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Message from Manitoba Hydro's CEO

While Manitoba's population and economy continue to grow, so does our demand for electricity. At Manitoba Hydro, we've met our province's current and future energy needs through a combination of resources including energy efficiency.

As part of the Efficiency Manitoba Act, a new standalone Crown corporation - Efficiency Manitoba - is being established with accountability to deliver electric and natural gas demand side management programs and services to consumers, businesses and industry. This will include most of the current programs and initiatives offered through Power Smart. As such, Manitoba Hydro will work closely with Efficiency Manitoba during 2018 to effect a transition to the new entity. As part of this transition period, Manitoba Hydro has continued to offer demand side management programming to assist Manitobans in meeting their energy needs and in managing their energy costs.

In 2016/17, demand side management programs empowered people and businesses to save energy and money. Working closely with our industry partners to deliver energy and cost saving programs to Manitobans, these efforts saw over 52,000 customers participate in the 2016/17 year and in turn save nearly \$17 million on their energy bills.

In addition to helping customers save money, these programs also helped to minimize our collective impact on the environment. The reduced greenhouse gas emissions due to energy savings from 2016/17 Power Smart programs was equivalent to removing nearly 42,000 vehicles from the road for one year.

The success of these demand side management offerings has been recognized across Canada. Included in our achievements for the 2016/17 year was the 2017 ENERGY STAR Provincial Utility of the Year Award, recognizing excellence in promoting energy efficiency to customers in the 2016 year, and the 2017 ENERGY STAR Promotional Campaign of the Year Award for the Residential LED Lighting Program awareness campaign.

Through this period of transition, Manitoba Hydro has and will continue to support customers in meeting their energy needs. Manitoba Hydro looks forward to continuing to work with government, consumers, businesses, industry partners and Efficiency Manitoba as we continue to move our province towards achieving greater energy efficiency.

A handwritten signature in black ink, appearing to read 'K. Shepherd'. The signature is fluid and cursive, written over a light-colored background.

Kelvin Shepherd,
 President & Chief Executive Officer
 Manitoba Hydro

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HIGHLIGHTS

2016/17 Year in Review



More than **52,000** participants in Power Smart programs and initiatives.

Nearly **830,000** LED light bulbs purchased by Manitobans through the Residential LED Lighting Program.

Customer electricity and natural gas bills reduced by nearly **\$17 million**.



The electric energy saved in 2016/17 is enough to power over **18,000** homes for a year.

The natural gas energy saved in 2016/17 is enough to serve nearly **1,000** homes for a year.

Reduced greenhouse gas emissions resulting from Power Smart energy savings equate to removing nearly **42,000** cars from the road.



Customers are very satisfied with Manitoba Hydro's efforts to encourage customers to be more energy efficient – **82%** of customers rated Manitoba Hydro as 7 or higher out of 10.

Achievements to Date

Over **655,000** participants in Power Smart programs and initiatives.

More than **1,720,000** LED light bulbs purchased by Manitobans through the Residential LED Lighting Program.

Over **340,000** CFL light bulbs purchased by participants of the Residential Compact Fluorescent Lighting Program.



Customers enjoy bill reductions of more than **\$1.2 billion** on their electricity and natural gas bills.

The electric energy saved is enough to power **half** of the residential and commercial electric needs of Winnipeg for a year.



The natural gas energy saved is enough to serve **2.1 times** the residential and commercial natural gas needs of Brandon for a year.

Reduced greenhouse gas emissions resulting from Power Smart energy savings equate to removing more than **490,000** cars from the road.

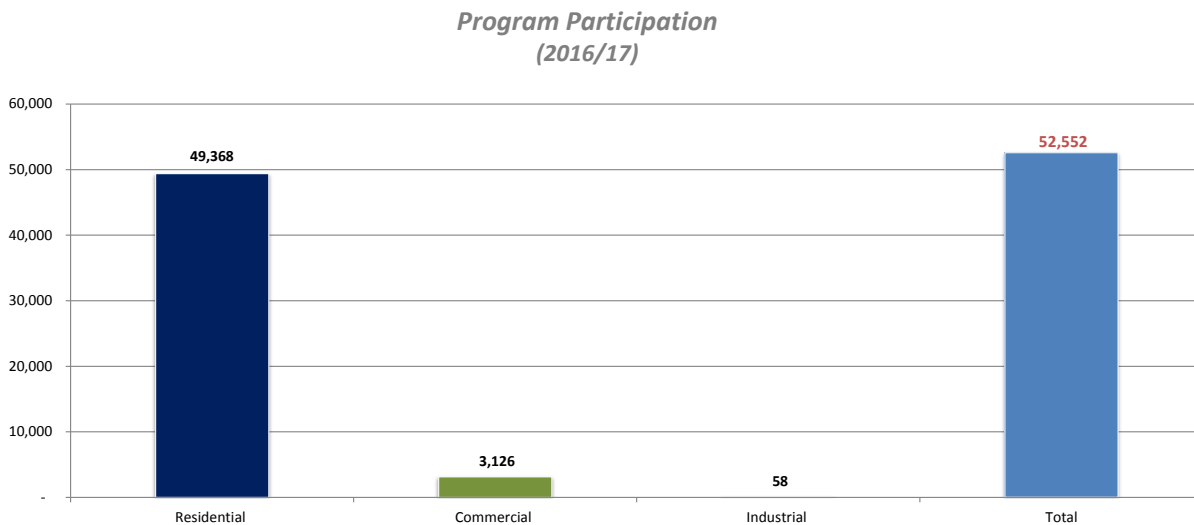


2016/17 ACHIEVEMENTS

Partnering with Our Customers

In 2016/17, Manitoba Hydro engaged more than 52,000 customers to participate in Manitoba Hydro’s incentive-based and Demand Side Management (DSM) support programs. In addition, more than 828,000 LED bulbs were purchased by customers through the Residential LED Lighting Program, over 22,000 weather-stripping and window kit in-store rebates were provided through the Home Insulation Program and nearly 16,000 LED conversions were completed under the LED Roadway Lighting Program.

The following chart provides a breakdown of 2016/17 program participation, excluding participants of the Residential LED Lighting Program, the weather-stripping and window kit in-store rebate and the LED Roadway Lighting Program.



Note: Excluded from the graph are:

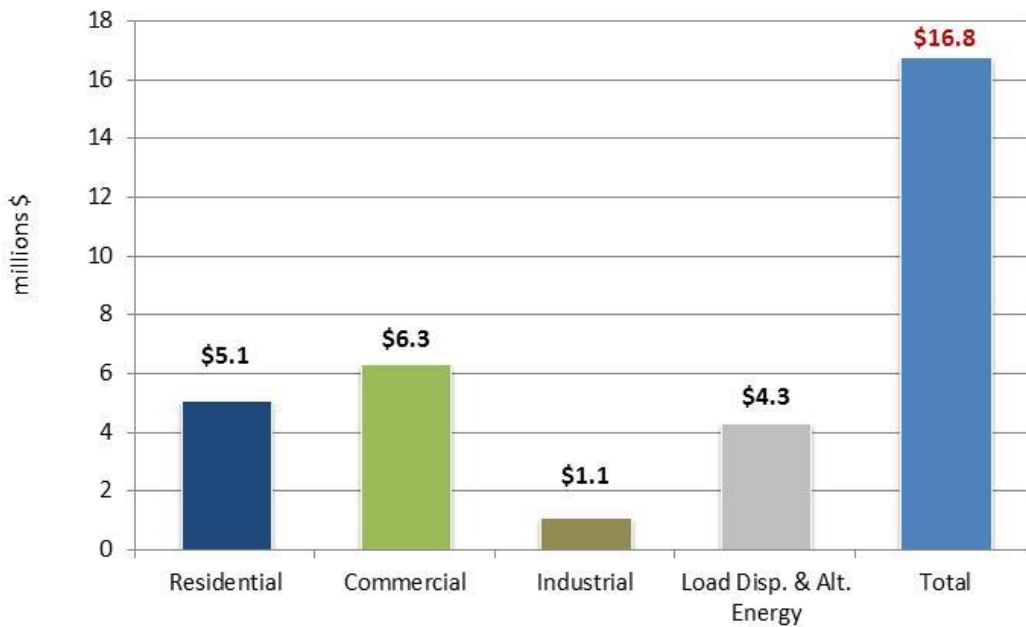
- 828,331 LED bulbs distributed under the Residential LED Lighting Program.
- 22,273 weather-stripping and window kit in-store rebates provided under the Home Insulation Program.
- 15,844 LED conversions completed under the LED Roadway Lighting Program.



