



FOR GENERATIONS

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July 15, 2015

Ms. Erica Hamilton
Commission Secretary
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Hamilton:

**RE: British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
F2005/F2006 Revenue Requirements Application
Commission Decision: October 29, 2004; Directive 69 (page 201)
(AMENDED pursuant to 2006 Integrate Electricity Plan and
2006 Long-Term Acquisition Plan
Commission Decision: May 11, 2006; Directive 16 (pages**

BC Hydro writes to provide its Report on Demand-Side Management Activities for the 12 months ending March 31, 2015.

For further information, please contact Geoff Higgins at 604-623-4121 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,

Original signed

Tom Loski
Chief Regulatory Officer

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Enclosure (1)



**Report on Demand-Side
Management Activities for
Fiscal 2015**

July 15, 2015

Table of Contents

1	Introduction	1
2	Expenditures and Electricity Savings for F2015	3
3	Expenditures to Date.....	8
4	Mitigation Measures	13
5	Operating Expenditures for F2015	14
6	Allocation of Supporting Initiative Costs to Programs.....	15

List of Tables

Table 1	Expenditures and Incremental Electricity Savings for F2015	4
Table 2	Expenditures since F2013.....	8
Table 3	Cumulative Electricity Savings since April 1, 2013.....	9
Table 4	Utility Cost of Electricity Savings: F2013 to F2015.....	11
Table 5	Benefit Cost Ratios of Electricity Savings: F2013 to F2015	12
Table 6	Operating Expenditures for F2015	14

1 Introduction

This BC Hydro annual report to the British Columbia Utilities Commission (**BCUC or Commission**) on Demand Side Management (**DSM**) activities responds to Directive 69 from the Commission decision on BC Hydro's F2005/F2006 Revenue Requirements Application (**F05/F06 RRA**), Directive 16 from the Commission decision on BC Hydro's 2006 Integrated Electricity Plan and Long Term Acquisition Plan (**2006 IEP/LTAP**) and Directives 36 and 38 from the Commission decision on BC Hydro's 2008 LTAP. The report provides information on DSM expenditures, electricity savings, plan performance and mitigation measures for the 2015 fiscal year (**F2015**), for the 12 months ending March 31, 2015.

Directive 69 of the F05/F06 RRA Decision directed BC Hydro "to provide information to the Commission for on-going review of Power Smart performance through:

- Executive Summaries of milestone evaluation reports and full final evaluation reports for each program;
- Semi-annual reports on DSM activities which, amongst others, will include:
 - ▶ detailed breakdown of OMA expenses related to support activities carried out within the Power Smart group and in other departments that support the Power Smart organization;
 - ▶ detailed description of the functions of portfolio level costs and how these costs are allocated to programs;
 - ▶ summaries of the overall performance of Power Smart with reference to program objectives; and
 - ▶ variances of fiscal year budgeted and actual deferred capital expenditures and explanation of variances."

Directive 16 of the 2006 IEP/LTAP Decision directed BC Hydro “to continue to file reports on DSM performance as described in Directive 69 of the F05/F06 RRA Decision and to file its Semi Annual Demand Side Management Reports in the same format as the June 2005 Report with the following enhancements:

Provide annual and cumulative totals since program inception;

- (i) Express these values on a per unit basis; and
- (ii) Provide the benefit to cost ratios for the three DSM tests.”

Directive 36 of the 2006 IEP/LTAP Decision directed BC Hydro to switch from semi-annual to annual DSM performance reports while Directive 38 directed BC Hydro to include in these reports “metrics for each initiative, achievements in relation to milestones, and description of past or planned mitigation measures where warranted. These mitigation measures should include shifting program resources and alternative supply options for each program. Ongoing DSM performance reporting should demonstrate how BC Hydro is continuously pursuing DSM and that specific programs are cost-effective.”

BC Hydro files its evaluation reports pursuant to Directive 69 of the F05/F06 RRA Decision separately. This report addresses the balance of Directives 69 and 16, as well as Directives 36 and 38 of the 2006 IEP/LTAP Decision.

