



Richard Stout
Chief Regulatory Officer
Phone: (604) 623-4046
Fax: (604) 623-4407

March 7, 2005

Mr. Robert J. Pellatt
Commission Secretary
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

ie de l'énergie
DOSSIER: R-3550-2004
DÉPOSÉE EN AUDIENCE
Date: 16 juin 2005
Pièces n°: ACCIE/cifg-5

Dear Mr. Pellatt:

**RE: British Columbia Hydro and Power Authority ("BC Hydro")
Resource Expenditure and Acquisition Plan**

Pursuant to Subsection 45(6.1) of the *Utilities Commission Act*, BC Hydro is submitting the enclosed Resource Expenditure and Acquisition Plan (the REAP) for the British Columbia Utilities Commission's (the Commission) review and approval.

Application

As part of the Commission's review and approval process, BC Hydro requests the Commission to:

- (a) Determine that the plan and F2006-F2007 capital expenditures contemplated in the REAP are in the public interest;
- (b) Determine that:
 - (i) The plan contained in the REAP to meet the demand for electricity is in the interests of persons within British Columbia who receive, or who may receive, services from BC Hydro;
 - (ii) The F2006-F2009 forecast expenditures to acquire energy from other persons, which acquisitions will be made pursuant to existing Electricity Purchase Agreements, are in the interests of persons within British Columbia who receive, or who may receive, services from BC Hydro and ought to be recoverable in rates; and

- (c) Determine that the plan and F2006-F2007 expenditures contemplated in the REAP to reduce demand for energy are in the interests of persons within British Columbia who receive, or who may receive, services from BC Hydro.

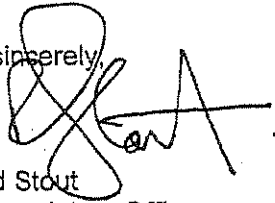
Communications

All communications in this proceeding are to be directed to the undersigned to the 17th Floor-333 Dunsmuir Street, Vancouver, BC V6B 5R3. For transmittals by electronic mail please address to regulatory.group@bchydro.com.

Service

BC Hydro will serve a copy of the REAP on the parties listed in Appendix 1 to this correspondence.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Richard Stout', written over a circular stamp or mark.

Richard Stout
Chief Regulatory Officer

Enclosure (20)

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1 4.3.0 Load Displacement

2 4.3.1 Planning Process

3 Load Displacement projects, as planned, are expected to achieve approximately 25%, or 900
4 GWh per year, of BC Hydro's DSM goal of 3,600 GWh per year by F2012. Currently, 524
5 GWh per year of the Load Displacement Plan (attached as Appendix C) have been achieved
6 or committed. The remainder is expected to be committed in F2006 and F2007, and
7 achieved through F2008, as shown in Table 1 of the Load Displacement Plan. Approximately
8 half of this remaining portion, or 188 GWh per year, will be new projects completed by F2007.

9 As directed in the RRA, Load Displacement Projects have been separated from the Energy
10 Efficiency programs. In line with Commission directives, portfolio level and sector enabling
11 costs have been allocated directly to the programs, including the Load Displacement
12 Program.

13 Load Displacement projects are those that result in the installation of new self-generation
14 facilities at customer sites, with the electricity generated being used on-site by the customer,
15 which results in a decrease in electricity purchased from BC Hydro. These projects are
16 generally large and displace a substantial portion of the customer's existing load, even to the
17 extent of total self-sufficiency. Load Displacement projects differ from Energy Efficiency
18 projects in that their primary driver is on-site generation on the demand side of the revenue
19 meter. They also differ from supply options, as they do not involve a sale of electricity to BC
20 Hydro.

21 The Commission Panel also determined that Load Displacement projects should be tested
22 against supply-side alternatives. As a result and as identified below in Section 4.3.2, any
23 contemplated investments under the Load Displacement program will be compared to supply
24 side alternatives.

