	<b>\$863</b>	<b>\$2,683</b>	<b>\$2,962</b>	<b>\$1,997</b>	<b>\$4,093</b>	<b>\$14,828</b>	<b>\$14,828</b>
<b>Support Costs</b>	<b>\$208</b>	<b>\$230</b>	<b>\$248</b>	<b>\$547</b>	<b>\$1,276</b>	<b>\$1,691</b>	<b>\$1,660</b>	<b>\$2,003</b>	<b>\$0</b>	<b>\$7,863</b>	<b>\$7,863</b>
<b>Contingency Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Administration Costs</b>	<b>\$1,022</b>	<b>\$709</b>	<b>\$720</b>	<b>\$1,012</b>	<b>\$2,140</b>	<b>\$4,374</b>	<b>\$4,621</b>	<b>\$4,000</b>	<b>\$4,093</b>	<b>\$22,691</b>	<b>\$22,691</b>

NOTE: Figures may not add due to rounding.

**Annual Program Incentive Budgets  
Savings To Date (2001/02 - 2009/10)  
(000's in 2010 \$)**

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Interim Estimate 2009/10	Cumulative Total 2009/10	Cumulative Total 2024/25
<b>Residential</b>											
Residential Furnace	\$0	\$0	\$0	\$0	\$336	\$1,082	\$1,739	\$2,921	\$1,466	\$7,544	\$7,544
Residential Thermostats	\$0	\$0	\$0	\$0	\$0	\$87	\$38	\$21	\$0	\$146	\$146
H2O NRG Saver	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Solar Water Heaters	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Home Insulation	\$0	\$0	\$0	\$0	\$216	\$1,380	\$2,303	\$2,239	\$1,958	\$8,097	\$8,097
New Homes	\$0	\$0	\$0	\$18	\$43	\$66	\$92	\$0	\$105	\$323	\$323
Residential Appliances	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Low Income	\$0	\$0	\$0	\$0	\$0	\$0	\$24	\$353	\$1,206	\$1,583	\$1,583
CFL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fridge Recycle	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EE Light Fix	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLED	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$18	\$595	\$2,615	\$4,196	\$5,535	\$4,736	\$17,694	\$17,694
<b>Commercial</b>											
PSEM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2	\$0	\$2	\$2
Commercial Insulation	\$0	\$0	\$0	\$0	\$0	\$362	\$779	\$870	\$1,226	\$3,238	\$3,238
Commercial Windows	\$0	\$0	\$0	\$0	\$0	\$49	\$203	\$353	\$712	\$1,318	\$1,318
CBOP	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43	\$37	\$81	\$81
Commercial Custom	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$87	\$87	\$87
Commercial Spray Valves	\$0	\$0	\$0	\$0	\$0	\$79	\$25	\$100	\$14	\$219	\$219
Commercial Furnaces	\$0	\$0	\$0	\$0	\$0	\$338	\$1,414	\$1,173	\$18	\$2,943	\$2,943
Commercial Boiler	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$821	\$821	\$821
City of Wpg PSA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
New Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Kitchen	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8	\$12	\$20	\$20
Commercial Lighting	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Washers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Commercial Refrigeration	\$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
PS Shops	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1	\$1
CO2 Sensors	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0	\$0	\$829	\$2,422	\$2,551	\$2,928	\$8,729	\$8,729
<b>Industrial</b>											
Industrial Gas Optimization Program	\$0	\$0	\$0	\$0	\$0	\$0	\$205	\$256	\$601	\$1,063	\$1,063
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$205	\$256	\$601	\$1,063	\$1,063
<b>Self Generation</b>											
Bioenergy	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Incentive Based Subtotal	\$0	\$0	\$0	\$18	\$595	\$3,444	\$6,823	\$8,342	\$8,265	\$27,486	\$27,486
<b>Customer Service Initiatives</b>											
Conservation Subtotal	\$0	\$0	\$0	\$18	\$595	\$3,444	\$6,823	\$8,342	\$8,265	\$27,486	\$27,486
<b>Total Incentives</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$18</b>	<b>\$595</b>	<b>\$3,444</b>	<b>\$6,823</b>	<b>\$8,342</b>	<b>\$8,265</b>	<b>\$27,486</b>	<b>\$27,486</b>

NOTE: Figures may not add due to rounding.

**APPENDIX E - Comparison to 2009 Power Smart Plan**

# Appendix E - Comparison to 2009 Power Smart Plan

## Electric DSM Target and Utility Cost Comparison

The following tables and graphs outline changes in electric savings expected to be achieved through the 2010 Power Smart Plan relative to the targets outlined in the 2009 Power Smart Plan.