Reducing Customer Bills

Customers who participated in Manitoba Hydro's Power Smart programs in 2016/17 will enjoy savings of nearly \$17 million on their energy bills each year going forward. As displayed in the following chart, in 2016/17 approximately \$5 million was saved by the residential sector, \$6 million by the commercial sector, \$1 million by the industrial sector and \$4 million by participants of load displacement and alternative energy programs.

**Customer Bill Reduction
(2016/17)**



Achieving Electric Energy Savings

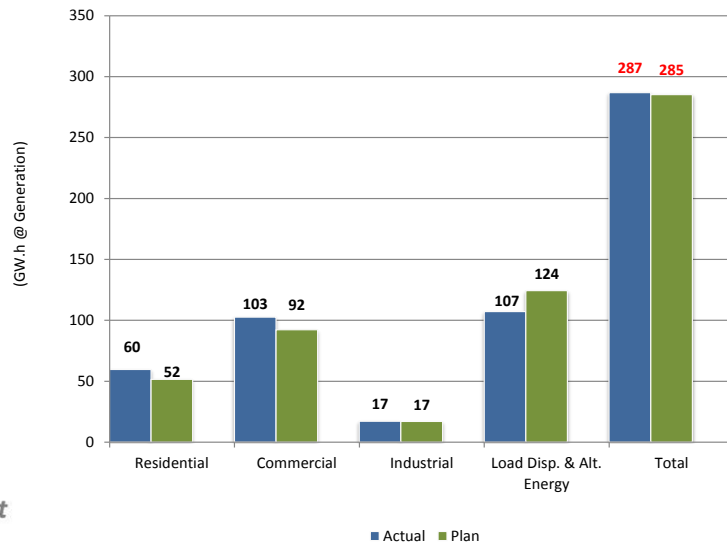
Manitoba Hydro’s Power Smart electric programs were successful in 2016/17, surpassing targets by achieving 287 GW.h in electric energy savings.

The residential portfolio exceeded 2016/17 planned savings by achieving 60 GW.h of energy savings. The Residential LED Lighting Program experienced much higher program participation than planned and surpassed its forecast savings, achieving 32 GW.h in energy savings. The commercial portfolio surpassed its 2016/17 forecast energy savings, achieving 103 GW.h. This achievement was mainly due to the success of the Commercial Lighting Program with higher participation than anticipated, particularly with LED technologies.

The industrial portfolio achieved 17 GW.h, meeting forecast energy savings in this sector. The load displacement and alternative energy portfolio achieved 107 GW.h in electric energy savings in 2016/17, slightly less than planned. This was mainly due to lower participation than planned in the Bioenergy Optimization Program.

Along with constructing new renewable hydroelectric generation, DSM is a key component of Manitoba Hydro’s strategy for meeting the province’s future energy needs. The 287 GW.h of electric energy savings achieved in 2016/17 is equivalent to 74% of the average annual load growth in Manitoba and 1.1% of total Manitoba electric load in 2016/17.

**Electric Energy Savings
(2016/17)**



**DSM Impact on Electric Load Forecast
(2016/17)**



Achieving Electric Capacity Savings

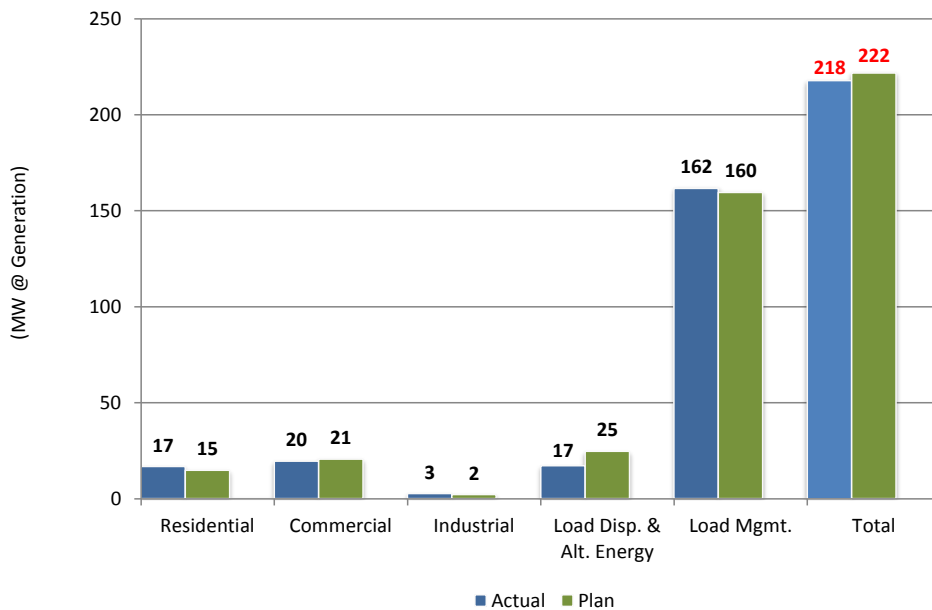
Manitoba Hydro's Power Smart electric programs were successful in achieving electric capacity savings of 218 MW in 2016/17.

The residential portfolio surpassed 2016/17 planned savings, achieving 17 MW of capacity savings. The commercial portfolio was successful in achieving 20 MW of capacity savings. The Commercial Lighting Program alone contributed 9 MW of electric capacity savings.

The industrial portfolio achieved 3 MW of electric capacity savings, surpassing forecast capacity savings in this sector.

The load management portfolio achieved 162 MW of electric capacity savings in 2016/17. This portfolio is the largest contributor to electric capacity savings, with all of the savings coming from the Curtailable Rates Program. Due to the nature of the curtailment contracts signed with participating customers, these capacity savings are assumed to continue for only one year.

**Electric Capacity Savings
(2016/17)**



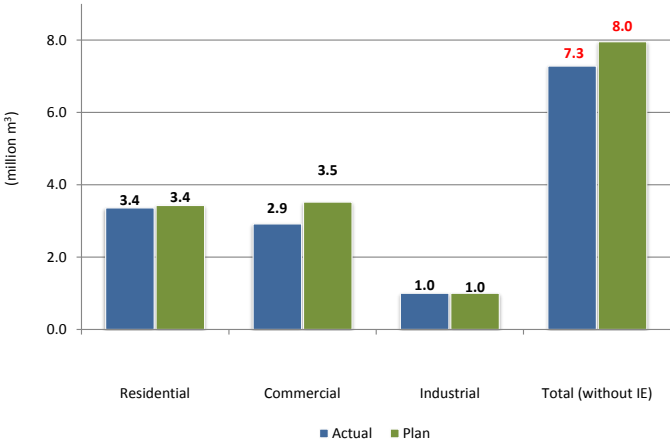
Achieving Natural Gas Energy Savings

Manitoba Hydro’s Power Smart natural gas programs were successful in achieving 7.3 million cubic metres in natural gas savings in 2016/17.

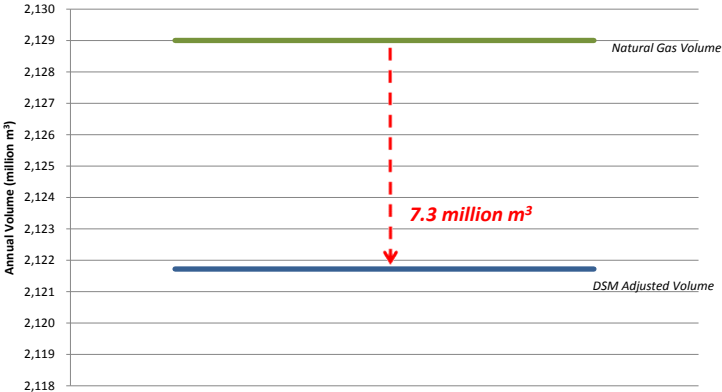
The residential portfolio met its targets and achieved 3.4 million cubic metres of natural gas savings. The most successful residential program was the Water & Energy Saver Program which achieved 1.1 million cubic metres of natural gas savings in 2016/17. The commercial portfolio was successful in achieving 2.9 million cubic metres of natural gas savings. The industrial portfolio met its targets and achieved 1.0 million cubic metres of natural gas savings, with all of the savings coming from the Industrial Natural Gas Optimization Program.