1 4.3.2 Guiding Principles

2 In developing the Load Displacement Plan, the following set of Guiding Principles was
3 followed:

- 4 1. Justify and manage the business from an overall portfolio "bottom line" perspective, in a
5 way that is consistent with BC Hydro's budgeting and cost control policies.
- 6 2. The Plan's areas of focus are driven by identified Load Displacement opportunities.
- 7 3. Individual project cost-effectiveness must be demonstrated relative to supply side
8 alternatives.
- 9 4. Load Displacement projects must meet the BC Clean Electricity criteria.
- 10 5. Each project must have a RIM benefit/cost ratio ≥ 1.0 .
- 11 6. Each project must have a TRC benefit/cost ratio ≥ 1.0 .
- 12 7. Anticipate risks/changes and know how to respond.

13 4.3.2.1 Load Displacement Potential

14 BC Hydro has undertaken an inventory of Load Displacement opportunities and identified a
15 significant potential. Having contracted three Load Displacement projects totalling 524 GWh
16 per year, BC Hydro expects to contract additional projects totalling approximately 400 GWh
17 per year. These are generally from large pulp and paper mill operations with surplus hog fuel
18 availability within the region. To acquire this potential, BC Hydro plans to issue Requests for
19 Proposals (RFP) through the established Large Project Incentive (LPI) process and facilitate
20 detailed opportunity identification with customers. Identified projects will then be brought to
21 the Commission for approval. Further details of these action plans are included in Section
22 4.3.5.

23 4.3.2.2 Market Barriers

24 As described in Section 4.2.1.3, there are generally 5 market barriers that prevent cost-
25 effective project initiatives from being realized within a market (awareness, affordability,
26 availability, accessibility, and acceptability). Of these barriers, awareness and affordability are
27 prominent in limiting Load Displacement opportunities.

28 *Awareness:* Customers operate with a strong focus on their output performance and make
29 investments to improve or maintain their product market share. As customer operations have

1 been streamlined to maintain global competitiveness, fewer staff has been available to
2 investigate energy opportunities. As a result, Load Displacement projects are not explored in
3 detail and are overlooked.

4 *Affordability:* While customers require access to capital to maintain their business success,
5 any given company must prioritize projects within a specific capital-funding limit. Projects that
6 drive product quality or market share, or address regulatory/environmental requirements, are
7 invariably ranked higher and receive funding over projects that are not core to the company's
8 business or ongoing success. Load Displacement projects, while desirable from a cost
9 control perspective, are usually not among the highest priority or highest payback projects for
10 capital-constrained companies. As a result, viable Load Displacement opportunities are not
11 pursued.

12 **4.3.2.3 Strategic Elements**

13 The Load Displacement Plan is comprised of two key strategic elements.

14 1. *Electricity Demand Reduction* is the objective of the Plan, in which electricity savings are
15 achieved by offering opportunity identification assistance and/or incentives to customers
16 in the following areas:

- 17 • Technology upgrades and replacement;
- 18 • New facility design; and
- 19 • Capital constraint alleviation.

20 2. *Enabling Initiatives* support the implementation of electricity demand reduction activities
21 by establishing a general awareness and understanding about Load Displacement
22 opportunities. They include efforts in the areas of:

- 23 • Trade and product manufacturer liaison; and
- 24 • Public awareness, communication and education.

25 The dissemination of information and facilitation of relationships amongst and between
26 customers, trades and product manufacturers means enabling initiatives play a critically
27 important role in helping to identify and shape the opportunities.

1 **4.3.2.4 Acquisition Strategy**

2 Following the RRA Decision, BC Hydro launched the LPI, a competitive and transparent
3 process to acquire large Energy Efficiency and Load Displacement projects. The LPI process
4 seeks projects from customers (and any of their private sector partners) that required capital
5 funding from BC Hydro in excess of \$1 million. Large Energy Efficiency projects are included
6 within the LPI process, but costs and incentives associated with these projects are
7 incorporated within the Energy Efficiency Plan.