2 Expenditures and Electricity Savings for F2015

BC Hydro's DSM expenditures¹ in F2015 totalled \$124.8 million while incremental DSM electricity savings totalled 444 GWh/year. This was \$26 million or 17 per cent below the DSM Plan presented in BC Hydro's F2015 to F2016 Revenue Requirements Rate Application (**F15-F16 RRR**) as the F2015 DSM Forecast. Overall, incremental electricity savings as shown in [Table 1](#), were 133 GWh/year or 23 per cent below the DSM Plan and cumulative electricity savings were 783 GWh/year or 30 per cent below the DSM Plan. The primary cause of these electricity savings variances is less than planned electricity savings from rate structures. Incremental electricity savings from DSM Programs were 3 GWh/year or 1 per cent above the DSM Plan and cumulative electricity savings were 109 GWh/year or 9 per cent below the DSM Plan.

[Table 1](#) presents planned and actual DSM expenditures and incremental electricity savings in F2015.

¹ Comprising all DSM-related deferred operating and specific capital expenditures. DSM operating expenditures are presented in [Table 6](#) of this report.

Table 1 Expenditures and Incremental Electricity Savings for F2015

	Expenditures ¹				Incremental Electricity Savings			
	Plan ² \$ 000	Actual \$ 000	Variance \$ 000	%	Plan ² GWh/yr	Actual ³ GWh/yr	Variance GWh/yr	%
Codes and Standards								
Residential	2,809	2,296	(513)	(18%)	115	108	(7)	(6%)
Commercial	1,047	660	(387)	(37%)	30	31	1	2%
Industrial	142	115	(27)	(19%)	6	5	(0)	(2%)
Total Codes and Standards	3,998	3,071	(927)	(23%)	151	144	(6)	(4%)
Rate Structures								
Residential	641	314	(327)	(51%)	109	67	(42)	(38%)
Commercial & Industrial Distribution	692	521	(171)	(25%)	(19) ⁴	(77)	(59)	318%
Industrial Transmission	644	400	(244)	(38%)	28	(1)	(29)	(102%)
Total Rate Structures	1,977	1,236	(741)	(37%)	119	(11)	(130)	(109%)
DSM Programs								
<u>Residential Sector</u>								
Behaviour	3,613	2,770	(843)	(23%)	36	21	(15)	(41%)
Refrigerator Buy-back	1,239	934	(305)	(25%)	9	3	(6)	(70%)
Low Income	2,478	1,925	(553)	(22%)	3	3	0	15%
New Home	2,200	2,716	516	23%	3	4	2	56%
Retail Rebate	4,023	4,011	(12)	(0%)	8	13	5	63%
Renovation Rebate	2,940	972	(1,968)	(67%)	5	3	(3)	(52%)
Load Displacement	-	-	-	n/a	-	-	-	n/a
Sector Enabling Activities	1,240	874	(366)	(30%)	n/a	n/a	n/a	n/a
<i>Residential Sector Total</i>	<i>17,734</i>	<i>14,202</i>	<i>(3,532)</i>	<i>(20%)</i>	<i>64</i>	<i>47</i>	<i>(17)</i>	<i>(27%)</i>
<u>Commercial Sector</u>								
Power Smart Partner	29,576	26,394	(3,182)	(11%)	72	61	(11)	(15%)
New Construction	8,764	9,011	247	3%	18	21	3	18%
Load Displacement	-	-	-	-	-	-	-	n/a
Sector Enabling Activities	1,127	1,245	118	11%	n/a	n/a	n/a	n/a
<i>Commercial Sector Total</i>	<i>39,467</i>	<i>36,650</i>	<i>(2,817)</i>	<i>(7%)</i>	<i>91</i>	<i>83</i>	<i>(8)</i>	<i>(9%)</i>
<u>Industrial Sector</u>								
Power Smart Partner - Transmission	29,577	28,296	(1,282)	(4%)	58	126	68	118%
Thermo-Mechanical Pulp	-	134	134	-	-	-	-	-
Power Smart Partner - Distribution	12,152	13,505	1,353	11%	28	35	7	24%
Load Displacement	21,321	2,919	(18,402)	(86%)	68	20	(47)	(70%)
Sector Enabling Activities	1,233	853	(380)	(31%)	n/a	n/a	n/a	n/a
<i>Industrial Sector Total</i>	<i>64,283</i>	<i>45,708</i>	<i>(18,575)</i>	<i>(29%)</i>	<i>153</i>	<i>181</i>	<i>28</i>	<i>18%</i>
Capacity Focused DSM	2,430	4,742	2,311	95%	-	-	-	-
Total Programs	123,914	101,302	(22,612)	(18%)	308	311	3	1%
Supporting Initiatives								
Public Awareness and Education	6,050	5,974	(77)	(1%)	-	-	-	-
Community Engagement	3,958	3,715	(243)	(6%)	-	-	-	-
Advanced DSM Strategies	1,871	984	(886)	(47%)	-	-	-	-
Information Technology	225	-	(225)	(100%)	-	-	-	-
Indirect and Portfolio Enabling	8,731	8,470	(261)	(3%)	-	-	-	-
Supporting Initiatives Total	20,834	19,142	(1,692)	(8%)	-	-	-	-
TOTAL DSM	150,723	124,750	(25,973)	(17%)	578	444	(133)	(23%)