The 7.3 million cubic metres of natural gas savings achieved is equivalent to 0.3% of natural gas volume in 2016/17 (excluding natural gas volume from power stations and special contracts), further reducing natural gas consumption in Manitoba.

**Natural Gas Energy Savings
(2016/17)**



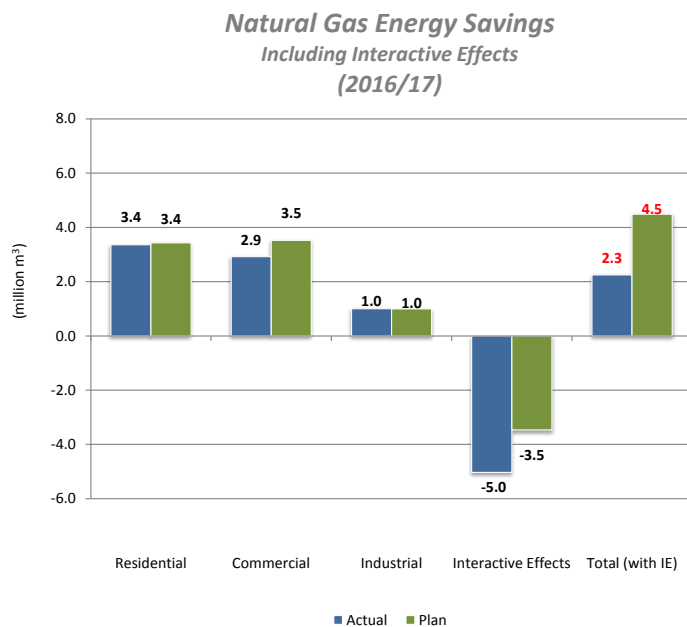
**DSM Impact on Natural Gas Volume Forecast
(2016/17)**



Achieving Natural Gas Energy Savings – Integrated Results

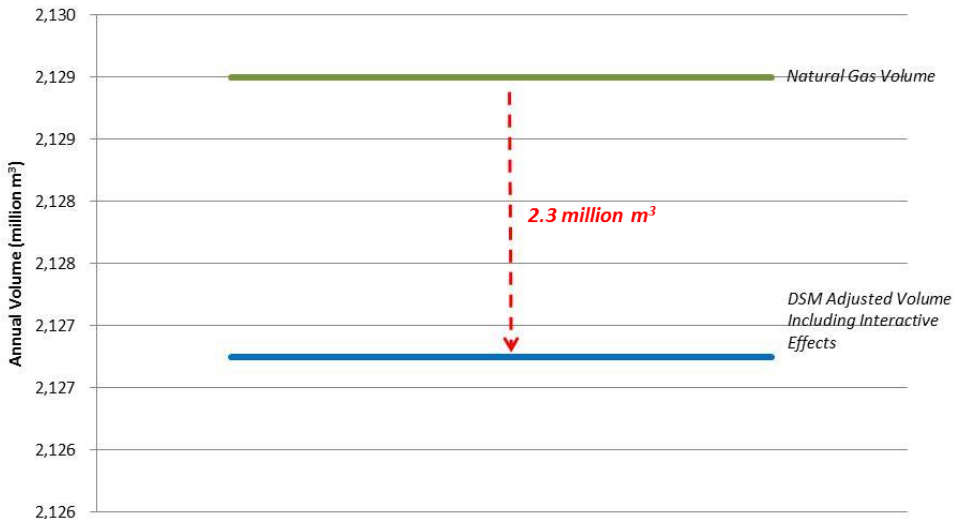
Some electric Power Smart programs result in interactive effects which increase the consumption of natural gas. With interactive effects from electric programs being higher than planned, Manitoba Hydro’s net natural gas savings after taking into account interactive effects fell short of savings targets by approximately 50%. If interactive effects were at planned levels, net natural gas savings would be only 15% less than planned.

The 2.3 million cubic metres of natural gas savings achieved after interactive effects is equivalent to 0.1% of natural gas volume in 2016/17 (excluding natural gas volume from power stations and special contracts), further reducing natural gas consumption in Manitoba.



DSM Impact on Natural Gas Volume Forecast

Including Interactive Effects
(2016/17)

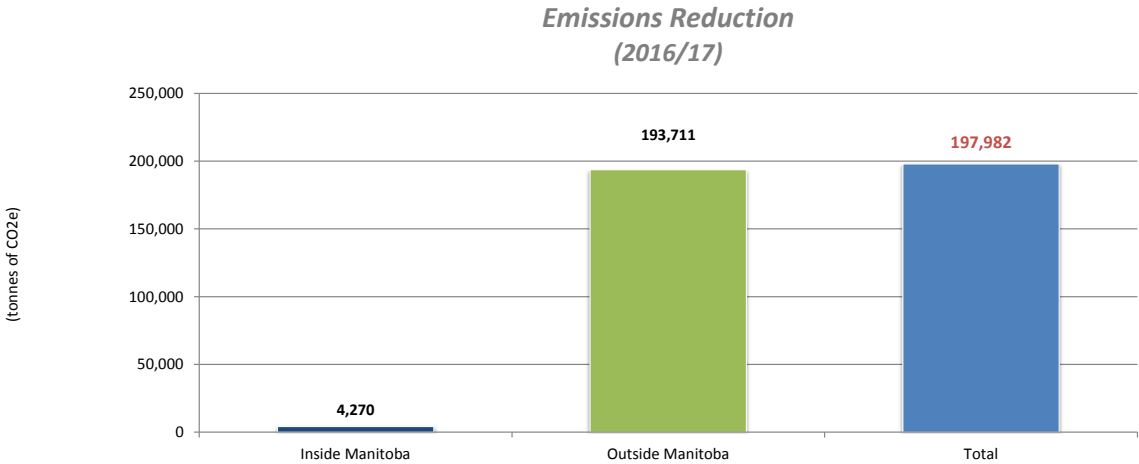


Reducing Environmental Impacts

As Manitobans conserve electric energy through Power Smart programs, more hydro-generated electricity is available for export. These exports displace coal and natural gas fuelled generation outside of Manitoba, which result in a significant global reduction of greenhouse gases and other emissions.

By decreasing natural gas consumption within Manitoba, the Power Smart programs further contribute to emissions reduction within the province.

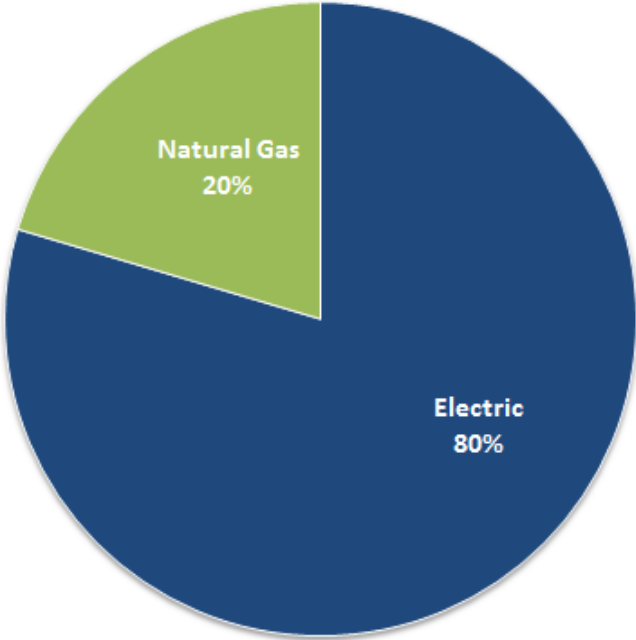
The energy savings achieved by Manitoba Hydro in 2016/17 resulted in a reduction of greenhouse gases and other air polluting emissions of nearly 198,000 tonnes of CO₂e, comprised of approximately 4,000 tonnes of CO₂e reduced inside Manitoba and nearly 194,000 tonnes of CO₂e reduced outside the province. This emissions reduction is equivalent to removing nearly 42,000 cars from the road for one year.



