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Ontario Energy Board
27th Floor
2300 Yonge Street
Toronto, ON
M4P 1E4

December 21, 2009

Dear Ms. Walli,

RE: EB-2009-0259
2010 Electricity Distribution Rate Application for Burlington Hydro Inc.
Responses to Supplementary Interrogatories

Please find attached the responses to supplementary interrogatories related to the 2010 Cost of Service Electricity Distribution Rate Application from Burlington Hydro Inc ("BHI"), requesting new distribution rates effective May 1, 2010.

BHI has included two paper copies and one CD with all electronic files. BHI has also filed through the Board's web portal at www.err.oeb.gov.on.ca.

I can be reached at 905-332-2265 should anything further be required.

Yours truly,

Original signed by

Michael Kysley
Executive Vice-President and Chief Financial Officer



Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 1

Question:

Harmonized Sales Tax

Ref: response to Interrogatory from Energy Probe #1

It is possible that the PST and GST may be harmonized effective July 1, 2010. Unlike the GST, the PST is included as an OM&A expense and is also included in capital expenditures. If the GST and PST are harmonized, corporations would see a reduction in OM&A expenses and capital expenditures.

In the event that PST and GST are harmonized effective July 1, 2010:

- a) Would Burlington agree to capture in a variance account the reductions in OM&A and capital expenditures?
- b) Are there any other alternatives that the Board might consider to reflect the reductions in OM&A and capital expenditures if this bill is enacted?

Response:

- a) As identified in the response to Interrogatory #1 from Energy Probe, Burlington would agree to capture reductions in OM&A and capital expenditures in a variance account, should that be the direction of the OEB. Burlington does note that we have concern with the additional administrative burden and associated costs associated with the processing and tracking of invoices subject to the HST, and determination of which would have had associated PST.
- b) In this same response, Burlington provided estimated total year values of \$72,728 and \$344,929 as the estimated costs of PST in the OM&A and Capital 2010 test year respectively. To reflect a July 1, 2010 implementation, Burlington would be agreeable to the removal of 50% these costs from the 2010 test year revenue requirement.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 2

Question:

Tree Trimming

Ref: response to Interrogatory from Board Staff #10

- a) Please provide an explanation as to what type of costs would be classified as miscellaneous expenditures.
- b) Please complete the following table for Tree Trimming expenditures.

ITEM	2010	2011	2012	2013
Annual Expenditure				
Miscellaneous Expenditure				
Total				
Year-to-year Variance (\$)				
Year-to-year Variance (%)				

Response:

- a) A miscellaneous expenditure is practically all tree trimming work outside of the annual tree trimming area contract. Examples of these expenditures are:
- Tree clearing due to storm damage or old and diseased trees that no longer can support the weight of the limbs and requires clearing mitigate damages and hazards.
 - Customer calls reporting branches in conflict near hydro lines not within the annual tree trimming area. In some cases the problem falls within the annual tree trimming area but must be trimmed before the scheduled crew deployment due to the severity.
 - Coordinating the removal of a customer's tree or City tree in the vicinity of the hydro lines by cutting a portion of the tree, thus creating a safe working environment for the customer's tree trimming contractor or City's contractor to remove the balance of the tree.

- b) Please see the following table:

ITEM	2010	2011	2012	2013
Annual Expenditure	\$341,421	\$257,200	\$350,870	\$348,000
Miscellaneous Expenditure	\$107,100	\$107,100	\$107,100	\$109,000
Total	\$448,521	\$364,300	\$457,970	\$457,000
Year-to-year Variance (\$)	\$124,843	-\$84,221	\$93,670	-\$970
Year-to-year Variance (%)	38.57%	-18.78%	25.71%	-0.21%

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 3

Question:

One-Time Costs

Ref: Response to Interrogatory from Board Staff #13

Please confirm that the one-time costs totaling \$34,300 have been amortized over 4 years.

Response:

The one-time costs identified have not been amortized and have been included in full in the 2010 test year. As indicated in response to the interrogatory #54 from Energy Probe, these costs are incurred every three years.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 4

Question:

Load Forecasting Methodology

Ref: Response to Interrogatory from Energy Probe #11 (a)

In its response to the above interrogatory, Burlington stated that:

When number of customers and population were both eliminated the resulting equation did not have any negative co-efficients that were not explainable but the equation had a R-square that was lower than the result when the number of customers were included.

Please provide the results of the regression analysis by eliminating both number of customers and population. Please include the resulting coefficients, t-statistics, regression statistics, and the volume forecast for 2009 and 2010 (using all 3 weather normals).

Response:

The results of the regression analysis by eliminating both number of customers and population are provided below which includes the resulting coefficients, t-statistics, regression statistics, and the volume forecast for 2009 and 2010 (using all 3 weather normals).

Statistic	Value
R Square	94.4%
Adjusted R Square	94.1%
F Test	415.8
Estimated Coefficient Values	
Intercept	(70,876,688)
Heating Degree Days	22,602
Cooling Degree Days	315,260
Ontario Real GDP Monthly %	674,253
Number of Days in Month	3,250,747
Spring Fall Flag	(5,291,116)
Number of Peak Hours	44,234
T-stats by Coefficient	
Intercept	(5.6)
Heating Degree Days	11.0
Cooling Degree Days	19.6
Ontario Real GDP Monthly %	32.8
Number of Days in Month	8.1
Spring Fall Flag	(6.3)

Year	Actual	Predicted	% Difference
Purchased Energy (GWh)			
1996	1,397.5	1,417.1	1.4%
1997	1,416.7	1,423.1	0.5%
1998	1,475.5	1,490.0	1.0%
1999	1,556.1	1,558.5	0.2%
2000	1,598.0	1,579.2	(1.2%)
2001	1,637.9	1,627.4	(0.6%)
2002	1,716.0	1,691.6	(1.4%)
2003	1,689.6	1,675.5	(0.8%)
2004	1,712.3	1,678.1	(2.0%)
2005	1,803.8	1,768.8	(1.9%)
2006	1,740.5	1,746.8	0.4%
2007	1,768.8	1,800.1	1.8%
2008	1,716.7	1,773.2	3.3%
2009 Actual (J-A) and Weather Normal for remaining		1,737.5	
2010 Weather Normal - 13 year average		1,772.6	
2010 Weather Normal - 10 year average		1,776.2	
2010 Weather Normal - 20 year trend		1,781.3	

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 5

Question:

Load Forecasting Methodology

Ref: Response to Interrogatory from Board Staff #7

Please provide a load forecast for 2009 and 2010 using the normalized average consumption approach.

Response:

A load forecast on a billed basis for 2009 and 2010 using the 2004 annual average weather normalized use per customer (as provided in the response to interrogatory #16 from VECC), is provided below:

Rate Class	2004 NAC (kWh/customer connection)	2009 Customer /Connections	2010 Customer /Connections	2009 Forecast (kWh)	2010 Forecast (kWh)
Residential	9,812	57,451	58,643	563,692,595	575,385,016
GS<50	36,998	4,926	5,028	182,259,040	186,041,105
GS>50kW	958,872	1,021	1,030	978,842,016	987,379,144
Street Lighting	644	14,526	14,673	9,355,940	9,450,892
USL	6,975	602	602	4,198,814	4,198,814
Total		78,526	79,977	1,738,348,405	1,762,454,971

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 6

Question:

Subdivisions Assumed

Ref: Response to Interrogatory from Board Staff #3
Response to Interrogatory from Energy Probe #7

- a) Please provide a table containing the forecasts for 2010, 2011, 2012 and 2013 for the subdivision assumed project. Include year-to-year dollar and percentage variances.
- b) Please explain all year-to-year variances.

Response:

The forecast budget amounts for the line item of subdivisions assumed is \$2 million per year for the years 2010-2013. There is no year-to-year variance.

Burlington notes that per Accounting Procedures Handbook, (Article 410), "Contributions in aid of construction received in the form of service on property should be recorded in the capital asset accounts with an equal and offsetting entry to contra asset account 1995, Contributions and Grants – credit. Accordingly, there are offsetting credit entries forecasted for these years of \$2 million (\$1.4 million for subdivisions assumed and \$0.6 million for transformers installed) included in account 1995. This line item therefore has no direct impact on the ratebase forecast.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 7

Question:

Global Adjustment

Ref: Response to Interrogatory from Board Staff #3

- a) Please identify separately, the balance associated with the Global Adjustment sub-account in Account 1588 Power as of December 31, 2008 for the principal balance and April 30, 2010 for carrying charges.
- b) Please confirm that the GA principal balance propose for disposition is based on the procedures identified by the Accounting Procedures Handbook.
- c) Please provide an allocation of the December 31, 2008 balance of the GA sub-account (plus interest to April 30, 2010) based on the 2008 kWh for non-RPP customers.
- d) Please calculate a separate rate rider for the recovery of the proposed GA balance using the allocated amounts in part 3 and the 2010 non-RPP consumption data (kWh or kW as applicable) as the billing determinant.
- e) Please provide a variation on Exhibit 9/Tab 2/Schedule 2/Page 3 excluding the Power (GA) sub-account from the calculations.
- f) Please calculate a separate rate rider for the recovery of the proposed balance of subaccount Power – Global Adjustment of account 1588 using the amounts shown in 2010 and the 2010 non-RPP consumption data (kWh or kW as applicable) as the billing determinant. If Burlington does not have a forecast for 2010 non-RPP consumption data, please use 2008 actuals to determine this rate rider.
- g) If Burlington were to establish a separate rate rider to dispose of the balance of the Power (Global Adjustment) sub-account of account 1588, please provide Burlington's views as to whether this rate rider would be applicable to MUSH ("Municipalities, Universities, Schools and Hospitals") sector customers.
- h) If the answer to e) is negative, does Burlington have the capability in its billing system to exclude MUSH sector customers to which the separate rate rider for the for the disposition of the account 1588 subaccount Power (Global Adjustment) Balance would apply?

Response:

- a) The balance associated with the Global Adjustment sub-account as of December 31, 2008 for principal is \$1,063,629, and including carrying charges to April 30, 2010 is \$1,076,240.
- b) Burlington confirms that the GA principal balance propose for disposition is based on the procedures identified by the Accounting Procedures Handbook.
- c) The allocation of the GA sub-account balance allocated based on 2008 kWh for non-RPP customers is shown on page 5 of this response.
- d) The calculation of a separate GA sub-account rate rider is shown on page 5 of this response. A summary of the rate riders is shown below.

Rate Rider Calc. - Global Adjustment Sub-Account		
Customer Class	GA Sub-Account	
	per kWh	per kW
Residential	0.0003	
General Service <50 kW	0.0003	
General Service >50 kW		0.1241
Street Lighting		0.1139
Unmetered Scattered Load	0.0003	

- e) Pages 6 through 8 provide the derivation of the rate riders for all balances requested at Exhibit 9/Tab 2/Schedule 2 excluding the GA sub-account. A summary of the rate riders is provided below.

Rate Rider Calculation - Excluding Global Adjustment Sub-Account						
Customer Class	RSVA Accounts		non-RSVA Accounts		Total	
	per kWh	per kW	per kWh	per kW	per kWh	per kW
Residential	(0.0006)		0.0001		(0.0005)	
General Service <50 kW	(0.0006)		0.0000		(0.0005)	
General Service >50 kW		(0.2164)		(0.0252)		(0.2417)
Street Lighting		(0.2010)		(0.0892)		(0.2903)
Unmetered Scattered Load	(0.0006)		0.0001		(0.0004)	

- f) Please see part (d) of this response.
- g) If a separate rate rider was established to dispose of the Global Adjustment sub-account, Burlington would propose that this be applied to all non-RPP customers, including any customers previously designated as MUSH. The majority of MUSH customers in the Burlington area have been with energy retailers over the past few years and have not been impacted by the November 2009 change in eligibility.
- h) Not applicable.

SHEET 1 - December 31, 2008 Deferral and Variance Accounts

NAME OF UTILITY	Burlington Hydro Inc.
NAME OF CONTACT	
E-mail Address	
VERSION NUMBER	ONLY RSVA - Power (Global Adjustment)
Date	21-Dec-09

LICENCE NUMBER	
DOCID NUMBER	EB-2009-0259
PHONE NUMBER	
(extension)	

Note to User - You may want to add others

Enter appropriate data in cells which are highlighted in yellow only.

Enter the total applied for Deferral and Variance amounts for each account in the appropriate cells below:

Account Description	Account Number	Principal Amounts as of Dec-31 2008	Interest to Dec31-08	Interest Jan-1 to Dec31-09	Interest Jan1-10 to Apr30-10	Total Claim
RSVA - Wholesale Market Service Charge	1580					\$ -
RSVA - One-time Wholesale Market Service	1582					\$ -
RSVA - Retail Transmission Network Charge	1584					\$ -
RSVA - Retail Transmission Connection Charge	1586					\$ -
RSVA - Power (excluding Global Adjustment)	1588					\$ -
RSVA - Power (Global Adjustment)	1588	\$ 1,063,629	\$ (1,338)	\$ 12,026	\$ 1,923	\$ 1,076,240
Sub-Totals		\$ 1,063,629	\$ (1,338)	\$ 12,026	\$ 1,923	\$ 1,076,240
Other Regulatory Assets - OEB Cost Assessments	1508					\$ -
Other Regulatory Assets - Pension Contributions	1508					\$ -
Retail Cost Variance Account - Retail	1518					\$ -
Retail Cost Variance Account - STR	1548					\$ -
Misc. Deferred Debits	1525					\$ -
Smart Meters Revenue and Capital	1555					\$ -
Smart Meter Expenses	1556					\$ -
Low Voltage	1550					\$ -
CDM	1565					\$ -
CDM Contra	1566					\$ -
Other Deferred Credits	2425					\$ -
Recovery of Regulatory Asset Balances	1590					\$ -
Sub-Totals		\$ -	\$ -	\$ -	\$ -	\$ -
Totals per column		\$ 1,063,629	\$ (1,338)	\$ 12,026	\$ 1,923	\$ 1,076,240

Annual interest rate: 3.35%

Enter the appropriate 2010 data in the cells below.

Once the data in the yellow fields on Sheet 1 has been entered, the relevant allocations will appear on Sheet 2.

Go to Sheets 3 and 4 and enter the appropriate data in the yellow cells.

2010 Data By Class	kW	kWhs	Non-RPP kW	Non-RPP kWhs	Cust. Num.'s	2006 EDR Recovery Allocation	Cust #'s w/ Rebate Cheques	Dx Revenue
RESIDENTIAL CLASS		520,407,965		46,472,431	58,643	3,002,897	43,544	\$ 17,872,017
GENERAL SERVICE <50 KW CLASS		171,414,280		28,489,053	5,028	888,254	4,139	\$ 4,074,973
GENERAL SERVICE >50 KW NON TIME OF USE	2,343,504	910,133,799	1,951,626	763,420,230	1,030	4,786,601	201	\$ 7,330,390
GENERAL SERVICE >50 KW TIME OF USE								
STANDBY								
LARGE USER CLASS								
UNMETERED & SCATTERED LOADS		3,918,008		25,075	602	23,869	0	\$ 149,415
SENTINEL LIGHTS								
STREET LIGHTING	26,120	9,421,002	26,044	9,349,402	14,673	20,515	2	\$ 134,500
Totals	2,369,624	1,615,295,054	1,977,670	847,756,193	79,977	8,722,136	47,886	\$ 29,561,295

Allocators	kW	kWhs	Non-RPP kWhs	Non-RPP kWhs	Cust. Num.'s	2006 EDR Recovery Allocation	Cust #'s w/ Rebate Cheques	Dx Revenue
RESIDENTIAL CLASS	0.0%	32.2%	0.0%	5.5%	73.3%	34.4%	90.9%	60.5%
GENERAL SERVICE <50 KW CLASS	0.0%	10.6%	0.0%	3.4%	6.3%	10.2%	8.6%	13.8%
GENERAL SERVICE >50 KW NON TIME OF USE	98.9%	56.3%	98.7%	90.1%	1.3%	54.9%	0.4%	24.8%
GENERAL SERVICE >50 KW TIME OF USE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
STANDBY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LARGE USER CLASS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
UNMETERED & SCATTERED LOADS	0.0%	0.2%	0.0%	0.0%	0.8%	0.3%	0.0%	0.5%
SENTINEL LIGHTS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
STREET LIGHTING	1.1%	0.6%	1.3%	1.1%	18.3%	0.2%	0.0%	0.5%
Totals	100%	100%	100%	100%	100%	100%	100%	100%

Sheet 2 - Rate Riders Calculation

NAME OF UTILITY
NAME OF CONTACT
E-mail Address
VERSION NUMBER
Date

Burlington Hydro Inc.

LICENCE NUMBER
DOCID NUMBER EB-2009-0259

ONLY RSVA - Power (Global Adjustment)
21-Dec-09

PHONE NUMBER
(extension)

Deferral and Variance Accounts:	Amount	ALLOCATOR	Residential	GS < 50 KW	GS > 50 Non TOU	Small Scattered Load	Street Lighting	Total
WMSC - Account 1580	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
One-Time WMSC - Account 1582	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Network - Account 1584	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Connection - Account 1586	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Power (excluding Global Adj)- Account 1588	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Power (Global Adjustment) - Account 1588	\$ 1,076,240	kWh non-RPP customers	\$ 58,997	\$ 36,167	\$ 969,174	\$ 32	\$ 11,869	\$ 1,076,240
Subtotal - RSVA	\$ 1,076,240		\$ 58,997	\$ 36,167	\$ 969,174	\$ 32	\$ 11,869	\$ 1,076,240
Other Regulatory Assets - Account 1508	\$ -	Dx Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Regulatory Assets - Account 1508	\$ -	Dx Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retail Cost Variance Account - Acct 1518	\$ -	# of Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Retail Cost Variance Account (STR) Acct 1548	\$ -	# of Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Misc. Deferred Debits - Account 1525	\$ -	# cust w/ rebate Cheq	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Low Voltage - Account 1550	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CDM	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CDM Contra	\$ -	kWh	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recovery of Regulatory Asset Balances	\$ -	2006 EDR Allocation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal - Non RSVA, Variable	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Smart Meters Revenue and Capital, 1555 (Fixed)	\$ -	# of Metered Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Smart Meter Expenses, 1556 (Fixed)	\$ -	# of Metered Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal - Non RSVA Fixed	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total to be Recovered	\$ 1,076,240		\$ 58,997	\$ 36,167	\$ 969,174	\$ 32	\$ 11,869	\$ 1,076,240

Balance to be collected or refunded, Variable	\$ 1,076,240	\$ 58,997	\$ 36,167	\$ 969,174	\$ 32	\$ 11,869	\$ 1,076,240
Balance to be collected or refunded, Fixed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Number of years for Variable	4						
Number of years for Fixed	4						
Balance to be collected or refunded per year, Variable	\$ 269,060	\$ 14,749	\$ 9,042	\$ 242,294	\$ 8	\$ 2,967	\$ 269,060
Balance to be collected or refunded per year, Fixed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Class
Deferral and Variance Account Rate Riders, Variable
Billing Determinants
Deferral and Variance Account Rate Riders, Fixed (per month)
Billing Determinants

Residential	GS < 50 KW	GS > 50 Non TOU	Scattered Load	Street Lighting
\$ 0.0003	\$ 0.0003	\$ 0.1241	\$ 0.0003	\$ 0.1139
kWh	kWh	kW	kWh	kW
\$ -	\$ -	\$ -	\$ -	\$ -
# metered cust.	# metered cust.	# metered cust.		

SHEET 1 - December 31, 2008 Deferral and Variance Accounts

NAME OF UTILITY	Burlington Hydro Inc.
NAME OF CONTACT	
E-mail Address	
VERSION NUMBER	NO RSVA - Power (Global Adjustment)
Date	21-Dec-09

LICENCE NUMBER
DOCID NUMBER
PHONE NUMBER
(extension)

EB-2009-0259

Note to User - You may want to add others

Enter appropriate data in cells which are highlighted in yellow only.

Enter the total applied for Deferral and Variance amounts for each account in the appropriate cells below:

Account Description	Account Number	Principal Amounts as of Dec-31 2008	Interest to Dec31-08	Interest Jan-1 to Dec31-09	Interest Jan1-10 to Apr30-10	Total Claim
RSVA - Wholesale Market Service Charge	1580	\$ (3,892,432)	\$ (63,798)	\$ (37,530)	\$ (6,002)	\$ (3,999,762)
RSVA - One-time Wholesale Market Service	1582	\$ 251,781	\$ 35,938	\$ 2,397	\$ 383	\$ 290,500
RSVA - Retail Transmission Network Charge	1584	\$ (1,003,791)	\$ 77,818	\$ (5,078)	\$ (812)	\$ (931,864)
RSVA - Retail Transmission Connection Charge	1586	\$ (301,032)	\$ 65,557	\$ 2,148	\$ 344	\$ (232,984)
RSVA - Power (excluding Global Adjustment)	1588	\$ 684,320	\$ 578,871	\$ 7,738	\$ 2,267	\$ 1,273,196
RSVA - Power (Global Adjustment)	1588					\$ -
Sub-Totals		\$ (4,261,154)	\$ 694,386	\$ (30,325)	\$ (3,820)	\$ (3,600,914)
Other Regulatory Assets - OEB Cost Assessments	1508	\$ 190,168	\$ 21,803	\$ 2,150	\$ 344	\$ 214,465
Other Regulatory Assets - Pension Contributions	1508	\$ 561,924	\$ 76,967	\$ 6,336	\$ 1,013	\$ 646,241
Retail Cost Variance Account - Retail	1518	\$ (50,137)	\$ 136	\$ (523)	\$ (84)	\$ (50,608)
Retail Cost Variance Account - STR	1548	\$ (6,741)	\$ (513)	\$ (76)	\$ (12)	\$ (7,342)
Misc. Deferred Debits	1525	\$ 11,413	\$ 1,607	\$ 132	\$ 21	\$ 13,174
Smart Meters Revenue and Capital	1555			\$ -	\$ -	\$ -
Smart Meter Expenses	1556			\$ -	\$ -	\$ -
Low Voltage	1550	\$ (195,556)	\$ (2,088)	\$ (1,981)	\$ (317)	\$ (199,941)
CDM	1565	\$ 7,771	\$ 200	\$ -	\$ -	\$ 7,971
CDM Contra	1566	\$ (7,771)	\$ (200)	\$ -	\$ -	\$ (7,971)
Other Deferred Credits	2425			\$ -	\$ -	\$ -
Recovery of Regulatory Asset Balances	1590	\$ (2,215,017)	\$ 1,630,603	\$ (25,045)	\$ (4,005)	\$ (613,465)
Sub-Totals		\$ (1,703,945)	\$ 1,728,515	\$ (19,006)	\$ (3,039)	\$ 2,525
Totals per column		\$ (5,965,099)	\$ 2,422,900	\$ (49,331)	\$ (6,859)	\$ (3,598,389)
Annual interest rate:		3.35%				

Enter the appropriate 2010 data in the cells below.
 Once the data in the yellow fields on Sheet 1 has been entered, the relevant allocations will appear on Sheet 2.
 Go to Sheets 3 and 4 and enter the appropriate data in the yellow cells.

2010 Data By Class	kW	kWhs	Non-RPP kWhs	Cust. Num.'s	2006 EDR Recovery Allocation	Cust #'s w/ Rebate Cheques	Dx Revenue
RESIDENTIAL CLASS		520,407,965	46,472,431	58,643	3,002,897	43,544	\$ 17,872,017
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GENERAL SERVICE >50 KW TIME OF USE							
STANDBY							
LARGE USER CLASS							
UNMETERED & SCATTERED LOADS		3,918,008	25,075	602	23,869	0	\$ 149,415
SENTINEL LIGHTS							
STREET LIGHTING	26,120	9,421,002	9,349,402	14,673	20,515	2	\$ 134,500
Totals	2,369,624	1,615,295,054	847,756,193	79,977	8,722,136	47,886	\$ 29,561,295

Allocators	kW	kWhs	Non-RPP kWhs	Cust. Num.'s	2006 EDR Recovery Allocation	Cust #'s w/ Rebate Cheques	Dx Revenue
RESIDENTIAL CLASS	0.0%	32.2%	5.5%	73.3%	34.4%	90.9%	60.5%
GENERAL SERVICE <50 KW CLASS	0.0%	10.6%	3.4%	6.3%	10.2%	8.6%	13.8%
GENERAL SERVICE >50 KW NON TIME OF USE	98.9%	56.3%	90.1%	1.3%	54.9%	0.4%	24.8%
GENERAL SERVICE >50 KW TIME OF USE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
STANDBY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LARGE USER CLASS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
UNMETERED & SCATTERED LOADS	0.0%	0.2%	0.0%	0.8%	0.3%	0.0%	0.5%
SENTINEL LIGHTS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
STREET LIGHTING	1.1%	0.6%	1.1%	18.3%	0.2%	0.0%	0.5%
Totals	100%	100%	100%	100%	100%	100%	100%

Sheet 2 - Rate Riders Calculation

NAME OF UTILITY
NAME OF CONTACT
E-mail Address
VERSION NUMBER
Date

Burlington Hydro Inc.

NO RSVA - Power (Global Adjustment)
 21-Dec-09

LICENCE NUMBER
DOCID NUMBER

EB-2009-0259

PHONE NUMBER
(extension)

	Amount	ALLOCATOR	Residential	GS < 50 KW	GS > 50 Non TOU	Small Scattered Load	Street Lighting	Total
Deferral and Variance Accounts:								
WMSC - Account 1580	\$ (3,999,762)	kWh	\$ (1,288,624)	\$ (424,453)	\$ (2,253,656)	\$ (9,702)	\$ (23,328)	\$ (3,999,762)
One-Time WMSC - Account 1582	\$ 290,500	kWh	\$ 93,592	\$ 30,828	\$ 163,681	\$ 705	\$ 1,694	\$ 290,500
Network - Account 1584	\$ (931,864)	kWh	\$ (300,223)	\$ (98,889)	\$ (525,056)	\$ (2,260)	\$ (5,435)	\$ (931,864)
Connection - Account 1586	\$ (232,984)	kWh	\$ (75,062)	\$ (24,724)	\$ (131,274)	\$ (565)	\$ (1,359)	\$ (232,984)
Power (excluding Global Adj)- Account 1588	\$ 1,273,196	kWh	\$ 410,192	\$ 135,111	\$ 717,379	\$ 3,088	\$ 7,426	\$ 1,273,196
Power (Global Adjustment) - Account 1588	\$ -	kWh non-RPP customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal - RSVA	\$ (3,600,914)		\$ (1,160,125)	\$ (382,127)	\$ (2,028,926)	\$ (8,734)	\$ (21,002)	\$ (3,600,914)
Other Regulatory Assets - Account 1508	\$ 214,465	Dx Revenue	\$ 129,660	\$ 29,564	\$ 53,181	\$ 1,084	\$ 976	\$ 214,465
Other Regulatory Assets - Account 1508	\$ 646,241	Dx Revenue	\$ 390,701	\$ 89,083	\$ 160,250	\$ 3,266	\$ 2,940	\$ 646,241
Retail Cost Variance Account - Acct 1518	\$ (50,608)	# of Customers	\$ (37,108)	\$ (3,182)	\$ (652)	\$ (381)	\$ (9,285)	\$ (50,608)
Retail Cost Variance Account (STR) Acct 1548	\$ (7,342)	# of Customers	\$ (5,383)	\$ (462)	\$ (95)	\$ (55)	\$ (1,347)	\$ (7,342)
Misc. Deferred Debits - Account 1525	\$ 13,174	# cust w/ rebate Cheq	\$ 11,979	\$ 1,139	\$ 55	\$ -	\$ 1	\$ 13,174
Low Voltage - Account 1550	\$ (199,941)	kWh	\$ (64,416)	\$ (21,218)	\$ (112,656)	\$ (485)	\$ (1,166)	\$ (199,941)
CDM	\$ 7,971	kWh	\$ 2,568	\$ 846	\$ 4,491	\$ 19	\$ 46	\$ 7,971
CDM Contra	\$ (7,971)	kWh	\$ (2,568)	\$ (846)	\$ (4,491)	\$ (19)	\$ (46)	\$ (7,971)
Recovery of Regulatory Asset Balances	\$ (613,465)	2006 EDR Allocation	\$ (211,206)	\$ (62,475)	\$ (336,662)	\$ (1,679)	\$ (1,443)	\$ (613,465)
Subtotal - Non RSVA, Variable	\$ 2,525		\$ 214,226	\$ 32,450	\$ (236,577)	\$ 1,750	\$ (9,324)	\$ 2,525
Smart Meters Revenue and Capital, 1555 (Fixed)	\$ -	# of Metered Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Smart Meter Expenses, 1556 (Fixed)	\$ -	# of Metered Customers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal - Non RSVA Fixed	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total to be Recovered	\$ (3,598,389)		\$ (945,899)	\$ (349,677)	\$ (2,265,503)	\$ (6,984)	\$ (30,326)	\$ (3,598,389)

Balance to be collected or refunded, Variable	\$ (3,598,389)	\$ (945,899)	\$ (349,677)	\$ (2,265,503)	\$ (6,984)	\$ (30,326)	\$ (3,598,389)
Balance to be collected or refunded, Fixed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Number of years for Variable	4						
Number of years for Fixed	4						
Balance to be collected or refunded per year, Variable	\$ (899,597)	\$ (236,475)	\$ (87,419)	\$ (566,376)	\$ (1,746)	\$ (7,582)	\$ (899,597)
Balance to be collected or refunded per year, Fixed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Class
Deferral and Variance Account Rate Riders, Variable
Billing Determinants
Deferral and Variance Account Rate Riders, Fixed (per month)
Billing Determinants

Components of 2010 Riders:
 Variable RSVA
 Variable Non RSVA

Residential	GS < 50 KW	GS > 50 Non TOU	Scattered Load	Street Lighting
\$ (0.0005)	\$ (0.0005)	\$ (0.2417)	\$ (0.0004)	\$ (0.2903)
kWh	kWh	kW	kWh	kW
\$ -	\$ -	\$ -	\$ -	\$ -
# metered cust.	# metered cust.	# metered cust.		
\$ (0.0006)	\$ (0.0006)	\$ (0.2164)	\$ (0.0006)	\$ (0.2010)
\$ 0.0001	\$ 0.0000	\$ (0.0252)	\$ 0.0001	\$ (0.0892)

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 8

Question:

Manager's Summary

Ref: Response to Interrogatory from Board Staff #1

- a) Based on the first and second round interrogatories from all parties, please submit and update Microsoft Excel file containing the revenue requirement workform.
- b) Please provide a listing of all changes made to Burlington's original application (by Exhibit), including an updated derivation of its revenue requirement, PILs calculation, base rates, rate adders/riders, and bill impacts.

Response:

- a) A updated revenue requirement workform has been attached, reflecting items identified at part (b) of this response.
- b) The table below provides a listing of the changes made to the application, and reflected in the revenue requirement workforms:

Summary of Changes Impacting Revenue Requirement				
Exhibit	IR Reference	Description	2010 Test Year Adjustment	Comments
E2 - Rate Base	VECC 40	Delay of Capital Project		
		- Reduced Capital Additions	(175,000)	50% of project cost of \$350,000
		- Reduced Accumulated Dep	14,000	\$7,000 each from 2009 and 2010
		- Reduced Working Capital	(1,050)	\$7,000 reduction in controllable exp.
		Change to Rate Base	(162,050)	
E3 - Revenue	VECC 45	SSS Admin Fee Revenue	(175,417)	included as misc. revenue
E4 - Operating Costs	Energy Probe 55	Property Taxes	63,000	correcting input error
	Energy Probe 46	Smart Meter Bank Fees	(4,000)	costs associated with smart meters
	VECC 40	Reduced depreciation expense	(7,000)	associated with delay of project
E5 - Cost of Capital	VECC 40	Delay of Capital Project		
		- Long Term Debt	(6,915)	change in deemed interest expense
		- Short Term Debt	(86)	change in deemed interest expense
		- Common Equity	(6,320)	impact of reduction in rate base
	Schools 23	ROE increase to 9.75%	728,991	to reflect Board Report

Burlington has attached, at page 2, a revised Calculation of Revenue Deficiency of Surplus, that was originally filed at Exhibit 6, Tab 1, Schedule 1. Attached at page 3 is a revised schedule of distribution rates.

Revised Calculation of Revenue Deficiency or Surplus		
Calculation of Revenue Deficiency or Surplus	2010 Test Existing Rates	2010 Test Proposed Rates
Revenue		
Suff/ Def From Below.		\$4,172,323
Distribution Revenue	\$26,479,520	\$26,479,520
Other Operating Revenue (Net)	\$1,758,319	\$1,758,319
Total Revenue	\$28,237,839	\$32,410,162
Distribution Costs		
Operation, Maintenance, and Administration	\$14,796,994	\$14,796,994
Depreciation & Amortization	\$6,687,092	\$6,687,092
Property & Capital Taxes	\$359,305	\$359,305
Interest- Deemed Interest	\$4,518,188	\$4,518,188
Total Costs and Expenses	\$26,361,580	\$26,361,580
Utility Income Before Income Taxes	\$1,876,259	\$6,048,582
Net Adjustments per 2009 Pils	\$306,385	\$306,385
Taxable Income	\$2,182,644	\$6,354,967
Tax Rate	31.0%	31.0%
Income Tax	\$676,620	\$1,970,040
Utility Income	\$1,199,639	\$4,078,542
Rate Base	\$104,578,009	\$104,578,009
Equity	40.00%	40.00%
Equity Component Rate Base	\$41,831,203	\$41,831,203
Income / Equity Rate Base %	2.87%	9.75%
Target Return -Equity on Rate Base	9.75%	9.75%
Return- Equity on Rate Base	\$4,078,542	\$4,078,542
Revenue Deficiency	\$2,878,903	
Revenue Deficiency (Gross-up)	\$4,172,323	

RATES SCHEDULE (Part 1)			
<i>Schedule of Distribution Rates and Charges</i>			
<i>Effective May 1, 2010</i>			
Customer Class	Item Description	Unit	Rate (\$)
Residential			
	Monthly Service Charge	per month	13.89
	Distribution Volumetric Rate	per kWh	0.0168
	LRAM and SSM Rate Rider	per kWh	0.0004
	Smart Meter Rate Rider	per month	1.0000
	Regulatory Assets Rate Rider	per kWh	(0.0006)
GS < 50 kW			
	Monthly Service Charge	per month	26.51
	Distribution Volumetric Rate	per kWh	0.0152
	LRAM and SSM Rate Rider	per kWh	0.0001
	Smart Meter Rate Rider	per month	1.0000
	Regulatory Assets Rate Rider	per kWh	(0.0006)
GS >50			
	Monthly Service Charge	per month	76.89
	Distribution Volumetric Rate	per kW	3.1131
	LRAM and SSM Rate Rider	per kW	0.0124
	Smart Meter Rate Rider	per month	1.0000
	Regulatory Assets Rate Rider	per kW	(0.2030)
Street Lighting			
	Monthly Service Charge	per month	0.37
	Distribution Volumetric Rate	per kW	2.6944
	Regulatory Assets Rate Rider	per kW	(0.0891)
USL			
	Monthly Service Charge	per month	10.24
	Distribution Volumetric Rate	per kWh	0.0200
	LRAM and SSM Rate Rider	per kWh	0.0000
	Regulatory Assets Rate Rider	per kWh	(0.0899)



REVENUE REQUIREMENT WORK FORM

Name of LDC: (1)
 File Number:
 Rate Year: Version: 1.0

Table of Content

<u>Sheet</u>	<u>Name</u>
A	Data Input Sheet
1	Rate Base
2	Utility Income
3	Taxes/PILS
4	Capitalization/Cost of Capital
5	Revenue Sufficiency/Deficiency
6	Revenue Requirement
7	Bill Impacts

Notes:

(1) Pale green cells represent inputs

(2) **Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.**

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REVENUE REQUIREMENT WORK FORM

Name of LDC: Burlington Hydro Inc.
File Number: EB-2009-0259
Rate Year: 2010

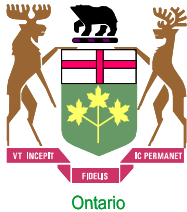
Data Input (1)

	Application	Adjustments	Per Board Decision
1 Rate Base			
Gross Fixed Assets (average)	\$204,244,334	(4)	\$204,244,334
Accumulated Depreciation (average)	(\$121,182,017)	(5)	(\$121,182,017)
Allowance for Working Capital:			
Controllable Expenses	\$15,022,994	(6)	\$15,022,994
Cost of Power	\$128,414,948		\$128,414,948
Working Capital Rate (%)	15.00%		15.00%
2 Utility Income			
Operating Revenues:			
Distribution Revenue at Current Rates	\$26,479,520		
Distribution Revenue at Proposed Rates	\$30,651,843		
Other Revenue:			
Specific Service Charges	\$846,985		
Late Payment Charges	\$202,800		
Other Distribution Revenue	\$557,144		
Other Income and Deductions	\$151,390		
Operating Expenses:			
OM+A Expenses	\$14,789,994		\$14,789,994
Depreciation/Amortization	\$6,694,092		\$6,694,092
Property taxes	\$292,000		\$292,000
Capital taxes	\$67,305		
Other expenses	\$ -		\$0
3 Taxes/PILs			
Taxable Income:			
Adjustments required to arrive at taxable income	\$306,385	(3)	
Utility Income Taxes and Rates:			
Income taxes (not grossed up)	\$1,359,328		
Income taxes (grossed up)	\$1,970,040		
Capital Taxes	\$67,305		
Federal tax (%)	18.00%		
Provincial tax (%)	13.00%		
Income Tax Credits			
4 Capitalization/Cost of Capital			
Capital Structure:			
Long-term debt Capitalization Ratio (%)	56.0%		
Short-term debt Capitalization Ratio (%)	4.0%	(2)	(2)
Common Equity Capitalization Ratio (%)	40.0%		
Preferred Shares Capitalization Ratio (%)	0.0%		
			Capital Structure must total 100%
Cost of Capital			
Long-term debt Cost Rate (%)	7.62%		
Short-term debt Cost Rate (%)	1.33%		
Common Equity Cost Rate (%)	9.75%		
Preferred Shares Cost Rate (%)	0.00%		

Notes:

This input sheet provides all inputs needed to complete sheets 1 through 6 (Rate Base through Revenue Requirement), except for Notes that the utility may wish to use to support the components. Notes should be put on the applicable pages to understand the context of each such note.

- (1) All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)
- (2) 4.0% unless an Applicant has proposed or been approved for another amount.
- (3) Net of addbacks and deductions to arrive at taxable income.
- (4) Average of Gross Fixed Assets at beginning and end of the Test Year
- (5) Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.



REVENUE REQUIREMENT WORK FORM

Name of LDC: Burlington Hydro Inc.

File Number: EB-2009-0259

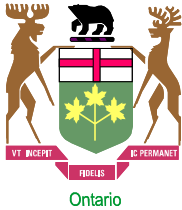
Rate Year: 2010

			Rate Base		
Line No.	Particulars		Application	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(3)	\$204,244,334	\$ -	\$204,244,334
2	Accumulated Depreciation (average)	(3)	(\$121,182,017)	\$ -	(\$121,182,017)
3	Net Fixed Assets (average)	(3)	\$83,062,317	\$ -	\$83,062,317
4	Allowance for Working Capital	(1)	\$21,515,691	\$ -	\$21,515,691
5	Total Rate Base		\$104,578,009	\$ -	\$104,578,009

(1) Allowance for Working Capital - Derivation					
6	Controllable Expenses		\$15,022,994	\$ -	\$15,022,994
7	Cost of Power		\$128,414,948	\$ -	\$128,414,948
8	Working Capital Base		\$143,437,942	\$ -	\$143,437,942
9	Working Capital Rate %	(2)	15.00%		15.00%
10	Working Capital Allowance		\$21,515,691	\$ -	\$21,515,691

Notes

- (2) Generally 15%. Some distributors may have a unique rate due as a result of a lead-lag study.
 (3) Average of opening and closing balances for the year.



REVENUE REQUIREMENT WORK FORM

Name of LDC: Burlington Hydro Inc.

File Number: EB-2009-0259

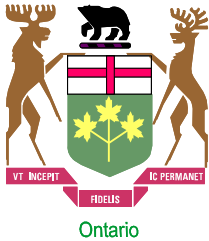
Rate Year: 2010

Utility income

Line No.	Particulars	Application	Adjustments	Per Board Decision
Operating Revenues:				
1	Distribution Revenue (at Proposed Rates)	\$30,651,843	\$ -	\$30,651,843
2	Other Revenue (1)	\$1,758,319	\$ -	\$1,758,319
3	Total Operating Revenues	\$32,410,162	\$ -	\$32,410,162
Operating Expenses:				
4	OM+A Expenses	\$14,789,994	\$ -	\$14,789,994
5	Depreciation/Amortization	\$6,694,092	\$ -	\$6,694,092
6	Property taxes	\$292,000	\$ -	\$292,000
7	Capital taxes	\$67,305	\$ -	\$67,305
8	Other expense	\$ -	\$ -	\$ -
9	Subtotal	\$21,843,391	\$ -	\$21,843,391
10	Deemed Interest Expense	\$4,518,188	\$ -	\$4,518,188
11	Total Expenses (lines 4 to 10)	\$26,361,580	\$ -	\$26,361,580
12	Utility income before income taxes	\$6,048,583	\$ -	\$6,048,583
13	Income taxes (grossed-up)	\$1,970,040	\$ -	\$1,970,040
14	Utility net income	\$4,078,543	\$ -	\$4,078,543

Notes

(1)	Other Revenues / Revenue Offsets		
	Specific Service Charges	\$846,985	\$846,985
	Late Payment Charges	\$202,800	\$202,800
	Other Distribution Revenue	\$557,144	\$557,144
	Other Income and Deductions	\$151,390	\$151,390
	Total Revenue Offsets	\$1,758,319	\$1,758,319



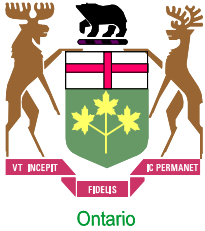
REVENUE REQUIREMENT WORK FORM

Name of LDC: Burlington Hydro Inc.
 File Number: EB-2009-0259
 Rate Year: 2010

Taxes/PILs

Line No.	Particulars	Application	Per Board Decision
<u>Determination of Taxable Income</u>			
1	Utility net income	\$4,078,542	\$4,078,542
2	Adjustments required to arrive at taxable utility income	\$306,385	\$306,385
3	Taxable income	<u>\$4,384,927</u>	<u>\$4,384,927</u>
<u>Calculation of Utility income Taxes</u>			
4	Income taxes	\$1,359,328	\$1,359,328
5	Capital taxes	\$67,305	\$67,305
6	Total taxes	<u>\$1,426,633</u>	<u>\$1,426,633</u>
7	Gross-up of Income Taxes	<u>\$610,712</u>	<u>\$610,712</u>
8	Grossed-up Income Taxes	<u>\$1,970,040</u>	<u>\$1,970,040</u>
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	<u>\$2,037,345</u>	<u>\$2,037,345</u>
10	Other tax Credits	\$ -	\$ -
<u>Tax Rates</u>			
11	Federal tax (%)	18.00%	18.00%
12	Provincial tax (%)	13.00%	13.00%
13	Total tax rate (%)	<u>31.00%</u>	<u>31.00%</u>

Notes



REVENUE REQUIREMENT WORK FORM

Name of LDC: Burlington Hydro Inc.

File Number: EB-2009-0259

Rate Year: 2010

Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
Application					
		(%)	(\$)	(%)	(\$)
	Debt				
1	Long-term Debt	56.00%	\$58,563,685	7.62%	\$4,462,553
2	Short-term Debt	4.00%	\$4,183,120	1.33%	\$55,636
3	Total Debt	60.00%	\$62,746,805	7.20%	\$4,518,188
	Equity				
4	Common Equity	40.00%	\$41,831,203	9.75%	\$4,078,542
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	Total Equity	40.00%	\$41,831,203	9.75%	\$4,078,542
7	Total	100%	\$104,578,009	8.22%	\$8,596,731
Per Board Decision					
		(%)	(\$)	(%)	
	Debt				
8	Long-term Debt	56.00%	\$58,563,685	7.62%	\$4,462,553
9	Short-term Debt	4.00%	\$4,183,120	1.33%	\$55,636
10	Total Debt	60.00%	\$62,746,805	7.20%	\$4,518,188
	Equity				
11	Common Equity	40.0%	\$41,831,203	9.75%	\$4,078,542
12	Preferred Shares	0.0%	\$ -	0.00%	\$ -
13	Total Equity	40.0%	\$41,831,203	9.75%	\$4,078,542
14	Total	100%	\$104,578,009	8.22%	\$8,596,731

Notes

(1) 4.0% unless an Applicant has proposed or been approved for another amount.



REVENUE REQUIREMENT WORK FORM

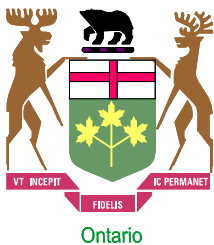
Name of LDC: Burlington Hydro Inc.
 File Number: EB-2009-0259
 Rate Year: 2010

Revenue Sufficiency/Deficiency

Line No.	Particulars	Per Application		Per Board Decision	
		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$4,172,323		\$4,172,323
2	Distribution Revenue	\$26,479,520	\$26,479,520	\$26,479,520	\$26,479,520
3	Other Operating Revenue Offsets - net	\$1,758,319	\$1,758,319	\$1,758,319	\$1,758,319
4	Total Revenue	\$28,237,839	\$32,410,162	\$28,237,839	\$32,410,162
5	Operating Expenses	\$21,843,391	\$21,843,391	\$21,843,391	\$21,843,391
6	Deemed Interest Expense	\$4,518,188	\$4,518,188	\$4,518,188	\$4,518,188
	Total Cost and Expenses	\$26,361,580	\$26,361,580	\$26,361,580	\$26,361,580
7	Utility Income Before Income Taxes	\$1,876,259	\$6,048,583	\$1,876,259	\$6,048,583
	Tax Adjustments to Accounting				
8	Income per 2009 PILs	\$306,385	\$306,385	\$306,385	\$306,385
9	Taxable Income	\$2,182,644	\$6,354,968	\$2,182,644	\$6,354,968
10	Income Tax Rate	31.00%	31.00%	31.00%	31.00%
11	Income Tax on Taxable Income	\$676,620	\$1,970,040	\$676,620	\$1,970,040
12	Income Tax Credits	\$ -	\$ -	\$ -	\$ -
13	Utility Net Income	\$1,199,639	\$4,078,543	\$1,199,639	\$4,078,543
14	Utility Rate Base	\$104,578,009	\$104,578,009	\$104,578,009	\$104,578,009
	Deemed Equity Portion of Rate Base	\$41,831,203	\$41,831,203	\$41,831,203	\$41,831,203
15	Income/Equity Rate Base (%)	2.87%	9.75%	2.87%	9.75%
16	Target Return - Equity on Rate Base	9.75%	9.75%	9.75%	9.75%
	Sufficiency/Deficiency in Return on Equity	-6.88%	0.00%	-6.88%	0.00%
17	Indicated Rate of Return	5.47%	8.22%	5.47%	8.22%
18	Requested Rate of Return on Rate Base	8.22%	8.22%	8.22%	8.22%
19	Sufficiency/Deficiency in Rate of Return	-2.75%	0.00%	-2.75%	0.00%
20	Target Return on Equity	\$4,078,542	\$4,078,542	\$4,078,542	\$4,078,542
21	Revenue Sufficiency/Deficiency	\$2,878,903	\$0	\$2,878,903	\$0
22	Gross Revenue Sufficiency/Deficiency	\$4,172,323 (1)		\$4,172,323 (1)	

Notes:

(1) Revenue Sufficiency/Deficiency divided by (1 - Tax Rate)



REVENUE REQUIREMENT WORK FORM

Name of LDC: Burlington Hydro Inc.

File Number: EB-2009-0259

Rate Year: 2010

Revenue Requirement			
Line No.	Particulars	Application	Per Board Decision
1	OM&A Expenses	\$14,789,994	\$14,789,994
2	Amortization/Depreciation	\$6,694,092	\$6,694,092
3	Property Taxes	\$292,000	\$292,000
4	Capital Taxes	\$67,305	\$67,305
5	Income Taxes (Grossed up)	\$1,970,040	\$1,970,040
6	Other Expenses	\$ -	\$ -
7	Return		
	Deemed Interest Expense	\$4,518,188	\$4,518,188
	Return on Deemed Equity	\$4,078,542	\$4,078,542
8	Distribution Revenue Requirement before Revenues	<u>\$32,410,162</u>	<u>\$32,410,162</u>
9	Distribution revenue	\$30,651,843	\$30,651,843
10	Other revenue	<u>\$1,758,319</u>	<u>\$1,758,319</u>
11	Total revenue	<u>\$32,410,162</u>	<u>\$32,410,162</u>
12	Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)	<u>\$0 (1)</u>	<u>\$0 (1)</u>

Notes

(1)

Line 11 - Line 8



REVENUE REQUIREMENT WORK FORM

Name of LDC: Burlington Hydro Inc.

File Number: EB-2009-0259

Rate Year: 2010

		Selected Delivery Charge and Bill Impacts Per Draft Rate Order								
		Monthly Delivery Charge					Total Bill			
		Current	Per Draft Rate Order	Change			Current	Per Draft Rate Order	Change	
				\$	%				\$	%
Residential	800 kWh/month	\$ 25.27	\$ 28.17	\$ 2.90	11.5%		\$ 99.62	\$ 102.57	\$ 2.95	3.0%
GS < 50kW	2000 kWh/month	\$ 51.38	\$ 56.91	\$ 5.53	10.8%		\$ 241.56	\$ 247.13	\$ 5.57	2.3%

Notes:

Burlington Hydro Inc.
Response to Supplemental Interrogatory from Board Staff
Question 9

Question:

Responses to Letters of Comment

- a) Following publication of the Notice of Application and Hearing, has Burlington received any letters of comment?
 - b) If so, please confirm whether a reply was send from Burlington to the customer.
 - i. If confirmed, please file that reply with the Board.
 - ii. If not confirmed, please explain why a response was not sent and confirm if Burlington intends on responding. If so, please file that response with the Board.
-

Response:

- a) Burlington did not receive any letters of comment.
- b) Not applicable.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 38

Question:

Ref: Energy Probe Interrogatory #2

The response indicates that the Holdco Board oversees the LDC operation, but that the LDC has its own Board of Directors.

- a) What does that LCD Board of Directors do given that the Holdco Board oversees the LDC operation?
 - b) What is the total cost associated with the LDC Board of Directors?
-

Response:

- a) The LDC Board meets on an as needed basis to review the annual business plan of the corporation, approve the annual audited financial statements, quarterly review of financial position and declaration of dividends.
- b) As at November 30, 2009, total director remuneration for the LDC Board of Directors is \$16,167.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 39

Question:

Ref: Energy Probe Interrogatory #3

The response indicates that the new position will reduce excessive hours of overtime. Please indicate in the evidence where this reduction in overtime related expenses can be found. Please quantify the reduction in overtime costs included in the 2010 filing.

Response:

The excessive hours of overtime are being incurred by the Controller and Staff Accountant. These positions are management and non-union positions and are not paid overtime. Therefore, there is no reduction in expenses because the unpaid overtime has never been recorded as an expense.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 40

Question:

Ref: Energy Probe Interrogatory #5

- a) Does the response in part (c) reflect the movement of more customers from RPP to non-RPP status effective November of 2009? If not, does Burlington Hydro has an estimate of the percentage of its total kWh sales associated with these customers?
 - b) Please explain why the Wholesale Market Service charge has been reduced in the scenario with RPP and non-RPP volumes. Does the Wholesale Market Service charge not apply to non-RPP customers?
-

Response:

- a) As indicated in the response to Energy Probe interrogatory #37, Burlington is not proposing any further movement of customers from RPP to non-RPP given the November 2009 eligibility change. The major MUSH customers in the Burlington area had already moved from RPP pricing and were not impacted. The small number of customers impacted by this change represent approximately 1.3% of total sales.
- b) The Wholesale Market Service calculation omitted the non-RPP volumes in error. A revised page is attached.

<u>Electricity - Commodity</u>	2010 RPP Forecasted Metered kWhs	2010 Loss Factor			
Class per Load Forecast			2010		
Residential	473,935,534	1.0405	493,129,923	\$0.06215	\$30,648,025
Street Lighting	71,600	1.0405	74,499	\$0.06215	\$4,630
GS<50kW	142,925,227	1.0405	148,713,698	\$0.06215	\$9,242,556
GS>50kW	146,713,568	1.0405	152,655,468	\$0.06215	\$9,487,537
Unmetered Scattered Load	3,892,933	1.0405	4,050,596	\$0.06215	\$251,745
TOTAL	767,538,861		794,573,589		\$49,634,493
<u>Electricity - Commodity</u>	2010 non-RPP Forecasted Metered kWhs	2010 Loss Factor			
Class per Load Forecast			2010		
Residential	46,472,431	1.0405	48,354,565	\$0.05820	\$2,814,236
Street Lighting	9,349,402	1.0405	9,728,053	\$0.05820	\$566,173
GS<50kW	28,489,053	1.0405	29,642,860	\$0.05820	\$1,725,214
GS>50kW	763,420,230	1.0405	794,338,750	\$0.05820	\$46,230,515
Unmetered Scattered Load	25,075	1.0405	26,091	\$0.05820	\$1,518
TOTAL	847,756,193		882,064,228		\$51,337,657
<u>Transmission - Network</u>		Volume			
Class per Load Forecast		Metric	2010		
Residential		kWh	541,484,488	\$0.0055	\$2,978,165
Street Lighting		kW	26,120	\$1.5557	\$40,635
GS<50kW		kWh	178,356,558	\$0.0051	\$909,618
GS>50kW		kW	2,343,504	\$2.0983	\$4,917,374
Unmetered Scattered Load		kWh	4,076,687	\$0.0051	\$20,791
TOTAL					\$8,866,583
<u>Transmission - Connection</u>		Volume			
Class per Load Forecast		Metric	2010		
Residential		kWh	541,484,488	\$0.0050	\$2,707,422
Street Lighting		kW	26,120	\$1.3674	\$35,717
GS<50kW		kWh	178,356,558	\$0.0044	\$784,769
GS>50kW		kW	2,343,504	\$1.8202	\$4,265,645
Unmetered Scattered Load		kWh	4,076,687	\$0.0044	\$17,937
TOTAL					\$7,811,491
<u>Wholesale Market Service</u>					
Class per Load Forecast			2010		
Residential			541,484,488	\$0.0052	\$2,815,719
Street Lighting			9,802,552	\$0.0052	\$50,973
GS<50kW			178,356,558	\$0.0052	\$927,454
GS>50kW			946,994,218	\$0.0052	\$4,924,370
Unmetered Scattered Load			4,102,778	\$0.0052	\$21,334
TOTAL					\$8,739,851
<u>Rural Rate Assistance</u>					
Class per Load Forecast			2010		
Residential			541,484,488	\$0.0013	\$703,930
Street Lighting			26,120	\$0.0013	\$34
GS<50kW			178,356,558	\$0.0013	\$231,864
GS>50kW			2,343,504	\$0.0013	\$3,047
Unmetered Scattered Load			4,076,687	\$0.0013	\$5,300
TOTAL					\$944,174
	2010				
4705-Power Purchased	\$100,972,150				
4708-Charges-WMS	\$8,739,851				
4714-Charges-NW	\$8,866,583				
4716-Charges-CN	\$7,811,491				
4730-Rural Rate Assistance	\$944,174				
4750-Low Voltage					
TOTAL	127,334,249				

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 41

Question:

Ref: Energy Probe Interrogatory #10

What is the t-statistic associated with the number of peak hours in the response to part (c)?

Response:

The t-statistic associated with the number of peak hours in the response to Energy Probe 10 (c) is 2.4.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 42

Question:

Ref: Energy Probe Interrogatory #11

The response to part (a) indicates that Burlington Hydro did a regression analysis that removed both the population and number of customers from the equation. The response indicates that all of the remaining coefficients in the equation had signs that were expected.

- a) Please provide the coefficients and regression statistics associated with this equation in the same format as in the response to part (c) of the Energy Probe interrogatory #11.
 - b) Please also provide the volume forecast for 2009 and 2010 (using all three weather normals) generated by this equation.
-

Response:

Please see response to Board Staff Supplementary Interrogatory #4.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 43

Question:

Ref: Energy Probe Interrogatory #15 & 16

The response to part (a) of Energy Probe interrogatory #16 indicates that there is a \$113,000 of one-time revenue included in the forecast revenue for specific service charges in 2009.

- a) Please confirm that this \$113,000 is also reflected in the September year-to-date figure for 2009 of \$732,412 shown in the response to Energy Probe interrogatory #15.
- b) If so confirmed, please confirm that the year-to-date revenue in 2009 excluding the one-time adjustment is virtually identical to the year-to-date figure of the previous year.
- c) Based on the response to part (b) above, is it reasonable to forecast the 2009 specific service charges, excluding the \$113,000 one-time revenue, will be similar to the leave of \$944,000 recorded in 2008? If not, why not?
- d) Please explain the reduction in the 2010 forecast of specific service charges from the levels recorded in 2008 and 2007.
- e) Please explain how the interest rate of 0.27% shown in the response to part (h) of Energy Probe interrogatory #16 has been forecast for 2010. Is all of the \$11.9 million cash balance kept in a bank account or is some amount invested in short term instruments? If yes, please provide details.

Response:

- a) Burlington Hydro confirms that the \$113,000 is included in the September 2009 year- to-date revenue of \$732,412 for Specific Service Charges.
- b) If the one-time revenue of \$113,000 was excluded from the Specific Service Charges, the year-to-date revenue for Specific Service Charges at September 2009 would have been \$26,299 in comparison to the 2008 revenue of \$24,891. The revenues are close but not identical.
- c) Based on the response to part (b) and the actual financial data for 2009 it is reasonable to forecast the 2009 specific service charges, excluding the \$113,000 one time revenue, at the same level of \$944,000 as recorded in 2008.
- d) The main reason for the reduction in the 2010 forecast of specific service charges from the levels recorded in 2008 and 2007 is due to non-recurring revenues received in those years. Some of those non recurring revenues are discussed below.

In 2007 there were a large number of tax recoveries which were recorded in this account. The largest recovery was for a Scientific Research and Experimental Development Claim in the amount of \$63,574. Other recoveries for the G.S.T and the Fuel Tax totaled \$14,428. In 2007 and 2008 there were a large number of stale-dated cheques that were charged back to this account. The amount was \$42,293 in 2007 and \$54,329 in 2008. In 2007 Burlington Hydro received \$16,622 for its portion of the winding down of the Enerconnect Limited Partnership which was recorded in this account.

In 2008 there was a significant increase in the Temporary Services Installation Revenue. This revenue reached a peak of \$53,108 in 2008. Since 2008 it has continuously dropped such that the revenue for 2010 has been budgeted at \$12,000.

- e) The interest rate of .27% was based on the current interest rates being paid to Burlington Hydro in 2009 on its investments in Bankers' Acceptances. Of the \$11.9 million cash balance, \$6.9 million is kept in the bank account and \$5.0 million is invested in short term instruments.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 44

Question:

Ref: Energy Probe Interrogatory #17

- a) What is the impact on the costs of the 3.0% increase negotiated with unionized employees in place of the 3.5% used in the forecast for 2009?
 - b) Given that the non-unionized increase was equal to the 3.9% that was forecast for 2009, was there any impact on the forecasted 2009 costs associated with non-union personnel? If yes, please explain and quantify.
-

Response:

- a) The total impact associated with the 3.0% actual negotiated increase vs the 3.5% projected increase is \$19,165.

Total payroll cost at 3.5% increase = \$8,584,005

Total payroll cost at 3.0% increase = \$8,564,840

\$ 19,165

- b) There was no impact to the 3.9% forecasted costs for non-union personnel. The 3.9% also takes into consideration progressions for junior staff in addition to merit. Timing of non-union increases occurred before the result of the unionized increases.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 45

Question:

Ref: Energy Probe Interrogatory #18 &
Board Staff Interrogatory #14

Please confirm that Burlington Hydro proposes to leave the \$39,000 associated with LEAP in the 2010 revenue requirement.

Response:

As stated in the response to Board Staff #14, Burlington expects that it would incur equivalent costs associated with Ministry's integrated program, and as such is proposing to leave the \$39,000 associated with LEAP in the revenue requirement.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 46

Question:

Ref: Energy Probe Interrogatory #19, part (c)

The response did not fully answer the question asked.

- a) Why are the bank fees associated with arranging a new bank credit facility to assist in the funding of the smart meter program included in the OM&A and not covered through the smart meter (1555) account?
 - b) What is the amount of the bank fees associated with the smart meter portion of the new credit facility?
-

Response:

- a) The bank fees associated with arranging a new bank credit facility to assist in the funding of the smart meter program were included in the OM&A in error. These costs had been forecasted monthly beginning in May 2009 at \$1,000 per month. Accordingly, amounts of \$8,000 and \$4,000 will be moved from OM&A to the Smart Meter account 1555 for 2009 bridge year and 2010 test year respectively. This adjustment is reflected in the Revenue Requirement workform at the response to OEB interrogatory #8.
- b) Arrangement Fee for the smart meter non-revolving term facility is \$12,000.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 47

Question:

Ref: Energy Probe Interrogatory #21

Please confirm that the costs associated with the employees eligible to retire in 2009 and 2010 (partial year) have been removed from the forecast for 2010. If this cannot be confirmed, please explain why.

Response:

The forecasting of retirements is not a perfect science and therefore some employees do not retire when expected. As such, employees are only removed from the 2010 budget if an actual retirement occurred.

Two of the three employees forecasted to retire have been removed from the 2010 budget due to their retirement.

Those that are forecasted in future will not be removed until the retirement actually occurs.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 48

Question:

Ref: Energy Probe Interrogatory #25 &
Board Staff Interrogatory #15

Does the Total Compensation Charged to Billings figure of \$673,493 shown for 2010 include an allocation of the incentive forecast of \$204,000 included in the 2010 revenue requirement? If yes, please explain what proportion of the \$204,000 is included in the total compensation charged to billings and please explain how this amount has been calculated. If no, please explain why not.

Response:

No. The reason is that the billings figure of \$673,493 for 2010 only includes labour dollars associated with staff (trades) that are not participants of the incentive plan.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 49

Question:

Ref: Energy Probe Interrogatory #28

- a) Please explain why the taxes associated with the federal tax credit of \$16,000 and the co-operative education tax credit of \$3,000 in 2010 are taxed at a rate of 28.5%.
- b) Please calculate the net reduction in taxes in 2010 related to the apprenticeship training tax credits, (federal and provincial) and the co-operative education tax credit, showing the tax credits available and the incremental taxes payable based on the credits.
- c) Please clarify what Burlington Hydro means by “little certainty as to the amount” as used in the response to part (b) of the interrogatory.
- d) Does Burlington Hydro consider the impact on the tax component of the revenue requirement calculated in part (b) above to be not significant?

Response:

- a) The general rule for federal tax credits is that they are included in income and taxed in the following year. Provincial credits are taxes in the same year that they are claimed.

Thus federal tax credits claimed in 2009, would be included in income in 2010 and 2010 credits would be taxed in 2011. The \$16,000 federal tax credit for apprentices which relates to 2009 would be taxed in 2010 at the marginal rate of 31%. The \$24,000 federal tax credit for apprentices claimed in 2010, would be taxed in 2011 at the marginal rate of 28.25%.

The provincial cooperative tax credit claimed in 2010 of \$3,000 would be taxed in 2010 at the marginal rate of 31%

- b) The 2010 apprenticeship credits based on the information provided would be \$120,000 for the provincial tax credit. The taxes payable on the provincial tax credit would be based on the 2010 rates and would equal \$37,200 ($\$120,000 \times 31\%$) resulting in a net tax reduction of \$82,800.

The 2010 federal credit based on the information provided would be \$24,000. The taxes payable on the federal tax credit would be based on the 2011 rates and would equal \$6,780 ($\$24,000 \times 28.25\%$) resulting in a net tax reduction of \$17,220.

The 2010 cooperative tax credit based on the information provided would be \$3,000 for the provincial tax credit. The taxes payable on the provincial tax credit would be based on the 2010 rates and would equal \$930 ($\$3,000 \times 31\%$) resulting in a net tax reduction of \$2,070.

- c) Often it is not know the number of coop students or apprentices in determination of the budgeted numbers. Also, as these credits are not applied against taxes payable until the tax return is assessed and are often subject to review by the Ministry, these credits are generally not included in the effective tax rates used.
- d) The impact of the tax credits are considered to be insignificant in the total determination of the tax rates.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 50

Question:

Ref: Energy Probe Interrogatory #29

The response indicates that there is no tax savings for Burlington Hydro associated with the reduction in the small business tax rate and elimination of the claw back because the company's taxable income is too large to be eligible for the small business tax deduction.

- a) Please quantify the taxable capital limits associated with the provincial small business tax deduction eligibility. Please provide the government documents that quantify the taxable capital limit.
- b) Does the provincial small business tax deduction have the same taxable capital limit as the federal small business tax rate?

Response:

- a) For the provincial small business deduction, the calculation is based on the taxable income for the associated group. As long as the taxable income for the associated group is under \$500,000 for the year and this income is attributable to active business in Ontario, \$500,000 of the taxable income of the group is subject to the small business deduction.

Any amounts in excess of \$500,000 for the group will have a surtax of 4.25% applied that will reduce the amount of the small business deduction available for the group. Once the income for the group (in 2009) reaches \$2,000,000, the small business deduction for Ontario is completely eliminated.

These provisions are found in the Ontario Corporations Tax Act. Small business incentive is covered in section 41 and the surtax is described in section 41.1.

- b) The Provincial small business tax deduction does not rely on the taxable capital limit like the federal small business deduction. Only taxable income of the associated group will affect the surtax and related deduction.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 51

Question:

Ref: Energy Probe Interrogatory #30

Please explain the reference to the need to obtain approximately \$11 million in long term financing associated with the need to fund the smart meter rollout. In particular, does the capital structure shown in Exhibit 5, Tab 3, Schedule 1 reflect the inclusion of smart meters in the calculation of rate base and, hence in the total capital required?

Response:

Burlington Hydro estimates that the capital cost of installing Smart Meters throughout it's territory will be approximately \$11.5 million. It is Burlington Hydro's plan to match long term funding against this long term asset by borrowing \$11 million to fund the project. Burlington Hydro expects to obtain this debt from the marketplace and not through an increase in the existing Promissory Note.

The capital structure reflected in Exhibit 5, Tab 3, Schedule 1 is the OEB deemed capital structure. This structure supports the distribution revenue requirement excluding smart meters. Once Burlington has completed the implementation of the smart meter initiative, it will follow established OEB guidelines on review and incorporation of smart meter related costs into the calculation of the revenue requirement and rate base.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 52

Question:

Ref: Board Staff Interrogatory #30

The response provided indicates that Burlington Hydro has a three year tree trimming cycle and that in 2010 it has included costs associated with the most expensive area to trim in 2010. Given that rates derived from this application will be used as base rates for 2011 through 2012, would it be appropriate to reflect a “normalized” tree trimming expense in 2010 that reflects both the higher cost year and lower cost years in the cycle?

Response:

The tree trimming areas were established for more than 20 years based on tree density in an effort to balance operating costs each year. Burlington Hydro is in the throes of a 3 year tree trimming tender due Dec 13, 2009 and shall be awarded soon after. The contract will span over a 3 year period, 2010, 2011 and 2012. The forecasted costs for these years is provided in the response to supplementary interrogatory #2 from Board Staff. Normalizing the current projected costs would result in a short fall in 2010 for the annual tree trimming area contract and would not be consistent with setting rates based on the annual forecast costs of the test year (i.e. 2010).

Burlington Hydro has benefited from the cost effective services of a single contractor in the past, however, was not able to procure their services due to unavailability which resulted in the hiring of another well qualified contractor to complete the annual tree area at a higher cost. It is not prudent to rely or expect the services from a single contractor as done in the past and have found the benefits offered by other contractors that align with Burlington Hydro’s health and safety culture and commitment to training and education of their employees.

Over the past 2 years, Burlington Hydro has enhanced the tree inspection component resulting in additional costs directly. The 2007 actual amount does not reflect the enhanced inspection cost since the program was not fully implemented during the entire year.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 53

Question:

Ref: Board Staff Interrogatory #11

- a) What is driving the increase in the forecast bad debt expense in account 5665 that is associated with uncollectible billable jobs?
 - b) Please provide the most recent year-to-date bad debt expense in account 5665 for 2009 and for the same period in 2008.
 - c) Please provide the most recent year-to-date bad debt expense in account 5335 for 2009 and for the same period in 2008.
-

Response:

- a) The major driver in the forecasted increase in bad debts is due to insurance companies that are refusing to pay the full amount of the invoice. Many, but not all, insurance companies want to pay only 50% of the invoice. Burlington Hydro attempts to negotiate full payment and this is weighted against the cost of going to court versus accepting the reduced payment. Any reduction in the invoice is treated as a Bad Debt.
- b) Burlington Hydro records the Bad Debt Expense at the end of the year. There are currently six large accounts that are outstanding over 90 days totaling \$51,700 that may be written off at year end. In 2008 the Bad Debt Expense recorded in account 5665 was \$11,469.
- c) The bad debt expense in account 5335 for 2009 is \$322,043. The bad debt expense in account 5335 for 2008 was \$405,047.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 54

Question:

Ref: Board Staff Interrogatory #13

For each of the items shown as one-time costs included in the 2010 test year OM&A forecast, please indicate how often these costs are incurred (for example, every two years, or every four years).

Response:

ITEM	AMOUNT	FREQUENCY
Respect in the Workplace Training	5,500	Every three years.
Compensation Study	20,000	Every three years.
First Aid Training	8,800	Every three years.

Burlington Hydro Inc.
Response to Supplementary Interrogatory from Energy Probe
Question 55

Question:

Ref: VECC Interrogatory #25

Please provide the actual property tax expense for each of 2006 through 2010. Please provide both the 2009 forecast used in the filing and the actual 2009 property tax expense.

Response:

The actual property tax expense for each of 2006 through 2010 is listed below.

YEAR	AMOUNT
2006	\$ 272,645
2007	\$ 279,329
2008	\$ 284,965
2009	\$ 283,886
2010	\$ 292,000 (i)

The actual property tax expense for 2009 is \$283,886. The 2009 forecast was \$280,000.

- (i) *Due to a transposition error the amount for 2010 was incorrectly entered as \$229,000 in the filing. Burlington has corrected for this error in the Revenue Requirement Workforms provided at the response to Board Staff Supplementary interrogatory #8.*

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 23

Question:

Ref: Response to Interrogatory from Board Staff #20

Please recalculate the table in this IR on the assumption that the current values for ROE, long term debt, and short term debt set forth in the Board's report dated December 11, 2009 on Cost of Capital would be applicable (prior to any updates of those values in 2010). Please calculate and provide any change in the value of PILs that would be applicable if those values were then applied.

Response:

The table provided in Board Staff interrogatory #20 has been updated below to reflect a revised ROE value of 9.75% based on the December 11, 2009 Cost of Capital report. The PILs amount would increase accordingly by \$327,518 based on the tax rate of 31%. Burlington has reflected these updates in the Revenue Requirement Workforms included in the response to Board Staff interrogatory #8.

Particulars	Capitalization Ratio		Cost Rate	Return
	2010 Test Year			
	(%)	(\$)	(%)	(\$)
Debt				
Long Term Debt	56.00%	\$ 58,654,433	7.62%	\$ 4,469,468
Short Term Debt	4.00%	\$ 4,189,602	1.33%	\$ 55,722
Total Debt	60.00%	\$ 62,844,035	7.20%	\$ 4,525,189
Equity				
Common Equity	40.00%	\$ 41,896,023	9.75%	\$ 4,084,862
Preferred Shares	0.00%	\$ -	0.00%	\$ -
Total Equity	40.00%	\$ 41,896,023	9.75%	\$ 4,084,862
Total	100.00%	\$ 104,740,059	8.22%	\$ 8,610,052
			Original IR:	\$ 7,881,061
			Variance:	\$ 728,991
			Gross up:	\$ 1,056,508
			Incremental PILs	\$ 327,518
			Tax Rate:	31.00%

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 24

Question:

Ref: Response to Interrogatory from Board Staff #27

Please provide an explanatory note for each entry in the monthly chart, allowing us to follow the origin of each entry.

Response:

2006

Principal - the monthly credits represent the amount recovered on each month's billings, per the OEB-approved formula. The small debits are due to corrections of prior years' billings. The debit of \$78,720 in December 2006 is the reversal of the unbilled recoveries on 2005 billings that were accrued in 2005 but not collected until 2006. The debit of \$6,645,787 and the credit of \$837,231 is the sum total of the 2004 principal balances of the RSVA and non-RSVA balances transferred to this account per the OEB's instructions.

Interest – the credit of \$143,626 is the carrying charge on the principal balance for the year 2006. The debit of \$2,041,975 and the credit of \$63,298 represent the interest on the 2004 principal balances which were transferred to the principal account – see above.

2007

Principal – the monthly credits represent the amount recovered on each month's billings, per the OEB-approved formula. The debit of \$273,977 is the reversal of the unbilled revenue accrued in December 2006. The small debit of \$78 is due to a billing correction. The debit of \$279,677 is the reversal of an accrual set up in January for the same amount, part of the January credit of \$502,781. The December debit of \$373,524 includes the reversal of a \$273,554 credit set up in May 2007 for unbilled revenue, plus \$99,971 which reversed a credit of the same amount posted to this account in error in December.

Interest - \$99,971, the carrying charge for the year.