### Electric DSM Targets - Differences

Overall, winter capacity and electric energy savings are expected to increase from the 2009 Plan. The differences in estimated electrical energy savings reflect adjustments to existing and future programs based on updated market information.

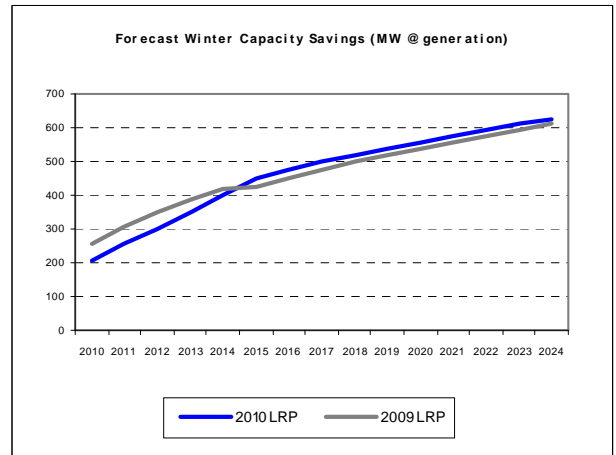
Anticipated capacity savings due to load management decreased as a result of changes to the Curtailable Rate program in the 2010 Plan. The program will experience a decrease of 34 MW due to a reduction in participant load as a result of the economic downturn.

Anticipated capacity savings in the area of Codes and Standards increased due to the inclusion of Federal Codes Savings from residential general service lighting which is estimated to come into effect in 2012.

As per the graph below, the decrease in savings, notably in the first 5 years, is attributable to revisions made to the Curtailable Rates program. In 2015, this decrease is offset by the increase in savings attributable to Codes and Standards commencing in 2012, peaking in 2015 and persisting through to the benchmark year of 2024.

Forecast Winter Capacity Savings  
(MW @ Generation)

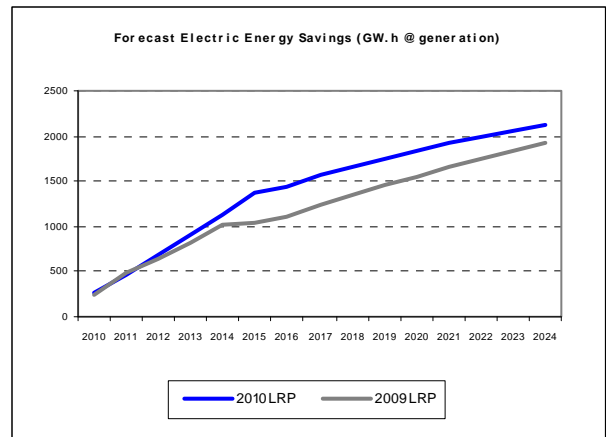
	2010 Plan 2010-2024	2009 Plan 2010-2024	Difference
Residential	46	33	13
Commercial	155	143	12
Industrial	71	72	(1)
Load Management	161	195	(34)
Self-Generation	11	10	0
Codes & Standards	183	159	24
Customer Service, Support &	n/a	n/a	n/a
<b>Total</b>	<b>626</b>	<b>612</b>	<b>14</b>





Forecast Energy Savings Savings  
(GW.h @ Generation)

	2010 Plan 2010-2024	2009 Plan 2010-2024	Difference
Residential	163	118	46
Commercial	600	586	14
Industrial	252	301	(49)
Load Management	n/a	n/a	n/a
Self-Generation	86	82	3
Codes & Standards	1032	827	205
Customer Service, Support &	n/a	n/a	n/a
<b>Total</b>	<b>2,133</b>	<b>1,914</b>	<b>219</b>



The electric energy savings that are expected to be achieved from residential programs increased from the 2009 Plan. The increase of 46 GW.h resulted from adjustments made to existing programs based on updated market information. In particular, the New Homes program has captured Provincial Codes savings as a result of its continuing support of the voluntary adoption of the Power Smart standards and on-going work to have these standards adopted into the National Energy Code for Housing in Manitoba until mandatory adoption in 2010. In addition, the Residential Earth Power program has experienced an increase in savings due to an increase in the forecasted number of loans in from 2018-2024. Moreover, the Fridge Recycling program has experienced an increase in savings due to an increase in the forecasted number of fridges and freezers to be replaced over the next four years.