Investing in Power Smart

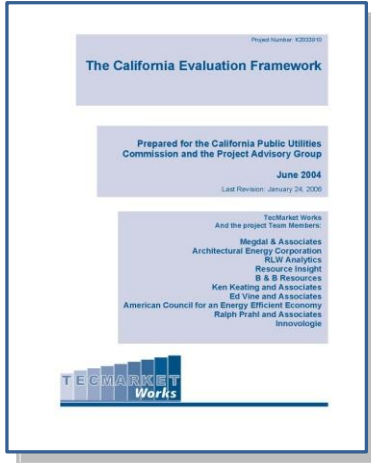
Manitoba Hydro invested nearly \$65 million in Power Smart initiatives in 2016/17. This investment is comprised of \$51 million from the Power Smart electric budget, \$11 million from the Power Smart natural gas budget, \$200 thousand from the Affordable Energy Fund and \$2 million from the Lower Income Natural Gas Furnace Replacement Budget. Approximately 80% of this investment went towards electric Power Smart programs, with the remaining 20% supporting natural gas Power Smart initiatives.

**Utility Cost
(2016/17)**



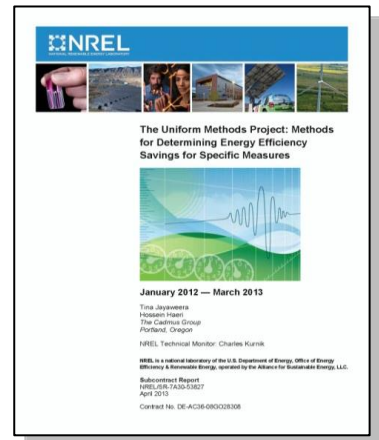
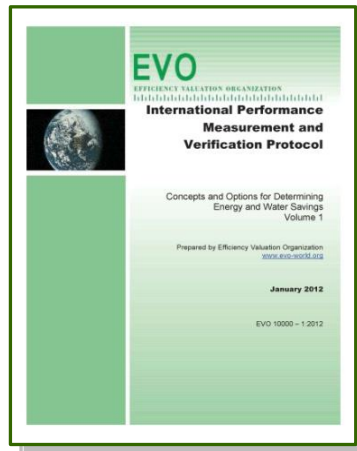
DEMAND SIDE MANAGEMENT EVALUATION

Manitoba Hydro evaluates its DSM programs on an annual basis to validate electric and natural gas savings.



The California Evaluation Framework is used as a guide in Manitoba Hydro’s DSM evaluations and related activities. This framework, which is widely used in the DSM evaluation industry, provides a consistent, systemized, cyclic approach for planning and conducting evaluations of energy efficiency programs.

When verifying the energy and demand savings of its DSM programs, Manitoba Hydro uses the International Performance Measurement and Verification Protocol (IPMVP) and the Uniform Methods Project (UMP) as guides. Both of these resources provide an overview of current best practices for verifying the impacts of DSM activities in program impact evaluations.

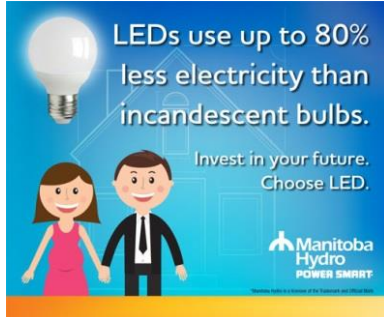


Manitoba Hydro takes a comprehensive approach to evaluating its DSM programs. Impact evaluations are undertaken internally on an annual basis on all DSM programs to determine the electric and natural gas savings and cost-effectiveness of the DSM programs.

Manitoba Hydro’s internal evaluations are complemented by undertaking third-party impact evaluations of a number of programs on a regular basis. These evaluations provide third-party reviews of the DSM programs and also validate achieved energy and demand savings and cost-effectiveness results. The results of three third-party program evaluations are included in the DSM results for 2016/17.

2016/17 SUCCESS STORIES

Manitoba Hydro Recognized by Natural Resources Canada



Manitoba Hydro took home the 2017 Energy Star Provincial Utility of the Year award presented by Natural Resources Canada for the third year in a row. Manitoba Hydro also received the 2017 Promotional Campaign of the Year for the Residential LED Lighting Program awareness campaign.

Each year, Natural Resource Canada presents awards to utilities, manufacturers and retailers for leading the way in energy conservation, efficiency and demand-side management.

Manitoba Hydro has now received 8 ENERGY STAR Awards:

- Promotional Campaign of the Year (in 2005, 2015 and 2017);
- Participant of the Year (in 2010); and
- Provincial Utility of the Year (in 2006, 2015, 2016 and 2017).



Affordable Energy Program Successful in Multi-Unit Residential Buildings



The Affordable Energy Program recently entered the multi-unit residential building market, offering tenants living in apartment suites basic energy efficiency upgrades which include water saver items, air sealing measures and LED bulbs. The program works with landlords and property managers to retrofit suites with these basic energy efficiency measures.

Applications began in late 2015/16, with the first suites completed in April 2016. The program has been extremely successful in its first full year, exceeding the planned target of 1,000 suites by completing a total of 2,491 suites in the 2016/17 fiscal year. These completed suites will provide annual energy savings of over 640,000 kW.h and 37,000 cubic metres of natural gas savings, resulting in annual bill reductions of \$75,000.

Manitoba Hydro Helps Make Hylife's Future Much Brighter



With customer service assistance and financial support from Manitoba Hydro's Commercial Lighting Program, Hylife conducted extensive lighting upgrades to improve their energy efficiency and working conditions, and create operational efficiencies to reinvest in their local operations.

The project involved replacing the outdated, inefficient incandescent lighting in its 65 hog barns across Manitoba, with over 14,300 15-watt screw-in LED lamps. By doing so, Hylife has saved over 3.4 million kW.h of electricity, or \$200,000 per year. This project also reduces greenhouse gas emissions by an estimated 2,600 tonnes of CO₂e annually. This is equivalent to taking more than 550 cars off the road each year.

St. Boniface General Hospital Rehabilitates Lighting Systems with Power Smart



With technical assistance and financial support from Manitoba Hydro Power Smart, St. Boniface General Hospital increased energy efficiency, enhanced visibility and ensured an ongoing safe and comfortable indoor environment for patients and staff through recent upgrades to its lighting systems.

The lighting project removed inefficient incandescent and halogen lamps, upgrading them to LED screw-in lamps that reduce energy costs by 75 percent while lasting 8 times as long. Old, incandescent exit signs were upgraded to the modern, LED running man exit sign, slashing energy costs by 90 percent and drastically reducing ongoing re-lamping and maintenance costs for hospital maintenance staff. Halogen fixtures were upgraded to LED fixtures which provide crisp, clear light with 75 percent less energy consumption. Old T12 fluorescent fixtures were upgraded to T8 energy efficient lamps, making an easy, efficient and low-cost upgrade. Existing T8 fluorescent fixtures were upgraded to LED T8s, cutting energy consumption by more than 50 percent while reducing maintenance costs.

The installation of these lighting technologies will provide estimated annual energy savings of 800,000 kW.h, resulting in annual lighting bill reductions of \$40,000, while reducing greenhouse gas emissions by an estimated 600 tonnes of CO₂e annually, which is equivalent to taking 130 cars off the road each year.

Peguis First Nation Committed to Energy Efficiency



Made possible through Manitoba Hydro Power Smart, recent upgrades to refrigeration equipment at Peguis Family Foods have enhanced operational efficiency, while improving the shopping experience for customers. The upgrades will also lengthen the life of perishable foods, increase overall profitability and offer improved comfort levels for customers and staff while in refrigerated aisles.

These technologies are estimated to provide annual energy savings of over 160,000 kW.h, reducing customer energy costs by \$8,000 per year. The project also reduces greenhouse gas emissions by 125 tonnes of CO₂e annually, which is equivalent to taking 25 cars off the road each year.

Manitoba Retailers Promote Manitoba Hydro's "Savings in Every Corner" Campaign

BULBS • FIXTURES
More selection, more value on LED
INSTANT REBATES
 VALID UNTIL OCTOBER 31, 2016

Manitoba Hydro
 RECEIVE UP TO **50% OFF** SELECT ENERGY STAR LED LIGHT BULBS and additional rebates on a wide range of energy-efficient products for your home from Friday, September 25 to Monday, October 31, 2016.

Manitoba Hydro
 RECEIVE **\$15 OFF** ENERGY STAR LED FIXTURES

LED ENERGY STAR CERTIFIED BULBS AND FIXTURES
 ENERGY STAR LED bulbs and fixtures use at least 75% less energy than traditional incandescent products and last 25 times longer.