Notes:

- ¹ Including all DSM-related deferred operating and specific capital expenditures that are relevant for DSM cost-effectiveness.
- ² Plan figures are from BC Hydro's F15-F16 RRRRA, Appendix G. The Plan includes additional DSM-related expenditures of \$0.2 million for Information Technology (IT). These costs are relevant for DSM cost-effectiveness because full costs are utilized for cost-effectiveness calculations but only direct DSM expenditures are shown in the F15-F16 RRRRA.
- ³ Reported savings from codes and standards and residential, commercial & industrial distribution rate structures are based on planned estimates as well as evaluated results.
- ⁴ The approach to applying rate increases for F2015 onto the two-part rate structure of the MGS and LGS rates results in a lessening of the conservation price signal. As a result, the incremental plan savings are negative.

The following corresponds to the information provided in [Table 1](#) and are explanations for the above variances:

<u>Codes and Standards</u>	
Residential	Expenditures were below plan because BC Hydro was able to leverage the involvement of other industry stakeholders/organizations to take on the responsibility of training for the recent BC building code energy efficiency updates as well as the deferral of market/technical studies to support development of Amendment 6 to the BC Energy Efficiency Standards Regulation. Energy savings were below plan due to a shift in timing of the anticipated effective date of the proposed product regulations in Amendment 13 to Canada's Energy Efficiency Regulations by NRCan.
Commercial	
Industrial	
<u>Rate Structures</u>	
Residential	Expenditures were below plan due to reduced use of consultants for work related to the residential rate design for the 2015 Rate Design Application. Electricity savings were below plan due to an adjustment in the savings calculation due to the incorporation of the 2013 RIB Evaluation outcomes into the forecast model.
Commercial & Industrial Distribution	Expenditures were below plan due to reduced use of consultants for work related to the commercial and industrial distribution rate design for the 2015 Rate Design Application. Electricity savings were below plan due to the incorporation of the F2014 LGS/MGS evaluation results. As a result, no further conservation is forecast from the commercial and industrial distribution conservation rates.
Industrial Transmission	Expenditures were below plan due to delays in IT work, as well as less than expected engagement costs for the Transmission Rate part of the Rate Design Application. Electricity savings were lower than forecast due to a drop in non-contracted customer self-generation.
<u>DSM Programs</u>	
Residential Sector	
Behaviour	Expenditures were below plan due to reduced advertising expenditures, as well as lower incentive costs resulting from fewer successful challenge completions. Electricity savings were below plan in accordance with a new more conservative definition for engaged users through the Energy Visualization Portlet while the estimated savings per engaged user remained the same.
Refrigerator Buy-Back	Expenditures and electricity savings were below plan due to lower than planned participation as a result of a change in the program offer to be seasonal rather than year-round in order to reduce expenditures. Operational efficiencies were also gained from a new online registration process and bill credit option for customer rebates.