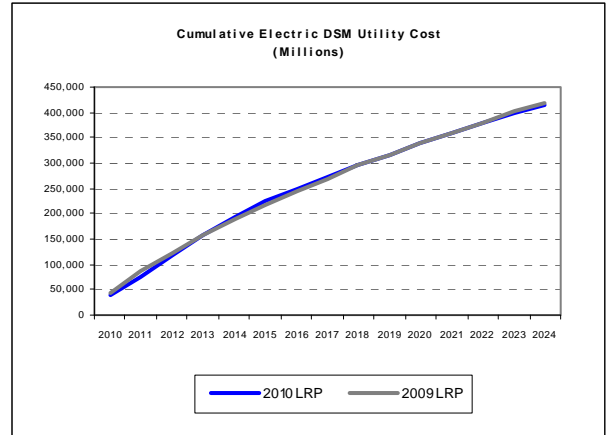
The electric energy savings that are expected to be achieved from industrial programs decreased from the 2009 Plan. The decrease in energy of 49 GW.h is mainly the result of revisions made to the Performance Optimization program, and in particular, revisions made to per unit savings from the technologies offered.

Anticipated electric energy savings in the area of Codes and Standards increased due to the inclusion of Federal Codes Savings from residential general service lighting which is estimated to come into effect in 2012. This increase accounts for approximately 107% of the total change.

### Electric DSM Utility Costs - Differences

The difference in electric utility cost is mainly the result of decreased spending in the Curtailable Rates program which is the result of lower incentives being paid to customers.

Electric DSM Utility Costs (millions)			
	2010 Plan 2010-2024	2009 Plan 2010-2024	Difference
Residential	\$31.7	\$27.6	\$4.1
Commercial	\$140.3	\$138.5	\$1.7
Industrial	\$62.8	\$62.1	\$0.6
Load Management	\$81.7	\$95.4	-\$13.7
Self-Generation	\$25.2	\$21.9	\$3.2
Support and Codes & Standards	\$53.6	\$50.6	\$3.0
Contingency	\$19.0	\$21.0	-\$2.0
<b>Total</b>	<b>\$414.2</b>	<b>\$417.2</b>	<b>-\$3.1</b>



## Natural Gas DSM Target and Utility Cost Comparison

The following tables and graphs outline changes in natural gas savings expected to be achieved through the 2010 Power Smart Plan relative to the targets outlined in the 2009 Power Smart Plan.

### Natural Gas DSM Targets - Differences

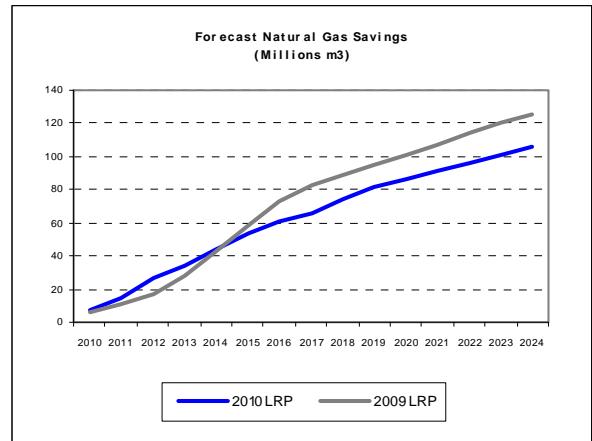
Overall, natural gas savings are expected to decrease from the 2009 Plan primarily due to revisions to natural gas codes and standards impacts. The forecast savings were revised after a review indicated that projected savings from furnace codes were overestimated. The decreased savings reflect the revised savings.

From 2012-2014, there is an increase in natural gas savings over the 2009 PS Plan. Due to a decline in both participation and per unit savings in the Residential CFL program in 2010, there are less gas interactive effects and thus greater gas savings from the previous plan.

In 2015 and forward, there is a decrease natural gas savings from the 2009 PS Plan. This decrease is primarily due to an overestimation of code savings relating to Residential Furnaces in the 2009 Plan coupled with revisions to existing programs based on new updated market information.

Forecast Natural Gas Savings  
(million m3)

	2010 Plan 2010-2024	2009 Plan 2010-2024	Difference
Residential	29	27	2
Commercial	62	59	3
Industrial	10	5	5
Load Management	n/a	n/a	n/a
Self-Generation	4	4	0
Codes & Standards	2	31	(29)
Customer Service, Support &	n/a	n/a	n/a
<b>Total</b>	<b>106</b>	<b>125</b>	<b>(19)</b>

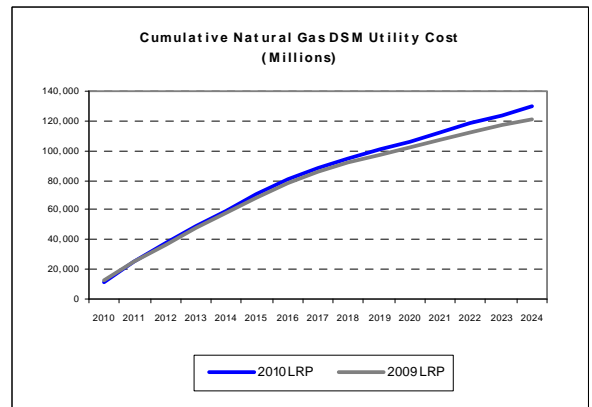


### Natural Gas DSM Utility Costs - Differences

As per the graph below, there are no significant differences between the 2010 and 2009 plans as it relates to natural gas utility costs.