For more details, visit homedepot.ca/valuecentre. Maximum of 10 single packs and 3 multipacks per customer per visit.

Product	Regular Price	Instant Rebate	Final Price
PHILIPS 50W Equivalent LED MR16 Indoor Flood Bulb • Bright White, 3,000K color-rendering	\$15.97	-\$12.07	\$3.90
PHILIPS 50W Equivalent LED MR16 Indoor Flood Bulb • Bright White, 3,000K color-rendering	\$15.97	-\$12.07	\$3.90
3-Pack PHILIPS 40W Equivalent LED Dimmable Chandelier Base Light Bulbs • Soft White, 2,700K color-rendering, Daylight, 5,000K color-rendering	\$12.97	-\$8.48	\$4.49
3-Pack PHILIPS 50W Equivalent LED Dimmable PAR20 Light Bulbs • Bright White, 3,000K color-rendering, Soft White, 2,700K color-rendering, Daylight, 5,000K color-rendering	\$27.97	-\$11.99	\$15.98
11" LED Flush-Mount • Brushed Nickel finish (maximum)	\$39.98	-\$15.00	\$24.98
EXCLUSIVE to The Home Depot: HAMPTON BAY® Round Brushed Nickel LED Flush-Mount Ceiling Light • All-in-one design - no bulb required (maximum)	\$69.98	-\$15.00	\$54.98
4-Pack 3" PRO LED Panels • White (maximum)	\$149	-\$15	\$134

Did you know? The Home Depot has thousands of Eco Options™ products

During October 2016, Manitoba Hydro's "Savings in Every Corner" campaign provided customers with instant rebates on energy efficient products at 160 participating retailer locations throughout the province. In addition to the popular LED bulbs, rebates were available for the purchase of LED fixtures, lighting controls, plug-in timers, low-flow showerheads, smart power bars, window film insulating kits and weather-stripping. The campaign far exceeded expectations for energy efficient product sales, and will provide estimated in-year electricity savings of 1.9 million kW.h.

Participating retailers continue to enhance their advertising and promotional efforts with each campaign offered by Manitoba Hydro. At no cost to Manitoba Hydro, retailer support has included flyer space (including premium front page placement), web, social media, print, radio, outdoor signage and in-store point-of-purchase materials and merchandising. Retailers are also providing deep discounts on products eligible for Manitoba Hydro's rebate.

Fridge Retirement Saves Electricity and so much more



In September 2016, the 50,000th unit was retired through the Refrigerator Retirement Program, marking a significant milestone since program inception in 2011.

As a result of retiring 50,000 fridges and freezers, Manitoba realizes a positive environmental impact equivalent to 39,000 fewer cars on the road for a year, and has prevented the waste equivalent to 910 school busses from ending up in a Manitoba landfill. Energy savings as a result of this also equate to the amount of electricity that would be required to power the town of Stonewall for a year.

MacDon Industries Harvests Energy Efficiency



MacDon Industries increased energy efficiency, ensured ongoing employee safety and created an even more productive work environment through the installation of the latest in lighting technologies, all with the technical assistance and financial support provided by Manitoba Hydro Power Smart.

The massive lighting project upgraded the existing lighting with the latest options of LED fixtures and high output T5 linear fluorescent lighting, which will last four times as long as the existing metal halide system while only using half of the energy to produce the same amount of light.

The installation of these lighting technologies will provide estimated annual energy savings of 1.7 million kW.h reducing MacDon Industries' annual lighting costs by an estimated \$90,000, while also decreasing greenhouse gas emissions by 1,300 tonnes of CO₂e annually. This is equivalent to taking well over 250 cars off the road for a year.

Siloam Mission and its Patrons Benefit from Energy Efficiency



Made possible through the support provided by Manitoba Hydro Power Smart, local Christian humanitarian organization, Siloam Mission has lowered operating costs through improved energy efficiency while simultaneously increasing patron comfort as a result of increased insulation levels during a recent roof replacement project.

The project will result in annual energy savings of nearly 2,000 kW.h of electricity and 10,000 cubic metres of natural gas. This equates to over \$1,500 in annual bill reductions, while reducing annual greenhouse gas emissions by 20 tonnes of CO₂e, which is equivalent to the air filtering capacity of 2,000 trees.

In addition to the substantial impact higher levels of insulation can have on lowering utility bills and reducing environmental emissions, a number of non-energy benefits are also realized including improved indoor air quality and increased indoor comfort due to the reduction of drafts, heat gain and outdoor noise infiltration.

POWER SMART 2016/17 ACHIEVEMENTS

Residential Sector

Manitoba Hydro invested \$19.6 million towards programs and initiatives for residential customers in 2016/17. There were 4 residential DSM support programs and 16 residential incentive-based programs offered to customers in 2016/17, with approximately 49,000 customers participating in these programs. In addition to this, nearly 830,000 LED bulbs were purchased by Manitobans through the Residential LED Lighting Program. As well, more than 22,000 weather-stripping and window kit in-store rebates were provided through the Home Insulation Program. This activity resulted in electric savings of 59.8 GW.h and 16.7 MW, and natural gas savings of 3.4 million cubic metres.

The following table summarizes the achievements by program for the residential sector.

RESIDENTIAL PROGRAMS	Customer Participation	2016/17 Achievements			Utility Cost
		Electric		Natural Gas	
		GW.h	MW	Millions of m ³	
Residential DSM Support Programs					
Power Smart Residential Loan	4,565	0.4	0.2	0.3	\$ (602,399)
Power Smart Residential PAYS	133	0.0	0.0	(0.0)	\$ 10,892
Residential Earth Power Loan	25	0.3	0.2	0.1	\$ (31,290)
Mail-In/On-Line Energy Assessments	-	-	-	-	\$ -
Residential DSM Support Programs Subtotal	4,723	0.8	0.4	0.4	\$ (622,796)
Residential Incentive-Based Programs					
Residential LED Lighting	828,331	31.5	9.9	-	\$ 3,521,756
Weather-stripping & Window Kits	22,273	n/a	n/a	n/a	n/a
Water & Energy Saver	19,997	4.4	0.8	1.1	\$ 1,612,243
Refrigerator Retirement	9,895	9.1	1.0	-	\$ 1,968,950
Affordable Energy Program	5,596	5.7	1.4	1.0	\$ 7,483,298
Residential Appliances	4,606	0.7	0.1	0.0	\$ 544,878
Smart Thermostats	2,333	0.6	0.3	0.2	\$ 369,796
Home Insulation	1,971	4.9	2.4	0.5	\$ 2,918,686
Drain Water Heat Recovery	92	0.1	0.0	-	\$ 51,842
Community Geothermal	80	1.2	0.2	-	\$ 611,859
Residential Solar Energy	37	0.4	-	-	\$ 549,304
New Home (Re-design)	29	0.2	0.1	0.0	\$ 206,667
Residential HRV Controls	9	0.0	0.0	0.0	\$ 142,230
Solar Hot Water Heater Pilot	-	-	-	-	\$ 10,495
Air Source Heat Pumps	-	-	-	-	\$ 20,870
Residential Conservation Rates	-	-	-	-	\$ 188,784
Residential Incentive-Based Programs Subtotal	895,249	59.0	16.3	2.9	20,201,656
Residential Discontinued Programs	-	-	-	-	\$ 2,105
Residential Programs Total	899,972	59.8	16.7	3.4	\$ 19,580,964

Note: The Power Smart Residential Loan Program is a cost recovery program; however, at this stage of the program, it is earning revenue in order to cover costs incurred during earlier years of the program.

Commercial Sector

Manitoba Hydro invested \$27.4 million towards programs and initiatives for commercial customers in 2016/17. There were 4 commercial DSM support programs and 16 commercial incentive-based programs offered to customers in 2016/17, and over 3,000 customers participated in these programs. As well, nearly 16,000 LED conversions were completed under the LED Roadway Lighting Program. This activity resulted in electric savings of 102.7 GW.h and 19.6 MW, and natural gas savings of 2.9 million cubic metres.

The following table summarizes the achievements by program for the commercial sector.