Low Income	Expenditures were below plan due to lower than forecast participation in the Energy Conservation Assistance Program (ECAP) portion of the program as a result of lower contractor lead generation occurring during the rebidding for contractors. Electricity savings were above plan due to higher than planned volumes of energy savings kits due to an increase in identified participants as a result of our partnerships with FortisBC and the Ministry of Social Development.
New Home	Expenditures and electricity savings were higher than plan due to higher than forecast program participation, particularly amongst detached homes.
Retail Rebate	Expenditures were on plan. Electricity savings were above plan due to higher than planned participation in the lower cost LED portion of the program particularly in the number of multi-pack bulb sales that was as a result of successful spring and fall campaigns.
Renovation Rebate	Expenditures and electricity savings were below plan due to a delayed launch following the transition from the provincial LiveSmart program to the new utility led model.
Sector Enabling Activities	Expenditures were below plan due to the suspension of the Home Loan pilot in order to pursue a different option that involved a third party as the financier instead of BC Hydro.
Commercial Sector	
Power Smart Partner	Expenditures and electricity savings were below plan due to projects not completing as planned and being deferred to the next fiscal.
New Construction	Expenditures were approximately on plan. Energy savings were above plan due to higher participation for lower cost projects.
Sector Enabling Activities	Expenditures were slightly above plan due to advancing industry engagement and communication activities related to Power Smart Alliance and a targeted information package to small and medium business customers.
Industrial Sector	
Power Smart Partner – Transmission	Expenditures were approximately on plan. Electricity savings were above plan due to more customer-funded DSM projects completing than expected.
Thermo-Mechanical Pulp	No expenditures and electricity savings were planned. The Thermo-Mechanical Pulp initiative was introduced after the DSM plan was completed. Projects are expected to complete in the future.
Power Smart Partner – Distribution	Expenditure and electricity savings are above plan due to an increase in participation in the self-serve incentive component of the program.
Load Displacement	Expenditure and electricity savings are below plan due to a large customer project being delayed until F2016.
Sector Enabling Activities	Expenditures are below plan due to less contract services required than planned.

Capacity Focused DSM	Expenditures are above plan due to a project that was accelerated in F2015 as a proof of concept project to inform future activities.
Total Programs	Expenditures were below plan largely because of lower than planned costs in the Industrial Load Displacement program due to a large customer project being delayed until F2016. Electricity savings were approximately on plan.
Supporting Initiatives	
Public Awareness & Education	Expenditures were approximately on plan.
Community Engagement	Expenditures were approximately on plan.
Advanced DSM Strategies	Expenditures were below plan due to the merging and integration of Communities activities with Technology Innovation and Policies activities. In addition, take-up of policy implementation funding by local governments was lower than planned.
Information Technology	Expenditures were below plan due to a delay in an IT project.
Indirect and Portfolio Enabling Activities	Expenditures were approximately on plan.
Total DSM	Expenditures were 17 per cent below plan primarily due to an Industrial Load Displacement large customer project being delayed until F2016. Electricity savings were 23 per cent below plan due to the incorporation of evaluation results for Residential and Commercial and Industrial Distribution Rate Structures.

3 Expenditures to Date

BC Hydro's DSM expenditures from F2013 through F2015 totalled \$395.2 million.