2008

Principal - the monthly credits represent the amount recovered on each month's billings, per the OEB-approved formula. The small debits are once again billing corrections, as is the small credit posted in December. The \$278,988 debit in December is the reversal of the credit accrued in December 2007 for unbilled revenue.

Interest - \$(153,083), the carrying charge for the year.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 25

Question:

Ref: Response to Interrogatory from Energy Probe #22

Please confirm that regulatory costs for the rebasing application assume an oral hearing for the purposes of forecasting legal costs, but assume no oral hearing for the purposes of forecasting OEB and intervenor costs. Please provide two forecasts for rebasing costs – one assuming an oral hearing consistently for all categories, and one assuming no oral hearing for all categories.

Response:

The table below summarizes the forecasted costs assuming an oral hearing:

Costs associates with preparation of CoS	Total Forecasted Cost
OEB Hearing Assessments (applicant initiated)	\$ 45,000
Legal Costs for regulatory matters	\$ 101,000
Consultants costs for regulatory matters	\$ 46,947
Operating Expenses associated with staff resources	\$153,599
Intervenor costs	\$ 90,000
Total	\$436,546

The table below summarizes the forecasted costs assuming no oral hearing:

Costs associates with preparation of CoS	Total Forecasted Cost
OEB Hearing Assessments (applicant initiated)	\$ 25,000
Legal Costs for regulatory matters	\$ 51,000
Consultants costs for regulatory matters	\$ 46,947
Operating Expenses associated with staff resources	\$153,599
Intervenor costs	\$ 35,000
Total	\$311,546

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 26

Question:

Ref: Response to Interrogatory from Energy Probe #27

Please explain the difference between depreciation charged to OM&A and depreciation charged to amortization expense, including identifying the accounting rule or APH rule that applies.

Response:

There is no difference between the depreciation charged to OM&A and the depreciation charged to Amortization expense other than where it is allocated.

Of the \$677,523 that is charged to OM&A, \$88,560 is charged to Account 5665 – Miscellaneous General Expenses. The \$88,560 relates to amortization on computer software. The remaining balance of \$588,693 relates to amortization on Engineering Equipment and Rolling Stock which is included in the Engineering and Rolling Stock Clearing Accounts respectively and expensed through the Burden Rates .

There are three Articles in the Accounting Procedures Handbook that support this application

Article 100 - Chapter called Records, Section F, discusses Clearing Accounts. (Page 9)

Article 220 – Account 5705 – Amortization Expense – Part A and Note B - provides for exceptions of amortization expenses that are charged to the Clearing Accounts. (Page 171)

Article 340 – Chapter called Clearing Accounts addresses the use of Clearing Accounts, (Pages 3, 9, and 10), Rolling Stock Operation (Page 12) and Engineering (Page 12)

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 27

Question:

Ref: Response to Interrogatory from Energy Probe #30

With respect to long term debt:

- a) Please explain why the principal of the promissory note is not being adjusted in accordance with its terms. Please provide copies of any communications between the Applicant and the City with respect to this provision.
 - b) Please explain how the standard waiver of notice, presentment, etc. provision relates to the City's obligations with respect to the principal amount of the note.
 - c) Please provide copies of any communications between the Applicant and the City with respect to adjusting the interest rate on this promissory note.
 - d) Please provide copies of any communications between the Applicant and any third party with respect to new long term borrowing.
-

Response:

- a) The City of Burlington has not expressed any interest in advancing Burlington Hydro Inc. additional funds by way of increasing their promissory note. There have been no communications between Burlington Hydro and the City with respect to this provision.
- b) The standard waiver of notice etc applies if the City were to demand payment of the promissory note principle.
- c) There are no written communications between the City and Burlington Hydro with respect to adjusting the promissory note interest rate.
- d) Copies of Infrastructure Ontario borrowing documents have been provided and are included under response to Question 28 part e).

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 28

Question:

Ref: Response to Interrogatory from School #3

With respect to the material provided to the Board of Directors:

- a) Please provide a copy of the most recent Shareholder Direction from the City.
- b) The memo to the Board of Directors states (page 3) that the approved budget should reflect the rate application. Did the Applicant consider any different budget, not consistent with the rate application, for presentation to the Board of Directors? If so, please provide a copy of that budget, and any documentation of the rationale for rejecting it in favour of the budget in the Application.
- c) What determinations, if any, have been made with respect to whether the new initiatives described in this document (such as renewable energy, smart grid, increased conservation, etc.) should be carried out within the utility or in an affiliate? In the event that some will be carried out in the utility, please identify the costs in the 2010 Test Year (other than for smart meters) that are included in the Application.
- d) The CFO report (page 2) refers to \$900,000 of capital projects deferred from 2009 to 2010 to “assist in managing reduced cash flows”. Please provide a list of those projects, and the rationale in each case for choosing it for deferral. Please reconcile the “reduced cash flows” referred to with the \$718,000 favourable cash flow change reported in the table on the same page.
- e) Please provide details of the 15 year financing from Infrastructure Ontario (CFO Report p. 3), including copies of the term sheet, commitment letter, and other relevant documents. Please include all documents relating to the interest rate on that financing.
- f) Please provide all documentation in the Applicant’s possession relating to possible “privatization” (CFO Report p.4) of the City’s note, including any communications with the City and any communications with third parties with respect to replacement financings (all to the extent not already provided in IR #27 above).
- g) Please reconcile the figures on each line of the first table on CFO Report page 6 with the increases in these categories proposed in the Application.
- h) Please reconcile the 2009 Update figures in the Operating Expenses tables (approximately 26 unnumbered pages at the end of this IR response) with the Bridge Year figures in the Application. Please explain any variances in excess of \$50,000 between figures in the Application and figures in the Board of Directors package.

Response:

- a) The Shareholder Direction is provided as an attachment in response to interrogatory #33 from Schools.

- b) Burlington Hydro did not consider any other budget that was not consistent with the rate application.
- c) Burlington Hydro has not made any determination as to whether new initiatives should be carried out within the utility or in an affiliate. Burlington Hydro has not assumed any smart grid initiatives in the 2010 test year forecast.

d)

Capital Projects Deferred to 2010

Metering

1. Wholesale metering at Cumberland TS – no 2009 additions, deferred to 2010
(The IESO is the driver for setting the dead line for completing this work. This project was scheduled for completion in 2009 by Hydro One at the request of Burlington. Hydro One has scheduled the work in 2010 in conjunction with the Hydro One transformer at Cumberland TS.)
 \$350,000
2. Metering upgrades, 2.5 to 3 element – no 2009 additions, deferred to 2010 *(Deferral would not impact public safety. Measurement Canada has recommended that Utilities upgrade the 2.5 element meters to 3 element when completing socket verification, service upgrades and on new services. In 2009 BHI did not have activity in the area of socket verification or service upgrades. All new services have 3 element meters. Staff was deployed in the smart meter roll-out in 2009.)*
 \$25,000

Underground Projects

1. Cable Rebuild Project, North Brant Hills area – no 2009 additions, deferred to 2010
(Burlington redeployed staff to other capital projects necessary to meet target deadlines for other capital projects. Deferral of this project allowed a significant amount of capital dollars to be reallocated. Deferral of this project will not impact public safety as would if the pole replacement program was deferred.)
 \$500,000

Overhead Projects

1. Fault Indicators – no 2009 additions, deferred to 2010
(Burlington redeployed staff to other capital projects necessary to meet target deadlines for other capital projects. Deferral would not impact public safety but will impact the response time for crews to reinstate power to customer.)
 \$25,000

Reduced cash flows for 2009 were expected due to lower Distribution Revenues resulting from reduced consumption due to weather, impacts of the recession and the impact of conservation initiatives. In response to these reduced revenues, an effort was initiated to manage capital projects by deferring where possible. The result being, when the Update was forecast, cash flows were anticipated to be positively impacted for 2009 by managing the capital budget. The reconciliation is provided below:

Free Cash Flow	2009 Budget (000's)	2009 Update (000's)
Earnings Before Tax	\$4,670	\$4,500
+ Depreciation	\$6,871	\$6,915
- Capital	\$8,447	\$7,603
	\$3,094	\$3,812

- e) Term Sheet and Financing Agreement relating to the Infrastructure Ontario loan are attached.
Current interest rate schedule from the IO is attached.
- f) There have been no communications with the City regarding privatization of the promissory note nor has Burlington Hydro had any communications with third parties with respect to replacement financing.

g)

			2009 Budget	2010 Budget	Variance	Variance as reported per page 6 of CFO Report
1	Salaries & Benefits	Change in Salary & Benefits	3,112,130	3,209,945	97,815	\$96,000
2	Bank Expenses	Annual Fees	31,401	93,000	61,599	60,000
3	Regulatory Expense	Rebase Appl.	0	95,250	95,250	100,000
4	Regulatory Expense	OEB Assessment/ Section 30	<u>204,770</u>	<u>246,883</u>	<u>42,113</u>	<u>50,000</u>
			3,348,301	3,645,078	296,777	306,000

			2010 Budget	2010 Rebase Applic.	Variance
1	Salaries & Benefits	Change in Salary & Benefits	3,209,945	3,236,819	26,874
2	Bank Expenses	Annual Fees	93,000	104,029	11,029
3	Regulatory Expense	Rebase Appl.	95,250	95,387	137
4	Regulatory Expense	OEB Assessment/ Section 30	<u>246,883</u>	<u>246,883</u>	<u>0</u>
			3,645,078	3,683,118	38,040

The variance between the 2010 Budget and the 2010 Rate Application was due to more current information.

- h) The 2009 Update figures in the Operating Expenses tables have been provided in the attached tables in USofA format, with comparisons to the 2009 Bridge Year figures in the Application.

RECONCILIATION OF 2009 BRIDGE YEAR TO 2009 UPDATE FOR BOARD OF DIRECTORS					
DEPARTMENT	ACCOUNT	2009 BRIDGE YEAR	2009 UPDATE	VARIANCE UPDATE TO BRIDGE	NOTE
OPERATIONS	5005	0	0	0	
	5010	1,049,785	1,068,976	(19,191)	
	5012	102,981	113,296	(10,315)	
	5014	0	0	0	
	5015	0	0	0	
	5016	519,152	410,804	108,348	(a)
	5017	274,022	265,503	8,519	
	5020	278,657	240,114	38,543	
	5025	419,111	376,593	42,518	
	5030	0	0	0	
	5035	147,345	114,432	32,913	
	5040	154,360	117,023	37,337	
	5045	556,455	596,703	(40,248)	
	5050	0	0	0	
	5055	67,554	112,452	(44,898)	
	5060	0	0	0	
	5065	224,982	187,671	37,311	
	5070	154,420	138,399	16,021	
	5075	31,187	39,240	(8,053)	
	5085	0	0	0	
	5090	71	0	71	
	5095	177,625	178,897	(1,272)	
	5096	0	0	0	
<i>Operations - Sub-total</i>		<u>4,157,707</u>	<u>3,960,103</u>	<u>197,604</u>	
MAINTENANCE	5105	0	0	0	
	5110	105,301	66,562	38,739	
	5112	0	0	0	
	5114	85,889	50,674	35,215	
	5120	128,507	88,555	39,952	
	5125	598,891	558,111	40,780	
	5130	241,431	204,293	37,138	
	5135	457,050	414,800	42,250	
	5145	33,746	10,767	22,979	
	5150	335,263	313,416	21,847	
	5155	224,597	179,398	45,199	
	5160	191,165	183,357	7,808	
	5165	0	0	0	
	5170	0	0	0	
	5172	0	0	0	
	5175	211,169	177,205	33,964	
	5178	0	0	0	
	5195	0	0	0	
<i>Maintenance - Sub-total</i>		<u>2,613,009</u>	<u>2,247,138</u>	<u>365,871</u>	
BILLING AND COLLECTING	5305	0	0	0	
	5310	405,824	403,243	2,581	
	5315	696,594	664,908	31,686	
	5320	195,053	240,107	(45,054)	
	5325	100	0	100	
	5330	11,967	9,200	2,767	
	5335	400,000	400,000	0	
	5340	608,207	578,309	29,898	
<i>Billing and Collecting - Sub-total</i>		<u>2,317,745</u>	<u>2,295,767</u>	<u>21,978</u>	

DEPARTMENT	ACCOUNT	2009 BRIDGE YEAR	2009 UPDATE	VARIANCE UPDATE TO BRIDGE	NOTE
COMMUNITY RELATIONS	5405	0	0	0	
	5410	25,000	0	25,000	
	5415	3,026	22,000	(18,974)	
	5420	19,075	18,475	600	
	5425	0	0	0	
	5505	0	0	0	
	5510	0	0	0	
	5515	0	0	0	
	5520	0	0	0	
<i>Community Relations - Sub-total</i>		<i>47,101</i>	<i>40,475</i>	<i>6,626</i>	
ADMINISTRATIVE AND GENERAL	5605	753,577	750,616	2,961	
	5610	481,277	481,598	(321)	
	5615	1,329,826	1,302,652	27,174	
	5620	369,528	346,776	22,752	
	5625	-250,377	-250,486	109	
	5630	333,506	327,452	6,054	
	5635	124,077	125,259	(1,182)	
	5640	128,973	128,973	0	
	5645	332,009	317,753	14,256	
	5650	0	0	0	
	5655	519,153	504,493	14,660	
	5660	10,000	10,626	(626)	
	5665	443,765	446,953	(3,188)	
	5670	119,895	119,843	52	
	5675	205,797	199,491	6,306	
	5680	0	0	0	
	5685	0	0	0	
	5695	0	0	0	
<i>Administrative and General - sub-total</i>		<i>4,901,006</i>	<i>4,811,999</i>	<i>89,007</i>	
TOTAL		14,036,568	13,355,482	681,086	
<i>(a) Station Maintenance staff were temporarily transferred to the Meter Department to assist in the Smart Meter change out of commercial G01 meters.</i>					
RECONCILIATION					
BOARD OF DIRECTORS PACKAGE					
Operations and Maintenance Summary			6,207,241		
Billing and Collecting Summary			2,571,828		
Administration Summary			4,925,072		
			13,704,141		
Remove salaries, benefits and services provided to an affiliate.			-283,171		
Charitable Donations recorded in account 6205			-65,488		
TOTAL			13,355,482		

Loan Details: (to be completed by Credit Risk)

Name	Burlington Hydro Inc.	Appl'n ID: 9006
Sector	Local Distribution Company	
Service Area	Burlington	
Project	\$15,000,000 Smart Meters	
Description / Type		
Loan Amount	\$15,000,000 Total	
Term	15 years	Type Amortizing

Condition(s) Precedent (FA): (to be completed by all as required)

Non standard actions required before signing of Financing Agreements

1 none

Condition(s) Precedent (Flow of Funds): (to be completed by all as required)

Non standard actions required before funds are to be flowed

1 none

Financial Covenants & Security: (to be completed by Credit Risk)

Non standard actions required of the borrower to be included in the Financing Agreements

- 1 General Security Agreement with the borrower in 3rd priority position after the City of Burlington and Scotia Bank (not to exceed the existing credit limit).
- 2 New debt issue test: DSCR¹ of at least 1.20x must be demonstrated
- 3 Borrower not to repay shareholder debt or retire equity beyond *permitted distributions* without IO's prior written consent.
- 4 Dividend payments are allowed.
- 5 Permitted distributions will be allowed in the amount not exceeding (EBITDA less Cash Taxes less Unfinanced Capex² less Interest Costs and Principal Repayments on all outstanding debt) to be tested based on annual audited financial statements.

Project Mgmt Covenants/Requirements: (to be completed by Project Delivery)

Non standard actions required of the borrower to be included in the Financing Agreements

- 1 none
- 2

¹ Debt Service Coverage Ratio (DSCR) is defined as net income before depreciation, amortization and interest expense divided by annual debt service charge of principal and interest on all existing and proposed debts.

² Unfinanced Capex means the sum of Capital Expenditures in the period net of the amount of such Capital Expenditures financed by (i) contributed shareholder equity capital, or (ii) the principal portion of term debt or capital lease indebtedness permitted by IO in writing prior to the incurrence thereof.

***Disclaimer:** The proposed terms contained herein are for discussion purposes only and shall not be enforceable against any party, and shall have no force and effect, unless a Financing Agreement containing such proposed terms has been fully executed by all parties. This document is confidential and must not be distributed to any person not involved in the proposed transaction without the consent of Infrastructure Ontario. Infrastructure Ontario does not accept any liability whatsoever for any direct, indirect or consequential loss arising from any actions undertaken in reliance on anything contained in this proposed term sheet. This proposed term sheet is provided on the basis that you have the capability to make your own independent evaluation of the financial, market, legal, regulatory, credit, tax and accounting risks and consequences involved in the described transaction and its suitability for your purposes.

Termination Provision(s): (to be completed by all as required)

Non-standard events resulting in termination of the loan to be included in the Financing Agreements

- 1 Failure to comply with the financial and/or project management covenants/requirements (see sections above)
- 2

Credit Monitoring/Reporting Requirements: (to be completed by Credit)

Required ongoing submissions to help monitor borrower's performance and adherence to covenants after signing of the Financing Agreement

- 1 Submission of the annual audited financial statements of the borrower until the loan is repaid in full;

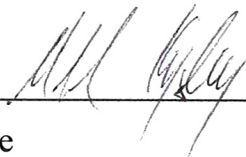
Required Documentation: (to be completed by Corporate Legal)

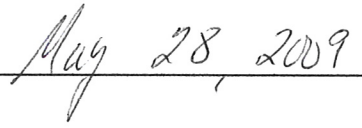
All documentation required from the client prior to execution of the Financing Agreement

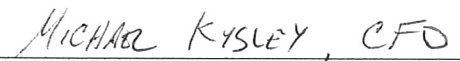
- 1 Copy of Articles of Incorporation
- 2 Copy of Ontario Energy Board License
- 3 Certificate of No Litigation (Original with Seal)
- 4 General By-Law/Borrowing By-Law (Copy)
- 5 Officer's Certificate w/ attachments (Original with Seal)
- 6 Borrowing Resolution (Original with Seal or Certified True Copy with Seal)
- 7 Legal Opinion by External Legal Counsel

Burlington Hydro Inc.


I accept the conditions and covenants proposed in this term sheet and would like OIPC to proceed with the final review of the loan application under the aforementioned terms.


Signature

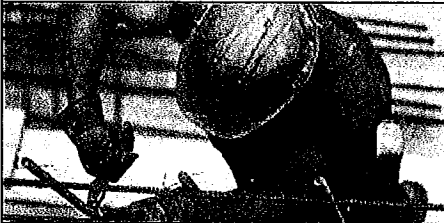

Date


Name, Title

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Lending Rates: Local Distribution Companies

Indicative Lending Rates as of December 11, 2009**

Term	Construction	Serial	Amortizer
1 Month	0.95%	-	-
5 Year	-	2.79%	2.89%
10 Year	-	3.87%	3.97%
15 Year	-	4.45%	4.55%
20 Year	-	4.81%	4.91%
25 Year	-	5.04%	5.14%
30 Year	-	5.16%	5.26%
35 Year	-	5.23%	5.33%
40 Year	-	5.28%	5.38%


About our Lending Rates

Our online lending rates are updated frequently as we track the movement of our cost of borrowing in the capital markets.

Debentures - rates on debentures are fixed for the entire life of the loan once the debenture is purchased by Infrastructure Ontario.

Construction Loans - for construction loans, rates float throughout the term of the loan until they are replaced by a debenture. Construction loan requests over \$75 million are subject to funding availability and interest rates may vary from those posted.

**These interest rates are the all-in cost for loans of the term and type selected.



RESOURCES

[Loan Payment Calculator](#)
 Five-year, \$30 billion strategic investment plan
[ReNew Ontario](#)
 Five principles guiding all infrastructure projects
[Building a Better Tomorrow](#)
[Serial vs. Amortizer Debentures](#)

FINANCING AGREEMENT

THIS AGREEMENT (the “Agreement”), made in duplicate, dated and effective November 17, 2009 (the “Effective Date”)

BETWEEN:

**ONTARIO INFRASTRUCTURE PROJECTS
CORPORATION**

(herein after referred to as “OIPC”);

and

BURLINGTON HYDRO INC.

(an Ontario corporation created under the *Business Corporations Act* (Ontario) herein after referred to as the “Borrower”)

WHEREAS:

OIPC has advised the Borrower that its loan application number 9006, (the “Application”) has been approved;

OIPC agrees to make financing available to the Borrower up to a maximum aggregate principal amount of \$15,000,000.00 (FIFTEEN MILLION DOLLARS) (the “Committed Amount”) for the projects listed in the Application and more particularly described in Schedule “A” hereto (the “Project”), subject to the terms and conditions set out in this Agreement.

NOW THEREFORE in consideration of the covenants of each of the parties contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the parties, the Borrower and OIPC hereby agree as follows:

1. Definitions

In this Agreement:

- (a) **“Acquired Assets”** means any assets, rights or properties, of any nature or kind, acquired, constructed or improved by the Borrower or any Related Entity after the date of this Agreement and, for greater certainty, shall include any buildings or other fixtures, acquired, constructed or improved by the Borrower after the date of this Agreement.
- (b) **“Advance”** means a short-term loan made by OIPC to the Borrower in Canadian dollars pursuant to the terms and conditions of this Agreement.
- (c) **“Advance Date”** has the meaning given to it in paragraph 6(a) hereof.
- (d) **“Advance Interest Rate”** has the meaning given to it in paragraph 9(a) hereof.

- (e) **“Agreement”** means the agreement constituted by this agreement including all attached schedules and referenced documents including the debenture(s) and the general security agreement and the respective terms and conditions thereunder, as the same may be amended, restated, modified or replaced from time to time. Terms such as “hereof”, “herein” and “hereto” refer to this Agreement.
- (f) **“Applicable Law”** means, in respect of any Person, property, transaction or event, all present or future applicable laws, statutes, regulations, treaties, judgments and decrees and all present or future applicable published directives, rules, policy statements, instruments and orders of any Public Authority and all applicable orders and decrees of courts and arbitrators of like application.
- (g) **“Application”** has the meaning given to it in the first recital hereof.
- (h) **“Authorized Officer”** means with respect to the Borrower, the Chairperson of the Board of Directors, or any Executive Director or any other officer or Person designated from time to time by a resolution of the Board of Directors of the Borrower.
- (i) **“Business Day”** means a day on which banking institutions in Toronto, Ontario, Canada are not authorized or obligated by law or executive order to be closed, other than Saturday or Sunday.
- (j) **“Capital Lease Obligation”** means, in respect of any Person, the obligation of such Person, as lessee, to pay rent or other payment amounts under a lease of real or personal property which is required to be classified and accounted for as a capital lease or liability of such Person, in accordance with GAAP.
- (k) **“Committed Amount”** has the meaning given to it in the second recital hereof;
- (l) **“Debt Service Coverage Ratio”** means, in respect of the Borrower, on a consolidated basis, at any time, the amount determined in accordance with the formula: net income before depreciation, amortization and interest expense divided by annual scheduled payments of principal and interest as required on any Indebtedness of the Borrower.
- (m) **“Debentures”** means secured debentures of the Borrower issued from time to time pursuant to the terms and conditions of this Agreement.
- (n) **“Debenture Interest Rate”** has the meaning given to it in paragraph 11(e) hereof.
- (o) **“Debenture Purchase Certificate”** means a certificate substantially in the form as provided by OIPC to the Borrower.
- (p) **“Debenture Purchase Date”** has the meaning given to it in paragraph 10(a) hereof.
- (q) **“Drawdown Certificate”** means a certificate substantially in the form as provided by OIPC to the Borrower.

- (r) **“Eligible Borrower”** means a public body that is eligible to borrow from OIPC pursuant to the *Ontario Infrastructure Projects Corporation Act, 2006* (Ontario).
- (s) **“Equity”** means, on a consolidated basis, the book value, preferred and common shares, contributed surpluses and retained earnings of the Borrower.
- (t) **“Event of Default”** means any of the events described in paragraph 13(c).
- (u) **“Facility Termination Date”** means the earlier of November 17, 2014 and the date on which the obligations of OIPC hereunder have been terminated pursuant to paragraphs 13(b) or 13(c) hereof.
- (v) **“Financial Instrument Obligations”** means all obligations and liabilities of the Borrower or a Related Entity under or in respect of any interest or currency rate swap, forward agreement or other instrument which is a financial derivative.
- (w) **“Fiscal Year”** means the fiscal year of the Borrower ending on December 31st in each calendar year.
- (x) **“GAAP”** means the generally accepted accounting principles stated from time to time in the Handbook of the Canadian Institute of Chartered Accountants.
- (y) **“Indebtedness”** means, at any time and in respect of any Person, without duplication:
 - (i) all obligations of such Person for money borrowed including:
 - (A) obligations with respect to bankers' acceptances;
 - (B) contingent reimbursement obligations with respect to letters of credit and other financial instruments; and
 - (C) all Purchase Money Obligations which would be indebtedness under GAAP but excluding, for greater certainty, trade indebtedness accounted for as accounts payable, accrued expenses and other similar current liabilities incurred in the ordinary course of operations determined in accordance with GAAP;
 - (ii) any Capital Lease Obligation of such Person; and
 - (iii) all undertakings of such Person in respect of obligations of any Person of the type described in (i) which such Person has guaranteed, directly or indirectly, or the holder of which such Person has otherwise assured against loss thereon.
- (z) **“Interest Period”** for an Advance means: (i) initially, the period from and including the date of the Advance to but excluding the next following Reset Date; and (ii) subsequently, each period from and including a Reset Date to but excluding the next following Reset Date.

- (aa) **“Issue Date”** for a Debenture means the date on which the Debenture is issued.
- (bb) **“Lien”** means any mortgage, hypothec, lien, pledge, assignment, charge, security interest, title retention agreement intended as security, or other similar encumbrance and any other arrangement which has the effect of granting security.
- (cc) **“Limited Recourse Debt”** means Indebtedness, under which recourse in respect of a default in the repayment of such Indebtedness is limited to the asset or assets acquired with such Indebtedness by the Borrower or any Related Entity.
- (dd) **“Material Related Entity”** means, at any relevant time, any Related Entity, the book value of whose assets, rights and properties constitutes in excess of 10% of the book value of the assets, rights and properties of the Borrower and all its Related Entities, considered as a whole.
- (ee) **“Maturity Date”** has the meaning given to it in paragraph 11(a) hereof.
- (ff) **“Obligations”** means the amount of all Advances provided to the Borrower pursuant to this Agreement and any unpaid interest thereon.
- (gg) **“Officer's Certificate”** means a certificate of the Borrower that has been signed by an Authorized Officer.
- (hh) **“Operating Line of Credit”** means a credit facility funding the day-to-day operating requirements of the Borrower and does not include use for long-term capital investments.
- (ii) **“Permitted Liens”** means and refers to:
 - (i) Liens to which any Acquired Assets are subject at the time such Acquired Assets are acquired by the Borrower or any Related Entity provided that such Lien is limited to the Acquired Assets and such Lien has not been created or incurred in anticipation of such acquisition;
 - (ii) any Lien on or against cash or marketable debt securities to secure Financial Instrument Obligations incurred by the Borrower or any Related Entity in the course of its operations and not for speculative purposes;
 - (iii) any Lien in respect of a Purchase Money Obligation, Capital Lease Obligation or Limited Recourse Debt incurred in connection with or within 180 days of the acquisition, construction or improvement of any Acquired Assets and which secures the purchase price of such asset or the cost of acquiring, constructing or improving such asset provided that the amount secured by such Lien does not exceed the purchase price or cost of acquiring, constructing or improving such asset (including any applicable interest and/or lease payments to be paid);
 - (iv) any Liens to which assets acquired or which are deemed to have been acquired by the Borrower or any Related Entity pursuant to a merger or

other combination with any other entity are subject at the time of such merger or other combination;

- (v) Liens for Taxes, utility charges, levies, assessments or governmental charges:
 - (A) not at such time past due; or
 - (B) the validity of which are being contested in good faith and by appropriate proceedings;
- (vi) the Lien of any judgment rendered, or claim filed, which is being contested in good faith and by appropriate proceedings;
- (vii) undetermined or inchoate Liens and charges incidental to, purchases of goods, construction, maintenance or current operations which have not at such time been filed or registered pursuant to law, which relate to obligations which are at such time not past due or which, if filed or registered, are being contested in good faith and by appropriate proceedings;
- (viii) easements, rights-of-way, servitudes or other similar rights in property (including rights-of-way and servitudes for railways, sewers, drains, gas and oil pipe lines, gas and water mains, electric light and power and telephone or telegraph or cable television conduits, poles, wires and cables) granted to or reserved or taken by other Persons;
- (ix) security given to a public utility or any municipality or governmental or other public authority when and to the extent required by such utility or municipality or other authority in the ordinary course of operations of the Borrower or any Related Entity and not in connection with the borrowing of money or obtaining of credit by the Borrower or any Related Entity;
- (x) the right reserved to or vested in any municipality or governmental or other public authority by the terms of any lease, license, franchise, grant or permit, or by any statutory provision, to terminate any such lease, license, franchise, grant or permit, or to require annual or other periodic payments as a condition of the continuance thereof;
- (xi) the reservation in any original grant from the Crown of any land or interests therein and statutory exceptions to title;
- (xii) Liens created or assumed by the Borrower or any Related Entity if an Authorized Officer has certified to OIPC that such Liens secure amounts which are not material having regard to the then current market value of the assets, rights and properties of the Borrower and its Related Entities, considered as a whole;
- (xiii) any renewal, replacement or temporal extension (or successive renewals, replacements or extensions) in whole or in part of any Permitted Lien so

long as the principal amount secured by such Permitted Lien does not exceed the principal amount secured by the Permitted Lien immediately prior to such extension;

- (xiv) any and all Liens, whether direct or indirect, contingent or otherwise, to which any of the assets, rights and properties of the Borrower and its Related Entities are subject on the date of this Agreement;
- (xv) Liens or any rights of distress reserved in or exercisable under any lease for rent and for compliance with the terms of such lease;
- (xvi) an Operating Line of Credit with the Bank of Nova Scotia in the amount of \$10,000,000.00 which is secured by a general security agreement registered under the *Personal Property Security Act (Ontario)*; future increases to the Operating Line of Credit with the Bank of Nova Scotia shall not exceed the sum of which is seventy-five percent (75%) of current accounts receivable (90 days or less) and unbilled earned revenue; this Operating Line of Credit shall rank in priority to any OIPC security issued under this Agreement;
- (xvii) a letter of credit with the Bank of Nova Scotia in the amount of \$14,000,000.00 which is secured by a general security agreement registered under the *Personal Property Security Act (Ontario)*; future increases to the letter of credit with the Bank of Nova Scotia are permitted provided that the letter of credit is to be used for the exclusive purpose of providing required support for the Borrower's electricity purchases through the Independent Electricity System Operator (IESO) and provided such increase is required by the IESO; this letter of credit with the Bank of Nova Scotia shall rank in priority to any OIPC security issued under this Agreement;
- (xviii) a promissory note with the Corporation of the City of Burlington in the amount of \$47,878,608.00 which is secured by a general security agreement registered under the *Personal Property Security Act (Ontario)*; an assignment of this promissory note to another Person shall be permitted and shall rank in priority to any OIPC security issued under this Agreement as long as the amount, term and conditions of the promissory note remain unchanged;
- (jj) “**Person**” includes an individual, firm, partnership, trust, trustee, executor, administrator, legal personal representative, government, governmental body or authority, corporation or other incorporated or unincorporated entity.
- (kk) “**Prime Rate**” means, on any day, the annual rate of interest which is the arithmetic mean of the prime rates announced from time to time by the Reference Banks as their reference rates in effect on such day for Canadian dollar commercial loans made in Canada. If fewer than five of the Reference Banks quote a prime rate on such days, the “Prime Rate” shall be the arithmetic mean of the rates quoted by the remaining Reference Banks.

- (ll) “**Principal Amount**” of an interest-bearing Debenture means the amount stated to be payable at maturity, exclusive of any interest.
- (mm) “**Project**” has the meaning given to it in the second recital hereof.
- (nn) “**Public Authority**” means any governmental, regional, municipal or local body having authority over either of the parties.
- (oo) “**Purchase Money Obligation**” means any unpaid part of, or indebtedness incurred or assumed for the purpose of acquiring, a particular asset, right or property, the repayment of which is secured by recourse against such asset, right or property.
- (pp) “**Reference Banks**” means, collectively, The Toronto-Dominion Bank, Bank of Nova Scotia, Bank of Montreal, Royal Bank of Canada and Canadian Imperial Bank of Commerce.
- (qq) “**Related Entity**” means any company, corporation, partnership or other entity which is controlled by the Borrower either through the ownership of voting securities, by contract or otherwise.
- (rr) “**Reset Date**” has the meaning given to it in paragraph 9(a) hereof.
- (ss) “**Shareholder**” means the City of Burlington.
- (tt) “**Successor Entity**” has the meaning given to it in paragraph 14 hereof.
- (uu) “**Taxes**” means any present or future income, excise, stamp, capital, goods and services, property or other taxes, levies or withholding imposed by any taxing authority.
- (vv) “**Unfinanced Capex**” means the sum of all capital expenditures of the Borrower in a quarterly period net of the amount of such capital expenditures financed by (i) contributed Shareholder equity capital, or (ii) the principal portion of term debt or capital lease Indebtedness as permitted by OIPC in writing prior to the incurrence thereof.

2. Representations and Warranties

The Borrower represents and warrants to OIPC that:

- (a) the information contained in the Application, to the extent that it relates to the Borrower or the Project, is true and correct in all material respects as of the date of this Agreement;
- (b) the Borrower has been duly incorporated pursuant to Section 142 of the *Electricity Act*, 1998 (Ontario) as amended, all of the shares of the Borrower are held by one or more municipal corporations and the Borrower is in the business of

generating, transmitting, distributing, or retailing electricity and has the corporate power and capacity to:

- (i) own, lease and operate its properties and assets and to carry on its activities as a generator, transmitter, distributor or retailer of electricity;
 - (ii) to borrow money;
 - (iii) to enter into and complete the Project; and
 - (iv) to execute and deliver this Agreement and to perform its obligations hereunder;
- (c) the Borrower has taken all necessary corporate action to authorize the execution, delivery and performance of this Agreement;
- (d) the Agreement has been duly authorized, executed and delivered by the Borrower and constitutes a valid and legally binding obligation, enforceable against the Borrower in accordance with its respective terms, subject to applicable bankruptcy, insolvency and other laws affecting the enforcement of creditors' rights generally;
- (e) the execution and delivery by the Borrower of this Agreement and the performance by the Borrower of its obligations hereunder do not violate, result in a breach of, or constitute a default under:
- (i) any of the terms, conditions or provisions of its constituting documents or by-laws of the Borrower;
 - (ii) any resolution of the board of directors or any financial plan, budget, borrowing strategy or investment strategy of the Borrower; or
 - (iii) any statute, regulation or other law applicable to the Borrower;
- (f) the Borrower is not currently in default under any Indebtedness and undertakes to immediately inform OIPC if it is in default under any Indebtedness at any time; and
- (g) subject only to minor title defects not individually or in the aggregate material nor materially and adversely affecting the use thereof and subject to any security granted to OIPC pursuant to the provisions hereof, the Borrower has good and marketable title to its real and personal properties.

The representations and warranties set out in this paragraph 2 shall survive the execution and delivery of this Agreement and the making of any Advances to the Borrower, notwithstanding any investigations or examinations which may be made by OIPC or any counsel to it.

3. Covenants

The Borrower covenants and agrees with OIPC that, unless OIPC otherwise consents in writing, so long as any Advance is outstanding:

- (a) the proceeds of all Advances provided by OIPC to the Borrower shall be applied only to capital expenditures in respect of hard and soft capital costs actually incurred or to be incurred by the Borrower, if such costs and expenditures are directly related to the Project and not for any other purpose;
- (b) the proceeds of each Debenture shall be applied only to either:
 - (i) repayment of Advances, as more particularly set out in paragraph 11 below; or
 - (ii) capital expenditures in respect of hard and soft capital costs actually incurred or to be incurred if OIPC in its sole discretion has agreed to purchase a Debenture prior to making any Advance or prior to the expenditure of all or any portion of the Committed Amount on the Project, by the Borrower, if such costs and expenditures are directly related to the Project in respect of which the Debenture is being issued; or
 - (iii) legal costs and expenses directly related to the issue of such Debenture;and not for any other purpose;
- (c) the Borrower shall duly and punctually pay or cause to be paid when due and payable the principal of and interest on all Advances and all other amounts owing in respect of all Advances, in conformity with the terms of this Agreement, and it shall faithfully observe and perform all the conditions, covenants and requirements of this Agreement;
- (d) the Borrower will not, nor will it permit any Material Related Entity to, create, assume or suffer to exist any Lien upon the whole or any part of its assets, rights or properties (both real and personal, including licences, franchises, permits and leasehold interests) whether now owned or hereafter acquired if such Lien secures Indebtedness and is a Lien for the benefit of any Person other than OIPC unless such Lien is a Permitted Lien;
- (e) the Borrower will not, nor will it permit any Material Related Entity to, sell, assign or otherwise dispose of any of its assets, rights and properties whether in a single transaction or a series of transactions, other than to the Borrower, unless:
 - (i) such sale, assignment or other disposition is not material having regard to the assets, rights and properties of the Borrower and the Material Related Entities, taken as a whole or effected in the ordinary course of operations of the Borrower or the Material Related Entities, as applicable;
 - (ii) the Borrower, concurrent with the completion of such sale, assignment or other disposition, provides OIPC with a certificate of an Authorized Officer to the effect that such Authorized Officer has no reason to believe that, after giving effect to such sale, assignment or other disposition, the

Borrower will not be able to meet all of its financial obligations in accordance with their terms; including its obligation to pay principal and interest on the Advances;

- (iii) the sale is a sale to a wholly owned municipal corporation or a wholly owned subsidiary thereof; or
- (iv) in the case of a disposition of all or substantially all of its assets, the Borrower complies with paragraph 14 of this Agreement;
- (f) the Borrower shall as soon as practicable following the approval thereof by the Borrower and, in any event, within 120 days after the end of each Fiscal Year of the Borrower, furnish OIPC with such number of copies as OIPC may reasonably request of an annual balance sheet, statement of revenue and expense, statement of changes in net assets, statement of cash flows, prepared in accordance with GAAP as applied to the presentation of financial information of the Borrower and reported on by an independent accountant and independent auditor;
- (g) the Borrower shall furnish OIPC as soon as practicable with any other financial reporting information that OIPC may require at its discretion and at any time prepared in accordance with GAAP.
- (h) the Borrower will at all times maintain its existence as a body corporate with all necessary approvals to carry on its operations as a municipal corporation that generates, transmits, distributes, or retails electricity under Applicable Law and conduct its operations in a proper and efficient manner, and will keep or cause to be kept proper books of account and will take all necessary steps to ensure that its Material Related Entities conduct their operations in a proper and efficient manner and keep or cause to be kept proper books of account;
- (i) the Borrower shall maintain in force with reputable insurers insurance with respect to losses of or damage to its assets from such risks, casualties and contingencies and of such types and in such amounts and subject to such deductible amounts as are customary in the case of prudent persons of established reputation engaged in the same or similar businesses with similar assets, and any other form(s) of appropriate insurance that a prudent person in the business of operating a municipal corporation for the purposes of generating, transmitting, distributing or retailing electricity under Applicable Law would maintain. The Borrower's insurance carriers and policy provisions must be acceptable to OIPC and must remain in effect for the duration of this Agreement. OIPC shall be named as an additional insured on all such insurance policies. The Borrower shall submit certificates of insurance as evidence of the above required insurance to OIPC prior to any Advances pursuant to this Agreement. Subsequent to Project completion, the Borrower shall maintain adequate liability, machinery replacement insurance naming OIPC as an additional insured on said insurance policies;
- (j) the Borrower shall execute and deliver the general security agreement in the form provided and attached as Schedule "D" to this Agreement in order to give OIPC a

security interest in the present assets of the Borrower as well as those assets acquired subsequent to the effective date of this Agreement;

- (k) since the date of incorporation of the Borrower, there has been no development materially adversely affecting the business or financial condition or position of the Borrower or its ability to carry on business as presently conducted or as contemplated hereunder to be conducted;
- (l) the Borrower shall not issue any preferred shares without first seeking the written approval of OIPC;
- (m) the Borrower shall notify OIPC in writing prior to any new debt issuance and shall seek the approval of OIPC where the resulting Debt Service Coverage Ratio of the Borrower relating to any new debt issue falls below 1.20x at any time, such ratio will otherwise be tested and calculated as of the end of each Fiscal Year as applicable; any new debt issuance on behalf of the Borrower, including any term debt with the Bank of Nova Scotia under existing credit facilities, shall rank *pari passu* with OIPC's security under this Agreement;
- (n) the Borrower shall not make any payments towards repaying any Shareholder debt or retiring any of its Equity with the exception of those repayments which constitute (i) any amount not exceeding EBITDA, less cash taxes, less Unfinanced Capex, less interest costs and any principal repayments on all Indebtedness of the Borrower, all of which is to be tested and calculated by OIPC on an annual basis, or (ii) any dividend payments, without first obtaining OIPC's prior written consent;
- (o) the Borrower shall provide OIPC with written notification where there is an increase to its letter of credit with the Bank of Nova Scotia as more particularly described in the definition of "Permitted Liens" under this Agreement;
- (p) the Borrower shall provide OIPC with written notification where there is an increase to its Operating Line of Credit with the Bank of Nova Scotia as more particularly described in the definition of "Permitted Liens" under this Agreement and shall provide OIPC with the latest list of accounts receivable and financial statements for verification purposes; provided that if and only if the Borrower's accounts receivable and revenue do not support an increase in its Operating Line of Credit as described within the definition Permitted Liens, OIPC shall have the right that the increase in the Operating Line of Credit be reversed to its original amount;
- (q) the Borrower shall notify OIPC as soon as practicable after becoming aware of the occurrence of any Event of Default or of the occurrence of any event or circumstance which, after notice or lapse of time, would become an Event of Default; and
- (r) the Borrower shall, within sixty (60) days of the execution of this Agreement, retire and close out its short term loan with the Bank of Nova Scotia in the amount

of \$4,000,000.00 to fund the Project on an interim basis; the Borrower shall not increase its indebtedness under this facility in the future.

For greater certainty, OIPC is not responsible for ensuring that the proceeds of Advances and Debentures provided to the Borrower are in fact used in the manner specified in paragraphs 3(a) and 3(b) above.

4. Project Expenditure Requirements

The Borrower shall not request an Advance in respect of the Project hereunder unless expenditures in an amount no less than the amount of the Advance to be allocated to the Project have actually been incurred by the Borrower prior to the date of such request subject to the right of OIPC to waive this requirement at its sole discretion.

5. Evidence of Advances

OIPC shall open and maintain in accordance with its usual practice books of account evidencing all Advances and all other amounts owing by the Borrower to OIPC. OIPC shall enter in the foregoing accounts details of each Advance and of all amounts from time to time owing or paid by the Borrower to OIPC hereunder, the amounts of principal, interest and fees payable from time to time hereunder. The information entered in the foregoing accounts shall constitute, in the absence of manifest error, *prima facie* evidence of the obligations of the Borrower to OIPC hereunder, the date OIPC made each Advance available to the Borrower and the amounts the Borrower has paid from time to time on account of the principal of, interest on and fees related to the Advances.

6. Procedure for Obtaining Advances

(a) The Borrower may request an Advance to be made on either the 1st or the 15th day of any calendar month or the first Business Day following such date if such date is not a Business Day (either of which is defined as the "Advance Date") by delivering to OIPC at the address shown on Schedule "B" hereto no later than five (5) Business Days prior to the Advance Date on which the Advance is required, by courier or fax, an irrevocable Drawdown Certificate.

(b) The principal amount of all Advances will be tendered to the Borrower by electronic transfer of funds to an account of the Borrower maintained with a deposit-taking institution, such account to be designated by notice in writing to OIPC by the execution and delivery of the attached Schedule "C" to this Agreement and the Borrower undertakes to notify OIPC immediately in writing of any changes in its designated account for the purposes of such deposit.

7. Conditions Precedent to Advances

OIPC shall not make any Advance until each of the following conditions precedent has been satisfied:

- (a) OIPC shall have received a Drawdown Certificate in respect of the Advance requested;

- (b) at OIPC's discretion, if any issues that were raised in any audit conducted under paragraph 18(a) have been resolved to OIPC's satisfaction and/or OIPC has neither required an audit under paragraph 18(a) nor is such an audit ongoing;
- (c) the amount of the requested Advance when added to the aggregate amount of Advances then outstanding in respect of the Project does not exceed the Committed Amount for the Project;
- (d) the representations and warranties of the Borrower set out in paragraph 2 hereof shall be true and correct as at the date of the Advance, as evidenced by a Drawdown Certificate;
- (e) the Borrower shall not be in material default of any of its obligations under this Agreement as at the date of the Advance, as evidenced by a Drawdown Certificate;
- (f) no Event of Default shall have occurred and be continuing;
- (g) expenditures on the Project shall have been incurred subject to paragraph 4, as evidenced by a Drawdown Certificate;
- (h) a legal opinion from the Borrower's external legal counsel addressed to OIPC and in the form and substance satisfactory to OIPC shall have been delivered to OIPC on or prior to the first Advance made by OIPC;
- (i) at OIPC's discretion, the requested Advance when added to the aggregate amount of all Advances then outstanding does not exceed the Advance requests as noted in Schedule "A" hereto; and
- (j) OIPC shall have received evidence in the form of valid certificates of insurance from the Borrower that OIPC has been added as an additional insured on all insurance policies in association with the construction of the Project by the entity that is responsible for the development of the Project and that has been retained by the Borrower.

8. Conditions Precedent to Debenture Purchases

OIPC shall not purchase any Debenture until each of the following conditions precedent, has been satisfied, subject also to paragraphs 10 and 11:

- (a) OIPC shall have received a Debenture Purchase Certificate;
- (b) the amount from the proceeds of the Debenture purchase when added to the aggregate amount of Debentures then outstanding in respect of the Project does not exceed the Committed Amount;
- (c) the representations and warranties of the Borrower set out in paragraph 2 hereof shall be true and correct as at the date of the Debenture purchase, as evidenced by a Debenture Purchase Certificate;

- (d) the Borrower shall not be in material default of any of its obligations under this Agreement as at the date of the Debenture purchase, as evidenced by a Debenture Purchase Certificate;
- (e) at OIPC's discretion, if any issues that were raised in any audit conducted under paragraph 18(a) have been resolved to OIPC's satisfaction and/or OIPC has neither required an audit under paragraph 18(a) nor is such an audit ongoing;
- (f) no Event of Default shall have occurred and be continuing;
- (g) a legal opinion from the Borrower's external legal counsel addressed to OIPC and in the form and substance satisfactory to OIPC shall have been delivered to OIPC;
- (h) expenditures on the Project shall have been incurred or will be incurred if OIPC in its sole discretion has agreed to purchase a Debenture prior to making any Advance or prior to the expenditure of all or any portion of the Committed Amount on the Project, as evidenced by a Debenture Purchase Certificate; and
- (i) OIPC shall have received evidence in the form of valid certificates of insurance from the Borrower that OIPC has been added as a added insured on all insurance policies in association with the construction of the Project by the entity that is responsible for the development of the Project and that has been retained by the Borrower.

9. Interest on Advances

(a) Each Advance shall bear interest at a floating rate per annum as determined by OIPC based on OIPC's cost of funds plus OIPC's prevailing spread assigned to the borrower sector for program delivery costs and risks (the "Advance Interest Rate"). The Advance Interest Rate for an Advance for the initial Interest Period shall be set by OIPC based on OIPC's cost of funds plus OIPC's prevailing spread assigned to the borrower sector for program delivery costs and risks and will be effective on the date of the Advance. The Advance Interest Rate for each subsequent Interest Period shall be reset on the first Business Day of each calendar month (each such Business Day, a "Reset Date") for the following Interest Period as set by OIPC at its discretion and will be effective on the Reset Date, which Advance Interest Rate as so reset shall apply to the Advance for such Interest Period until reset again.

(b) Interest accrued during an Interest Period on the principal balance of an Advance outstanding during such Interest Period shall be payable in arrears on the first Business Day of the calendar month following the Interest Period in an amount equal to the product of the Advance Interest Rate in effect during such Interest Period and the principal balance of the Advance outstanding as at the Reset Date for such Interest Period, or in the case of an initial Interest Period the principal balance outstanding on the date of the Advance, multiplied by a fraction, the numerator of which is the number of days in the Interest Period and the denominator of which is 365.

(c) Payments of interest due by the Borrower for any Advance, and any other payments due under this Agreement, shall be made by pre-authorized debit from an account of the Borrower maintained with a deposit-taking institution, such account to be designated by

notice in writing to OIPC by the execution and delivery of the attached Schedule "C" to this Agreement which Schedule forms part of this Agreement, together with such other authorizations, voided cheques and other documentation as the deposit-taking institution and the rules of the Canadian Payments Association may require for such pre-authorized debit, and the Borrower undertakes to notify OIPC immediately in writing of any changes in its designated account for the purposes of pre-authorized debits.

(d) The Borrower shall pay interest to OIPC on any overdue amount of principal or interest in respect of any Advance, both before and after demand, default, maturity and judgment, at a rate per annum equal to the Prime Rate plus 200 basis points, calculated on a daily basis from the date such amount becomes overdue for so long as such amount remains overdue, and the Borrower shall pay to OIPC any and all costs and losses incurred by OIPC as a result of the payment having been overdue.

(e) For purposes of disclosure pursuant to the *Interest Act* (Canada), the yearly rate of interest which is equivalent to a rate of interest payable in respect of the principal amount of any Advance for any period of less than a year may be determined by multiplying the rate of interest for such period by a fraction, the numerator of which is the actual number of days in a year commencing on and including the first day in such period and ending on but excluding the corresponding day in the next calendar year and the denominator of which is the actual number of days in such period.

10. Purchase of Debentures

(a) Provided that the Borrower is not in default under this Agreement, that all of the conditions precedent listed in paragraph 8 have been satisfied and that none of the events specified in paragraph 13(c) shall have occurred and be continuing, and upon satisfaction of such other usual and customary conditions precedent as OIPC and its legal counsel may reasonably require, and subject to paragraph 11 hereof, OIPC agrees to purchase Debentures from the Borrower on the 1st or 15th of the calendar month next following the debenture purchase date(s) as noted on the attached Schedule "A" and as determined in the sole discretion of OIPC ("Debenture Purchase Date") and/or at a time or times to be determined at the sole discretion of OIPC, on or prior to the Facility Termination Date in an aggregate Principal Amount not to exceed the Committed Amount and subject to the detailed Debenture purchase process to be provided to the Borrower.

(b) The purchase price for any Debenture issued in accordance with paragraph 10(a) shall be satisfied by virtue of and to the extent of the satisfaction of the Obligations effected by such issuance pursuant to paragraph 11(d). Satisfaction of such purchase price by such means shall be deemed to be equivalent for all purposes, to the receipt by the Borrower from OIPC of a sum of money equal to the amount of the Obligations so satisfied. If such purchase price exceeds the amount of the Obligations so satisfied, OIPC shall pay such excess to the Borrower in immediately available funds upon the issue of the Debentures.

(c) If OIPC agrees to purchase a Debenture(s) from the Borrower prior to making any Advance or prior to the expenditure of all or any portion of the Committed Amount on the Project, the Borrower agrees that it will submit an annual report to OIPC, in the form to be provided by OIPC, verifying that all proceeds of such Debenture(s) have been used exclusively for the financing of the Project during the relevant period. The first such report shall be due on

the first anniversary of the purchase of the Debenture(s) by OIPC and subsequent reports shall be due annually thereafter on subsequent anniversaries until such time as all the proceeds of such Debenture(s) have been expended.

(d) The purchase price for Debentures, in excess of the principal amount of any outstanding Obligations, will be tendered to the Borrower by electronic transfer of funds to an account of the Borrower maintained with a deposit-taking institution, such account to be designated by notice in writing to OIPC by the execution and delivery of the attached Schedule "C" to this Agreement and the Borrower undertakes to notify OIPC immediately in writing of any changes in its designated account for the purposes of such deposit.

11. Issue of Debentures and Repayment of Advances

(a) Each Advance shall be due and payable in full on the earlier of the Facility Termination Date or the Debenture Purchase Date for the Project for which the Advance was made (the "Maturity Date"), subject to OIPC's right to extend the Maturity Date in its sole discretion. The Borrower shall repay the Advance on the Maturity Date by:

- (i) paying an amount equal to the Advance to OIPC in immediately available funds;
- (ii) converting the Advance into long term financing by issuing to OIPC one or more Debentures in a principal amount at least equal to the Advance to be repaid; or
- (iii) any combination of (i) and (ii).

(b) The Borrower shall notify OIPC at least sixty (60) days in advance of the Debenture Purchase Date as noted on Schedule "A" hereto if the Debenture(s) will not be offered for purchase on such date and the Borrower shall propose another Debenture Purchase Date subject to OIPC's rights under paragraph 10(a) and subject to OIPC's right to reject the new Debenture Purchase Date.

(c) An Advance may be repaid at any time prior to its Maturity Date at the discretion of OIPC and subject to such terms and conditions as may be imposed at OIPC's discretion. The principal amount of any such repaid Advance cannot be subsequently borrowed by the Borrower.

(d) The issuance of Debentures shall satisfy the Obligations then outstanding to the extent of the aggregate Principal Amount of such issuance with the exception that any amount owing for interest on the Obligations on the Issue Date will be payable on the next following Reset Date and will not be added to the aggregate Principal Amount of such issuance. If such aggregate Principal Amount is less than the total amount of the Obligations, then the principal owing on the balance of the Obligations shall be repaid on the Issue Date to the extent of such aggregate Principal Amount and the interest owing on such balance on the Issue Date will be payable on the next following Reset Date, subject to the right of OIPC to permit the Borrower to satisfy the said balance of the Obligations at a later date.

(e) The interest rate for each Debenture (the "Debenture Interest Rate") shall be fixed by OIPC based on OIPC's cost of funds plus OIPC's prevailing spread assigned to the borrower sector for program delivery costs and risks. A rate confirmation letter will be sent to the

Borrower by OIPC confirming the interest rate to be offered for the Debenture and the Borrower's acceptance of such rate shall be conclusive proof of acceptance of the rate offered.

(f) Payments of principal and interest due on each Debenture, and any other payments due under this Agreement, shall be made by pre-authorized debit from an account of the Borrower maintained with a deposit-taking institution, such account to be designated by notice in writing to OIPC by the execution and delivery of the attached Schedule "C" to this Agreement, together with such other authorizations, voided cheques and other documentation as the deposit-taking institution and the rules of the Canadian Payments Association may require for such pre-authorized debit, and the Borrower undertakes to notify OIPC immediately in writing of any changes in its designated account for the purposes of pre-authorized debits.

12. Security and Standby Fees

(a) As continuing collateral security for the payment by the Borrower to OIPC under the terms of this Agreement and for performance by the Borrower of its obligations hereunder, the Borrower acknowledges and agrees that OIPC is to have the benefit of the general security agreement as more particularly described in Schedule "E" hereto.

(b) The Borrower shall pay OIPC a standby fee (the "Standby Fee") calculated at the rate of 25 basis points (0.25% per annum) on the unadvanced balance of the Committed Amount should the Borrower fail to draw any funds pursuant to this Agreement from OIPC during any period of twelve (12) consecutive months commencing initially from the Effective Date of this Agreement and subsequently from the date of the draw of any such funds until the earlier of the Facility Termination Date or the full advance of the Committed Amount. The Standby Fee shall be calculated daily on the basis of a calendar year of 365 or 366 days, as the case may be, and shall be due and payable by the Borrower monthly in arrears on the last Business Day of each month in accordance with the pre-authorized debit procedure outlined in paragraphs 9(c) and 11(f) above.

13. Term, Termination and Default

(a) This Agreement shall terminate ten (10) Business Days following the date on which the last Obligations outstanding hereunder are paid in full or following the last payment made by the Borrower to OIPC as specified on the Debenture(s) and or general security agreement pursuant to this Agreement unless earlier terminated in accordance with paragraphs (b) or (c) below.

(b) OIPC may terminate its obligations under this Agreement on thirty (30) days prior notice in writing to the Borrower if in the reasonable opinion of OIPC the Borrower is in material default under this Agreement, other than for any cause enumerated in (c) below or if OIPC rejects a new Debenture Purchase Date pursuant to section 11(b).

(c) OIPC may terminate any or all of its obligations under this Agreement immediately, subject to paragraph (d) below,

(i) if the Borrower:

- (A) fails to make one or more payments of principal or interest in respect of any Advance or Debenture within five (5) Business Days after the same becomes due and payable;
- (B) reaches or exceeds any updated debt and financial obligation limit imposed by its by-laws or any resolution of the Board of Directors of the Borrower;
- (C) has failed to pay principal of or interest on any Indebtedness other than the Advances or Debentures issued under this Agreement when due and such default continues for five (5) Business Days;
- (D) has failed to meet and pay any of its liabilities and obligations other than Indebtedness when due and default in payment is occasioned from financial difficulties affecting the Borrower;
- (E) has or may become involved in financial difficulties such that default or unusual difficulty in meeting debts or obligations or in providing adequate funds to meet current expenditures may ensue;
- (F) uses any Advance or the proceeds of any Debenture financing provided by OIPC for any purpose other than those purposes outlined in Section 3(a), (b) and (r) hereof;
- (G) takes any action to authorize the termination of the existence of the Borrower or a resolution is passed authorizing the termination of the existence of the Borrower, unless such action or resolution is being pursued by the Borrower on the basis that it has made provision for payment of all of its Indebtedness including all of the Advances and Debentures issued under this Agreement, that no court proceedings are pending against it and that it has obtained the approval of its creditors to a plan for the rateable distribution of all of its property; or
- (H) is subject to any proceeding whereby such proceeding shall be instituted against the Borrower or applying to a substantial part of its property or assets seeking to adjudicate it a bankrupt or insolvent, or seeking liquidation, dissolution, winding-up, reorganization, arrangement, adjustment, protection, relief or composition of it or any substantial part of its property or debt under any law relating to bankruptcy, insolvency or reorganization or relief of debts, or seeking an order for relief or the appointment of a receiver, trustee or other similar official for it or for any substantial part of its property and such proceeding shall have continued undismissed or unstayed for sixty (60) days, or a creditor or creditors of the Borrower shall privately appoint a receiver, trustee or similar official for any substantial part of the property of the Borrower and, if the Borrower shall be contesting such appointment in good faith, such appointment shall continue

for ninety (90) days; or any such action or proceeding shall have been consented to or not expeditiously opposed by the Borrower;

- (ii) if the Borrower shall fail to observe or perform any covenant or condition contained herein and the Borrower shall not make good such default within a period of thirty (30) days after written notice has been given to the Borrower by OIPC;
- (iii) if the representations and warranties made by the Borrower in this Agreement and/or the Application, or in any certificate or other document delivered hereunder shall be incorrect in any material respect when made and, if such incorrect representation or warranty is curable, the Borrower shall fail to make good such default within a period of thirty (30) days after notice in writing has been given to the Borrower by OIPC;
- (iv) if issues raised in an audit required under paragraph 18(a) have not been resolved to OIPC's satisfaction within a reasonable time after the Borrower has been notified of such issues;
- (v) if the report of the auditors on any annual financial statements delivered pursuant to paragraph 3(f) or any other financial information requested by OIPC delivered pursuant to paragraph 3(g) hereof shall be qualified in any way which OIPC acting reasonably deems to be materially adverse or if the Borrower should fail to supply any documents requested pursuant to paragraphs 3(f) and (g);
- (vi) if any final judgment is obtained against the Borrower for an amount in excess of \$100,000 and, within 10 days of the obtaining thereof, such judgment has not been discharged or execution thereunder stayed; or
- (vii) if at any time any licence or approvals required by the Borrower by any Applicable Law or Public Authority to carry on the business of a municipal corporation for the purposes of generating, transmitting, distributing or retailing electricity has been assigned, cancelled or suspended;
- (viii) if the Borrower shall fail to have obtained the consent required under paragraph 14(i);
- (ix) if the Borrower shall enter into any Indebtedness which is senior to any Indebtedness to OIPC, other than pursuant to this Agreement, subsequent to the date of this Agreement without the prior written consent of OIPC or
- (x) if the shares of the Borrower are no longer held exclusively by one or more municipal corporations as further described in paragraph 2(b) above.

(d) If OIPC elects to terminate its obligations under this Agreement pursuant to paragraph 13(c) hereof, it shall give notice in writing of such termination to the Borrower, specifying the reason for such termination. Upon delivery of such notice OIPC shall have no further obligation to make any Advances or to purchase any Debentures hereunder. In such

notice OIPC may also declare all Obligations and Debentures outstanding hereunder to be immediately due and payable, whereupon such Obligations and Debentures shall become immediately due and payable pursuant to paragraph 11(f) in addition to any other rights or remedies that OIPC may have at law or in equity to enforce such Obligations and Debentures.

(e) No delay on the part of OIPC in exercising any remedy and no waiver by OIPC of any of its rights against the Borrower shall operate as a waiver of any other rights nor shall any single or partial exercise of any remedy against the Borrower restrict other or further exercises of such remedy, all remedies being cumulative and not exclusive.

(f) If OIPC elects to terminate its obligations under this Agreement in accordance with paragraphs 13(b) or (c) above, OIPC, at its discretion, shall assess any losses that it may incur as a result of the early termination as follows: if on the date of termination the outstanding principal balance on the Debenture is less than the net present value of the Debenture, the Borrower shall pay the difference between these two amounts to OIPC. Net present value will be calculated based on the following formulae: For Bullet Debenture – $[(\text{principal}) / (1+(r/2))^n] + [\text{interest payment} / (r/2) * (1 - (1/(1+(r/2))^n))]$ or for Serial Debenture – $[(\text{principal}) / (1+(r/2))^n] + [\text{interest payment} / (r/2) * (1 - (1/(1+(r/2))^n))]$ for each remaining serial principal repayment or for Amortizing Debenture – $[\text{loan payment} / (r/2) * (1 - (1/(1+(r/2))^n))]$, where “r” is the prevailing lending rate less an appropriate basis point deduction for costs incurred and “n” is the number of semi-annual periods to maturity.

14. Successor Corporations

The Borrower may:

- (a) amalgamate, merge, consolidate or otherwise combine pursuant to statute or by private agreement with any other Person, or
- (b) sell, lease or otherwise dispose of all or substantially all of its assets, rights and properties, whether in a single transaction or a series of related transactions, to any other Person;

provided, in either case that:

- (i) the prior written consent of OIPC is obtained;
- (ii) the resulting or acquiring entity (the “Successor Entity”) is a body corporate existing and organized under the laws of Canada or any province or territory thereof;
- (iii) the Successor Entity is an Eligible Borrower;
- (iv) the Successor Entity expressly assumes the due and punctual payment of the principal of, and all interest on all Advances and all other amounts owing hereunder and the performance and observance of all of the covenants and conditions of this Agreement on the part of the Borrower to be performed;

- (v) the Successor Entity delivers an opinion acceptable to counsel for OIPC, acting reasonably, to the effect that the Successor Entity has validly assumed such obligations; and
- (vi) no Event of Default shall have occurred or be continuing as of the effective date of each such transaction or shall arise as of the effective date of each such transaction and as a result thereof and the Borrower shall have provided OIPC with an Officer's Certificate to such effect.

15. Communications Requirements

(a) OIPC and the Borrower will work together to ensure that OIPC financing of the Project receives recognition and prominence through agreed upon communications activities after reasonable approval by the Borrower. An example of such activity could include signage at the project site signifying Government of Ontario project financing.

(b) OIPC reserves the right to undertake its own communications activities in relation to OIPC financing of the Project at anytime in its sole discretion and at its expense.

(c) All joint communications activities between the Borrower and OIPC must comply with the Government of Ontario's Visual Identity Directive and guidelines.

16. Project Management Requirements

(a) (a) As a condition of OIPC making financing available to the Borrower as further described in the second recital hereof, the Borrower shall: (1) be required to have a qualified project manager in place for the Project subject to OIPC approval; (2) comply with OIPC's project management reporting requirements for the Project; and (3) shall submit the Reports to OIPC pursuant to and as further described in the attached Schedule "D" to this Agreement.

(b) Reports submitted by the Borrower to OIPC are for OIPC's reference only and in no way shall OIPC, its officers, directors, agents, subcontractors, or employees be held responsible or liable at law for: (a) any claim, demand or action brought forward by any party, including third parties, against OIPC; and (b) direct or indirect consequential damages, including bodily injury, death or property damages, arising out of or in any way related to the Reports, this Agreement or the Project.

17. Indemnity

To the fullest extent permitted by law, the Borrower shall indemnify and hold harmless OIPC, its officers, directors, employees and agents (the "Indemnified Parties") from and against all (a) claims and causes of action, pending or threatened, of any kind (whether based in contract, tort or otherwise) by third parties or by whomever made related to or arising out of or in any way related to the Reports, this Agreement or the Project and (b) liabilities, losses, damages, costs and expenses (including, without limitation, legal fees and disbursements) suffered or incurred by any of the Indemnified Parties in connection with any claims or causes of action described in (a) above. The obligations contained in this paragraph shall survive the termination or expiry of this Agreement.

18. General Provisions

(a) OIPC reserves the right to audit compliance with this Agreement at any time. Such right will survive any termination of this Agreement. The cost of any such audit will be at OIPC's or the Borrower's expense at OIPC's discretion. The Borrower is required to keep any supporting documents required for any such audit for a minimum of seven (7) years.

(b) No amendment, supplement, restatement or termination of any provision of this Agreement is binding unless it is in writing and signed by each party.

(c) The Borrower may not assign its rights or transfer its obligations under this Agreement without the prior written consent of OIPC. OIPC may assign its rights or transfer its obligations under this Agreement without the prior written consent of the Borrower by giving thirty (30) days notice of such assignment or transfer to the Borrower. This Agreement enures to the benefit of and binds the parties and their respective successors and permitted assigns.

(d) This Agreement, together with the Schedules, the Application, the Drawdown Certificate, the Debenture Purchase Certificate, the Officer's Certificates delivered hereunder, the annual report provided for in paragraph 10(c) hereof, the Debenture(s) and the general security agreement and their respective terms and conditions delivered hereunder constitute the entire agreement between the parties with respect to the subject matter referenced in those documents and supersedes all prior agreements, negotiations, discussions, undertakings, representations, warranties and understandings, whether written or oral.

(e) Each party shall from time to time promptly execute and deliver all further documents and take all further action reasonably necessary or appropriate to give effect to the provisions and intent of this Agreement.

(f) This Agreement is governed by, and is to be construed and interpreted in accordance with, the laws of the Province of Ontario and the federal laws of Canada applicable in the Province of Ontario.

(g) This Agreement and any amendment, supplement, restatement or termination of any provision of this Agreement may be executed and delivered in any number of counterparts, each of which when executed and delivered is an original but all of which taken together constitute one and the same instrument.

(h) Either party may deliver an executed copy of this Agreement by fax but that party shall immediately deliver to the other party an original executed copy of this Agreement.

(i) Unless otherwise specified, each notice to a party must be given in writing and delivered personally or by courier, sent by prepaid registered mail or transmitted by fax to the address or fax number set out in Schedule "B".

(j) If any provision of this Agreement is or becomes illegal, invalid or unenforceable in any jurisdiction, the illegality, invalidity or unenforceability of that provision will not affect:

- (i) the legality, validity or enforceability of the remaining provisions of this Agreement; or

(ii) the legality, validity or enforceability of that provision in any other jurisdiction.

(k) All covenants, agreements, representations and warranties made herein or in any document delivered pursuant to the provisions hereof are material, shall be deemed to have been relied upon by each party hereto and, notwithstanding any investigation heretofore or hereafter made by such party shall survive the execution and delivery of this Agreement until all amounts owing pursuant to the provisions hereof have been paid in full.

(l) Words importing the singular include the plural and vice versa.

IN WITNESS WHEREOF the parties hereto have executed this Agreement effective as of the date first above written.

**ONTARIO INFRASTRUCTURE PROJECTS
CORPORATION**

By: _____

Name: Bill Ralph

Title: Senior Vice President, Infrastructure Lending and
Chief Financial Officer

I have authority to bind the Corporation.

BURLINGTON HYDRO INC.

By: _____

Name: David Collie

Title: President

By: _____

Name: Michael Kysley

Title: Chief Financial Officer

We have authority to bind the Corporation.

[Affix Corporate Seal]

SCHEDULE “A”
FINANCING SCHEDULE

SCHEDULE “B”

ADDRESSES FOR NOTICE

Ontario Infrastructure Projects Corporation
777 Bay Street, 9th Floor
Toronto, Ontario M5G 2C8

Attn: Director, Loans Operations
Tel.: 416-326-1149
Fax: 416-263-5900

Burlington Hydro Inc.
1340 Brant Street
Burlington, Ontario L7P3C3

Attn: Michael Kysley, Chief Financial Officer/Corporate Secretary
Tel.: (905)332-2265
Fax: (905)332-8384

SCHEDULE "C"

PRE-AUTHORIZED DEBIT ("PAD") AND ACCOUNT FOR DEPOSIT

BURLINGTON HYDRO INC.

(1)	<u>Account Holder Information</u>
Full Legal Name: _____	
Exact account name: _____	
Address: _____ City: _____	
Province: _____ Postal Code: _____ Phone #: _____	

(2)	<u>Financial Institution Information</u>	(Note: Please attach VOID cheque)
(i) Inflow of Deposits		
Name of Financial Institution: _____		
Address: _____ City: _____		
Province: _____ Postal Code: _____ Phone #: _____		
Transit #: _____ Institution #: _____ Account #: _____		
(ii) Outflow of Pre-Authorized Debit		
<input type="checkbox"/> Same as above		
<input type="checkbox"/> If different from above fill out banking information below		
Name of Financial Institution: _____		
Address: _____ City: _____		
Province: _____ Postal Code: _____ Phone #: _____		
Transit #: _____ Institution #: _____ Account #: _____		

Sample of the numbering at the bottom of a cheque

001234	01234 - 001	111-222-3
↓	↗	↘
Cheque #	Transit #	Institution #
		↓
		Account #

SCHEDULE “C”
PRE-AUTHORIZED DEBIT (“PAD”) AND ACCOUNT FOR DEPOSIT
BURLINGTON HYDRO INC.

Attach VOID Cheque Here:

Sample:

001

YOUR NAME
123 ANY STREET
YOUR TOWN, PROVINCE M4P 1V5

DATE

Y

Y

Y

Y

M

M

D

D

PAY TO THE ORDER OF

\$

100 DOLLARS

YOUR FINANCIAL INSTITUTION
456 MAIN STREET
YOUR TOWN, PROVINCE J1L 1L1

MEMO

Transit/Branch #

Financial Institution #

Bank Account #

⑈001⑈

⑆12345⑆

⑆678⑆

⑆234567⑈

1. Purpose of Debits

☒ Business PAD

2. Pre Notification of Amounts

Fixed Amounts: The Company will provide written notice of the amount to be debited and the date of the debit at least ten (10) calendar days before the date of the first debit and every time there is a change in the amount or payment date.

Variable Amounts: The Company will provide written notice of each amount to be debited and the date of the debit at least ten (10) calendar days before the date of each debit.

The Customer and Company agree to waive the above pre notification requirements.

Authorized Signature of Customer: _____
BURLINGTON HYDRO INC.

Authorized Signature of Customer: _____
BURLINGTON HYDRO INC.

Authorized Signature of Company: _____
OIPC

3. Rights of Dispute

The Customer may dispute a debit under the following conditions: (i) the debit was not drawn in accordance with this Authorization; (ii) this Authorization was revoked or cancelled; or (iii) prenotification (as set out in paragraph 2 above) was not received.

In order to be reimbursed, the Customer must complete a Declaration Form at the above indicated branch of the Bank up to and including ten (10) calendar days, after the date on which the debit in dispute was posted to the Customer's account.

The Customer acknowledges that disputes after the above noted time limitations are matters to be resolved solely between the Company and Customer.

4. Terms of Authorization to Debit the Above Account

The Customer authorizes the Company to debit the above account(s) in the amount of \$ (intentionally left blank) for payments payable to the Company in respect of its indebtedness to OIPC as further identified in the Financing Agreement between the Company and the Customer.

The Bank is not required to verify that any debits drawn by the Company are in accordance with this Authorization or the agreement made between the Customer and the Company.

This authorization is to remain in effect until the Company has received written notification from the Customer of its change or termination. This notification must be received at least thirty (30) days before the next scheduled debit by the Company from the account(s) noted above. The Customer may obtain a sample cancellation form, or more information on the right to cancel a PAD Agreement by visiting www.cdnpay.ca. This Authorization applies only to a method of payment and cancellation of this Authorization does not mean that the Customer's contractual obligations to the Company are ended.

The Customer will notify the Company promptly in writing if there is any change in the above account information.

Ontario Infrastructure Projects Corporation
777 Bay Street, 9th Floor
Toronto, ON M5G 2C8
Attention: Loan Operations Manager

The Customer has certain recourse rights if any debit does not comply with this agreement. For example, the Customer has the right to receive reimbursement for any PAD that is not authorized or is not consistent with this PAD. To obtain more information on the Customer's recourse rights, the Customer can visit www.cdnpay.ca.

Any delivery of this Authorization to the Company constitutes delivery by the Customer to the Bank. It is warranted by the Customer that all persons whose signatures are required to sign on the above account have signed this Authorization. The Customer acknowledges receipt of a signed copy of this Authorization.