Natural Gas DSM Utility Costs  
(millions)

	2010 Plan 2010-2024	2009 Plan 2010-2024	Difference
Residential	\$23.3	\$24.7	-\$1.4
Commercial	\$53.9	\$48.2	\$5.7
Industrial	\$6.2	\$3.1	\$3.1
Load Management	n/a	n/a	n/a
Self-Generation	\$1.5	\$1.4	\$0.1
Support and Codes & Standards	\$30.6	\$29.2	\$1.4
Contingency	\$14.0	\$14.0	\$0.0
<b>Total</b>	<b>\$129.6</b>	<b>\$120.7</b>	<b>\$8.9</b>



**APPENDIX F - Lower Income Energy Efficiency Program**

# Appendix F - Lower Income Energy Efficiency Program

Note: Due to the cancellation of the Federal ecoENERGY program, the Lower Income Energy Efficiency Program is currently being modified. The program design included in this report is draft in nature and subject to change.

## **Program Objective**

The Lower Income Energy Efficiency Program (LIEEP) is designed to bring Power Smart and energy efficient measures to qualifying Manitoba lower income households.

Qualified lower income households are eligible for energy efficient retrofits that will:

- save energy;
- lower energy bills; and
- improve home comfort.

The program takes a comprehensive and broad-based approach to achieving energy savings and assisting lower income consumers by leveraging existing Power Smart programs, Manitoba Hydro's internal Affordable Energy Fund and Furnace Replacement Program, various provincial government programs and existing community-based infrastructures.

## **Target Market/Eligibility**

The program targets lower income Manitoban homeowners and tenants.

Non-profit social housing organizations, including Manitoba Housing Authority (MHA), are eligible to participate in the program.

Targeted buildings include single-detached homes, semi-detached homes (duplex, multiplex, or townhome) and mobile/modular homes on a permanent foundation.

Eligibility guidelines are determined based on 125% of the low income levels established by the Federal Government Low Income Cut Off (LICO).

## **Targeted DSM Measures**

Energy efficiency measures include:

- an in-home pre and post energy evaluation conducted by trained energy advisors;
- installation of low- and no-cost basic energy measures such as compact fluorescent light bulbs, low-flow showerheads, faucet aerators, pipe wrap, hot water tank set back, caulking/air sealing;
- an insulation upgrade to the attic, basement, crawlspace and wall cavity; and
- incentives for high-efficiency heating system upgrade - natural gas furnaces or boiler.

## **Program Delivery**

Manitoba Hydro delivers the program through a community-based approach and through individual participation. Both approaches require pre- and post-evaluations, which serve to identify energy efficiency opportunities and verify the completion of work.

### a) Community-Based Approach

The community-based approach is modeled after the Centennial and Brandon Pilot Low-Income Projects. This approach leverages existing municipal or provincial government infrastructures and community agencies, organizations and/or special interest groups. This approach involves a community organization developing a Community Energy Efficiency Business Plan and managing the program in their community. With this approach, customer contact will be primarily through the community organization.

### b) Individual Approach

Manitoba Hydro works directly with the eligible lower income homeowners. The lower income customer is provided with a list of contractors that have been engaged by Manitoba Hydro to do the retrofit work. For those customers residing in areas where Manitoba Hydro has not developed a list of contractors, Manitoba Hydro will work directly with the customer and local contractor to facilitate the required upgrades.

### c) First Nation Communities

Manitoba Hydro is working directly with First Nation Communities to assist them in taking advantage of energy efficiency upgrades available through the Lower Income Program.

## **Program Description and Incentives**

Incentives are available from Manitoba Hydro's Power Smart programs, the Affordable Energy Fund, Furnace Replacement Program and from the ecoENERGY Retrofit Program. In addition, organizations are encouraged to pursue support from other sources, including local organizations. As a result of the recent cancellation of the ecoENERGY Program, Manitoba Hydro is reviewing the program design and related funding and incentives. Customers that are currently enrolled in the ecoENERGY Program will continue to participate in the program under its current structure. The following reviews the components to the current LIEEP structure and how Manitoba Hydro's incentives and ecoENERGY grants will be applied towards the costs of the upgrades:

### 1. In-home Energy Evaluation and Installation of Basic Energy Efficiency Items

#### a) Home Evaluations:

- For owner-occupied homes, Manitoba Hydro pays the customer's portion of the ecoENERGY home audit cost.
- For social housing properties, the social housing organization is required to pay the customer's portion of the ecoENERGY home audit cost.