COMMERCIAL PROGRAMS	Customer Participation	2016/17 Achievements			Utility Cost
		Electric		Natural Gas	
		GW.h	MW	Millions of m ³	
Commercial DSM Support Programs					
Power Smart for Business PAYS	19	-	-	-	\$ 111,106
Religious Buildings Initiative	-	-	-	-	\$ -
Power Smart Recreation Facility Survey	-	-	-	-	\$ -
Race to Reduce	-	-	-	-	\$ 169,429
Commercial DSM Support Programs Subtotal	19	-	-	-	\$ 280,534
Commercial Incentive-Based Programs					
LED Roadway Lighting	15,844	6.8	1.0	-	\$ 6,411,079
Commercial Lighting	1,417	61.2	9.1	-	\$ 10,641,496
Power Smart Shops	685	2.7	0.7	0.0	\$ 806,827
Commercial Building Envelope	351	4.8	2.3	1.4	\$ 3,280,264
Commercial Refrigeration	215	3.6	0.7	-	\$ 580,570
Commercial HVAC	192	0.1	0.0	0.8	\$ 1,218,799
Internal Retrofit	83	2.2	0.4	-	\$ 1,178,598
Commercial Kitchen Appliances	75	0.2	0.0	0.0	\$ 66,061
Parking Lot Controllers Re-design	48	1.0	-	-	\$ 206,427
Commercial Custom Measures	24	1.4	0.1	0.5	\$ 490,779
New Buildings	8	2.1	0.5	0.1	\$ 1,642,707
Commercial Geothermal	7	10.8	4.2	-	\$ 269,042
Commercial Building Optimization	2	0.3	-	0.1	\$ 328,710
Commercial Solar Energy	-	-	-	-	\$ 2,699
Commercial Conservation Rates	-	-	-	-	\$ 624
Network Energy Management	-	-	-	-	\$ 706
Commercial Incentive-Based Programs Subtotal	18,951	97.3	19.1	2.9	\$ 27,125,389
Commercial Discontinued Programs	-	5.5	0.5	-	\$ 19,095
Commercial Programs Total	18,970	102.7	19.6	2.9	\$ 27,425,018

Industrial Sector

Manitoba Hydro invested \$12.3 million towards programs and initiatives for industrial customers in 2016/17. There were 5 industrial incentive-based programs offered to customers in 2016/17, and 58 customers participated. This activity resulted in electric savings of 124.5 GW.h and 181.5 MW, and natural gas savings of 1.0 million cubic metres.

The following table summarizes the achievements by program for the industrial sector.

INDUSTRIAL PROGRAMS	Customer Participation	2016/17 Achievements			Utility Cost
		Electric		Natural Gas	
		GW.h	MW	Millions of m ³	
Industrial Incentive-Based Programs					
Performance Optimization	45	17.3	2.7	-	\$ 1,633,497
Natural Gas Optimization	8	-	-	1.0	\$ 720,763
Industrial Incentive-Based Programs Subtotal	53	17.3	2.7	1.0	\$ 2,354,259
Industrial Discontinued Programs					
	-	-	-	-	\$ -
Customer Self-Generation Programs					
Load Displacement	2	107.2	17.2	-	\$ 3,389,533
Bioenergy Optimization Program	-	-	-	-	\$ 248,571
Customer Self-Generation Programs Subtotal	2	107.2	17.2	-	\$ 3,638,104
Rate/Load Management Programs					
Curtable Rates	3	-	161.6	-	\$ 6,262,084
Industrial Programs Total	58	124.5	181.5	1.0	\$ 12,254,448

Power Smart Portfolio

Manitoba Hydro invested \$64.6 million towards programs and initiatives for customers in 2016/17. There were 8 DSM support programs and 37 incentive-based programs offered to customers in 2016/17, with more than 52,000 customers participating in these programs. In addition to this, nearly 830,000 LED bulbs were purchased by Manitobans through the Residential LED Lighting Program. As well, more than 22,000 weather-stripping and window kit in-store rebates were provided through the Home Insulation Program. And nearly 16,000 LED conversions were completed under the LED Roadway Lighting Program. This activity resulted in electric savings of 287.0 GW.h and 218 MW, as well as natural gas savings of 7.3 million cubic metres before interactive effects and 2.3 million cubic metres after interactive effects.

The following table summarizes the achievements by sector for the Power Smart portfolio.

SUMMARY	Customer Participation	2016/17 Achievements			Utility Cost
		Electric		Natural Gas	
		GW.h	MW	Millions of m ³	
RESIDENTIAL					
Residential DSM Support Programs	4,723	0.8	0.4	0.4	\$ (622,796)
Residential Incentive-Based Programs	895,249	59.0	16.3	2.9	\$ 20,201,656
Residential Discontinued Programs	-	-	-	-	\$ 2,105
Residential Total	899,972	59.8	16.7	3.4	\$ 19,580,964
COMMERCIAL					
Commercial DSM Support Programs	19	-	-	-	\$ 280,534
Commercial Incentive-Based Programs	18,951	97.3	19.1	2.9	\$ 27,125,389
Commercial Discontinued Programs	-	5.5	0.5	-	\$ 19,095
Commercial Total	18,970	102.7	19.6	2.9	\$ 27,425,018
INDUSTRIAL					
Industrial Incentive-Based Programs	58	124.5	181.5	1.0	\$ 12,254,448
Industrial Discontinued Programs	-	-	-	-	\$ -
Industrial Total	58	124.5	181.5	1.0	\$ 12,254,448
Total Before Interactive Effects and Support Costs	919,000	287.0	217.8	7.3	\$ 59,260,430
INTERACTIVE EFFECTS	n/a	-	-	(5.0)	n/a
SUPPORT COSTS	n/a	n/a	n/a	n/a	\$ 5,362,515
TOTAL	919,000	287.0	217.8	2.3	\$64,622,945

Notes:

Some electric Power Smart programs have interactive effects which increase the consumption of natural gas. For example, a more energy efficient lighting system will emit less heat and therefore more energy will be required for space heating. The table above includes integrated natural gas results which have been adjusted for interactive effects.

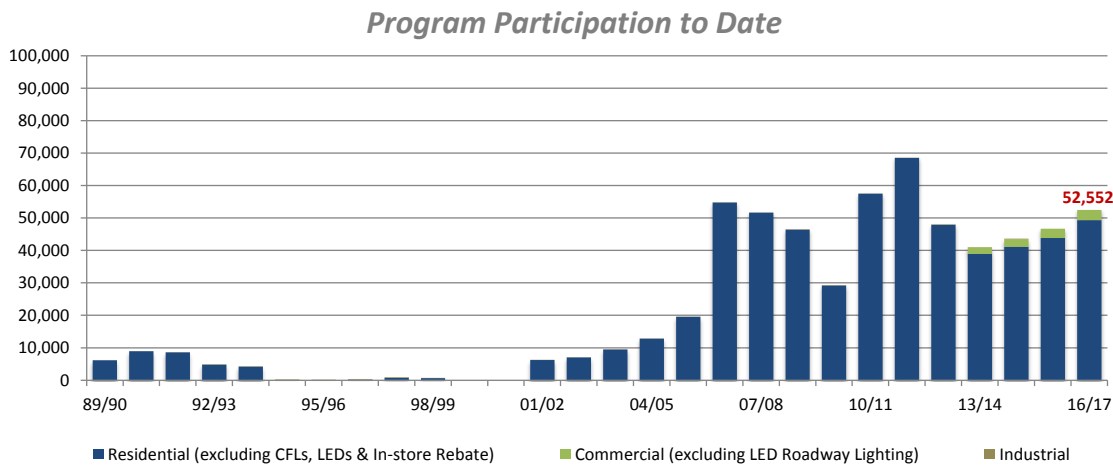
Support costs are related to providing overall support to the Power Smart portfolio. These costs include promoting and advertising the Power Smart brand, supporting sustainability and standards efforts and DSM planning and evaluation functions.

POWER SMART 1989/90 - 2016/17 ACHIEVEMENTS

This section outlines Manitoba Hydro’s Power Smart achievements since the inception of the program in 1989/90 through to the end of 2016/17.