Signature(s) or Authorized Signature(s) of Account Holder(s)

(Date)

Signature(s) or Authorized Signature(s) of Account Holder(s)

(Date)

SCHEDULE “D” GENERAL SECURITY AGREEMENT

For valuable consideration the undersigned (the “Borrower”) agrees with Ontario Infrastructure Projects Corporation (“OIPC”) as follows:

1. GRANT OF SECURITY INTEREST

As general and continuing security for the payment and performance when due of all Obligations, the Borrower hereby mortgages, charges and assigns to OIPC, and grants to OIPC, and OIPC takes, a Security Interest in the property described in the following paragraphs of this section, and in all property described in any schedules, documents or listings that the Borrower may from time to time sign and provide to OIPC in connection with this Agreement, and in all present and future Accessions to, and all Proceeds of, any such property (collectively, the “Collateral”) as a general and continuing collateral security for the due payment of the obligations payable under the Financing Agreement (the “Financing Agreement”) dated and effective November 17, 2009 and made between the Borrower and Ontario Infrastructure Projects Corporation:

- (a) **Accounts Receivable.** All debts, book debts, accounts, claims, demands, money and choses in action, including without limitation, all claims against Her Majesty the Queen in right of Canada or any Province (other than Ontario) or Territory and all claims and benefits under any insurance policies;
- (b) **Inventory.** All inventory, including, without limitation, all goods, merchandise, raw materials, goods in process, finished goods and other tangible personal property now or hereafter held for sale, lease or resale or that are to be furnished or have been furnished under a contract of service or that are used or consumed in the business of the Borrower;
- (c) **Equipment.** All goods which are not inventory or consumer goods, including, without limitation, all fixtures, equipment, machinery, vehicles and other tangible personal property;
- (d) **Chattel Paper, Instruments, Securities etc.** All chattel paper, instruments, warehouse receipts, bills of lading and other documents of title, whether negotiable or non-negotiable, shares, stock, warrants, bonds, debentures, debenture stock and other securities;

- (e) **Intangibles.** All intangibles, including, without limitation, all contractual rights, goodwill, patents, trade-marks, copyrights, industrial designs and other industrial or intellectual property or rights therein;
- (f) **Books and Accounts, etc.** All books, accounts, invoices, letters, papers, writings, certificates, receipts, documents and other records and data in any form or medium evidencing, representing, creating, giving rise to any rights in respect of or otherwise relating to the property described in paragraphs (a) to (e) inclusive;
- (g) **Real Property.** All real and immovable property, wherever situate, and all buildings, structures, fixtures, hereditaments and appurtenances thereon or relating thereto; and
- (h) **Proceeds.** All property in any form derived directly or indirectly from any dealing with any undertaking or property subject to the Security Interest or that indemnifies or compensates for such undertaking or property being destroyed, damaged, expropriated, stolen or lost and proceeds or proceeds whether of the same type or kind as the original proceeds.

2. GOVERNING LAW

This Agreement is governed by the laws of Ontario.

BURLINGTON HYDRO INC.

By: _____

Name: David Collie

Title: President

By: _____

Name: Michael Kysley

Title: Chief Financial Officer

c/s

We have authority to bind the Corporation.

[Affix Corporate Seal]

ADDITIONAL TERMS AND CONDITIONS. THE ADDITIONAL TERMS AND CONDITIONS (INCLUDING ANY SCHEDULES) ON THE FOLLOWING PAGES FORM PART OF THIS AGREEMENT.

The Borrower has signed this Agreement on November 17, 2009.

GENERAL SECURITY AGREEMENT ADDITIONAL TERMS AND CONDITIONS

3. FINANCING AGREEMENT

Reference is hereby expressly made to the Financing Agreement and all instruments supplemental thereto for a statement and description of, among other things, the liability of the Borrower for payment of the Obligations, the terms, conditions, covenants and warranties upon which the Obligations are issued and held, and the rights and remedies of OIPC, all to the same effect as if the provisions of the Financing Agreement were herein set out. Notwithstanding any terms in this General Security Agreement, should the terms of this General Security Agreement be in conflict or inconsistent with the Financing Agreement, the terms of the Financing Agreement shall prevail in all respects as between the parties.

4. PLACES OF BUSINESS

The Borrower represents and warrants that the locations of all existing Places of Business are specified in Schedule AA. The Borrower will promptly notify OIPC in writing of any additional Places of Business as soon as they are established. Subject to Section 5, the Collateral will at all times be kept at the Places of Business and will not be removed without OIPC's prior written consent.

5. COLLATERAL FREE OF CHARGES

The Borrower represents and warrants that the Collateral is, and agrees that the Collateral will at all times be free, of any Charge or trust except in favour of OIPC or incurred with OIPC's prior written consent. OIPC may, but will not have to, pay any amount or take any action required to remove or redeem any unauthorized Charge. The Borrower will immediately reimburse OIPC for any amount so paid and will indemnify OIPC in respect of any action so taken.

6. USE OF COLLATERAL

The Borrower will not, without OIPC's prior written consent, sell, lease or otherwise dispose of any of the Collateral (other than Inventory, which may be sold, leased or otherwise disposed of in the ordinary course of the Borrower's business). All Proceeds of the Collateral (including among other things received in respect of Receivables), whether or not arising in the ordinary course of the Borrower's business, will be received by the Borrower as trustee for OIPC and will be immediately paid to OIPC.

7. INSURANCE

The Borrower will keep the Collateral insured to its full insurable value against loss or damage by fire and such other risks as are customarily insured for property similar to the Collateral (and against such other risks as OIPC may reasonably require). At OIPC's request, all policies in respect of such insurance will contain a loss payable clause in favour of OIPC and in any event the Borrower assigns all proceeds of insurance on the Collateral to OIPC. The Borrower will, from time to time at OIPC's request, deliver such policies (or satisfactory evidence of such policies) to OIPC. If the Borrower does not obtain or maintain such insurance, OIPC may, but

will not have to, do so. The Borrower will immediately reimburse OIPC for any amount so paid. The Borrower will promptly give OIPC written notice of any loss or damage to all or any part of the Collateral.

8. INFORMATION AND INSPECTION

The Borrower will from time to time immediately give OIPC in writing all information requested by OIPC relating to the Collateral, the Places of Business, and the Borrower's financial or business affairs. The Borrower will promptly advise OIPC of the Serial Number, model year, make and model of each Serial Number Good at any time included in the Collateral that is held as Equipment, including in circumstances where the Borrower ceases holding such Serial Number Good as Inventory and begins holding it as Equipment. OIPC may from time to time inspect any Books and Records and any Collateral, wherever located. For that purpose OIPC may, without charge, have access to each Place of Business and to all mechanical or electronic equipment, devices and processes where any of them may be stored or from which any of them may be retrieved. The Borrower authorizes any Person holding any Books and Records to make them available to OIPC, in a readable form upon request by OIPC.

9. RECEIVABLES

If the Collateral includes Receivables, OIPC may advise any Person who is liable to make any payment to the Borrower of the existence of this Agreement. OIPC may from time to time confirm with such Persons the existence and the amount of the Receivables. Upon an Event of Default, OIPC may collect and otherwise deal with the Receivables in such manner and upon such terms, as OIPC considers appropriate.

10. RECEIPTS PRIOR TO DEFAULT

Until an Event of Default, all amounts received by OIPC as Proceeds of the Collateral will be applied on account of the Obligations in such manner and at such times as OIPC may consider appropriate or, at OIPC's option, may be held unappropriated in a collateral account or released to the Borrower.

11. DEFAULT

(1) **Events of Default.** "Event of Default" means any of the events described in paragraph 13(c) of the Financing Agreement. In case an Event of Default shall occur and be continuing, the full unpaid principal amount together with interest accrued thereon of any obligations outstanding payable under the Financing Agreement at the time of the occurrence, may become or be declared due before stated maturity by OIPC.

(2) **Additional Rights upon Default.** Upon the occurrence of any Event of Default, OIPC and a Receiver, as applicable, will to the extent permitted by law have the following additional rights:

- (a) Appointment of Receiver. OIPC may by instrument in writing appoint any Person as a Receiver of all or any part of the Collateral. OIPC may from time to time remove or replace a Receiver, or make application to any court of competent jurisdiction for the appointment of a Receiver. Any Receiver appointed by OIPC will (for purposes relating to responsibility for the Receiver's acts or omissions) be considered to be the Borrower's

agent. OIPC may from time to time fix the Receiver's remuneration and the Borrower will pay OIPC the amount of such remuneration. OIPC will not be liable to the Borrower or any other Person in connection with appointing or not appointing a Receiver or in connection with the Receiver's actions or omissions.

- (b) Dealings with the Collateral. OIPC or a Receiver may take possession of all or any part of the Collateral and retain it for as long as OIPC or the Receiver considers appropriate, receive any rents and profits from the Collateral, carry on (or concur in carrying on) all or any part of the Borrower's business or refrain from doing so, borrow on the security of the Collateral, repair the Collateral, process the Collateral, prepare the Collateral for sale, lease or other disposition, and sell or lease (or concur in selling or leasing) or otherwise dispose of the Collateral on such terms and conditions (including among other things by arrangement providing for deferred payment) as OIPC or the Receiver considers appropriate. OIPC or the Receiver may (without charge and to the exclusion of all other Persons including the Borrower), enter upon any Place of Business.
- (c) Realization. OIPC or a Receiver may use, collect, sell, lease or otherwise dispose of, realize upon, release to the Borrower or other Persons and otherwise deal with, the Collateral in such manner, upon such terms (including among other things by arrangement providing for deferred payment) and at such times as OIPC or the Receiver considers appropriate. OIPC or the Receiver may make any sale, lease or other disposition of the Collateral in the name of and on behalf of the Borrower or otherwise.
- (d) Application of Proceeds After Default. All Proceeds of Collateral received by OIPC or a Receiver may be applied to discharge or satisfy any expenses (including among other things the Receiver's remuneration and other expenses of enforcing OIPC's rights under this Agreement), Charges, borrowings, taxes and other outgoings affecting the Collateral or which are considered advisable by OIPC or the Receiver to preserve, repair, process, maintain or enhance the Collateral or prepare it for sale, lease or other disposition, or to sell, lease or otherwise dispose of the Collateral. The balance of such Proceeds will be applied to the Obligations in such manner and at such times as OIPC considers appropriate and thereafter will be accounted for as required by law.
- (e) Other Legal Rights. Before and After Default. OIPC will have in addition to the rights specifically provided in this Agreement, the rights of a secured party under the PPSA, as well as the rights recognized at law and in equity. No right will be exclusive of or dependent upon or merge in any other right, and one or more of such rights may be exercised independently or in combination from time to time.
- (f) Deficiency. The Borrower will remain liable to OIPC for payment of any obligations under the Financing Agreement that are outstanding following realization of all or any part of the Collateral.

12. **OIPC NOT LIABLE**

OIPC will not be liable to the Borrower or any other Person for any failure or delay in exercising any of its rights under this Agreement (including among other things any failure to take possession of, collect, or sell, lease or otherwise dispose of any Collateral). None of OIPC, a Receiver or any agent of OIPC is required to take, or will have any liability for any failure to take or delay in taking, any steps necessary or advisable to preserve rights against other Persons under any Chattel Paper, Securities or Instrument in possession of OIPC, a Receiver or OIPC's agent.

13. CHARGES AND EXPENSES

The Borrower agrees to pay on demand all costs and expenses incurred (including among other things legal fees on a solicitor and client basis) and fees charged by OIPC in connection with obtaining or discharging this Agreement or establishing or confirming the priority of the Charges created by this Agreement or by law, compliance with any demand by any Person under the PPSA to amend or discharge any registration relating to this Agreement, and by OIPC or any Receiver in exercising any remedy under this Agreement (including among other things, repairing, processing, preparing for disposition and disposing of the Collateral by sale, lease or otherwise) and in carrying on the Borrower's business. All such amounts will bear interest from time to time at the highest interest rate then applicable to any of the Obligations, and the Borrower will reimburse OIPC upon demand for any amount so paid.

14. FURTHER ASSURANCES

The Borrower will from time to time immediately upon request by OIPC take such action (including among other things the signing and delivery of financing statements and financing change statements, other schedules, documents or listings describing property included in the Collateral, further assignments and other documents, and the registration of this Agreement) as OIPC may require in connection with the Collateral or as OIPC may consider necessary to give effect to this Agreement. If permitted by law, the Borrower waives the right to sign or receive a copy of any financing statement or financing change statement, or any statement issued by any registry that confirms any registration of a financing statement or financing change statement, relating to this Agreement. The Borrower irrevocably appoints the Senior Vice President, Infrastructure Lending and Chief Financial Officer of OIPC as the Borrower's attorney (with full powers of substitution and delegation) to sign, upon an Event of Default, all documents required to give effect to this section. Nothing in this section affects the right of OIPC as secured party, or any other Person on OIPC's behalf, to sign and file or deliver (as applicable) all such financing statements, financing change statements, notices, verification agreements and other documents relating to the Collateral and this Agreement as OIPC or such other Person considers appropriate.

15. DEALINGS BY OIPC

OIPC may from time to time increase, reduce, discontinue or otherwise vary the Borrower's credit facilities, grant extensions of time and other indulgences, take and give up any Charge, abstain from taking, perfecting or registering any Charge, accept compositions, grant releases and discharges and otherwise deal with the Borrower, Borrowers of the Borrower, guarantors and others, and with the Collateral and any Charges held by OIPC, as OIPC considers appropriate without affecting the Borrowers obligations to OIPC or OIPC's rights under this Agreement.

16. DEFINITIONS IN THIS AGREEMENT

“**Accessions**”, “**Account**”, “**Chattel Paper**”, “**Collateral**”, “**Document of Title**”, “**Equipment**”, “**Goods**”, “**Instrument**”, “**Intangible**”, “**Inventory**”, “**Proceeds**”, “**Purchase-Money Security Interest**” and “**Security Interest**” have the respective meanings given to them in the PPSA.

“**Books and Records**” means all books, records, files, papers, disks, documents and other repositories of data recording, evidencing or relating to the Collateral to which the Borrower (or any Person on the Borrower’s behalf) has access.

“**Charge**” means any mortgage, charge, pledge, hypothecation, lien (statutory or otherwise), assignment, financial lease, title retention-agreement or arrangement, security interest or other encumbrance of any nature however arising, or any other security agreement or arrangement creating in favour of any creditor a right in respect of a particular property that is or could be prior to the right of any other creditor in respect of such property.

“**Consumer Goods**” has the meaning given to it in the PPSA.

“**Event of Default**” has the meaning set out in subsection 11(1).

“**Obligations**” means all present and future indebtedness and liability of every kind, nature and description (whether direct or indirect, joint or several, absolute or contingent, matured or unmatured) of the Borrower to OIPC, wherever and however incurred and any unpaid balance thereof, including, without limitation, under or in respect of the Financing Agreement.

“**Money**” has the meaning given to it in the PPSA or, if there is no such definition, means a medium of exchange authorized or adopted by the Parliament of Canada as part of the currency of Canada, or by a foreign government as part of its currency

“**Person**” means any natural person or artificial body (including among others any firm, corporation or government).

“**Personal Property**” means personal property and includes among other things Inventory, Equipment, Receivables, Books and Records, Chattel Paper, Goods, Documents of Title, Instruments, Intangibles (including intellectual property), Money and Securities, and includes all Accessions to such property.

“**Place of Business**” means a location where the Borrower carries on business or where any of the Collateral is located (including any location described in Schedule AA).

“**PPSA**” means the *Personal Property Security Act, 1990* (Ontario), as such legislation may be amended, renamed or replaced from time to time (and includes all regulations from time to time made under such legislation).

“**Receivables**” means all debts, claims and choses in action (including among other things Accounts and Chattel Paper) - now or in the future due or owing to or owned by the Borrower.

“**Receiver**” means a receiver or a receiver and manager.

“**Securities**” has the meaning given to it in the PPSA or, if there is no such definition and the PPSA defines “security” instead, it means the plural of that term.

“**Serial Number**” means the number that the Person who manufactured or constructed a Serial Number Good permanently marked or attached to it for identification purposes or, if applicable such other number as the PPSA stipulates as the serial number or vehicle information number to be used for registration purposes of such Serial Number Good.

“**Serial Number Good**” means a motor vehicle, trailer, mobile home, aircraft airframe, aircraft engine or aircraft propeller, boat or an outboard motor for a boat.

17. **GENERAL**

- (a) Reservation of the Last Day of any Lease. The Charges created by this Agreement do not extend to the last day of the term of any lease or agreement for lease; however, the Borrower will hold such last day in trust for OIPC and, upon the exercise by OIPC of any of its rights under this Agreement following Default, will assign such last day as directed by OIPC.
- (b) Attachment of Security Interest. The Security Interests created by this Agreement are intended to attach (i) to existing Collateral when the Borrower signs this Agreement, and (ii) to Collateral subsequently acquired by the Borrower, immediately upon the Borrower acquiring any rights in such Collateral. The parties do not intend to postpone the attachment of any Security Interest created by this Agreement.
- (c) Purchase-Money Security Interest. If OIPC gives value for the purpose of enabling the Borrower to acquire rights in or to any of the Collateral, the Borrower will in fact apply such value to acquire those rights (and will provide OIPC with such evidence in this regard as OIPC may require), and the Borrower grants to OIPC, and OIPC takes, a Purchase-Money Security Interest in such Collateral to the extent that the value is applied to acquire such rights. A certificate or affidavit of any of OIPC’s authorized representatives is admissible in evidence to establish the amount of any such value.
- (d) Entire Agreement. OIPC has not made any representation or undertaken any obligation in connection with the subject matter of this Agreement other than as specifically set out in this Agreement, and in particular nothing contained in this Agreement will require OIPC to make, renew or extend the time for payment of any loan or other credit accommodation to the Borrower or any other Person.
- (e) Additional Security. The Charges created by this Agreement are in addition and without prejudice to any other Charge now or later held by OIPC. No Charge held by OIPC will be exclusive of or dependent upon or merge in any other Charge, and OIPC may exercise its rights under such Charges independently or in combination.
- (f) Severability: Headings. Any provision of this Agreement that is void or unenforceable in any jurisdiction is, as to that jurisdiction, ineffective to that extent without invalidating the remaining provisions of this Agreement. The headings in this Agreement are for convenience only and do not limit or extend the provisions of this Agreement.

- (g) Interpretation. When the context so requires, the singular will be read as the plural, and vice versa.
- (h) Copy of Agreement. The Borrower acknowledges receipt of a copy of this Agreement.
- (i) Notice. OIPC may send to the Borrower, by prepaid regular mail addressed to the Borrower at the Borrower's address last known to OIPC, copies of any document required by the PPSA to be delivered by OIPC to the Borrower. Any document mailed in this manner will be deemed to have been received by the Borrower upon the earlier of actual receipt by the Borrower and the expiry of 10 days after the mailing date. A certificate or affidavit of any of OIPC's authorized representatives is admissible in evidence to establish the mailing date.
- (j) Enurement; Assignment. This Agreement will enure to the benefit of and be binding upon (i) OIPC, its successors and assigns, and (ii) the Borrower and the Borrower's heirs, executors, administrators, successors and permitted assigns. The Borrower will not assign this Agreement without OIPC's prior written consent.

Schedule “AA”

The following are the Places of Business:

11340 Brant Street, Burlington, Ontario L7R 3Z7.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 29

Question:

Ref: Response to Interrogatory from Schools #6

Please confirm that Facility C of the Scotia financing arrangements is being replaced by the Infrastructure Ontario financing, and that under section 2.02 of the Agreement Facility C is being or had been reduced to zero. If that is not the case, please advise how Facility C and the Infrastructure Ontario financing will interrelate, and what activities are intended to be financed by each.

Response:

As of December 14, 2009, availability of drawdowns under Facility C remain available as legal documents for the Infrastructure Ontario loan are still being finalized. Facility C will be cancelled and reduced to zero once the Infrastructure Ontario financing has been finalized which is expected prior to calendar year end 2009.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 30

Question:

Ref: Response to Interrogatory from Schools #15

Please explain why the Engineering Overhead to be distributed in 2010 is forecast to increase by \$101,280 (6.0%), while the base activity costs to which it is being added are forecast to decrease by \$456,675 (3.1%).

Response:

The majority of the \$101,280 increase forecasted for 2010 is the result of increases in two major accounts.

- Salary and Benefits increased by \$38,207
- Software Amortization and Maintenance increased by \$54,451 due to the full year's depreciation on the \$656,000 Engineering Software purchased in 2009.

The remaining balance of \$8,622 is a .51% increase.

The base activity costs do not have any correlation to the movement of costs in the Engineering Overhead. The base activity costs are made up of all the costs charged to operations, maintenance, capital and billable jobs that attract the engineering overhead rate. In 2009 a one-time capital expenditure of \$650,000 was budgeted for the GIS Mapping System Upgrades. In 2010, no such one-time capital expenditures has been budgeted; therefore, reducing the base activity costs.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 31

Question:

Ref: Response to Interrogatory from Schools #17

Please confirm that none of the cost of incentive compensation is included in the budget for ratemaking purposes. If any portion of the cost is included in the regulated budget, please provide the breakdown of the cost based on incentives compensating for shareholder benefits and incentives compensating for utility benefits. Please provide all documents associated with this breakdown or any analysis done by the Applicant.

Response:

The cost of the incentive compensation plan is included in the budget for ratemaking purposes. As included in the Incentive Compensation Plan documents, the incentive plan is based on a Corporate Balanced Scorecard in which the corporate categories of financial, customer service, internal processes and learning and growth are combined with individual performance objectives to encourage achievements from employees. Corporate, customer, and individual employee targets must be met prior to any payout being made. Burlington believes that this is of benefit to ratepayers and has therefore included this cost.

Corporate measures for the management incentive plan are as follows:

- i. Return on Equity – 20%
- ii. EBIT – 15%
- iii. Free Cash Flow – 15%
- iv. Safety – 20%
- v. OEB Customer Call Response – 10%
- vi. OEB Reliability to exceed 3 year average – 10%
- vii. Number of Customers Served per Employee – 10%

Items iv. through vii. all are directly beneficial to the ratepayer. They are ratepayer related as they are focused with providing a safe and reliable service to the customer at the same time ensuring customer service levels are maintained. Items i. through iii. not only benefit the shareholder but ultimately benefits the ratepayer because a utility that is financially sound represents a company that is efficient and is committed to a high level of customer service, safety and reliability to its customers. Burlington Hydro's financial performance has consistently been amongst the top in the industry. This has been attributed to finding efficiencies throughout the company wherever possible. The incentive plan has motivated staff to implement and achieve items such as the following:

- Reduction of inventory
- Reduction of staff through natural attrition
- Restructuring of Human Resources to maximize productivity and efficiencies
- Implementation of processes such as technology to reduce overhead costs and duplication of work.
- Reduction of budgeted expenses

Individual objectives must be linked to the Balanced Scorecard and the company's strategy as well.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 32

Question:

Ref: Response to Interrogatory from Schools #17

Please explain the term “Rent-a-Lineperson” on page 4 of the Staffing Plan.

Response:

The term “rent-a-lineperson” means contract personnel that are hired through a contractor to compliment our staffing levels for optimal operational output. They would work directly with Burlington Hydro Staff as part of a crew.

Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 33

Question:

Ref: Response to Interrogatory from VECC #8

Please file the policy, agreement or other document under which the City of Burlington does not make any capital contributions for work done by the Applicant that is required by the City.

Response:

Please find attached the Shareholder Direction approved by Burlington City Council on December 7, 1999. The section referring to the above interrogatory is found at 7.4 (h) of the Shareholder Direction.

CITY OF BURLINGTON

**SHAREHOLDER DIRECTION
RELATING TO
BURLINGTON HYDRO ELECTRIC INC.**

CERTIFIED A TRUE COPY


DEPUTY CITY CLERK

Pg. 1 of 13 B.

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SHAREHOLDER DIRECTION

WHEREAS Burlington Hydro Electric Inc. (the "**Corporation**") is a corporation existing under the *Business Corporations Act* (Ontario);

AND WHEREAS the City of Burlington (the "**Shareholder**") is the beneficial owner of all of the issued shares of the Corporation;

AND WHEREAS the Corporation and the Subsidiaries (together, "**Burlington Hydro**") are the successors to the business of Burlington Hydro-Electric Commission (the "**Business**");

AND WHEREAS the Business is subject to the provisions of the *Energy Competition Act, 1998*, S.O. c.15, as such statute may be amended or re-enacted from time to time;

AND WHEREAS the Shareholder wishes to establish certain principles of governance relating to the Corporation without restricting the powers of the Board to manage or supervise the management of the Corporation, except as expressly provided for in this Direction;

NOW THEREFORE THIS DIRECTION WITNESSES:

ARTICLE 1 INTERPRETATION

1.1 Definitions

In this Direction, in addition to the terms defined in the recitals, the following terms will have the meanings set out below:

- (a) "**Board**" means the board of directors of the Corporation;
- (b) "**body corporate**" means a firm, partnership, unincorporated association, joint venture, body corporate, corporation, bank, trust, pension fund, union, governmental agency, board, tribunal, ministry or commission or other legal entity of any kind whatsoever, but excludes an individual or natural person;
- (c) "**Business Plan**" means a five year business plan and budget for the Corporation and the Subsidiaries prepared and approved in accordance with **Section 6.1**;
- (d) "**Chair**" means the director of the Corporation appointed as Chair of the Board by the Board upon the nomination by the Shareholder from time to time;
- (e) "**Distribution Company**" means any one or more Subsidiaries that carries on the business described in **Section 3.2** and that owns any distribution system, structures, equipment or property used for that purpose;
- (f) "**Financial Statements**" means, for any particular period, audited or unaudited (as stipulated in this Direction), consolidated or unconsolidated (as stipulated in

this Direction), comparative financial statements of the Corporation consisting of not less than a balance sheet, a statement of income and retained earnings, a statement of changes in financial position, a report or opinion of the Auditor (in the case of audited Financial Statements) and such other statements, reports, notes and information prepared in accordance with generally accepted accounting principles (consistently applied) and as are required in accordance with any applicable law;

- (g) “**OBCA**” means the *Business Corporations Act* (Ontario), as such statute may be amended or re-enacted from time to time;
- (h) “**person**” means an individual, a natural person or a body corporate;
- (i) “**Regulator**” means the Ontario Energy Board, the Independent Electricity Market Operator and each other governmental or regulatory authority having jurisdiction over Burlington Hydro;
- (j) “**Subsidiary**” means, with respect to the Corporation, any body corporate of which more than 50% of the outstanding securities of any class carrying exercisable voting rights are beneficially owned, directly or indirectly, by the Corporation, and includes any body corporate in like relation to a Subsidiary; and
- (k) “**third party**” means a person who deals at arm’s length (as interpreted by subsection 251(1) of the *Income Tax Act* (Canada)) with the Corporation or the Subsidiaries.

ARTICLE 2 OBJECTIVES AND PRINCIPLES

2.1 Purpose

The purpose of this Direction is to express the Shareholder’s fundamental principles regarding the Business and to set out the accountability, responsibility and relationship between the Board and the Shareholder.

2.2 Shareholder Objectives

- (a) The Shareholder’s objective in connection with its relationship with Burlington Hydro is that the Board supervise the management of Burlington Hydro in a manner that:
 - (i) takes due consideration of the financial objectives established by the Shareholder;
 - (ii) protects the investment of the Shareholder by managing the exposure of Burlington Hydro to risks inherent to the Business through the development of a strategic planning process and risk management strategy;

- (iii) provides the Shareholder with its desired rate of return on its investment;
 - (iv) provides adequate reporting to the Shareholder;
 - (v) establishes and maintains appropriate financial and capital structures for the Corporation and the Subsidiaries giving due consideration to the rate of return permitted by the Ontario Energy Board;
 - (vi) undertakes activities which will enhance the economic development of the City of Burlington;
 - (vii) provides energy services beneficial to energy consumers in the City of Burlington; and
 - (viii) provides energy services in an environmentally responsible manner.
- (b) The Shareholder's further objective is that the Board explore potential opportunities for the possible disposition, partnering or outsourcing of all or a part of the business with the goal of:
- (i) maximizing the financial returns to the Shareholder of the Corporation
 - (ii) identifying one or more acquirors, partners or suppliers that would provide safe and reliable energy services to the customers of the Business at a reasonable price; and
 - (iii) identifying one or more acquirors, partners or suppliers that would be responsive to the future needs and concerns of the customers of the Business and the City of Burlington

ARTICLE 3 BUSINESS OF BURLINGTON HYDRO

3.1 Business of Burlington Hydro

Subject to the ongoing ability of Burlington Hydro to meet the financial objectives of the Shareholder set out in this Direction and to **Section 3.2**, the Corporation and its Subsidiaries may upon the due authorization of the Board engage in any business activity permitted by law and by Burlington Hydro's Regulators.

3.2 Business of the Distribution Company

For greater certainty, the Distribution Company may engage only in the following business activities:

- (a) selling (i) directly, (ii) through a third party, (iii) through a Subsidiary, or (iv) through a combination of the foregoing, electricity to every person connected to the distribution system of the Distribution Company;

- (b) transmitting or distributing electricity;
- (c) business activities, the principal purpose of which is to use more effectively the assets of the distribution system of the Distribution Company, including, without limiting the generality of the foregoing, meter installation and reading services, and billing and collection services;
- (d) using the real property that the Distribution Company has the right to use for the purpose of providing telecommunications services, or entering into agreements with any third party, including Subsidiaries, authorizing such third party or Subsidiaries to use such real property for the purpose of providing telecommunications services.

3.3 Geographical Scope

The business activities of Burlington Hydro shall be carried out within the Province of Ontario.

ARTICLE 4 OPERATION AND CONTROL

4.1 Board of Directors and Responsibilities

The Board of the Corporation shall consist of seven directors. Subject to any matters requiring approval of the Shareholder pursuant to this Direction, the Board will supervise the management of the business and affairs of the Corporation. The Board will govern itself in accordance with the standards of care set out in the OBCA and the Final Report of The Toronto Stock Exchange Committee on Corporate Governance in Canada dated December 1994.

4.2 Board of Directors of Subsidiaries

Subject to any matters requiring approval of the Shareholder pursuant to this Direction, the business and affairs of the Subsidiaries will be managed or supervised by their respective boards of directors. The Corporation will elect the directors of the Subsidiaries from among the directors of the Corporation in accordance with the provisions of the Ontario Energy Board Affiliate Relationship Code for Electricity Distributors and Transmitters.

4.3 Qualifications of Directors

A majority of the Board and the board of directors of each Subsidiary will be residents of Canada. All nominees should have an established reputation for personal integrity and honesty. In electing directors to the Board, the Shareholder will give due regard to the qualifications of candidates and ensure that the Board cumulatively possesses qualifications that will contribute to the success of the Business, including:

- (a) experience with corporate finance and business management
- (b) knowledge of corporate governance

- (c) background in large systems operations, maintenance, and management
- (d) background in government regulation and or regulated industries
- (e) knowledge of the energy industry
- (f) experience with employee union relations and workplace health and safety
- (g) background in marketing and sales
- (h) experience with consumer relations
- (i) knowledge of the City of Burlington community

The President and Chief Executive Officer of the Corporation may be a member of the Board but no other incumbent officer of the Corporation or the Subsidiaries shall be a member of the Board.

4.4 Vacancies

If a member of the Board ceases to be a director for any reason, the Shareholder will fill the vacancy created thereby as soon as reasonably possible. If a member of the board of directors of any Subsidiary ceases to be a director for any reason, the Corporation will cause the vacancy to be filled by another director of the Corporation as soon as reasonably possible.

4.5 Term

The term of office for a director who is not a member of the City of Burlington Council will be two years or until his or her successor is elected. The term of office for a director who is a member of the City of Burlington Council will run concurrently with his or her term on Council, or until his or her successor is elected, provided such term shall not exceed three years. Any director may stand for re-election to the Board at the expiry of his or her first and second term but shall not be permitted to be elected to a fourth consecutive term. The provisions of this Section 4.5 are subject to review and revision by the Shareholder at its discretion from time to time.

4.6 Conflict of Interest Policy

The directors and officers of the Corporation and the Subsidiaries will strictly abide by the requirements of the OBCA and the Corporation in respect of conflicts of interest, including any requirements in respect of disclosure and abstention from voting.

4.7 Confidentiality

The Shareholder and the directors and officers of the Corporation and the Subsidiaries (each a "Receiving Party") will ensure that no confidential information of the Shareholder or Burlington Hydro is disclosed or otherwise made available to any person, except to the extent that:

- (a) disclosure to a Receiving Party's employees or agents is necessary for the performance of any Receiving Party's duties and obligations under this Direction;
- (b) disclosure is required in the course of judicial proceedings or pursuant to law; or
- (c) the confidential information becomes part of the public domain (other than through unauthorized disclosure by the Receiving Party).

4.8 Remuneration

The remuneration of the members of the Board for their respective services as directors will be as determined by the Shareholder from time to time.

ARTICLE 5 SHAREHOLDER MATTERS

5.1 Decisions of the Shareholder

The following will apply to any approvals or decisions that the Shareholder must provide:

- (a) approvals and decisions will be subject to duly passed resolution of City of Burlington Council and shall be evidenced in writing by the City of Burlington's Director of Finance, or as otherwise determined by the Shareholder; and
- (b) no approval will be given unless the Corporation has given reasonable advance notice in writing of the need for approval and has provided such information as is reasonably necessary for the Shareholder to make an informed decision regarding the subject matter requiring approval.

5.2 Matters Requiring Shareholder Approval

Neither the Corporation nor any Subsidiary will, without the approval of the Shareholder:

- (a) amend its articles or make, amend or repeal any by-law;
- (b) change the name of the Corporation;
- (c) amalgamate (except for an amalgamation with one or more Subsidiaries), apply to continue as a body corporate under the laws of another jurisdiction, merge, consolidate or reorganize, or approve or effect any plan of arrangement, in each case whether statutory or otherwise;
- (d) take or institute proceedings for any winding up, arrangement, reorganization or dissolution;

- (e) create new classes of shares or reorganize, consolidate, subdivide or otherwise change its outstanding securities;
- (f) sell or otherwise dispose of, by conveyance, transfer, lease, sale and leaseback, or other transaction, all or substantially all of its assets or undertaking;
- (g) change the Auditor;
- (h) make any change to the number of directors comprising the Board;
- (i) enter into any transaction or take any action that requires shareholder approval pursuant to the OBCA;
- (j) issue, or enter into any agreement to issue, any Shares of any class, or any securities convertible into any Shares of any class;
- (k) redeem, purchase for cancellation or otherwise retire any of its outstanding Shares;
- (l) reorganize, consolidate, subdivide, or otherwise change its outstanding shares;
- (m) establish any requirement for capital contributions by the Shareholder;
- (n) borrow money or provide any financial assistance to any Subsidiary (whether by guarantee or otherwise) in the amount exceeding \$10,000,000 or grant a security interest in or otherwise encumber its assets;
- (o) provide any financial assistance, whether by guarantee or otherwise, to any Person not dealing at arm's length to it, or any of its directors or officers;
- (p) enter into strategic business alliances, partnerships, joint ventures or arrangement for the sharing of profits with any Person that would require capital contributions exceeding \$5,000,000;
- (q) incorporate any material Subsidiary;
- (r) change the remuneration of members of the Board or the board of directors of any Subsidiary;
- (s) enter into gas or electricity trading arrangements or derivative strategies beyond that approved by the Shareholder in the current Business Plan;
- (t) make any capital expenditure in an amount exceeding \$1,000,000, except expenditures that are included in the current Business Plan;
- (u) acquire all or substantially all of the assets, undertaking or securities of a distributor (as defined in the *Electricity Act, 1998*);

- (v) invest funds in publicly-traded securities other than government bonds, guaranteed investment certificates or other short-term debt instruments;
- (w) assume any financial obligation which would increase the debt/equity ratio of the Corporation and the Subsidiaries on a consolidated basis above the ratio of 60:40; or
- (x) make any decision that would materially adversely affect the tax or regulatory status of the Corporation or any Subsidiary.

ARTICLE 6 REPORTING

6.1 Business Plan

Not later than 45 days prior to the end of each fiscal year, the Board will approve and submit to the chief financial officer of the Shareholder a business plan for the next five fiscal years (the “**Business Plan**”). In the event that the Corporation notifies the Shareholder that the Business Plan contains sensitive commercial information, the Business Plan shall be received *in camera* by the City of Burlington Council. The Business Plan will be prepared on a consistent basis with the Business Plan then in effect. The Corporation will carry on its business and operations in accordance with the Business Plan which will include, in respect of the period covered by such plan:

- (a) the strategic direction and any new business initiatives which Burlington Hydro will undertake;
- (b) an operating and capital expenditure budget for the next fiscal year and an operating and capital expenditure projection for each fiscal year thereafter, including the resources necessary to implement the Business Plan;
- (c) pro forma unconsolidated Financial Statements for each fiscal year, including projected dividend payments to the Shareholder;
- (d) an acquisition budget setting forth the nature and type of capital expenditures proposed to be made in the following fiscal year, supported by explanations, notes and information upon which the budget was based;
- (e) energy conservation programs and environmental plans; and
- (f) any material variances from the Business Plan then in effect.

6.2 Quarterly Reports

Within 60 days after the end of each fiscal quarter, the Board will prepare (on a consistent basis with the previous fiscal quarter) and submit to the chief financial officer of the

Shareholder a quarterly report. The quarterly report will include, in respect of the immediately preceding fiscal quarter:

- (a) quarterly unaudited consolidated Financial Statements;
- (b) such explanations, notes and information as is required to explain and account for any material variances between the actual results from operations and the budgeted amounts set forth in the current Business Plan;
- (c) information that is likely to materially affect the Shareholder's financial objectives or energy policies or customers' perceptions or opinions regarding Burlington Hydro;
- (d) information regarding any matter, occurrence or other event which is a material breach or violation of any law; and
- (e) any such additional information as the Shareholder may specify from time to time.

6.3 Access to Records

The duly appointed representatives of the Shareholder (as approved by report to the Council of the City of Burlington from time to time) shall have unrestricted access to the books and records of the Corporation and the Subsidiaries during normal business hours. Such representatives shall treat all information of Burlington Hydro with the same level of care and confidentiality as any confidential information of the Shareholder.

6.4 Audit

The Corporation's consolidated and unconsolidated Financial Statements will be audited annually. The auditor of the Corporation (the "**Auditor**") will be appointed by the Shareholder.

6.5 Accounting

The Corporation will, in consultation with the Auditor, adopt and use the accounting policies and procedures which may be approved by the Board from time to time and all such policies and procedures will be in accordance with generally accepted accounting principles and applicable regulatory requirements.

6.6 Annual Financial Statements

The Board will cause the Auditor to deliver, as soon as practicable and in any event within 90 days after the end of each fiscal year, the audited consolidated Financial Statements of the Corporation for consideration by the Shareholder.

ARTICLE 7 FINANCIAL PERFORMANCE

7.1 Financial Performance

The Board will use its best efforts to ensure that Burlington Hydro meets the financial performance standards set out in this **Article 7**.

7.2 Credit Rating

The Distribution Company shall maintain a financial structure that will achieve a rating of A (low) (as defined by CBRIS Inc.) or an equivalent rating (as defined by Dominion Bond Rating Service Limited) or higher.

7.3 Dividend Policy

Subject to any law, the Distribution Company will pay to the Corporation a dividend of all cash in excess of the requirements for working capital and capital expenditures as established in the Business Plan for the forthcoming fiscal year.

The amount of the dividend paid by the Corporation to the Shareholder may be subject to adjustment by the Shareholder from time to time based on the financial requirements of the Shareholder or the Corporation.

7.4 Operations Policy

Burlington Hydro will:

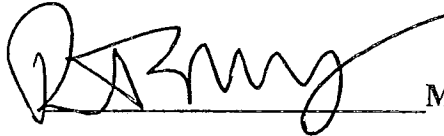
- (a) employ the most efficient cost structure available for like businesses;
- (b) mandate the creation and implementation of cost reduction programs to ensure that distribution costs are minimized;
- (c) maximize return on the Shareholder's equity;
- (d) prior to commencing work of any kind on a service corridor, public highway or municipally owned property Burlington Hydro will obtain the approval of the Municipal Engineer;
- (e) prior to constructing fibre-optic cables and accessories on , over across or under public streets, Burlington Hydro shall enter into an access agreement with the City;
- (f) pay a fee for each approval to the City as established annually;
- (g) permit the city to use hydro poles for street lighting, traffic signals, communication signals and signs free of charge. Any subsequent relocation of these facilities shall be free of charge to the City;


- (h) on service corridors, public highways or municipally owned land relocate hydro facilities for roadway or drainage improvements to the satisfaction of the Municipal Engineer at no cost to the City;
- (i) pay an annual rental fee for the use of city owned lands for Municipal Substations as established by the City; and
- (j) pay an annual rental fee as established by the City for the use of city owned lands for any hydro transmission facilities installed after the date of incorporation.

7.5 Amendments

This Direction may be amended solely at the discretion of the Shareholder. The Shareholder will provide prior written notice to the Board of any proposed amendments to this Direction.

DATED at the City of Burlington this 7th day of December, 1999.

 **MAYOR**

 **CITY CLERK**

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Burlington Hydro Inc.
Response to Supplemental Interrogatory from School Energy Coalition
Question 34

Question:

Ref: Response to Interrogatory from VECC #21

Please provide the current price per bill for the billing services, and the derivation of that price from the \$1.00 per bill in the 2001 agreement. If the Applicant has any documentation showing that the price per bill is based on the Applicant's costs to provide the service, please provide that documentation.

Response:

Please refer to Response to VECC Interrogatory No. 44.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 39

Question:

General

Ref: Response to Interrogatory from VECC #7

- a) Please provide a schedule that for the years 2008, 2009 and 2010 breaks down the capital contributions received by USOA.

Response:

The table below provides the breakdown of capital contributions by USofA account:

Breakdown of Capital Contributions			
USofA Account	2008	2009	2010
1830	\$ (114,360)	\$ (533,200)	\$ (94,000)
1835	\$ (496,109)	\$ (380,000)	\$ (88,000)
1840	\$ (145,974)	\$ (1,379,450)	\$ (289,450)
1845	\$ (918,536)	\$ (2,121,950)	\$ (436,950)
1850	\$ (78,354)	\$ (600,000)	\$ (600,000)
1855	\$ 128,800	\$ (1,185,400)	\$ (1,191,600)
1860	\$ (20,449)	\$ -	\$ -
Total	\$ (1,644,983)	\$ (6,200,000)	\$ (2,700,000)

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 40

Question:

General

Ref: Response to Interrogatory from VECC #9 (d) and VECC #25 (d)

- a) Based on the response to VECC #9 (d), please update the 2010 rate base to reflect the delay in the wholesale metering spending from 2009 to 2010.
-

Response:

The IT replacement at Cumberland TS was scheduled to be completed in 2009 as per IESO requirements. The work will be completed by Hydro One. A purchase order was given to Hydro One in 2009, but Hydro One has scheduled this work to be complete in conjunction with a transformer change at Cumberland TS, scheduled for the Spring 2010.

The Revenue Requirement Workform at the response to Board Staff interrogatory 8 reflects this change.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 41

Question:

Ref: Response to Interrogatory from VECC #10

- a) With respect to part (c), please provide a schedule that sets out:
- The total number of poles previously identified replacement as of the end of 2006, 2007, 2008 and 2009 (forecast).
 - The number of poles replaced during the year.
 - The number of (additional) poles identified as requiring replacement during the year.
- b) Have Burlington's practices with how it identifies poles requiring replacement changed since 2005? If so, please describe when and how the practices changed.
- c) With respect to part (i), please provide the annual spending for connections as requested in the original interrogatory.

Response:

- a) See schedule below:

Pole Replacement Schedule						
Year of Program	Capital Expenditure	Poles Identified for Replacement via Pole Testing Program	Back Log of Poles to be Replaced from Previous Year	Total Number of Poles to be Replaced	Number of Poles Replaced from Pole testing & Other Sources	Number of Poles Remaining to be Replaced
2006	\$219,881.00	65	34	99	34	65
2007	\$301,191.00	128	65	193	46	147
2008	\$550,855.00	33	147	180	64	116
2009	\$720,000.00	75	116	191	51	140

- b) Burlington Hydro's practice of identifying poles for replacement has not changed. An annual pole testing program is used to test approximately 1200 poles and assess the condition and remaining life. Through various maintenance programs and the experienced Burlington Hydro staff that are in the field daily whose responsibility include the identification of any hazard or potential problems with any asset whether it be poles, transformers, line hardware, trees, clearance from buildings, compliance issues. Burlington Hydro's pole testing program has changed to include the evasive testing of poles by boring holes into the wood and performing pole treatments to extend the life of a pole that would otherwise require replacement in the future before its life expectancy.
- c) Annual spending for connections is not tracked in an account used for the sole purpose of capturing connection costs. As per Burlington Hydro's conditions of service, Burlington Hydro provides service connections at no charge. Connection charges are applied to the general service

capital accounts depending on the assets being connected i.e. 1845, 1855. See table below for analysis of connection costs:

New Customers Connected							
Year	Residential	GS<50	GS>50	SLR	USL	Total	Estimated Connection Spending
2008	904	60	16	158	13	1151	\$224,200
2009	1167	100	9	146	0	1422	\$274,400
2010	1192	102	9	147	0	1450	\$279,800
Hourly Rates for labour and vehicle							
A	2 person crew, 1 bucket truck			\$200/hr			
B	1 person crew, 1 Van			\$100/hr			
Residential services will be connected by "A"							
GS<50 will be connected by "B"							
GS>50 will be connected by "A"							
SLR will be connected by "A"							
USL will be connected by "A"							
Connections do not include the metering works involved in services >50kW or the work to run cables up hydro poles. Installation of connection assets are not included.							

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 42

Question:

Ref: Response to Interrogatory from VECC #25 (c)

- a) Please provide a schedule setting out Burlington's property taxes for 2007, 2008, 2009 and 2010 (forecast). Please explain any year over year changes that exceed 5%.
-

Response:

Please see response to Energy Probe interrogatory #55 for annual taxes. There are no year over year changes that exceed 5%.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 43

Question:

Ref: Response to Interrogatory from VECC #19

- a) With respect to part (i), was there any bad debt expense incurred in 2006 – 2008 with respect to large customers? If so, what were the annual amounts?
-

Response:

Burlington Hydro had no bad debt expense related to the large user customer class in the period 2006-2008.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 44

Question:

Ref: Response to Interrogatory from VECC #21

- a) With respect to the Billing Services Agreement:
- What is current (2009) amount that BESI is paying Burlington Hydro per bill and what was forecast 2010 amount (per bill) used for purposes of the 2010 Rate Application?
 - Please provide any analysis that Burlington Hydro has performed to determine either: (i) the current market value of its billing services or (ii) the current cost of providing billing services to BESI.

Response:

BESI is currently (2009) paying Burlington Hydro \$1.13 per bill. The forecasted amount used for the 2010 Rate Application was \$1.15 per bill, a 2% increase.

No market analysis has been conducted to determine the market value of its billing services. A schedule providing details of the current cost of providing the billing services to BESI is provided below:

Burlington Hydro Inc.	
Region Water and Wastewater Billing Service	
Region Water/Wastewater Billing Costs	2009
Estimated Number of Water/Wastewater Bills	316,548
Meter Reading	
Total Meter Reading Cost	332,460
15% of Meter Reading Cost	49,869
Meter Reading Cost per Bill	0.16
Billing and Collecting Services	
Salaries	
1 Billing Clerk	55,978
1 Customer Service Clerk	55,979
Benefits	
1 Billing Clerk	16,250
1 Customer Service Clerk	16,554
Billing and Collecting Cost per Bill	0.46
Programming Services	
Salary	
1 I.S. Programmer	70,017
Benefits	
1 I.S. Programmer	18,243
Programming Cost per Bill	0.28
Administration Charge per Bill (15.16%)	0.14
Profit Charge per Bill (9%)	0.09
Total Cost per Bill	\$ 1.13

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 45

Question:

Ref: Response to Interrogatory from VECC #25 (b) and Exhibit 6, Tab 1

- a) Please confirm that, in Exhibit 6, Tab 1, Schedule 1, the anticipated revenues from the SSS Admin Fee are included in the \$26,479,520 Distribution Revenues (at current rates) and not captured in the \$1,582,902 value for Other Operating Revenue (Net).
- b) What is the forecast revenue from SSS Admin Fees for 2010?

Response:

- a) The response to VECC Interrogatory #25 incorrectly identified that the SSS admin fee was included in the table provided at part (a) of the response to VECC Interrogatory #28. Burlington has revised the Other Operating Revenue to reflect the forecasted SSS admin fees for 2010.
- b) The forecasted SSS Admin. Fees for 2010 are as follows:

Calculation of SSS Admin Fee By Rate Class					
Class	Annualized Customers	Annualized Connections	% SSS	Customers/ Connections on SSS	SSS Admin Fee Revenue
Residential	703,718		89.69%	631,180	157,795
GS < 50 kW	60,340		89.99%	54,302	13,576
GS > 50 kW	12,357		72.58%	8,969	2,242
Street Lighting	-	176,080	0.31%	548	137
USL	-	7,224	92.31%	6,668	1,667
Total	776,415	183,304		701,668	175,417

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 46

Question:

Ref: Response to Interrogatory from VECC #28

- a) Please re-do the response to part (a) with the SSS Admin Fee excluded from the Monthly Fixed Rate.
 - b) Please re-do the 2010 Cost Allocation Study with the following changes:
 - Increase the Miscellaneous Revenues to be allocated by the SSS Admin Fee revenues.
 - Decrease the Total Distribution Revenue required by the amount of the 2010 SSS Admin Fee revenues.
 - Allocate the revised Total Distribution Revenues to customer classes using the class shared of distribution revenues determined from the response to part (a) above.
-

Response:

- a) The SSS Admin. Fee was excluded from the Monthly Fixed rate in the original table and no recalculation is required.
- b) Please see attached Cost Allocation page O1.



2010 COST ALLOCATION STUDY - RESPONSE TO VECC IR #45
Burlington Hydro Inc.
EB-2009-0259
Monday, December 21, 2009
Sheet 01 Revenue to Cost Summary Worksheet

Class Revenue, Cost Analysis, and Return on Rate Base

		Total	1 Residential	2 GS <50	3 GS>50-Regular	7 Street Light	9 Unmetered Scattered Load
Rate Base Assets	Distribution Revenue (sale)	\$29,559,495	\$18,202,710	\$4,218,325	\$6,944,894	\$44,940	\$148,626
	Miscellaneous Revenue (mi)	\$1,758,319	\$1,068,666	\$324,658	\$354,929	\$4,447	\$5,619
	Total Revenue	\$31,317,814	\$19,271,376	\$4,542,982	\$7,299,823	\$49,388	\$154,245
Expenses di cu ad dep INPUT INT	Expenses						
	Distribution Costs (di)	\$6,741,282	\$3,686,496	\$756,745	\$2,178,612	\$82,920	\$36,510
	Customer Related Costs (cu)	\$3,015,417	\$1,850,495	\$613,019	\$541,430	\$4,444	\$6,029
	General and Administration (ad)	\$5,272,787	\$2,990,522	\$732,795	\$1,477,838	\$48,327	\$23,306
	Depreciation and Amortization (dep)	\$6,694,092	\$3,910,014	\$799,359	\$1,861,629	\$86,115	\$36,975
	PILs (INPUT)	\$1,712,667	\$938,348	\$210,556	\$536,375	\$18,961	\$8,427
	Interest	\$4,525,189	\$2,479,292	\$556,328	\$1,417,205	\$50,098	\$22,266
	Total Expenses	\$27,961,434	\$15,855,166	\$3,668,801	\$8,013,089	\$290,865	\$133,513
	Direct Allocation	\$508	\$0	\$0	\$0	\$508	\$0
NI	Allocated Net Income (NI)	\$3,355,871	\$1,838,638	\$412,572	\$1,050,996	\$37,152	\$16,513
	Revenue Requirement (includes NI)	\$31,317,814	\$17,693,804	\$4,081,373	\$9,064,085	\$328,525	\$150,026
Revenue Requirement Input equals Output							
Rate Base Calculation							
Net Assets dp gp accum dep co	Net Assets						
	Distribution Plant - Gross	\$200,165,306	\$116,288,365	\$23,898,514	\$56,323,748	\$2,556,096	\$1,098,583
	General Plant - Gross	\$24,896,093	\$14,549,748	\$2,949,321	\$6,936,962	\$321,909	\$138,153
	Accumulated Depreciation	(\$121,196,017)	(\$70,137,217)	(\$14,543,399)	(\$34,320,017)	(\$1,535,016)	(\$660,368)
	Capital Contribution	(\$20,642,065)	(\$14,805,703)	(\$2,109,463)	(\$3,158,704)	(\$406,459)	(\$161,736)
	Total Net Plant	\$83,223,317	\$45,895,193	\$10,194,973	\$25,781,989	\$936,531	\$414,632
	Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0
COP	Cost of Power (COP)	\$128,414,948	\$41,517,536	\$13,583,793	\$72,274,448	\$729,275	\$309,896
	OM&A Expenses	\$15,029,486	\$8,527,512	\$2,102,558	\$4,197,879	\$135,691	\$65,845
	Directly Allocated Expenses	\$508	\$0	\$0	\$0	\$508	\$0
	Subtotal	\$143,444,942	\$50,045,048	\$15,686,351	\$76,472,327	\$865,475	\$375,741
	Working Capital	\$21,516,741	\$7,506,757	\$2,352,953	\$11,470,849	\$129,821	\$56,361
	Total Rate Base	\$104,740,059	\$53,401,950	\$12,547,926	\$37,252,838	\$1,066,352	\$470,994
Rate Base Input equals Output							
	Equity Component of Rate Base	\$41,896,023	\$21,360,780	\$5,019,170	\$14,901,135	\$426,541	\$188,397
	Net Income on Allocated Assets	\$3,355,871	\$3,416,210	\$874,181	(\$713,266)	(\$241,985)	\$20,731
	Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0
	Net Income	\$3,355,871	\$3,416,210	\$874,181	(\$713,266)	(\$241,985)	\$20,731
RATIOS ANALYSIS							
	REVENUE TO EXPENSES %	100.00%	108.92%	111.31%	80.54%	15.03%	102.81%
	EXISTING REVENUE MINUS ALLOCATED COSTS	\$0	\$1,577,572	\$461,609	(\$1,764,262)	(\$279,138)	\$4,219
	RETURN ON EQUITY COMPONENT OF RATE BASE	8.01%	15.99%	17.42%	-4.79%	-56.73%	11.00%

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 47

Question:

Ref: Response to Interrogatory from Board Staff and VECC regarding LRAM/SSM Claim

Preamble: References are made throughout the IR Responses to Tables e.g. Table 14. VECC is having difficulty matching text references to Tables.

- a) Provide a list of Tables referenced in the Board Staff and VECC IR responses, including references to the Indeco Report, together with the title/and subject matter of each table.
 - b) Check Table references in the VECC IR responses and correct these as necessary
-

Response:

- a) The attached table provides a listing of all tables.
- b) A revised version of the response to VECC interrogatory #36 has been attached.

IR Question	Group	PDF Page	Embedded Document Page	Table Number	Name of Table in text of Response	Name on Table in IR Response	Indeco Report Reference	IR Response References
1.30	Board Staff	44	Page 2 of 30	Table 1	Gross kWh and kW impacts on each program on each rate class	Table 1 - Gross kWh impacts of each program on each rate class	Indeco Report - Page 12 - Table 6 - Energy Rates per rate class, Indeco Report - Page 11 - Table 5 - Energy Savings by rate class	IR Response- Board Staff - 1.32- Table 4 - Adjustments made to the LRAM and SSM claims since the application was filed
1.31	Board Staff	46	Page 1 of 1	Table 2	2005 electricity rates with and without Regulatory Asset Recovery rate riders	Table 2 - 2005 Electricity rates with and without Regulatory Asset Recovery rate riders	Indeco Report- Page 12 - Table 6 - Energy Rates per rate class	
1.32	Board Staff	48	Page 2 of 4	Table 3	Summary of Net TRC Benefits and requested SSM amounts in 2010\$ without the Distribution System Improvements or the 2008 Residential coupon program	Table 3- Summary of Net TRC Benefits and requested SSM amounts in 2010\$ without the Distribution System Improvements or the 2008 Residential coupon program	Indeco Report- Page 9 - Table 4 - Summary of Net TRC benefits and requested SSM amounts n 2010\$	
1.32	Board Staff	49	Page 3 of 4	Table 4	Adjustments made to the LRAM and SSM claims since the application was filed	Table 4 - Adjustments made to the LRAM and SSM claims since the application was filed		
1.32	Board Staff	49	Page 3 of 4	Table 5	Final Requested LRAM amounts n 2010\$	Table 5 - Final Requested LRAM amounts n 2010\$		
4.32	VECC	50	Page 4 of 4	Table 6	Final LRAM and SSM amounts in 2010\$	Table 6 - Final LRAM and SSM amounts in 2010\$		
4.32	VECC	426	Page 2 of 30	Table 1	Energy Savings and LRAM contributions for the GS < 50kW	Table 1- Energy Savings and LRAM contributions for the GS < 50kW		
4.32	VECC	429	Page 5 of 30	Table 2	Energy Savings and LRAM contributions for the GS< 50 kW OPA funded program	Table 2 - Energy Savings and LRAM contributions for the GS< 50 kW OPA funded program		
4.32	VECC	430	Page 6 of 30	Table 3	Energy Savings and LRAM contributions for the GS < 50kW Third Tranche funded programs	Table 3 -Energy Savings and LRAM contributions for the GS < 50kW Third Tranche funded programs		
4.32	VECC	433	Page 9 of 30	Table 4	Energy Savings and LRAM contributions for the Residential Post Third Tranche Funded programs	Table 4 - Energy Savings and LRAM contributions for the Residential Post Third Tranche Funded programs		
4.32	VECC	436	Page 12 of 30	Table 5	Energy Savings and LRAM contributions for the Residential OPA Funded program	Table 5- Energy Savings and LRAM contributions for the Residential OPA Funded program		
4.32	VECC	438	Page 14 of 30	Table 6	Energy Savings and LRAM contributions for the Residential Third Tranche funded programs	Table 6 - Energy Savings and LRAM contributions for the Residential Third Tranche funded programs		IR Response - Board Staff - 1.30 - Table 1 Gross impacts of each program on each rate class
4.32	VECC	438	Page 15 of 30	Table 7	Rate class split for the energy savings of eleven split programs	Table 7 - Rate class split for the energy savings of eleven split programs		
4.32	VECC	439	Page 17 of 30	Table 8	Net TRC benefits and SSM contributions for the GS <50kW Post Third Tranche funded programs	Table 8- Net TRC benefits and SSM contributions for the GS <50kW Post Third Tranche funded programs		
4.32	VECC	441	Page 20 of 30	Table 9	Net TRC benefits and SSM contributions for the GS < 50kW Third Tranche funded programs	Table 9 - Net TRC benefits and SSM contributions for the GS < 50kW Third Tranche funded programs		
4.32	VECC	444	Page 24 of 30	Table 10	Bet TRC benefits and SSM contributions for the Residential Post Third Tranche Funded programs	Table 10 - Bet TRC benefits and SSM contributions for the Residential Post Third Tranche Funded programs		
4.32	VECC	448	Page 26 of 30	Table 11	Net TRC benefits and SSM contributions for the Residential Third Tranche Funded programs	Table 11- Net TRC benefits and SSM contributions for the Residential Third Tranche Funded programs		
4.32	VECC	452	Page 28 of 30	Table 12	Carrying costs for LRAM claim	Table 12- Carrying costs for LRAM claim		
4.32	VECC	453	Page 29 of 30	Table 13	As filed carrying cost for total SS claim	Table 13 - As filed carrying cost for total SS claim		
4.33	VECC	458	Page 4 of 4	Table 1	Source of LRAM assumptions for the BHI Third Tranche Program	Table 1 - Source of LRAM assumptions for the BHI Third Tranche Program		
4.34	VECC	460	Page 2 of 12	Table 1	Source of LRAM assumptions for BHI CDM portfolio	Table 1 - Source of LRAM assumptions for BHI CDM portfolio	Indeco Report Page 5 - 7, Table 1 - 3	
4.34	VECC	462	Page 4 of 12	Table 2	Source of SSM assumptions for BHI'S CDM portfolio	Table 2 - Source of SSM assumptions for BHI'S CDM portfolio	Indeco Report Page 5 - 7, Table 1 - 3	
4.34	VECC	465	Page 8 of 12	Table 3	List of assumption used for the residential programs	Table 3 - List of assumption used for the residential programs	Indeco Report Page 11 - Table 5 - Energy Savings by Rate Class	

IR Question	Group	PDF Page	Embedded Document Page	Table Number	Name of Table in text of Response	Name on Table in IR Response	Indeco Report Reference	IR Response References
4.35	VECC	470	Page 2 of 20	Table 1	kWh savings comparison table for all CFL's, PTs, and seasonal lights	Table 1 - kWh savings comparison table for all CFL's, PTs, and seasonal lights	Indeco Report, Page 14 - 26, Table 9 - 13	
4.35	VECC	472	Page 4 of 20	Table 2	Energy savings by rate class using assumptions from the 2009 OPA Measures and Assumptions list	Table 2 - Energy savings by rate class using assumptions from the 2009 OPA Measures and Assumptions list	Indeco Report, Page 11, Table 5	
4.35	VECC	473	Page 5 of 20	Table 3	LRAM Claim(in 2010\$) using assumptions from the 2008 OPA Measures and Assumptions list	Table 3 - LRAM Claim(in 2010\$) using assumptions from the 2008 OPA Measures and Assumptions list	Indeco Report, Page 12, Table 6	
4.35	VECC	475	Page 7 of 20	Table 4	Net TRC and SSM claim using assumptions from the 2008 OPA Measures and Assumptions list	Table 4 - Net TRC and SSM claim using assumptions from the 2008 OPA Measures and Assumptions list	Indeco Report, Page 9, Table 4	
4.35	VECC	476	Page 8 of 20	Table 5	Energy savings and LRAM contributions for the GS<50 kW Post Third Tranche programs broken down by measure and adjusted to reflect the 2008/2009 OPA Measures and Assumptions list	Table 5 - Energy savings and LRAM contributions for the GS<50 kW Post Third Tranche programs broken down by measure and adjusted to reflect the 2008/2009 OPA Measures and Assumptions list		IR Response VECC - 4.32 A
4.35	VECC	478	Page 10 of 20	Table 6	Energy savings and LRAM contributions for the GS<50 kW OPA funded programs broken down by measure and adjusted to reflect the 2008/2009 OPA Measures and Assumptions list	Table 6 - Energy savings and LRAM contributions for the GS<50 kW OPA funded programs broken down by measure and adjusted to reflect the 2008/2009 OPA Measures and Assumptions list		IR Response VECC - 4.32 A
4.35	VECC	479	Page 11 of 20	Table 7	Energy savings and LRAM contributions for the GS<50 kW Third Tranche funded programs broken down by measure and adjusted to reflect the 2008/2009 OPA Measures and Assumptions list	Table 7 - Energy savings and LRAM contributions for the GS<50 kW Third Tranche funded programs broken down by measure and adjusted to reflect the 2008/2009 OPA Measures and Assumptions list		IR Response VECC - 4.32 A
4.35	VECC	482	Page 14 of 20	Table 8	Energy savings and LRAM contributions for the Residential Post Third Tranche funded programs broken down by measure and adjusted to reflect 2008 / 2009 OPA Measures and Assumptions list	Table 8 - Energy savings and LRAM contributions for the Residential Post Third Tranche funded programs broken down by measure and adjusted to reflect 2008 / 2009 OPA Measures and Assumptions list		IR Response VECC - 4.32 A
4.35	VECC	484	Page 16 of 20	Table 9	Energy savings and LRAM contributions for the Residential OPA funded programs broken down by measure and adjusted to reflect 2008 / 2009 OPA Measures and Assumptions list	Table 9 - Energy savings and LRAM contributions for the Residential OPA funded programs broken down by measure and adjusted to reflect 2008 / 2009 OPA Measures and Assumptions list		IR Response VECC - 4.32 A
4.35	VECC	485	Page 17 of 20	Table 10	Energy savings and LRAM contributions for the Residential Third Tranche funded programs broken down by measure and adjusted to reflect 2008 / 2009 OPA Measures and Assumptions list	Table 10 - Energy savings and LRAM contributions for the Residential Third Tranche funded programs broken down by measure and adjusted to reflect 2008 / 2009 OPA Measures and Assumptions list		IR Response VECC - 4.32 A
4.35	VECC	486	Page 18 of 20	Table 11	Carrying costs that reflect the LRAM amounts calculated using 2008 OPA Measures and Assumptions list	Table 11 - Carrying costs that reflect the LRAM amounts calculated using 2008 OPA Measures and Assumptions list		IR Response VECC - 4.35 C and D
4.35	VECC	487	Page 19 of 20	Table 12	Carrying costs that reflect the SSM amounts calculated using the 2008 OPA measures and assumptions list,	Table 12 - Carrying costs that reflect the SSM amounts calculated using the 2008 OPA measures and assumptions list,		IR Response VECC - 4.35 E, VECC 4.36 B
4.36	VECC	489	Page 1 of 2	Table 1	Adjustments made to the LRAM and SSM claims in the application filed	Table 1 - Adjustments made to the LRAM and SSM claims in the application filed	Indeco Report- Page 9 - Table 4 - Summary of Net TRC benefits and requested SSM amounts n 2010\$	IR Response VECC - 4.35e - Table 4 - Net TRC and SSM claim using assumptions from the 2008 OPA Measures and Assumptions List
4.36	VECC	490	Page 2 of 20	Table 2	Final requested LRAM and SSM amounts in 2010\$	Table 2 - Final requested LRAM and SSM amounts in 2010\$	Indeco Report- Page 9 - Table 4 - Summary of Net TRC benefits and requested SSM amounts n 2010\$	IR Response VECC - 4.35e - Table 4 - Net TRC and SSM claim using assumptions from the 2008 OPA Measures and Assumptions List

Burlington Hydro Inc.
Response to Interrogatory from Vulnerable Energy Consumers Coalition
Question 36

Question:

LRAM /SSM Claim

Ref: Exhibit 8/ Tab 6 / Schedule 1, Indeco Report, Page 9, Table 4

Preamble: In section 6.1 of the Board's CDM Guidelines, state that an SSM is not available for utility-side expenditures

- a) Provide the rationale for including distribution system improvements in BHI's SSM claim.
- b) Provide a revised copy of Table 4 incorporating the revisions request in VECC IR # 35, part e) and with the distribution system improvements program removed.

Response:

We agree that distribution system improvement projects are not eligible for the SSM. Table 4 found in the response to Question 35e has removed Distribution System Improvements from the SSM claim calculated with assumptions from the 2008/2009 OPA Measures and Assumptions list.

As a result of the availability of OPA's final program results for 2008 and adjustments made in light of both the Board and VECC interrogatory questions, values for energy savings and both LRAM and SSM claims differ from those presented in the application as filed. The adjustments made are in Table 1

Table 1- Adjustments made to the LRAM and SSM claims in the application as filed

Adjustment	Adjusts the LRAM claim?	Adjusts the SSM claim?	Justification of the adjustment
Addition of the free ridership missed by the OPA for its 2006 Cool Savings Rebate Program	Yes	No	Response to VECC interrogatory Q32b
Adjustment of the energy savings for 13W CFLs found as part of the 2007 Residential Coupon program to reflect the 2008 OPA M&A list	Yes	No	Response to VECC interrogatory Q32b
Removal of Regulatory Asset Recovery rate riders for the 2005 electricity rates	Yes	No	Response to Board interrogatory Q31
Removal of Distribution system improvements from the BHI CDM portfolio	No	Yes	Response to VECC interrogatory Q36 (and Board interrogatory Q32)
Update of the results for the	Yes	No	Response to VECC

2008 OPA funded programs to their confirmed, finalized values			interrogatory Q33b
Removal of the 2008 Residential Coupon program from the list of programs eligible for SSM	No	Yes	Response to VECC interrogatory Q32c
Adjustment of the 2005 Public Education and Outreach program to reflect the OPA M&A list	Yes	No	Response to VECC interrogatory Q33b

The breakdown of energy savings, LRAM and SSM amounts resulting from the changes listed in Table 1 can be found in Questions 30 and 32 of the Board Staff interrogatories. The split of SSM and LRAM claims reflecting the changes listed in Table 1 is given in Table 2.

Table 2 - Final requested LRAM and SSM amounts in 2010\$

Rate class	LRAM	SSM
Residential	\$567,125	\$166,045
GS < 50 kW	\$72,485	\$4,450
GS > 50 kW	\$65,735	\$50,823
Unmetered Scattered Load	\$0	-\$36
TOTAL	\$705,345	\$221,283

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 48

Question:

Ref: Response to Interrogatory from VECC #32
Response to Interrogatory from Board Staff # 29

Preamble: The Response indicates:
“In many cases, the (OPA) Measures and Assumptions List does not address the measures implemented by Burlington Hydro. In particular, many Burlington Hydro programs installed types of lighting fixtures that are not found on the OPA list”.

- a) For each of the Third Tranche and post Third Tranche CDM programs for the Residential and GS<50 kw classes, provide a list of measures that are **not** on the OPA list and for each measure provide the alternative set of assumptions and source(s) used by BHI/Indeco.
- b) For each measure identify the number of participants by year and the kWh savings.
- c) Map/reconcile the result of the response to part (b) to the Tables Provided in response to VECC IR #32 part a)

Response:

a) and b)

Table 1 to Table 4 provides a list of all measures found in the Residential and GS < 50 kW Third Tranche and Post-third Tranche programs. Those not found in the OPA Measures and Assumptions list are highlighted. Their sets of assumptions are provided, as well as their participants and kWh savings by year (as requested in part b).

Annual operating time, measure life and equipment cost and energy savings for all measures listed in Table 1 were substantiated through documentation such as invoices of equipment type, wattage, cost and savings provided by a professional lighting expert. Burlington Hydro provided the number of participants.

The 2006 Municipal Construction program and the 2006 Municipal Building Retrofit program were programs initiated by BHI at the Halton Regional Police Services and Burlington City Hall. Free ridership of 0% is justified for these two programs since they were in-house and municipal infrastructure retrofits that would not have been initiated without BHI's efforts. The 2007 Municipal New Construction program involved the construction of a 10kW wind turbine on the Burlington Pier. Due to the unique nature of this program, a free ridership of 0% was applied.