8 The LPI process used a Pre-Qualification and RFP process to solicit customer bids, each
9 project must meet the following selection criteria:

- 10 • Has a simple payback (before incentives) equal to or greater than two years
- 11 • Any Load Displacement projects must meet the BC Clean Electricity definition
- 12 • Has a RIM benefit/cost ratio ≥ 1.0 .
- 13 • Has a TRC benefit/cost ratio ≥ 1.0 .
- 14 • Has energy savings term up to 25 years
- 15 • Meets the financial credit and security requirements set by BC Hydro

16 The Load Displacement Plan uses the LPI process to solicit new Load Displacement
17 projects.

18 Through this approach, the inclusion of Load Displacement projects expands BC Hydro's
19 acquisition strategy for supply-side resources to include projects that would not otherwise be
20 captured by BC Hydro's energy supply calls. Due to inherent differences between a
21 generation project and a Load Displacement project (e.g. BC Hydro is not purchasing energy,
22 it is helping a customer purchase less; not the proponent's core business; installation
23 timelines driven by site processes; generation output dependant upon and tracks on-site
24 load; existing transmission interconnection, advance funding to eliminate capital barriers,
25 security on advance capital funding; flexible on delivery timing; profile and term), many of
26 these projects would not come to fruition without an alternative approach.

27 In addition to technical and business differences between Load Displacement and generation
28 projects, there can be customer driven barriers to projects, such as limited access to capital
29 and lack of technical expertise and senior management buy-in. The overall Load
30 Displacement Plan helps to address these market barriers by contributing to funding of
31 engineering studies, assisting the customer's executive team in understanding the

1 opportunities, and providing capital funding where required by the customer and cost
2 effective for BC Hydro.

3 **4.3.2.5 Changes from the RRA**

4 The Load Displacement Plan presented with this REAP reflects a number of changes from
5 the Load Displacement component of the Power Smart Plan presented with the RRA:

- 6 • Forecast cumulative electricity savings in F2012 are 146 GWh higher, reflecting the
7 successful contracting of the Weyerhaeuser and Canfor Load Displacement projects and
8 BC Hydro's updated estimate of the remaining achievable Load Displacement potential in
9 the province.
- 10 • BC Hydro's forecast costs over the 10-year period from F2003 to F2012 have increased
11 by \$2 million, reflecting increased costs associated with the additional electricity savings
12 and offsetting reductions in sector enabling and portfolio-level costs.
- 13 • Forecast incremental electricity savings in F2006 and F2007 are 369 GWh higher,
14 reflecting a shift in timing of the Canfor project and an advancement and concentration of
15 additional Load Displacement savings.
- 16 • BC Hydro's forecast costs in F2006 and F2007 are \$36 million higher, reflecting the costs
17 associated with the additional 369 GWh of electricity savings and offsetting reductions in
18 sector enabling and portfolio-level costs.

19 **4.3.3 Regulatory Requirements**

20 – *The Commission Panel disallows F2005 and F2006 total expenditures on Load
21 Displacement projects other than with respect to expenditures for projects with a contract
22 dated prior to the date of the Application. For the purpose of calculating the disallowed
23 amount, BC Hydro is directed to allocate, based on energy savings, the Sector Enabler
24 Costs, as well as Portfolio Level Costs directly associated with the Load Displacement
25 program. The calculation of the disallowed amount should be filed with the Commission
26 with the financial schedules to be filed as directed in Commission Order No. G-96-04,
27 issued with this Decision.*

28 The disallowed costs were filed with the Commission on November 15, 2004 and
29 subsequently accepted by the Commission on November 24, 2004.

1 – *The Commission Panel determines that Load Displacement projects should be*
2 *considered as supply side alternatives and accordingly directs BC Hydro to not proceed*
3 *with any new industrial Load Displacement projects as part of the Power Smart 10-Year*
4 *Plan. The Commission Panel directs that costs and benefits associated with all Load*
5 *Displacement projects be removed from the program statistics used for reporting the*
6 *costs and benefits of the overall Power Smart program and be removed from calculating*
7 *BC Hydro investment threshold tests, that is, the TRC, UC, and RIM.*

8 Load Displacement projects are considered along with supply side alternatives in Section 2.5
9 of this REAP.

10 The Power Smart plan has been separated into an Energy Efficiency Plan and a Load
11 Displacement Plan, attached as Appendix A and Appendix C respectively. The energy
12 targets, associated investments and evaluation methodology are dealt with separately in
13 Sections 4.2.0 and 4.3.0.