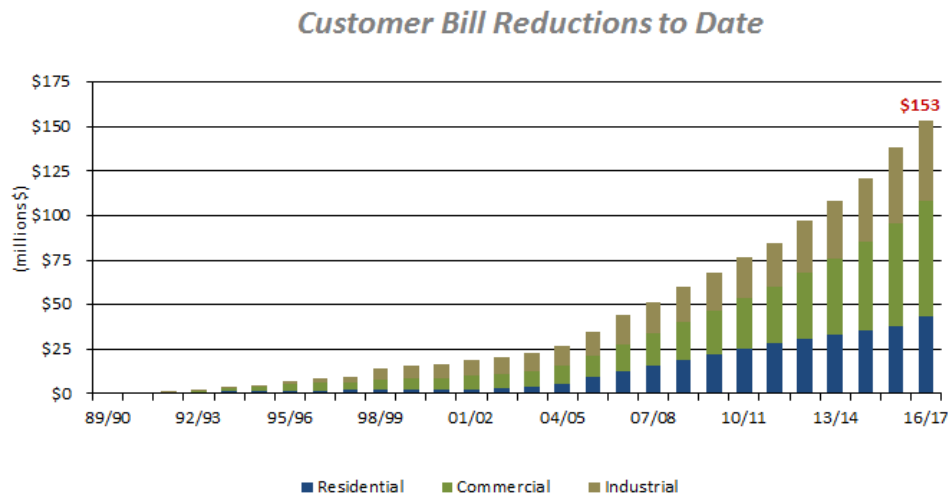
Partnering with Our Customers

To date, there have been more than 655,000 participants in Manitoba Hydro’s Power Smart programs. In addition, there have been over 1,720,000 LED bulbs purchased by customers through the Residential LED Lighting Program and over 340,000 CFLs purchased by participants of the Residential Compact Fluorescent Lighting Program. As well, more than 22,000 weather-stripping and window kit in-store rebates were provided through the Home Insulation Program. And more than 44,000 LED conversions were completed under the LED Roadway Lighting Program. To provide a better indication of participation trends, these four programs have been excluded from the following chart.



Reducing Customer Bills

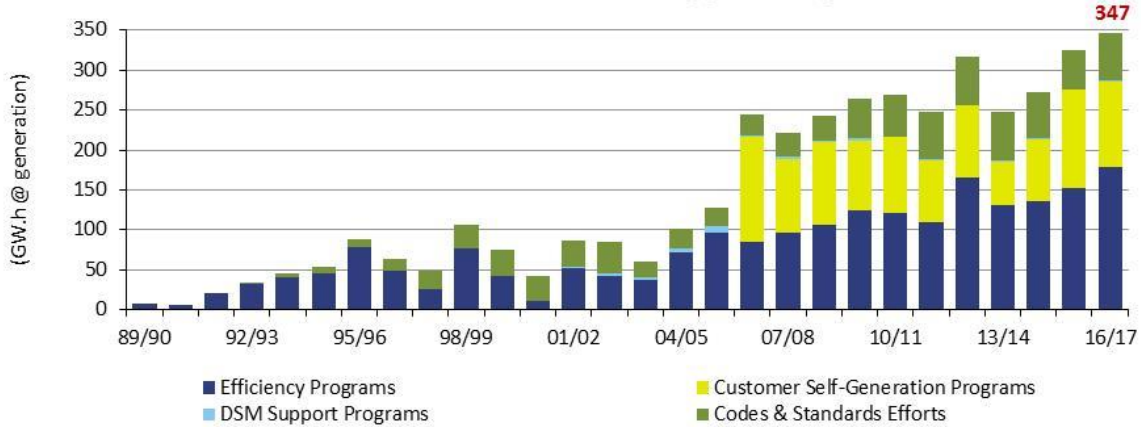
As displayed in the following graph, customers who have participated in Power Smart programs since its inception in 1989/90 saved \$153 million on their electric and natural gas bills in 2016/17. Cumulatively, over \$1.2 billion has been saved by participants on their electric and natural gas bills.



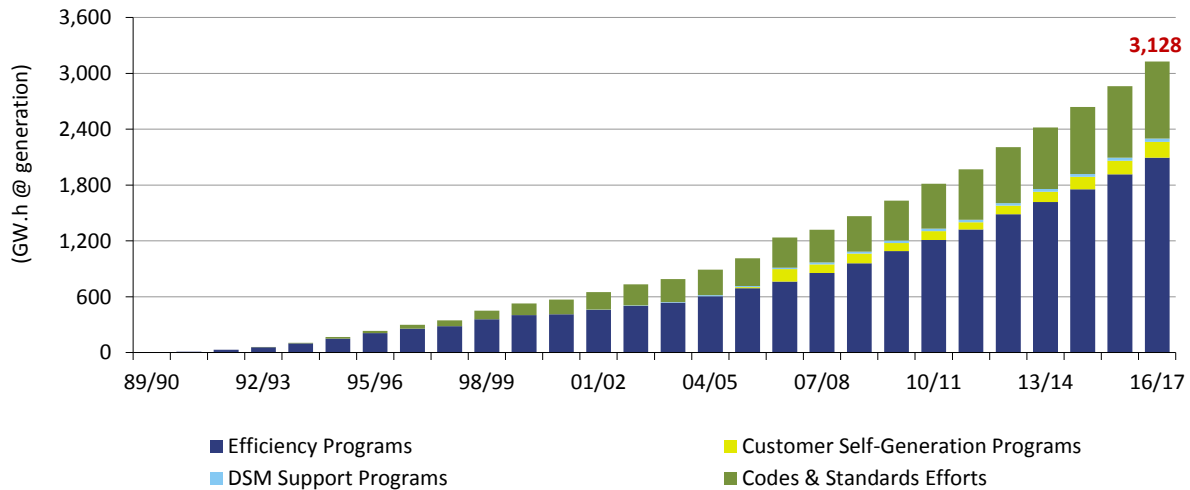
Achieving Electric Energy Savings

Cumulatively, the Power Smart portfolio has achieved a total of 3,128 GW.h in electric energy savings to the end of 2016/17. The following graphs display incremental and cumulative electric energy savings achieved.

