

**MANITOBA HYDRO**  
**2010/11 & 2011/12 GENERAL RATE APPLICATION**

**DEMAND SIDE MANAGEMENT**

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**DEMAND SIDE MANAGEMENT**

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**9.0 OVERVIEW**

Tab 9 discusses Demand Side Management (“DSM”).

Section 9.1 provides the benefits of DSM.

Section 9.2 discusses the current DSM plan.

Section 9.3 is a summary of the progress of Power Smart Programs to date.

Appendix 9.1 is the 2009 Power Smart Plan.

Appendix 9.2 provides a copy of the 2007/08 Annual Power Smart Review.

**9.1 BENEFITS OF DSM**

Manitoba Hydro’s DSM initiative, “Power Smart” consists of energy conservation and load management activities designed to lower the demand for electricity and natural gas in Manitoba. For the electric business, the initiative is one element of the resource options available for meeting the province’s electrical needs and the initiative plays an important role in the Corporation’s overall integrated resource plan.

DSM initiatives are designed to assist customers in meeting their energy needs through energy efficient measures. For the electric business, such initiatives enable Manitoba Hydro to serve domestic customers with less energy based on reduced domestic load requirements which allows for reduced capital expenditures and increased energy available for export. Electric DSM initiatives are evaluated utilizing the same underlying criteria and the same economic evaluation approach as used with alternative resource options.

1 Manitoba Hydro's Commercial Lighting Program is one example of an electrical energy  
2 efficiency initiative promoting the installation of lighting technologies that use less  
3 energy than conventional technologies but provide similar lighting levels. A number of  
4 other energy conservation initiatives exist including the New Home Program, the Home  
5 Insulation Program, the Compact Fluorescent Lighting Program, the Lower Income  
6 Energy Efficiency Program, the Residential Earth Power Loan (Geothermal Heat Pumps),  
7 the Home Comfort and Energy Savings Program, the Commercial Refrigeration Program,  
8 the Parking Lot Controller Program, the Commercial Building Envelope Program, and  
9 the Industrial Performance Optimization Program.

10  
11 Load management initiatives provide economic benefits to Manitoba Hydro. These  
12 initiatives are designed to modify customer demand for energy at a particular time, or  
13 shift demand from one period to another, allowing for more lucrative export sales.  
14 Manitoba Hydro's Curtailable Rates Program is an example of a load management  
15 initiative where participating customers curtail or "turn off" a contracted amount of load  
16 at Manitoba Hydro's request for a specified period of time.

## 17 18 **9.2 CURRENT DSM PLAN**

19  
20 Manitoba Hydro's DSM plan involves a continued commitment to pursuing the  
21 maximum cost effective DSM savings achievable. Under Manitoba Hydro's most current  
22 long range plan for DSM, "The 2009 Power Smart Plan", (see Appendix 9.1), energy and  
23 demand savings resulting from Power Smart initiatives (including savings to date) are  
24 targeted to achieve 3,271 GW.h/year and 915 MW by 2024/25. This plan represents a  
25 significant investment and commitment by the Corporation.

## 26 27 **9.3 SUMMARY OF PROGRESS TO DATE**

28  
29 Manitoba Hydro's Power Smart Programs have been and continue to be very successful.  
30 Appendix 9.2 provides a copy of the 2007/08 Annual Power Smart Review. The energy  
31 savings realized during 2008/09 is currently being evaluated with the report expected to  
32 be finalized in late 2009. By the end of 2007/08, Power Smart Programs are estimated to  
33 have achieved an annual load reduction of 1,360 GW.h in energy and 488 MW in winter  
34 peak demand (at generation). These Power Smart electrical savings translate into a  
35 cumulative reduction of \$300 million in customer bills to date and indirect greenhouse  
36 gas emission reductions of approximately 918,000 tonnes of carbon dioxide equivalent  
37 emission in 2007/08 alone. These domestic energy reductions have contributed to surplus  
38 generation capacity, which contributes to energy sold in the export market. The

1 cumulative energy and demand reduction achieved through the Corporation's DSM  
2 efforts is on target with meeting the forecast energy savings to be achieved by 2024/25.  
3  
4 Figures 9.3.1 and 9.3.2 depict the energy and demand savings realized through to  
5 2007/08.