14 – *BC Hydro may apply on a project-by-project basis for approval of Load Displacement*
15 *projects; the Commission may then approve a deferral account for recovery of such*
16 *expenditures in future test periods.*

17 The action plan for Load Displacement shown in Section 4.3.5 sets out the investment levels
18 for both committed (per the allowed projects for F2005 and F2006) and prospective Load
19 Displacement projects for F2006 and F2007). Applications will be made to the Commission
20 for approval of any additional Load Displacement projects.

21 – *The Commission encourages BC Hydro to follow an appropriate competitive process for*
22 *Load Displacement projects if it pursues such projects in the future.*

23 BC Hydro has established a competitive process for DSM projects that require an incentive
24 greater than \$1 million. It is expected that all Load Displacement projects will fall into this
25 process.

26 **4.3.4 Program Status**

27 Load Displacement has been separated from Energy Efficiency. Committed projects are on
28 schedule.

1 4.3.5 Action Plan

- 2 • Monitor the performance of the current program and identify new Load Displacement
- 3 opportunities
- 4 • Solicit Load Displacement proposals through competitive processes
- 5 • Select Load Displacement projects for investment. Commission approval will be sought
- 6 as required.

7 4.3.5.1 Identify Load Displacement Opportunities

8 The identification of Load Displacement projects requires the co-ordinated efforts of BC
9 Hydro, customers, trade allies and product manufacturers. To achieve this end, the first
10 element of the action plan builds awareness of Load Displacement opportunities and
11 provides funding and technical assistance to customers wanting to identify Load
12 Displacement opportunities. Through this assistance, customers are able to assess their
13 Load Displacement potential and determine the cost-effectiveness for their operations and
14 facilities.

15 This support is comparable to that provided within the Energy Efficiency Plan to identify
16 projects, and fulfils similar market and customer needs with respect to Load Displacement.

17 4.3.5.2 Solicit Load Displacement Proposals

18 The second element of the action plan involves soliciting proposals for Load Displacement
19 projects in a competitive, fair and transparent manner. BC Hydro plans to employ the LPI
20 process to fulfil this element.

21 The LPI process will be implemented as a public process, with advertising in major daily
22 newspapers, and the BC Bid web site. Program details and forms will be provided on BC
23 Hydro's web site, with a question and answer section to ensure that all potential participants
24 have consistent information leading up to the RFP. To increase the degree of
25 competitiveness in selecting Load Displacement projects, BC Hydro is planning to include
26 Load Displacement projects of all sizes in the LPI process, not just those with an incentive in
27 excess of \$1 million. This process could be implemented up to twice per year as demand
28 warrants.

1 An evaluation template has been developed for customers to allow them to model the
2 selection criteria and explore various bid scenarios. This will ensure that the selection
3 process and criteria used are transparent to participants.

4 **4.3.5.3 Select Load Displacement Projects for Investment**

5 For any Load Displacement projects that are identified through the LPI process, the cost and
6 value of the project will be compared to supply-side alternatives. In addition, due to the
7 guiding principle requiring all Load Displacement projects to have a RIM benefit/cost ratio
8 greater than or equal to 1.0, selected projects will result in a net decrease in rates for all
9 ratepayers relative to other alternatives.

10 **4.3.6 Expected Performance**

11 Based on executing the Action Plan, Table 4-8 presents the Load Displacement Plan's
12 expected electricity savings and expenditures in F2005 through F2007. The figures
13 demonstrate considerable year-to-year variation. This is largely a result of the "lumpiness" of
14 Load Displacement projects. F2006 is forecast to have higher savings and expenditures than
15 F2005 or F2007 because the Canfor Load Displacement project is expected to come online
16 in that year.

17 Table 4-9 presents the cost test results for the Load Displacement Plan, with and without
18 allocated portfolio-level costs.