#### b) Low-Cost/No-Cost Measures:

- Under the community approach, the community organization implements these measures and is eligible for incentives through Manitoba Hydro's Lower Income Energy Efficiency Program which covers the cost of materials. Under the

individual approach, the ecoENERGY advisor implements the measures at no cost to the customer.

2. Insulation Upgrades (attic, basement, crawlspace and wall cavity):

- Under the community approach, an incentive structure has been developed which is expected to cover the cost of materials through the Manitoba Hydro incentive and the cost of labour being covered through ecoENERGY grants and other provincial training funding.
- Under the individual approach, the cost of qualifying eligible insulation upgrades is expected to be covered (both materials and labour) through a combination of Manitoba Hydro's incentives and ecoENERGY grants.

3. Natural Gas Standard Efficiency Furnace Upgrades:

- Lower income homeowners can upgrade their natural gas standard efficiency furnace to a qualified high efficiency ENERGY STAR furnace for the cost of \$19 per month over five years (a total of \$1,140); or upgrade their boiler to a qualified high efficiency ENERGY STAR boiler and receive a Manitoba Hydro rebate of \$2,500.

### **Community Groups**

Manitoba Hydro is currently working with BUILD (a Winnipeg neighborhood group) and Brandon Neighborhood Renewal Corporation through the community approach. In addition, Manitoba Hydro is working with several other community groups to help promote the program and provide feedback on how best to approach potential customers in their areas, including:

- Spence Neighborhood Association;
- West Broadway Renewal Corporation;
- Manitoba Urban Native Housing Association;
- Winnipeg Harvest;
- Consumers Association of Canada;
- North End Community Renewal Corporation;
- Central Neighborhoods Development Corporation;
- Social Planning Council of Winnipeg;
- Northern Association of Community Councils Inc.;
- Daniel McIntyre / St. Matthews Community Association;
- Residential Rehabilitation Assistance Program (RRAP);
- Westminster Housing Society; and
- Salvation Army.

## Budget Forecast

The following table outlines the total projected budget for the LIEEP to 2024/25 (in millions):

Lower Income Energy Efficiency Program Annual Budget  
2010/11 - 2024/25  
(Millions, 2010 \$)

	2010/11	2011/12	2012/13	2013/14	2014/15
<b>Electric</b>					
Electric Power Smart	0.4	0.5	0.5	0.0	0.0
Affordable Energy Fund	0.9	1.4	1.4	0.0	0.0
<b>Annual Electric Budget</b>	<b>1.3</b>	<b>1.8</b>	<b>1.8</b>	<b>0.0</b>	<b>0.0</b>
<b>Natural Gas</b>					
Natural Gas Power Smart	0.8	1.1	1.1	0.0	0.0
Affordable Energy Fund	3.0	4.9	4.9	0.0	0.0
Lower Income Furnace Replacement Budget	1.4	1.9	1.9	0.0	0.0
<b>Annual Natural Gas Budget</b>	<b>5.1</b>	<b>7.9</b>	<b>7.9</b>	<b>0.0</b>	<b>0.0</b>
<b>Lower Income Annual Budget</b>	<b>\$6.4</b>	<b>\$9.7</b>	<b>\$9.7</b>	<b>\$0.0</b>	<b>\$0.0</b>
<b>Cumulative Budget, 2010-2024</b>	<b>\$6.4</b>	<b>\$16.1</b>	<b>\$25.8</b>	<b>\$25.8</b>	<b>\$25.8</b>

## Cost-Effectiveness

This activity is cost-effective with an expected combined TRC Ratio of 1.69.

	Benefit / Cost Ratio		Levelized Utility Cost
	TRC	RIM	
<b>Electric</b>			(¢/kW.h)
LIEEP (Power Smart & AEF Budget)	4.44*	0.86	4.93
LIEEP (Power Smart)		1.28	1.31
<b>Natural Gas</b>			(¢/m3)
LIEEP (Power Smart, Furnace Replacement, & AEF Budget)	1.42*	0.43	46.92
LIEEP (Power Smart)		0.77	8.42
LIEEP (Power Smart & AEF Budget)	1.65*	0.45	44.48
LIEEP (Furnace Replacement Program only)	0.70	0.37	56.18
<b>Combined</b>	<b>1.91*</b>		

Notes:

\* TRC benefit/cost ratio includes water benefits



**APPENDIX G - Program Evaluation Criteria**

# Appendix G - Program Evaluation Criteria

Manitoba Hydro's Power Smart programs take into account the underlying differences in the electricity and natural gas industries and the nature of the programs evaluated. Power Smart programs are assessed annually to ensure the individual programs as well as the overall portfolio of programs are cost-effective and meeting intended market transformation objectives and targets.