Incremental Electric Energy Savings



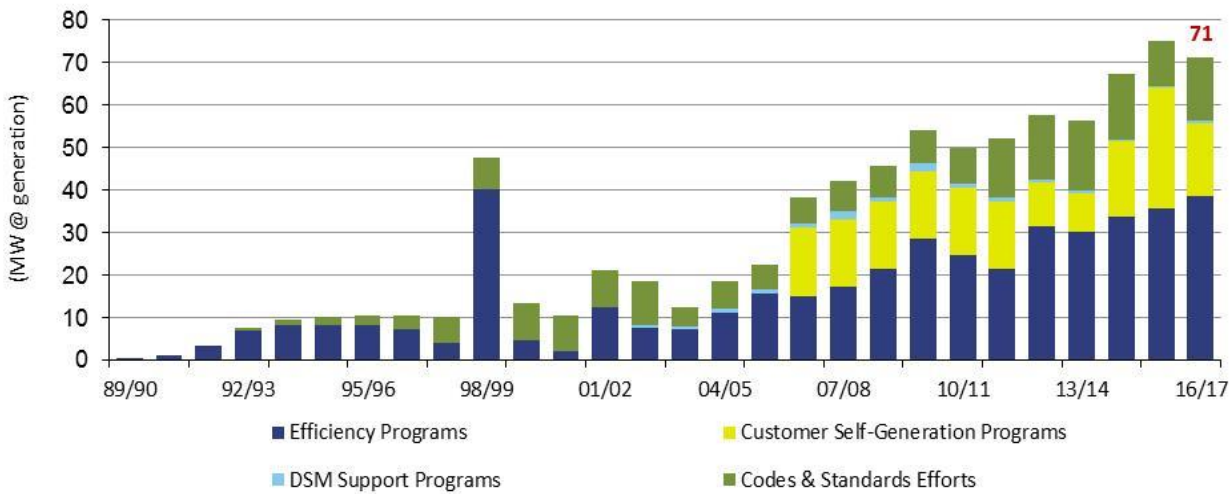
Electric Energy Savings to Date



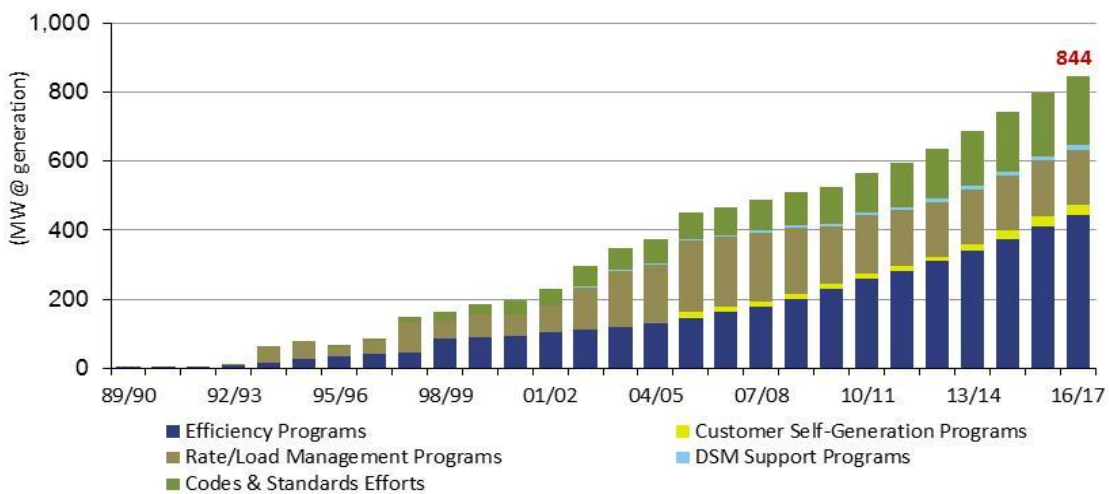
Achieving Electric Capacity Savings

Since 1989/90, the Power Smart portfolio has achieved a total of 844 MW in electric capacity savings. The following graphs demonstrate incremental and cumulative electric capacity savings achieved. Electric capacity savings resulting from the Curtailable Rates Program have been excluded from the incremental savings graph to better represent incremental results. The high incremental capacity savings in 1998/99 was due to a large industrial project with substantial capacity savings.

Incremental Electric Capacity Savings



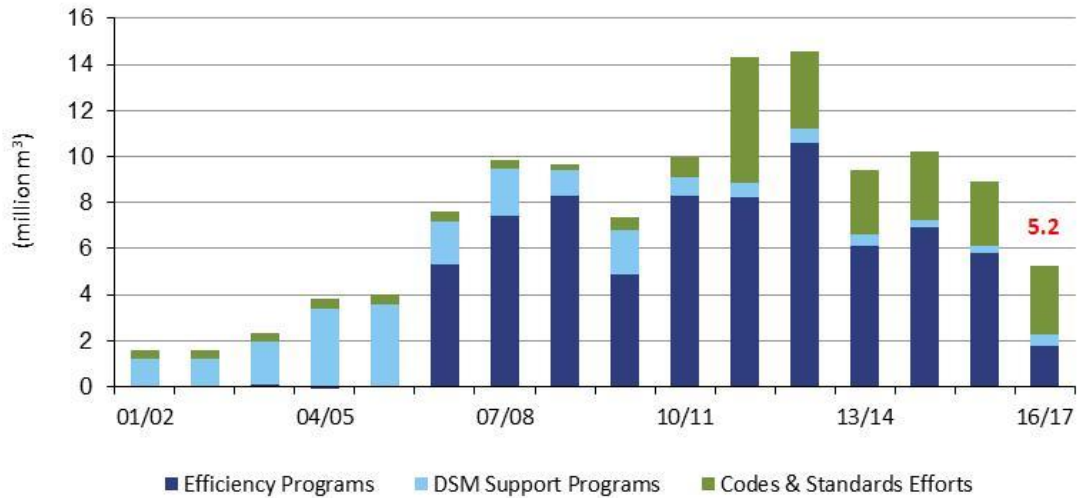
Electric Capacity Savings to Date



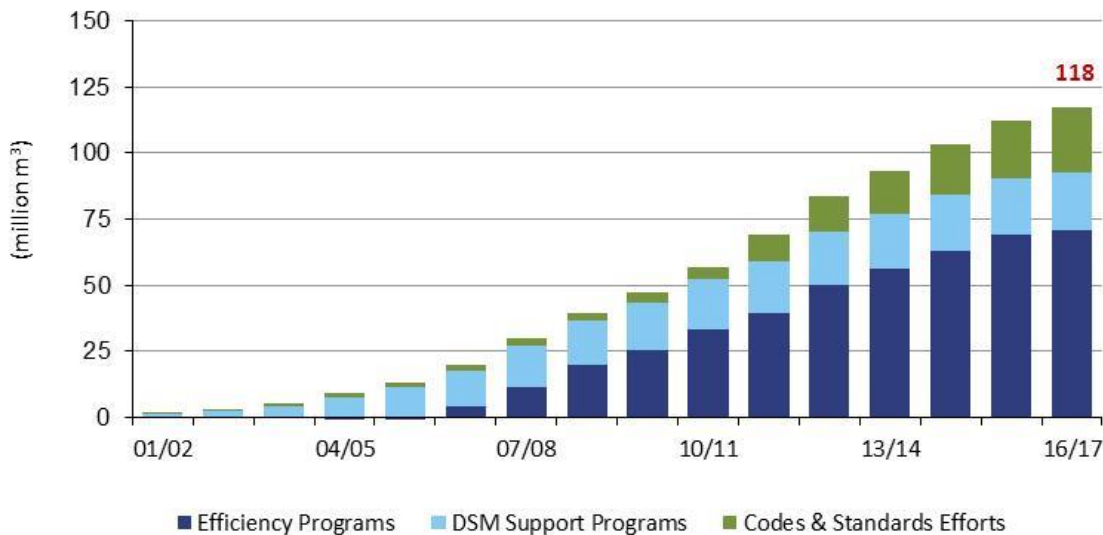
Achieving Natural Gas Energy Savings

To date, Manitoba Hydro's Power Smart program has achieved a total of 118 million cubic metres in natural gas savings, including interactive effects. The following graphs display incremental and cumulative natural gas savings achieved.

Incremental Natural Gas Energy Savings
(Including Interactive Effects)



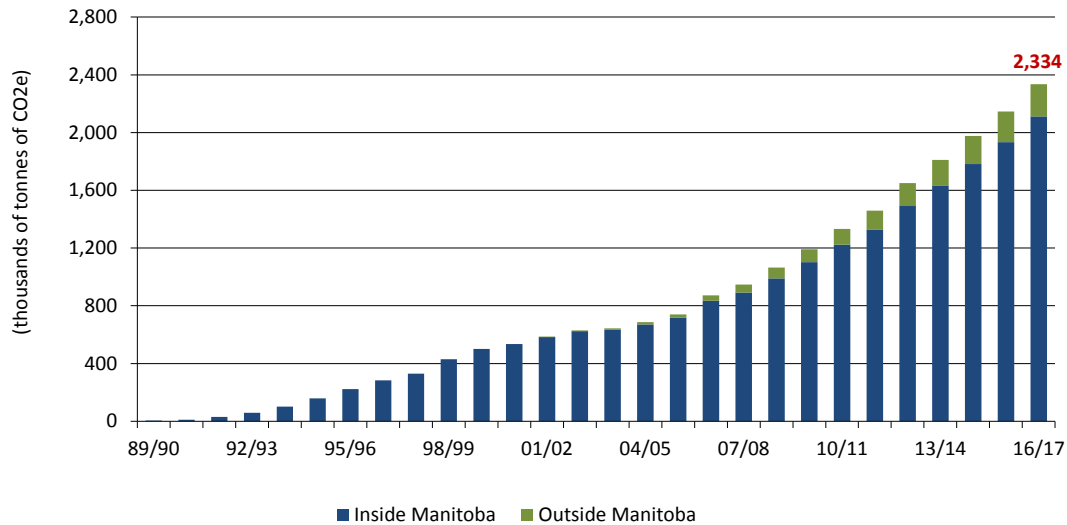
Natural Gas Energy Savings to Date
(Including Interactive Effects)



Reducing Environmental Impacts

The 3,128 GW.h of electric energy savings and 118 million cubic metres of natural gas savings achieved to date by Manitoba Hydro's Power Smart program equate to a greenhouse gas emissions reduction of approximately 2.3 million tonnes of CO₂e. This is comparable to removing more than 490,000 cars from the road for one year. The following graph displays greenhouse gas emissions reduction achieved to the end of 2016/17.

Emissions Reduction to Date



Investing in Power Smart

Since 1989/90, Manitoba Hydro has invested \$708 million in Power Smart initiatives. This investment is comprised of \$542 million from the Power Smart electric budget, \$119 million from the Power Smart natural gas budget, \$32 million from the Affordable Energy Fund and \$16 million from the Lower Income Natural Gas Furnace Replacement Budget.

Power Smart Investment to Date