For the other programs in Table 1, a 10% default free ridership was used to calculate net TRC benefits and a 30% default free ridership was used to calculate energy savings. The OEB states that for the calculation of LRAM (from energy savings), assumptions in place at the time of the third party review should be used. For the calculation of SSM (from net TRC benefits), assumptions in place in the year immediately prior to the start of the program should be used.¹

Table 1 - List of assumptions used for Third Tranche programs, GS < 50 kW rate class

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2006	Municipal building retrofit	26W CFL fixture w/EM ballast	4380	10	140	324	0	12	3851
2006	Municipal building retrofit	3W LED EXIT Sign	8760	15	95	237	0	101	23650
2006	Municipal building retrofit	2lamp T8 32W (58W)	2600	10	78	52	0	333	17143
2006	Municipal building retrofit	2lamp T8 32W (73-78W)	2910	10	90	242	0	6	1435

¹ Ontario Energy Board. 2008. *Guidelines for Electricity Distributor Conservation and Demand Management* (File no: EB-2008-0037). p.26

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2006	Municipal building retrofit	4lamp T8 32W (112W)	2080	10	114	250	0	36	8896
2006	Municipal building retrofit	6lamp T8 32W (202-226W)	4160	10	310	1073	0	89	94567
2006	Municipal building retrofit	15W Traffic Light	8760	7	165	1183	0	52	60880
2006	Municipal building retrofit	7.5W Pedestrian Light	8760	7	165	810	0	48	38505
2006	Municipal building retrofit	65W Metal Halide	4380	10	220	372	0	2	737
2006	Municipal building retrofit	65W Metal Halide	4380	10	220	482	0	1	477
2006	Municipal building retrofit	28W CFL	4380	10	140	534	0	1	529
2006	Municipal building retrofit	1lamp T8 (30W)	2600	10	75	52	0	18	927
2006	Municipal building retrofit	2lamp T8-2' (50W)	2600	10	90	52	0	10	515
2006	Municipal building retrofit	2lamp T8 4' (59W)	2600	10	78	96	0	13	1238
2006	Municipal building retrofit	3lamp T8-4' (87W)	4380	10	90	302	0	20	5984
2006	Municipal building retrofit	2lamp T8 4' (59W)	2080	10	78	85	0	9	760
2006	Municipal building retrofit	10lamp T5-HO (fixture input 562W)	6550	10	550	3393	0	48	161231
2006	Municipal building retrofit	15W CFL	8760	1	4	526	0	2	347
2006	Municipal building retrofit	65W Metal Halide	4380	10	90	153	0	8	1214
2006	Municipal building retrofit	23W CFL	4380	2	20	337	0	1	223
2006	Municipal new construction	Halogen (20W)	8760	10	180	482	0	9	13009
2006	Municipal new construction	PH Metal Halide (945W)	8760	10	180	1183	0	8	28382
2006	Municipal new construction	PH Metal Halide (450W)	8760	10	180	88	0	4	1051

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2006	Municipal new construction	PH Metal Halide (185W)	8760	10	180	964	0	22	63598
2006	Municipal new construction	1lamp T8 (30W)	8760	10	68	149	0	19	8488
2006	Municipal new construction	1lamp T8-3' (25W)	8760	10	68	114	0	8	2733
2006	Municipal new construction	1lamp T8-2' (19W)	8760	10	68	88	0	3	788
2006	Municipal new construction	2lamp T8-3' (52W)	8760	10	76	210	0	10	6307
2006	Municipal new construction	2lamp T8 4' (62W)	8760	10	70	140	0	338	142122
2006	Municipal new construction	2lamp T8 4' (59W)	8760	10	70	166	0	103	51430
2006	Municipal new construction	1lamp T8-4' (40W)	8760	10	68	61	0	4	736
2006	Municipal new construction	3lamp T8-4' (83W)	8760	10	81	394	0	15	17739
2006	Municipal new construction	2lamp T8 4' (64W)	8760	10	70	123	0	46	16924
2006	Municipal new construction	2lamp T8 2' (19W)	8760	10	70	88	0	3	788
2006	Municipal new construction	12W CF EXIT Sign	8760	10	180	158	0	34	16083
2006	Municipal new construction	26W CFL	8760	1	20	648	0	3	1945
2006	Municipal new construction	42W CFL	8760	1	24	946	0	39	36897
2006	Municipal new construction	94W Metal Halide	8760	10	90	929	0	20	55714
2006	Municipal new construction	56W Screw-in CFL	8760	1	24	1261	0	13	16399
2006	Municipal new construction	91W Screw-in CFL	8760	1	24	1831	0	50	91542
2006	Municipal new construction	94W Screw-in CFL	8760	1	24	1805	0	7	12632
2007	Home Developers Program	2lamp 4' T8 (46W)	8760	3	57	263	10 / 30%	171	31457

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2007	Home Developers Program	2lamp 2' T8 (27W)	8760	3	60	184	10 / 30%	110	14165
2007	Home Developers Program	1lamp 2' T8 (15W)	8760	3	54	105	10 / 30%	44	3238
2007	Home Developers Program	2lamp 4' T8 (59W)	8760	3	57	596	10 / 30%	98	40864
2007	Home Developers Program	2lamp 4' T8 (74W)	8760	3	65	1848	10 / 30%	7	9057
2007	Home Developers Program	Exit Sign LED=2.4W	8760	25	38	242	10 / 30%	71	12016
2007	Home Developers Program	Exit Sign LED=2.4W	8760	25	38	680	10 / 30%	64	30454
2007	Home Developers Program	13W CFL	4368	1	5	205	10 / 30%	4329	354602
2007	Home Developers Program	14W CFL	4368	1	6	201	10 / 30%	54	4329
2007	Home Developers Program	9W CFL	4368	1	7	70	10 / 30%	669	18655
2007	Home Developers Program	7W CFL	4368	1	7	144	10 / 30%	934	42880
2007	Home Developers Program	23W CFL	4368	1	7	336	10 / 30%	20	2142
2007	Home Developers Program	4lamp 4' T8 (112W)	8760	3	72	806	10 / 30%	83	46824
2007	Home Developers Program	4lamp 4' T8 (95W)	728	3	74	79	10 / 30%	1	56
2007	Home Developers Program	4lamp 4' T8 (98W)	1450	3	74	84	10 / 30%	1	59
2007	Home Developers Program	2lamp 4' T8 (51W)	8760	3	57	237	10 / 30%	74	12252
2007	Home Developers Program	1lamp 4' T8 (28W)	364	3	50	21	10 / 30%	25	363
2007	Home Developers Program	1lamp 4' T8 (30W)	8760	3	50	79	10 / 30%	34	1876
2007	Home Developers Program	1lamp 3' T8 (22W)	8760	3	54	131	10 / 30%	60	5519
2007	Home Developers Program	9W CFL	728	1	7	30	10 / 30%	16	191

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2007	Home Developers Program	13W CFL	728	1	6	63	10 / 30%	1	25
2007	Municipal new construction	Wind Turbine	8760	30	218000	0	0	1	0

The 2005 Public Education and Outreach program in Table 2 has two different sets of inputs. The first, used for the SSM claim, is composed of the inputs in place in the year immediately prior to the start of the program and were provided by SeeLine. OEB states that for the calculation of SSM (from net TRC benefits), assumptions in place in the year immediately prior to the start of the program should be used.² The second set of inputs was used to calculate LRAM. The 2008/2009 OPA Measures and Assumptions list provided this set of inputs. SeeLine provided the number of participants for this program.

Annual operating time, measure life and equipment cost and energy savings for the measures from the three other programs listed in Table 2 were substantiated through documentation such as invoices of equipment type, wattage, cost and savings provided by a professional lighting expert. Burlington Hydro provided the number of participants.

For the programs in Table 2, a 10% default free ridership was used to calculate net TRC benefits (used to calculate SSM) and a 30% default free ridership was used to calculate energy savings for the purpose of the LRAM.

Table 2 - List of assumptions used for Third Tranche programs, Residential rate class

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2005	Public education and outreach (SSM claim)	15W CFL	--	4	2	94	10%	315	11877
2005	Public education and outreach (SSM claim)	LED Christmas lights	--	30	2	40	10%	659	10544
2005	Public education and outreach	LED Christmas lights	--	30	2	15	10%	658	3948

² Ontario Energy Board. 2008. *Guidelines for Electricity Distributor Conservation and Demand Management* (File no: EB-2008-0037). p.26

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
05	(SSM claim)								
20	Public education and outreach	Programmable thermostat - Space Heating, Existing	--	18	60	1326	10%	67	35536.8
05	(SSM claim)	Single Family Detached							
20	Public education and outreach	Programmable thermostat - Space Cooling, Existing	--	18	60	143	10%	175	10010
05	(SSM claim)	Single Family Detached							
20	Public education and outreach	Timer - Outdoor - Light	--	20	20	263	10%	120	12624
05	(SSM claim)								
20	Public education and outreach	Timer - Indoor - Light	--	20	7	88	10%	36	1267.2
05	(SSM claim)								
20	Public education and outreach	Timer - Indoor - Air conditioners	--	20	7	98	10%	36	1411.2
05	(SSM claim)								
20	Public education and outreach	Ceiling Fan	--	20	42	0	10%	74	0
05	(SSM claim)								
20	Public education and outreach	EnerGuide for Existing homes - space heating	--	25	150	78	10%	0	0
05	(SSM claim)								
20	Public education and outreach	15W CFL	--	8	--	43	30%	315	38034.9
05	(LRAM claim)								
20	Public education and outreach	LED Christmas lights	--	5	--	14	30%	659	25279
05	(LRAM claim)								
20	Public education and outreach	LED Christmas lights	--	5	--	14	30%	658	25241
05	(LRAM claim)								
20	Public education and outreach	Programmable thermostat - Space Heating, Existing	--	15	--	2063	30%	67	38701.9
05	(LRAM claim)	Single Family Detached							
20	Public education and outreach	Programmable thermostat - Space Cooling, Existing	--	15	--	138	30%	175	67620
05	(LRAM claim)	Single Family Detached							
20	Public education and outreach	Timer - Outdoor - Light	--	10	--	41	30%	120	13810
05	(LRAM claim)								
20	Public education and outreach	Timer - Indoor - Light	--	10	--	219	30%	36	22075
05	(LRAM claim)								
20	Public education and outreach	Timer - Indoor - Air conditioners	--	10	--	98	30%	36	9870
05	(LRAM claim)								
20	Public education and outreach	Ceiling Fan	--	10	--	90	30%	74	18607
05	(LRAM claim)								
20	Public education and outreach	EnerGuide for Existing homes - space heating	--	25	--	78	30%	0	0
05	(LRAM claim)								

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2007	Municipal building retrofit	15W CFL	4000	2	4	180	30%	2200	554400
2007	Public education and outreach	13W CFL	4000	2	4	188	30%	800	210560
2007	Staff Development Program	15W CFL	4000	2	4	180	30%	260	65520

Annual operating time, measure life, equipment cost and energy savings for all measures listed in Table 3 were substantiated through documentation such as invoices of equipment type, wattage, cost and savings provided by a professional lighting expert. Burlington Hydro provided the number of participants.

For the programs in Table 3, a 10% default free ridership was used to calculate net TRC benefits and a 30% default free ridership was used to calculate energy savings. The OEB states that for the calculation of LRAM (from energy savings), assumptions in place at the time of the third party review should be used. For the calculation of SSM (from net TRC benefits), assumptions in place in the year immediately prior to the start of the program should be used.³

Table 3 - List of assumptions used for Post Third Tranche programs, GS < 50 kW rate class

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2006	General Service Lighting Program	2 - T8 32W (58 W) reflectorized w/E	4000	10	79	392	10 / 30%	88	18,110
2006	General Service Lighting Program	3W LED EXIT Sign	8760	10	95	237	10 / 30%	238	29,553
2006	General Service Lighting Program	2lamp T8 32W (51W)	4000	10	56	108	10 / 30%	1,030	58,401
2006	General Service Lighting Program	2lamp T8 32W (58-59W)	4000	10	79	392	10 / 30%	548	112,778

³ Ontario Energy Board. 2008. *Guidelines for Electricity Distributor Conservation and Demand Management* (File no: EB-2008-0037). p.26

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2006	Program General Service Lighting Program	2lamp T8 32W (73-78W)	4000	10	85	332	10 / 30%	1,151	200,619
2006	Program General Service Lighting Program	2lamp T8 32W (73-78W)	4000	10	85	240	10 / 30%	12	1,512
2006	Program General Service Lighting Program	4lamp T8 32W (112W)	4000	10	93	480	10 / 30%	24	6,048
2006	Program General Service Lighting Program	6lamp T8 32W (174W)	4000	10	322	1144	10 / 30%	57	34,234
2006	Program General Service Lighting Program	6lamp T8 32W (202-226W)	4000	10	382	1032	10 / 30%	86	46,595
2006	Program General Service Lighting Program	4lamp T5-HO 54W (232W)	4000	10	424	912	10 / 30%	58	27,770
2006	Program General Service Lighting Program	6lamp T8 32W (174W)	4000	10	359	484	10 / 30%	37	9,402
2006	Program General Service Lighting Program	2lamp T8 32W (73-78W)	4000	10	88	292	10 / 30%	11	1,686
2006	Program General Service Lighting Program	1lamp T8 (30W)	4000	10	53	68	10 / 30%	118	4,213
2006	Program General Service Lighting Program	1lamp T8 (30W)	8760	10	53	149	10 / 30%	70	5,473
2006	Program General Service Lighting Program	1lamp T8 (24W)	8760	10	54	88	10 / 30%	204	9,382
2006	Program General Service Lighting Program	2lamp T8-3' (40W)	4000	10	61	108	10 / 30%	113	6,407
2006	Program General Service Lighting Program	4lamp T8 (100W)	4000	10	65	224	10 / 30%	25	2,940
2006	Program General Service Lighting Program	4lamp T8 (100W)	8760	10	65	429	10 / 30%	27	6,084
2006	Program General Service Lighting Program	4lamp T8 (102W)	8760	10	93	1139	10 / 30%	118	70,549
2006	Program General Service Lighting Program	1lamp T8-2' (14W)	8760	10	58	114	10 / 30%	210	12,555
2006	Program General Service Lighting Program	2lamp T8-2' (30W)	4000	10	61	96	10 / 30%	113	5,695
2006	Program General Service Lighting Program	2lamp T8-2' (32W)	8760	10	67	403	10 / 30%	29	6,135

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2006	General Service Lighting Program	2lamp T8-4' (78W)	8760	10	63	-35	10 / 30%	40	-736
2006	General Service Lighting Program	2lamp T8 4' (59W)	8760	10	165	596	10 / 30%	38	11,884
2006	General Service Lighting Program	7W CFL	4000	2	12	132	10 / 30%	232	8,039
2006	General Service Lighting Program	9W CFL	4000	2	12	124	10 / 30%	315	10,253
2006	General Service Lighting Program	11W CFL	4000	2	9	356	10 / 30%	30	3,738
2006	General Service Lighting Program	13W CFL	4000	2	8	188	10 / 30%	1,242	81,724
2006	General Service Lighting Program	15W CFL	4000	2	10	240	10 / 30%	23	1,449
2006	General Service Lighting Program	65W CFL	4000	3	65	1740	10 / 30%	40	30,450
2006	General Service Lighting Program	23W CFL	4000	3	10	308	10 / 30%	140	18,865
2006	Multi-unit Residential Lighting Retrofit Program	2lamp T8 32W (51W)	4000	10	56	108	10 / 30%	29	3,289
2006	Multi-unit Residential Lighting Retrofit Program	2lamp T8 32W (51W)	8760	10	56	237	10 / 30%	70	17,384
2006	Multi-unit Residential Lighting Retrofit Program	2lamp T8 32W (58-59W)	728	10	79	71	10 / 30%	2	150
2006	Multi-unit Residential Lighting Retrofit Program	4lamp T8 32W (112W)	8760	10	93	1051	10 / 30%	93	102,650
2006	Multi-unit Residential Lighting Retrofit Program	1lamp T8 (30W)	4000	10	53	68	10 / 30%	113	8,068
2006	Multi-unit Residential Lighting Retrofit Program	1lamp T8 (30W)	8760	10	53	149	10 / 30%	218	34,088
2006	Multi-unit Residential Lighting Retrofit Program	2lamp T8 32W (51W)	8760	10	95	403	10 / 30%	128	54,158
2006	Multi-unit Residential Lighting Retrofit Program	1lamp T8-3' (24W)	4000	10	58	52	10 / 30%	214	11,684
2006	Multi-unit Residential Lighting Retrofit Program	1lamp T8-2' (14W)	4000	10	58	52	10 / 30%	24	1,310
2006	Multi-unit Residential Lighting	13W CFL	4000	2	8	188	10 / 30%	1,901	250,172

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2007	Retrofit Program General Service Lighting Program	8lamp T5	6400	9	475	3578	10 / 30%	76	64,712
2007	General Service Lighting Program	2lamp T5	6400	9	210	717	10 / 30%	32	5,459
2007	General Service Lighting Program	4lamp T5	6400	9	300	4205	10 / 30%	51	51,038
2007	General Service Lighting Program	2lamp 4' T8	5500	11	65	561	10 / 30%	130	17,357
2007	General Service Lighting Program	6lamp T8 High Bay	8760	11	315	1542	10 / 30%	82	30,089
2007	General Service Lighting Program	3lamp T8 EB Troffer	8760	9	150	556	10 / 30%	42	5,560
2007	General Service Lighting Program	2lamp 4' T8 EB	8760	9	135	162	10 / 30%	22	849
2007	General Service Lighting Program	6lamp 4' T8 (158W)	6240	10	310	1679	10 / 30%	25	9,987
2007	General Service Lighting Program	6lamp 4' T8 (220W)	6240	10	310	1292	10 / 30%	3	922
2007	General Service Lighting Program	6lamp 4' T8 (158W)	6240	10	310	1223	10 / 30%	60	17,465
2007	General Service Lighting Program	Exit (2.4W)	8760	25	38	242	10 / 30%	14	806
2007	General Service Lighting Program	Remove fixture 4lamp T8	6240	5	0	736	10 / 30%	6	1,051
2007	General Service Lighting Program	Remove fixture 400W Metal Halide	6240	5	0	2664	10 / 30%	1	634
2007	General Service Lighting Program	2lamp 4' T8 (51W)	2912	5	57	79	10 / 30%	36	674
2007	General Service Lighting Program	4lamp 4' T8 (112W)	8760	5	72	1051	10 / 30%	27	6,755
2007	General Service Lighting Program	Exit (2.4W)	8760	25	38	242	10 / 30%	8	460

For the 2006 Residential Coupon program in Table 4, the 2006-2008 OPA Conservation Results for BHI provided the measure life, energy savings, free ridership and number of units. The 2006 EKC calculators⁴ provided the equipment cost. Equipment costs are only used for SSM calculations. Therefore the assumptions used were those in place at the beginning of the program and not updated to the 2008/2009 OPA Measures and Assumption list.

For the 2007 Residential Coupon program in Table 4, the 2006-2008 OPA Conservation Results for BHI provided the measure life, energy savings, free ridership and number of units. The 2008/2009 OPA Measures and Assumptions list provided the equipment cost. The one exception is the 13W CFLs whose energy savings were provided by the 2008/2009 OPA Measures and Assumption list and whose inputs used for SSM calculations were those in place at the beginning of the program.

For the 2008 Residential Coupon program in Table 4, the 2006-2008 OPA Conservation Results for BHI provided the measure life, energy savings, free ridership and number of units.

Table 4 - List of assumptions used for Post Third Tranche programs, Residential rate class

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2006	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Compact Fluorescent Light Bulb	--	4	\$2.50	104	10%	18,328	5,166,420
2006	Residential Coupon Program - Spring and Fall EKC Program	Electric Timers	--	20	\$12.50	183	10%	514	253,883
2006	Residential Coupon Program - Spring and Fall EKC Program	Programmable Thermostats	--	15	\$65.00	216	10%	224	130,352
2006	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Ceiling Fans	--	20	\$25.00	141	10%	170	64,731
2006	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Compact Fluorescent Light Bulb	--	4	\$1.62	104	10%	27,176	7,660,272
2006	Residential Coupon	Seasonal Light Emitting	--	30	\$8.70	31	10%	6,541	543,080

⁴ EKC 2006 Fall results and 2006 Fall EKC calculator provided by e-mail from Chris Bodanis (EnergyShop) to Gerry Smallegange and Anne Rampado dated 3 March 2007. EKC 2006 Spring results and 2006 Spring EKC calculator provided by e-mail from Raegan Bunker (OPA) to Gerry Smallegange; Anne Rampado; Allan Frederick; John Cesco; <bshortreed@camhydro.com>; <rskevington@camhydro.com> dated 2 February 2007.

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
	Program - Spring and Fall EKC Program	Diode Light String							
2006	Residential Coupon Program - Spring and Fall EKC Program	Programmable Thermostats	--	18	\$25.00	522	10%	431	607,829
2006	Residential Coupon Program - Spring and Fall EKC Program	Dimmers	--	10	\$13.00	139	10%	341	127,959
2006	Residential Coupon Program - Spring and Fall EKC Program	Indoor Motion Sensors	--	20	\$20.00	209	10%	122	69,038
2006	Residential Coupon Program - Spring and Fall EKC Program	Programmable Baseboard Thermostats	--	18	25	1,466	10%	26	101,678
2007	Residential Coupon Program - Spring EKC Program	15 W CFL	--	8	2	43	22%	32,784	2,199,129
2007	Residential Coupon Program - Spring EKC Program	20 W+ CFLs	--	8	1	62	22%	5,337	517,015
2007	Residential Coupon Program - Spring EKC Program	Project Porchlight CFLs	--	8	4	43	24%	6,899	450,904
2007	Residential Coupon Program - Spring EKC Program	Energy Star Ceiling Fan	--	10	47	90	45%	264	26,122
2007	Residential Coupon Program - Spring EKC Program	Furnace Filter	--	1	12	38	45%	1,066	22,094
2007	Residential Coupon Program - Spring EKC Program	Solar Lights	--	5	5	33	87%	4,209	35,894
2007	Residential Coupon Program - Spring EKC Program	Outdoor Motion Sensor	--	10	16	160	45%	421	74,011
2007	Residential Coupon Program - Spring EKC Program	Dimmer Switch	--	10	13	24	45%	268	6,975

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2007	Program Residential Coupon Program - Spring EKC Program	Energy Star Light Fixtures	--	16	24	123	45%	127	17,215
2007	Residential Coupon Program - Spring EKC Program	SLEDs	--	5	9	14	51%	8,686	116,612
2007	Residential Coupon Program - Spring EKC Program	T8	--	18	20	37	23%	250	14,297
2007	Residential Coupon Program - Spring EKC Program	Programmable Thermostat	--	15	25	75	45%	257	21,238
2007	Residential Coupon Program - Spring EKC Program	Power Bar with Timer	--	10	25	72	23%	116	12,987
2007	Residential Coupon Program - Spring EKC Program	Lighting Control Devices	--	10	21	72	45%	1,349	107,106
2007	Residential Coupon Program - Spring EKC Program	13W CFL	4000	2	7	43	10 / 30%	8,000	481,600
2008	Residential Coupon Program - Spring and Fall EKC Program	Air Conditioner/Furnace Filters	--	1	--	38	65%	536	7,094
2008	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Qualified CFL (Indoor & Outdoor)	--	7	--	88	63%	5,819	191,023
2008	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Qualified Light Fixtures	--	16	--	133	67%	9,030	402,268
2008	Residential Coupon Program - Spring and Fall EKC Program	Heavy Duty Timers	--	10	--	301	67%	204	20,481
2008	Residential Coupon Program - Spring and Fall EKC Program	T8 Fluorescent Fixtures	--	16	--	37	67%	1,643	20,076

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2008	Residential Coupon Program - Spring and Fall EKC Program	ENERGY STAR Decorative CFLs	--	4	--	30	61%	20,958	245,544
2008	Residential Coupon Program - Spring and Fall EKC Program	ENERGY STAR Dimmable CFLs	--	6	--	98	62%	1,351	49,778
2008	Residential Coupon Program - Spring and Fall EKC Program	Power Bars with Timers	--	10	--	53	59%	97	2,104
2008	Residential Coupon Program - Spring and Fall EKC Program	Programmable Thermostats - Baseboard	--	15	--	64	53%	570	16,871
2008	Residential Coupon Program - Spring and Fall EKC Program	Car block heater timer	--	n/a	--	n/a	100%	n/a	
2008	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Qualified Compact Fluorescent Light Bulbs	--	8	--	53	48%	12,406	343,328
2008	Residential Coupon Program - Spring and Fall EKC Program	Lighting Control Devices	--	10	--	102	55%	1,766	81,905
2008	Residential Coupon Program - Spring and Fall EKC Program	Awnings	--	n/a	--	0	100%	390	
2008	Residential Coupon Program - Spring and Fall EKC Program	Window Films	--	n/a	--	0	100%	6,284	
2008	Residential Coupon Program - Spring and Fall EKC Program	Electric Water Heater Blankets	--	n/a	--	0	100%	193	
2008	Residential Coupon Program - Spring and Fall EKC Program	Pipe Wrap	--	6	--	38	53%	11,573	205,913
2008	Residential Coupon Program - Spring and Fall EKC Program	Low-Flow Toilets	--	n/a	--	0	100%	1,514	
2008	Residential Coupon	Keep Cool – Dehumidifier	--	12	--	500	65%	4	632

Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
2008	Program - Spring and Fall EKC Program Residential Coupon Program - Spring and Fall EKC Program	Keep Cool – Room Air Conditioner	--	9	--	141	58%	4	239
2008	Residential Coupon Program - Spring and Fall EKC Program	Rewards for Recycling – Dehumidifier	--	12	--	500	56%	108	23,847
2008	Residential Coupon Program - Spring and Fall EKC Program	Rewards for Recycling – Room Air Conditioner	--	9	--	141	56%	117	7,256
2008	Residential Coupon Program - Spring and Fall EKC Program	Rewards for Recycling - Halogen Lamp	--	16	--	275	52%	93	12,349

c)

The results listed in Table 1 to Table 4 were used to generate the tables provided in response to VECC IR #32 part a.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 49

Question:

Ref: Response to Interrogatory from VECC #33 (b)
Response to Interrogatory from Board Staff # 29

Preamble The response indicates:
“For the OPA funded programs and the 2006, 2007 and 2008 Residential Coupon (EKC) programs, the OPA has conducted a program specific evaluation, and calculated results for those specific programs, and these became available after the most current Measures and Assumptions List. Those evaluation results are more appropriate than would be calculations based on the default assumptions in the Measures and Assumptions List, and so we have used those results, provided by the OPA.”

- a) Provide a copy of the data supplied to the OPA and the OPA reports and associated correspondence that supports BHIs OPA Component of the LRAM and SSM claims

Response:

Burlington Hydro provided OPA with customer contact information for the EKC program and no information on participants, or measure uptake or characteristics.

The OPA provided an e-mail (which follows), and an Excel workbook that has been filed as Burlington_IRR_VECC_q49_20091221.xls. In addition, the OPA provided a subsequent explanatory e-mail which also follows.

From: "James Yue" <James.Yue@powerauthority.on.ca>
To: <arampado@burlingtonhydro.com>, <gsmallegange@burlingtonhydro.com>, <jholzschuh@burlingtonhydro.com>, "AKunz@burlingtonhydro.com" <'AKunz@burlingtonhydro.com'>
Cc: "Raegan Bunker" <Raegan.Bunker@powerauthority.on.ca>
Date: 11/10/2009 02:50 PM
Subject: 2006-8 OPA Conservation Program Results - Burlington Hydro Inc.



November 10, 2009

Re: Estimated allocation of 2006-2008 provincial conservation results to Local Distribution Company service territories - update to July 2009 report

Dear Anne, Gerry, Jenna and Amy,

The Ontario Power Authority (OPA) is pleased to provide the enclosed report as an update to the Conservation and Demand Management (CDM) Program Results Data report which was distributed to LDCs on July 14, 2009.

About this report

Two updates have been made to the report circulated in July:

- preliminary results for 2008 programs have been updated based on final results of OPA's 2008 conservation programs now that the evaluation process is complete.
- statistics from the recently published 2008 OEB Yearbook of Electricity Distributors have been used for allocation of 2008 provincial results.

No changes have been made to the 2006 or 2007 provincial program results or the estimated allocation of 2006 and 2007 results to individual LDC service territories. All results presented herein are considered final.

The results provided in the enclosed report are in accordance with current OPA practices and policies for reporting progress against the provincial conservation goals. Demand Response initiatives, for example, are reported based on the total DR resources that were available (based on contracted nameplate capacity) rather than the actual demand reduction which occurred at the one-hour system peak in 2008. Additionally, customer based generation resources shown for the Renewable Energy Standard Offer Program are based on total contracts signed in each year, rather than in-service date.

The OPA welcomes inquiries regarding the estimation province-wide results and/or allocation of these CDM program results to individual LDC territories, however it is unable to provide any technical or regulatory advice to LDCs regarding specific treatment of these OPA funded program savings for the purposes of Lost Revenue Adjustment Mechanism or other filings by LDCs to the Ontario Energy Board (OEB). Such inquiries should be directed to the OEB.

Allocation methodologies

As described in the memo distributed July 3, 2009, the OPA has used four distinct methodologies to estimate the allocation of provincial savings to individual LDC service territories, depending on the conservation program type:

- LDC delivered programs: Savings were allocated based on participation data that was tracked by individual LDCs.
- Third-party (non-LDC) delivered programs:
- Where geographic participant data was readily available, savings were allocated to corresponding LDC territory.
- Where geographic participation was not readily available, savings were allocated based on each LDC's share of the provincial energy consumption for the customer class targeted by the program, based on data from the Ontario Energy Board Yearbook of Electricity Distributors for the respective year the program was delivered. For example, if an LDC has 10% of the residential energy consumption of Ontario in 2008, they would be allocated 10% of the savings from the 2008 province wide Every Kilowatt Counts Power Savings Event retail coupon initiative (as it is delivered by third party and does not include LDC-specific participant data).
- Programs run exclusively in Toronto: All energy and demand savings were allocated to Toronto Hydro.

The specific allocation methodology that was used for each conservation initiative in 2006 through 2008 is summarized in a table at the end of this memo.

Report structure

The structure of the enclosed spreadsheet-based report is unchanged from the previous version. It includes the following tabs:

- 1) Summary:** Provides a portfolio-level summary of the annual resources savings (MW and MWh, net and gross for each) for the 2006, 2007 and 2008 program portfolios. The summary includes both province wide results, as well as the estimated share of those results which occurred in your LDC service territory.
- 2) Annual net demand savings – LDC:** Provides a stacked bar graph of the annual net summer peak demand savings (MW) that are estimated to occur within your service territory from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
- 3) Annual net energy savings – LDC:** Provides a stacked bar graph of the annual net energy savings (MWh) that are estimated to occur within your service territory from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
- 4) Annual net demand savings – Prov:** Provides a stacked bar graph of the annual net summer peak demand savings (MW) that are estimated to occur across the province from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
- 5) Annual net energy savings – Prov:** Provides a stacked bar graph of the annual net energy savings (MWh) that are estimated to occur across the province from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
- 6) Initiative level:** Provides a breakdown of the portfolio-level summary information provided in Summary tab, by individual initiative and year.
- 7) Measures:** For each initiative in each year, this tab provides (where available): per unit savings assumptions (summer peak demand savings, annual energy savings, effective useful life), net-to-gross adjustment factors, and participation numbers (provincial and estimated share for your LDC service territory).
- 8) Local Distribution Companies:** includes the OEB-Year Book data that was used for results allocation amongst LDCs.

Third party evaluation reports

If you would like to receive a copy of the third-party impact evaluation reports for 2007 third-party

program evaluations (Great Refrigerator Roundup, Cool Savings Rebate, Summer Savings and Every Kilowatt Counts) please send a request to james.yue@powerauthority.on.ca. Third-party impact evaluation reports for 2008 are currently being finalized and LDCs will be notified once they are available.

We hope that you find this report both informative and useful. If you have any questions, please do not hesitate to contact us.

With kind regards,

Raegan Bunker
Manager, Conservation Portfolio

Sent on behalf by,

James Yue

Analyst – Conservation Portfolio
Conservation and Sector Development

Ontario Power Authority

120 Adelaide Street West

Suite 1600

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December 19, 2009

Ms. Anne Rampado
Manager, Market Compliance
Burlington Hydro Inc.
1340 Brant Street
Burlington ON L7R 3Z7

Re: 2008 OPA Conservation Program Results – estimated allocation to Burlington Hydro Inc. service territory

Dear Anne,

This letter is to confirm the purpose and status of the 2006-2008 Conservation Results Report Updates which were sent to LDCs on November 10th 2009 by the OPA.

The reports provide an estimated allocation of OPA-funded conservation program results for each LDC's service territory, from 2006, 2007 and 2008 programs. The reports are an update to the reports circulated in July 2009 which included final results for 2006 and 2007 programs and preliminary results for 2008 programs. The reports circulated last week included two updates:

- preliminary results for 2008 programs have been updated based on final results of OPA's 2008 conservation programs now that the evaluation process is complete.
- statistics from the recently published 2008 OEB Yearbook of Electricity Distributors have been used for allocation of 2008 provincial results.

No changes have been made to the 2006 or 2007 provincial program results or the estimated allocation of 2006 and 2007 results to individual LDC service territories. All results presented in the November 10th Report Update are considered final.

The results provided in the report are in accordance with current OPA practices and policies for reporting progress against the provincial conservation goals. Demand Response initiatives, for example, are reported based on the total DR resources that were available (based on contracted nameplate capacity) rather than the actual demand reduction which occurred at the one-hour system peak in 2008. Additionally, customer based generation resources shown for the Renewable Energy Standard Offer Program are based on total contracts signed in each year, rather than in-service date.

The OPA has used four distinct methodologies to estimate the allocation of provincial savings to individual LDC service territories, depending on the conservation program type. The specific allocation methodology that was used for each conservation initiative in 2006 through 2008 is summarized in the excel workbook provided in the Report Update.

The OPA welcomes inquiries regarding the estimation of province-wide results and/or allocation of these program results to individual LDC territories, however it is unable to provide any technical or regulatory advice to LDCs regarding specific treatment of these OPA funded program savings for the purposes of Lost Revenue Adjustment Mechanism or other filings by LDCs to the Ontario Energy Board (OEB). Such inquiries should be directed to the OEB.

These are the final results for 2008 programs. We do not anticipate any further adjustment to the 2008 conservation program results.

Yours truly,



R. Paul Shervill
Vice President
Conservation

OPA Conservation & Demand Management Programs

Allocation Methodology

#	Initiative	Allocation Methodology	Notes
1	2006 Every Kilowatt Counts (Spring)	Measure level allocation based on 2006 residential energy throughput by LDC	
2	2006 Cool Savings	Measure level allocation based on 2006 residential energy throughput by LDC	
3	2006 Secondary Refrigerator Retirement	Measure level allocation based on 2006 residential energy throughput by LDC	
4	2006 Every Kilowatt Counts (Autumn)	Measure level allocation based on 2006 residential energy throughput by LDC	
5	2006 Demand Response 1	Initiative level allocation based on 2006 non-residential energy throughput by LDCs	1) Although the program is managed internally and actual participant data is available, the small participant population of the Demand Response 1 program can lead to participant confidentiality issues if disclosed on an actual LDC share basis. 2) Program results are based on contracted nameplate capacity and not actual summer coincident peak demand reduction.
6	2007 Great Refrigerator Roundup	Actual LDC specific results	
7	2007 Cool Savings	Measure level allocation based on 2007 residential energy throughput by LDC	
8	2007 Aboriginal	Actual LDC specific results	
9	2007 Every Kilowatt Counts	Measure level allocation based on 2007 residential energy throughput by LDC	
10	2007 peaksaver [®]	Actual LDC specific results	
11	2007 Summer Savings	Allocation determined by evaluation contractor based on residential customers	
12	2007 Affordable Housing	Actual LDC specific results	
13	2007 Social Housing	Initiative level allocation based on 2007 Residential Energy Throughput	
14	2007 Energy Efficiency Assistance for Houses	Actual LDC specific results	
15	2007 Toronto Comprehensive	Program run exclusively in Toronto	
16	2007 Electricity Retrofit Incentive	Actual LDC specific results	
17	2007 Demand Response 1	Initiative level allocation based on 2007 non-residential energy throughput by LDCs	1) Although the program is managed internally and actual participant data is available, the small participant population of the Demand Response 1 program can lead to participant confidentiality issues if disclosed on an actual LDC share basis. 2) Program results are based on contracted nameplate capacity and not actual summer coincident peak demand reduction.
18	2007 Other Demand Response	Contract level allocation based on 2007 non-residential energy throughput by LDCs	1) Although the program is managed internally and actual participant data is available, the small participant population of the Other Demand Response program can lead to participant confidentiality issues if disclosed on an actual LDC share basis. 2) Program results are based on contracted nameplate capacity and not actual summer coincident peak demand reduction.
19	2007 Renewable Energy Standard Offer	Actual LDC specific results	Program results are based on contracted nameplate capacity and not actual summer coincident peak generation
20	2008 Great Refrigerator Roundup	Actual LDC specific results	
21	2008 Cool Savings	Measure level allocation based on 2008 Residential Energy Throughput	
22	2008 Aboriginal	Actual LDC specific results	
23	2008 Summer Sweepstakes	Actual LDC specific results	
24	2008 Every Kilowatt Counts Power Savings Event	Measure level allocation based on 2008 Residential Energy Throughput	
25	2008 peaksaver [®]	Actual LDC specific results	
26	2008 Electricity Retrofit Incentive	LDC's respective proportion of province-wide reported gross demand savings.	While this initiative underwent a thorough evaluation process at the provincial level, individual prescriptive input assumptions were not verified for all measures nor were reported savings from every individual LDC verified. A representative sample of retrofit projects were measured and verified and a province-wide savings total was derived. The province wide verified energy and demand savings were allocated to individual LDCs based on their respective proportion of province-wide reported gross demand savings.
27	2008 Toronto Comprehensive	Program run exclusively in Toronto	
28	2008 High Performance New Construction		
29	2008 Power Savings Blitz	Actual LDC specific results	
30	2008 Chiller Plant Re-Commissioning	Actual LDC specific results	
31	2008 Demand Response 1	Initiative level allocation based on 2008 non-residential energy throughput by LDCs	1) Although the program is managed internally and actual participant data is available, the small participant population of the Demand Response 1 program can lead to participant confidentiality issues if disclosed on an actual LDC share basis. 2) Program results are based on contracted nameplate capacity and not actual summer coincident peak demand reduction.
32	2008 Demand Response 3	Initiative level allocation based on 2008 non-residential energy throughput by LDCs	1) Although the program is managed internally and actual participant data is available, the small participant population of the Demand Response 3 program can lead to participant confidentiality issues if disclosed on an actual LDC share basis. 2) Program results are based on contracted nameplate capacity and not actual summer coincident peak demand reduction.
33	2008 Other Demand Response	Contract level allocation based on 2008 non-residential energy throughput by LDCs	1) Although the program is managed internally and actual participant data is available, the small participant population of the Other Demand Response program can lead to participant confidentiality issues if disclosed on an actual LDC share basis. 2) Program results are based on contracted nameplate capacity and not actual summer coincident peak demand reduction.
34	2008 LDC Custom – Hydro One Double Return	Program run exclusively in Hydro One	Verified
35	2008 Renewable Energy Standard Offer	Actual LDC specific results	Program results are based on contracted nameplate capacity and not actual summer coincident peak generation
36	2008 Other Customer Based Generation	Actual LDC specific results	Program results are based on contracted nameplate capacity and not actual summer coincident peak generation

OPA Conservation & Demand Management Programs

Annual Results

For: Burlington Hydro Inc.

#	Program Name	Program Year	Results Status	Net													
				Summer Peak Demand Savings													
				2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	Burlington Hydro Inc.	2006	Final	4.23	4.23	4.23	0.22	0.22	0.21	0.19	0.15	0.15	0.15	0.15	0.15	0.15	0.00
2	Burlington Hydro Inc.	2007	Final	0.00	2.81	2.80	0.47	0.47	0.47	0.40	0.40	0.40	0.35	0.33	0.30	0.30	0.26
3	Burlington Hydro Inc.	2008	Final	0.00	0.00	5.37	3.56	3.56	3.56	3.55	2.33	2.32	2.31	2.28	2.23	2.23	2.23
Total				4	7	12	4	4	4	4	3	3	3	3	3	3	2
4	Province Wide	2006	Final	282.17	282.17	282.17	16.17	16.17	15.27	14.01	10.67	10.67	10.67	10.67	10.67	10.67	0.00
5	Province Wide	2007	Final	0.00	300.38	299.91	177.11	177.11	176.15	42.13	42.13	42.13	38.33	37.30	34.83	34.83	21.50
6	Province Wide	2008	Final	0.00	0.00	360.73	179.37	179.27	179.27	178.59	93.59	92.29	91.85	87.72	80.98	80.63	80.63
Total				282	583	943	373	373	371	235	146	145	141	136	126	126	102

Savings (MW)												
2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.26	0.26	0.05	0.05	0.05	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
2.21	0.39	0.38	0.30	0.19	0.19	0.02	0.02	0.00	0.00	0.00	0.00	0.00
2	1	0	0	0	0	0	0	0	0	0	0	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21.50	21.19	5.66	5.63	5.63	2.46	1.95	0.00	0.00	0.00	0.00	0.00	0.00
79.52	45.40	45.03	41.23	26.42	26.42	14.41	14.41	0.00	0.00	0.00	0.00	0.00
101	67	51	47	32	29	16	14	0	0	0	0	0

2006	2007	2008	2009	2010	2011
5,128	5,128	5,128	5,128	5,128	3,256
0	4,897	4,875	2,722	2,722	2,722
0	0	3,517	3,396	3,387	3,387
5,128	10,025	13,520	11,246	11,237	9,365
374,407	374,407	374,407	374,407	374,407	237,735
0	474,318	472,717	391,717	391,717	371,920
0	0	360,162	335,617	334,553	334,553
374,407	848,725	1,207,285	1,101,741	1,100,677	944,208

Net																	
Annual Energy Savings (MWh)																	
2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
3,179	143	143	143	143	143	143	0	0	0	0	0	0	0	0	0	0	0
2,631	2,469	2,469	852	713	435	435	435	435	435	62	53	53	6	6	0	0	0
3,141	3,141	2,885	2,694	2,164	1,761	1,648	1,648	1,624	1,584	1,579	1,198	275	275	21	21	0	0
8,952	5,753	5,497	3,688	3,019	2,339	2,226	2,083	2,059	2,019	1,641	1,251	328	281	28	21	0	0
232,140	10,417	10,417	10,417	10,417	10,417	10,417	0	0	0	0	0	0	0	0	0	0	0
199,587	194,587	194,587	77,277	66,358	46,225	46,225	46,225	46,225	41,971	14,937	14,313	14,313	10,907	8,607	0	0	0
316,559	316,378	297,758	283,825	236,654	196,624	187,191	187,191	184,705	183,376	182,857	171,903	59,667	59,667	41,012	41,012	0	0
748,286	521,382	502,761	371,519	313,429	253,265	243,833	233,416	230,930	225,346	197,794	186,216	73,980	70,574	49,619	41,012	0	0

2030	2031	2032
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

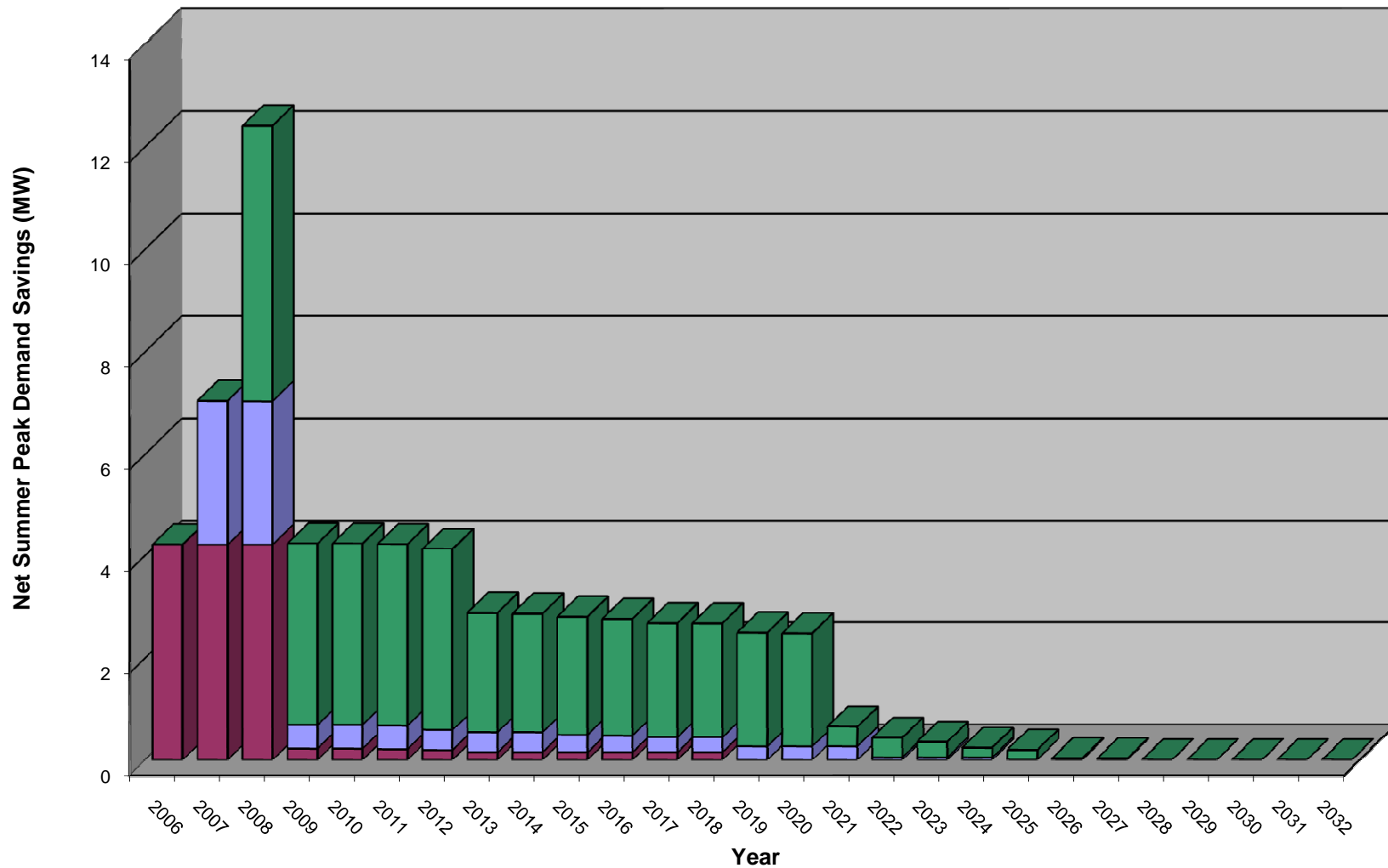
Gross																
Summer Peak Demand Savings (MW)																
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4.26	4.26	4.26	0.25	0.25	0.23	0.21	0.16	0.16	0.16	0.16	0.16	0.16	0.00	0.00	0.00	0.00
0.00	11.92	11.91	0.81	0.81	0.81	0.64	0.64	0.64	0.57	0.54	0.49	0.49	0.46	0.46	0.46	0.08
0.00	0.00	5.99	4.16	4.16	4.16	4.14	2.92	2.88	2.87	2.81	2.72	2.71	2.71	2.68	0.65	0.64
4	16	22	5	5	5	5	4	4	4	4	3	3	3	3	1	1
283.96	283.96	283.96	17.96	17.96	16.97	15.56	11.86	11.86	11.86	11.86	11.86	11.86	0.00	0.00	0.00	0.00
0.00	671.04	670.17	217.37	217.37	216.41	61.34	61.34	61.34	56.15	53.51	50.18	50.18	35.37	35.37	35.06	8.04
0.00	0.00	405.15	222.12	221.99	221.99	220.21	135.21	132.38	131.21	124.38	111.36	110.59	110.59	108.10	70.18	69.66
284	955	1,359	457	457	455	297	208	206	199	190	173	173	146	143	105	78

2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.08	0.08	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.53	0.31	0.31	0.03	0.03	0.00	0.00	0.00	0.00	0.00
1	0	0	0	0	0	0	0	0	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.99	7.99	2.46	1.95	0.00	0.00	0.00	0.00	0.00	0.00
63.43	36.95	36.95	16.08	16.08	0.00	0.00	0.00	0.00	0.00
71	45	39	18	16	0	0	0	0	0

2006	2007	2008	2009	2010	2011	2012	2013	2014
5,697	5,697	5,697	5,697	5,697	3,618	3,533	159	159
0	22,099	22,059	4,118	4,118	4,118	3,589	3,589	3,589
0	0	7,061	6,894	6,884	6,884	6,247	6,247	5,675
5,697	27,797	34,817	16,709	16,699	14,620	13,368	9,994	9,422
416,007	416,007	416,007	416,007	416,007	264,150	257,933	11,574	11,574
0	1,189,858	1,186,946	511,946	511,946	492,149	277,077	277,077	277,077
0	0	677,605	645,319	643,918	643,918	597,241	596,982	555,334
416,007	1,605,865	2,280,559	1,573,273	1,571,872	1,400,217	1,132,252	885,634	843,986

Gross																	
Annual Energy Savings (MWh)																	
2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
159	159	159	159	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1,477	1,120	752	752	752	752	752	101	85	85	6	6	0	0	0	0	0	0
5,164	4,177	3,441	3,183	3,183	3,127	3,082	3,075	2,594	469	469	28	28	0	0	0	0	0
6,800	5,455	4,352	4,094	3,935	3,879	3,835	3,176	2,680	554	475	34	28	0	0	0	0	0
11,574	11,574	11,574	11,574	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123,786	95,856	69,231	69,231	69,231	69,231	64,977	17,763	16,629	16,629	10,907	8,607	0	0	0	0	0	0
518,183	434,492	359,600	339,246	339,246	334,040	332,452	331,746	313,985	79,645	79,645	47,148	47,148	0	0	0	0	0
653,544	541,923	440,405	420,052	408,477	403,271	397,429	349,509	330,614	96,274	90,551	55,754	47,148	0	0	0	0	0

Net Summer Peak Demand Savings By Year (LDC Specific)

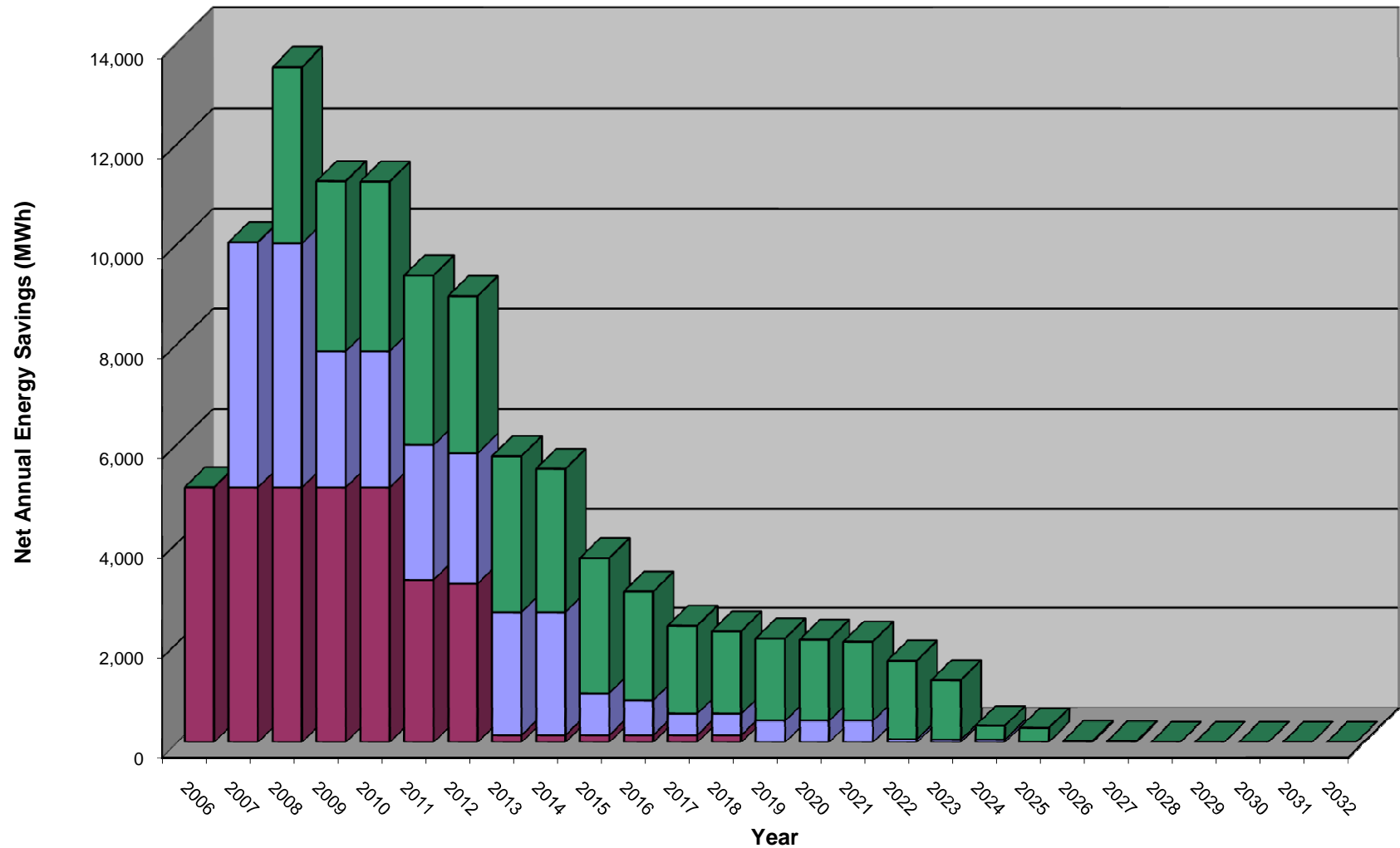


■ Burlington Hydro Inc. - 2008 programs (Final)

■ Burlington Hydro Inc. - 2007 programs (Final)

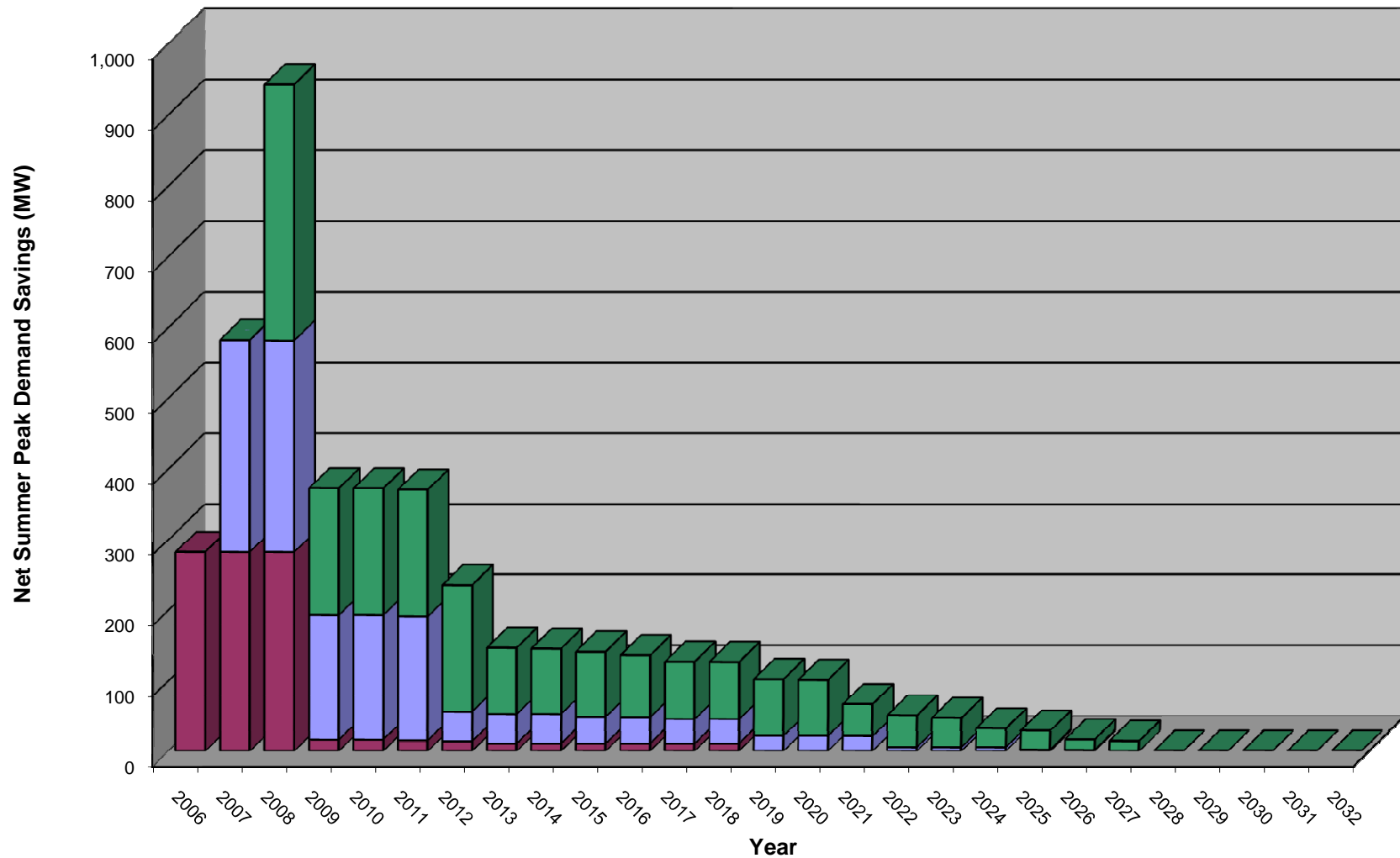
■ Burlington Hydro Inc. - 2006 programs (Final)

Net Annual Energy Savings By Year (LDC Specific)



■ Burlington Hydro Inc. - 2008 programs (Final)
 ■ Burlington Hydro Inc. - 2007 programs (Final)
 ■ Burlington Hydro Inc. - 2006 programs (Final)

Net Summer Peak Demand Savings By Year (Province Wide)

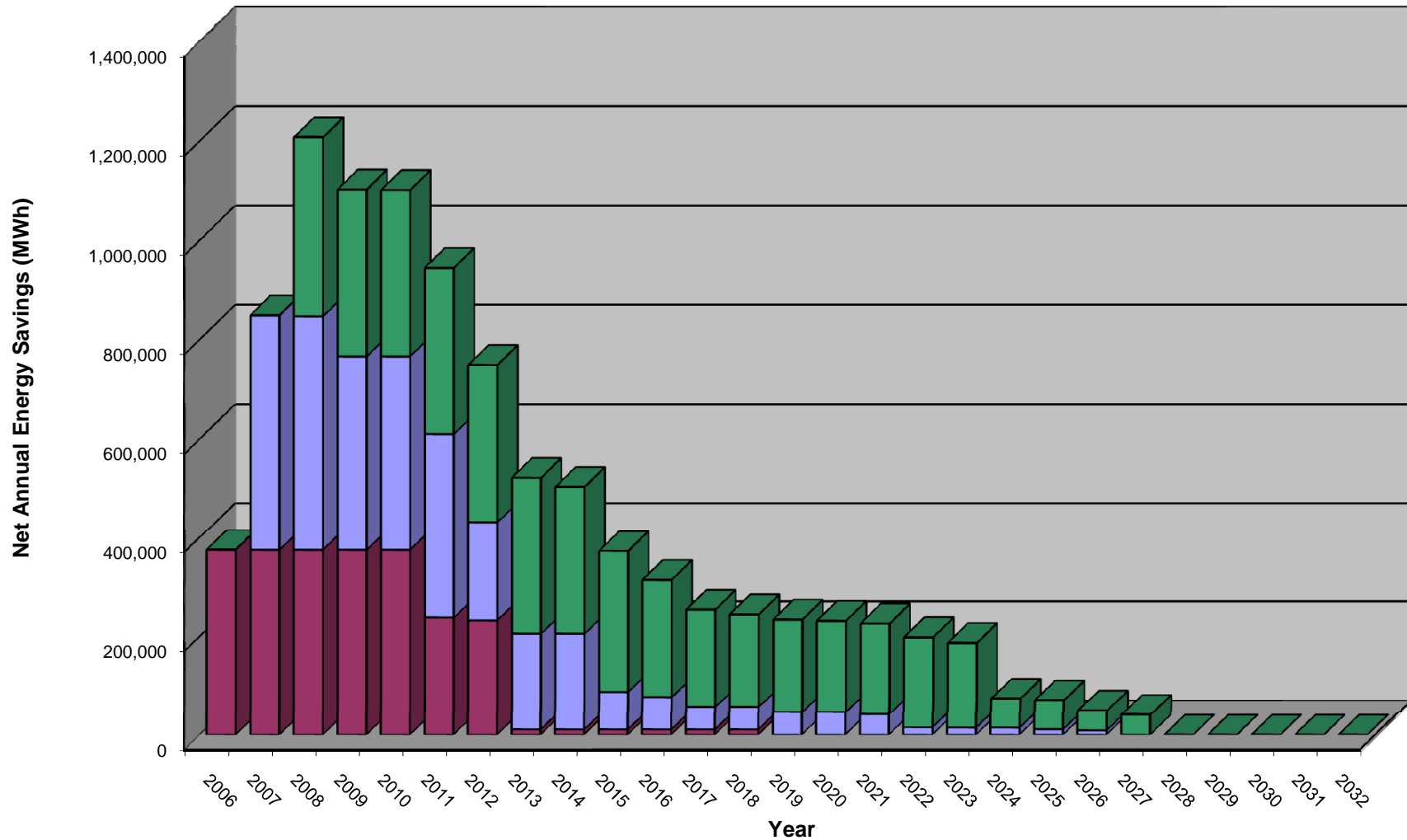


■ Province Wide - 2008 programs (Final)

■ Province Wide - 2007 programs (Final)

■ Province Wide - 2006 programs (Final)

Net Annual Energy Savings By Year (Province Wide)



Province Wide - 2008 programs (Final)

Province Wide - 2007 programs (Final)

Province Wide - 2006 programs (Final)

OPA Conservation & Demand Management Programs

Initiative Results

For: Burlington Hydro Inc.

#	Initiative Name	Program Name	Program Year	Results Status	Allocation Methodology	2006	2007	2008
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.01	0.01	0.01
2	2006 Cool Savings Rebate Program	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.15	0.15	0.15
3	2006 Secondary Fridge Retirement Pilot	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.02	0.02	0.02
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final	2006 LDC Residential Energy Throughput	0.05	0.05	0.05
6	2006 Demand Response 1	Industrial, Business	2006	Final	2006 LDC Non-Residential Energy Throughput	4.01	4.01	4.01
2006 Subtotal						4.23	4.23	4.23
7	2007 Great Refrigerator Roundup	Consumer	2007	Final	LDC Participation	0.00	0.02	0.02
8	2007 Cool Savings Rebate	Consumer	2007	Final	2007 LDC Residential Energy Throughput	0.00	0.27	0.27
9	2007 Aboriginal – Pilot	Consumer	2007	Final	LDC Participation	0.00	0.00	0.00
10	2007 Every Kilowatt Counts	Consumer	2007	Final	2007 LDC Residential Energy Throughput	0.00	0.07	0.06
11	2007 peaksaver®	Consumer, Business	2007	Final	LDC Participation	0.00	0.03	0.03
12	2007 Summer Savings	Consumer	2007	Final	Evaluation Contractor Determined	0.00	1.20	1.20
13	2007 Affordable Housing – Pilot	Consumer	2007	Final	LDC Participation	0.00	0.00	0.00
14	2007 Social Housing – Pilot	Consumer	2007	Final	2007 LDC Residential Energy Throughput	0.00	0.02	0.02
15	2007 Energy Efficiency Assistance for Houses – Pilot	Consumer	2007	Final	LDC Participation	0.00	0.00	0.00
16	2007 Toronto Comprehensive	Business	2007	Final	LDC Participation	0.00	0.00	0.00
17	2007 Electricity Retrofit Incentive Program	Business	2007	Final	LDC Participation	0.00	0.06	0.06
18	2007 Demand Response 1	Industrial, Business	2007	Final	2007 LDC Non-Residential Energy Throughput	0.00	0.75	0.75
19	2007 Other Demand Response	Industrial, Business	2007	Final	2007 LDC Non-Residential Energy Throughput	0.00	0.38	0.38
20	2007 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2007	Final	LDC Participation	0.00	0.01	0.01
2007 Subtotal						0.00	2.81	2.80
21	2008 Great Refrigerator Roundup	Consumer	2008	Final	LDC Participation	0.00	0.00	0.05
22	2008 Cool Savings Rebate	Consumer	2008	Final	2008 LDC Residential Energy Throughput	0.00	0.00	0.20
23	2008 Aboriginal	Consumer	2008	Final	LDC Participation	0.00	0.00	0.00
24	2008 Summer Sweepstakes	Consumer	2008	Final	LDC Participation	0.00	0.00	0.05
25	2008 Every Kilowatt Counts Power Savings Event	Consumer	2008	Final	2008 LDC Residential Energy Throughput	0.00	0.00	0.09
26	2008 peaksaver®	Consumer, Business	2008	Final	LDC Participation	0.00	0.00	1.82
27	2008 Electricity Retrofit Incentive	Business	2008	Final	LDC Participation	0.00	0.00	0.10
28	2008 Toronto Comprehensive	Business	2008	Final	LDC Participation	0.00	0.00	0.00
29	2008 High Performance New Construction	Business	2008	Final	2008 LDC Non-Residential Energy Throughput	0.00	0.00	0.00
30	2008 Power Savings Blitz	Business	2008	Final	LDC Participation	0.00	0.00	0.04
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final	LDC Participation	0.00	0.00	0.00
32	2008 Demand Response 1	Industrial, Business	2008	Final	2008 LDC Non-Residential Energy Throughput	0.00	0.00	1.75
33	2008 Demand Response 3	Industrial, Business	2008	Final	2008 LDC Non-Residential Energy Throughput	0.00	0.00	1.22
34	2008 Other Demand Response	Industrial, Business	2008	Final	2008 LDC Non-Residential Energy Throughput	0.00	0.00	0.04
35	2008 LDC Custom	Consumer, Business, Industrial, Low-Income	2008	Final	LDC Participation	0.00	0.00	0.00
36	2008 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2008	Final	LDC Participation	0.00	0.00	0.00
37	2008 Other Customer Based Generation	Consumer, Business, Industrial, Low-Income	2008	Final	LDC Participation	0.00	0.00	0.00
2008 Subtotal						0.00	0.00	5.37
Overall Total						4.23	7.04	12.41

Province Wide Results

#	Initiative Name	Program Name	Program	Results
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			Year	Status
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final
2	2006 Cool Savings Rebate Program	Consumer	2006	Final
3	2006 Secondary Fridge Retirement Pilot	Consumer	2006	Final
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final
6	2006 Demand Response 1	Industrial, Business	2006	Final
2006 Subtotal				
7	2007 Great Refrigerator Roundup	Consumer	2007	Final
8	2007 Cool Savings Rebate	Consumer	2007	Final
9	2007 Aboriginal – Pilot	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final
11	2007 peaksaver®	Consumer, Business	2007	Final
12	2007 Summer Savings	Consumer	2007	Final
13	2007 Affordable Housing – Pilot	Consumer	2007	Final
14	2007 Social Housing – Pilot	Consumer	2007	Final
15	2007 Energy Efficiency Assistance for Houses – Pilot	Consumer	2007	Final
16	2007 Toronto Comprehensive	Business	2007	Final
17	2007 Electricity Retrofit Incentive Program	Business	2007	Final
18	2007 Demand Response 1	Industrial, Business	2007	Final
19	2007 Other Demand Response	Industrial, Business	2007	Final
20	2007 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2007	Final
2007 Subtotal				
21	2008 Great Refrigerator Roundup	Consumer	2008	Final
22	2008 Cool Savings Rebate	Consumer	2008	Final
23	2008 Aboriginal	Consumer	2008	Final
24	2008 Summer Sweepstakes	Consumer	2008	Final
25	2008 Every Kilowatt Counts Power Savings Event	Consumer	2008	Final
26	2008 peaksaver®	Consumer, Business	2008	Final
27	2008 Electricity Retrofit Incentive	Business	2008	Final
28	2008 Toronto Comprehensive	Business	2008	Final
29	2008 High Performance New Construction	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final
32	2008 Demand Response 1	Industrial, Business	2008	Final
33	2008 Demand Response 3	Industrial, Business	2008	Final
34	2008 Other Demand Response	Industrial, Business	2008	Final
35	2008 LDC Custom	Consumer, Business, Industrial, Low-Income	2008	Final
36	2008 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2008	Final
37	2008 Other Customer Based Generation	Consumer, Business, Industrial, Low-Income	2008	Final
2008 Subtotal				
Overall Total				

2006	2007	2008
0.89	0.89	0.89
10.67	10.67	10.67
1.27	1.27	1.27
3.34	3.34	3.34
266.00	266.00	266.00
282	282	282
0.00	1.54	1.54
0.00	19.82	19.82
0.00	0.96	0.96
0.00	5.07	4.59
0.00	13.32	13.32
0.00	45.00	45.00
0.00	0.31	0.31
0.00	1.40	1.40
0.00	0.50	0.50
0.00	130.90	130.90
0.00	1.80	1.80
0.00	51.40	51.40
0.00	26.40	26.40
0.00	1.95	1.95
0	300	300
0.00	0.00	3.67
0.00	0.00	14.82
0.00	0.00	0.00
0.00	0.00	9.54
0.00	0.00	6.48
0.00	0.00	34.05
0.00	0.00	10.01
0.00	0.00	10.30
0.00	0.00	0.34
0.00	0.00	0.44
0.00	0.00	0.00
0.00	0.00	122.20
0.00	0.00	85.00
0.00	0.00	2.80
0.00	0.00	52.00
0.00	0.00	1.78
0.00	0.00	7.30
0	0	361
282	583	943

Summer Peak Demand Savings (MW)																			
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
0.89	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.27	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.34	3.34	3.34	3.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	16	15	14	11	11	11	11	11	11	0	0	0	0	0	0	0	0	0	0
1.54	1.54	1.54	1.36	1.36	1.36	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19.82	19.82	19.82	18.69	18.69	18.69	18.69	18.69	18.69	18.69	18.69	18.69	18.69	18.69	3.15	3.15	3.15	0.00	0.00	0.00
0.96	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.59	4.59	4.59	4.59	4.59	4.59	1.12	1.12	0.05	0.05	0.05	0.05	0.05	0.05	0.02	0.02	0.00	0.00	0.00	0.00
13.32	13.32	13.32	13.32	13.32	13.32	13.32	13.32	13.32	13.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.00	0.00
130.90	130.90	130.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.80	1.80	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	0.00
177	177	176	42	42	42	38	37	35	35	22	22	21	6	6	6	2	2	0	0
3.67	3.67	3.67	3.56	3.56	3.56	3.56	2.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	14.82	12.02	12.02	12.02	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.47	5.47	5.47	5.47	5.47	5.47	5.47	5.28	5.28	5.22	5.22	5.22	5.16	5.13	4.88	4.88	4.88	4.88	4.88	0.00
6.19	6.19	6.19	5.62	5.62	4.33	3.89	2.85	2.30	2.03	2.03	0.99	0.99	0.99	0.99	0.00	0.00	0.00	0.00	0.00
34.05	34.05	34.05	34.05	34.05	34.05	34.05	34.05	34.05	34.05	34.05	34.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.01	10.01	10.01	10.01	10.01	10.01	10.01	9.86	9.86	9.86	9.86	9.86	9.86	9.86	9.57	0.00	0.00	0.00	0.00	0.00
10.30	10.27	10.27	10.27	10.27	10.27	10.27	8.32	4.88	4.87	4.87	4.79	4.79	4.79	4.69	0.45	0.45	0.45	0.45	0.00
0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.00	0.00	0.00	0.00	0.00	0.00
0.44	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.01	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.00	85.00	85.00	85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00
7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	0.00
179	179	179	179	94	92	92	88	81	81	81	80	45	45	41	26	26	14	14	0
373	373	371	235	146	145	141	136	126	126	102	101	67	51	47	32	29	16	14	0

0.00	0.00	0.00	0.00
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5,128	10,025	13,520	11,246	11,237	9,365	8,952	5,753	5,497	3,688	3,019	2,339	2,226	2,083	2,059
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2029	2030	2031	2032
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0	0	0	0

Annual Energy Savings (MWh)														
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
136,671.67	136,671.67	136,671.67	136,671.67	136,671.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	10,417.00	0.00	0.00
5,595.21	5,595.21	5,595.21	5,595.21	5,595.21	5,595.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
221,722.84	221,722.84	221,722.84	221,722.84	221,722.84	221,722.84	221,722.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
374,407	374,407	374,407	374,407	374,407	237,735	232,140	10,417	10,417	10,417	10,417	10,417	10,417	0	0

0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0	0	0	0

0	13,539	13,539	13,539	13,539	13,539	13,460	13,460	13,460	10,919	0	0	0	0	0
0	30,191	30,191	30,191	30,191	30,191	29,153	29,153	29,153	29,153	29,153	29,153	29,153	29,153	29,153
0	19,797	19,797	19,797	19,797	0	0	0	0	0	0	0	0	0	0
0	132,041	130,440	130,440	130,440	130,440	124,914	124,914	124,914	10,145	10,145	1,912	1,912	1,912	1,912
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	81,000	81,000	0	0	0	0	0	0	0	0	0	0	0	0
0	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254
0	11,900	11,900	11,900	11,900	11,900	11,900	11,900	11,900	11,900	11,900	0	0	0	0
0	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
0	165,690	165,690	165,690	165,690	165,690	0	0	0	0	0	0	0	0	0
0	5,000	5,000	5,000	5,000	5,000	5,000	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607
0	474,318	472,717	391,717	391,717	371,920	199,587	194,587	194,587	77,277	66,358	46,225	46,225	46,225	46,225

0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0	0	0	0

0	0	34,024	34,024	34,024	34,024	33,911	33,911	33,911	33,911	26,840	0	0	0	0
0	0	23,393	23,393	23,393	23,393	23,393	23,393	23,393	23,393	23,393	23,393	23,393	23,393	23,393
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	37,551	13,550	13,550	13,550	13,550	13,550	13,550	13,550	7,423	7,423	5,625	5,625	5,625
0	0	118,754	118,237	118,237	118,237	100,356	100,356	81,735	67,824	42,822	42,276	34,667	34,667	32,884
0	0	681	681	681	681	681	681	681	681	681	681	681	681	681
0	0	54,593	54,593	54,593	54,593	54,593	54,593	54,593	54,593	50,140	50,140	50,140	50,140	50,140
0	0	58,059	58,032	57,546	57,546	57,546	57,364	57,364	57,364	52,847	40,202	40,178	40,178	39,474
0	0	287	287	287	287	287	287	287	287	287	287	287	287	287
0	0	3,205	3,205	2,627	2,627	2,627	2,627	2,627	2,606	2,606	2,606	2,606	2,606	2,606
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118
0	0	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498
0	0	360,162	335,617	334,553	334,553	316,559	316,378	297,758	283,825	236,654	196,624	187,191	187,191	184,705

0	0	0	0
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374,407	848,725	1,207,285	1,101,741	1,100,677	944,208	748,286	521,382	502,761	371,519	313,429	253,265	243,833	233,416	230,930
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2,019	1,641	1,251	328	281	28	21	0	0	0	0	0
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4	16	22	5	5	5	5	4
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2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0
29,153	2,888	2,888	2,888	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
1,912	1,142	518	518	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
2,300	2,300	2,300	2,300	2,300	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
8,607	8,607	8,607	8,607	8,607	8,607	0	0	0	0	0	0
41,971	14,937	14,313	14,313	10,907	8,607	0	0	0	0	0	0

0	0	0	0	0	0	0	0	0	0	0	0
23,393	23,393	18,655	18,655	18,655	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
4,976	4,745	4,512	4,512	4,512	4,512	4,512	0	0	0	0	0
32,884	32,884	31,656	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
50,140	50,140	48,635	0	0	0	0	0	0	0	0	0
39,474	39,474	38,766	6,885	6,885	6,885	6,885	0	0	0	0	0
287	0	0	0	0	0	0	0	0	0	0	0
2,606	2,606	63	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
2,118	2,118	2,118	2,118	2,118	2,118	2,118	0	0	0	0	0
27,498	27,498	27,498	27,498	27,498	27,498	27,498	0	0	0	0	0
183,376	182,857	171,903	59,667	59,667	41,012	41,012	0	0	0	0	0

225,346	197,794	186,216	73,980	70,574	49,619	41,012	0	0	0	0	0
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2006	2007	2008	2009	2010	2011	2012	2013
0.990	0.990	0.990	0.990	0.990	0.000	0.000	0.000
11.856	11.856	11.856	11.856	11.856	11.856	11.856	11.856
1.409	1.409	1.409	1.409	1.409	1.409	0.000	0.000
3.707	3.707	3.707	3.707	3.707	3.707	3.707	0.000
266.000	266.000	266.000	0.000	0.000	0.000	0.000	0.000
284	284	284	18	18	17	16	12

0.00	3.79	3.79	3.79	3.79	3.79	3.36	3.36
0.00	39.73	39.73	39.73	39.73	39.73	32.53	32.53
0.00	0.96	0.96	0.96	0.96	0.00	0.00	0.00
0.00	7.34	6.48	6.48	6.48	6.48	6.48	6.48
0.00	14.80	14.80	14.80	14.80	14.80	14.80	14.80
0.00	375.00	375.00	0.00	0.00	0.00	0.00	0.00
0.00	0.31	0.31	0.31	0.31	0.31	0.31	0.31
0.00	1.40	1.40	1.40	1.40	1.40	1.40	1.40
0.00	0.50	0.50	0.50	0.50	0.50	0.50	0.50
0.00	145.44	145.44	145.44	145.44	145.44	0.00	0.00
0.00	2.00	2.00	2.00	2.00	2.00	0.00	0.00
0.00	51.40	51.40	0.00	0.00	0.00	0.00	0.00
0.00	26.40	26.40	0.00	0.00	0.00	0.00	0.00
0.00	1.95	1.95	1.95	1.95	1.95	1.95	1.95
0	671	670	217	217	216	61	61

0.00	0.00	6.87	6.87	6.87	6.87	6.55	6.55
0.00	0.00	25.73	25.73	25.73	25.73	25.73	25.73
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	12.23	7.01	7.01	7.01	7.01	7.01
0.00	0.00	15.51	14.69	14.69	14.69	13.23	13.23
0.00	0.00	37.84	37.84	37.84	37.84	37.84	37.84
0.00	0.00	17.37	17.37	17.37	17.37	17.37	17.37
0.00	0.00	17.57	17.57	17.52	17.52	17.52	17.52
0.00	0.00	0.49	0.49	0.49	0.49	0.49	0.49
0.00	0.00	0.48	0.48	0.39	0.39	0.39	0.39
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	122.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	85.00	85.00	85.00	85.00	85.00	0.00
0.00	0.00	2.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	52.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	1.78	1.78	1.78	1.78	1.78	1.78
0.00	0.00	7.30	7.30	7.30	7.30	7.30	7.30
0	0	405	222	222	222	220	135

284	955	1,359	457	457	455	297	208
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Gross																			
Summer Peak Demand Savings (MW)																			
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2006
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,080
0.16	0.16	0.16	0.16	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	159
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,374
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,697
0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.08	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.09	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.04	0.04	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.02	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0
1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.10	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.28	0.28	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0
0.14	0.13	0.10	0.08	0.07	0.07	0.04	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
2.03	2.03	2.03	2.03	2.03	2.03	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.									