Table 4-8
Load Displacement Electricity Savings and Expenditures

	Net Incremental Electricity Savings at Customer Meter (GWh)			Expenditures (\$ 000)		
	F2005 Forecast	F2006 Plan	F2007 Plan	F2005 Forecast	F2006 Plan	F2007 Plan
Industrial Sector						
Load Displacement Committed prior to the RRA Forecast	147	371	6	16,832	47,649	1,030
Total	0	0	188	0	0	20,494
Sector Enabling Activities	147	371	194	16,832	47,649	21,524
Sector Total	n/a	n/a	n/a	117	243	270
	147	371	194	16,949	47,892	21,794
Portfolio Level Costs						
Public Awareness & Communications Indirect and Portfolio Enabling Activities Sub-Total	n/a	n/a	n/a	1,978	1,907	1,946
	n/a	n/a	n/a	2,441	2,177	2,221
	n/a	n/a	n/a	4,419	4,085	4,167
Portfolio Total	147	371	194	21,368	51,977	25,961

Table 4-9
Results of Load Displacement Cost Test for Period F2003 to F2022

	Portfolio Level Costs Allocated to Program						Portfolio Level Costs Not Allocated to Program					
	Utility Cost		Total Resource Cost		Rate Impact Measure		Utility Cost		Total Resource Cost		Rate Impact Measure	
	Levelized Cost (\$/kWh)	Benefit Cost Ratio	Levelized Cost (\$/kWh)	Benefit Cost Ratio	Levelized Cost (\$/kWh)	Benefit Cost Ratio	Levelized Cost (\$/kWh)	Benefit Cost Ratio	Levelized Cost (\$/kWh)	Benefit Cost Ratio	Levelized Cost (\$/kWh)	Benefit Cost Ratio
Industrial Sector	0.015	3.3	0.030	1.6	0.047	1.0	0.011	4.3	0.026	1.8	0.044	1.1
Load Displacement Sector Total	0.015	3.2	0.030	1.6	0.047	1.0	0.011	4.2	0.026	1.6	0.044	1.1
Portfolio Level Costs	0.000	n/a	0.000	n/a	0.000	n/a	0.003	n/a	0.003	n/a	0.003	n/a
Portfolio Total	0.015	3.2	0.030	1.6	0.047	1.0	0.015	3.2	0.030	1.6	0.047	1.0



Appendix C

Load Displacement Plan

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1 Planning Assumptions and Glossary

Base Year & Planning Horizon	<p>The base year is F2003, comprising the twelve months ended March 31, 2003, and including expenditures and electricity savings from the latter part of F2002.</p> <p>BC Hydro costs occur for 10 fiscal years, from F2003 through F2012, while electricity savings and customer costs occur over 20 fiscal years, from F2003 through F2022.</p>
Inflation	<p>Inflation of 2.0% has been applied to BC Hydro and customer costs.</p>
Discount Rates	<p>Streams of nominal costs and benefits are discounted at 8%, which is BC Hydro's corporate nominal discount rate.</p> <p>In the levelized cost calculations, streams of electricity savings are discounted at 6%, equivalent to BC Hydro's corporate real discount rate.</p>
Avoided cost	<p>Electricity savings are valued using the scenario average of BC Hydro's September 2004 electricity price forecast, with the exception of savings in F2003 and F2004, for which actual prices are used. This is assumed to reflect the electricity supply cost that is avoided due to Load Displacement.</p>
Tariffs	<p>The following tariffs were used to calculate customer bill savings and lost revenues, starting in F2003 and inflated by the assumed rate increases noted below.</p> <p>Industrial: 3.61 cents/kWh, which is a blended tariff assuming 85% at the transmission (1821) tariff of 3.30 cents/kWh and 15% at the blended commercial/government tariff. The 85/15 split is based on BC Hydro's estimate of the achievable electricity savings in the industrial sector, drawing from the 2003 Conservation Potential Review.</p>
Rate Increases	<p>The following rate increases were assumed:</p> <ul style="list-style-type: none">• F2003 0%• F2004 0%• F2005 4.85%• F2006 0%• F2007 and all subsequent years: 1% per year
Stepped Rates	<p>This plan does not reflect the potential impact of the introduction of stepped rates for large industrial customers.</p>
Line Losses	<p>BC Hydro estimates electricity savings at the customer meter. Cost tests are calculated at regional transmission in order to match the</p>

point of interconnection of electricity supply. This requires an adjustment of the electricity savings to account for line losses. The following line loss assumptions were employed:

Industrial sector: 3.6%, which is the weighted average of 85% at 3% and 15% at 7%. 3% is the estimated line losses between regional transmission and industrial customers connected at transmission voltage levels.