[Table 2](#) presents DSM expenditures from April 1, 2013 to March 31, 2015.²

Table 2 Expenditures since F2013

	F2013 (\$ 000)	F2014 (\$ 000)	F2015 (\$ 000)	Total (\$ 000)
Codes and Standards				
Residential	1,323	1,257	2,296	4,877
Commercial	245	307	660	1,211
<u>Industrial</u>	<u>47</u>	<u>64</u>	<u>115</u>	<u>225</u>
Total Codes and Standards	1,615	1,628	3,071	6,313
Rate Structures				
Residential	330	302	314	946
Commercial & Industrial Distribution	557	409	521	1,487
<u>Industrial Transmission</u>	<u>407</u>	<u>300</u>	<u>400</u>	<u>1,107</u>
Total Rate Structures	1,294	1,011	1,236	3,540
DSM Programs				
<u>Residential Sector</u>				
Behaviour	4,419	4,112	2,770	11,302
Refrigerator Buy-back	3,754	2,239	934	6,928
Low Income	3,040	2,185	1,925	7,150
New Home	2,321	2,706	2,716	7,743
Retail Rebate	9,141	4,063	4,011	17,215
Renovation Rebate	3,636	1,264	972	5,872
Load Displacement	-	-	-	-
<u>Sector Enabling Activities</u>	<u>1,220</u>	<u>1,013</u>	<u>874</u>	<u>3,108</u>
<i>Residential Sector Total</i>	27,532	17,582	14,202	59,317
<u>Commercial Sector</u>				
Power Smart Partner	42,472	33,784	26,394	102,649
New Construction	8,680	7,672	9,011	25,363
Load Displacement	-	-	-	-
<u>Sector Enabling Activities</u>	<u>1,100</u>	<u>1,176</u>	<u>1,245</u>	<u>3,521</u>
<i>Commercial Sector Total</i>	52,252	42,631	36,650	131,533
<u>Industrial Sector</u>				
Power Smart Partner - Transmission	18,146	20,437	28,296	66,879
Thermo-Mechanical Pulp	-	-	134	134
Power Smart Partner - Distribution	12,397	10,126	13,505	36,028
Load Displacement	10,009	4,537	2,919	17,465
<u>Sector Enabling Activities</u>	<u>1,015</u>	<u>1,003</u>	<u>853</u>	<u>2,871</u>
<i>Industrial Sector Total</i>	41,567	36,103	45,708	123,378
Capacity Focused DSM	-	28	4,742	4,770
Total Programs	121,352	96,345	101,302	318,998
Supporting Initiatives				
Public Awareness and Education	7,235	7,018	5,974	20,227
Community Engagement	7,232	4,137	3,715	15,084
Advanced DSM Strategies	1,863	1,940	984	4,788
Information Technology	145	-	-	145
<u>Indirect and Portfolio Enabling</u>	<u>9,386</u>	<u>8,200</u>	<u>8,470</u>	<u>26,056</u>
Supporting Initiatives Total	25,861	21,296	19,142	47,157
Total DSM	150,121	120,279	124,750	395,151

² Comprising all DSM deferred operating and specific capital expenditures that are relevant for DSM cost-effectiveness.

BC Hydro's DSM electricity savings since F2013 totalled 1,828 GWh/year at March 31, 2015, which equates to 70 per cent of the planned savings of 2,611 GWh/year in the F15-F16 RRR. [Table 3](#) presents actual cumulative savings as a percentage of plan in F2013 to F2015.

Table 3 Cumulative Electricity Savings since April 1, 2013

Actual as a Percentage of Plan ¹	
	F2015
Codes and Standards	
Residential	94%
Commercial	83%
<u>Industrial</u>	<u>88%</u>
Total Codes and Standards	91%
Rate Structures	
Residential	73%
Commercial & Industrial Distribution	0%
<u>Industrial Transmission</u>	<u>91%</u>
Total Rate Structures	30%
DSM Programs	
<u>Residential Sector</u>	
Behaviour	64%
Refrigerator Buy-back	79%
Low Income	109%
New Home	133%
Retail Rebate	114%
Renovation Rebate	68%
<u>Load Displacement</u>	<u>n/a</u>
<i>Residential Sector Total</i>	84%
<u>Commercial Sector</u>	
Power Smart Partner	91%
New Construction	117%
<u>Load Displacement</u>	<u>n/a</u>
<i>Commercial Sector Total</i>	94%
<u>Industrial Sector</u>	
Power Smart Partner - Transmission	112%
Thermo-Mechanical Pulp	n/a
Power Smart Partner - Distribution	104%
<u>Load Displacement</u>	<u>51%</u>
<i>Industrial Sector Total</i>	90%
Capacity Focused DSM	n/a
Total Programs	91%
Total DSM	70%

Notes:

¹ Reported savings for codes and standards and rates structures are based on planned estimates as well as evaluated results.

The cumulative DSM electricity savings since F2013 have been achieved at an average net levelized utility cost of \$5 per MWh. [Table 4](#) presents the net levelized utility cost of actual DSM electricity savings achieved from April 1, 2013 through March 31, 2015. Refer to footnote 1 to [Table 4](#) for a definition of “net levelized utility cost”.