Gross																		
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Summer Peak Demand Savings (MW)																			
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2006
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	151,857
11.856	11.856	11.856	11.856	11.856	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11,574
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6,217
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	246,359
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0
12	12	12	12	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	416,007
3.36	2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
32.53	32.53	32.53	32.53	32.53	32.53	32.53	32.53	5.51	5.51	5.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
6.48	2.00	2.00	0.07	0.07	0.07	0.07	0.07	0.07	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
14.80	14.80	14.80	14.80	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
1.40	1.40	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	0.00	0.00	0.00	0.00	0.00	0.00	0
61	56	54	50	50	35	35	35	8	8	8	2	2	0	0	0	0	0	0	0
6.55	6.55	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
25.73	25.73	25.73	25.73	25.73	25.73	25.73	25.73	25.73	20.88	20.88	20.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
7.01	7.01	6.77	6.77	6.70	6.70	6.70	6.61	6.58	6.25	6.25	6.25	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0
10.40	9.23	7.24	5.99	5.31	5.31	2.95	2.95	2.95	2.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
37.84	37.84	37.84	37.84	37.84	37.84	37.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
17.37	17.37	17.11	17.11	17.11	17.11	17.11	17.11	17.11	16.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
17.52	17.52	14.74	7.98	7.95	7.95	7.83	7.83	7.83	7.67	0.74	0.74	0.74	0.74	0.00	0.00	0.00	0.00	0.00	0
0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	1.78	0.00	0.00	0.00	0.00	0.00	0
7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	0.00	0.00	0.00	0.00	0.00	0
132	131	124	111	111	111	108	70	70	63	37	37	16	16	0	0	0	0	0	0
206	199	190	173	173	146	143	105	78	71	45	39	18	16	0	0	0	0	0	416,007

Gross																			
Annual Energy Savings (MWh)																			
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2,080	2,080	2,080	2,080	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	159	159	159	159	159	159	159	159	159	159	159	0	0	0	0	0	0	0	0
85	85	85	85	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3,374	3,374	3,374	3,374	3,374	3,374	3,374	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5,697	5,697	5,697	5,697	3,618	3,533	159	159	159	159	159	159	0	0	0	0	0	0	0	0
432	432	432	432	432	431	431	431	357	0	0	0	0	0	0	0	0	0	0	0
793	793	793	793	793	702	702	702	702	702	702	702	702	702	702	70	70	70	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2,582	2,542	2,542	2,542	2,542	2,285	2,285	2,285	247	247	44	44	44	44	44	25	9	9	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17,942	17,942	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	164	164	164	164	164	164	164	164	164	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	180	180	180	180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
22,099	22,059	4,118	4,118	4,118	3,589	3,589	3,589	1,477	1,120	752	752	752	752	752	101	85	85	6	6
0	938	938	938	938	937	937	937	937	718	0	0	0	0	0	0	0	0	0	0
0	553	553	553	553	553	553	553	553	553	553	553	553	553	553	553	441	441	441	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	229	83	83	83	83	83	83	83	45	45	34	34	34	30	29	28	28	28	28
0	4,044	4,024	4,024	4,024	3,388	3,388	2,816	2,306	1,649	1,632	1,384	1,384	1,328	1,328	1,328	1,292	0	0	0
0	41	41	41	41	41	41	41	41	41	41	41	41	41	0	0	0	0	0	0
0	920	920	920	920	920	920	920	920	845	845	845	845	845	845	845	819	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	0	0	0	0
0	331	331	321	321	321	321	321	320	320	320	320	320	320	320	320	320	14	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0																			

Gross																		
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Annual Energy Savings (MWh)																			
2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
151,857	151,857	151,857	151,857	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11,574	11,574	11,574	11,574	11,574	11,574	11,574	11,574	11,574	11,574	11,574	11,574	0	0	0	0	0	0	0	0
6,217	6,217	6,217	6,217	6,217	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
246,359	246,359	246,359	246,359	246,359	246,359	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
416,007	416,007	416,007	416,007	264,150	257,933	11,574	11,574	11,574	11,574	11,574	11,574	0	0	0	0	0	0	0	0
33,712	33,712	33,712	33,712	33,712	33,530	33,530	33,530	27,930	0	0	0	0	0	0	0	0	0	0	0
57,469	57,469	57,469	57,469	57,469	50,864	50,864	50,864	50,864	50,864	50,864	50,864	50,864	50,864	50,864	5,050	5,050	5,050	0	0
19,797	19,797	19,797	19,797	19,797	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
187,163	184,252	184,252	184,252	184,252	165,622	165,622	165,622	17,932	17,932	3,206	3,206	3,206	3,206	3,206	1,807	673	673	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
675,000	675,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	4,254	0	0	0	0	0	0
11,900	11,900	11,900	11,900	11,900	11,900	11,900	11,900	11,900	11,900	0	0	0	0	0	0	0	0	0	0
2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	0
184,100	184,100	184,100	184,100	184,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5,556	5,556	5,556	5,556	5,556	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607	8,607
1,189,858	1,186,946	511,946	511,946	492,149	277,077	277,077	277,077	123,786	95,856	69,231	69,231	69,231	69,231	64,977	17,763	16,629	16,629	10,907	8,607
0	62,711	62,711	62,711	62,711	62,398	62,398	62,398	62,398	48,800	0	0	0	0	0	0	0	0	0	0
0	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	40,725	32,497	32,497	32,497	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	48,142	17,372	17,372	17,372	17,372	17,372	17,372	17,372	9,517	9,517	7,211	7,211	7,211	6,380	6,084	5,784	5,784	5,784	5,784
0	294,528	293,056	293,056	293,056	246,692	246,692	205,044	167,916	120,070	118,827	100,820	100,820	96,741	96,741	96,741	94,100	0	0	0
0	757	757	757	757	757	757	757	757	757	757	757	757	757	757	0	0	0	0	0
0	97,310	97,309	97,309	97,309	97,309	97,309	97,309	97,309	89,372	89,372	89,372	89,372	89,372	89,372	89,372	86,690	0	0	0
0	99,960	99,917	99,137	99,137	99,137	98,878	98,878	98,878	92,425	67,575	67,535	67,535	66,407	66,407	66,407	65,230	11,748	11,748	11,748
0	410	410	410	410	410	410	410	410	410	410	410	410	410	410	0	0	0	0	0
0	3,447	3,447	2,825	2,825	2,825	2,825	2,825	2,802	2,802	2,802	2,802	2,802	2,802	2,802	2,802	68	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118	2,118
0	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498	27,498
0	677,605	645,319	643,918	643,918	597,241	596,982	555,334	518,183	434,492	359,600	339,246	339,246	334,040	332,452	331,746	313,985	79,645	79,645	47,148
1,605,865	2,280,559	1,573,273	1,571,872	1,400,217	1,132,252	885,634	843,986	653,544	541,923	440,405	420,052	408,477	403,271	397,429	349,509	330,614	96,274	90,551	55,754

[illegible][illegible]

	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
28	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
28	0	0	0	0	0	0

28	0	0	0	0	0
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OPA Conservation & Demand Management Programs

Measure Results

For: Burlington Hydro Inc.

#	Initiative Name	Program Name	Program Year	Results Status
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2006				
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final
1	2006 Every Kilowatt Counts (spring)	Consumer	2006	Final
2	2006 Cool Savings Rebate Program	Consumer	2006	Final
2	2006 Cool Savings Rebate Program	Consumer	2006	Final
2	2006 Cool Savings Rebate Program	Consumer	2006	Final
3	2006 Secondary Fridge Retirement Pilot	Consumer	2006	Final
3	2006 Secondary Fridge Retirement Pilot	Consumer	2006	Final
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final
4	2006 Every Kilowatt Counts (fall)	Consumer	2006	Final
6	2006 Demand Response 1	Industrial, Business	2006	Final

2007				
7	2007 Great Refrigerator Roundup	Consumer	2007	Final
7	2007 Great Refrigerator Roundup	Consumer	2007	Final
7	2007 Great Refrigerator Roundup	Consumer	2007	Final
7	2007 Great Refrigerator Roundup	Consumer	2007	Final
7	2007 Great Refrigerator Roundup	Consumer	2007	Final
8	2007 Cool Savings Rebate	Consumer	2007	Final
8	2007 Cool Savings Rebate	Consumer	2007	Final
8	2007 Cool Savings Rebate	Consumer	2007	Final
8	2007 Cool Savings Rebate	Consumer	2007	Final
9	2007 Aboriginal – Pilot	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final
10	2007 Every Kilowatt Counts	Consumer	2007	Final

#	Measure Name	Unit
		Summer Peak Demand Savings per Unit (kW)

1	Energy Star® Compact Fluorescent Light Bulb	0.00
2	Electric Timers	0.00
3	Programmable Thermostats	0.05
4	Energy Star® Ceiling Fans	0.01
1	Energy Star® Air Conditioner	0.36
2	Programmable Thermostats	0.16
3	Air Conditioner Tune-Up	0.04
1	Refrigerator Retirement	0.27
2	Freezer Retirement	0.20
1	Energy Star® Compact Fluorescent Light Bulb	0.00
2	Seasonal Light Emitting Diode Light String	0.00
3	Programmable Thermostats	0.12
4	Dimmers	0.00
5	Indoor Motion Sensors	0.00
6	Programmable Baseboard Thermostats	0.00
1	Voluntary Load Shedding Project	Custom

1	Refrigerator	0.07
2	Freezer	0.07
3	Small Refrigerator	0.05
4	Small Freezer	0.04
5	Window Air Conditioner	0.56
1	ENERGY STAR® Central Air Conditioner	0.17
2	Programmable Thermostat	0.03
3	Furnace with Electronically Commutated Motor	0.49
4	Central Air Conditioning Tune Up	0.26
1	Consumer Retrofit Kit	0.04
1	15 W CFL	0.00
2	20 W+ CFLs	0.00
3	Project Porchlight CFLs	0.00
4	Energy Star Ceiling Fan	0.00
5	Furnace Filter	0.01
6	Solar Lights	0.00
7	Outdoor Motion Sensor	0.00
8	Dimmer Switch	0.00

	10	2007 Every Kilowatt Counts	Consumer	2007	Final
	10	2007 Every Kilowatt Counts	Consumer	2007	Final
	10	2007 Every Kilowatt Counts	Consumer	2007	Final
	10	2007 Every Kilowatt Counts	Consumer	2007	Final
	10	2007 Every Kilowatt Counts	Consumer	2007	Final
	10	2007 Every Kilowatt Counts	Consumer	2007	Final
	11	2007 peaksaver®	Consumer, Business	2007	Final
	11	2007 peaksaver®	Consumer, Business	2007	Final
	11	2007 peaksaver®	Consumer, Business	2007	Final
	11	2007 peaksaver®	Consumer, Business	2007	Final
	11	2007 peaksaver®	Consumer, Business	2007	Final
	12	2007 Summer Savings	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	13	2007 Affordable Housing – Pilot	Consumer	2007	Final
	14	2007 Social Housing – Pilot	Consumer	2007	Final
	15	2007 Energy Efficiency Assistance for Households	Consumer	2007	Final
	16	2007 Toronto Comprehensive	Business	2007	Final
	16	2007 Toronto Comprehensive	Business	2007	Final
	16	2007 Toronto Comprehensive	Business	2007	Final
	17	2007 Electricity Retrofit Incentive Program	Business	2007	Final

9	Energy Star Light Fixtures	0.01
10	SLEDs	0.00
11	T8	0.00
12	Programmable Thermostat	0.00
13	Power Bar with Timer	0.01
14	Lighting Control Devices	0.02
1	Residential Programmable Thermostat	0.63
2	Residential Air Conditioner Switch	0.63
3	Residential Water Heater Switch	0.30
4	Commercial Programmable Thermostat	4.00
5	Commercial Air Conditioner Switch	4.00
6	Commercial Water Heater Switch	0.30
1	Household	0.44
1	1 - T8 32W w/EL ballast	0.01
2	2 - T8 32W w/EL ballast	0.02
3	Air-source Heat Pump - Split	6.08
4	Automated Controls for HVAC	0.00
5	Boiler	0.01
6	Ceiling Fan (common area)	0.00
7	Ceiling Fan (in-suite)	0.00
8	Central Air Conditioning System - Single	1.07
9	Central Air Conditioning System - Split	1.94
10	CFL Screw-In 15W - in suite	0.01
11	CFL Screw-In 25W - in suite	0.01
12	Dimmer Switch	0.00
13	Energy Star Clotheswasher	0.03
14	Energy Star Dishwasher	0.01
15	Energy Star Refrigerator	0.01
16	Flood Light, 26W Fluorescent Fixture	0.01
17	Front Loading Washing Machine	0.11
18	Furnace	0.02
19	Furnace with DC Motor	0.03
20	Ground-source Heat Pump	4.71
21	High Pressure Sodium	0.09
22	Motion Detector	0.00
23	Occupancy Sensors	0.00
24	Other CFL Screw-in Light (please specify)	0.01
25	Other Exterior Lighting (please specify)	0.01
26	Other Parking Garage Lighting (please specify)	0.05
27	Photo Sensors	0.00
28	Programmable Thermostat	0.01
29	Timer - Outdoor Light	0.00
30	Ventilating Fan (in-suite)	0.00
1	Custom Retrofit Projects	Custom
1	Custom Retrofit Projects	Custom
1	City of Toronto - Better Building Partnership Project	Custom
2	Toronto Hydro - Business Incentive Program Project	Custom
3	Building Owners & Managers Association - Toronto Proj	Custom
1	Custom Retrofit Projects	Custom

18	2007 Demand Response 1	Industrial, Business	2007	Final
19	2007 Other Demand Response	Industrial, Business	2007	Final
19	2007 Other Demand Response	Industrial, Business	2007	Final
20	2007 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2007	Final
20	2007 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2007	Final
20	2007 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2007	Final
20	2007 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2007	Final

[illegible]

1	Voluntary Load Shedding Project	Custom
1	Loblaw Contract	Custom
2	Rodan Contract	Custom
1	Hydro	Custom
2	Wind	Custom
3	Solar Photo-Voltaic	Custom
4	Bio-Energy	Custom

1 Refrigerator		0.08
2 Freezer		0.08
3 Room Air Conditioner		0.20
1 2007 Efficient Furnance with Electronically Commutable		0.50
2 2007 ENERGYSTAR® Central Air Conditioner		0.17
3 2007 Programable Thermostat		0.03
4 2007 Central Air Conditioner Tune-ups		0.26
5 2008 Efficient Furnance with Electronically Commutable		0.49
6 2008 ENERGYSTAR® Central Air Conditioner		0.14
7 2008 Programable Thermostat		0.03
1 Building Retrofits		1.60
1 Households		0.20
1 Air Conditioner/Furnace Filters		0.02
2 Energy Star® Qualified Compact Fluorescent Floods (In		0.00
3 Energy Star® Qualified Light Fixtures		0.00
4 Heavy Duty Timers		0.02
5 T8 Fluorescent Fixtures		0.00
6 ENERGY STAR Decorative CFLs		0.00
7 ENERGY STAR Dimmable CFLs		0.00
8 Power Bars with Timers		0.00
9 Programmable Thermostats - Baseboard		0.00
10 Car block heater timer		n/a
11 Energy Star® Qualified Compact Fluorescent Light Bulb		0.00
12 Lighting Control Devices		0.00
13 Awnings		0.00
14 Window Films		0.00
15 Electric Water Heater Blankets		0.00
16 Pipe Wrap		0.00
17 Low-Flow Toilets		0.00
18 Keep Cool – Dehumidifier		0.29
19 Keep Cool – Room Air Conditioner		0.14
20 Rewards for Recycling – Dehumidifier		0.29
21 Rewards for Recycling – Room Air Conditioner		0.14
22 Rewards for Recycling - Halogen Lamp		0.01
1 Residential Programmable Thermostat		0.87
2 Residential Air Conditioner Switch		0.87
3 Residential Water Heater Switch		0.30
4 Commercial Programmable Thermostat		3.70
5 Commercial Air Conditioner Switch		3.70
6 Commercial Water Heater Switch		1.85

[illegible]

1	Agribusiness ENERGY STAR® Rated Exit Signs, All sizes	n/a
2	Agribusiness ENERGY STAR® Rated CFLs, Screw in	n/a
3	Agribusiness ENERGY STAR® Rated CFLs, Hard wired	n/a
4	Agribusiness Standard Performance T8, Single lamp station	n/a
5	Agribusiness Standard Performance T8, Double lamp station	n/a
6	Agribusiness Standard Performance T8, Triple lamp station	n/a
7	Agribusiness Standard Performance T8, Quadruple lamp station	n/a
8	Agribusiness High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
9	Agribusiness High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
10	Agribusiness High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
11	Agribusiness High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
12	Agribusiness T5 Fixtures, T5 fixture with 1, 2, or 3 lamps	n/a
13	Agribusiness T5 Fixtures, High Bay T5. Maximum 6 lamps	n/a
14	Agribusiness Metal Halide, 320 W Ceramic pulse start	n/a
15	Agribusiness Occupancy Sensors, Switch plate mounted	n/a
16	Agribusiness Occupancy Sensors, Ceiling mounted occupancy	n/a
17	Agribusiness Creep Heat Pads, up to 100W maximum	n/a
18	Agribusiness Creep Heat Pads, up to 200W maximum	n/a
19	Agribusiness High Temperature Cutout Thermostat	n/a
20	Agribusiness Creep Heat Controller	n/a
21	Agribusiness Energy Efficient Ventilation Exhaust Fans	n/a
22	Agribusiness Low Energy Livestock Waterers	n/a
23	Agribusiness Photocell and Timer for Lighting Control	n/a
24	Lighting System Exit Signs, 5 W or less	n/a
25	Lighting System ENERGY STAR® Rated CFLs, Screw in	n/a
26	Lighting System ENERGY STAR® Rated CFLs, Hard wired	n/a
27	Lighting System Standard Performance T8, Single lamp station	n/a
28	Lighting System Standard Performance T8, Double lamp station	n/a
29	Lighting System Standard Performance T8, Triple lamp station	n/a
30	Lighting System Standard Performance T8, Quadruple lamp station	n/a
31	Lighting System High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
32	Lighting System High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
33	Lighting System High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
34	Lighting System High Performance T8 (Consortium for Energy Efficient Lighting)	n/a
35	Lighting System T5 Fixtures, T5 fixture with 1, 2, or 3 lamps	n/a
36	Lighting System T5 Fixtures, High Bay T5. Maximum 6 lamps	n/a
37	Lighting System Metal Halide, 320 W Ceramic pulse start	n/a
38	Lighting System Occupancy Sensors, Switch plate mounted	n/a
39	Lighting System Occupancy Sensors, Ceiling mounted occupancy	n/a
40	Motor Open Drip-Proof (ODP), 1 HP	n/a
41	Motor Open Drip-Proof (ODP), 1.5 HP	n/a
42	Motor Open Drip-Proof (ODP), 2 HP	n/a
43	Motor Open Drip-Proof (ODP), 3 HP	n/a
44	Motor Open Drip-Proof (ODP), 5 HP	n/a
45	Motor Open Drip-Proof (ODP), 7.5 HP	n/a
46	Motor Open Drip-Proof (ODP), 10 HP	n/a
47	Motor Open Drip-Proof (ODP), 15 HP	n/a
48	Motor Open Drip-Proof (ODP), 20 HP	n/a
49	Motor Open Drip-Proof (ODP), 25 HP	n/a

[illegible]

50	Motor Open Drip-Proof (ODP), 30 HP	n/a
51	Motor Open Drip-Proof (ODP), 40 HP	n/a
52	Motor Open Drip-Proof (ODP), 50 HP	n/a
53	Motor Open Drip-Proof (ODP), 60 HP	n/a
54	Motor Open Drip-Proof (ODP), 75 HP	n/a
55	Motor Open Drip-Proof (ODP), 100 HP	n/a
56	Motor Open Drip-Proof (ODP), 125 HP	n/a
57	Motor Open Drip-Proof (ODP), 150 HP	n/a
58	Motor Open Drip-Proof (ODP), 200 HP	n/a
59	Motor Totally Enclosed Fan-Cooled (TEFC), 1 HP	n/a
60	Motor Totally Enclosed Fan-Cooled (TEFC), 1.5 HP	n/a
61	Motor Totally Enclosed Fan-Cooled (TEFC), 2 HP	n/a
62	Motor Totally Enclosed Fan-Cooled (TEFC), 3 HP	n/a
63	Motor Totally Enclosed Fan-Cooled (TEFC), 5 HP	n/a
64	Motor Totally Enclosed Fan-Cooled (TEFC), 7.5 HP	n/a
65	Motor Totally Enclosed Fan-Cooled (TEFC), 10 HP	n/a
66	Motor Totally Enclosed Fan-Cooled (TEFC), 15 HP	n/a
67	Motor Totally Enclosed Fan-Cooled (TEFC), 20 HP	n/a
68	Motor Totally Enclosed Fan-Cooled (TEFC), 25 HP	n/a
69	Motor Totally Enclosed Fan-Cooled (TEFC), 30 HP	n/a
70	Motor Totally Enclosed Fan-Cooled (TEFC), 40 HP	n/a
71	Motor Totally Enclosed Fan-Cooled (TEFC), 50 HP	n/a
72	Motor Totally Enclosed Fan-Cooled (TEFC), 60 HP	n/a
73	Motor Totally Enclosed Fan-Cooled (TEFC), 75 HP	n/a
74	Motor Totally Enclosed Fan-Cooled (TEFC), 100 HP	n/a
75	Motor Totally Enclosed Fan-Cooled (TEFC), 125 HP	n/a
76	Motor Totally Enclosed Fan-Cooled (TEFC), 150 HP	n/a
77	Motor Totally Enclosed Fan-Cooled (TEFC), 200 HP	n/a
78	Transformer Size 15	n/a
79	Transformer Size 30	n/a
80	Transformer Size 45	n/a
81	Transformer Size 75	n/a
82	Transformer Size 112.5	n/a
83	Transformer Size 150	n/a
84	Transformer Size 225	n/a
85	Transformer Size 300	n/a
86	Transformer Size 500	n/a
87	Transformer Size 750	n/a
88	Transformer Size 1000	n/a
89	Unitary AC Single Phase <= 5.4 Tons	n/a
90	Unitary AC 3 Phase <= 5.4 Tons	n/a
91	Unitary AC >5.4 & <= 11.25 tons	n/a
92	Unitary AC >11.25 & <= 20 tons	n/a
93	Unitary AC 25 tons	n/a
94	Custom	n/a
1	City of Toronto - Better Building Partnership Project	Custom
2	Toronto Hydro - Business Incentive Program Project	Custom
3	Building Owners & Managers Association - Toronto Proj	Custom
1	Custom New Construction Project	Custom

30	2008 Power Savings Blitz	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
30	2008 Power Savings Blitz	Business	2008	Final
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final
31	2008 Chiller Plant Re-Commissioning	Business	2008	Final
32	2008 Demand Response 1	Industrial, Business	2008	Final
33	2008 Demand Response 3	Industrial, Business	2008	Final
34	2008 Other Demand Response	Industrial, Business	2008	Final
34	2008 Other Demand Response	Industrial, Business	2008	Final
35	2008 LDC Custom	Consumer, Business, Industrial, Low-Income	2008	Final
36	2008 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2008	Final
36	2008 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2008	Final
36	2008 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2008	Final
36	2008 Renewable Energy Standard Offer	Consumer, Business, Industrial, Low-Income	2008	Final
37	2008 Other Customer Based Generation	Consumer, Business, Industrial, Low-Income	2008	Final

1	T8 Fixture With Electronic Ballast	0.02
2	Energy Star® rated LED Exit Sign	0.03
3	Energy Star® rated CLF	0.03
4	Electric Water Heater Tank Wrap	0.05
5	Electric Water Heater Pipe Insulation	0.03
6	Aerator	0.03
7	Halogen	1.96
8	Other	0.00
1	Mixed Use Facility	TBD
2	University Campus	TBD
3	Hospital	TBD
4	Commercial Office Tower	TBD
5	Industrial/Manufacturing Facility	TBD
6	City Government Central Utilities Plant	TBD
7	Hotel	TBD
1	Voluntary Load Shedding Project	Custom
1	Contractual Load Shedding Project	Custom
1	Loblaw Contract	Custom
2	Rodan Contract	Custom
1	Hydro One Networks - Double Return	52,000.00
1	Hydro	Custom
2	Wind	Custom
3	Solar Photo-Voltaic	Custom
4	Bio-Energy	Custom
1	Combined Heat & Power / By-Product	Custom

Savings Assumptions	
Annual Energy Savings per Unit (kWh)	Effective Useful Life (EUL)

104	4
183	20
216	15
141	20
351	14
159	18
369	8
1,200	6
900	6
104	4
31	30
522	18
139	10
209	20
1,466	18
Custom	3

745	9
515	8
490	9
339	8
240	5
152	18
55	15
832	15
235	5
900	4
43	8
62	8
43	8
90	10
38	1
33	5
160	10
24	10

Net-to-Gross Adjustments (%)					
Free Rider (#1)	Spill Over (#2)	Exclusions (#3)	Part Use (#4)	Other (#5)	Aggregate (#6)

90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
100%	100%	100%	100%	100%	100%

48%	100%	100%	81%	100%	39%
50%	100%	100%	91%	100%	46%
38%	100%	100%	79%	100%	30%
38%	100%	100%	79%	100%	30%
43%	100%	100%	100%	100%	43%
52%	5%	100%	100%	100%	57%
46%	0%	60%	100%	100%	27%
54%	5%	100%	100%	100%	59%
42%	0%	38%	100%	100%	16%
100%	100%	100%	100%	100%	100%
78%	100%	100%	100%	100%	78%
78%	100%	100%	100%	100%	78%
76%	100%	100%	100%	100%	76%
55%	100%	100%	100%	100%	55%
55%	100%	100%	100%	100%	55%
13%	100%	100%	100%	100%	13%
55%	100%	100%	100%	100%	55%
55%	100%	100%	100%	100%	55%

Provincial Total (# Units)	LDC Total (# Units)
----------------------------	---------------------

1,338,276	18,328
37,518	514
16,320	224
12,415	170
14,393	197
10,965	150
9,816	134
5,018	69
217	3
1,984,267	27,176
477,612	6,541
31,484	431
0	341
0	122
1,875	26
n/a	n/a

37,123	475
10,652	141
581	7
325	4
758	4
33,178	458
46,989	648
51,990	717
28,048	387
21,997	0
2,376,053	32,784
386,799	5,337
500,000	6,899
19,166	264
77,226	1,066
305,048	4,209
30,516	421
19,390	268

Custom	2
Custom	2
Custom	2
Custom	20
Custom	20
Custom	20
Custom	20

100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%

n/a	n/a
n/a	n/a
n/a	n/a
4	0
3	0
72	1
2	0

775	9
740	8
197	4.5
837	15
155	18
54	15
235	5
819	18
125	18
54	18
2,820	10
768	1
38	1
88	7
133	16
301	10
37	16
30	4
98	6
53	10
64	15
n/a	n/a
53	8
102	10
0	n/a
0	n/a
0	n/a
38	6
0	n/a
500	12
141	9
500	12
141	9
275	16
17	13
17	13
6	13
74	13
74	13
37	13

55%	100%	100%	100%	100%	55%
52%	100%	100%	100%	100%	52%
36%	100%	100%	100%	100%	36%
54%	100%	100%	100%	5%	100%
52%	100%	100%	100%	5%	100%
46%	100%	100%	100%	0%	60%
16%	100%	100%	100%	0%	100%
54%	100%	100%	100%	5%	100%
52%	100%	100%	100%	5%	100%
46%	100%	100%	100%	0%	60%
100%	100%	100%	100%	100%	100%
78%	100%	100%	100%	100%	78%
35%	100%	100%	100%	100%	100%
37%	100%	100%	100%	100%	100%
33%	100%	100%	100%	100%	100%
33%	100%	100%	100%	100%	100%
33%	100%	100%	100%	100%	100%
39%	100%	100%	100%	100%	100%
38%	100%	100%	100%	100%	100%
41%	100%	100%	100%	100%	100%
47%	100%	100%	100%	100%	100%
0%	100%	100%	100%	100%	100%
52%	100%	100%	100%	100%	100%
45%	100%	100%	100%	100%	100%
0%	100%	100%	100%	100%	100%
0%	100%	100%	100%	100%	100%
0%	100%	100%	100%	100%	100%
0%	100%	100%	100%	100%	100%
47%	100%	100%	100%	100%	100%
0%	100%	100%	100%	100%	100%
35%	100%	100%	100%	100%	100%
42%	100%	100%	100%	100%	100%
44%	100%	100%	100%	100%	100%
44%	100%	100%	100%	100%	100%
48%	100%	100%	100%	100%	100%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%
90%	100%	100%	100%	100%	90%

62,968	927
18,376	295
1,587	4
9,366	127
4,499	61
7,291	99
0	0
33,546	455
22,241	302
28,505	387
0	0
62,670	298
39,053	536
423,741	5,819
657,609	9,030
14,885	204
119,646	1,643
1,526,248	20,958
98,397	1,351
7,055	97
41,495	570
n/a	n/a
903,439	12,406
128,609	1,766
28,376	390
457,649	6,284
14,029	193
842,772	11,573
110,248	1,514
263	4
295	4
7,897	108
8,535	117
6,808	93
28,831	2,344
14,152	0
318	0
104	0
47	0
1	0

[illegible]

151	15
237	16
191	2
436	7
277	15
310	5
14	1
0	0
TBD	TBD
TBD	TBD
TBD	TBD
TBD	TBD
TBD	TBD
TBD	TBD
TBD	TBD
Custom	1
Custom	5
Custom	1
Custom	1
0	1
Custom	20
Custom	20
Custom	20
Custom	20
Custom	20

93%	100%	100%	100%	100%	93%
93%	100%	100%	100%	100%	93%
93%	100%	100%	100%	100%	93%
93%	100%	100%	100%	100%	93%
93%	100%	100%	100%	100%	93%
93%	100%	100%	100%	100%	93%
93%	100%	100%	100%	100%	93%
100%	100%	100%	100%	100%	100%
70%	100%	100%	100%	100%	70%
70%	100%	100%	100%	100%	70%
70%	100%	100%	100%	100%	70%
70%	100%	100%	100%	100%	70%
70%	100%	100%	100%	100%	70%
70%	100%	100%	100%	100%	70%
70%	100%	100%	100%	100%	70%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%
100%	100%	100%	100%	100%	100%

18,026	2,024
287	61
3,256	52
53	2
35	0
1	0
0	0
1,775	143
1	0
3	0
1	0
1	0
0	0
1	0
1	0
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
n/a	n/a
0	0
7	0
116	0
2	0
2	0

#	Local Distribution Company
1	Atikokan Hydro Inc.
2	Attawapiskat First Nation
3	Attawapiskat Power Corporation
4	Barrie Hydro Distribution Inc.
5	Bluewater Power Distribution Corporation
6	Brant County Power Inc.
7	Brantford Power Inc.
8	Burlington Hydro Inc.
9	COLLUS Power Corp.
10	Cambridge and North Dumfries Hydro Inc.
11	Canadian Niagara Power Inc.
12	Centre Wellington Hydro Ltd.
13	Chapleau Public Utilities Corporation
14	Chatham-Kent Hydro Inc.
15	Clinton Power Corporation
16	Cooperative Hydro Embrun Inc.
17	Cornwall Street Railway Light and Power Company Limited
18	Dubreuil Forest Products Ltd.
19	Dutton Hydro Limited
20	E.L.K. Energy Inc.
21	ENWIN Utilities Ltd.
22	Enersource Hydro Mississauga Inc.
23	Erie Thames Powerlines Corporation
24	Espanola Regional Hydro Distribution Corporation
25	Essex Powerlines Corporation
26	Festival Hydro Inc.
27	Fort Albany First Nation
28	Fort Albany Power Corporation
29	Fort Frances Power Corporation
30	Grand Valley Energy Inc
31	Great Lakes Power Limited
32	Greater Sudbury Hydro Inc.
33	Grimsby Power Incorporated
34	Guelph Hydro Electric Systems Inc.
35	Haldimand County Hydro Inc.
36	Halton Hills Hydro Inc.
37	Hearst Power Distribution Company Limited
38	Horizon Utilities Corporation
39	Hydro 2000 Inc.
40	Hydro Hawkesbury Inc.
41	Hydro One Brampton Networks Inc.
42	Hydro One Networks Inc.
43	Hydro One Networks Inc./Cat Lake Power Community

2006 Residential Peak Load (kW)	2006 Residential Peak Load (%)	2006 Residential Energy Throughput (kWh)	2006 Residential Energy Throughput (%)	2006 Non-Residential Peak Load (kW)	2006 Non-Residential Peak Load (%)	2006 Non-Residential Energy Throughput (kWh)
n/a	n/a	11,400,673	0.03%	n/a	n/a	34,099,588
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a	530,557,254	1.32%	n/a	n/a	937,360,428
n/a	n/a	261,470,152	0.65%	n/a	n/a	842,737,021
n/a	n/a	79,563,205	0.20%	n/a	n/a	145,133,733
n/a	n/a	284,501,278	0.71%	n/a	n/a	680,671,928
n/a	n/a	551,419,663	1.37%	n/a	n/a	1,182,280,000
n/a	n/a	110,110,859	0.27%	n/a	n/a	225,767,061
n/a	n/a	389,897,758	0.97%	n/a	n/a	1,175,499,726
n/a	n/a	143,693,705	0.36%	n/a	n/a	215,257,881
n/a	n/a	44,421,203	0.11%	n/a	n/a	104,851,041
n/a	n/a	14,654,854	0.04%	n/a	n/a	13,456,323
n/a	n/a	239,607,514	0.60%	n/a	n/a	615,842,408
n/a	n/a	12,656,005	0.03%	n/a	n/a	5,883,572
n/a	n/a	19,799,972	0.05%	n/a	n/a	9,670,245
n/a	n/a		0.00%	n/a	n/a	3,316,831
n/a	n/a		0.00%	n/a	n/a	104,680,214
n/a	n/a	409,958	0.00%	n/a	n/a	244,729,136
n/a	n/a	91,182,112	0.23%	n/a	n/a	45,502,520
n/a	n/a	655,143,475	1.63%	n/a	n/a	244,729,136
n/a	n/a	1,603,332,097	3.98%	n/a	n/a	6,490,116,773
n/a	n/a	116,103,693	0.29%	n/a	n/a	36,572,686
n/a	n/a	32,486,898	0.08%	n/a	n/a	30,450,548
n/a	n/a	284,492,550	0.71%	n/a	n/a	148,696,240
n/a	n/a	142,060,467	0.35%	n/a	n/a	471,908,335
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a	38,401,315	0.10%	n/a	n/a	42,879,081
n/a	n/a	5,683,369	0.01%	n/a	n/a	2,812,411
n/a	n/a	91,383,636	0.23%	n/a	n/a	102,068,591
n/a	n/a	397,678,409	0.99%	n/a	n/a	535,059,474
n/a	n/a	85,590,583	0.21%	n/a	n/a	18,314,103
n/a	n/a	357,495,622	0.89%	n/a	n/a	1,264,636,266
n/a	n/a	172,359,424	0.43%	n/a	n/a	185,282,283
n/a	n/a	200,925,506	0.50%	n/a	n/a	271,457,391
n/a	n/a	26,681,677	0.07%	n/a	n/a	87,318,533
n/a	n/a	1,654,664,050	4.11%	n/a	n/a	3,638,046,674
n/a	n/a	15,223,723	0.04%	n/a	n/a	10,268,966
n/a	n/a	54,802,923	0.14%	n/a	n/a	143,819,890
n/a	n/a	1,075,118,931	2.67%	n/a	n/a	2,744,176,570
n/a	n/a	12,237,925,130	30.40%	n/a	n/a	9,935,112,037
n/a	n/a		0.00%	n/a	n/a	

44	Hydro One Remote Communities Inc.
45	Hydro Ottawa Limited
46	Innisfil Hydro Distribution Systems Limited
47	Kashechewan First Nation
48	Kashechewan Power Corporation
49	Kenora Hydro Electric Corporation Ltd.
50	Kingston Hydro Corporation
51	Kitchener-Wilmot Hydro Inc.
52	Lakefront Utilities Inc.
53	Lakeland Power Distribution Ltd.
54	London Hydro Inc.
55	Middlesex Power Distribution Corporation
56	Midland Power Utility Corporation
57	Milton Hydro Distribution Inc.
58	Newbury Power Inc.
59	Newmarket - Tay Power Distribution Ltd.
60	Niagara Peninsula Energy Inc.
61	Niagara-on-the-Lake Hydro Inc.
62	Norfolk Power Distribution Inc.
63	North Bay Hydro Distribution Limited
64	Northern Ontario Wires Inc.
65	Oakville Hydro Electricity Distribution Inc.
66	Orangeville Hydro Limited
67	Orillia Power Distribution Corporation
68	Oshawa PUC Networks Inc.
69	Ottawa River Power Corporation
70	PUC Distribution Inc.
71	Parry Sound Power Corporation
72	Peterborough Distribution Incorporated
73	Port Colborne Hydro Inc.
74	PowerStream Inc.
75	Renfrew Hydro Inc.
76	Rideau St. Lawrence Distribution Inc.
77	Sioux Lookout Hydro Inc.
78	St. Thomas Energy Inc.
79	Thunder Bay Hydro Electricity Distribution Inc.
80	Tillsonburg Hydro Inc.
81	Toronto Hydro-Electric System Limited
82	Veridian Connections Inc.
83	Wasaga Distribution Inc.
84	Waterloo North Hydro Inc.
85	Welland Hydro-Electric System Corp.
86	Wellington North Power Inc.
87	West Coast Huron Energy Inc.
88	West Perth Power Inc.
89	Westario Power Inc.
90	Whitby Hydro Electric Corporation
91	Woodstock Hydro Services Inc.
Total	

n/a	n/a		0.00%	n/a	n/a	
n/a	n/a	2,226,415,669	5.53%	n/a	n/a	5,188,092,986
n/a	n/a	157,140,654	0.39%	n/a	n/a	28,964,493
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a	39,159,513	0.10%	n/a	n/a	68,402,801
n/a	n/a	200,214,258	0.50%	n/a	n/a	531,028,042
n/a	n/a	644,108,007	1.60%	n/a	n/a	1,309,299,590
n/a	n/a	67,942,208	0.17%	n/a	n/a	213,381,240
n/a	n/a	78,930,880	0.20%	n/a	n/a	45,933,794
n/a	n/a	1,088,755,114	2.70%	n/a	n/a	2,244,907,930
n/a	n/a	57,128,547	0.14%	n/a	n/a	145,163,360
n/a	n/a	43,734,088	0.11%	n/a	n/a	177,618,443
n/a	n/a	197,466,598	0.49%	n/a	n/a	439,013,389
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a	262,995,579	0.65%	n/a	n/a	93,266,581
n/a	n/a	449,386,643	1.12%	n/a	n/a	809,188,538
n/a	n/a	63,805,148	0.16%	n/a	n/a	111,101,732
n/a	n/a	139,960,236	0.35%	n/a	n/a	237,962,119
n/a	n/a	207,199,584	0.51%	n/a	n/a	349,174,613
n/a	n/a	43,040,214	0.11%	n/a	n/a	91,314,990
n/a	n/a	569,566,301	1.41%	n/a	n/a	994,238,859
n/a	n/a	79,376,454	0.20%	n/a	n/a	160,927,606
n/a	n/a	108,206,276	0.27%	n/a	n/a	209,218,547
n/a	n/a	465,431,095	1.16%	n/a	n/a	632,361,055
n/a	n/a	75,536,829	0.19%	n/a	n/a	116,088,912
n/a	n/a	335,395,539	0.83%	n/a	n/a	353,865,433
n/a	n/a	33,103,725	0.08%	n/a	n/a	51,649,272
n/a	n/a	290,645,501	0.72%	n/a	n/a	512,167,589
n/a	n/a	63,748,755	0.16%	n/a	n/a	131,007,820
n/a	n/a	2,003,371,840	4.98%	n/a	n/a	4,700,083,921
n/a	n/a	30,640,237	0.08%	n/a	n/a	65,574,034
n/a	n/a	44,343,815	0.11%	n/a	n/a	22,573,648
n/a	n/a	31,452,628	0.08%	n/a	n/a	60,136,389
n/a	n/a	113,523,979	0.28%	n/a	n/a	250,600,744
n/a	n/a	346,415,246	0.86%	n/a	n/a	681,186,819
n/a	n/a	52,306,081	0.13%	n/a	n/a	175,367,100
n/a	n/a	5,351,746,739	13.29%	n/a	n/a	20,069,911,519
n/a	n/a	929,432,918	2.31%	n/a	n/a	1,583,103,519
n/a	n/a	73,495,682	0.18%	n/a	n/a	31,661,531
n/a	n/a	391,947,018	0.97%	n/a	n/a	922,560,313
n/a	n/a	169,952,289	0.42%	n/a	n/a	314,737,340
n/a	n/a	25,536,958	0.06%	n/a	n/a	68,059,736
n/a	n/a	27,222,139	0.07%	n/a	n/a	119,067,345
n/a	n/a		0.00%	n/a	n/a	
n/a	n/a	207,243,931	0.51%	n/a	n/a	243,567,288
n/a	n/a	337,897,948	0.84%	n/a	n/a	511,216,232
n/a	n/a	104,833,112	0.26%	n/a	n/a	300,154,329
n/a	n/a	40,262,655,618	100.00%	n/a	n/a	78,355,367,185

2006 Non-Residential Energy Throughput (%)	2007 Residential Peak Load (kW)	2007 Residential Peak Load (%)	2007 Residential Energy Throughput (kWh)	2007 Residential Energy Throughput (%)	2007 Non-Residential Peak Load (kW)	2007 Non-Residential Peak Load (%)	2007 Non-Residential Energy Throughput (kWh)	2007 Non-Residential Energy Throughput (%)	2008 Residential Peak Load (kW)	2008 Residential Peak Load (%)
0.04%	n/a	n/a	11,858,778	0.03%	n/a	n/a	31,082,191	0.04%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
1.20%	n/a	n/a	548,016,272	1.33%	n/a	n/a	940,740,837	1.14%	n/a	n/a
1.08%	n/a	n/a	264,836,003	0.64%	n/a	n/a	855,922,144	1.04%	n/a	n/a
0.19%	n/a	n/a	81,004,255	0.20%	n/a	n/a	207,717,221	0.25%	n/a	n/a
0.87%	n/a	n/a	298,531,289	0.73%	n/a	n/a	741,598,484	0.90%	n/a	n/a
1.51%	n/a	n/a	567,063,035	1.38%	n/a	n/a	1,199,736,238	1.45%	n/a	n/a
0.29%	n/a	n/a	113,589,579	0.28%	n/a	n/a	215,072,148	0.26%	n/a	n/a
1.50%	n/a	n/a	395,062,443	0.96%	n/a	n/a	1,165,105,313	1.41%	n/a	n/a
0.27%	n/a	n/a	143,862,348	0.35%	n/a	n/a	215,810,521	0.26%	n/a	n/a
0.13%	n/a	n/a	46,699,194	0.11%	n/a	n/a	111,831,932	0.14%	n/a	n/a
0.02%	n/a	n/a	15,018,918	0.04%	n/a	n/a	13,186,691	0.02%	n/a	n/a
0.79%	n/a	n/a	236,072,777	0.57%	n/a	n/a	601,416,856	0.73%	n/a	n/a
0.01%	n/a	n/a	12,522,951	0.03%	n/a	n/a	18,085,796	0.02%	n/a	n/a
0.01%	n/a	n/a	19,386,628	0.05%	n/a	n/a	9,298,043	0.01%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.13%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.31%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.06%	n/a	n/a	94,171,770	0.23%	n/a	n/a	160,761,797	0.19%	n/a	n/a
0.31%	n/a	n/a	664,998,752	1.62%	n/a	n/a	1,903,884,798	2.31%	n/a	n/a
8.28%	n/a	n/a	1,632,816,129	3.97%	n/a	n/a	6,605,288,225	8.00%	n/a	n/a
0.05%	n/a	n/a	116,256,740	0.28%	n/a	n/a	291,852,488	0.35%	n/a	n/a
0.04%	n/a	n/a	32,040,530	0.08%	n/a	n/a	31,021,479	0.04%	n/a	n/a
0.19%	n/a	n/a	280,966,066	0.68%	n/a	n/a	279,180,331	0.34%	n/a	n/a
0.60%	n/a	n/a	143,658,315	0.35%	n/a	n/a	468,128,577	0.57%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.05%	n/a	n/a	39,011,690	0.09%	n/a	n/a	43,615,480	0.05%	n/a	n/a
0.00%	n/a	n/a	5,786,652	0.01%	n/a	n/a	3,568,735	0.00%	n/a	n/a
0.13%	n/a	n/a	92,360,867	0.22%	n/a	n/a	109,854,997	0.13%	n/a	n/a
0.68%	n/a	n/a	405,736,204	0.99%	n/a	n/a	543,747,565	0.66%	n/a	n/a
0.02%	n/a	n/a	86,770,666	0.21%	n/a	n/a	88,449,813	0.11%	n/a	n/a
1.61%	n/a	n/a	358,331,164	0.87%	n/a	n/a	1,269,317,570	1.54%	n/a	n/a
0.24%	n/a	n/a	173,795,327	0.42%	n/a	n/a	183,754,191	0.22%	n/a	n/a
0.35%	n/a	n/a	208,287,499	0.51%	n/a	n/a	311,739,725	0.38%	n/a	n/a
0.11%	n/a	n/a	28,317,089	0.07%	n/a	n/a	82,118,980	0.10%	n/a	n/a
4.64%	n/a	n/a	1,666,789,557	4.06%	n/a	n/a	4,575,455,672	5.54%	n/a	n/a
0.01%	n/a	n/a	15,036,848	0.04%	n/a	n/a	9,877,930	0.01%	n/a	n/a
0.18%	n/a	n/a	56,403,314	0.14%	n/a	n/a	145,226,883	0.18%	n/a	n/a
3.50%	n/a	n/a	1,141,600,000	2.78%	n/a	n/a	2,798,700,000	3.39%	n/a	n/a
12.68%	n/a	n/a	12,620,681,000	30.71%	n/a	n/a	10,298,799,000	12.47%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a

0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
6.62%	n/a	n/a	2,234,039,085	5.44%	n/a	n/a	5,255,181,082	6.36%	n/a	n/a
0.04%	n/a	n/a	156,705,342	0.38%	n/a	n/a	71,986,330	0.09%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.00%	n/a	n/a		0.00%	n/a	n/a		0.00%	n/a	n/a
0.09%	n/a	n/a	39,142,088	0.10%	n/a	n/a	70,186,402	0.08%	n/a	n/a
0.68%	n/a	n/a	221,960,966	0.54%	n/a	n/a	497,012,043	0.60%	n/a	n/a
1.67%	n/a	n/a	660,550,766	1.61%	n/a	n/a	1,312,172,498	1.59%	n/a	n/a
0.27%	n/a	n/a	74,685,958	0.18%	n/a	n/a	215,906,659	0.26%	n/a	n/a
0.06%	n/a	n/a	78,209,625	0.19%	n/a	n/a	135,514,735	0.16%	n/a	n/a
2.87%	n/a	n/a	1,117,283,048	2.72%	n/a	n/a	2,246,550,773	2.72%	n/a	n/a
0.19%	n/a	n/a	57,541,659	0.14%	n/a	n/a	139,592,176	0.17%	n/a	n/a
0.23%	n/a	n/a	47,886,438	0.12%	n/a	n/a	175,517,601	0.21%	n/a	n/a
0.56%	n/a	n/a	218,633,202	0.53%	n/a	n/a	470,712,726	0.57%	n/a	n/a
0.00%	n/a	n/a	463,355	0.00%	n/a	n/a	606,285	0.00%	n/a	n/a
0.12%	n/a	n/a	270,904,453	0.66%	n/a	n/a	96,866,788	0.12%	n/a	n/a
1.03%	n/a	n/a	423,910,347	1.03%	n/a	n/a	853,493,894	1.03%	n/a	n/a
0.14%	n/a	n/a	65,561,722	0.16%	n/a	n/a	112,958,244	0.14%	n/a	n/a
0.30%	n/a	n/a	142,543,771	0.35%	n/a	n/a	236,960,151	0.29%	n/a	n/a
0.45%	n/a	n/a	213,131,701	0.52%	n/a	n/a	353,433,822	0.43%	n/a	n/a
0.12%	n/a	n/a	43,226,412	0.11%	n/a	n/a	87,800,701	0.11%	n/a	n/a
1.27%	n/a	n/a	592,214,968	1.44%	n/a	n/a	1,015,760,199	1.23%	n/a	n/a
0.21%	n/a	n/a	80,135,717	0.19%	n/a	n/a	165,400,748	0.20%	n/a	n/a
0.27%	n/a	n/a	109,590,116	0.27%	n/a	n/a	208,616,563	0.25%	n/a	n/a
0.81%	n/a	n/a	495,109,283	1.20%	n/a	n/a	685,818,845	0.83%	n/a	n/a
0.15%	n/a	n/a	75,938,194	0.18%	n/a	n/a	84,784,890	0.10%	n/a	n/a
0.45%	n/a	n/a	338,874,337	0.82%	n/a	n/a	355,019,853	0.43%	n/a	n/a
0.07%	n/a	n/a	34,279,947	0.08%	n/a	n/a	54,561,642	0.07%	n/a	n/a
0.65%	n/a	n/a	286,683,602	0.70%	n/a	n/a	525,620,624	0.64%	n/a	n/a
0.17%	n/a	n/a	65,276,304	0.16%	n/a	n/a	125,625,452	0.15%	n/a	n/a
6.00%	n/a	n/a	2,039,498,572	4.96%	n/a	n/a	4,749,900,082	5.75%	n/a	n/a
0.08%	n/a	n/a	31,007,901	0.08%	n/a	n/a	67,121,871	0.08%	n/a	n/a
0.03%	n/a	n/a	45,086,486	0.11%	n/a	n/a	67,416,920	0.08%	n/a	n/a
0.08%	n/a	n/a	32,814,076	0.08%	n/a	n/a	57,375,461	0.07%	n/a	n/a
0.32%	n/a	n/a	119,400,889	0.29%	n/a	n/a	244,392,868	0.30%	n/a	n/a
0.87%	n/a	n/a	344,508,404	0.84%	n/a	n/a	669,420,045	0.81%	n/a	n/a
0.22%	n/a	n/a	52,893,412	0.13%	n/a	n/a	183,570,981	0.22%	n/a	n/a
25.61%	n/a	n/a	5,332,356,184	12.97%	n/a	n/a	20,316,766,672	24.60%	n/a	n/a
2.02%	n/a	n/a	960,984,164	2.34%	n/a	n/a	1,566,734,483	1.90%	n/a	n/a
0.04%	n/a	n/a	78,007,343	0.19%	n/a	n/a	35,464,935	0.04%	n/a	n/a
1.18%	n/a	n/a	405,071,611	0.99%	n/a	n/a	954,721,743	1.16%	n/a	n/a
0.40%	n/a	n/a	162,857,785	0.40%	n/a	n/a	300,569,977	0.36%	n/a	n/a
0.09%	n/a	n/a	25,027,983	0.06%	n/a	n/a	69,405,347	0.08%	n/a	n/a
0.15%	n/a	n/a	26,672,783	0.06%	n/a	n/a	117,989,487	0.14%	n/a	n/a
0.00%	n/a	n/a	15,466,784	0.04%	n/a	n/a	46,047,710	0.06%	n/a	n/a
0.31%	n/a	n/a	213,039,032	0.52%	n/a	n/a	246,987,034	0.30%	n/a	n/a
0.65%	n/a	n/a	347,926,496	0.85%	n/a	n/a	511,966,838	0.62%	n/a	n/a
0.38%	n/a	n/a	104,412,330	0.25%	n/a	n/a	287,974,277	0.35%	n/a	n/a
100.00%	n/a	n/a	41,098,855,290	100.00%	n/a	n/a	82,578,437,108	100.00%	n/a	n/a

2008 Residential Energy Throughput (kWh)	2008 Residential Energy Throughput (%)	2008 Non-Residential Peak Load (kW)	2008 Non-Residential Peak Load (%)	2008 Non-Residential Energy Throughput (kWh)	2008 Non-Residential Energy Throughput (%)
11,183,350	0.03%	n/a	n/a	14,843,605	0.02%
0	0.00%	n/a	n/a	0	0.00%
0	0.00%	n/a	n/a	0	0.00%
547,117,234	1.35%	n/a	n/a	980,805,847	1.21%
261,354,534	0.64%	n/a	n/a	821,568,128	1.02%
79,817,804	0.20%	n/a	n/a	200,988,235	0.25%
291,972,257	0.72%	n/a	n/a	719,465,778	0.89%
557,752,794	1.37%	n/a	n/a	1,158,340,390	1.43%
114,695,863	0.28%	n/a	n/a	205,759,520	0.25%
384,779,246	0.95%	n/a	n/a	1,125,532,050	1.39%
141,136,541	0.35%	n/a	n/a	206,108,617	0.25%
44,627,090	0.11%	n/a	n/a	113,895,413	0.14%
15,056,281	0.04%	n/a	n/a	13,204,594	0.02%
232,973,162	0.57%	n/a	n/a	578,228,629	0.71%
0	0.00%	n/a	n/a	0	0.00%
19,644,024	0.05%	n/a	n/a	9,451,266	0.01%
0	0.00%	n/a	n/a	0	0.00%
0	0.00%	n/a	n/a	0	0.00%
0	0.00%	n/a	n/a	0	0.00%
93,091,229	0.23%	n/a	n/a	157,019,403	0.19%
637,053,725	1.57%	n/a	n/a	1,801,822,532	2.23%
1,590,715,870	3.92%	n/a	n/a	6,464,408,854	7.99%
115,637,295	0.28%	n/a	n/a	278,295,099	0.34%
32,354,293	0.08%	n/a	n/a	30,605,267	0.04%
261,929,749	0.65%	n/a	n/a	278,831,202	0.34%
140,987,205	0.35%	n/a	n/a	448,339,012	0.55%
0	0.00%	n/a	n/a	0	0.00%
0	0.00%	n/a	n/a	0	0.00%
39,844,007	0.10%	n/a	n/a	42,938,079	0.05%
5,882,230	0.01%	n/a	n/a	3,097,510	0.00%
87,951,272	0.22%	n/a	n/a	89,322,297	0.11%
411,072,289	1.01%	n/a	n/a	546,788,157	0.68%
91,344,616	0.23%	n/a	n/a	87,677,058	0.11%
366,970,148	0.90%	n/a	n/a	1,223,442,614	1.51%
171,781,095	0.42%	n/a	n/a	177,498,802	0.22%
220,683,563	0.54%	n/a	n/a	276,894,738	0.34%
26,743,823	0.07%	n/a	n/a	56,718,432	0.07%
1,641,702,487	4.04%	n/a	n/a	4,317,582,512	5.34%
15,306,507	0.04%	n/a	n/a	10,138,585	0.01%
55,769,040	0.14%	n/a	n/a	138,066,467	0.17%
1,136,600,000	2.80%	n/a	n/a	2,748,900,000	3.40%
12,410,000,000	30.57%	n/a	n/a	9,990,000,000	12.35%
0	0.00%	n/a	n/a	0	0.00%

0	0.00%	n/a	n/a	0	0.00%
2,226,078,653	5.48%	n/a	n/a	5,274,086,924	6.52%
158,043,498	0.39%	n/a	n/a	78,175,459	0.10%
0	0.00%	n/a	n/a	0	0.00%
0	0.00%	n/a	n/a	0	0.00%
39,338,336	0.10%	n/a	n/a	69,225,456	0.09%
200,853,045	0.49%	n/a	n/a	535,320,723	0.66%
659,163,062	1.62%	n/a	n/a	1,257,832,920	1.56%
75,604,253	0.19%	n/a	n/a	205,196,563	0.25%
81,234,268	0.20%	n/a	n/a	136,289,494	0.17%
1,119,770,671	2.76%	n/a	n/a	2,189,969,229	2.71%
57,013,718	0.14%	n/a	n/a	132,646,565	0.16%
48,136,133	0.12%	n/a	n/a	166,162,739	0.21%
225,897,498	0.56%	n/a	n/a	476,230,193	0.59%
0	0.00%	n/a	n/a	0	0.00%
268,062,456	0.66%	n/a	n/a	452,921,581	0.56%
400,445,564	0.99%	n/a	n/a	813,890,886	1.01%
63,512,671	0.16%	n/a	n/a	109,639,488	0.14%
140,646,761	0.35%	n/a	n/a	230,446,897	0.28%
213,813,392	0.53%	n/a	n/a	349,313,014	0.43%
41,990,761	0.10%	n/a	n/a	78,987,933	0.10%
588,349,444	1.45%	n/a	n/a	991,360,456	1.23%
79,576,857	0.20%	n/a	n/a	159,288,984	0.20%
109,814,584	0.27%	n/a	n/a	206,291,735	0.26%
493,225,543	1.22%	n/a	n/a	661,990,009	0.82%
78,434,655	0.19%	n/a	n/a	114,881,644	0.14%
347,363,230	0.86%	n/a	n/a	355,446,428	0.44%
34,188,975	0.08%	n/a	n/a	53,124,268	0.07%
288,028,301	0.71%	n/a	n/a	525,236,456	0.65%
64,024,829	0.16%	n/a	n/a	127,071,772	0.16%
2,077,903,209	5.12%	n/a	n/a	4,705,762,883	5.82%
31,465,398	0.08%	n/a	n/a	69,352,093	0.09%
44,465,236	0.11%	n/a	n/a	65,825,492	0.08%
33,587,664	0.08%	n/a	n/a	42,670,262	0.05%
120,297,987	0.30%	n/a	n/a	220,058,899	0.27%
351,645,318	0.87%	n/a	n/a	644,339,043	0.80%
51,050,818	0.13%	n/a	n/a	165,205,863	0.20%
5,215,687,193	12.85%	n/a	n/a	19,811,187,290	24.50%
942,451,035	2.32%	n/a	n/a	1,538,562,235	1.90%
76,997,980	0.19%	n/a	n/a	37,455,844	0.05%
405,533,476	1.00%	n/a	n/a	956,629,104	1.18%
157,955,849	0.39%	n/a	n/a	304,094,821	0.38%
25,485,646	0.06%	n/a	n/a	67,434,118	0.08%
26,528,425	0.07%	n/a	n/a	126,738,954	0.16%
0	0.00%	n/a	n/a	0	0.00%
213,227,356	0.53%	n/a	n/a	254,222,507	0.31%
346,038,642	0.85%	n/a	n/a	500,707,723	0.62%
110,536,185	0.27%	n/a	n/a	295,103,216	0.36%
40,588,999,198	100.00%	n/a	n/a	80,872,956,854	100.00%

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 50

Question:

Ref: Response to Interrogatory from VECC #33 (b)
Response to Interrogatory from Board Staff # 29

Preamble: Both responses state:
“As stated in the e-mail sent to Burlington Hydro with these results, the OPA states: “All results presented herein are considered final” and “The results provided in the enclosed report are in accordance with current OPA practices and policies for reporting progress against the provincial conservation goals.”

- a) Provide a copy of the “enclosed” report.
- b) Map/reconcile the result in the OPA report to the revised as filed LRAM claim for OPA 2005-2008 programs

Response:

a) The results (the “enclosed report”) are presented in the Excel workbook filed as Burlington_IRR_VECC_q49_20091221.xls, and as described in the e-mail and letter included in the response to VECC interrogatory 49.

b) The results from the OPA are incorporated into the Tables presented in response to IR round 1 VECC #32 under the appropriately named program, beginning on Question 4.32p.5 of 30 for ERIP and PSB and p.9 of 30 for EKC and p.12 of 30 for Cool Savings, Refrigerator Roundup and other OPA programs.

A comparison table mapping the results of the OPA report can be found in response to IR round 2, VECC #55b.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 51

Question:

Ref: Response to Interrogatory from VECC #33 (c)

- Preamble: The response states:
- c) The independent third party review used the “Best Available” input assumptions, in accordance with Board Guidelines. Those assumptions are the following:
- Program-specific inputs, provided by both BHI and its professional lighting expert to gauge what specific function each measure would have and for how long they would last in that capacity. For instance, annual operating times are from on-site inspections, and discussions with users of the equipment. Custom values for equipment cost were provided directly from pricing estimates provided by the lighting expert. All custom inputs were examined for their suitability in comparison to default prescriptive values.
- a) Provide a list of Program specific assumptions referred to and compare to the corresponding OPA Measures and Assumptions list values.
- b) Provide a Comparison Table of the Program- specific Assumptions and the participants and kWh savings compared to the OPA Measures and Assumptions list.
- c) Show how these fit into the final third tranche LRAM claim for the relevant sectors
-

Response:

- a) The program specific assumptions for the residential and GS < 50 kW programs can be found in the tables in response to IR round 2 VECC Q#48. The program specific assumptions for the remaining GS > 50 kW programs can be found in Table 1 below.

The inputs used to calculate the LRAM and SSM claims for each program are the result of either program specific results reported by the OPA (in the 2006-2008 OPA final results for BHI) or the assessment of the specific use of each measure provided by a professional lighting expert. As such, in comparison to the OPA Measures and Assumptions list, which uses generic assumptions for operating hours, measure lives, equipment cost and energy savings, the inputs used are more representative of the actual achievements of the BHI portfolio.

Table 1 - List of assumptions used for GS > 50 kW rate class

Year	Funding Source	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost Used (\$)	Demand Savings Used	Free Ridership Default	Number of units	Total Demand Savings (kW)
2005	Third Tranche	BHI Lighting Retrofit Program	2 lamp T8 (58W)	2600	15	79	0.098	0%	121	11.86
2005	Third Tranche	BHI Lighting Retrofit Program	2 lamp T8 (58W)	2600	15	62	0.07	0%	181	12.67
2005	Third Tranche	BHI Lighting Retrofit Program	2 lamp T8 (51W)	2600	15	56	0.027	0%	146	3.94
2005	Third Tranche	BHI Lighting Retrofit Program	2 lamp T8 (51W)	8760	15	56	0.027	0%	48	1.30
2005	Third Tranche	BHI Lighting Retrofit Program	1 lamp T8 (31W)	2600	15	53	0.016	0%	6	0.10
2005	Third Tranche	BHI Lighting Retrofit Program	23W CFL	1820	5	13	0.077	0%	23	1.77
2005	Third Tranche	BHI Lighting Retrofit Program	16W CFL	1820	5	13	0.044	0%	17	0.75
2005	Third Tranche	BHI Lighting Retrofit Program	6 lamp fluorescent (226W)	8760	15	322	0.234	0%	52	12.17
2005	Third Tranche	BHI Lighting Retrofit Program	6 lamp fluorescent (174W)	8760	15	322	0.121	0%	28	3.39
2006	Third Tranche	BHI Lighting Retrofit Program	2 lamp T8 32W (51W)	780	10	77	0.027	0%	196	5.29
2006	Third Tranche	BHI Lighting Retrofit Program	16 W screw in CLF	780	2	10	0.044	0%	25	1.10
2006	Third Tranche	BHI Lighting Retrofit Program	1 lamp 4' T8 (30W)	780	10	73	0.017	0%	53	0.90
2006	Third Tranche	BHI Lighting Retrofit Program	2 lamp T8 32W (73-78W)	780	10	127	0.069	0%	15	1.04
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	4lamp 4' T8 (95W)	8760	5	74	0.085	30%	89	5.30
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	4lamp 4' T8 (95W)	520	5	74	0.061	30%	4	0.17
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	2lamp 4' T8 (51W)	520	5	57	0.027	30%	3	0.06

Year	Funding Source	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost Used (\$)	Demand Savings Used	Free Ridership Default	Number of units	Total Demand Savings (kW)
7	Tranche	Program								
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	13W CFL	1092	2	5	0.047	30%	1186	39.02
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	23W CFL	1092	2	7	0.077	30%	59	3.18
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	9W CFL	1092	2	7	0.031	30%	270	5.86
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	40W CFL	1092	2	7	0.11	30%	16	1.23
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	40W CFL	1092	2	7	0.16	30%	2	0.22
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	7W CFL	1092	2	7	0.033	30%	183	4.23
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	14W CFL	1092	2	6	0.046	30%	10	0.32
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	15W CFL	1092	2	4	0.06	30%	12	0.50
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	2lamp 4' T8 (77W)	8760	5	65	0.013	30%	74	0.67
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	2lamp 4' T8 (59W)	8760	5	57	0.107	30%	9	0.67
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	1lamp 4' T8 (30W)	8760	5	50	0.017	30%	67	0.80
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	2lamp 3' T8 (40W)	1095	5	60	0.024	30%	4	0.07
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	1lamp 2' T8 (15W)	8760	5	54	0.012	30%	3	0.03
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	2lamp 2' T8 (32W)	2190	5	60	0.044	30%	10	0.31
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	13W CFL	1825	2	5	0.047	30%	1638	53.89
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	14W CFL	1825	2	6	0.046	30%	73	2.35
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	23W CFL	1825	2	7	0.077	30%	46	2.48

Year	Funding Source	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost Used (\$)	Demand Savings Used	Free Ridership Default	Number of units	Total Demand Savings (kW)
7	Tranche	Program								
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	7W CFL	1825	2	7	0.033	30%	118	2.73
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	28W CFL	1825	2	7	0.072	30%	32	1.61
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	4lamp 4' T8 (110W)	8760	5	72	0.148	30%	73	7.56
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	13W CFL	364	2	5	0.047	30%	352	11.58
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	15W CFL	364	2	4	0.05	30%	116	4.06
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	15W CFL	1092	2	4	0.06	30%	97	4.07
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	14W CFL	364	2	6	0.046	30%	3	0.10
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	14W CFL	364	2	6	0.036	30%	26	0.66
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	14W CFL	364	2	6	0.051	30%	4	0.14
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	4lamp 4' T8 (111W)	8760	5	72	0.14	30%	105	10.29
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	2lamp 4' T8 (74W)	8760	5	65	0.063	30%	54	2.38
2007	Post Third Tranche	Multi-unit Residential Lighting Retrofit Program	2lamp 4' T8 (51W)	8760	5	57	0.027	30%	36	0.68

b) Comparison tables of the program specific inputs and the participants and kWh savings compared to the OPA Measures and Assumptions list can be found as Table 2 to Table 7. In Table 2 to Table 7, the comparison is made between values 'as filed' and 'OPA'. The 'as filed' values refer to the values used in the amended LRAM and SSM claims submitted as part of the responses to the first round of VECC IRs. The 'OPA' values refer to the values found in the OPA Measures and Assumptions list.

In examining Table 2 to Table 7, note that differences in measure life between 'as filed' and OPA values has minor impact on the total kWh savings. The key determinant of energy savings for the purpose of LRAM is the operating hours.

When comparing the totals at the bottoms of Table 2 to Table 7, it should be noted that whenever a measure does not have assumptions found on the OPA Measures and Assumptions list, its OPA energy savings (the rightmost columns in Table 2 to Table 7) was given a value of zero. As such, the total OPA kWh savings at the bottom of each table do not report any savings for these measures whereas the total 'as filed' kWh savings do account for these measures. An example is the first four entries in Table 3.