**Adjustments
Monitoring &
Verification**

Gross electricity savings are adjusted for the potential for new information from monitoring and verification activities, in order to arrive at net electricity savings which are used in the cost-effectiveness calculations.

Load displacement projects are inspected by BC Hydro staff one year following commissioning to verify the resulting electricity savings. For planning purposes, BC Hydro assumes that these verification inspections will lead to a reduction in electricity savings of 5%.

**Persistence of
electricity savings**

Persistence is the period of time during which electricity savings can be attributed to programs.

**Degradation of
electricity savings**

Degradation is the reduction in electricity savings from Load Displacement projects that do not persist at the full level beyond their contracted term.

**Public Awareness
and
Communication
Costs**

These costs fund 8 initiatives that increase public awareness and education around demand side management: Power Smart outreach, public education and information advertising; primary and secondary school education, sponsorships and events, public relations, internet, key customer recognition, and the Power Smart information telephone line.

**Indirect and
Portfolio Enabling
Costs**

Indirect costs consist of administration, research, quality assurance, evaluation, customer information management and tracking systems, training, and non-program specific labour and support costs.

**Net Customer
Cost**

This is the net cost to the customer of the load displacement project. It equals the project cost (total or incremental, depending on the situation and data availability) less incentives or rebates received from BC Hydro.

Utility Cost

Utility cost is the sum of BC Hydro costs, not including lost revenues.

**Total Resource
Cost**

Total resource cost is the sum of utility costs and net customer costs.

2 Changes from Previous Power Smart 10 Year Plan

The plan presented in this appendix incorporates a number of changes from the Power Smart 10 Year Plan included in BC Hydro's F2005/F2006 Revenue Requirements Application. Key changes are the following.

General

In keeping with the BCUC's directive to separate load displacement from the Power Smart plan for the purpose of regulatory reporting and cost-effectiveness analysis, this plan contains information on BC Hydro's load displacement program.

Assumptions

Discount rate: In the levelized cost calculations, electricity savings are discounted at 6%, down from the 8% used in the Power Smart plan, to align with BC Hydro's resource planning practice.

Rate increases: Increases of 4.85%, 0% and 1% are assumed in F2005, F2006 and F2007 and all subsequent years, respectively, up from 0% in all years.

Avoided cost: Electricity savings are valued using BC Hydro's September 2004 electricity price forecast, rather than the weighted average price from BC Hydro's 2002/03 call for green energy supply which was used for the Power Smart plan, to align with BC Hydro's resource planning practice.

Avoided greenhouse gas regulatory cost: These are assumed to be zero, down from \$3 per tonne in the Power Smart plan, to align with BC Hydro's resource planning practice. BC Hydro is reviewing this assumption as part of the 2005 Integrated Electricity Plan.

Inputs

The plan includes projects that meet BC Hydro's definition of load displacement, namely "the installation of new self-generation facilities at customer sites". It does not include industrial self-generation optimization projects that were included in the Load Displacement program within the Power Smart plan. These projects are now included in the Industrial Power Smart Partners program within the Energy Efficiency Plan.

The plan includes actuals for electricity savings and BC Hydro costs in F2003 and F2004. The Power Smart plan included forecast figures for these two fiscal years.

Forecast electricity savings, BC Hydro costs and net customer costs (and therefore total resource costs and customer bill savings) in F2005 and future years have been updated in light of new information on load displacement projects and opportunities. More specifically:

- The plan is expected to achieve 906 GWh of electricity savings by F2012, up from 760 GWh in the Power Smart plan. This reflects the successful contracting of the Weyerhaeuser and Canfor load

displacement projects and BC Hydro's updated estimate of the remaining achievable load displacement potential in the province.