Figure 9.3.1

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

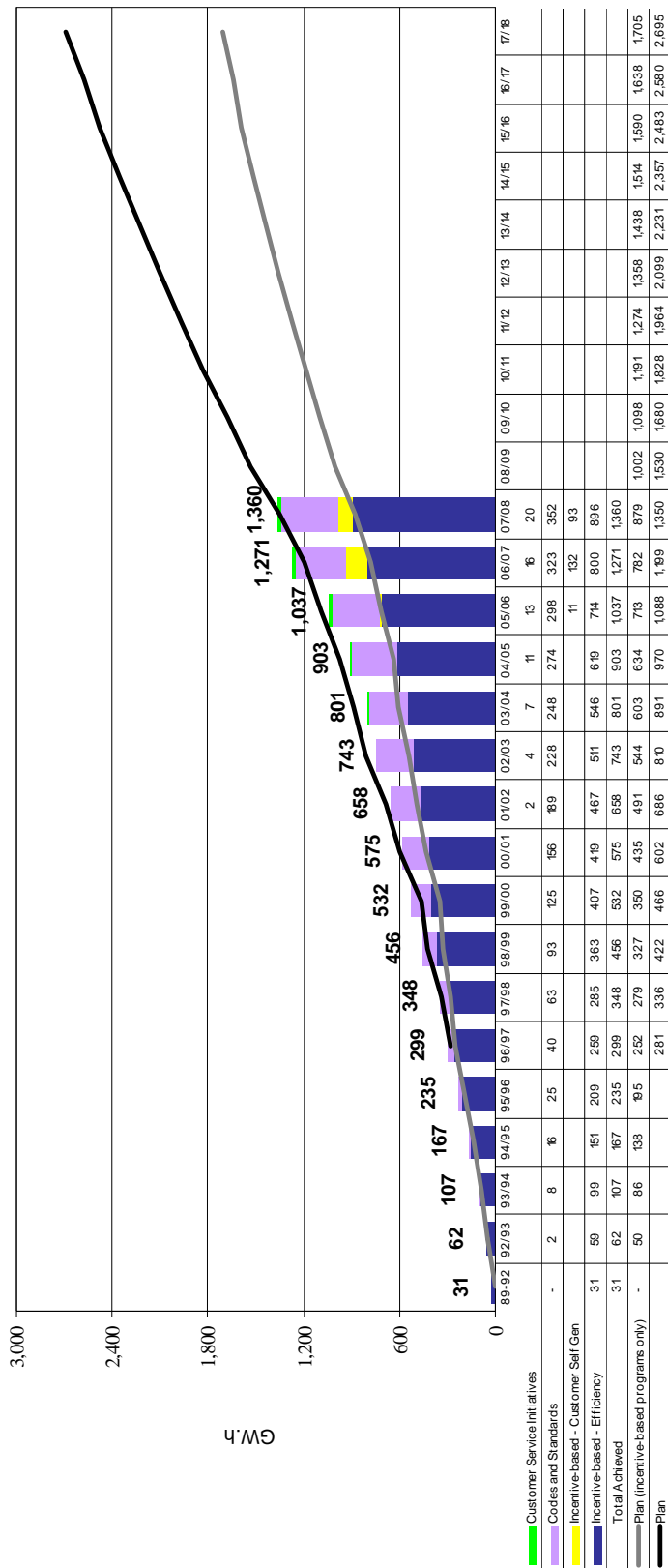


Figure 9.3.2

**Electric Demand Savings - Power Smart Portfolio**  
 Total Savings Achieved vs. Plan  
*at generation*