Table 4 Utility Cost of Electricity Savings: F2013 to F2015

	Net Levelized Utility Cost (\$/MWh) ¹
Codes and Standards	
Residential	-19
Commercial	-9
<u>Industrial</u>	<u>-8</u>
Total Codes and Standards	-17
Rate Structures	
Residential	-12
Commercial & Industrial Distribution	-2
<u>Industrial Transmission</u>	<u>-4</u>
Total Rate Structures	-10
Programs	
<u>Residential Sector</u>	
Behaviour	15
Refrigerator Buy-back	44
Low Income	65
New Home	32
Retail Rebate	14
Renovation Rebate	14
Load Displacement	n/a
<u>Sector Enabling Activities</u>	<u>n/a</u>
<i>Residential Sector Total</i>	23
<u>Commercial Sector</u>	
Power Smart Partner	37
New Construction	33
Load Displacement	n/a
<u>Sector Enabling Activities</u>	<u>n/a</u>
<i>Commercial Sector Total</i>	37
<u>Industrial Sector</u>	
Power Smart Partner - Transmission	22
Thermo-Mechanical Pulp	n/a
Power Smart Partner - Distribution	31
Load Displacement	19
<u>Sector Enabling Activities</u>	<u>n/a</u>
<i>Industrial Sector Total</i>	24
Capacity Focused DSM	n/a
Total Programs	28
Total DSM	5

Notes:

¹ Net levelized utility cost is calculated by subtracting capacity benefits from gross utility costs and then dividing the resulting net utility costs by electricity savings. A negative net levelized utility cost means that the subtracted capacity benefits exceed gross utility costs.

[Table 5](#) presents Total Resource Cost Test benefit-cost ratios of actual DSM electricity savings achieved from April 1, 2013 through March 31, 2015. [Table 5](#) shows the Total Resource Cost Test benefit-cost ratios for the Total Resource Cost test and the Total Resource Cost test as modified by the Demand Side Measures Regulation.

Table 5 Benefit Cost Ratios of Electricity Savings: F2013 to F2015

	Benefit Cost Ratios			
	Utility Test	Total Resource Cost Test	Total Resource Cost Test as modified by DSM Regulation ¹	Ratepayer Impact Measure Test ²
Codes and Standards				
Residential	189.4	6.5	8.1	1.5
Commercial	152.4	4.4	5.0	1.5
<u>Industrial</u>	<u>139.6</u>	<u>51.5</u>	<u>61.7</u>	<u>2.1</u>
Total Codes and Standards	180.6	6.2	7.6	1.5
Rate Structures				
Residential	28.8	28.8	34.5	1.1
Commercial & Industrial Distribution	16.9	16.9	19.4	1.3
<u>Industrial Transmission</u>	<u>22.8</u>	<u>2.3</u>	<u>4.4</u>	<u>0.7</u>
Total Rate Structures	26.7	14.3	18.0	1.0
Programs				
<i>Residential Sector</i>				
Behaviour	3.5	4.1	5.1	0.9
Refrigerator Buy-back	2.1	2.8	3.0	0.7
Low Income ³	1.3	1.7	1.8	0.7
New Home	2.3	1.5	1.5	0.9
Retail Rebate	3.5	3.4	3.9	1.0
Renovation Rebate	3.9	1.5	1.7	1.1
Load Displacement	n/a	n/a	n/a	n/a
<u>Sector Enabling Activities</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>
<i>Residential Sector Total</i>	2.9	2.5	2.9	0.9
<i>Commercial Sector</i>				
Power Smart Partner	2.4	1.9	2.4	0.9
New Construction	2.4	1.7	2.7	0.8
Load Displacement	n/a	n/a	n/a	n/a
<u>Sector Enabling Activities</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>
<i>Commercial Sector Total</i>	2.4	1.8	2.5	0.9
<i>Industrial Sector</i>				
Power Smart Partner - Transmission	3.3	2.0	2.5	1.0
Thermo-Mechanical Pulp	n/a	n/a	n/a	n/a
Power Smart Partner - Distribution	2.7	2.3	2.8	0.9
Load Displacement	4.5	2.6	3.0	1.5
<u>Sector Enabling Activities</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>
<i>Industrial Sector Total</i>	3.3	2.2	2.7	1.0
Capacity Focused DSM	n/a	n/a	n/a	n/a
Total Programs	2.8	2.1	2.6	1.0
Total DSM	6.2	3.4	4.3	1.1

Notes:

- ¹ In accordance with the DSM Regulation (Ministerial Order M233/2014), the avoided cost of natural gas is valued at BC Hydro's long run marginal cost of acquiring electricity generated from clean or renewable resources in B.C converted to \$/GJ in all time periods. Non-energy benefits are valued at 15 per cent of the energy and capacity benefits of electricity and natural gas.
- ² While subsection 4(6) of the DSM Regulation precludes the use of the Ratepayer Impact Measure Test in determining cost-effectiveness of a demand-side measure, this benefit cost ratio is included in the table to comply with Directive 42 from the Commission decision on BC Hydro's 2008 LTAP.
- ³ The Total Resource Cost Test benefit-cost ratio for the Low Income program includes a 40 per cent adder to program benefits, rather than a 15 per cent value for non-energy benefits, in accordance with the DSM Regulation.