## Nature of Electricity and Natural Gas Markets

The nature of the electricity and natural gas markets are similar, however unique differences exist and need to be considered in Manitoba Hydro's Power Smart initiative.

For electricity, lower consumption in Manitoba and lower utility revenue is offset by higher revenues realized by selling the conserved energy in the export market. Lower electricity consumption also defers the need to invest in new generation and transmission facilities that would be required to meet future domestic demand. Load management and certain types of demand response initiatives are also unique elements of electricity markets (e.g. short term price volatility creates opportunities for cost-effective load management and demand response initiatives). The combined effect results in an economic case for Manitoba Hydro to aggressively pursue electricity DSM in Manitoba.

With natural gas, lower consumption in Manitoba is offset by lower natural gas purchases from Alberta. In general, this is a one-to-one relationship as Manitoba Hydro passes the cost of primary natural gas through to its customers with no mark up on the commodity. Reduced natural gas consumption can also reduce or defer capital expenditures on natural gas transmission facilities. Load management opportunities are generally not available in the natural gas market as these operational issues are handled through natural gas storage facilities.

## Program Categories

### a) Customer Service Programs

Customer service programs are those programs offered as part of the overall Power Smart initiative that represent the customer service levels that would be expected of a utility. Customer service programs and services are assessed by the aggregate value realized by both the Corporation's customers and the Corporation. These assessments are undertaken on an on going basis and require a qualitative evaluation of the benefits. Service levels are then adjusted accordingly.

### b) Cost-Recovery Programs

Cost-recovery programs are those programs where the cost associated with the program is recovered from participating customers through fees or charges (e.g. interest rates). The cost-effectiveness of these programs is assessed annually with fees or charges adjusted accordingly.

### c) Incentive Based Programs

Incentive based programs are those programs where Power Smart uses a financial incentive to encourage customer participation. Assessments provide feedback on the success and cost-effectiveness of individual programs and the Power Smart portfolio. The results of these assessments drive program design and strategy modifications.

#### **d) 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 is complex and politically sensitive due to three factors:

1. **Governance:** The provincial government department responsible for energy is separate from the department responsible for building codes. Canada's national model code development process historically only engages with provinces and territories via the department responsible for building codes;
2. **Applicability:** Building codes are minimum requirements for health and life-safety in buildings. Energy efficiency is not viewed by the code community as a necessary minimum requirement;
3. **Market Acceptance:** These changes impact building design and construction, as well as industry manufacturing processes, and therefore do not always receive strong industry support.

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

#### **Economic Effectiveness Ratios**

Manitoba Hydro uses a number of cost effective tests to assess energy efficient opportunities, including whether to pursue an opportunity, how aggressively an opportunity will be pursued, effectiveness of program design options and the relative investment from ratepayers and participants. In addition to quantitative assessments, Manitoba Hydro also considers various qualitative factors including equity (i.e. reasonable participation by various ratepayer sectors such as lower income) and overall contribution towards having a balanced energy conservation strategy and plan.

Quantitative assessments include using the following cost effective tests:

- Marginal Resource Cost (MRC) test;
- Total Resource Cost (TRC) test;
- Rate Impact Cost (RIM) test;
- Levelized Utility Cost (LUC);
- Program Administrator Cost (PAC) test;
- Simple Customer Payback calculation; and
- Participating Customer (PC) test.

#### **a) Marginal Resource Cost Test**

The Marginal Resource Cost (MRC) test is used as a preliminary and high level screen to assess the benefits associated with an energy efficient opportunity. This benefit/cost ratio is a simple assessment to determine whether the benefits that are associated with an energy efficient opportunity are greater than the costs. This assessment is undertaken irrespective of who realizes the benefits and who pays the costs with any economic transfers between the Corporation and the participating customer being excluded. In addition, the assessment excludes any program administration costs (e.g. program planning, design, marketing, implementation and evaluation).