Table 2 – Assumption comparison table for 2005 Third Tranche Programs

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Public education and outreach	15W CFL	--	--	8	8	43	43	30%	3,159	380,344	380,344
Public education and outreach	LED Christmas lights	--	--	5	5	14	14	30%	659	25,279	25,279
Public education and outreach	LED Christmas lights	--	--	5	5	14	14	30%	658	25,241	25,241
Public education and outreach	Programmable thermostat - Space Heating, Existing Single Family Detached	--	--	15	15	2,063	2,063	30%	67	387,019	387,019
Public education and outreach	Programmable thermostat - Space Cooling, Existing Single Family Detached	--	--	15	15	138	138	30%	175	67,620	67,620
Public education and outreach	Timer - Outdoor - Light	--	--	10	10	41	41	30%	120	13,810	13,810
Public education and outreach	Timer - Indoor - Light	--	--	10	10	219	219	30%	36	22,075	22,075
Public education and outreach	Timer - Indoor - Air conditioner	--	--	10	10	98	98	30%	36	9,878	9,878
Public education and outreach	Ceiling Fan	--	--	10	10	--	0	30%	74	18,607	18,607
Public education and outreach	EnerGuide for Existing homes - space heating	--	--	25	25	--	78	30%	0	0	0
TOTAL										949,873	949,873

Table 3 - Assumption comparison table for 2006 Third Tranche Programs

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Municipal new construction	Halogen (20W)	NA	8760	NA	10	NA	482	0%	9	13,009	NA
Municipal new construction	PH metal halide (945W)	NA	8760	NA	10	NA	1,183	0%	8	28,382	NA
Municipal new construction	PH metal halide (450W)	NA	8760	NA	10	NA	88	0%	4	1,051	NA
Municipal new construction	PH metal halide (185W)	NA	8760	NA	10	NA	964	0%	22	63,598	NA
Municipal new construction	1lamp T8 (30W)	4000	8760	24	10	68	149	0%	19	8,488	3,876
Municipal new construction	1lamp T8-3' (25W)	4000	8760	24	10	52	114	0%	8	2,733	1,248
Municipal new construction	1lamp T8-2' (19W)	4000	8760	24	10	40	88	0%	3	788	360
Municipal new construction	2lamp T8-3' (52W)	4000	8760	24	10	96	210	0%	10	6,307	2,880
Municipal new construction	2lamp T8 4' (62W)	4000	8760	24	10	64	140	0%	338	142,122	64,896
Municipal new construction	2lamp T8 4' (59W)	4000	8760	24	10	76	166	0%	103	51,430	23,484
Municipal new construction	1lamp T8-4' (40W)	4000	8760	24	10	28	61	0%	4	736	336
Municipal new construction	3lamp T8-4' (83W)	4000	8760	24	10	180	394	0%	15	17,739	8,100
Municipal new construction	2lamp T8 4' (64W)	4000	8760	24	10	56	123	0%	46	16,924	7,728
Municipal new construction	2lamp T8 2' (19W)	4000	8760	24	10	40	88	0%	3	788	360
Municipal new construction	12W CF EXIT sign	8760	8760	10	10	158	158	0%	34	16,083	16,083
Municipal new	26W CFL	4000	8760	2	1	296	648	0%	3	1,945	1,998

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
construction											
Municipal new construction	42W CFL	4000	8760	2	1	432	946	0%	39	36,897	37,908
Municipal new construction	94W metal halide	NA	8760	NA	10	NA	929	0%	20	55,714	NA
Municipal new construction	56W CFL	4000	8760	2	1	576	1,261	0%	13	16,399	16,848
Municipal new construction	91W CFL	4000	8760	2	1	836	1,831	0%	50	91,542	94,050
Municipal new construction	94W CFL	4000	8760	2	1	824	1,805	0%	7	12,632	12,978
Municipal building retrofit	26W CFL fixture w/EM ballast	4000	4380	NA	10	296	324	0%	12	3,851	2,637
Municipal building retrofit	3W LED EXIT sign	8760	8760	10	15	237	237	0%	101	23,650	23,650
Municipal building retrofit	2lamp T8 32W (58W)	4000	2600	24	10	80	52	0%	333	17,143	26,374
Municipal building retrofit	2lamp T8 32W (73-78W)	4000	2910	24	10	333	242	0%	6	1,435	1,972
Municipal building retrofit	4lamp T8 32W (112W)	4000	2080	16	10	481	250	0%	36	8,896	17,107
Municipal building retrofit	6lamp T8 32W (202-226W)	4000	4160	16	10	1,032	1,073	0%	89	94,567	90,930
Municipal building retrofit	15W traffic light	NA	8760	NA	7	NA	1,183	0%	52	60,880	NA
Municipal building retrofit	7.5W pedestrian light	NA	8760	NA	7	NA	810	0%	48	38,505	NA
Municipal building retrofit	65W metal halide	NA	4380	NA	10	NA	372	0%	2	737	NA
Municipal building retrofit	65W metal halide	NA	4380	NA	10	NA	482	0%	1	477	NA
Municipal building retrofit	28W CFL	4000	4380	2	10	488	534	0%	1	529	362
Municipal building	1lamp T8 (30W)	4000	2600	24	10	80	52	0%	18	927	1,426

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
retrofit											
Municipal building retrofit	2lamp T8-2' (50W)	4000	2600	24	10	80	52	0%	10	515	792
Municipal building retrofit	2lamp T8 4' (59W)	4000	2600	24	10	148	96	0%	13	1,238	1,905
Municipal building retrofit	3lamp T8-4' (87W)	4000	4380	24	10	276	302	0%	20	5,984	5,465
Municipal building retrofit	2lamp T8 4' (59W)	4000	2080	24	10	163	85	0%	9	760	1,461
Municipal building retrofit	10lamp T5-HO (fixture input 562W)	NA	6550	NA	10	NA	3,393	0%	48	161,231	NA
Municipal building retrofit	15W CFL	4000	8760	2	1	240	526	0%	2	347	356
Municipal building retrofit	65W metal halide	NA	4380	NA	10	NA	153	0%	8	1,214	NA
Municipal building retrofit	23W CFL	4000	4380	2	2	308	337	0%	1	223	229
TOTAL										1,008,415	467,799

Table 4 - Assumption comparison table for 2006 Post Third Tranche Programs

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Multi-unit residential lighting retrofit	2lamp T8 32W (51W)	3150	4000	24	10	85	108	30%	29	3,289	2,590
Multi-unit residential lighting retrofit	2lamp T8 32W (51W)	3150	8760	24	10	85	237	30%	70	17,384	6,251

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free riders hip	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Multi-unit residential lighting retrofit	2lamp T8 32W (58-59W)	3150	728	24	10	307	71	30%	2	150	648
Multi-unit residential lighting retrofit	4lamp T8 32W (112W)	3150	8760	16	10	378	1,051	30%	93	102,650	36,912
Multi-unit residential lighting retrofit	1lamp T8 (30W)	3150	4000	24	10	54	68	30%	113	8,068	6,354
Multi-unit residential lighting retrofit	1lamp T8 (30W)	3150	8760	24	10	54	149	30%	218	34,088	12,258
Multi-unit residential lighting retrofit	2lamp T8 32W (51W)	3150	8760	24	10	145	403	30%	128	54,158	19,475
Multi-unit residential lighting retrofit	1lamp T8-3' (24W)	3150	4000	24	10	41	52	30%	214	11,684	9,201
Multi-unit residential lighting retrofit	1lamp T8-2' (14W)	3150	4000	24	10	41	52	30%	24	1,310	1,032
Multi-unit residential lighting retrofit	13W CFL	3150	4000	3	2	148	188	30%	1,901	250,172	281,443
Residential coupon program - Spring and fall EKC	Energy Star® Compact Fluorescent Light Bulb			8	4	43	104	10%	18,328	5,166,420	2,127,931
Residential coupon program - Spring and fall EKC	Electric Timers			NA	20	183	183	10%	514	253,883	253,883
Residential coupon program - Spring and fall EKC	Programmable Thermostats			15	15	182	216	10%	224	130,352	109,834
Residential coupon program - Spring and fall EKC	Energy Star® Ceiling Fans			10	20	90	141	10%	170	64,731	41,226
Residential coupon program - Spring and fall EKC	Energy Star® Compact Fluorescent Light Bulb			8	4	43	104	10%	27,176	7,660,272	3,155,093
Residential coupon program - Spring and fall EKC	Seasonal Light Emitting Diode Light String			5	30	14	31	10%	6,541	543,080	241,958
Residential coupon program - Spring and fall EKC	Programmable Thermostats			15	18	75	522	10%	431	607,829	87,432
Residential coupon program - Spring and fall EKC	Dimmers			10	10	24	139	10%	341	127,959	21,817
Residential coupon program - Spring and fall EKC	Indoor Motion Sensors			10	20	64	209	10%	122	69,038	21,141
Residential coupon program - Spring and fall EKC	Programmable Baseboard Thermostats			15	18	2,063	1,466	10%	26	101,678	143,055

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
General service lighting	2 T8 32W (58W) reflectorized w/E	4450	4000	24	10	436	392	30%	88	18,110	20,148
General service lighting	3W LED EXIT sign	8760	8760	10	10	237	237	30%	238	29,553	29,553
General service lighting	2lamp T8 32W (51W)	4450	4000	24	10	120	108	30%	1,030	58,401	64,971
General service lighting	2lamp T8 32W (58-59W)	4450	4000	24	10	436	392	30%	548	112,778	125,466
General service lighting	2lamp T8 32W (73-78W)	4450	4000	24	10	369	332	30%	1,151	200,619	223,189
General service lighting	2lamp T8 32W (73-78W)	4450	4000	24	10	267	240	30%	12	1,512	1,682
General service lighting	4lamp T8 32W (112W)	4450	4000	16	10	534	480	30%	24	6,048	6,728
General service lighting	6lamp T8 32W (174W)	4450	4000	16	10	1,273	1,144	30%	57	34,234	38,086
General service lighting	6lamp T8 32W (202-226W)	4450	4000	16	10	1,148	1,032	30%	86	46,595	51,837
General service lighting	4lamp T5-HO 54W (232W)	5000	4000	16	10	1,140	912	30%	58	27,770	34,713
General service lighting	6lamp T8 32W (174W)	4450	4000	16	10	538	484	30%	37	9,402	10,459
General service lighting	2lamp T8 32W (73-78W)	4450	4000	24	10	325	292	30%	11	1,686	1,876
General service lighting	1lamp T8 (30W)	4450	4000	24	10	76	68	30%	118	4,213	4,687
General service lighting	1lamp T8 (30W)	4450	8760	24	10	76	149	30%	70	5,473	2,780
General service lighting	1lamp T8 (24W)	4450	8760	24	10	45	88	30%	204	9,382	4,766
General service lighting	2lamp T8-3' (40W)	4450	4000	24	10	120	108	30%	113	6,407	7,128
General service lighting	4lamp T8 (100W)	4450	4000	16	10	249	224	30%	25	2,940	3,271
General service lighting	4lamp T8 (100W)	4450	8760	16	10	218	429	30%	27	6,084	3,091
General service lighting	4lamp T8 (102W)	4450	8760	16	10	579	1,139	30%	118	70,549	35,838
General service lighting	1lamp T8-2' (14W)	4450	8760	24	10	58	114	30%	210	12,555	6,378
General service lighting	2lamp T8-2' (30W)	4450	4000	24	10	107	96	30%	113	5,695	6,336

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
General service lighting	2lamp T8-2' (32W)	4450	8760	24	10	205	403	30%	29	6,135	3,117
General service lighting	2lamp T8-4' (78W)	4450	8760	24	10	-18	-35	30%	40	-736	-374
General service lighting	2lamp T8 4' (59W)	4450	8760	24	10	303	596	30%	38	11,884	6,037
General service lighting	7W CFL	4450	4000	2	2	147	132	30%	232	8,039	8,943
General service lighting	9W CFL	4450	4000	2	2	138	124	30%	315	10,253	11,407
General service lighting	11W CFL	4450	4000	2	2	396	356	30%	30	3,738	4,159
General service lighting	13W CFL	4450	4000	2	2	209	188	30%	1,242	81,724	90,918
General service lighting	15W CFL	4450	4000	2	2	267	240	30%	23	1,449	1,612
General service lighting	65W CFL	4450	4000	2	3	1,936	1,740	30%	40	30,450	22,838
General service lighting	23W CFL	4450	4000	2	3	343	308	30%	140	18,865	14,149
TOTAL										16,050,003	7,425,319

Table 5 - Assumption comparison table for 2007 Third Tranche Programs

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Home developers	2lamp 4' T8 (46W)	3150	8760	24	3	95	263	30%	171	31,457	11,312
Home developers	2lamp 2' T8 (27W)	3150	8760	24	3	66	184	30%	110	14,165	5,094

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Home developers	1lamp 2' T8 (15W)	3150	8760	24	3	38	105	30%	44	3,238	1,164
Home developers	2lamp 4' T8 (59W)	3150	8760	24	3	214	596	30%	98	40,864	14,694
Home developers	2lamp 4' T8 (74W)	3150	8760	24	3	665	1,848	30%	7	9,057	3,257
Home developers	2.4W LED EXIT sign	8760	8760	24	25	242	242	30%	71	12,016	12,016
Home developers	2.4W LED EXIT sign	8760	8760	24	25	680	680	30%	64	30,454	30,454
Home developers	13W CFL	3150	4368	3	1	148	205	30%	4,329	354,602	511,445
Home developers	14W CFL	3150	4368	3	1	145	201	30%	54	4,329	6,244
Home developers	9W CFL	3150	4368	3	1	50	70	30%	669	18,655	26,907
Home developers	7W CFL	3150	4368	3	1	104	144	30%	934	42,880	61,846
Home developers	23W CFL	3150	4368	3	1	242	336	30%	20	2,142	3,090
Home developers	4lamp 4' T8 (112W)	3150	8760	16	3	290	806	30%	83	46,824	16,837
Home developers	4lamp 4' T8 (95W)	3150	728	16	3	342	79	30%	1	56	240
Home developers	4lamp 4' T8 (98W)	3150	1450	16	3	182	84	30%	1	59	128
Home developers	2lamp 4' T8 (51W)	3150	8760	24	3	85	237	30%	74	12,252	4,406
Home developers	1lamp 4' T8 (28W)	3150	364	24	3	182	21	30%	25	363	3,142
Home developers	1lamp 4' T8 (30W)	3150	8760	24	3	28	79	30%	34	1,876	675
Home developers	1lamp 3' T8 (22W)	3150	8760	24	3	47	131	30%	60	5,519	1,985
Home developers	9W CFL	3150	728	3	1	130	30	30%	16	191	1,649
Home developers	13W CFL	3150	728	3	1	273	63	30%	1	25	219
Staff development	15W CFL	3150	4000	3	2	142	180	30%	260	65,520	51,597
Municipal new construction	Wind turbine	NA	8760	NA	30		26,280	0%	1	0	
Municipal Building Retrofit	15W CFL	3150	4000	3	2	142	180	0%	2,200	554,400	436,590

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Public education & outreach	13W CFL	3150	4000	3	2	148	188	30%	800	210,560	165,816
TOTAL										1,461,503	1,370,805

Table 6 - Assumption comparison table for 2007 Post Third Tranche Programs

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
General service lighting	8lamp T5	4450	6400	4	9	2,488	3,578	30%	76	64,712	44,995
General service lighting	2lamp T5	4450	6400	24	9	499	717	30%	32	5,459	3,796
General service lighting	4lamp T5	4450	6400	4	9	2,924	4,205	30%	51	51,038	35,487
General service lighting	2lamp 4' T8	4450	5500	24	11	454	561	30%	130	17,357	14,044
General service lighting	6lamp T8 HB	NA	8760	NA	11		1,542	30%	82	30,089	
General service lighting	3lamp T8 EB troffer	4450	8760	24	9	282	556	30%	42	5,560	2,825
General service lighting	2lamp 4' T8 EB	4450	8760	24	9	82	162	30%	22	849	431
General service lighting	6lamp 4' T8 (158W)	4450	6240	16	10	1,197	1,679	30%	25	9,987	7,122
General service lighting	6lamp 4' T8 (220W)	4450	6240	16	10	921	1,292	30%	3	922	658
General service lighting	6lamp 4' T8 (158W)	4450	6240	16	10	872	1,223	30%	60	17,465	12,455
General service lighting	2.4W EXIT sign	8760	8760	10	25	242	242	30%	14	806	806
General service lighting	Remove 4lamp T8	4450	6240	NA	5	525	736	30%	6	1,051	750
General service lighting	Remove 400W metal halide	4450	6240	NA	5	1,900	2,664	30%	1	634	452

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
General service lighting	2lamp 4' T8 51W	4450	2912	24	5	121	79	30%	36	674	1,029
General service lighting	4lamp 4' T8 (112W)	4450	8760	16	5	534	1,051	30%	27	6,755	3,431
General service lighting	2.4W EXIT sign	8760	8760	10	25	242	242	30%	8	460	460
Residential coupon program - spring EKC	15 W CFL			8	8	43	43	22%	32,784	2,199,129	2,199,129
Residential coupon program - spring EKC	20 W+ CFLs			8	8	53	62	22%	5,337	517,015	437,923
Residential coupon program - spring EKC	Project Porchlight CFLs			8	8	43	43	24%	6,899	450,904	450,904
Residential coupon program - spring EKC	Energy Star Ceiling Fan			10	10	90	90	45%	264	26,122	26,122
Residential coupon program - spring EKC	Furnace Filter			1	1	38	38	45%	1,066	22,094	22,094
Residential coupon program - spring EKC	Solar Lights			5	5	10	33	87%	4,209	35,894	10,724
Residential coupon program - spring EKC	Outdoor Motion Sensor			10	10	160	160	45%	421	74,011	74,011
Residential coupon program - spring EKC	Dimmer Switch			10	10	24	24	45%	268	6,975	6,975
Residential coupon program - spring EKC	Energy Star Light Fixtures			16	16	123	123	45%	127	17,215	17,215
Residential coupon program - spring EKC	SLEDs			5	5	14	14	51%	8,686	116,612	116,612
Residential coupon program - spring EKC	T8			16	18	37	37	23%	250	14,297	14,297
Residential coupon program - spring EKC	Programmable Thermostat			15	15	75	75	45%	257	21,238	21,238
Residential coupon program - spring EKC	Power Bar with Timer			10	10	72	72	23%	116	12,987	12,987
Residential coupon program - spring EKC	Lighting Control Devices			10	10	72	72	45%	1,349	107,106	107,106

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Residential coupon program - spring EKC	13W CFL			8	8	43	43	30%	8,000	481,600	481,600
TOTAL										4,317,017	4,127,677

Table 7 - Assumption comparison table for 2008 Post Third Tranche Programs

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Residential coupon program - EKC	Air Conditioner/Furnace Filters	--	--	1	1	38	38	65%	536	7,094	7,094
Residential coupon program - EKC	Energy Star® Qualified Compact Fluorescent Floods (Indoor & Outdoor)	--	--	7	7	77	88	63%	5,819	191,023	168,090
Residential coupon program - EKC	Energy Star® Qualified Light Fixtures	--	--	16	16	123	133	67%	9,030	402,268	370,392
Residential coupon program - EKC	Heavy Duty Timers	--	--	10	10	511	301	67%	204	20,481	34,747
Residential coupon program - EKC	T8 Fluorescent Fixtures	--	--	16	16	37	37	67%	1,643	20,076	20,076
Residential coupon program - EKC	ENERGY STAR Decorative CFLs	--	--	4	4	14	30	61%	20,958	245,544	110,738
Residential coupon program - EKC	ENERGY STAR Dimmable CFLs	--	--	6	6	98	98	62%	1,351	49,778	49,778
Residential coupon program - EKC	Power Bars with Timers	--	--	10	10	72	53	59%	97	2,104	2,857

Program	Energy efficient technology	Annual operating time OPA	Annual operating time filed	Measure life OPA	Measure life filed	Annual kWh energy savings OPA	Annual kWh energy savings filed	% Free ridership	Units	Total kWh energy savings filed	Total kWh energy savings OPA
Residential coupon program - EKC	Programmable Thermostats - Baseboard	--	--	15	15	75	64	53%	570	16,871	19,903
Residential coupon program - EKC	Car block heater timer	--	--		n/a		n/a	100%		0	0
Residential coupon program - EKC	Energy Star® Qualified Compact Fluorescent Light Bulbs	--	--	8	8	43	53	48%	12,406	343,328	278,759
Residential coupon program - EKC	Lighting Control Devices	--	--	10	10	72	102	55%	1,766	81,905	57,843
Residential coupon program - EKC	Awnings	--	--		n/a	0	0	100%	390	0	0
Residential coupon program - EKC	Window Films	--	--		n/a	0	0	100%	6,284	0	0
Residential coupon program - EKC	Electric Water Heater Blankets	--	--		n/a	0	0	100%	193	0	0
Residential coupon program - EKC	Pipe Wrap	--	--	6	6	38	38	53%	11,573	205,913	205,913
Residential coupon program - EKC	Low-Flow Toilets	--	--		n/a	0	0	100%	1,514	0	0
Residential coupon program - EKC	Keep Cool – Dehumidifier	--	--	12	12	500	500	65%	4	632	632
Residential coupon program - EKC	Keep Cool – Room Air Conditioner	--	--	9	9	141	141	58%	4	239	239
Residential coupon program - EKC	Rewards for Recycling – Dehumidifier	--	--	12	12	500	500	56%	108	23,847	23,847
Residential coupon program - EKC	Rewards for Recycling – Room Air Conditioner	--	--	9	9	141	141	56%	117	7,256	7,256
Residential coupon program - EKC	Rewards for Recycling - Halogen Lamp	--	--	16	16	275	275	52%	93	12,349	12,349
TOTAL										1,630,708	1,370,514

c) The use of the OPA Measures and Assumptions list as a source of assumptions for the Residential and GS < 50 kW programs leads to a Third Tranche Residential and GS < 50 kW LRAM claim that is 21% smaller. This is shown in the table below.

Table 8 - Comparison of energy savings and LRAM claim for Third Tranche Residential and GS < 50 kW programs

Program	Year	Residential kWh energy savings (as filed)	Residential kWh energy savings (OPA assumptions)	GS < 50kW kWh energy savings (as filed)	GS < 50kW kWh energy savings (OPA assumptions)	Final Third Tranche LRAM claim (as filed)	Final Third Tranche LRAM claim (OPA assumptions)
Home developers program	2007			631,023	716,802	\$15,783	\$17,929
Municipal building retrofit	2006			423,107	174,665	\$13,647	\$5,634
	2007	554,400	436,590			\$10,435	\$8,218
Municipal new construction	2006			585,308	293,133	\$10,789	\$5,403
Public education and outreach	2005	949,873	949,873			\$14,081	\$14,081
	2007	210,560	165,816			\$3,963	\$3,121
Staff development program	2007	65,520	51,597			\$1,233	\$971
TOTAL		1,780,353	1,603,876	1,639,438	1,184,601	\$69,932	\$55,357

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 52

Question:

Ref: Response to Interrogatory from VECC #33, page 3 of 4, Footnote #5

Preamble: The main response states:
“The input assumptions in the independent third party review for the 13W CFL giveaway run through the 2007 Post Third Tranche Residential Coupon program used inputs for a 15W CFL from the 2008 OEB Measures and Assumptions list prorated to a 13W CFL. This measure has now been updated to use the energy savings assumptions for a 15W CFL found in the 2008/2009 OPA Measures and Assumptions list when calculating its total energy savings and related LRAM claim.”

- a) Explain why for third tranche and post third tranche programs only the 13/15 W CFL giveaway input assumption was updated to reflect the OPA Measures and Assumptions List, rather than all screw-in CFLs.
 - b) Does a 13/15 w CFL installed under third tranche programs save more or less than one installed under OPA Programs? Provide/compare the input assumptions for each?
 - c) Is BHI/Indeco aware the OPA changed its input Assumptions for CFLs starting with the 2007 EKC campaigns? Provide and compare the OPA assumptions for 13/15 W CFLs for 2006 and for 2007-08 and provide a breakdown of the number of 13/15 w CFLs and associated kwh claimed by BHI in each of 2006, 2007 and 2008.
 - d) Provide copies of material referenced in footnote 5. Indicate the affiliation and position of the individuals named and their relationship to BHI
-

Response:

- a) The energy savings associated with CFLs depend upon a number of factors, including:
 - The wattage of the CFL
 - The wattage and other technological characteristics of the lighting unit being replaced
 - The usage pattern of the CFL (e.g. hours per year)

These do vary from installation to installation, or program to program. For example, the usage patterns differ between bulbs used in residences and those used in multi-unit residential buildings. Similarly, there may be differences in usage patterns within a residence.

In estimating energy savings from programs, BHI wishes to use the best-available information for the particular program or application of the measure. The ‘best’ information comes from programs that have been subjected to a 3rd party, independent evaluation. These exist for the OPA sponsored program, and are used for these programs.

For the commercial lighting program, BHI’s independent lighting program examined the specific installation and technology, and consulted with customers to determine hours of use for new lighting,

including CFLs, installed. The forms where this information was recorded were reviewed for reasonableness and completeness in the independent review.

In the absence of program- or implementation-specific information, information from the OPA Measures and Assumptions list was used. These values are estimated based on a review of the literature, and represent 'typical' or average values on usage.

The OPA Measures and Assumptions list provides values to be used when information is not known about the usage characteristics, and it was these that were adopted for the CFL give-away.

- b) As described above, there are differences in savings for CFLs in different circumstances. The table below summarizes the usage or energy saving value for CFLs in different programs and different applications. Note that the only OPA program that has 13W and 15W CFLs is the Residential EKC program, which is reported as a Post Third Tranche program.

Table 1 - 13W and 15W CFLs in Third Tranche and Post Third Tranche programs

Class	Funding Source	Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
GS<50	Third Tranche	2006	Municipal building retrofit	15W CFL	8,760	1	4	526	0%	2	347
GS<50	Third Tranche	2007	Home Developers Program	13W CFL	4,368	1	5	205	10 / 30%	4,329	354,602
GS<50	Third Tranche	2007	Home Developers Program	13W CFL	728	1	6	63	10 / 30%	1	25
Residential	Third Tranche	2005	Public education and outreach	15W CFL	--	8	2	43	10 / 30%	3,159	380,344
Residential	Third Tranche	2007	Municipal building retrofit	15W CFL	4,000	2	4	180	10 / 30%	2,200	554,400
Residential	Third Tranche	2007	Public education and outreach	13W CFL	4,000	2	4	188	10 / 30%	800	210,560
Residential	Third Tranche	2007	Staff Development Program	15W CFL	4,000	2	4	180	10 / 30%	260	65,520
GS<50	Post Third Tranche	2006	General Service Lighting Program	13W CFL	4,000	2	8	188	10 / 30%	1,242	81,724
GS<50	Post Third Tranche	2006	General Service Lighting Program	15W CFL	4,000	2	10	240	10 / 30%	23	1,449
Residential	Post Third Tranche	2006	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Compact Fluorescent Light Bulb	--	4	3	104	10%	18,328	5,166,420
Residential	Post Third Tranche	2006	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Compact Fluorescent	--	4	3	104	10%	27,176	7,660,272

Class	Funding Source	Year	Program	Energy Efficient Technology	Annual Operating Time	Measure Life	Equipment Cost (\$)	Energy Savings (kWh)	Free Ridership	Units	Total energy savings (kWh)
				Light Bulb							
Residential	Post Third Tranche	2007	Residential Coupon Program - Spring EKC Program	15 W CFL	--	8	2	43	22%	32,784	2,199,129
Residential	Post Third Tranche	2007	Residential Coupon Program - Spring EKC Program	13W CFL	4,000	2	7	43	10 / 30%	8,000	481,600
Residential	Post Third Tranche	2008	Residential Coupon Program - Spring and Fall EKC Program	Energy Star® Qualified Compact Fluorescent Light Bulbs	--	8	Not used	53	48%	12,406	343,328

c) OPA-estimated savings for 15W CFLs over time are summarized in the following table:

Table 2 - OPA assumptions for a 15W CFL for 2006-2008

OPA Assumption list	Annual energy savings (kWh)	Measure life	Source
2006 OPA assumptions	104	4	2006 Spring EKC calculator. Filed as Burlington_IRR_VECC_q52a_20091221.xls
2007 OPA assumptions	44.3	6	Page 30-31 of http://www.powerauthority.on.ca/Storage/53/4854_FINAL_Measures_&_Assumptions_Oct_15.pdf
2008 OPA assumptions	43	8	Page 93-94 of http://www.powerauthority.on.ca/Storage/97/9274_V_1_02_2009_MA_List_-_MM_14Apr_2009.pdf

Table 1 in response to Q#52 part b) provides a breakdown of the number of 13/15 w CFLs and associated kWh claimed by BHI in each of 2006, 2007 and 2008.

d) Footnote 5 of the response to VECC #33 references e-mails and spreadsheets provided to Burlington Hydro by the OPA or its consultant regarding the 2006 EKC program. Only the equipment costs listed in the calculators were used in BHI's SSM claim because all other 2006 EKC information used for LRAM/SSM has been superseded by the information provided by the 2006-2008 OPA results for BHI. The calculators were provided only in response to VECC's request for an EKC calculator.

E-mails related to Burlington Hydro were directed to Anne Rampado (Manager Regulatory Affairs) and Gerry Smallegange (then Chief Operating Officer). E-mails that were not specific to Burlington Hydro results often went to more than one LDC and Burlington is not aware of the positions of individuals at other utilities.

The first of these is an e-mail and accompanying attachments from Raegan Bunker of the OPA with results from the Spring 2006 program and a TRC calculator. The calculator is filed as Burlington_IRR_VECC_q52a_20091221.xls. The e-mail is reproduced here:

From: "Raegan Bunker" <Raegan.Bunker@powerauthority.on.ca>
 To: <arampado@burlingtonhydro.com>, <gsmallegange@burlingtonhydro.com>, <bshortreed@camhydro.com>, <rskevington@camhydro.com>, <allan.frederick@ssmpuc.com>, <john.cesco@ssmpuc.com>
 Date: 02/02/2007 05:22 PM
 Subject: Spring 2006 EKC Program Report (email 1 of 2)
 Sent by: "Jacquie Davidson" <Jacquie.Davidson@powerauthority.on.ca>

Dear LDC partner,
 On behalf of the Ontario Power Authority, I would like to thank you and your team for participating in and supporting the Spring 2006 Every Kilowatt Counts campaign. The results are now in and I am pleased to report that the Spring campaign was a success. Attached with this email are a

number of documents that describe the results of the program:

- Final program report – by Mearie Management Inc.
- TRC analysis tool and instruction guide

I will also be email you, under separate email cover, a customized coupon redemption report for your LDC. Please note that the coupon redemption counts and the TRC analysis are subject to third party verification and may therefore change.





The preliminary results of the Fall 2006 campaign will be available within a couple of weeks. Planning is also underway for the 2007 program. Early next week, we will be sending you a briefing on the 2007 program along with instructions and deadlines for signing up for the program and for submitting your mailing lists and logos to the printer.

If you have any questions, please contact me.

Cheers,
Raegan

Raegan Bunker
Manager, Program Delivery
Program Operations and Sector Development
Ontario Power Authority
T. 416-969-6053 F. 416-967-1947
120 Adelaide St. W, Suite 1600
Toronto, ON M5H 1T1

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 [TRC_Calculator_Guide_ver2.2.pdf](#)  [Every Kilowatt Counts TRC CalculatorVer2.2.xls](#)  [Spring 2006 EKC letter to LDCs.pdf](#)
 [Spring 2006 EKC - Mearie Program Report.pdf](#)

The second of these from Chris Bodanis of EnergyShop.com provided coupon results and a calculator for the Fall 2006. The spreadsheets have been filed as Burlington_IRR_VECC_q52b_20091221.xls and Burlington_IRR_VECC_q52c_20091221.xls. The e-mail that accompanied these is reproduced below.

From: "Chris Bodanis" <chris.bodanis@energyshop.com>
To: <GSmallegange@burlingtonhydro.com>, <arampado@burlingtonhydro.com>
Cc: "Raegan Bunker" <Raegan.Bunker@powerauthority.on.ca>
Date: 03/03/2007 02:30 PM
Subject: 2006 Fall EKC Results - Burlington

Hello,

Attached you will find your detailed results report for the 2006 Fall Every KiloWatt Counts

Campaign.

Your report identifies the total number of coupons redeemed from the direct mail booklet and also provides a breakdown by City/Town of in-store retailer coupons redeemed.

We have also included a TRC calculator that has been pre-populated with the overall results of the Fall program and can be used for additional calculations.

Please note that, as was the case with the spring results, the coupon redemption counts and the TRC analysis are subject to third party verification and may therefore change.

The final report for the program is to follow.

Should you have any questions regarding these results you may contact Raegan Bunker (416-969-6053) or myself.

Cheers,

Chris

Chris Bodanis
CDM Programs
Energyshop.com
905-737-5041 x117



Burlington Hydro Fall 2006 EKC Coupon Results.xls Fall 2006 EKC Calculator.xls

To summarize, the following documents are attached:

- “Every Kilowatt Counts User Guide” prepared by SeeLine Group (file name TRC_Calculator_Guide_ver2.2.pdf in above e-mail);
- “Instructions for Calculating Total Resource Cost Test Results” (file name Every Kilowatt Counts TRC CalculatorVer2.2.xls, also filed as excel file with name Burlington_IRR_VECC_q52a_20091221.xls);
- OPA Letter to LDC Partner (file name Spring 2006 EKC letter to LDCs.pdf);
- “Residential Education and Coupon Incentive (“Every Kilowatt Counts”) Program Spring 2006 Final Report” (file name Spring 2006 EKC – Mearie Program Report.pdf);
- “Spring Every Kilowatt Counts Final Results” (file name Burlington Hydro Fall 2006 EKC Coupon Results.xls also filed as excel file with name Burlington_IRR_VECC_q52b_20091221.xls); and
- “Instructions for Calculating Total Resource Cost Test Results – 2006 Fall Every KiloWatt Counts Campaign” (file name Fall EKC Calculator.xls, also filed as excel file with name Burlington_IRR_VECC_q52c_20091221.xls);



**Instructions for Calculating Total Resource Cost Test Results for
Ontario Power Authority's
2006 Spring "Every KiloWatt Counts" Campaign:
Use of the TRC Calculator Version 2.2**

USER GUIDE

Prepared by



SUMMERHILL GROUP
BETTER CHOICES FOR CHANGING MARKETS

December, 2006

Background

As part of its on-going CDM efforts, the Ontario Power Authority (OPA) requested that SeeLine Group Ltd. (SLG), with the support of the Summerhill Group, develop a spreadsheet-based software Calculator to facilitate the calculation of the Total Resource Cost Test (TRC). The focus of the Calculator is the technologies promoted by the Spring Every KiloWatt Counts Program:

- Compact Fluorescent Lamps - 11 W, 15 W and 25 W.
- ENERGY STAR Ceiling Fans for residential application.
- Electric Timers for outdoor and indoor residential lighting.
- Programmable Thermostats for residential application.

The Calculator is intended to allow Local Distribution Companies to calculate their own TRC results, based upon coupon redemptions in their franchise area. The Calculator is provided as a user-friendly ExcelTM based spreadsheet. LDC users simply input their respective data (provided by the OPA) in the appropriate fields and the Calculator automatically generates the TRC results.

The Calculator comes with all the savings, equipment costs, free rider and equipment life estimates that drive the TRC analysis. Users are not required to provide any of this information. For a complete discussion of this information, see the companion document, "Every KiloWatt Counts" TRC Assessment."¹

Users of the Calculator require a Windows based operating system and a version of Microsoft ExcelTM.

As indicated, the Calculator is an ExcelTM spreadsheet with two Tabs. The first tab is the instruction sheet, containing the same information as provided in this Manual. The second tab is the input and results sheet where the User enters the specific data required and the Calculator automatically calculates and shows the TRC results.

¹ "Every KiloWatt Counts TRC Assessment", SeeLine Group Ltd, December 8, 2006.

Step One – Enter Program Data

Note that data entries are required for the **yellow shaded** fields only.

1a. Enter a discount rate in cell C24. For the purposes of calculating the TRC, the Ontario Energy Board has recommended LDCs to use a discount rate equal to the after-tax cost of capital. For further direction on the specification of the discount rate, refer to the Ontario Energy Board “Total Resource Cost Test Guide, Revised October 2, 2006” (OEB TRC Guide).² The Calculator has a default value of 4%, representing a “societal” perspective.

1b. Enter number of products sold for each of the four technologies in cells C28 to C31.

Example: The total number of compact fluorescent bulbs sold is entered in cell C28³

*****PLEASE NOTE: the OPA has given you 2 sets of data for your LDC. The first outlines the number of mail-in coupons redeemed in your territory. The second set of data is a list of every city in Ontario and the number of in-store coupons redeemed in that city. It is up to you to determine the total number of in-store coupons from your service cities, and add those to the mail-in coupons redeemed.***

1c. Enter total program expenditures in cell C32. These costs include any marketing, support or evaluation costs that are associated with delivering the ‘Every Kilowatt Counts’ program. This includes incremental staff costs and external consultants that might have been hired to operate aspects of the program. Coupon redemption value or incentives are considered transfers within the TRC test are not included in the analysis.⁴

For the purposes of this example, the Calculator has been loaded with data representing the final provincial results for the Every KiloWatt Counts Program.

The following schematic shows the entry fields in the Calculator:

² Ontario Energy Board “Total Resource Cost Test Guide, Revised October 2, 2006”, Page 5.

³ Note that there are 2.77 bulbs purchased for each coupon redeemed

⁴ IBID. Page 10.

Part 1. Enter Data Here (in yellow shaded area: cells C22 and C26:C30)

LDC Information	
Discount Rate	4.00%

Products Sold	
CFLs	1,338,276
Ceiling Fans	12,415
Timers	37,518
Program Thermostats	16,320
Program Costs	\$5,318,155

Step 2 - Total Resource Cost Test Results by Technology

Where available, the technology savings assumptions were generated using the approved Ontario Energy Board Measures List⁵ data.

A composite technology savings estimate was derived based on various products eligible for coupon redemption and electricity market share.

Savings and equipment cost are adjusted automatically by the Calculator for the free ridership rate.

The following table shows the key savings, equipment cost, equipment life and free ridership estimates for each technology. This Table resides in the Instructions tab of the Calculator.

	Energy Savings Winter Peak (kW.h)	Energy Savings Winter Mid (kW.h)	Energy Savings Winter Off Peak (kW.h)	Energy Savings Summer Peak (kW.h)	Energy Savings Summer Mid (kW.h)	Energy Savings Summer Off Peak (kW.h)	Energy Savings Shoulder Mid (kW.h)	Energy Savings Shoulder Off (kW.h)	Summer On Peak (kW)	Free Ridership	EE Technology Life	Incremental Equipment Cost, \$
<i>CFL</i>	15.43	7.71	20.27	0.00	11.71	13.90	17.40	17.63	0	10%	4	\$ 2.50
<i>Ceiling Fan</i>	9.66	11.04	25.91	8.38	12.57	26.05	20.95	26.05	0.014	10%	20	\$ 25.00
<i>Timer</i>	27.06	13.53	35.56	0.00	20.53	24.39	30.52	30.91	0	10%	20	\$ 12.50
<i>Programmable Thermostat</i>	23.9	25.4	59.6	14.8	9.7	30.6	24.1	30.0	0.050	10%	18	\$ 65.00

2a. Calculation of TRC Benefits

The TRC assesses CDM costs and benefits from a societal perspective. The benefits are defined as “avoided costs”. This represents the benefit to society of not having to provide an extra unit of supply – typically expressed as kW and/or kWh. For electricity, supply costs include generation, transmission and distribution.

$$= \text{energy/demand savings} \times \text{avoided cost} \times \text{participants} \times (1 - \text{free ridership})^6$$

⁵ IBID. Page 26.

2b. Calculation of TRC Costs

From the perspective of the TRC test, LDC program costs include any marketing and support costs that are associated with delivering the “Every Kilowatt Counts” program. These may include marketing, consulting and field staff costs among others.

Incremental equipment costs are costs paid by the participant/customer. Customer equipment costs (sometimes termed “Participant costs”) are the costs to purchase the more efficient equipment. Incremental equipment costs are defined as the cost of the energy efficient technology over and above the “base case” technology.

$$= \text{LDC program costs} + \text{incremental equipment cost} \times \text{participants} \times (1 - \text{free ridership})^7$$

2c. Calculation of TRC Net Benefits

$$= \text{TRC Benefits} - \text{TRC Costs}$$

Step 3 – Technology and Program Total Resource Cost Test Results

Two results Tables are provided. The first shows the TRC results for each of the technologies in the program. For the purposes of this example, the Calculator has been loaded with data representing the final provincial results for the Every KiloWatt Counts Program.

<i>Total Resource Cost Test Results by Technology (2007 \$'s)</i>							
<i>Technology</i>	<i>TRC Benefits</i>	<i>TRC Costs</i>	<i>TRC Net Benefits</i>	<i>TRC Benefit Cost Ratio</i>	<i>Summer Peak kW Savings</i>	<i>Net Annual kWh Savings</i>	<i>Net Lifecycle kWh Savings</i>
CFLs	\$29,746,946	\$2,710,009	\$27,036,937	10.98	-	125,325,265	501,301,060
Ceiling Fans	\$1,963,957	\$279,338	\$1,684,620	7.03	159.41	1,570,994	31,419,882
Timers	\$7,424,336	\$422,078	\$7,002,258	17.59	-	6,162,332	123,246,630
Programmable Thermostats	\$4,071,010	\$954,720	\$3,116,290	4.26	734.40	3,202,080	57,637,436

Note that kW.h savings are reported both annually, and for the life-cycle of the equipment (determined by the equipment life).

The second Table shows the program results, representing the aggregation of the individual measure results and the inclusion of the program costs associated with operating the program. For the purposes of this example, the Calculator has been loaded with data representing the final provincial results for the Every KiloWatt Counts Program.

⁶ IBID. Page 3-4.

⁷ IBID. Page 9.

Part 3. Program Results

<i>Total Resource Cost Test Results for Program (2007 \$'s)</i>	
TRC Benefits	\$43,206,249
TRC Costs	\$9,684,299
TRC Net Benefits	\$33,521,950
Benefit Cost Ratio	4.46
Total Summer Peak kW Savings	893.81
Total Annual kWh Savings	136,260,670
Total Lifecycle kWh Savings	713,605,008

3a. Calculation of Program TRC Benefits

Σ TRC Benefits for each technology

i.e. sum of cells C40 to C43

3b. Calculation of Program TRC Costs

Σ TRC Costs for each technology plus program costs

i.e. sum of cells D40 to D43 plus C32

3c. Calculation of Program TRC Net Benefits

= TRC Benefits - TRC Costs

And the Benefit/Cost Ratio is the TRC Benefits/TRC Costs

Like the individual measure results, the Calculator also derives annual and life-cycle energy savings for the total program. The annual values are the sum of the individual technology annual kW.h and the life-cycle energy savings are the sum of the individual technology life-cycle savings as determined by their respective equipment lives.

**Instructions for Calculating Total Resource Cost Test Results
2006 Summer Every KiloWatt Counts Campaign**

Part 1

- a. Enter Discount Rate (refer to page 5 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)
- b. Enter number of coupons redeemed by technology.
- c. Enter program dollars (refer to page 10 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Part 2

Total Resource Cost Test Results by Technology

Where applicable technology savings assumptions were generated using the Ontario Energy Board Measures List data.
A composite technology savings estimate was derived based on various products eligible for coupon redemption and electricity market share.
For a full discussion of the derivation of the estimates, contact the Ontario Power Authority.
Savings and equipment cost are adjusted in the TRC calculation by the free ridership rate.

	Energy Savings Winter Peak (kW.h)	Energy Savings Winter Mid (kW.h)	Energy Savings Winter Off Peak (kW.h)	Energy Savings Summer Peak (kW.h)	Energy Savings Summer Mid (kW.h)	Energy Savings Summer Off Peak (kW.h)	Energy Savings Shoulder Mid (kW.h)	Energy Savings Shoulder Off (kW.h)	Summer On Peak (kW)	Free Ridership	EE Technology Life	Incremental Equipment Cost, \$
CFL	15.43	7.71	20.27	0.00	11.71	13.90	17.40	17.63	0	10%	4	\$ 2.50
Ceiling Fan	9.66	11.04	25.91	8.38	12.57	26.05	20.95	26.05	0.014	10%	20	\$ 25.00
Timer	27.06	13.53	35.56	0.00	20.53	24.39	30.52	30.91	0	10%	20	\$ 12.50
Programmable Thermostat	23.9	25.4	59.6	14.8	9.7	30.6	24.1	30.0	0.050	10%	18	\$ 65.00

Calculation of TRC Benefits

= energy/demand savings X avoided cost X participants X (1-free ridership)

Calculation of TRC Costs

= equipment cost X participants X (1-free ridership)

Calculation of TRC Net Benefits

= TRC Benefits - TRC Costs

Part 3

Program Total Resource Cost Test Results

Calculation of Program TRC Benefits

Sum of TRC Benefits for all technologies

Calculation of Program TRC Costs

Sum of TRC Costs for all technologies plus Program Costs

Calculation of Program TRC Net Benefits

= TRC Benefits - TRC Costs





TOTAL RESOURCE COST TEST CALCULATOR
2006 Summer Every KiloWatt Counts Campaign

Part 1. Enter Data Here (in yellow shaded area: cells C22 and C26:C30)

LDC Information	
Discount Rate	4.00%

Products Sold	
CFLs	1,338,276
Ceiling Fans	12,415
Timers	37,518
Program Thermostats	16,320
Program Costs	\$5,318,155

Part 2. Results by Technology

Total Resource Cost Test Results by Technology (2007 \$'s)							
Technology	TRC Benefits	TRC Costs	TRC Net Benefits	TRC Benefit Cost Ratio	Summer Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh Savings
CFLs	\$29,746,946	\$2,710,009	\$27,036,937	10.98	-	125,325,265	501,301,060
Ceiling Fans	\$1,963,957	\$279,338	\$1,684,620	7.03	159.41	1,570,994	31,419,882
Timers	\$7,424,336	\$422,078	\$7,002,258	17.59	-	6,162,332	123,246,630
Programmable Thermostats	\$4,071,010	\$954,720	\$3,116,290	4.26	734.40	3,202,080	57,637,436

Part 3. Program Results

Total Resource Cost Test Results for Program (2007 \$'s)	
TRC Benefits	\$43,206,249
TRC Costs	\$9,684,299
TRC Net Benefits	\$33,521,950
Benefit Cost Ratio	4.46
Total Summer Peak kW Savings	893.81
Total Annual kWh Savings	136,260,670
Total Lifecycle kWh Savings	713,605,008



Ontario Power Authority™

February 2, 2007

Dear LDC partner,

Re: Spring 2006 Residential Education & Incentive Program – “Every Kilowatt Counts”

On behalf of the Ontario Power Authority, I would like to thank you and your team for participating in and supporting the Spring 2006 Every Kilowatt Counts campaign.

As you are aware, we developed and implemented the campaign within a very aggressive timeline. Your willingness and flexibility, as an LDC partner, in responding to these timelines were a significant contributor to the program launching on time and to the overall success of the campaign.

The results are now in and I am pleased to report that the Spring campaign was a success. Enclosed are a number of documents that describe the results of the program:

- Final program report – by Mearie Management Inc.
- Customized coupon redemption report
- TRC analysis tool

Please note that the coupon redemption counts and the TRC analysis are subject to third party verification and may therefore change.

If you have any questions, please contact either myself (john.jeza@powerauthority.on.ca) or Raegan Bunker (raegan.bunker@powerauthority.on.ca). Once again, thank you for your contribution to the success of the campaign. We look forward to continued collaboration with you and our other LDC partners on conservation and demand management programs.

Sincerely,

John Jeza
Director, Mass Market Channels



Residential Education and Coupon Incentive ("Every Kilowatt Counts") Program

Spring 2006

Final Report

December 8, 2006

Prepared by:

The MEARIE Group

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I. EXECUTIVE SUMMARY

This is the Final Report on the “Every Kilowatt Counts” (EKC) Spring 2006 Program. An Interim Progress Report providing details on the review of the program implementation processes was completed on June 30, 2006.

The EKC Spring 2006 Program is a residential education and coupon incentive campaign of the Ontario Power Authority (OPA). It had the following goal and objectives:

A. Goal:

- Provide homeowners and tenants with the necessary tools to save energy and have a positive impact on the environment by implementing “easy-to-do and low cost” programs.

B. Objectives:

- Provide homeowners with information on easy-to-do conservation activities within their home or apartment.
- Provide meaningful incentives to homeowners and tenants to take action on one or more of the easy-to-do actions identified in the Program.

For maximum reach, the primary education medium used was a Direct Mail package that was distributed using billing addresses from LDCs. The campaign period ran from May to August 2006. Evaluation and reporting were conducted subsequently.

Based on the Total Resource Cost (TRC) analysis, the Program achieved over \$33.5 Million of net benefits and the benefit cost ratio is 4.46. The demand reduction and lifetime energy savings are as follows:

Measure	Target	Actual
Demand Reduction	8.8 MW	0.9 MW
Lifetime Energy Savings	742,000 MWh	713,605 MWh

The budget cost of the Program was \$12.6 Million. The actual cost is 33% below the budget and is \$ 8.4 Million. With the Ontario Energy Board (OEB) TRC Guide assuming CFLs having no impact on summer peak demand reduction, the demand reduction achieved is only 0.9 MW according to the guide even though 483,000 CFL coupons were redeemed. The lifetime energy savings achieved is 713,605 MWh.

A total of 3,000 people were surveyed in the pre- and post-program surveys. As could be gleaned from Section K of the Program Results

chapter of this report, the results of the surveys confirmed that there is a measurable positive improvement in conservation awareness after the Program.

The Program was managed within very aggressive timelines. The design, production and delivery of 4.58 Million addressed direct mail packages to homeowners and tenants were completed on June 7, 2006, less than three months after the Program was kicked off on March 15, 2006.

The project team recruited the participation of:

- 80 LDCs representing 97% of residential customers in Ontario,
- 2,108 retail stores (17 chains, 34 independents)
- 18 manufacturers.

The resources of these partners were leveraged and the partners were mobilized.

Pre-program and post-program surveys were conducted in April and June 2006, respectively, each with 1,500 respondents. The results of the post-program survey were compared with those from the pre-launch survey to assess the impact of the Program, with respect to both awareness and energy savings.

Coupon redemption data were tracked on a weekly basis and questionable coupons and redemptions were reported to the Steering Committee.

An Interim Process Review was conducted on June 15, 2006 to assess program implementation processes and to determine what can be done for the remainder of the Program.

A total of 549,385 coupons were redeemed, which is 62% higher than the ambitious target of 344,000 coupons. However, while the overall number of coupons exceeded target, coupons for the mix of products that were redeemed were different from what was anticipated.

The redemption results for the products are shown in the table below:

Product	Target Participation	Actual Participation	Target Coupons	Actual Coupons
CFL	5.00%	10.55%	215,000	483,132
Timer	1.25%	0.82%	53,750	37,518
Thermostat	1.25%	0.36%	53,750	16,320
Ceiling Fan	0.50%	0.27%	21,500	12,415
Total			344,000	549,385

Given the accomplishments and results achieved relative to the goal and objectives set forth, it can be declared that the EKC Spring 2006 Campaign was successful. As such, it is recommended that the OPA continue with this type of education and incentive program.

Based on feedback from suppliers and participants, lessons learned from the Program were documented and the key ones are as follows:

- There is a need to encourage retailers to increase their level of participation; e.g., teams of representatives can be deployed to focus on education and encourage customers to purchase energy efficient products at the stores.
- There were more in-store coupons redeemed (85.51%) than those from the mail (14.49%). As such, to further increase the level of coupon redemption, the retailer component of the Program should be enhanced.
- The redemption of CFL coupons was well above target. On the other hand, the redemption of coupons for the timers, thermostats and ceiling fans were below target. Additional research on the current market penetration, the potential market penetration and the appropriate incentive level may be warranted.
- Depending on the product/retailer, discussions with retailers should happen well in advance; say, 6-12 months, in order to gain maximum support and ensure adequate stock of products on the shelf.
- The brochure should provide greater focus on the products and incentives. It was suggested that coupons be made more visible, either on the back of the booklet or on individual product pages rather than just centre spread.
- There is a need to increase program visibility by increasing the frequency of advertisements. As well, at least one month lead time should be provided for the placement of advertisements, particularly for radio advertisements.
- The printing and mailing of overprints (extra unaddressed booklets) for LDCs should be done before mailing out packages to prime the LDC staff and call centre.
- Given the problems encountered at the redemption house (e.g., coupons submitted with no franking and duplicate receipts), there is a need for a tighter process to ensure that retailer stores follow the established procedures for processing coupons and making claims for redeemed coupons.
- The Program website should be more educational/interactive and not just be a brochureware.

Inputs and feedback from suppliers and partners have been solicited throughout the project. Their key suggestions for future programs are as follows:

- The retail component of the EKC Program should be enhanced further. For example, retailers could provide a temporary sales force for enhanced in-store support and be trained to maximize use of the coupons.
- More emphasis should be given to in-store advertising and point-of-sale (POS) or point-of-purchase (POP) promotions.
- All suppliers should be required to provide a Quality Control Plan. There is also a need to secure budget for engaging the services of a third party quality controller to conduct the audits.
- Financial incentives should be provided to LDCs to participate in and organize local PR events.
- LDCs should be given more time to prepare for supporting activities and coordinate the Program with their own Conservation and Demand Management (CDM) initiatives.
- Use of television and magazine advertising to support the Program should be explored.

II. INTRODUCTION

The Ontario Power Authority was established by the Ontario Government. Its mandate is to help lead Ontario's efforts to achieve targets and to foster a culture of conservation in which energy efficiency is a way of life. The "Every Kilowatt Counts" (EKC) Spring 2006 Program was the first program introduced by the OPA to work with all LDCs, retailers and manufacturers to provide residential consumers with educational information on energy conservation at their homes and opportunities for them to purchase energy saving products at a discount.

It was designed to achieve consumption and demand savings, build consumer capability and contribute to market transformation for the promoted products. The Program provided meaningful incentives and information on easy-to-do energy-saving actions for every Ontario household.

Since it was OPA's first program of this kind, it was intended that the lessons learned from this Program be used in the design and execution of future programs. Options were tested and experimented in the EKC Spring 2006 Program.

This ambitious program reached all the customers served by LDCs. It leveraged the resources of its partners: the participating LDCs, retailers and manufacturers. It was launched in spring 2006 in time to influence consumers' purchasing decisions that could affect the peak load in summer 2006.

This is the Final Report on the "Every Kilowatt Counts" (EKC) Spring 2006 Program. It provides the final results of the Program. An Interim Progress Report providing details on the review of the program implementation processes was completed on June 30, 2006. The MEARIE Group, the Project Manager for the Program, is the author of both reports. The findings and recommendations contained in this report are those of the Project Team and The MEARIE Group and are not necessarily the opinions of the OPA.

III. EKC SPRING 2006 PROGRAM

A. Objectives

The Program has the following objectives:

1. Provide homeowners with information on easy-to-do conservation activities within their home or apartment.
2. Provide meaningful incentives to homeowners and tenants to take action on one or more of the easy-to-do actions identified in the campaign.

B. Coupon Redemption Targets

Based on a population of 4.3 Million households and varying participation levels, the following are the coupon redemption targets:

Product	Participation	Coupons
CFL	5.00%	215,000
Timer	1.25%	53,750
Thermostat	1.25%	53,750
Ceiling Fan	0.50%	21,500
Total		344,000

C. MW and MWh Savings Targets

Based on a 5% household participation level for the original set of products, a summer peak demand reduction of 8.8 MW and lifetime energy savings of 742,000 MWh were estimated for the Program.

D. Project Execution

To implement the Program, it was divided into work packages. A work package is defined as a logical set of related tasks and activities performed to achieve a supporting objective. Some work packages were grouped under one supplier to reduce the total number direct-reporting suppliers and, hence, the complexity of managing the project.

The suppliers and their responsibilities are listed in the following table:

No.	Supplier	Work Package(s)
1	The MEARIE Group	Project Management, LDC and EDA Coordination
2	The Summerhill Group	Program Management, Retailers and Manufacturers Management, Call Centre, Coupon Redemption Clearinghouse, Total Resource Cost (TRC) Calculations
3	PLM Group / Canada Post	Package Assembly and Distribution of Direct Mail piece and retail point-of-sale (POS)/point-of-purchase (POP) materials
4	Haynes & Petryna	Package Design, Website
5	NATIONAL Public Relations	Public Relations, Lunch Events, Issues Management, Focus Groups
6	Huff Strategy	Newspaper and Radio Advertisements (Media Buy)
7	Oraclepoll Research	Market Research
8	Pascal Sabourin	Translation (French)
9	Multicultural Communications Group Ltd.	Translation (Arabic, Chinese, Greek, Italian, Polish, Portuguese, Punjabi, Spanish, Tagalog, Tamil, Urdu and Vietnamese)

With the OPA providing overall direction to the Program, the suppliers/members worked together as a team to execute all aspects of the Program.

E. Work Package Accomplishments

The following accomplishments were achieved for each work package:

1. Project Management

The MEARIE Group established a Project Management Methodology complete with a suite of tools and templates. Anchoring on this methodology, it developed and managed a good working and reporting relationship with Work Package Leaders. Additionally, it leveraged its existing relationship with the LDCs through the Electricity Distributors Association (EDA) and was able to maximize participation of the LDCs.

2. Program Management

The Summerhill Group provided recommendations on products and coupon amounts included in the Program and advice on content of EKC brochure. It obtained commitment from 2,108 retail locations and 18 manufacturers, put in place a system infrastructure to manage the relationship with these and developed POS/POP materials. It coordinated the audit of retail stores and conducted a series of webinars to engage LDCs. It managed CRM, the outsource service provider for the program call centre and coupon redemption house. The Summerhill Group also engaged the services of Seeline to develop the TRC methodology and perform the TRC analysis.

3. Package Design

Haynes & Petryna developed two 12-page brochures with energy conservation information and coupons. It conceptualized the “Every Kilowatt Counts” (EKC) campaign with a campaign theme—“The Power to Save is In Your Hands”. The brochure targeted for customers paying directly for their electricity included conservation tips, coupons for CFLs, timers, ceiling fans and programmable thermostats, entities promoting energy conservation and Cool Savings Rebate information (i.e., incentives for the purchase of Energy Star® air conditioners and tune up). On the other hand, the brochure targeted for customers paying for their electricity within their rent or condo fees included conservation tips, coupons for CFLs, timers, and ceiling fans, gift card for surrendering an old room air

conditioner and entities promoting energy conservation. Haynes & Petryna also developed print and radio advertisement copies.

4. Translation

Haynes & Petryna subcontracted to Pascal Sabourin and the Multicultural Communications Group Ltd. the translation of the booklets and website into French and the pdf printouts into the 12 other languages, respectively. These translations were made available on the Program website.

5. LDC Coordination

The MEARIE Group obtained participation of 80 LDCs representing 97% of residential customers with 54 of these helping out in the mailing audit, 29 performing the retailer audit and 6 availing themselves of the coop advertisement subsidy. It facilitated 4 webinars with an average attendance of 71 participants. The MEARIE Group also established a dedicated website for providing LDCs with information and tools on the Program.

6. Public Relations

NATIONAL Public Relations conducted research and developed messaging to communicate the need for electricity conservation. It mounted PR launch and redemption events at seven key markets (Toronto, Sarnia, London, Hamilton, Ottawa, Sudbury and Thunder Bay) over 15 days. It managed media relations that generated more than 100 media hits, including dailies, radio, television and community newspapers from across the province. Cost per contact was placed at \$0.01721 with a PR budget of \$300,000 and total impressions¹ of 17,431,901. NATIONAL also extended assistance to LDCs interested in conducting their own promotional events and provided pertinent materials.

7. Website

Haynes & Petryna developed and managed a bilingual website for the EKC campaign with 772,602 hits and 33,669 unique visitors. It provided pdf copies of the brochure in 14 languages

¹ An impression is an occasion where a person has read, seen or heard information about the Program.

and an interactive protocol between this site and PLM's Opt Out² site.

8. Newspaper/Radio Advertisements (Media Buy)

Huff Strategy in collaboration with Up Marketing and CBN Networks facilitated the media buy that resulted in 315 EKC display ads placed in Ontario papers (including First Nations newsletters such as Wawatay, French, Italian, Portuguese, Chinese, Russian, Spanish, Vietnamese, Indian, Persian, Korean papers. It inserted teaser ads in 11 newspapers across the province with estimated combined circulation of 1,393,000 copies. It enabled EKC advertisements to appear in 8,890,973 newspaper copies with calculated impressions from 17,780,000 readers. It made arrangements with Metroland (a large Ontario chain of newspapers) that resulted in five of Peter Love's Conservation Zone articles appearing in at least 103 papers (total circulation for each insert is at least 2.8 million copies). Huff Strategy also rolled out EKC radio ads in 69 radio stations across the province following a media plan with estimated 96 spots.

9. Package Assembly and Distribution

The PLM Group printed and mailed out a total of 4.58 Million brochures to homeowners, tenants and LDCs. It also printed and sent out approximately 2.3 Million coupons to retailers apart from retailer information kits and posters. It set up webpages for LDC Opt Out and Coop Advertising³ and a process for returned mail handling.

10. Communication

The MEARIE Group developed and implemented a Communications Plan. It used EDA's and its own communication channels to provide updates to the LDCs at different levels of management. It developed and maintained an LDC Communication website and facilitated project meetings (i.e., Steering Committee, Project Team, PMO and Work Packages) and tracked issues and action items accordingly.

² Opt Out is for customers who do not wish to receive any further OPA materials through their local electricity distributor.

³ Cooperative Advertising is a program to encourage LDCs to advertise, through the print media, the EKC Program in their local community media in a way that complements and sustains the OPA's planned media efforts.

11. Market Research

Oraclepoll Research conducted the pre-launch and post-program survey to establish baseline data and the LDC survey to obtain feedback from the LDCs.

12. Quality Control

The MEARIE Group identified Quality Control checkpoints for print quality and delivery, website, call centre, advertisements, retail stores and coupon redemption. It engaged a QC Specialist to conduct a QC review of key areas, namely: printing and delivery, call centre and coupon redemption. It coordinated retailer and mailing audit.

IV. PROGRAM RESULTS

A. Scale and Magnitude

The EKC Spring 2006 Program is a pioneering effort that can be considered successful in many ways. The following statistics illustrate the complexity and magnitude of the Program:

1. A total of 4.58 Million direct mail packages were mailed out to homeowners and tenants.
2. The mail package was customized according to customer's name and the LDC they are served by. Two versions were created (one for homeowners and the other for tenants). The homeowner version was addressed directly to the homeowner while the tenant version was addressed to the "occupant".
3. Eighty LDCs representing 97% of residential customers in the province of Ontario participated in the Program.
4. A total of 2,108 retail locations (17 chains, 34 independents) and 18 manufacturers supported the Program.
5. A total of 3,000 respondents were surveyed in the market research activities for the Program.

B. Schedules

The Program implementation team worked within very aggressive timeframes. The project was kicked off on March 15, 2006. After about six weeks, the first batch of mail packages were sent out on April 24, 2006. The EKC website was launched on April 21, 2006 while the call centre went live on April 26, 2006.

The coupons were redeemable until August 31, 2006. Retailers were asked to submit their claims on redeemed coupons by

September 30, 2006. This date was subsequently extended to November 17, 2006 to sort out head office versus store claims and to respond to retailers request for extension.

An Interim Process Review was conducted on June 15, 2006 to assess what has been accomplished from a process standpoint and what additional activities need to be undertaken for the remainder of the campaign. The review focused on a process evaluation of the Program planning and delivery process, rather than assessing the final results or impacts of the Program (e.g. energy savings, consumer awareness changes).

C. Package Design

There are two designs of the 12-page brochure with “Every Kilowatt Counts” as tagline and “The Power to Save is In Your Hands” as campaign theme. The brochure targeted for customers paying directly for their electricity included conservation tips, coupons for CFLs, timers, ceiling fans and programmable thermostats, entities promoting energy conservation and Cool Savings Rebate information (i.e., incentives for the purchase of Energy Star® air conditioners and tune up). On the other hand, the brochure targeted for customers paying for their electricity within their rent or condo fees included conservation tips, coupons for CFLs, timers, and ceiling fans, gift card for surrendering an old room air conditioner and entities promoting energy conservation. The lifestyle appearance was adopted with rotating messages on the front cover. The coupons were barcoded for data tracking purposes.

D. Mail Distribution

Appendix A provides a mail rollout plan that uses the Forward Sortation Area (FSA) codes as basis for the mail drop schedules. As part of the strategically-coordinated mail rollout plan, the first 6 LDCs were prioritized to support the city-based PR launch events.

E. LDC Participation

Eighty LDCs representing 97% of residential customers in the province of Ontario participated in the Program. Appendix B shows a list of participating LDCs with their respective service areas.

LDCs provided mailing lists of their customers so that each mail package was addressed specifically to the residents and included the local utility logo. Based on the Program Q&A scripts provided by the OPA, LDCs organized their call centres to respond to customer

questions on the Program. Many of them organized supporting local events. They also promoted the Program in their communities through local advertising. They visited retailer stores to audit the visibility of the Program and checked the knowledge of the retailer staff in the Program.

A survey (please see Appendix C) to obtain feedback from LDCs was conducted in June 2006. The results of the survey indicated that:

- 83% were satisfied with the quality and appropriateness of the energy conservation information and tips provided in the brochures.
- 79% were satisfied with the effectiveness of the webinars as a means to provide timely and useful information on the Program.
- 77% were satisfied with the with the direct mail distribution of the coupons.
- 75% were satisfied with overall management of the Program.
- 74% were satisfied with the design and print quality of the mail out packages/brochures.
- Only 38% were satisfied with the usefulness of sample PR and media materials for local promotional and supporting events and activities.
- Only 36% were satisfied with the effectiveness of the coop advertising arrangement in encouraging LDC's to supplement local promotions
- Only 21% were satisfied with the effectiveness of the newspaper and radio advertisements

F. Retailer and Manufacturer Participation

A total of 17 chain stores and 24 independents, with a combined total of over 2,100 retail locations and 18 manufacturers supported the Program (See Appendix D).

The majority of coupons redeemed in the Program were redeemed at larger retail chain stores, with Wal-Mart, Home Depot, Canadian Tire, Home Hardware, and Giant Tiger together representing 85% of all coupon redemptions in the Program.

Feedback on the Program gathered from retailers and manufacturers surfaced the following:

- 67% said that the campaign has been successful for their company;
- 67% said there was an increase in sales over same period last year for CFLs;

- 33% said there was an increase in sales over 2006 forecast for same period for CFLs; and,
- 83% said they received enough support from the Project Team and their requests were handled in a timely manner.
- It was pointed out that a number of manufacturers did not participate due to the fact there was no realistic lead time (minimum of six months) provided.

G. Media Coverage

There were 315 EKC advertisements placed in Ontario papers that included First Nations, French, Italian, Portuguese, Chinese (3 publications), Russian, Spanish, Vietnamese, Indian, Persian and Korean papers.

EKC advertisements appeared in 8,890,973 newspapers copies. Using a conservative multiplier to calculate impressions, it is estimated that over 17 Million impressions were registered.

The EKC campaign was supported by the following supplementary and supporting media initiatives.

1. Conservation Zone (CZ) newspaper columns. Arrangements made with Metroland (a large Ontario chain of newspapers) have resulted in five of Peter Love's Conservation Zone articles appearing in at least 103 papers (total circulation for each insert is at least 2.8 million copies). The CZ articles in the Toronto Star (Your Homes section), Ottawa Sun (Easy to be Green section) on a regular basis.
2. Significant additional editorial content on the EKC Program in the Ottawa Citizen and London Free Press
3. A special version of the CZ introducing the EKC Program also appeared in a special Metroland insert (There is No Place Like Home) that was distributed to over 1.5 million homes.
4. The Conservation Fund Tabloid went to 2.8 million homes with Metroland papers (largely in southern, central and eastern Ontario). In addition 550,000 units of the tabloid were distributed in the Toronto Star (Long Weekend) - the Tabloid contained almost one half page of text promoting the two Programs. The Tabloid was also sent to all MPP's (100 copies each) and all Conservation Fund partners.
5. Advertisements were placed in approximately 68 radio stations across the province during the period April-June.

The total PR budget was \$300,000. Based on data collected by Bowdens Media, the Program achieved 17,431,901 impressions.

Given these, the cost per contact would be 1.72 cents. According to benchmarks used by the Canadian Public Relations Society, a cost per contact of 5 cents or less makes the Program successful.

H. LDC Cooperative Advertising

To encourage LDCs to advertise the EKC Program in their local community media in a way that complements and sustains the OPA's planned media efforts, a Cooperative Advertising Program was created. Implemented through the print media, its objective was to drive consumers to their local participating retailers to access and redeem coupons. The coop subsidy was computed as a function of the number of customers, participation rate and number of coupons. This amount from OPA's Cooperative Advertising Fund (\$250,000) was to be matched by the participating LDC. A total of six LDCs availed themselves of the coop dollars for a combined amount of \$59,000 and 499 print ads were placed.

I. Coupon Redemption/Participation

The post-program survey results show 44% remember receiving the booklet. One quarter of those (11%) redeemed coupons from an overall standpoint.

Based on 4.58 Million direct mail packages sent to homeowners and tenants, the following are the coupon redemption results as at November 27, 2006:

Product	Target Participation	Actual Participation	Target Coupons	Actual Coupons
CFL	5.00%	10.55%	215,000	483,132
Timer	1.25%	0.82%	53,750	37,518
Thermostat	1.25%	0.36%	53,750	16,320
Ceiling Fan	0.50%	0.27%	21,500	12,415
Total			344,000	549,385

Overall, the actual coupon redemption exceeded the target by 62%. CFLs had the highest redemption rate indicating that the incentive level is attractive to consumers. This could be due to a number of factors such as attractiveness of the incentive level, frequency of purchase and how common CFLs are used in households.

On the other hand, actual coupons redeemed for timers and thermostats were lower than projected. This may be due to the perceived low value offering and/or issues associated with the cost and complexity of installation. There could be other reasons as well

such as low awareness of the uses/benefits of the products and the targets (estimated based on input from manufacturers) may have been set too high.

One probable reason why the redemption rate for ceiling fans was below target was the limited supply of eligible (Energy Star®) ceiling fans. The project team became aware of the situation early on in the Program but manufacturers were not able to increase the supply within the timeframe provided. Another possible reason is the perception that the coupon value is not attractive enough.

The proportion of redeemed coupons that were received by customers in the mail versus coupons available in-store is as follows.

- Direct Mail coupons redeemed—79,608 (14.49%)
- In-store coupons redeemed—469,777 (85.81%)

The majority of redeemed coupons were picked up in-store. The split of in-store versus direct-mail coupons that were redeemed varied by product. They are as follows:

Product	Direct Mail		In-Store		Total	
	Qty	%	Qty	%	Qty	%
CFL	59,923	75.27%	423,209	90.09%	483,132	87.94%
Timer	9,690	12.17%	27,828	5.92%	37,518	6.83%
Thermostat	5,844	7.34%	10,476	2.23%	16,320	2.97%
Ceiling Fan	4,151	5.21%	8,264	1.76%	12,415	2.26%
Total	79,608	100.00%	469,777	100.00%	549,385	100.00%

J. Results of the Total Resource Cost (TRC) Analysis

The total provincial TRC results are the aggregation of the individual component results and the associated program costs for operating the program. For the purposes of the TRC Test, the program costs represent the marketing, administration, evaluation and related costs but do not include the value of the coupons. This is an incentive and is treated as a transfer in the TRC analysis.

The table below shows the provincial TRC results for the Program.

Total Resource Cost Test Results for Program (2007 \$'s)	
TRC Benefits	\$43,206,249
TRC Costs	\$9,684,299
TRC Net Benefits	\$33,521,950
Benefit Cost Ratio	4.46
Total Summer Peak kW Savings	893.81
Total Annual kWh Savings	136,260,670
Total Lifecycle kWh Savings	713,605,008

Appendix E provides details on the TRC Analysis.

K. Results Summary of the Market Research

Pre-launch and post-program surveys were conducted by Oraclepoll Research Limited in April and June 2006, respectively; each with 1,500 respondents. The results of the post-program survey were compared with those from the pre-launch survey to assess the impact of the Program, with respect to both awareness and energy savings (See Appendix F). The following are excerpts from the market research report prepared by Oraclepoll:

- Energy conservation is an emerging top-of-mind issue among Ontarians that began with the 2003 blackout and has endured as a result of fears of rising prices and shortages. But while fear of crises and the pocketbook may be driving the agenda, various campaigns related to conservation starting with the One Tonne Challenge up to EKC are having an effect.
- Most Ontarians take simple actions such as turning off their lights to conserve as well as closing their blinds, but work needs to be done around more pro-active deeds such as unplugging appliances when not in use. CFL use continues to increase and more residents are changing to these bulbs.
- There are several factors that impact on conservation including geography. For example, while GTA residents are most likely to have regular air conditioning maintenance they are the least likely region in the province to turn up their A/C temperature while northerners are most likely. In addition, fans are a rarer item in Toronto but prevalent in the north, southwest as well as in rural Ontario. In general, urban residents also tend to be higher conservers than rural residents.

- Demographically, conservation varies as a function of age; income and gender as females, those in age groups over 35 and with incomes higher than \$55,000 tend to conserve electricity. Owners and renters who pay for their own electricity use are more likely to conserve.
- There is interest in obtaining information on ways to conserve and mail techniques including direct mail and bill inserts dominate, followed by print in newspapers. More than seven in ten respondents would like future EKC type mail outs and less than three in ten oppose having addressed mail.
- While few are able to name specific campaigns, initiative or agencies, the results continue to improve. However, unaided specific name recall is not a good indicator of a campaigns success or impact. 44% of Ontario residents claimed that they received an EKC coupon booklet and there was a 13% increase in June in the number of Ontarians that were aware of conservation initiatives compared to April. Those respondents aware of a campaign, the OPA or received an EKC booklet etc, are also more likely to be conservers or take conservation actions. As a result, an EKC based type campaign is an effective method to reach an audience open to conservation.
- CFL's were the biggest drawing card in the EKC campaign and they were also seen as having the best price point as evidenced by it high redemption rate. The biggest single motivator to redeem a coupon was the monetary angle, followed by need. Conversely, the most cited reasons for not redeeming a coupon related to a lack of need rather than the discount value or a dislike of them.
- The retail experience appeared to be a good one overall, especially the ease of redemption; however, respondents that received a coupon booklet were not satisfied with the ease of finding information about the Program.
- Store familiarity and location were reasons for shopping at a particular retail outlet and while as stated most want future EKC booklets mailed to their home 21% also want to obtain booklets at retail stores.
- Demand for future products varied widely from appliances to air conditioners but CFL's appear to be a good anchor or draw in any campaign.

- In addition, there is an opportunity have future campaigns target the Ontario market geographically (i.e. to promote AC maintenance or thermostats in the north), demographically (i.e. lower income renters to close binds) and account for seasonality (i.e. high efficiency Christmas lights).
- In short, the significant number of Ontarians have that received a booklet have a good opinion of the Program, and it appears to be a good vehicle to keep people thinking about conservation as well as informing them about information and savings opportunities.

L. Call Centre

Program-related calls were handled by the Consumer Response Marketing Ltd. (CRM), a B.C.-based subcontractor of The Summerhill Group.

Below is a chart that analyzes the volume of calls that came into the call centre during the campaign.

Calls	April 15- June 9	June 10- July 14	July 15- Aug 11	Aug 12- Sept 30	Oct 1- Oct 31	Total
0-2 minutes	7,429	5,007	1,928	1,552	291	16,207
2-3 minutes	737	349	232	182	53	1,553
3-4 minutes	289	157	83	64	15	608
4-5 minutes	266	111	48	46	6	477
5-6 minutes	111	68	27	25	0	231
6-7 minutes	55	49	19	11	2	136
7-8 minutes	47	37	17	7	1	109
8-9 minutes	26	23	15	2	0	66
9-10 minutes	8	9	4	1	0	22
10-15 minutes	4	1	1	0	0	6
plus 15 minutes	1	0	0	0	0	1
Totals	8,973	5,811	2,374	1,890	368	19,416

The majority of calls were received during the first two weeks of the campaign, as people received the mailing in their homes. A large portion of these calls came from customers asking where they could find certain products and how the campaign worked. Throughout the summer, as the stock of Energy Star® qualified ceiling fans dwindled, many people called to find out where they could get one.

The call centre's hours of operation were 12-8pm; Monday to Friday. However, it was noted during the Program that the number of calls received early in the morning (8:00am) was significantly high. There was some discussion mid-campaign about moving the call centre to a 24x7 operation; however, the decision was made to keep hours but to add voicemail capabilities for callers to leave a message.