4 Mitigation Measures

[Table 3](#) indicates that most DSM initiatives are approximately on or above plan in terms of cumulative electricity savings in F2015 while [Table 5](#) indicates that the portfolio has delivered electricity savings at a substantially lower cost than new electricity supply. Based on the experience gathered over the past few years through initiative tracking, the following are mitigation measures that have been undertaken or are planned for the future.

Codes and Standards	
Residential	Cumulative electricity savings in F2015 were below plan. BC Hydro will manage risk by tracking Codes & Standards progress against a number of milestones or indicators to anticipate savings shortfalls or identify trends that may trigger the need for saving adjustments to the DSM Plan as well as continuing to work closely with both the federal and provincial governments to anticipate and adjust code and regulation approval timelines as appropriate. No additional mitigation measures are required.
Commercial	
Industrial	
Rate Structures	
Residential	Cumulative electricity savings in F2015 were below plan. Adjustments have been made to the conservation forecasts to reflect the outcomes from their respective evaluation reports. Any rate structure changes will come as a result of BC Hydro's 2015 RDA process.
Commercial & Industrial Distribution	
Industrial Transmission	Cumulative electricity savings were approximately on plan in F2015.
DSM Programs	
Residential Sector	
Behaviour	Cumulative electricity savings in F2015 were below plan. With program infrastructure enhancements complete in mid-F2015, program performance is expected to meet F2016 targets.
Refrigerator Buy-Back	Cumulative electricity savings in F2015 were below plan. With one year experience in the new seasonal model of the program offering and with IT enhancements made to the customer online registration process, program participation is expected to increase.
Low Income	Cumulative electricity savings in F2015 were above plan.
New Home	Cumulative electricity savings in F2015 were above plan.
Retail Rebate	Cumulative electricity savings in F2015 were above plan.
Renovation Rebate	Cumulative electricity savings in F2015 were below plan. Following program re-launch in F2015, program monthly participation is now on track and expected to meet F2016 targets.

Commercial Sector	
Power Smart Partner	Cumulative electricity savings in F2015 were below plan. Targeted sector program promotion will be launched in F2016 to drive higher program participation.
New Construction	Cumulative electricity savings in F2015 were above plan.
Industrial Sector	
Power Smart Partner – Transmission	Cumulative electricity savings in F2015 were above plan.
Thermo-Mechanical Pulp	No electricity savings were planned in F2015.
Power Smart Partner – Distribution	Cumulative electricity savings in F2015 were above plan.
Load Displacement	Cumulative energy savings were below plan in F2015 due to the delay of one project. No mitigation measures are warranted as planned cumulative electricity savings are expected to be achieved. Delays in load displacement projects are possible due to the long lead times for equipment delivery, installation and commissioning.
Capacity Focused DSM	No capacity savings were planned in F2015.

5 Operating Expenditures for F2015

BC Hydro’s DSM operating expenditures in F2015 totalled \$392,257.³ [Table 6](#) presents DSM operating expenditures in F2015.

Table 6 Operating Expenditures for F2015

	(\$000)
Labour	307
Consultants/Contractors/Temp Labour	28
Other	57
Total	392

³ DSM operating expenditures are not included in earlier tables.

6 Allocation of Supporting Initiative Costs to Programs

This section describes how supporting initiative costs are allocated to programs for the purpose of cost test calculations.

In keeping with Directive 61 from the Commission decision on the F05/F06 RRA, when calculating levelized costs and benefit-cost ratios for this report, supporting initiative costs are allocated to DSM programs and rate structures based on their share of DSM electricity savings in F2018. For example, rate structures and programs are forecast to save roughly 4,508 GWh/year in F2018, so a program that is forecast to save 45 GWh/year in F2018 represents 1 per cent of the total. In turn, 1 per cent of supporting initiative costs would be allocated to that program in each year when calculating the program's levelized cost or benefit-cost ratio.