In general, if an opportunity offers greater benefits relative to costs, then a program for pursuing the opportunity should be considered, however Manitoba Hydro will also consider supporting certain programs where the benefits are less than the costs. In the latter case, the rationale driving the support will be driven by other qualitative factors such as supporting emerging technologies (e.g. solar panels). The Marginal Resource Cost test is defined as follows:

$$\text{MRC} = \frac{\text{PV (Marginal Benefits)}}{\text{PV (Incremental Product Costs)}}$$

Where:

- For electricity, the Marginal Benefits includes the revenue realized by Manitoba Hydro from conserved electricity being sold in the export market, the avoided cost of new infrastructure (e.g. electric transmission facilities) and measurable non-energy benefits (e.g. water savings);
- For natural gas, the Marginal Benefits includes Manitoba Hydro's avoided cost of purchasing natural gas, avoided transportation costs, the value of reduced greenhouse gas emissions (GHGs) and measurable non-energy benefits (e.g. water savings);
- Incremental Product Costs includes the total incremental cost associated with implementing an energy efficient opportunity. It is the difference in costs between the energy efficient technology and the standard technology that would have been installed in the absence of the program. Any maintenance cost differences associated with the technology options is also considered as part of the incremental cost.

#### **b) Total Resource Cost Test**

The Total Resource Cost (TRC) test is used to assess the benefits associated with an energy efficient program. This benefit/cost ratio is a detailed assessment to determine whether the benefits that are associated with an energy efficient program are greater than the costs. This assessment is undertaken irrespective of who realizes the benefits and who pays the costs with any economic transfers between the Corporation and the participating customer being excluded.

In general, if program offers greater benefits relative to costs, then a program for pursuing the opportunity should be considered, however Manitoba Hydro will also consider supporting certain programs where the benefits are less than the costs. In the latter case, the rationale driving the support will be driven by other qualitative factors such as supporting emerging technologies (e.g. solar panels) or targeting low participation market sectors (e.g. lower income). The Total Resource Cost test is defined as follows:

$$\text{TRC} = \frac{\text{PV (Marginal Benefits)}}{\text{PV (Total Program Admin Costs + Incremental Product Costs)}}$$

Where:

- For electricity, the Marginal Benefits includes the revenue realized by Manitoba Hydro from conserved electricity being sold in the export market, the avoided cost of new infrastructure (e.g. electric transmission facilities) and measurable non-energy benefits (e.g. water savings);

- For natural gas, the Marginal Benefits includes Manitoba Hydro’s avoided cost of purchasing natural gas, avoided transportation costs, the value of reduced greenhouse gas emissions (GHGs) and measurable non-energy benefits (e.g. water savings);
- Total Program Admin Costs includes 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;
- Incremental Product Costs includes the total incremental cost associated with implementing an energy efficient opportunity. It is the difference in costs between the energy efficient technology and the standard technology that would have been installed in the absence of the program. Any maintenance cost differences associated with the technology options is also considered as part of the incremental cost.

**c) Rate Impact Measure Test**

The Rate Impact Measure (RIM) test is used to provide an indication of the long term directional and magnitude impact of an energy efficient program on energy rates. The test is a benefit/cost ratio that represents the economic impact 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 in this assessment. The Rate Impact Measure test is defined as follows:

$$RIM = \frac{PV \text{ (Utility Marginal Benefits)}}{PV \text{ (Revenue Loss + Utility Program Admin Costs + Incentives)}}$$

Where:

- For electricity, the Utility Marginal Benefits includes the revenue realized by Manitoba Hydro from conserved electricity being sold in the export market and the avoided cost of new infrastructure (e.g. electric transmission facilities);
- For natural gas, the Utility Marginal Benefits includes Manitoba Hydro’s avoided cost of purchasing natural gas, avoided transportation costs and the value of reduced greenhouse gas emissions (GHGs);
- Revenue Loss includes Manitoba Hydro’s lost revenue associated with the participants’ reduced energy consumption (i.e. customer energy bill reductions);
- Utility Program Admin Costs includes administrative costs incurred by Manitoba Hydro for staff 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;
- Incentives includes the funds transferred from Manitoba Hydro to the participant associated with implementing the Power Smart measure.

**d) Levelized Utility Cost**

The Levelized Utility Cost (LUC) test is used to provide an economic cost value for the energy saved through an energy conservation 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 timeframes. The Levelized Utility Cost test is defined as follows:

$$LUC = \frac{PV \text{ (Utility Program Admin Costs + Incentives)}}{PV \text{ (Energy)}}$$

Where:

- Utility Program Admin Costs includes administrative costs incurred by Manitoba Hydro for staff 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;
- Incentives includes the funds transferred from Manitoba Hydro to the participant associated with implementing the Power Smart measure;
- Energy includes the annual energy savings.