M. EKC Website

The “Every Kilowatt Counts” public website recorded a total of 33,669 individual visits and 777,602 hits. Appendix G provides a summary of activities by month. The top 5 visited webpages apart from the sign-on page were: “Instant Rebates”, “Where to Shop and Save”, FAQs, “More Ways to Control Electricity”, and Product 1—CFL.

N. LDC Communication Website

To facilitate communication with LDCs and to provide a secured facility for downloading program information, a communication website was created by The MEARIE Group. It contained Program Overview, Contact Information, Mail Schedule, Samples of the Direct Mail Packages, Provincial PR and Advertising, Retailer Information and Optional LDC Activities, among other things. For the period April-October 2006, the LDC Communication website recorded a total of 1,169 visits and 36,619 hits. Appendix H provides a summary of activities by month.

O. Budget and Actual Costs

The OPA Board approved budget for the Program was \$12.6 Million. As at December 5, 2006, the total cost was approximately \$8.4 Million. Total coupon redemption value was approximately \$3.2 Million and other Program costs were \$5.2 Million.

P. Risk Management

As a pioneering program, this campaign had its own share of associated project implementation risks. With the combined efforts of the project team, the risk concerns were addressed and mitigated accordingly. Some key risk areas that were addressed include:

Q. Quality Control

To ensure quality throughout the Program, the following Quality Control (QC) activities were conducted:

1. For print quality and delivery, the following materials were checked:
 - English brochure (all versions)
 - French brochure (all versions)
 - English Poster (POS)
 - French Poster (POS)

- Coupons

In addition to checking the typeset of the creative by Haynes & Petryna and OPA, the following activities were performed:

- Review adequacy of the PLM's QC Plan
 - When the QC plan was deemed adequate and the reports indicated that printing machine works well, the following activities were conducted:
 - check PLM's QC reports on the print job during the print run to make sure that PLM actually follows its QC plan
 - review raw QC data
 - have a QC expert at PLM during the first 2 batches
 - conduct random checks on site for subsequent batches
 - have four LDCs review sample of the processed mailing
 - call 100 people to find out whether they have received the packages and received the right package
2. For the public website, the quality of content and hosting service was assessed. The QC Plan included the following:
 - technical check on capacity the hosting service provider has allocated for the website. The basic assumptions that 10% of consumers will be visiting the website over a 30 day period.
 - thorough review of the material on the website before the site is launch
 3. For the call centre, all types of calls were assessed. The assessment included the following activities:
 - review Call Centre's QC Program
 - provide recommendations/comments to Call Centre to improve quality control
 - we also reviewed the call centres' Q&A's/scripts
 4. For advertisements, print and radio were the main focus. The following activities were done:
 - Review typeset/film for ads
 - Request media companies to provide tear sheets by email and review them
 5. For the retailer stores, POS posters, coupons and handling of coupons were within scope. Checks were conducted at participating retailer stores on whether:
 - The POS posters have been put up

- Coupons are available and easy to find
 - Cashiers are able to handle the coupons
6. For coupons redemption, all redeemed coupons were checked. Specific activities included the following:
- Review Coupon Redemption House QC Program and provide recommendations
 - Scan the coupons to detect fraudulent activity
 - Detect mechanically reproduced coupons by checking the appearance and through scanning procedure as all will have the same bar code by product, FSA etc.
 - Investigate and ask retailers for supporting invoices to substantiate the following:
 - retailer outlet submitting abnormally large quantity of coupons for size of outlet
 - coupons submitted that appear to have been mechanically cut in quantity
 - coupons in quantity that do not appear to have been handled by individuals
7. For mail delivery, members of the Project Team and selected LDCs verified the delivery of the booklets.

Details of the coupon redemption house set-up and Quality Control procedures are provided in Appendix I.

V. KEY LESSONS LEARNED AND SUGGESTIONS FOR FUTURE PROGRAMS

Lessons learned from program implementation were solicited from the Project Team members. The associated recommendations were not reached via a consensus building activity and were not based on data analysis. Therefore, these do not constitute opinions of the OPA. Based on the lessons learned identified by the indicated Project Team members and partners, the following list of suggestions have been compiled for consideration in future programs:

A. Project Management (The MEARIE Group)

1. The redemption house service process constituted a large portion of the Program cost. The supplier for this service should be part of the project team and participate in the project team meetings.
2. The call centre has day-to-day direct contact with consumers. It should also be member of the project team once the centre is operational.
3. QC activities should be expanded to include actual onsite inspections and well coordinated. A consultant responsible for the proper execution of the QC Program should be part of the project team. Suppliers should submit their QC plan for review.

B. Program Management (Summerhill)

1. The Call Centre should have operating hours that are adequate and suitable for Ontario.
2. Customer traffic at the stores is usually heavy during the weekends. Weekend staff are usually different from weekday staff. It should be ensured that both sets of staff are properly trained on the campaign.
3. For high traffic stores, consideration should be given to engaging the services of third party booth and display management service providers at those retail stores.
4. A program should be put in place too ensure that the POS/POP materials are properly displayed at the retail stores.

5. A formal program to assess coupon redemption at the retailer stores to supplement the LDC audit should be put in place.
6. Decisions on products for each campaign should be made ahead of time to allow for longer lead times; say, 6-12 months for ensuring adequate supply of the products.
7. With the majority of the redeemed coupons distributed by the retail stores, the focus of the EKC campaign could be shifted to a retail-based campaign, where teams of representatives focus on education and encourage customers to purchase energy efficient products.
8. The coupon redemption pattern that emerged showed CFLs commanding a lion's share of the redeemed coupons. It would seem that increased consumer education effort is needed on the value of other product-offerings.

C. Package Design (Haynes & Petryna)

1. Consideration should be given to providing greater focus on products/incentives on the mail-out packages. Coupons should be more visible, either on the back of booklet or on individual product pages rather than just centre spread.

D. Translation (Haynes & Petryna)

1. As translators work directly with the Package Design and Website team, translation may be best co-ordinated and managed by the package designer.

E. LDC Coordination (The MEARIE Group)

1. Early notices of upcoming programs should be provided to LDCs to enable them to prepare for the programs and coordinate with their own CDM initiatives.
2. EDA's forums and committees should be leveraged to obtain input from LDCs on programs.
3. Flexibilities in programs should be provided to allow LDCs to integrate these into their own initiatives.
4. Updates and communications on programs should be provided to LDC program operations staff as well as senior management.

5. More assistance should be provided to LDCs in training their call centre staff on the programs.
6. More encouragement and incentives should be provided to LDCs to host local supporting activities.
7. Incentives should be provided to LDCs for conducting retailer store audits.

F. Public Relations (NATIONAL)

1. There is strength in numbers. To enhance Program image, the PR supplier should coordinate with LDCs to drum up attendance to PR launch and redemption events.
2. Consideration should be given to increasing local PR events to create greater impact at the retailer stores and within the community and to correct the "one-off" perception of Program.
3. To sustain a perception of the continuing nature of the Program, one or two homeowners per LDC should be selected and their electricity consumption tracked from month-to-month and even year-to-year. They can be used like the "Neilson Families" of television viewership.
4. Other promotional activities such as contests and raffles and investment in promotional devices such as cars, trucks, RV's, uniforms, and other materials that can be used from campaign to campaign should be considered.

G. Website (Haynes & Petryna)

1. Since more and more people begin to show propensity to use the Internet for education and transacting business, the Program website should be made more dynamic and interactive.

H. Newspaper/Radio Advertisements--Media Buy (Huff)

1. LDCs appreciate the availability of templates that they can use for their own CDM initiatives. For cooperative advertising, the definitions of the coop advertisement templates and advertising/media technical terms used should be defined.
2. In any campaign, the more "eyeballs" reached the better. Consideration should be given to increasing the frequency of

advertisements and greater use of magazines that is important for some very specific parts of the female demographic.

3. Adequate lead time should be provided for placing advertisements particularly for radio spots.

I. Package Assembly and Distribution (PLM)

1. Printing and mailing of overprints for LDCs should be done ahead of the mailout of the customer packages to prime the LDC staff and call centre.
2. There has to be a tight loopback process between PR and the printer especially when revising production and mail rollout dates based on the schedule of the PR launch event dates.
3. Quality assurance with regard to mail distribution must be comprehensive. The mailing audit plan should include unaddressed mail. One way to do it is to ask LDCs to get samples of landlords or building superintendents to check receipt of packages.
4. The printing technology used for the campaign should be reviewed from time to time to ensure that the quality of ink impression on the type of paper selected is good.
5. The printer should coordinate with the coupon clearinghouse upfront to ensure that there are no barcodes that are unscannable.

J. Communication (The MEARIE Group)

1. The LDC Communication website should be made more interactive for more effective information exchange with the LDCs and for online monitoring of Program results

K. Market Research (Oraclepoll)

1. To get a more comprehensive view of the conservation culture shift, post-program interviews with participating retailers and those customers who participated in the Program should be conducted.
2. There is merit in getting on-the-spot feedback from consumers. Consideration should be given to conducting exit surveys at point of purchase.

VI. CONCLUSION

The Spring 2006 Residential Education and Coupon Incentive Program was the largest addressed mail campaign in the province's history. Based on the measured results, the Program is successful in that:

- it was completed on time;
- it was below budget;
- it achieved TRC net benefits of over \$33.5 Million and a benefit cost ratio of 4.46;
- it mobilized the vast majority of targeted partners - the LDCs, retailer stores and manufacturers;
- it delivered aggregate coupons redemption results higher than the set targets; and
- it achieved measurable changes in consumer awareness and actions on energy conservation.

The key factors contributing to the success are as follows:

- a program design that is both ambitious and achievable;
- a top quality project team;
- effective communications between project team members;
- careful planning and sequencing of tasks;
- consideration of all the possible risks and the establishment of risk mitigating measures;
- tight communication network between project team members to ensure good coordination and issues are dealt with quickly; and
- clear documentation of responsibilities of tasks and sub-tasks and when they need to be completed with regular checks on progress.

Valuable lessons were learned from this first large province-wide residential program of the OPA. Relations with LDCs, retailers and manufacturers have been established. Through the Program, a solid foundation has been put in place for the success of future programs.

Appendix A: Mail Distribution Plan



Residential Education and Coupon Incentive Program
Mail Rollout Plan
As at May 18, 2006

No.	LDC Name	Mailout Date	
		For Those Paying Directly for Electricity (Addressed)	For Those Paying for Electricity Within Their Rent or Condo Fees (Unaddressed)
1	Toronto Hydro-Electric System Limited	April 24-26	starting May 10
2	Bluewater Power Distribution Corporation	April 28	May 18-19
3	Horizon Utilities Corporation	May 1	May 18-19
4	Hydro Ottawa Limited	May 2	May 18-19
5	Greater Sudbury Utilities Inc.	May 6 (done)	May 18-19
6	Thunder Bay Hydro Electricity Distrib. Inc.	May 8 (done)	May 18-19
7	Burlington Hydro Inc.	May 1-14	May 19-23
8	Canadian Niagara Power Inc.		
9	Enersource Hydro Mississauga Inc.		
10	Grimsby Power Incorporated		
11	Haldimand County Hydro Inc.		
12	Hydro One Brampton Networks		
13	Lakefront Utilities Inc.		
14	Milton Hydro Distribution Inc.		
15	Newmarket Hydro Ltd.		
16	Niagara Falls Hydro Inc.		
17	Niagara-on-the-Lake Hydro Inc.		
18	Oakville Hydro Corporation		
19	Oshawa PUC Networks Inc.		
20	Peninsula West Utilities Limited		
21	PowerStream Inc.		
22	Veridian Connections Inc.		
23	Welland Hydro Electric System Corp.		
24	Whitby Hydro Electric Corp.		
25	Brant County Power Inc.	May 14-24	May 24-25
26	Brantford Power Inc.		
27	Cambridge and N. Dumfries Hydro Inc.		
28	Centre Wellington Hydro Ltd.		
29	Chatham-Kent Hydro Inc.		
30	Clinton Power Corp.		
31	Dutton Hydro Limited		
32	E.L.K. Energy Inc.		
33	ENWIN Powerlines Ltd.		
34	Erie Thames Powerlines Corporation		
35	Essex Powerlines Corporation		
36	Festival Hydro Inc.		
37	Goderich Hydro		
38	Grand Valley Energy Inc.		
39	Guelph Hydro Electric Systems Inc.		
40	Halton Hills Hydro Inc.		
41	Kitchener-Wilmot Hydro Inc.		
42	London Hydro		
43	Middlesex Power Dist. Corp.		
44	Newbury Power Inc.		
45	Norfolk Power Distribution Inc.		
46	Orangeville Hydro Limited		
47	St. Thomas Energy Inc.		
48	Tillsonburg Hydro Inc.		
49	Waterloo North Hydro Inc.		
50	Wellington Electric Distribution Co. Inc.		
51	Wellington North Power Inc.		
52	West Perth Power Inc.		
53	Westario Power Inc.		
54	Woodstock Hydro Services Inc.		

No.	LDC Name	Mailout Date	
		For Those Paying Directly for Electricity (Addressed)	For Those Paying for Electricity Within Their Rent or Condo Fees (Unaddressed)
55	Cooperative Hydro Embrun Inc.	May 24-25	May 25
56	Cornwall Electric		
57	Hydro 2000 Inc.		
58	Hydro Hawkesbury Inc.		
59	Kingston Electricity Distribution Limited		
60	Ottawa River Power Corp.		
61	Renfrew Hydro Inc.		
62	Rideau St. Lawrence Distribution Inc.	May 25-30	
63	Barrie Hydro Distribution Inc.		
64	Chapleau Public Utilities Corporation		
65	Collus Power Corp.		
66	Espanola Regional Hydro Distribution Corp.		
67	Fort Albany Power Corporation		
68	Great Lakes Power Limited		
69	Hearst Power Distribution Co. Ltd.		
70	Innisfil Hydro Distribution Systems Ltd.		
71	Lakeland Power Distribution Ltd.		
72	Midland Power Utility Corporation		
73	North Bay Hydro Distribution Ltd.		
74	Northern Ontario Wires Inc.		
75	Orillia Power Distribution Corporation		
76	Parry Sound Power Corporation		
77	Peterborough Distribution Inc.		
78	PUC Distribution Inc.		
79	Tay Hydro Electric Distribution Co. Inc.		
80	Wasaga Distribution Inc.		
81	West Nipissing Energy Services Ltd.		
82	Atikokan Hydro Inc.		
83	Fort Frances Power Corporation		
84	Hydro One Remote Communities Inc.		
85	Kenora HE Corp. Ltd.		
86	Sioux Lookout Hydro Inc.		
87	Terrace Bay Superior Wires Inc.		
88	Hydro One Networks Inc.	May 26-June 1	May 26

Notes:

- 1) Residual mail will drop June 1-7.
- 2) Mailout date is the date that the packages are received at Canada Post's gateway. It will take 5-7 days from the mailout date for the customer to receive the package.

Appendix B: List of Participating LDCs

No.	LDC	Service Area(s)
1	Atikokan Hydro Inc.	Atikokan
2	Barrie Hydro Distribution Inc.	Barrie, Bradford, Thornton, Penetanguishene, Alliston, Beeton, and Tottenham
3	Bluewater Power Distribution Corporation	Sarnia, Pt Edward, Petrolia, Alvinston, Oil Springs, Watford
4	Brant County Power Inc.	Paris, St. George, Burford also Brantford Township
5	Brantford Power Inc.	Brantford
6	Burlington Hydro Inc.	Burlington
7	Cambridge and N. Dumfries Hydro Inc.	City of Cambridge and Township of North Dumfries
8	Canadian Niagara Power Inc.	Fort Erie and Port Colborne
9	Centre Wellington Hydro Ltd.	Fergus
10	Chapleau Public Utilities Corporation	Chapleau
11	Chatham-Kent Hydro Inc.	Chatham, Blenheim, Bothwell, Dresden, Eriau, Wheatley, Merlin, Ridgetown, Thamesville, Tilbury, Wallaceburg
12	Collus Power Corp.	Collingwood, Creemore, Stayner, and Thornbury
13	Cooperative Hydro Embrun Inc.	Embrun
14	Cornwall Electric	Cornwall
15	Eastern Ontario Power (Gananoque) 3a	Gananoque
16	Enersource Hydro Mississauga Inc.	Mississauga
17	Erie Thames Powerlines Corporation	Tavistock, Embro, Thamesford, Ingersoll, Belmont, Beachville, Burgessville, Norwich, Otterville, Aylmer, Port Stanley
18	Espanola Regional Hydro Distribution Corp.	Espanola
19	Essex Powerlines Corporation	Amherstburg, LaSalle, Leamington and Tecumseh
20	E.L.K. Energy Inc.	Essex
21	Festival Hydro Inc.	Brussels, Dashwood, Hensall, St Marys, Seaforth, Zurich and Stratford
22	Fort Frances Power Corporation	Fort Frances
23	Goderich Hydro (West Coast Huron Energy Inc.)	Goderich
24	Grand Valley Energy Inc.	Grand Valley

25	Great Lakes Power Limited	Sault Ste. Marie
26	Greater Sudbury Utilities Inc.	Sudbury
27	Grimsby Power Incorporated	Grimsby
28	Guelph Hydro Electric Systems Inc. (merged with Wellington Electric)	Guelph, Rockwood
29	Haldimand County Hydro Inc.	Caledonia
30	Halton Hills Hydro Inc.	Halton Hills (including Acton, Georgetown and the surrounding areas)
31	Hearst Power Distribution Co. Ltd.	Hearst
32	Horizon Utilities Corporation	Hamilton & St. Catharines
33	Hydro 2000 Inc. (formerly Alfred-Plantagenet)	Alfred
34	Hydro One Brampton Networks	Brampton
35	Hydro One Networks Inc.	Various Cities
36	Hydro Ottawa Limited	Ottawa
37	Innisfil Hydro Distribution Systems Ltd.	Innisfil
38	Kenora HE Corp. Ltd.	Kenora
39	Kingston Electricity Distribution Limited	Kingston
40	Kitchener-Wilmot Hydro Inc.	City of Kitchener, Township of Wilmot
41	Lakefront Utilities Inc.	Cobourg
42	Lakeland Power Distribution Ltd.	Huntsville
43	London Hydro	London
44	Middlesex Power Dist. Corp. (form. Strathroy)	Strathroy
45	Midland Power Utility Corporation	Midland
46	Milton Hydro Distribution Inc.	Milton
47	Newmarket Hydro Ltd.	Newmarket
48	Niagara-on-the-Lake Hydro Inc.	NOTL, St Davids, Queenston and Virgil
49	Niagara Falls Hydro Inc.	Niagara Falls
50	Norfolk Power Distribution Inc.	Simcoe
51	North Bay Hydro Distribution Ltd.	North Bay
52	Northern Ontario Wires Inc.	Cochrane, Iroquois Falls, Kapuskasing
53	Oakville Hydro Corporation	Oakville
54	Orangeville Hydro Limited	Orangeville
55	Orillia Power Distribution Corporation	Orillia

56	Oshawa PUC Networks Inc.	Oshawa
57	Ottawa River Power Corp.	City of Pembroke, Town of Beachburg, Town of Killaloe, Town of Almonte
58	Parry Sound Power Corporation	Parry Sound
59	Peninsula West Utilities Limited	Beamsville, Smithville, Fonthill, Vineland, Jordan, Lincoln and all of West Lincoln
60	Peterborough Distribution Inc.	Peterborough
61	PowerStream Inc.	Vaughan, Richmond Hill, Markham, Aurora
62	PUC Distribution Inc.	Sault Ste. Marie
63	Renfrew Hydro Inc.	Renfrew
64	Rideau St. Lawrence Distribution Inc.	Prescott, Cardinal, Morrisburg, Williamsburg, Iroquois, Williamsburg and Westport
65	Sioux Lookout Hydro Inc.	Sioux Lookout
66	St. Thomas Energy Inc.	St. Thomas
67	Tay Hydro Electric Distribution Co. Inc.	Port McNicoll
68	Thunder Bay Hydro Electricity Distrib. Inc.	Thunder Bay
69	Tillsonburg Hydro Inc.	Tillsonburg
70	Toronto Hydro-Electric System Limited	Toronto
71	Veridian Connections Inc.	Ajax, Beaverton, Belleville, Bowmanville, Cannington, Newcastle, Orono, Pickering, Port Hope, Port Perry, Gravenhurst, Sunderland and Uxbridge
72	Wasaga Distribution Inc.	Wasaga Beach
73	Waterloo North Hydro Inc.	City Waterloo, Township of Woolwich, Township of Wellesley
74	Welland Hydro Electric System Corp.	Welland
75	Wellington North Power Inc.	Mount Forest
76	West Nipissing Energy Services Ltd.	Sturgeon Falls
77	West Perth Power Inc.	Mitchell
78	Westario Power Inc.	Kincardine
79	Whitby Hydro Electric Corp.	Whitby
80	Woodstock Hydro Services Inc.	Woodstock

Appendix C: LDC Survey

M e t h o d o l o g y a n d L o g i s t i c s

Overview

- The following represents the results of a survey of 47 participating EKC Program and one non-participating LDC representing a 54% response.

Study Sample

- A total of 48 LDC respondents were surveyed from a database of 89 potential respondents provided by the OPA.

Survey Method

- The survey was conducted using computer-assisted techniques of telephone interviewing (CATI).
- A total of 30% of all interviews were monitored and the management of Oraclepoll Research Limited supervised 100%.

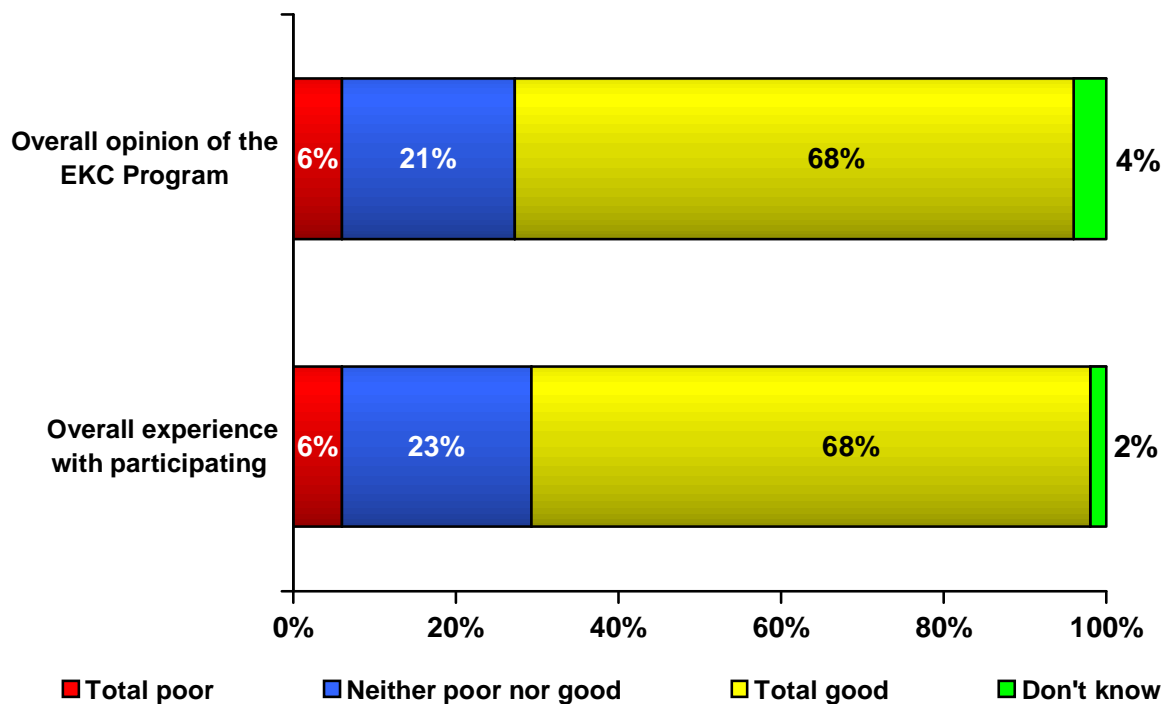
Logistics

- Interviews were conducted between the days of June 2nd and June 8th 2006.
- Initial calls were made from 8:30 a.m. to 6:00 p.m. with call-backs of no-answers and busy numbers made on a (staggered) daily rotating basis up to 7 times until contact was made.
- In addition, telephone interview appointments were attempted with those respondents unable to complete the survey at the time of contact.

Executive Summary

RATING THE PROGRAM

Participating respondents were asked to rate their overall experience EKC Program in each of the following areas using a scale from one very poor to five very good.



There was a high level of satisfaction and low dissatisfaction among the 47 participating LDC's interviewed with respect to their overall opinion and their experience in participating in the EKC Program. When asked why they participated in the EKC Program the most cited responses related to wanting to work with the OPA and to help in efforts to conserve.

The one non-participating LDC was asked a series of questions about their decision not to participate and their impression of the Program. This LDC did not participate because of a lack of time as a result of a lack of personnel but this LDC did have a good impression of the program. Better timing would encourage them to participate in the future.

Participating respondents were also asked to rate the EKC Program in each of the following areas.

“Next please rate the program in each of the following areas using a scale from one very poor to five very good.”

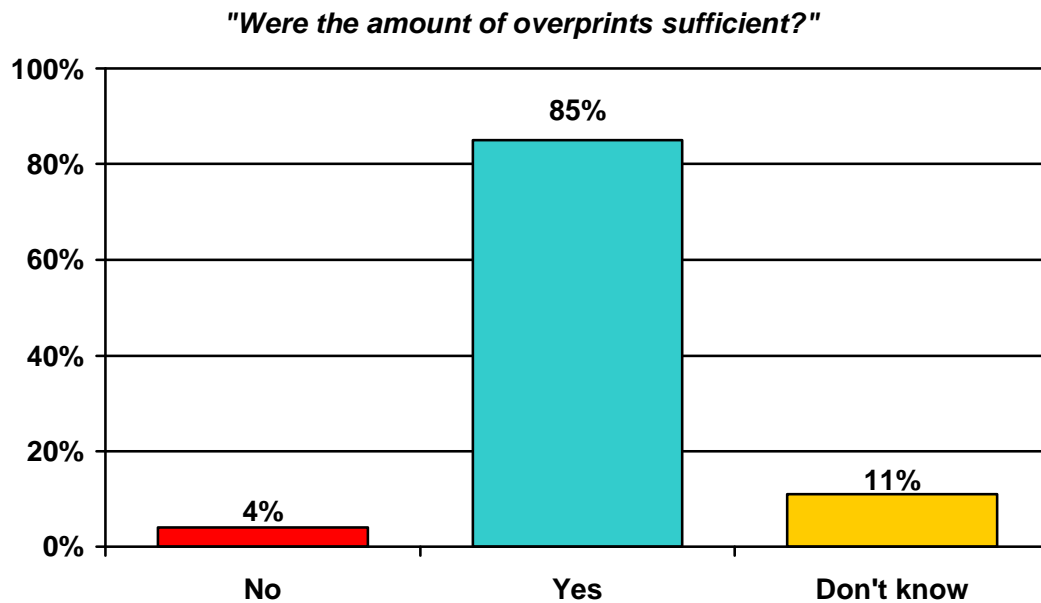
SATISFACTION RATING AREAS	Not Satisfied (Rating 1-2)	Neutral	Satisfied (Rating 4-5)	Don't know
The [quality] [appropriateness] of the energy conservation information and tips provided in the brochures	4%	13%	83%	-
The effectiveness of the webinars as a means to provide timely and useful information on the program	2%	15%	79%	4%
Your satisfaction with the mail distribution of the coupons	6%	11%	77%	6%
Overall management of the Program	-	26%	75%	-
The design and print quality of the mail out packages/brochures	4%	19%	74%	2%
The effectiveness of the LDC Communication website as a means to provide updates and useful information	11%	11%	70%	9%
The adequacy of materials provided to LDC's to prepare your staff for the program	9%	21%	70%	-
Support provided by Program managers	-	17%	70%	13%
Appropriateness of selected products	11%	19%	70%	-
Your satisfaction with the value of the coupons	6%	15%	70%	9%
The ease of preparing the mailing list/logo according to the specified format	8%	19%	68%	4%

Operation and delivery of the Program	11%	28%	60%	2%
The usefulness of sample PR and media materials for local promotional and supporting events and activities	13%	30%	38%	19%
The effectiveness of the coop advertising arrangement in encouraging LDC's to supplement local promotions	19%	21%	36%	23%
The effectiveness of the newspaper and radio advertising	11%	32%	21%	36%

LDC's rated the program high in most areas with the exceptions being the usefulness of sample PR and media materials, the effectiveness of coop advertising as well as newspaper and radio ads as a high number of respondents either did not know or were unable to answer these questions. The highest rated areas were the [quality] [appropriateness] of the energy conservation information, the effectiveness of webinars and mail distribution.

OVERPRINTS

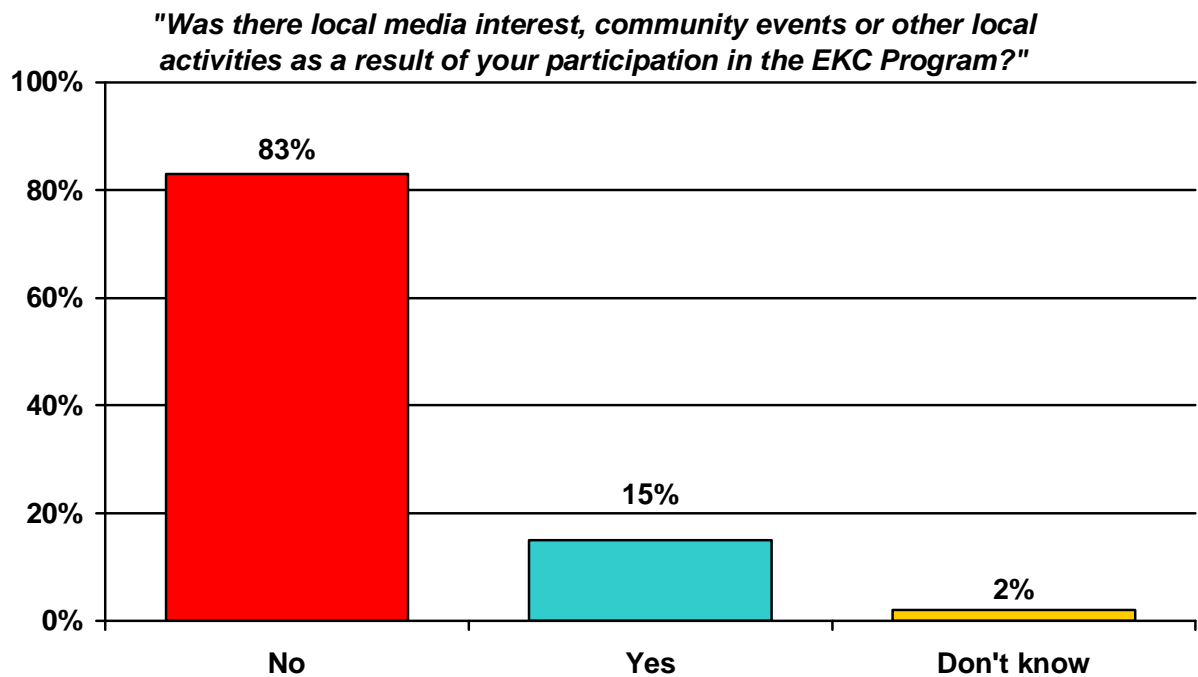
Respondents were asked two questions related to brochure overprints.



A high 85% of respondents were of the opinion that the amount of overprints was sufficient. When asked how they were used, 49% stated that they were provided to walk in clients or kept at the counter, 9% to those that requested them, 9% to organizations, 6% at trade shows and 6% to new clients.

MEDIA INTEREST

Respondents were asked about local media interest.



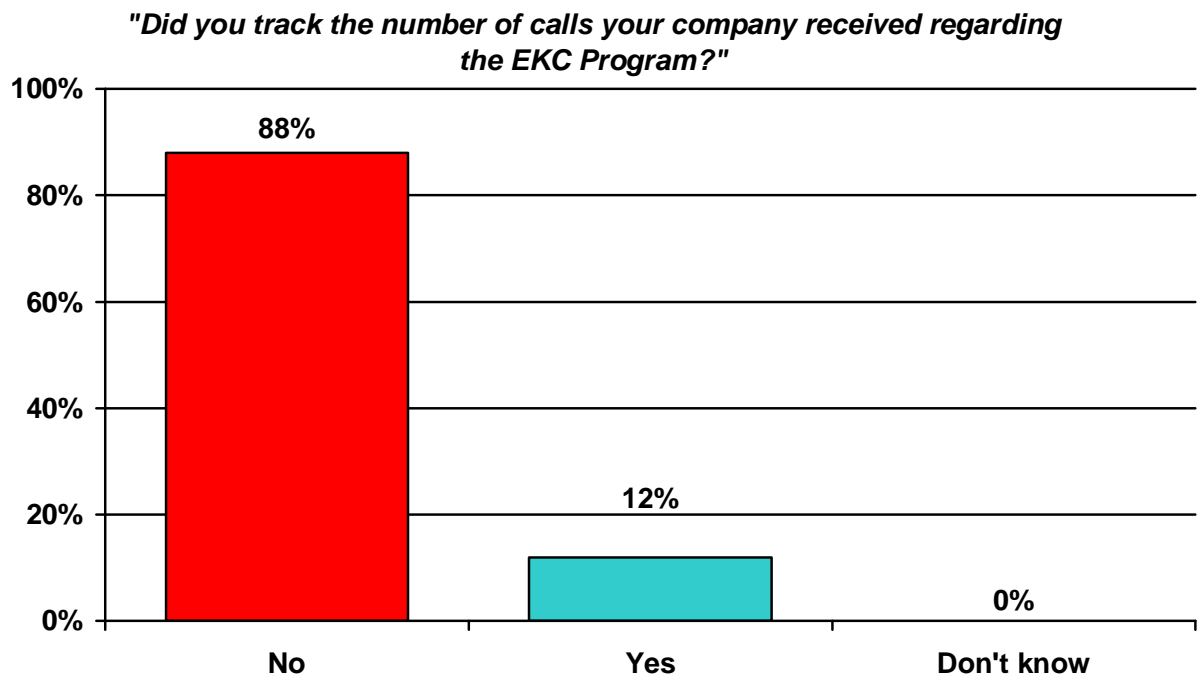
Only 15% of respondents claimed that there was local media or community interest as a result of their participation in the EKC Program. Those that stated there was interest were then asked the following.

Q21b. Please describe these events or activities.

		Frequency	Valid Percent
Valid	Newspaper articles	2	4.2
	Planing future event with local supplier as joint promotion	1	2.1
	Inquiries from Press and interviews with local newspapers and Rogers Cable	1	2.1
	Presentation for conservation	1	2.1
	Local retail promotional program for media advisory to Home Hardware stores	1	2.1
	Questions regarding coupon campaign	1	2.1

CALLS

Respondents were asked about calls received.



Only 12% of respondents tracked the number of calls that they received and this group was asked the following.

Q25b. How many calls were received

		Frequency	Valid Percent
Valid	Less than 10	1	16.7
	12	2	33.3
	20	2	33.3
	40	1	16.7
	Total	6	100.0

IMPROVEMENTS

Respondents were asked about how they felt the Program could be improved with respect to marketing and delivery. Having more time as well was seen as one way to improve upon both delivery and marketing as was improved communication/input and more advertising.

“How would you improve upon the delivery of future programs of this nature?”

- *Timing / more time (14)*
- *Don't know (7)*
- *Nothing (4)*
- *Make sure coupons can be used in all areas (4)*
- *Run different types of programs / its repetitive (2)*
- *Don't put customers name on package (2)*
- *More communication about delivery of coupons (2)*
- *More information on the program such as products, locations etc (2)*
- *Re-design look for item and abbreviate coupons with tips (2)*
- *TV ads*
- *Make sure French ones are sent out*
- *Those customers that don't have web access can't get rebate*
- *Program should have just one brand*
- *Media, radio, and coupons at retail should be done*
- *Keep the message simple can be confusing*
- *Mailings should be done at same time and not spread out*
- *Include with bills*
- *Expand products line*

How would you improve upon the marketing of future programs of this nature?

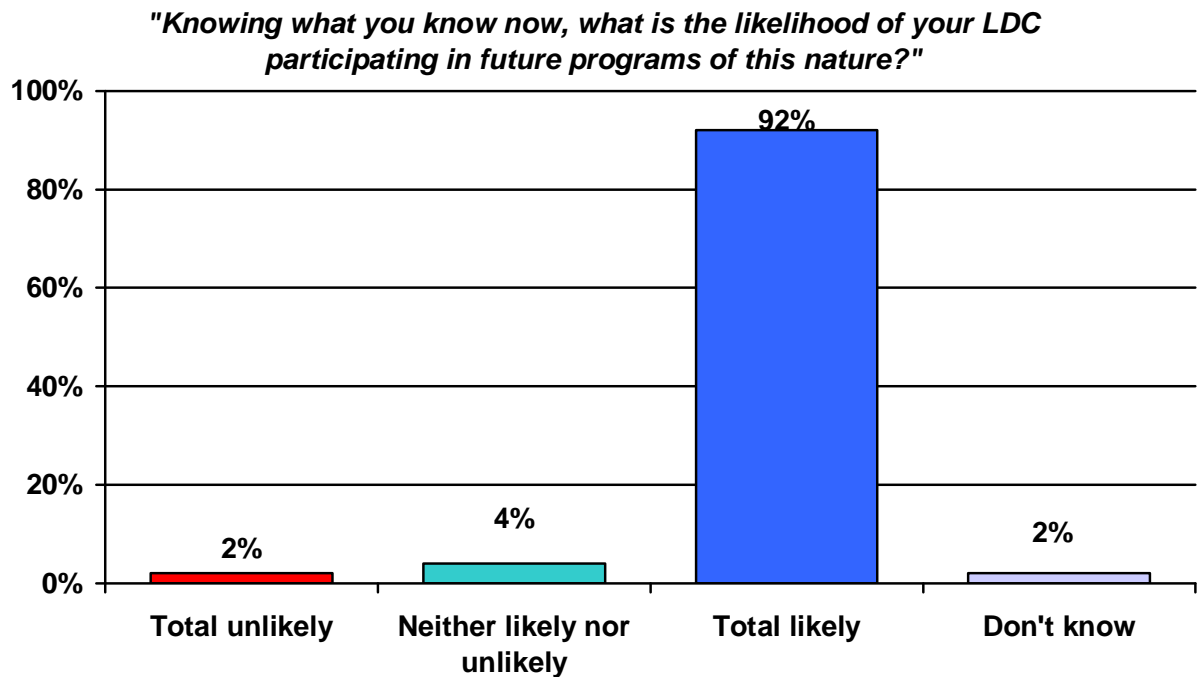
- *More time (10)*
- *More advertising (9)*
- *Don't know (8)*
- *More retail participation (3)*
- *More input / involvement from the LDC (3)*
- *Nothing (2)*
- *Target what is available to the customer (2)*
- *Local advertising in smaller communities (2)*
- *Simplify messaging*
- *Similar promotions instead of papers*
- *More action for customers to take part in events*
- *Have contacts in coupon booklets for participating retailers*
- *Coordinate province wide at same time in the same areas*
- *Should have rebate to avoid restriction of min requirements*
- *Don't use print mail*
- *Coupon visible with the product, at the retail outlet*

When asked about the role that they would like to see LDC's play in the future, 27% said a similar role, 15% would like to participate more in the planning and design, 10% more proactive, while 17% were unsure. Other comments related to having more of an input role or having improved communication.

Things that they would most like to see changed related to having more time (27%), changes to the format of the flyer (13%), more retail participation (10%) and more advertising (4%). 25% either did not know or had no changes in mind.

FUTURE PARTICIPATION

Respondents were asked about their participation in future programs.



A high 92% of LDC's stated that they would be either likely (19%) or very likely (73%) to participate in future programs. The types of products that they would like included in future campaigns consist of bulbs (17%), air conditioners (10%), furnaces (8%), appliances (8%), timers (6%), fridges/freezers (4%), and water heaters. 8% stated the same products that were offered and 23% were unsure or did not know.

Appendix D: List of Participating Retailers and Manufacturers

1. Retailers

No.	Retailer	Store Locations
1.	Ace/Pro	24
2.	Canadian Tire	197
3.	Giant Tiger	97
4.	Home Depot	66
5.	Home Hardware	419
6.	Hy and Zels	12
7.	Living Lighting	17
8.	Loblaws	529
9.	Rona	120
10.	Tim-Br Mart	115
11.	True Value	73
12.	TSC	23
13.	Sobeys/Price Chopper	268
14.	Zellers	0
15.	Wal-Mart	89
16.	Bargain Building Materials	3
17.	Misc Ind Retailers	34
18.	Ideal Supply	22
	Total	2108

2. Manufacturers

No.	Manufacturer
1.	Casablanca
2.	General Electric
3.	Globe
4.	Hampton Bay
5.	Honeywell
6.	Hunter
7.	Intermatic
8.	Landlite
9.	Leviton
10.	Luminus
11.	Marathon
12.	Noma
13.	Philips
14.	Pricemark
15.	Prolux
16.	Sylvania
17.	UPM
18.	White Rodgers

Appendix E: TRC Analysis

1.0 Introduction

As part of its on-going CDM efforts, the Conservation Bureau (the Bureau) has requested that SeeLine Group Inc. (SLG) undertake an assessment of a series of residential technologies with specific focus on potential savings, incremental cost and TRC results for specific electric technologies including:

- Compact Fluorescent Lamps - 11 W, 15 W and 25 W.
- ENERGY STAR Ceiling Fans for residential application.
- Electric Timers for outdoor and indoor residential lighting.
- Programmable Thermostats for residential application.

The activities included secondary research to support the savings and cost estimates, original calculations for measures where secondary data or information was not available, contextual discussions for each technology and a Total Resource Cost (TRC) analysis. The TRC analysis relied on SLG's SeeTool™ model to evaluate the cost effectiveness of each technology, and includes free ridership estimates in the results, consistent with the methodology required by the Ontario Energy Board¹.

The TRC analysis is done for the entire provincial program and does not distinguish between different utilities or regions of the province. A TRC Calculator has also been developed to facilitate easy calculation of the TRC results for the four measures for individual utilities, wherein utility specific discount rates and coupon redemptions can be used to calculate the TRC. This is provided as an Excel™ Spreadsheet in a separate document. All savings calculations are supported by detailed documentation.

Note that for the purposes of the TRC analysis, the Project Team created "archetype composites" for each technology.² The archetypes represent a blend of the various units available within the technology category, as well as market information for programmable thermostats. The results of the assessments are provided in the individual technology sections along with the description of their market.

2.0 Market Context

Section 2 examines the individual technologies, providing market context and background which represent key considerations for identifying CDM potential savings and programming considerations. Summary savings, equipment costs and TRC results are also provided.

¹ Ontario Energy Board, Total Resource Cost Test Guide. Revised October 2, 2006.

² Coupon redemption in the program did not delineate between the different brands, bulb sizes etc. Future evaluation efforts of the coupon program may want to consider collecting this information.

2.1 Compact Fluorescent Lamps

Lighting represents 5% of the total energy used in Ontario households, of which indoor lighting is the largest part. Incandescent lamps are ubiquitous in the residential sector. Common incandescent lamps have a useful life of 750 to 2,500 hours - depending on the amount of usage, they can require replacement more than once per year. These lamps provide 9-12 lumens/watt.

Compact fluorescent lamps have been widely used throughout North America to deliver residential energy efficient savings. Their accessibility and easy installation make them an ideal component to a variety of programs. In response to California's 2001 energy crisis, utilities and other organizations delivered some of the largest CFL campaigns to help mitigate consumer's high energy bills.

This activity gave rise to a research study conducted by KEMA-XENERGY³ which examined the market effects of various program delivery mechanisms. In particular, the 90% installation rate for a reduced priced or point of purchase rebate campaign was among the highest for the various delivery mechanisms studied. The implication is that 90% of the units purchased in a multi-unit campaign are installed, with the remaining 10% used in the future as replacements. For the purposes of this analysis, installation rates for the CFLs have been adjusted (lowered) by 10% to reflect this.

In addition, the KEMA-XENERGY identifies that the effects on the market are thought to be more sustainable due to product availability and product exposure at the retail level.⁴ This speaks to the market transformative nature of this kind of campaign. While no adjustment has been made to accommodate this "spill-over", the project team recommends that future evaluation efforts examine this issue. Ultimately, these kinds of campaigns can be expected to lead to greater purchases of bulbs, even without the program.

Compact fluorescent lamps (CFL) can be used as a direct replacement for incandescent lamps in most applications, when they are provided with a screw-in base and an integral ballast. With the exception of special models, they are not suitable for dimming. The lamps have a useful life of 6,000 to 10,000 hours.

CFLs provide 45-60 lumens/watt, based on the lamp input rating. The nominal input power rating of the CFL includes the ballast. The selection of a CFL-to-incandescent replacement is based on a nominal rating of 25% of the incandescent lamp, i.e. 60 W incandescent = 15 W CFL.

ENERGY STAR qualified CFLs:

- Use at least 2/3 less energy than standard incandescent bulbs to provide the same amount of light, and last up to 10 times longer.
- Save \$30 or more in energy costs over each bulb's lifetime.
- Generate 70 percent less heat, so they are safer to operate and can cut energy costs associated with home cooling.

³

http://www.eere.energy.gov/state_energy_program/case_study_by_topic_detail.cfm/cs_id=8. U.S. Department of Energy, Energy Efficiency and Renewable Energy, CFLs Programs That Work, SEP Case Study, California, October 2003.

⁴ IBID

- In addition to other quality requirements, must turn on instantly, produce no sound, and fall within a warm color range or be otherwise labeled as providing cooler colour tones.
- Are available in different sizes and shapes to fit in almost any fixture, for indoors and outdoors.

Recently, the price of CFL lamps has dropped significantly. Retailers regularly sell CFLs for \$2 to \$5 per unit, depending on size and operating life. Marketing campaigns often feature even lower prices.

Three bulb sizes dominate the retail market: 11W (replacing 40 W incandescents), 15 W (replacing 60 W incandescents and 25 W (replacing 100 W incandescents). For the purposes of this analysis, a composite archetype was created.

Table 2.1.1 summarizes the expected savings and costs for the three bulbs and a composite CFL based on 70% 15 W lamps, 15% 11 W lamps, and 15% 25 W lamps. The equivalent base case is based on 70% 60 W lamps, 15% 40 W lamps, and 15% 100 W lamps. A brief review of retailer stocking practices suggests that the predominant bulb type sold is the 15 W.

Table 2.1.1. Compact Fluorescent Lamps

Description	Energy Savings		Demand Reduction, kW		Equipment Life, yrs	Incremental Cost
	Gas, m ³	Electricity, kWh ⁵	Summer	Winter		
11 W	0	67	0.000	0.015	4.3	\$2.00
15 W	0	104	0.000	0.023	4.3	\$2.50
25 W	0	174	0.000	0.038	4.3	\$3.00
CFL Composite	0	104	0.000	0.022	4.3	\$2.50

Table 2.1.2 provides the Provincial TRC results for the compact fluorescent component of the Every KiloWatt Counts Summer program. These results are based upon the savings and cost information as defined above and the total number of units purchased. (Note that 2.77 bulbs are purchased for each coupon redeemed - coupon redemption values are multiplied by 2.77 to give the total number of bulbs purchased).

Table 2.1.2. CFL - Provincial TRC Results

Number of Bulbs Redeemed	TRC Benefits	TRC Costs	TRC Net Benefits	TRC Benefit Cost Ratio	Summer Peak kW Savings	Net Annual kWh Savings	Net Lifecycle kWh Savings
1,338,276	\$29,746,948	\$2,710,009	\$27,036,937	10.96	-	125,325,265	501,301,060

⁵ Ontario Energy Board. Op. cit.

As shown, 1,338,276 bulbs were purchased under the program. This yielded net TRC benefits of \$27 Million. Also shown are the annual energy savings and the savings over the life cycle of the bulbs.

2.2 ENERGY STAR Ceiling Fans

Ceiling fans are a popular and generally well regarded home appliance. They offer a decorative alternative to typical light fixtures, and they have a very pragmatic appeal to those who want to reduce summer electricity costs and improve overall comfort by eliminating temperature stratification.

Ceiling fan blade diameters range from 29 to 54 inches - the most popular being the 52-inch model. ENERGY STAR recommends the following selection guidelines, based on recommendations from the American Lighting Association, for selecting a fan diameter based on room size:

Room Area	Suggested Fan Size	Approximate Airflow at High Speed, cfm
Up to 75 ft ²	29 - 36"	2,000 – 4,000
76 - 144 ft ²	36 - 42"	2,500 – 4,500
144 - 225 ft ²	44"	4,500 – 6,500
225 - 400 ft ²	50 - 54"	5,000 – 8,500

Depending on how they are used and what kind of lights, if any, are part of the fan package, they can help reduce summer energy use, but they can also be substantial energy users. Because ceiling fan lights are often the brightest, most centrally located, and most conveniently switched fixtures in the room, they may be used about three to four hours per day. And, since ceiling lights don't tend to be efficient lights, these light kits actually use more electricity than the fan motors do, even though the fan motors often run for longer periods per day.

Researchers at Florida Solar Energy Center (FSEC) investigated ways to save energy by addressing four aspects of fan energy use when:

- Improve the aerodynamic qualities of the fan blades
- Use the smallest possible fan motor that would provide the optimum air flow, (they could not convince the manufacturer to use a more efficient motor)
- Develop smarter controls to ensure that the fan operates only when the occupants really want it.
- Designed fans with light fixtures designed for efficient lamps.

In comparison airflow tests, the new design delivered 130 cfm/W at high speed compared to 60 – 75 cfm/W for conventional designs.⁶

Based on modeling and input from fan manufacturers and utilities, a typical ceiling fan with light kit consumes about 300 kWh/year. ENERGY STAR labeled

⁶ "Cutting-Edge Blades Slash Energy Use", Home Energy Magazine, July/August 1999

models reduce that consumption to approximately 120 kWh/year, while providing equal or greater light output and airflow⁷.

For a ceiling fan to reduce electricity for space cooling (i.e. when air conditioning is present), it is necessary to raise the thermostat during the summer to take advantage of the "wind chill" effect provided by the ceiling fan. In a survey, however, the Florida Solar Energy Center found no difference between the air conditioner thermostat settings in Florida houses that had ceiling fans operating and those that didn't. As a result, the houses that were using ceiling fans had even higher energy bills. It seems reasonable to conclude that if consumers in a region having both a longer cooling season and higher electricity costs were not taking the simple step necessary to reduce air conditioning costs by raising the temperature setpoint, it is unlikely that Ontario consumers would do so.

There is also no information or data available that attempts to quantify what the savings might be, and no estimate is provided herein. An important consideration for future CDM programming efforts would be to attempt to verify if ceiling fans displace air conditioning load. Consideration should also be given to communicating the potential benefits of using ceiling fans as an alternative to air conditioning.

ENERGY STAR qualified ceiling fans move air up to 20% more efficiently than standard ceiling fans, and must meet the following minimum airflow efficiency:

Fan Speed	Minimum Airflow	Efficiency Requirement
Low	35.4 m ³ /min. (1250 cfm)	4.4 m ³ /min (155 cfm) per watt
Medium	85.0 m ³ /min. (3000 cfm)	2.8 m ³ /min (100 cfm) per watt
High	141.6 m ³ /min. (5000 cfm)	2.1 m ³ /min (75 cfm) per watt

The ENERGY STAR website offers a savings calculator to estimate the difference in operating cost between an approved ceiling fan and a standard model. Using the region designated "East North Central" as a proxy for Ontario, an electricity rate of \$0.10/kWh, and the default settings for the other inputs (including year round use), the energy savings for both fan and lights is calculated as 176 kWh/yr, with an incremental capital cost \$25.00. Of this energy saved, only 3 kWh/yr is attributable to the fan, with the balance for the lights.

The ENERGY STAR calculator output screen for the Fan and Light combination is shown in Table 2.2.3. For the purposes of this analysis, an archetype composite representing a blend of the two main types of fans (with and without lights) has been created. It is assumed that 80% of the fans purchased through the coupon campaign have lights while the remaining 20% do not.⁸ The composite savings and costs reflect this blend.

⁷ "Getting the Most from Your Fan – Tips for Maximizing Energy Savings", Home Energy Magazine, 2004

⁸ A brief survey of retailer stocking practices indicated that most ceiling fans had lights. This is also intuitive as the main application of ceiling fans is as replacements for fixtures having lights (bedrooms for example).

Table 2.2.1 summarizes the expected savings and costs for a both a ceiling fan only, and a ceiling fan with lights. The base case is a non-ENERGY STAR model using incandescent lamps, as defined in the savings calculator.

Table 2.2.1. ENERGY STAR Ceiling Fan

Features	Energy Savings		Demand Reduction, kW		Equipment Life, yrs	Incremental Cost
	Gas, m ³	Electricity, kWh	Summer	Winter		
Fan only	0	3	0.000	0.000	20	\$25.00
Fan & Light ^a	0	176	0.015	0.018	20	\$25.00
Fan Composite	0	141	0.014	0.012	20	\$25.00

Table 2.2.2 provides the Provincial TRC results for the Energy Star ceiling fan component of the Every KiloWatt Counts Summer program. These results are based upon the savings and cost information as defined above and the total number of units redeemed.

Table 2.2.2. ENERGY STAR Ceiling Fan - Provincial TRC Results

<i>Number of Fans Redeemed</i>	<i>TRC Benefits</i>	<i>TRC Costs</i>	<i>TRC Net Benefits</i>	<i>TRC Benefit Cost Ratio</i>	<i>Summer Peak kW Savings</i>	<i>Net Annual kWh Savings</i>	<i>Net Lifecycle kWh Savings</i>
12,415	\$1,963,957	\$279,338	\$1,684,620	7.03	169.41	1,570,994	31,419,882


As shown, 12,415 ceiling fans were redeemed/purchased under the program. This yielded net TRC benefits of \$1.68 Million. Also shown are the annual energy savings and the savings over the life cycle of the fans.

^a Assumes a 3 bulb configuration where compact fluorescent bulbs are used instead of incandescents.

Figure 2.2.3. ENERGY STAR Ceiling Fan Calculator Output Screen

Products that earn the ENERGY STAR proven greenhouse gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy.

www.energystar.gov



CHANGE FOR THE
BETTER WITH
ENERGY STAR

Life Cycle Cost Estimate for
1 ENERGY STAR Qualified Ceiling Fan(s) with Lighting

This energy saving calculator was developed by the U.S. EPA and U.S. DOE and is provided for estimating purposes only. Actual energy savings may vary based on use and other factors.

Enter your own values in the gray boxes or use our default values.

<p>Number of units: <input style="width: 80px;" type="text" value="1"/></p> <p>Electricity Rate (\$/kWh): <input style="width: 80px;" type="text" value="\$0.100"/></p> <p>Percent of Time Spent at Low Speed: <input style="width: 80px;" type="text" value="40%"/></p> <p>Percent of Time Spent at Medium Speed: <input style="width: 80px;" type="text" value="40%"/></p> <p>Percent of Time Spent at High Speed: <input style="width: 80px;" type="text" value="20%"/></p> <p>Speed per Speed Switch/Remote Control: <input style="width: 80px;" type="text" value="Select North Control"/></p>	<p>ENERGY STAR Qualified Unit</p>	<p>Conventional Unit</p>
<p>Initial Cost per Unit (estimated retail price): <input style="width: 80px;" type="text" value="\$160"/></p> <p>Cost per Replacement Bulb: <input style="width: 80px;" type="text" value="\$10.00"/></p> <p>Number of Bulbs per Fixture: <input style="width: 80px;" type="text" value="3"/></p> <p>Wattage per Bulb: <input style="width: 80px;" type="text" value="15"/></p>	<p><input style="width: 80px;" type="text" value="\$160"/></p> <p><input style="width: 80px;" type="text" value="\$10.00"/></p> <p><input style="width: 80px;" type="text" value="3"/></p> <p><input style="width: 80px;" type="text" value="15"/></p>	<p><input style="width: 80px;" type="text" value="\$120"/></p> <p><input style="width: 80px;" type="text" value="\$0.00"/></p> <p><input style="width: 80px;" type="text" value="3"/></p> <p><input style="width: 80px;" type="text" value="60"/></p>

Annual and Life Cycle Costs and Savings for 1 Ceiling Fan(s) with Lighting

	1 ENERGY STAR Qualified Unit(s)	1 Conventional Unit(s)	Savings with ENERGY STAR
Annual Operating Costs*			
Energy cost	\$8.07	\$20.52	\$12.55
Maintenance cost	\$5	\$13	\$8.43
Total	\$13.05	\$33.93	\$20.93
Life Cycle Costs*			
Operating costs (energy and maintenance)	\$113.17	\$325.91	\$210.73
Energy cost	\$72.76	\$215.11	\$142.34
Maintenance cost	\$40	\$100	\$60
Purchase price for 1 unit(s)	\$160.00	\$135.00	-\$25.00
Total	\$273	\$460	\$185
Simple payback of initial additional cost (years) [†]			1.0

* Annual costs exclude the total purchase price. All costs, except initial cost, are discounted over the product's lifetime using a real discount rate of 4%. See "Assumptions" to change factors including the discount rate.

† A simple payback period of zero years means that the payback is immediate.

Summary of Benefits for 1 Ceiling Fan(s) with Lighting

Initial cost difference	\$25
Life cycle savings	\$211
Net life cycle savings (life cycle savings - additional cost)	\$186
Simple payback of additional cost (years)	1.0
Life cycle energy saved (kWh)	1,755
Life cycle air pollution reduction (lbs of CO ₂)	2,510
Air pollution reduction equivalence (number of cars removed from the road for a year)	0.2
Air pollution reduction equivalence (acres of forest)	0.3
Savings as a percent of retail price	116%

2.3 Electric Timers

Lighting controls that can switch off lights when they are not required, or that can reduce light levels when full brightness is not required, can significantly reduce energy consumption as well as demand.

A timer for indoor or outdoor lights will ensure that these lights are turned off in accordance with a preset schedule, generally matching daylight hours, although seasonal variations in daylight will reduce their utility. Most timers are designed to be plugged into a receptacle, and some are suitable for outdoor use. Care must be given to the selection of one that has sufficient capacity for the load to be controlled – some lower cost digital units are limited to 300 W, and some cannot be used with fluorescent or compact fluorescent lamps. Where the device must be hard wired, it will likely only have the timer function – this may require resetting at least twice during the year.

A timer for outdoor lights that has a light sensor will ensure that these lights are turned off when there is sufficient daylight. This addresses both the changing seasons and the shift from daylight to standard time and back. Timers which incorporate an astrologic clock that will adjust to match changes in sunset and sunrise are also available. Timer/light sensor controls are readily available, and are usually manufactured for receptacle insertion.

Table 2.3.1 summarizes the expected savings and costs for an electric timer with no daylight sensor applied to an outdoor light fixture with 2 – 75 W incandescent lamps, and to an indoor light fixture with a total of 100 W of incandescent lamps. The timer is assumed to turn the lights on for 8 hours per day. The equivalent base case is based on having no timer, but having the lights turned on and off manually and where the lights are assumed to be on for 12 hours per day.

The composite technology assumes a 50/50 split between the two types of applications.¹⁰

Table 2.3.1. Electric Timers

Controlled Load	Energy Savings		Demand Reduction, kW		Equipment Life, yrs	Incremental Cost
	Gas, m ³	Electricity, kWh	Summer	Winter		
Outdoor Light, 150 W	0	219	0.000	0.014	20	\$20.00
Indoor Light, 100 W	0	146	0.000	0.010	20	\$5.00
Indoor/Outdoor Composite	0	183	0.000	0.109	20	\$20.00

Table 2.3.2 provides the Provincial TRC results for the Electric Timer component of the Every KiloWatt Counts Summer program. These results are based upon the savings and cost information as defined above and the total number of units redeemed/purchased.

¹⁰ Estimate.

Table 2.3.2. Electric Timer - Provincial TRC Results

<i>Number of Electric Timers Redeemed</i>	<i>TRC Benefits</i>	<i>TRC Costs</i>	<i>TRC Net Benefits</i>	<i>TRC Benefit Cost Ratio</i>	<i>Summer Peak kW Savings</i>	<i>Net Annual kWh Savings</i>	<i>Net Lifecycle kWh Savings</i>
37,518	\$7,424,336	\$422,078	\$7,002,258	17.59	-	6,162,332	123,246,630

As shown, 37,518 electric timers were redeemed/purchased under the program. This yielded net TRC benefits of \$7.0 Million. Also shown are the annual energy savings and the savings over the life cycle of the timers.

2.4 Programmable Thermostats

Programmable thermostats combine the capabilities of a calendar, clock and temperature control to reduce energy consumed for space heating when it is anticipated that the space will be unoccupied or that the occupants will be asleep. They can also perform the same function for space cooling.

The controls can be easily added to most forced-air heating systems and are typically used during the winter to lower temperatures at night and during the day, and to raise temperatures during the summer on the same basis. Most models now available include two setbacks during each 24 hour period, and with two separate schedules, one for weekdays and one for weekends – this is the prerequisite for an ENERGY STAR rating, along with specified factory set times and setpoints. Prices for units operating on the low-voltage control circuit of forced-air systems range from \$40 to \$100. Winter energy savings for 2 – 6°C setbacks per day will range from 15 – 19%, and 8 -10% for a night setback only.

There is a growing body of evidence suggesting that the installation of a programmable thermostat does not always, or even sometimes, reduce energy use, as described in these reports:

- A presentation given by David Shiller of the EPA on the Programmable Thermostat Program Proposal (Jan 06) states that “Available studies indicate no savings from programmable thermostat installation. Some studies indicate slight increased consumption.” Data for this report was taken from four different surveys of households with these devices installed.
- A report from the Canadian Building Energy End-Use Data and Analysis Centre¹¹ found that, “despite ‘engineering-type’ evidence, having/using a programmable thermostat does not reduce energy use once endogeneity is taken into account. The most important factor is attitudes toward energy consumption and efficiency that determine thermostat-setting behaviour and hence heating energy consumption. This report is based on an analysis of data from the Canadian Survey of Household Energy Use, 1997.

¹¹ Ryan, David L. and Darren Herasymiuk, *The Impact of Energy Efficient Equipment on Household Energy Use in Canada: Programmable Thermostats*. Department of Economics, University of Alberta, 2005

As a result of the research results and other concerns, EPA is proposing to revise their ENERGY STAR program for programmable thermostats to place a much greater focus on educating consumers. This initiative is currently underway. Consideration should be given to conduct further research on the usage patterns and related outcomes. As well, there is may be a need for

Table 2.4.1 summarizes the expected savings and costs for a programmable thermostat applied to three situations: space heating with natural gas; space heating with electricity; and space cooling. The equivalent base case is based on having no programmable thermostat, and no action by the consumer to manually adjust the setpoint of their thermostat.

The composite technology includes two considerations: space heating fuel shares and central air conditioning share. For space heating, it is assumed that 11% of homes in the province are electrically heated¹². For air conditioning, it is assumed that 46% of homes have central air conditioning¹³. Utilities that have much higher shares of either electric space heating or central air conditioning would expect greater electricity savings, and higher TRC results. Note as well that while natural gas savings can be expected to occur as a result of the installation of a programmable thermostat in gas heated homes, the TRC assessment does not include those benefits.

Table 2.4.1. Programmable Thermostats

Application, (Single Family Residence)	Energy Savings		Demand Reduction, kW		Equipment Life, yrs	Incremental Cost
	Gas, m ³	Electricity, kWh	Summer	Winter		
Space Heating - Gas	219 ¹⁴	0	0.000	0.000	15	\$65.00
Space Heating - Electric	0	1466 ¹⁵	0.000	0.244	15	\$65.00
Space Cooling	0	120 ¹⁶	0.109	0.000	15	\$65.00
Heating/Cooling Composite	195	216	0.050	0.027	15	\$65.00

Table 2.4.2 provides the Provincial TRC results for the Programmable Thermostat component of the Every KiloWatt Counts Summer program. These results are based upon the savings and cost information as defined above and the total number of units redeemed/purchased.

¹² NRCan National Energy Use Database, data for Ontario

¹³ Ontario Energy Board. Op. Cit.

¹⁴ Savings attributed to setback thermostat for natural gas LDC programs

¹⁵ Ontario Energy Board. Op. Cit.

¹⁶ Based on a 10% reduction in operating hours for a 2 ton SEER 10.0 unit

Table 2.4.2. Programmable Thermostat - Provincial TRC Results

<i>Number of Thermostats Redeemed</i>	<i>TRC Benefits</i>	<i>TRC Costs</i>	<i>TRC Net Benefits</i>	<i>TRC Benefit Cost Ratio</i>	<i>Summer Peak kW Savings</i>	<i>Net Annual kWh Savings</i>	<i>Net Lifecycle kWh Savings</i>
16,320	\$4,071,010	\$964,720	\$3,106,290	4.26	73440	3,202,090	67,637,438

As shown, 16,320 programmable thermostats were redeemed/purchased under the program. This yielded net TRC benefits of \$3.1 Million. Also shown are the annual energy savings and the savings over the life cycle of the thermostats.

3.0 Total Provincial TRC Results

The total provincial TRC results are the aggregation of the individual component results and the associated program costs for operating the program. For the purposes of the TRC Test, the program costs represent the marketing, administration, evaluation and related costs but do not include the value of the coupons. This is an incentive and is treated as a transfer in the TRC analysis. Table 3.1 provides the Ontario Power Authority's and supporting LDC costs for operating the program.

Table 3.1– Program Costs

OPA direct program costs	\$ 8,356,464.61
OPA staff time estimate	\$ 67,500.00
LDC co-op advertising contribution	\$ 55,760.07
Total	\$ 8,479,724.68
Face value of coupons (incentives)	\$ 3,161,570.00
Program cost for TRC calculation	\$ 5,318,154.68

The total program costs were approximately \$5.3 Million.

Table 3.2 provides the TRC Results for the Every KiloWatt Counts program. As shown, the TRC net benefits are \$33.52 Million. This includes the program costs as shown in Table 3.1.

Table 3.2 – TRC Results

<i>Total Resource Cost Test Results for Program (2007 \$'s)</i>	
TRC Benefits	\$43,206,249
TRC Costs	\$9,684,299
TRC Net Benefits	\$33,521,950
Benefit Cost Ratio	4.46
Total Summer Peak kW Savings	893.81
Total Annual kWh Savings	136,260,670
Total Lifecycle kWh Savings	713,605,008

Appendix F: Report on the Post-Program Survey Results

M e t h o d o l o g y a n d L o g i s t i c s

Overview

- The following represents the results of a public opinion survey of voting age Ontario residents conducted for the Ontario Power Authority (OPA).
- The project involved establishing baseline data in a pilot test survey prior to the launch of the Every Kilowatt Counts campaign in April 2006.
- This report contains the data from a tracking post test survey conducted in late June 2006 after the campaign launch to measure its impact and effectiveness.

Study Sample

- A total of 1,500 respondents, 18 years of age and older from across Ontario were interviewed. The margin of error for this survey is $\pm 2.5\%$, 19/20 times.
- Interviewers screened for someone living at each residence that makes the payments and other decisions about utility bills, including electricity or other household bills.

Survey Method

- The survey was conducted using computer-assisted techniques of telephone interviewing (CATI) and random number selection.
- Interviews were conducted in the respondents preferred language of choice.
- A total of 30% of all interviews were monitored and the management of Oraclepoll Research Limited supervised 100%.

Logistics

- Pilot test interviews were conducted between the days of April 10th to April 21st 2006.

- Post test interviews were conducted between the days of June 24th to June 30th 2006.
- Initial calls were made from 5:30 p.m. to 9:00 p.m. with call-backs of no-answers and busy numbers made on a (staggered) daily rotating basis up to 5 times (from 10:00 a.m. to 9:00 p.m.) until contact was made. In addition, telephone interview appointments were attempted with those respondents unable to complete the survey at the time of contact.

E x e c u t i v e S u m m a r y

TOP OF MIND

Respondents at both survey waves were first asked what they felt was the most important issue facing Ontario at this time. Health care (26%) and energy related issues (19%) continue to be the most named topics among Ontarians as they were in April (health care – 24% & energy 23%). Other topics continue to trail these dominant concerns and range from the environment (7%), taxes (6%), crime (5%) and education (5%). Similar issues were raised in April including, the environment (6%), taxes (5%) and education (4%).

Respondents were then asked in an open-ended question what first comes to mind when they think about conservation. Conservation was still the most named topic by 22% it was lesser than the 32% that stated the same in April as was the theme of cost or rising bill prices (June – 23% & April 14%). While 10% fewer respondents stated the generic theme of conservation in June compared to April, they were more likely to say that we are not doing enough or that it should be a priority (June – 9% & April 5%) as well as other topics not or infrequently mentioned in April such as blackout & shortages (3%) and using CFL's (2%).

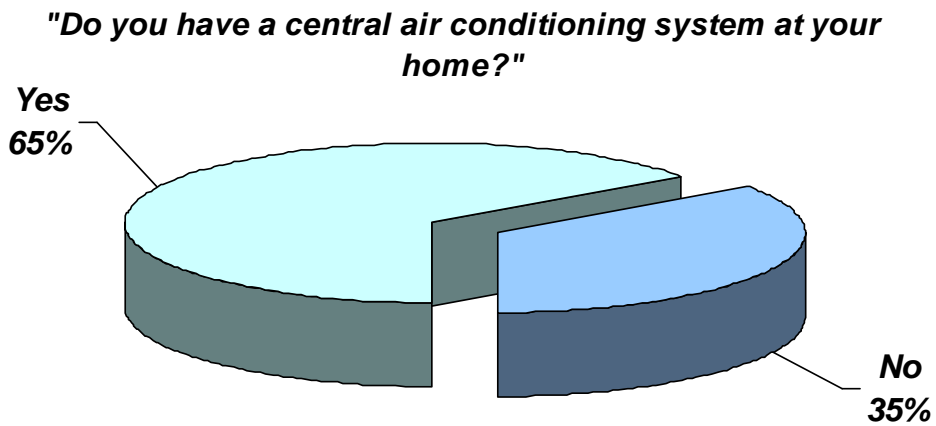
Shortages (32%) and high costs (14%) were seen as being the most important issues facing Ontario's electricity system and in higher numbers compared to April (shortages – 26% & high costs – 26%). Other responses related to high usage or waste (12%), conservation (5%) and alternative power sources (5%).

When asked what they felt that they could most do to reduce energy consumption at their home, 15% said turn off lights, 12% use less heating or air conditioning, 9% turn off or unplug appliances not being used, 5% conserve energy and 5% use less appliances. A total of 14% were unsure of what they could do and 8% said that they are doing all they can and 3% nothing.

This compares to April when 15% said turn off lights, 15% use less heating or air conditioning, 12% turn off appliances not being used, 4% conserve energy and 3% get energy efficient appliances.

CENTRAL AIR CONDITIONING

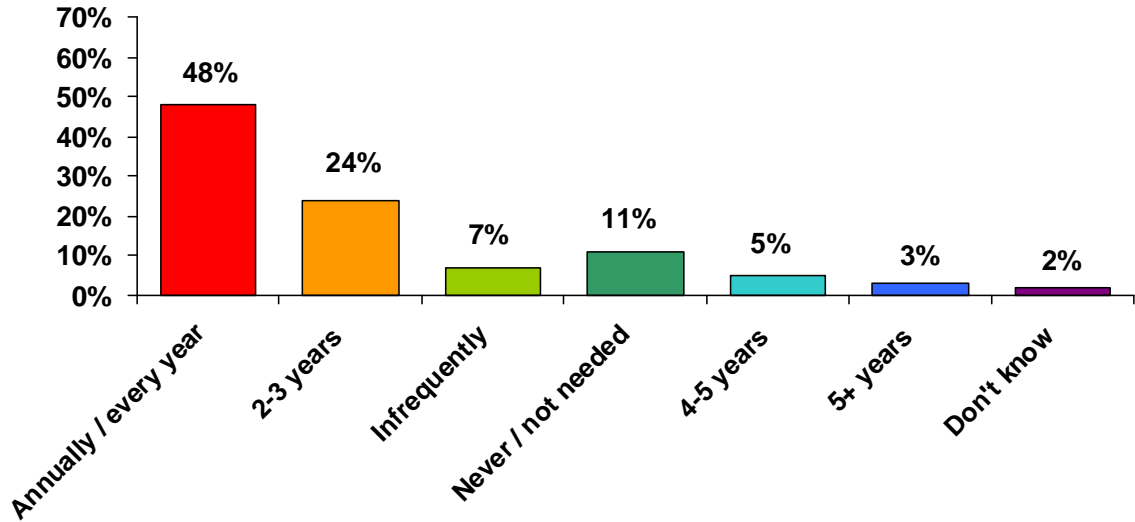
Among homeowners interviewed, 65% have a central air conditioning system at their residence.



Those homeowners with central air conditioners were then asked a series of questions related to the maintenance of their units.