- The plan is expected to involve BC Hydro costs of \$145 million over 10 years, up from \$103 million in the Power Smart plan. This reflects the costs associated with the additional electricity savings as well as the allocation of DSM portfolio-level costs.

3 Tables

This section presents a series of tables detailing actual (F2003 and F2004) and forecast (F2005 – F2022) electricity savings, costs, benefits and cost test results. Costs and benefits are in nominal dollars.

Table 1. Electricity Savings, Costs and Benefits

	Fiscal Year										10 Year Total	
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
Electricity Savings at Customer Meter (GWh)												
Net Incremental	0	0	147	371	194	194	0	0	0	0	0	906
Net Cumulative	0	0	147	518	712	906	906	906	906	906	906	n/a
BC Hydro Costs (\$ 000)												
Direct Program	0	0	1,330	1,859	1,178	1,070	641	0	0	0	0	6,078
Incentives	0	0	16,822	45,790	20,347	21,579	0	0	0	0	0	104,538
Allocated Portfolio Level Costs	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	0	0	18,152	47,649	21,524	22,649	641	0	0	0	0	110,616
Sector Enabling Activities Portfolio Level Activities	596	216	215	243	270	279	99	99	99	99	99	2,213
Portfolio Total	6,401	4,818	22,960	51,977	25,961	25,913	2,773	1,656	1,424	1,316	1,316	145,198
Net Customer Costs (\$ 000)	0	0	21,909	68,971	27,889	29,578	0	0	0	0	0	148,348
Total Resource Costs (\$ 000)	6,401	4,818	44,869	120,948	53,850	55,492	2,773	1,656	1,424	1,316	1,316	283,546
Customer Bill Savings (\$ 000)	0	0	5,558	19,585	27,189	34,943	35,293	35,646	36,002	36,362	36,362	230,579

Table 1. Electricity Savings, Costs and Benefits (continued)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	20 Year Total
Electricity Savings at Customer Meter (GWh)											
Net Incremental	0	-11	-27	-70	-31	-31	-33	-81	-209	-92	320
Net Cumulative	906	895	868	798	767	736	703	622	412	320	n/a
BC Hydro Costs (\$ 000)											
Direct Program	0	0	0	0	0	0	0	0	0	0	6,078
Incentives	0	0	0	0	0	0	0	0	0	0	104,538
<u>Allocated Portfolio Level Costs</u>	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	0	0	0	0	0	0	0	0	0	0	110,616
Sector Enabling Activities	0	0	0	0	0	0	0	0	0	0	2,213
Portfolio Level Activities	0	0	0	0	0	0	0	0	0	0	32,369
Portfolio Total	0	0	0	0	0	0	0	0	0	0	145,198
Net Customer Costs (\$ 000)	0	0	0	0	0	0	0	0	0	0	148,348
Total Resource Costs (\$ 000)	0	0	0	0	0	0	0	0	0	0	293,546
Customer Bill Savings (\$ 000)	36,725	36,629	35,878	33,323	32,369	31,355	30,243	27,021	18,105	14,188	526,413

Table 2. Cost Test Results

As per the BCUC's directive to BC Hydro, portfolio-level costs have been allocated to programs in the calculation of these results.

	Utility Cost		Total Resource Cost (TRC)		Rate Impact Measure (RIM)	
	Levelized Cost (\$/kWh)	Benefit Cost Ratio	Levelized Cost (\$/kWh)	Benefit Cost Ratio	Levelized Cost (\$/kWh)	Benefit Cost Ratio
Industrial Sector						
Load Displacement	0.015	3.3	0.030	1.6	0.047	1.0
Sector Total	0.015	3.2	0.030	1.6	0.047	1.0
Portfolio Level Costs	0.000	n/a	0.000	n/a	0.000	n/a
Portfolio Total	0.015	3.2	0.030	1.6	0.047	1.0