#### e) Program Administrator Cost Test

The Program Administrator Cost (PAC) test measures the cost effectiveness of a DSM program based on the costs incurred by the program administrator and excluding any costs incurred by the participant. Revenue loss is not included in the calculation as revenue shifts are viewed as a transfer payment between participants and all ratepayers. The Program Administrator Cost (PAC) test is defined as follows:

$$\text{PAC} = \frac{\text{PV (Utility Marginal Benefits)}}{\text{PV (Utility Program Admin Costs + Incentives)}}$$

Where:

- For electricity, the Utility Marginal Benefits includes the revenue realized by Manitoba Hydro from conserved electricity being sold in the export market and the avoided cost of new infrastructure (e.g. electric transmission facilities);
- For natural gas, the Utility Marginal Benefits includes Manitoba Hydro's avoided cost of purchasing natural gas, avoided transportation costs and the value of reduced greenhouse gas emissions (GHGs);
- Utility Program Admin Costs includes administrative costs incurred by Manitoba Hydro for staff 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;
- Incentives includes the funds transferred from Manitoba Hydro to the participant associated with implementing the Power Smart measure.

#### f) Customer Payback Calculation

The Customer Payback calculation provides the simple payback of implementing an energy efficient opportunity for customers. This value outlines the amount of time required before the customer recovers the incremental product cost. The value is useful in determining customer participation rates for energy efficient opportunities. The Customer Payback is defined as follows:

$$\text{Customer Payback} = \frac{\text{Participant Costs - Incentives}}{\text{Annual Bill Reductions}}$$

Where:

- Participant Costs includes the participant's total incremental cost associated with implementing the energy efficient opportunity, which is the difference in costs between the energy efficient technology and the standard technology that would have been installed in the absence of the program. Any maintenance cost differences associated with the technology options is also considered as part of the incremental cost ;

- Incentives includes funds provided by Manitoba Hydro and external parties to the participant associated with implementing the energy efficient opportunity;
- Annual Bill Reductions include the dollar reductions in the customer's electricity, natural gas, and water bills.

### **g) Participating Customer Test**

The Participating Customer (PC) test measures quantifiable benefits and costs associated with an energy efficient opportunity from a "typical" participating customer's perspective. Similar to the Customer Payback, the value is useful in determining customer participation rates for energy efficient opportunities. The Participating Customer test is defined as follows:

$$PC = \frac{PV \text{ (Customer Bill Reductions + Incentives)}}{PV \text{ (Participant Costs)}}$$

Where:

- Customer Bill Reductions includes the reduction in customer bills as a result of installing the energy efficient measure. This includes the dollar reduction in the customer's electricity, natural gas, and water bills;
- Incentives includes funds provided by Manitoba Hydro and external parties to the participant associated with implementing the energy efficient opportunity;
- Participant Costs includes the participant's total incremental cost associated with implementing the energy efficient opportunity. It is the difference in costs between the energy efficient technology and the standard technology that would have been installed in the absence of the program. Any maintenance cost differences associated with the technology options is also considered as part of the incremental cost.

## **Other DSM Program Assumptions**

### **Market Transformation**

Market transformation is a strategic intervention to achieve a lasting, significant share of energy efficient products and services in targeted markets. Manitoba Hydro's Power Smart strategy focuses on creating a sustainable market change where energy efficient technologies and practices become the market standard.

However, market transformation is difficult to measure. Manitoba Hydro has made significant progress in developing specific methodologies for measuring its impacts. Wherever possible, Manitoba Hydro has attempted to obtain sales/technology specific data to calculate a program's true effect. Difficulties arise in 1) obtaining sales data for areas outside of Manitoba for comparison purposes and in 2) obtaining sales information for Manitoba that fall outside of Power Smart program participation. In some instances, qualitative information is used to determine a program's impact on the market. Manitoba Hydro plans to continue work to further quantify and report on the influence of market transformation within the Manitoba marketplace.

For the 2010 Long Range Plan, the DSM programs that have assumed a future level of market transformation have been noted.

### **Participant Reinvestment**

Participant reinvestment is a marketing assumption which measures the program's influence on a participant's decision to repurchasing the energy efficient technology once the initial product life of the energy efficient technology has ended.

For the 2010 Long Range Plan, the DSM programs that have assumed a future level of participant reinvestment have been noted.

**Interactive Effects**

Interactive effects are related to the impacts of implementing certain electric efficiency opportunities. As a consequence of implementing a more efficient technology, less heat is often produced. The interactive effect refers to the offsetting need to supplement heat as a result of implementing the energy efficient technology. For example, a CFL emits less heat than a traditional incandescent light bulb; therefore it will take more natural gas to heat the area after the CFL is installed. With the creation of natural gas DSM, electric DSM programs are required to quantify increases in natural gas usage due to interactive effects.

For the 2010 Long Range Plan, electric DSM programs with natural gas interactive effects have been noted.