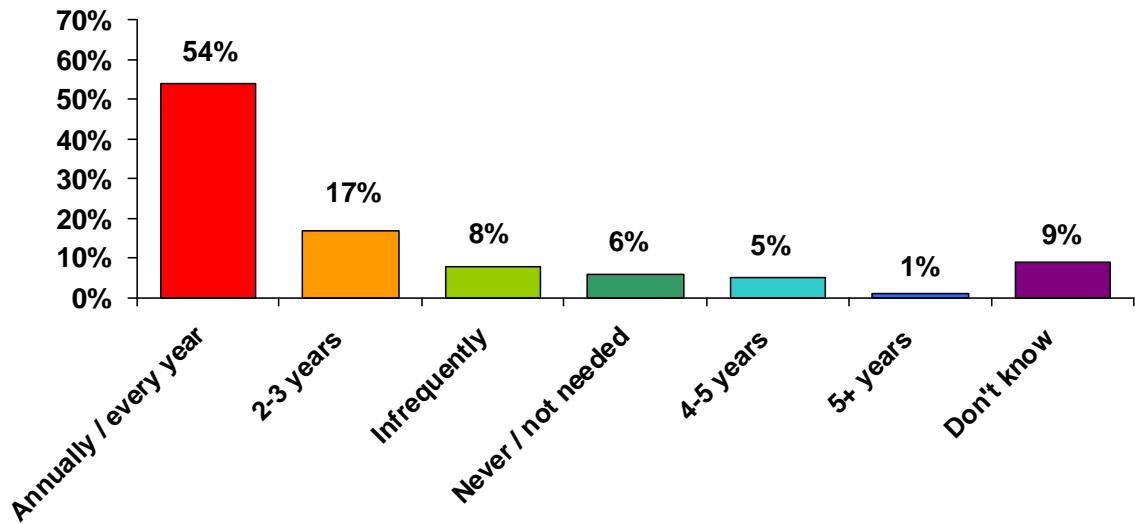
APRIL 2006

"How frequently do you have your central air conditioning unit maintained?"



JUNE 2006

"How frequently do you have your central air conditioning unit maintained?"



There was a 6% increase in the percentage of respondents that stated they have their central air conditioning system maintained annually.

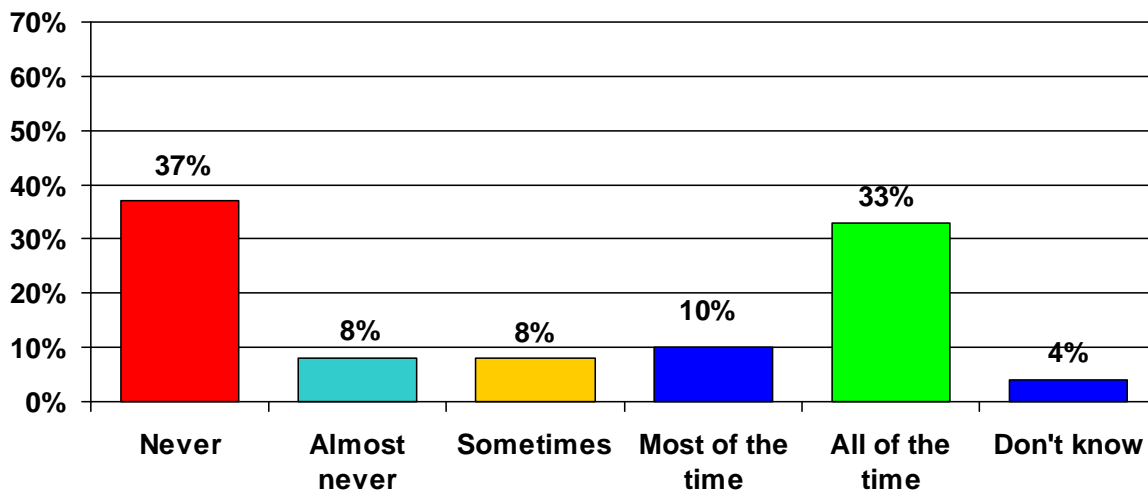
Toronto (64%) and GTA (62%) residents are most inclined to have annual maintenance as are urban (56%) compared to rural (49%) residents. Those respondents aware of recent programs related to energy conservation are also more likely to have their air conditioner maintained annually as illustrated below.

- *57% of those that have heard or seen anything about the OPA of Ontario have annual maintenance compared to 53% that have not*
- *56% of those in receipt of the EKC coupon booklet have annual maintenance compared to 51% that had not*
- *60% of those that received a EKC coupon booklet at a retail store have annual maintenance compared to 53% that had not*

When asked about the benefits of maintaining a central air conditioning system on an annual basis, there was an increase in the number of respondents to 41% that stated that this would make them more efficient compared to April (28%). In addition, 10% of July's respondents said to ensure they run properly, 9% said that they would work better, 7% to save energy and 5% reliability. A total of 10% did not know or were unsure and 4% stated that there were no benefits.

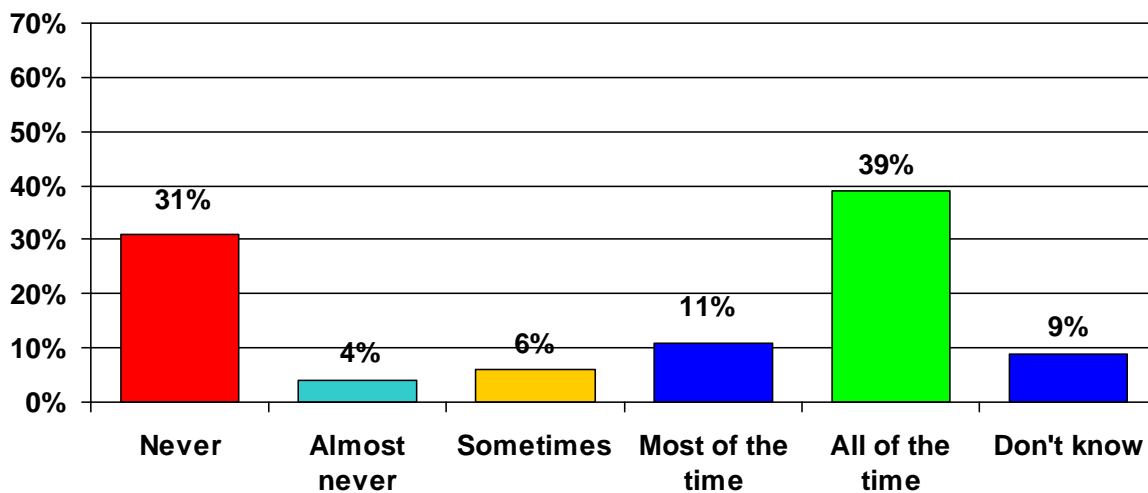
APRIL 2006

"How often would you say that you turn up the temperature on your central air conditioning thermostat when not at home?"



JUNE 2006

"How often would you say that you turn up the temperature on your central air conditioning thermostat when not at home?"



A total of 6% more respondents turn up the temperature on their air conditioner all of the time compared to April and there were drops in the number of those that never or almost never take this action.

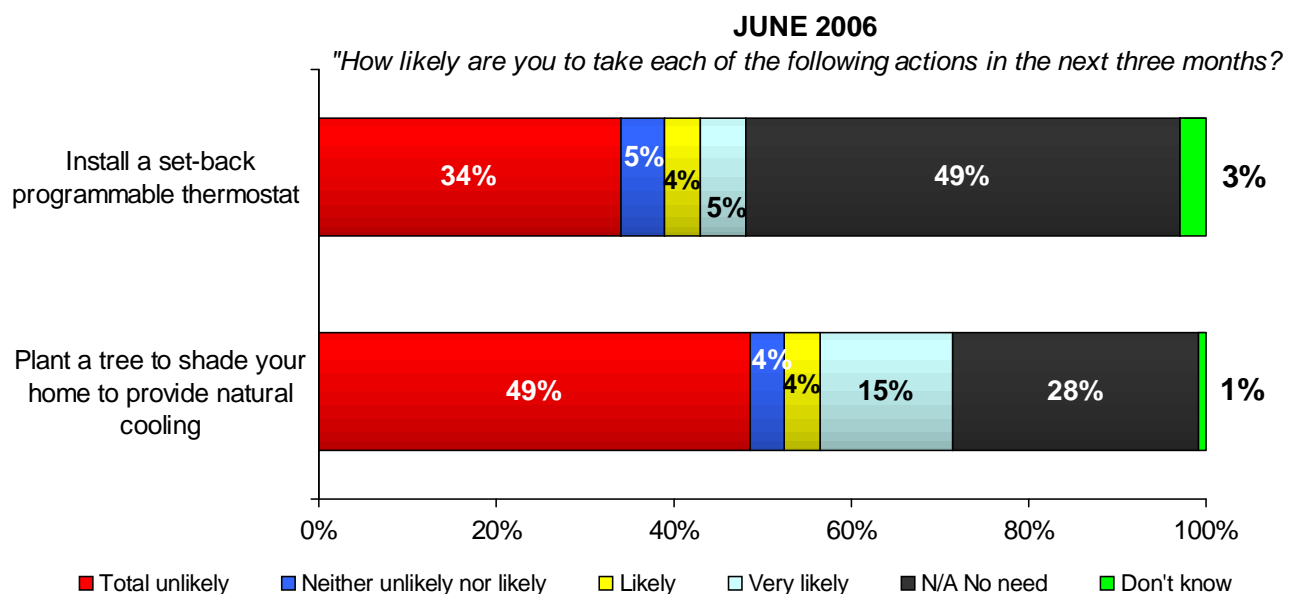
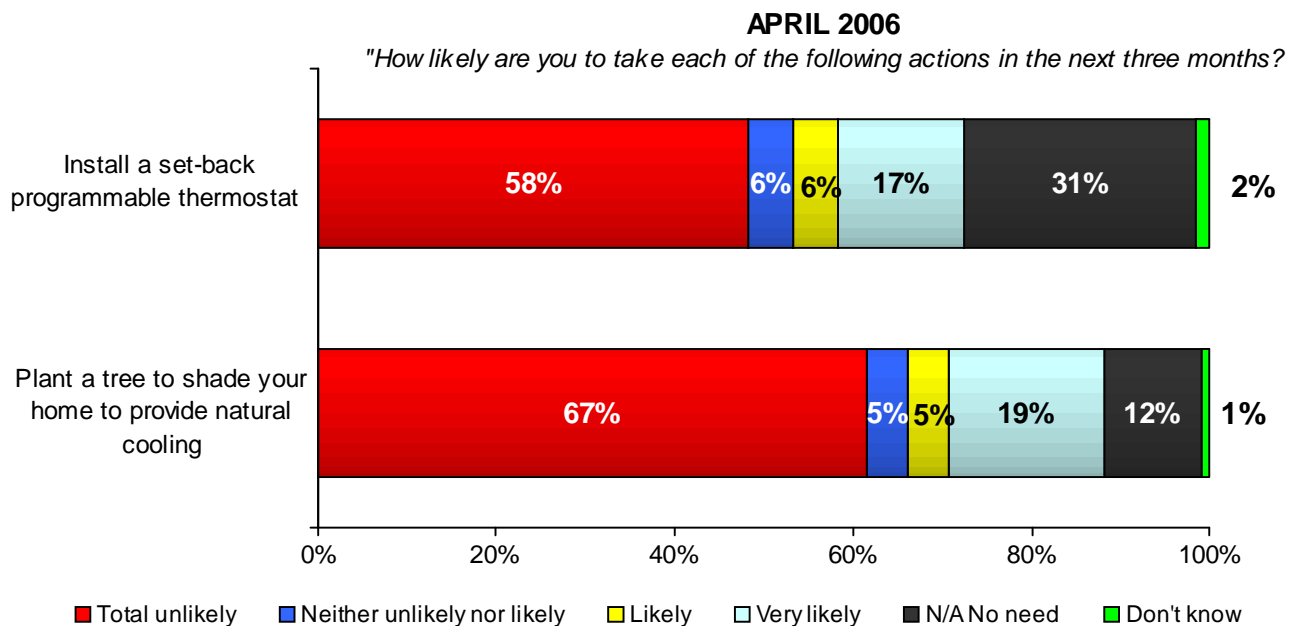
More Females (41%) than males (36%) turn up the temperature on their central air conditioner all of the time, while Northern Ontario residents (57%) were more likely to take this action and Toronto (32%) and GTA (33%) residents were least likely.

Once again respondents aware of recent programs related to energy conservation are also more likely to turn up the temperature on their central air conditioner compared to those not aware of them.

- *43% of respondents that have heard, read or seen anything in the media about energy conservation in Ontario turn up the temperature on their central air conditioner all of the time (compared to 24% that have not)*
- *45% of those that have heard or seen anything about the Every Kilowatt Counts Program (compared to 38% that have not)*
- *43% of those in receipt of the coupon booklet (compared to 36% that had not received it)*
- *56% of those that received a coupon booklet at a retail store (compared to 38% that had not received it)*

ACTIONS

In April, homeowners were asked if they were likely to install a programmable thermostat or plant a tree at their home in the next three months. During that survey, 17% of respondents stated they were very likely to install a programmable thermostat and 19% planned to plant a tree to shade their home. At the time of the survey 31% already had a programmable thermostat or had no need to install one and 12% already had or had no need to plant a tree.



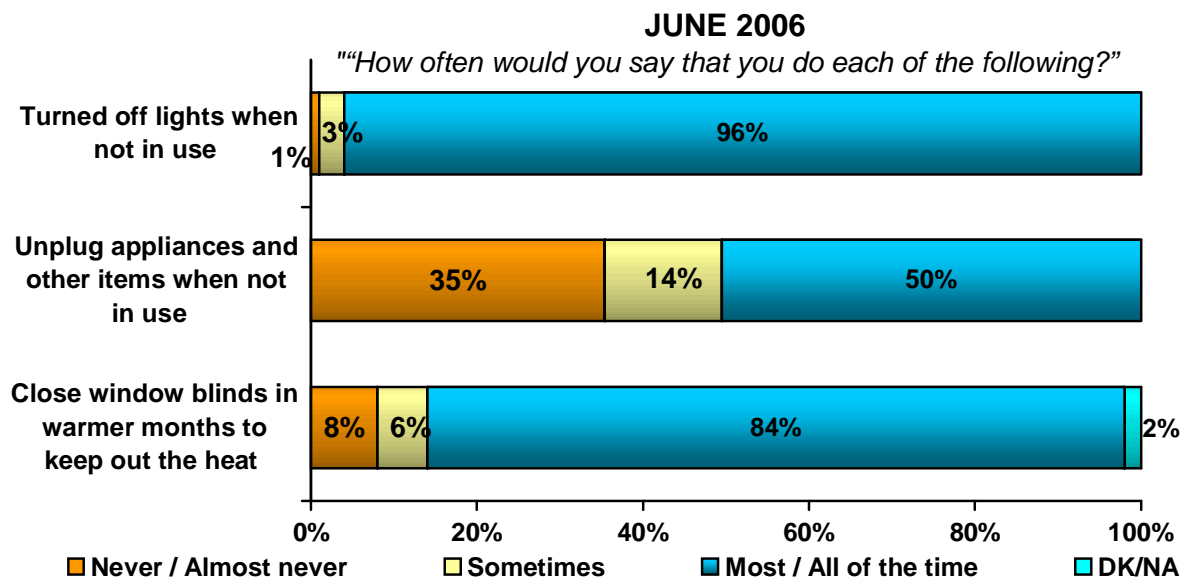
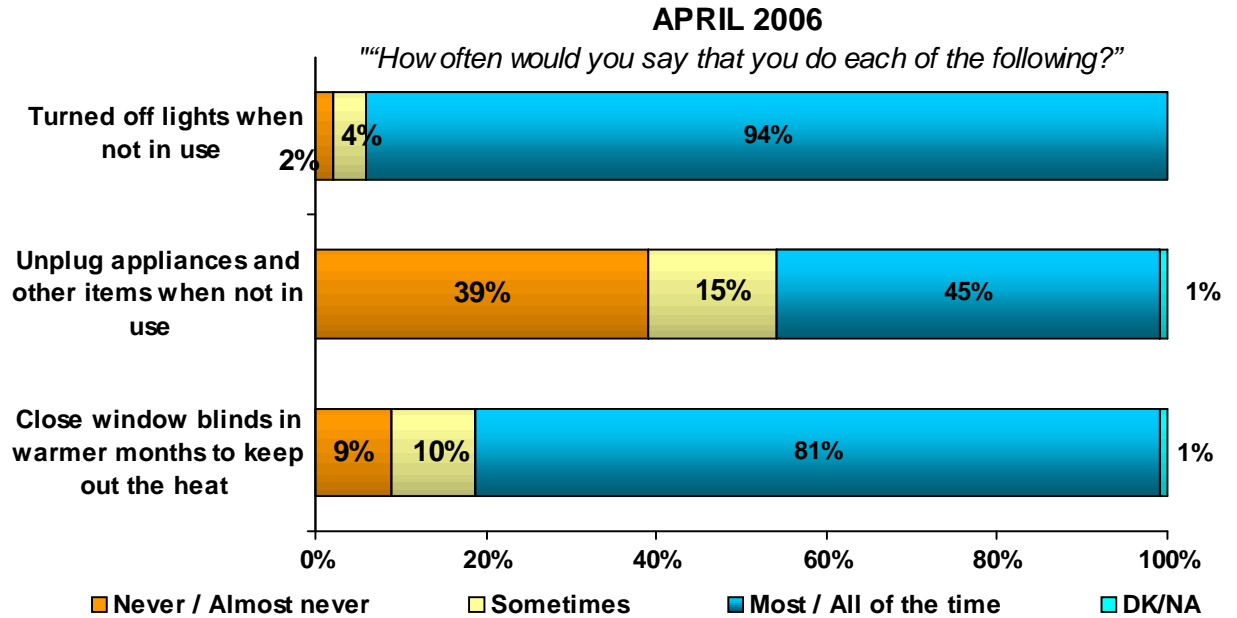
As stated, in April 31% of respondents had a programmable thermostat (N/A, No need) and 17% stated that they were very likely to install one in the next three months. In June 49% had a programmable thermostat representing an 18% increase over April. Further in this survey 5% are very likely to install one over the next 3 months and 4% likely.

When asked specifically in a separate question, 49% of respondents also stated that they had a programmable thermostat at their residence. GTA residents (63%) were most likely to have a programmable thermostat, while residents from northern Ontario (33%) were least likely.

- *53% of those that have heard or seen anything about the Every Kilowatt Counts Program have a programmable thermostat compared to 48% that have not seen or heard anything about EKC*
- *69% of those that received a EKC coupon booklet at a retail store have a thermostat compared to 48% that did not receive one at an outlet*

In April, 12% of respondents had no need to plant a tree for shade, claimed it was not applicable or had already done so, while 19% stated that they were very likely to plant one in the next three months. In June 28% had no need to plant a tree up 16% from June.

Homeowners were asked how often they do each of the following activities at their home.



There were increases in all three areas and especially with respect to unplugging appliances most or all of the time (+5%) and closing window blinds in warmer months (+3%).

In June, 4% more respondents stated that they close their blinds all of the time (70%) and 6% more unplug appliances all of the time (37%), while there was no change in the number that turn off lights all of the time (78%).

Among those closing their blinds all of the time are home owners (73%) compared to renters (60%), however, renters who pay for their own electricity use (63%) were more likely to close their blinds all of the time in relation to those that do not pay their own bills (55%). 72% of those that had seen or heard something about energy conservation in the past three months stated that they close their blinds all of the time as did 79% were aware of the OPA, 79% of the EKC Program and 73% in receipt of the coupon booklet at home.

More females (41%) than males (30%) unplug appliances and other items all of the time. In addition, 45% of Ontarians that had heard about the OPA claimed that they unplug their appliances all of the time as did 44% that obtained a coupon booklet at a retail store and 39% a coupon booklet at home.

More owners (80%) than renters (73%) said that they turn their lights off all of the time. 88% of those that had heard about the OPA turn off their lights all of the time as did 83% aware of the EKC Program, 83% in receipt the coupon booklet at home and 83% at a retail store.

The following is a demographic profile of high conserver respondents or the 46% of Ontarians that turn up the temperature on their air conditioner all or most of the time, as well as those who turn off their lights, unplug their appliances and close their blinds in warmer months all or most of the time.

Do you consider yourself a resident of a rural or urban community?

		Valid Percent
Valid	Rural	27.4
	Urban	72.6

In total, how many people live at this residence?

		Valid Percent
Valid	One	16.8
	Two	39.7
	Three	14.7
	Four	19.7
	Five or more	9.1

Which of the following age groups may I place you in?

		Valid Percent
Valid	18-24	4.4
	25-34	11.2
	35-44	18.2
	45-54	21.5
	55-64	21.8
	65 and over	22.9

What is your combined family income?

		Valid Percent
Valid	Less than \$25,000	13.6
	\$25,000 to \$34,999	11.3
	\$35,000 to \$44,999	10.1
	\$45,000 to \$54,999	9.3
	\$55,000 to \$74,999	17.1
	\$75,000 to \$99,999	15.6
	\$100,000 or more	23.0

Gender

		Valid Percent
Valid	Male	39.9
	Female	60.1

High conservers tend to be female, urban residents, over the age of 45, with combined family incomes of \$55,000 and over and residing in homes of one or two people.

COMPACT FLUORESCENT LIGHT BULBS

A total of 72% of Ontario residents surveyed stated that they have compact fluorescent light bulbs (CFL's) at their home, up slightly from 70% in April 2006 and similar to an Oraclepoll Research Limited January 2006 survey of 1,000 Ontarians (70%). Homeowners (77%) were more likely to have CFL's than renters (53%) as were those in income brackets over \$55,000 per annum and in age groups from 35 to 64.

These respondents were then asked about the number of bulbs in their home and how often they use CFL's as replacements when changing bulbs.

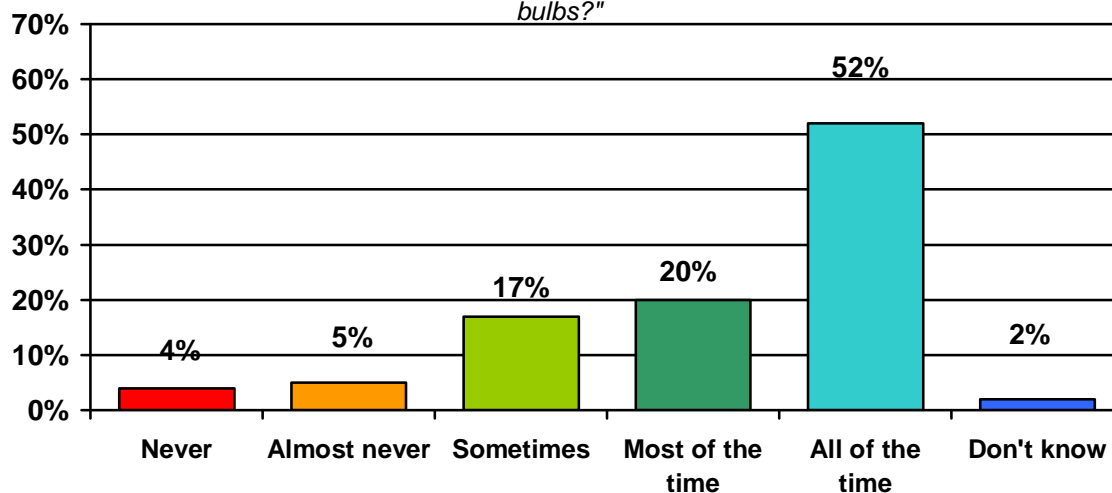
How many Compact Fluorescent Light bulbs do you have in your home?

Valid	1-5	39%
	6-10	29%
	11-15	17%
	16-20	8%
	More than 20	7%
	Don't know	1%

Most Ontario homes have 10 bulbs or less in them.

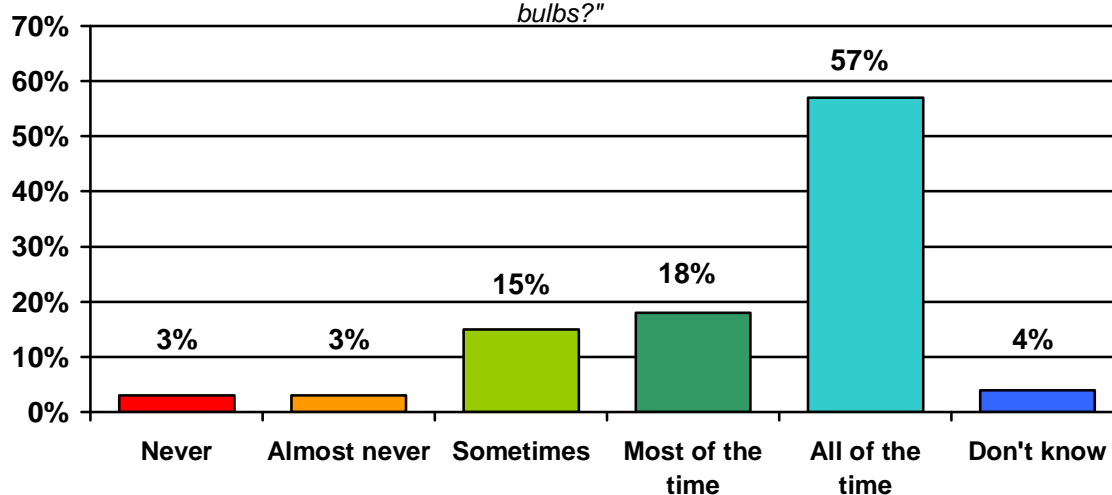
APRIL 2006

"When changing light bulbs (even if it is already a energy efficient bulb) how often do you replace them with energy efficient Compact Fluorescent Light bulbs?"



JUNE 2006

"When changing light bulbs (even if it is already a energy efficient bulb) how often do you replace them with energy efficient Compact Fluorescent Light bulbs?"



There was a 5% increase in the percentage of respondents that replace their old bulbs with CFL's al of the time.

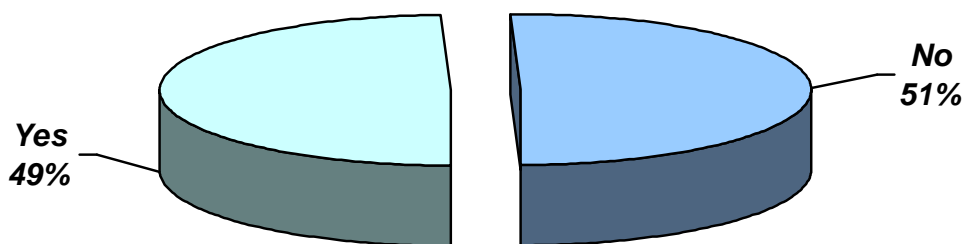
Once again respondents aware of recent programs related to energy conservation are also more likely to replace bulbs with CFL's all of the time.

- *64% of those that have heard or seen anything about the Every Kilowatt Counts Program replace bulbs with CFL's all of the time (compared to 55% that do not)*
- *63% that have seen or heard something about the OPA replace bulbs with CFL's all of the time (compared to 56% that do not)*
- *64% that have received the coupon booklet replace bulbs with CFL's all of the time (compared to 51% that do not. 75% of those that received a booklet at a retail store also replace bulbs with CFL's all of the time.*

PROGRAMMABLE THERMOSTATS

Respondents were asked questions about programmable thermostats at their homes.

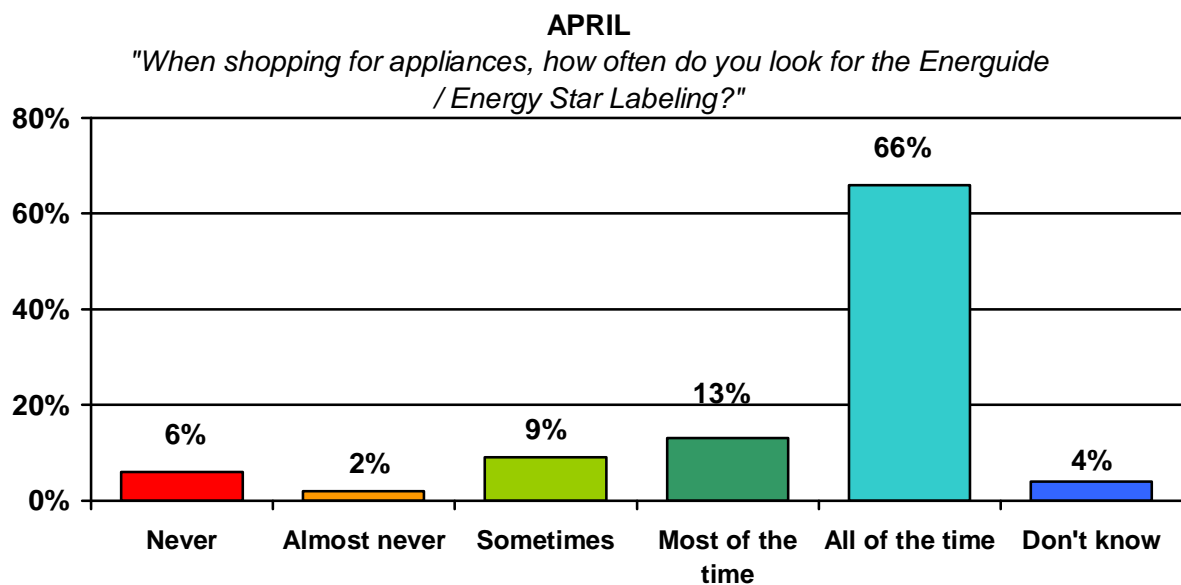
"Do you have programmable thermostat at your home?"

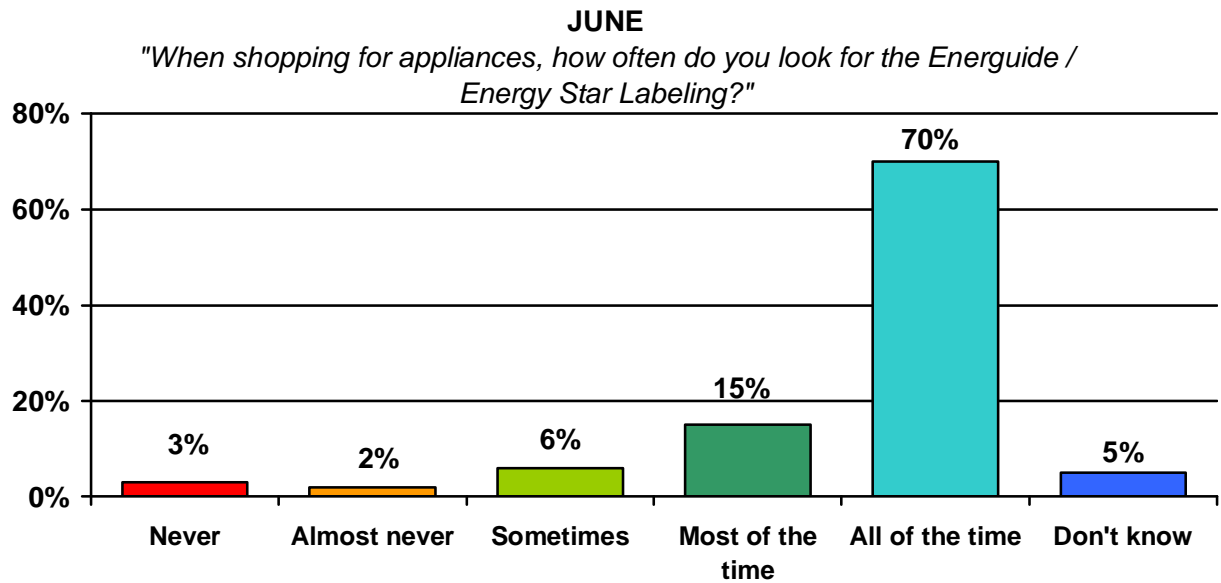


Almost half of Ontario households have a programmable thermostat with GTA residents being the most likely (63%) and northern residents least likely (33%) to have one. A higher percentage of homeowners (56%), higher income families in the \$100,000 and higher income bracket (71%) and homes with four or more people (61%) have programmable thermostats.

ENERGUIDE/ ENERGY STAR LABELING

A total of 67% of those interviewed stated that they are familiar with the Energuide / Energy Star Labeling higher than 63% in April. Ontarians most aware of the labeling were College (76%) and University (76%) graduates, \$100,000 plus income earners (81%), males (72%) and homeowners (72%). The 67% of those aware of the labeling were then asked the following revealing that more people look for the labeling all or most of the time.



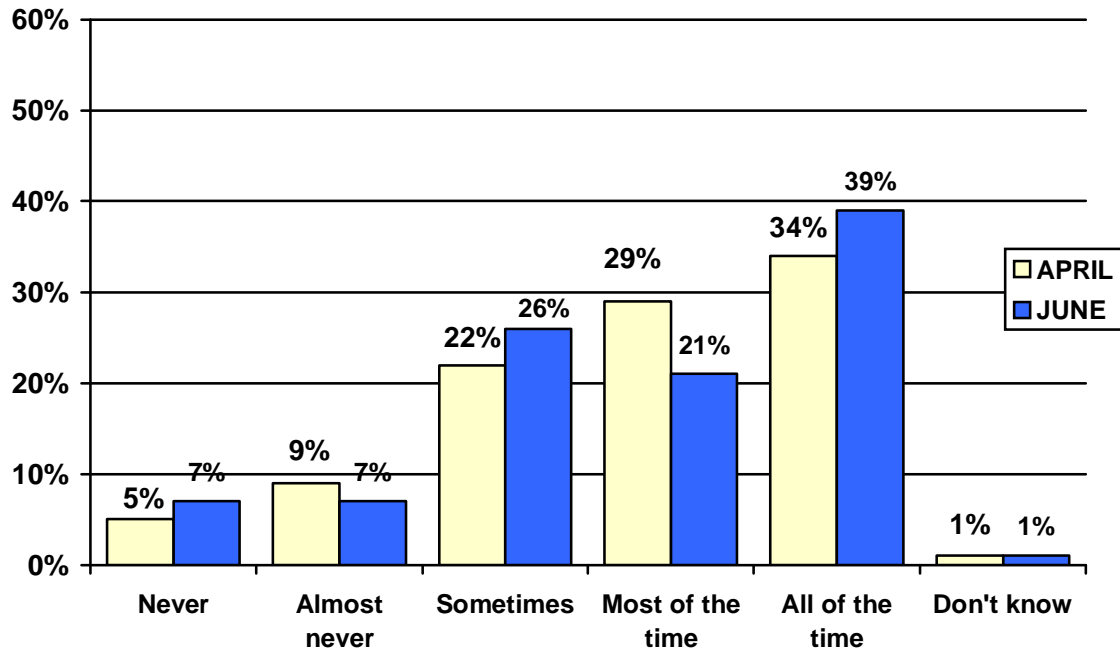


CEILING FAN(S)

63% of all respondents have a ceiling fan at their residence (61% in April) with rural Ontario residents (78%) and homeowners (66%) being more likely to have one than urban dwellers (57%) and renters (52%). In addition, residences in northern (81%) and south-western Ontario (76%) had a higher percentage of ceiling fans with the lowest number being among those living in Toronto (41%) and the GTA (57%).

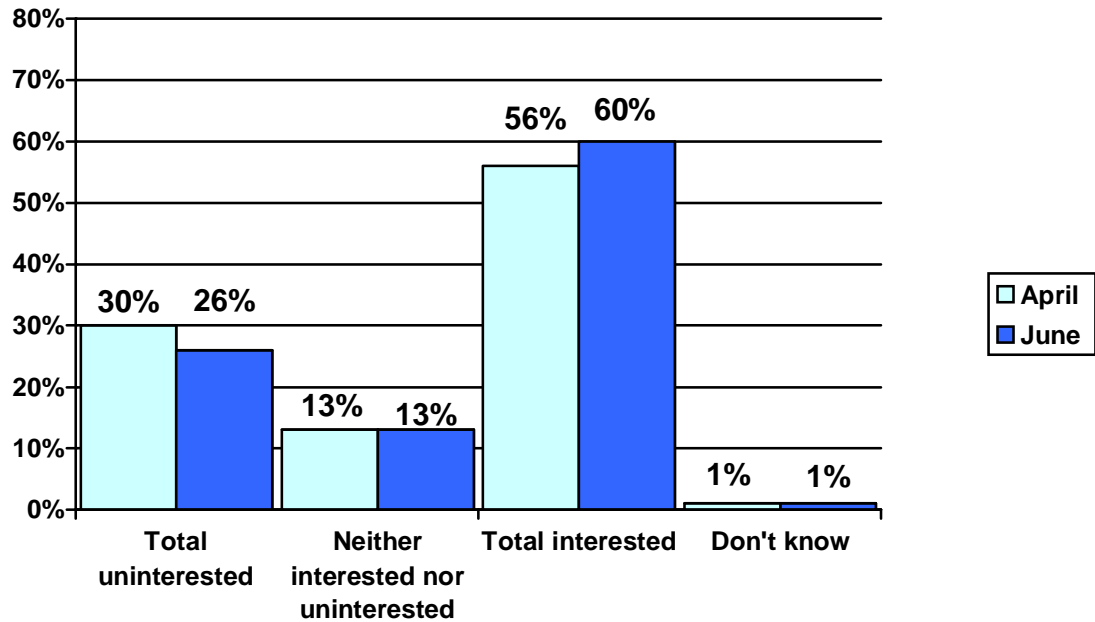
Respondents were then asked the frequency of their ceiling fan usage.

"How often would you say you use your ceiling fan(s) in warmer months?"



ENERGY CONSERVATION INFORMATION

"How interested are you in receiving information about ways to conserve energy at home?"



There was a 4% increase of the number of Ontarians surveyed that stated that are interested or very interested in receiving information about ways to conserve energy with homeowners (63%) being more interested than renters (47%).

Respondents were then asked about their current primary source for information about ways to conserve energy as well as their preferred source for this information.

What is your primary source for information about ways to conserve energy?

Utility bill insert / Utility company	19%
Television	17%
Internet	13%
Direct Mail / Flyer / Brochure	9%
Local daily newspaper	8%
Don't know	5%
National newspaper	5%
Common sense / Personal knowledge	5%
Radio	3%
News story (unspecified)	3%
Magazines / Other publications	3%
Friend / family member	2%
Web	2%
None	2%
Community paper	1%
Work / School	1%
Advertising (unspecified)	1%
NGO's	1%

What is your preferred source to receive information about ways to conserve energy?

Direct Mail / Flyer / Brochure	26%
Internet	14%
Utility bill insert / Utility company	13%
Television	12%
Local daily newspaper	7%
Don't know	6%
National newspaper	4%
Web	3%
None	3%
Radio	2%
News story (unspecified)	2%
Community paper	2%
Magazines / Other publications	2%
Friend / family member	1%
Common sense / Personal knowledge	1%

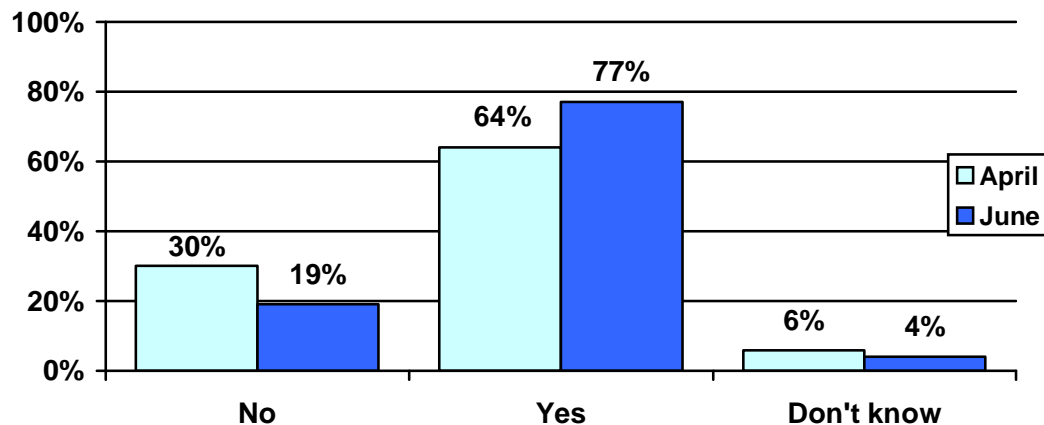
Utility bill inserts and television vie for the top spot as the current main source for information, but when brochures are considered, some form of mail is used by almost 3 in 10 Ontarians.

But when asked about their preferred source for such information, direct mail clearly came in first and when considering bill inserts, mail is favoured by almost four in ten. The internet and TV come in at second and third respectively.

ENERGY CONSERVATION INITIATIVES

Respondents were asked a series of questions about their awareness of energy conservation initiatives in Ontario.

"Within the past three months, have you heard, read or seen anything in the media about energy conservation in Ontario?"



A total of 13% more respondents had seen or heard something about conservation over the April survey period. The 77% were then asked what they had seen or heard with responses being varied.

APRIL (top 10)

- Don't know (21%)*
- Rising costs of energy / gas (13%) (12%)*
- Ways to conserve energy (11%)*
- Energy conservation / to conserve (9%)*
- Wind power / Windmills (7%)*
- Warning of electricity shortage (4%)*
- Nuclear plants / energy (3%)*

JUNE (top 10)

- Ways to conserve energy (13%)*
- Energy conservation / to conserve (12%)*
- Don't know (8%)*
- Adjusting A/C and heat (7%)*
- Ads on TV (5%)*
- Nuclear power (5%)*
- Use CFL's / CFL promotion (4%)*

Turning off lights when not in use (3%)

Shortages / blackouts (3%)

One Tonne Challenge (3%)

Rising cost of energy / gas (3%)

Energy saving light bulbs being promoted (3%)

Turn off lights when not in use (3%)

There was a 13% drop in the number of respondents that could not name something over April and an increase in the responses related to conservation and ways and approaches to conserve. TV, followed by newspapers, radio, bill inserts and direct mail were the methods most cited for receiving this information.

PROVINCIAL GOVERNMENT INITIATIVE AWARENESS

The questioning then focused specifically on the current Program.

Can you recall the name of any recent provincial government initiative / program that encourages Ontarians to save energy?"

		Valid Percent
Valid	No / can not	76.4
	Don't know	8.9
	Energuide/Energystar	3.7
	OTHER OPEN	2.8
	One Tonne Challenge	2.4
	Appliance rebate	1.2
	Cool Savings Rebate	1.1
	Smart Meter Program	.9
	Refrigerator Retirement	.8
	A/C rebate program	.5
	Thermostat / Thermostat rebate	.4
	Every Kilowatt Counts	.3
	PowerWISE	.3
	CFL's	.3
	Total	100.0

In April few could recall any initiative or program (92% no or don't know), with the One Tonne Challenge or Rick Mercer advertisements being most cited (3%). While a high number were still unable to recall (unaided) any program in June, there is now a varied range of responses touching upon the wide variety of programs being marketed.

EVERY KILOWATT COUNTS

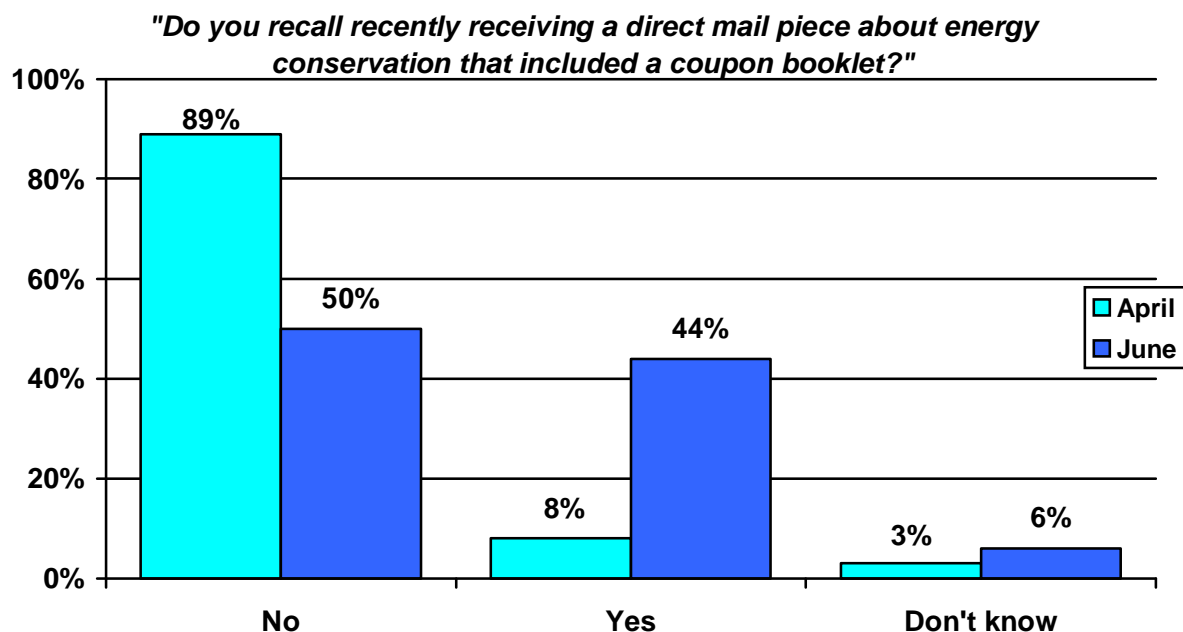
More than one-quarter of respondents or 26% had seen or heard something about the Every Kilowatt Counts Program. These respondents were then asked about what they recalled about the program and from what source.

What do you recall being the main message of this program?

	Valid Percent
Valid Energy saving benefits of energy conservation	39.3
Don't know	23.6
Environmental benefits of energy conservation	9.4
Conserve (in general)	7.3
Monetary benefits of energy conservation	5.2
Kilowatts / EKC / Coupon (rebates)	4.2
Reduce usage at peak times	3.1
Other	2.1
Turn off lights/appliances when not in use	2.1
Smart meters	1.6
Use CFL's	1.0
Turn up A/C	1.0
Total	100.0

From which sources have you seen or heard something about the Every Kilowatt Counts program.

	Valid Percent
Valid TV News Story	27.6
Utility bill	17.2
Don't know	13.5
Radio Ad	9.9
Newspaper ad	7.3
Newspaper News Story	6.8
Flyer / mail-out / brochure	6.3
TV ad	5.7
Internet	2.1
Other	2.1
Radio News Story	1.6
Total	100.0



A total of 44% of Ontarians surveyed stated that they received a direct mail piece coupon booklet with 47% of owners and 34% of renters receiving the mail pieces. In addition, 5% also received a coupon booklet at a retail store.

48% of those respondents in receipt of the booklets said that the mail piece was addressed to them, 19% stated someone else at their residence and 19% were unsure.

In the future would you like to see a direct mail piece such as this one addressed to yourself, yourself and your spouse/partner or not addressed at all?

		Valid Percent
Valid	Self	36.9
	Not at all	28.6
	Self/partner	17.3
	Don't know	17.3
	Total	100.0

However, there was a split of opinion as to how future direct mail pieces should be addressed. More males (46%) prefer the pieces addressed to themselves than females (31%) and a higher percentage of females would like the mail not addressed (31%) compared to males (24%) and more women (21%) in relation to men (11%) want the package addressed to both partners or spouses.

When the 44% of Ontarians that had received a coupon booklet were asked if they had redeemed any of the coupons, one-quarter of them stated that they had representing 11% of the total sample or population.

Monetary related issues influenced more than half of those in receipt of coupons to redeem them.

What motivated you to redeem these coupons?

	Valid Percent
Valid Saving money / Monetary saving	41.4
Rebate / Incentive	13.8
Conserve / Conservation	12.6
Needed bulbs / Like the CFL's	12.6
Need (in general)	6.9
Don't know	5.7
OTHER	4.6
Quality	2.3
Total	100.0

Among those redeeming:

- 85% redeemed one for a CFL
- 6% for a ceiling fan
- 5% for a thermostat
- 5% for a timer
- 4% replaced their old air conditioner with an Energy Star system
- 2% redeemed a voucher for an air conditioner tune-up or maintenance

All of those who purchased a programmable thermostat have installed them (100%) while only 40% of those that bought a fan have installed them.

When asked who made the decision to redeem the coupons, 66% of those answering claimed they made the decision, 9% their spouse, 18% both spouses, 3% another household member and 3% were unsure or could not recall. The following is a gender breakdown:

% within Gender

		Who at this household made the final decision to redeem this/these coupons?				
		Self	Spouse	Self & spouse	Other household member	Don't know
Gender	Male	72.2%	2.8%	19.4%	5.6%	
	Female	60.8%	13.7%	17.6%	2.0%	5.9%

In addition, the Home Depot and Canadian Tire were most mentioned as the retail store outlets visited for coupon redemption.

What retail outlet(s) did you visit to redeem this/these coupons?

		Valid Percent
Valid	The Home Depot	33%
	Canadian Tire	31%
	Don't know	11%
	Home Hardware	9%
	WAL-MART	6%
	RONA	2%
	Other	2%
	Fortinos	1%
	Sobey's	1%
	Timbr Mart	1%
	Zellers	1%

Familiarity or comfort with a store played a large role in the decision to shop, as 40% of those redeeming a coupon stated that they visited a particular store because they are a regular customer, while 28% named location, 12% the selection of items, 10% price, 2% ads and 8% were unsure.

Results from the top four shopped at stores reveal that WAL-MART customers are the most cost driven, while more Home Hardware shoppers were influenced by location and Canadian Tire and Home Depot visitors tend to be loyal/regular customers also liking the selection of items at these outlets.

% within Q49. What retail outlet(s) did you visit to redeem this/these coupons?

		What most influenced you to visit this/these retail outlets?				
		Location	Regular customer	Ads	Selection of Items	Price / Savings / Rebate
What retail outlet(s) did you visit to redeem this/these coupons?	Canadian Tire	37.0%	44.4%		11.1%	7.4%
	Home Hardware	50.0%	37.5%			12.5%
	The Home Depot	27.6%	41.4%	3.4%	17.2%	10.3%
	WAL-MART		60.0%			40.0%

Respondents that redeemed a coupon were also asked if they accessed each of the following revealing a low usage for each.

- 6% accessed the OPA website
- 5% accessed the Cool Savings website
- 2% accessed the EKC website
- 1% called the toll-free 1-800 information line

They were also asked to rate their experience when redeeming the coupons in each of the following areas.

<i>“Rate your experience when you redeemed these coupons in each of the following areas”</i>	<i>Total Dissatisfied</i>	<i>Neither Satisfied no Dissatisfied</i>	<i>Total Satisfied</i>	<i>Don’t Know</i>
Ease of finding information about the Program	8%	23%	43%	25%
Staff being knowledgeable about the coupons	9%	10%	71%	10%
Your overall shopping experience when redeeming the coupons	3%	13%	72%	13%
The availability of the products	6%	9%	75%	10%
The ease of redeeming coupons at the retail store	1%	9%	80%	10%

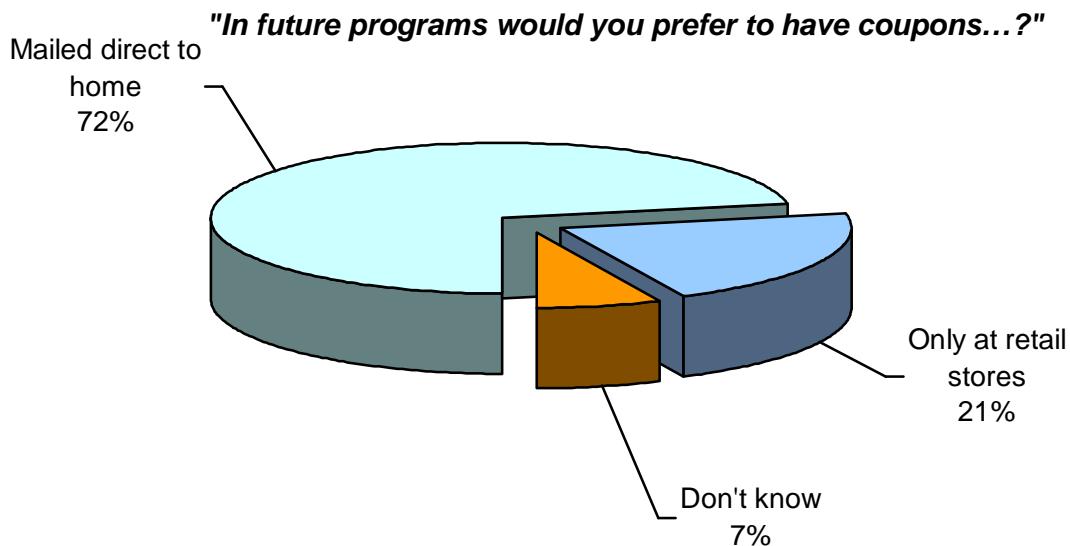
There was a high level of satisfaction with the shopping experience, especially for the ease of redeeming coupons and the availability of products. Results for finding information about the Program were poorer as one-quarter of respondents answered that they were unsure or did not know.

Those respondents that received a coupon booklet but have not yet redeemed any coupons were then asked if they planned to redeem one and what would motivate them to do so of which 35% stated that they still planned to do so. CFL’s were most named as the product that these respondents planned to redeem (61%) while one-quarter were did not know.

When asked why they did not plan to redeem any coupons, a lack of need, already having, or a lack of use for the products was the largest group of combined responses.

Can you tell me why you do not plan to redeem any coupons?		Valid Percent
Valid	Don't need the product now	20%
	Don't know	18%
	Lost them	10%
	Threw them out	10%
	Had already bought some of the products	10%
	Not useful for me	10%
	Not much of a coupon user	6%
	Haven't looked at them yet	3%
	It was inconvenient	3%
	Discount not high enough	2%
	Don't have the money	2%
	Prefer other products compared to what was offered	2%
	May still buy / need to talk to spouse	2%
	Appliances are still good	1%
	Gave away	1%
	OTHER	1%

And when asked about coupon delivery, direct mail was the preferred method of more than seven in ten of those surveyed.



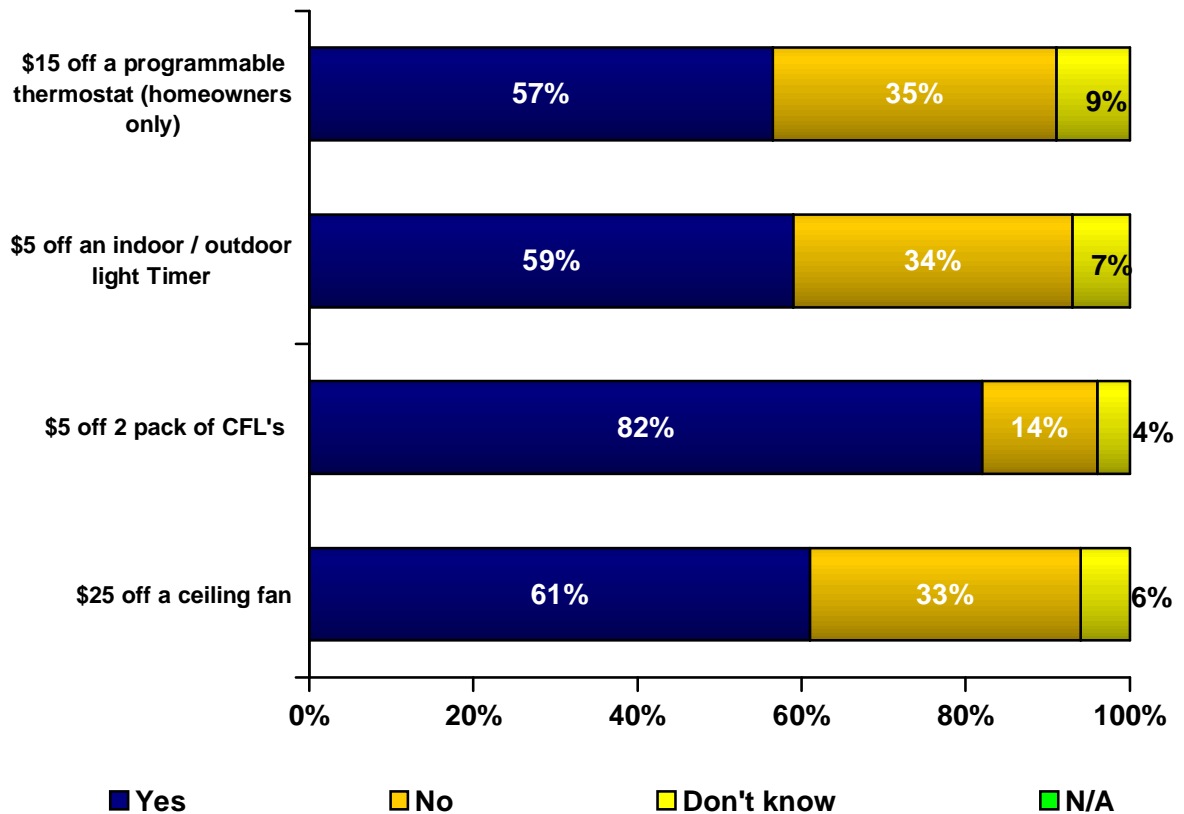
The following is a list of products that respondents would like to have included in future programs.

Are there any other products that you would like to have included in a future coupon campaign?

	Valid Percent
Valid Don't know	41%
None	25%
Appliances	9%
CFL's	6%
Solar lights / Solar panels	3%
Other fans (table, attic, roof, bathroom)	2%
Insulation / caulking / weather stripping	2%
Air conditioners	2%
Discounts / grants / incentives on utility bill	2%
Windows / doors	1%
Same ones	1%
OTHER	1%
Other electrical (Smoke detector, batteries, power bar, etc)	1%
Water tank / Water heater	1%
Wind Turbine	1%
Furnaces / upgrades / filters	1%
Motion sensors	1%
Alternative energy (solar panels, generators, fire places)	1%

Those who received a coupon booklet were asked about the coupons price points.

“As you know, the booklet contains coupons for products to redeem. In your opinion are the coupons values enough of an incentive to influence your decision to purchase each of the following products?”



The value of the CFL coupon was most appealing to respondents but six in ten were also satisfied with the other price levels.

OPA / PETER LOVE

All respondents were asked to recall the name of Ontario's Chief Energy Conservation Officer and the agency that promotes conservation in the province.

Can you recall the name of the agency that promotes energy conservation in Ontario?

	Valid Percent
Valid Don't know	45.9
None	38.0
OPG/OPA/Ontario Hydro/Hydro One	6.9
Conservation Bureau	1.6
Local Utility	1.5
Ontario Energy Board	1.3
Government/Gov't initiatives/Ministry	1.3
Energuide	.8
Other	.8
Union Energy	.7
Enbridge	.4
Energy Probe	.4
Direct Energy	.4
Total	100.0

Have you heard or seen anything about the Conservation Bureau of Ontario?

	Valid Percent
Valid No	77.4
Yes	14.8
Don't know	7.9
Total	100.0

Can you recall the name of the Chief Energy Conservation Officer of Ontario?

	Valid Percent
Valid None / No	88.0
Don't know	10.8
Peter Love	.9
OTHER	.3
Total	100.0

SUMMARY & CONCLUSION

Energy conservation is an emerging top of mind issue among Ontarians that began with the 2003 blackout and has endured as a result of fears of rising prices and shortages. But while fear of crises and the pocketbook may be driving the agenda, various campaigns related to conservation starting with the One Tonne Challenge up to EKC are having an effect. The data also points to the fact that a conservation campaign with financial incentives (such as EKC) is more effective than a nationalistic, moral or guilt based program (One Tonne). Oraclepoll Research Limited One Tonne Toronto pre & post campaign data is embargoed and this firm can only speak in broad terms on the topic.

Most Ontarians take simple actions such as turning off their lights to conserve as well as closing their blinds, but work needs to be done around more pro-active deeds such as unplugging appliances when not in use. There was an increase in June over April in the percentage of Ontario residents that have had regular air conditioner maintenance. CFL use continues to increase and more residents are changing to these bulbs.

There are several factors that impact on conservation including geography. For example, while GTA residents are most likely to have regular air conditioning maintenance they are the least likely region in the province to turn up their A/C temperature while northerners are most likely. In addition, fans are a rarer item in Toronto but prevalent in the north, southwest as well as in rural Ontario. In general, urban residents also tend to be higher conservers than rural residents.

Demographically, conservation varies as a function of age; income and gender as females, those in age groups over 35 and with incomes higher than \$55,000 tend to be conservers. Not surprisingly, owners and renters who pay for their own electricity use are more likely to conserve.

There is interest in obtaining information on ways to conserve and mail techniques including direct mail and bill inserts dominate, followed by print in newspapers. More than seven in ten respondents would like future EKC type mail outs and less than three in ten oppose having addressed mail.

While few are able to name specific campaigns, initiative or agencies, the results continue to improve. However, unaided specific name recall is not a good indicator of a campaign's success or impact. 44% of Ontario residents claimed that they received an EKC coupon booklet and there was a 13% increase in June in the number of Ontarians that were aware of conservation initiatives compared to April. Those respondents aware of a campaign, the OPA or received an EKC booklet etc, are also more likely to be conservers or take conservation actions. As a result, an EKC based type campaign is an effective method to reach an audience open to conservation.

CFL's were the biggest drawing card in the EKC campaign and they were also seen as having the best price point as evidenced by its high redemption rate. The biggest single motivator to redeem a coupon was the monetary angle, followed by need. Conversely, the most cited reasons for not redeeming a coupon related to a lack of need rather than the discount value or a dislike of them.

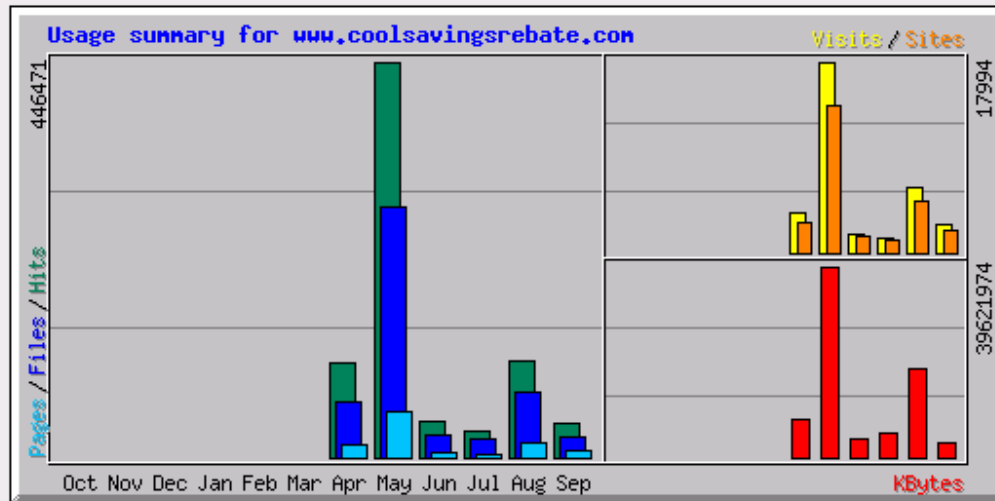
The retail experience appeared to be a good one overall, especially the ease of redemption; however, respondents that received a coupon booklet were not satisfied with the ease of finding information about the Program.

Store familiarity and location were reasons for shopping at a particular retail outlet and while as stated most want future EKC booklets mailed to their home 21% also want to obtain booklets at retail stores.

Demand for future products varied widely from appliances to air conditioners but CFL's appear to be a good anchor or draw in any campaign.

In addition, there is an opportunity have future campaigns target the Ontario market geographically (i.e. to promote AC maintenance or thermostats in the north), demographically (i.e. lower income renters to close blinds) and account for seasonality (i.e. high efficiency Christmas lights). In short, the significant number of Ontarians that received a booklet have a good opinion of the Program, and it appears to be a good vehicle to keep people thinking about conservation as well as informing them about information and savings opportunities.

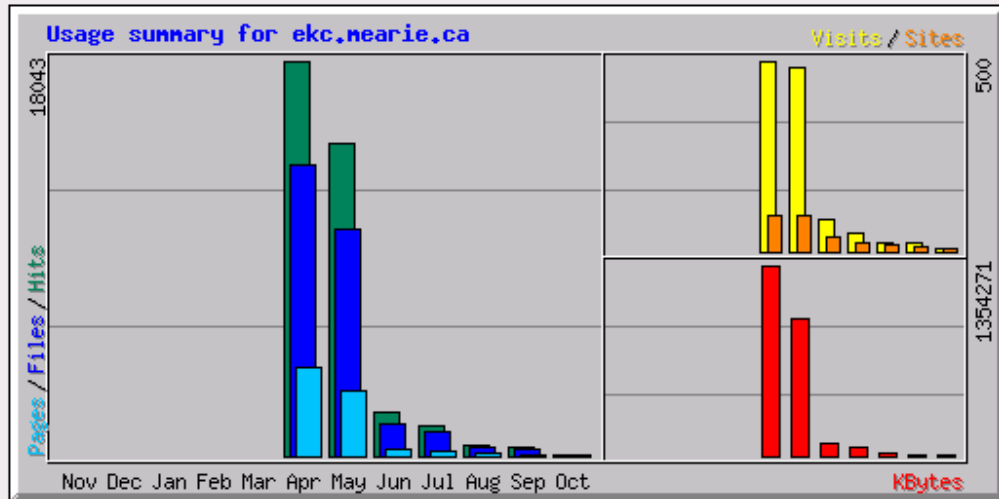
Appendix G: EKC Website Usage



Summary by Month

Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
Sep 2006	1383	851	275	95	2173	2964100	2665	7718	23839	38733
Aug 2006	3522	2401	535	196	4818	18501395	6103	16605	74442	109192
Jul 2006	974	672	122	41	1219	5014065	1297	3784	20851	30199
Jun 2006	1359	875	171	58	1639	4008552	1761	5154	26265	40794
May 2006	14402	9121	1702	580	13851	39621974	17994	52784	282763	446471
Apr 2006	10721	6319	1351	384	2879	7819061	3849	13518	63192	107213
Totals						77929146	33669	99563	491352	772602

Appendix H: LDC Communication Website Usage



Summary by Month										
Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
Oct 2006	10	8	2	1	8	419	7	13	41	52
Sep 2006	15	10	2	0	15	2160	25	68	272	406
Aug 2006	16	11	3	0	18	23294	23	93	368	505
Jul 2006	47	39	7	1	22	65880	47	211	1100	1335
Jun 2006	66	49	11	2	40	89563	86	348	1474	1983
May 2006	461	333	95	15	94	975156	481	2952	10351	14295
Apr 2006	751	553	167	20	96	1354271	500	4019	13284	18043
Totals						2510744	1169	7704	26890	36619

Appendix I: Coupon Redemption House Set-Up and Quality Control Procedures

CRM was subcontracted by The Summerhill Group for all coupon redemption processing. The Summerhill Group delivered coupon submission forms to all retailers, giving them instructions to batch and send their coupons to a P.O. Box for CRM to review and redeem. CRM was able to scan the barcodes on all the coupons and keep an electronic tally of what was owed to which retailers. Weekly cheque pending reports enabled the OPA to monitor the flow of funds back out to retailers. Below is a description of the quality assurance used at the CRM clearinghouse:

- Retailer submission is initially vetted by a supervisor for completeness, type and condition of coupons as well as quantity of coupons versus store/chain estimated sales volume
- Anything abnormal is flagged on the submission at this point and this is segregated for further investigation by management (see “Questionable Submissions” section below further indicated action)
- For those submissions deemed to be justified, the form and coupons are passed onto a data entry clerk who enters the retailer data into the database, generates a unique record number and scans each of the coupons in order to record the bar code data as to customer information and type of coupon (mailout versus in-store, product type and value) and attaches that information to the record
- The retailer submission form is compared with CRM’s scanned count and, if it balances, the retailer submission is keyed to the “Cheque Pending” file for approval by Summerhill. The submission is then filed by record number for future audit
- A “Cheque Pending Report” is generated once a week detailing the retailer’s name, address, coupon quantity by type and associated value as well as handling fees and forwarded to Summerhill for approval
- For those submissions that do not match the scanned coupon quantities by CRM, the coupons are physically counted by type to compare to the scanned quantities. Any differences are noted on the submission form and the retailer record is flagged to return the revised submission form with the cheque. The submission is then filed and the record is keyed to the “Cheque Pending” file for approval by Summerhill

- Once the “Cheque Pending” report is approved by Summerhill, the cheques are printed and each to those pertaining records have their status changed to “P” for paid and the cheques are mailed out. Cheque date, number and cheque amount are attached to the record
- A “Cheque Register” is now printed for this cheque run detailing retailer name, address, cheque number and cheque amount and this is forwarded to Summerhill for their records

Questionable Submissions

1. Coupons submitted with no franking or duplicate receipts
Action: Summerhill alerted to verify store inventory purchases with product distributor or store
2. Coupons appear to have been copied
Action: Summerhill alerted to contact store and question coupons as well as asking for distributor invoices in support of coupon quantities submitted
3. Coupons that appear to have been mechanically cut in quantity
Action: Summerhill alerted to contact store and request supporting distributor invoices
4. Coupons that appear to have not been handled by customers
Action: Summerhill alerted to contact store and request supporting invoices
5. Coupons in quantities that seem abnormally high for size of outlet
Action: Summerhill alerted to contact store and request supporting invoices

Next Steps With Questionable Retailer Submissions

1. Summerhill verifies inventory purchases to support coupon submissions
 - Action: CRM processes retailer submission as outlined above
2. Retailer is unable to substantiate inventory purchases in support of coupon submission
 - Action: CRM issues letter to retailer explaining that we cannot honour their submission without supporting invoices and submission is filed under “Reimbursement Denied”

Spring Every Kilowatt Counts Final Results

Table1 - Direct Mail Totals

	All products	BaseBoard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Province wide program total	1108680	7503	24900	538753	8931	50430	477143
Province wide direct mail	144146	1833	8482	72037	3961	14843	42990
Province wide in-store	964534	5670	16418	466716	4970	35587	434153
Burlington Hydro	2321	7	155	951	48	191	969

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Acton	1465	1	19	633	4	13	795
Ailsa Craig	35						35
Ajax	6566	36	244	2905	33	355	2993
Alban	16			16			
Alexandria	1962	6	1	732	0	47	1176
Alfred	294	12	0	115	0	9	158
Allenford	19			17		1	1
Alliston	1053	18	57	421	7	52	498
Almonte	409	4	7	180	5	12	201
Amherstburg	1300	4	27	730	0	73	466
Ancaster	4885	44	220	2617	96	200	1708
Angus	1258	3	6	474	0	9	766
Apsley	117	0	0	62	0	8	47
Arkona	5			3			2
Arnprior	1592	2	3	542	4	11	1030
Arthur	149		1	66		7	75
Atlanta	4341	45	352	3029	91	230	594
Atwood	18			4			14
Auburn	44			44			
Aurora	4076	52	78	2035	36	225	1650
Aylmer	1212	1	4	421	0	35	751
Bancroft	1378	20	11	316	10	29	992
Barrhaven	2246	3	142	1106	72	87	836
Barrie	16438	188	410	7962	172	975	6731
Barry's Bay	396	0	0	186	0	5	205
Bayfield	3			3			
Beamsville	393	2	0	307	0	6	78
Beaverton	303	2	0	157	0	1	143
Belgrave	59			59			
Belle River	872	1	11	315	4	26	515
Belleville	5587	30	90	2200	43	199	3025

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Binbrook	6			6			
Blenheim	719		11	290	1	34	383
Blind River	372	10	2	100	0	8	252
Blossom Park	547			220			327
Bobcaygeon	730	7	30	303	21	40	329
Bolton	4008	2	11	3114	3	41	837
Bourget	135	4	0	61	2	3	65
Bowmanville	2951	5	26	988	2	257	1673
Bracebridge	3334	88	65	1485	27	86	1583
Bradford	1168	12	55	538	4	44	515
Brampton	32456	149	331	12293	80	1124	18479
Brantford	11297	40	193	6878	53	404	3729
Brechin	23	1	3	18		1	
Bridgenorth	209	0	0	90	3	0	116
Brighton	51	1	3	30	1	1	15
Brights Grove	400		38	222	11	11	118
Brockville	3722	76	128	1085	23	161	2249
Brooklin	431	11	20	236	7	6	151
Bruce Mines	276			49	2	2	223
Brussels	28	2				1	25
Buckhorn	182			41		1	140
Burford	212			137		2	73
Burks Falls	25	0	0	18	2	1	4
Burlington	13294	76	565	5373	101	597	6582
Calabogie	17				1		16
Caledon East	130		10	70		5	45
Caledonia	5234	0	34	2938	7	114	2141
Cambridge	8488	119	398	3345	103	406	4117
Campbellford	981	0	1	652	1	2	325
Capreol	464		28	233		9	194
Carleton Place	3038	26	42	1012	6	95	1857
Carp	277	37	10	164	0	21	45
Casselman	2135	16	3	725	2	47	1342
Cayuga	200			11			189
Chapleau	70			15		2	53
Chatham	4596	16	76	2315	38	132	2019
Chatsworth	1			1			
Chelmsford	986	8	7	314	0	16	641
Chesley	99	0	0	39	0	1	59
Cloyne	93	1	0	27	0	2	63

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Cobden	286	1		173		3	109
Coboconk	97	0	1	75	0	8	13
Cobourg	3167	56	13	1113	3	57	1925
Cochrane	1012	7	2	410	1	9	583
Colborne	265		4	47		8	206
Coldwater	233	0	5	74	2	7	145
Collingwood	4275	23	92	1943	6	170	2041
Concord	518			352		19	147
Coniston	8			8			
Cookstown	106		8	59		3	36
Cornwall	4502	82	66	2003	22	283	2046
Corunna	362		1	201	8		152
Courtice	13	1	1	3			8
Courtright	69		3	49		3	14
Creemore	131			57		1	73
Crysler	194			39	2	1	152
Deep River	1094	1	0	688	0	11	394
Delhi	256	0	3	151	2	12	88
Deseronto	44		1	19	3	7	14
Dorchester	261		5	153	5	1	97
Dorset	24	0	0	6	0	0	18
Dowling	9			9			
Drayton	125			106		2	17
Dresden	226	2	0	118	1	9	96
Drumbo	6			6			
Dryden	981	0	2	408	0	10	561
Dundalk	141		1	61		5	74
Dundas	2242	3	11	1966	0	11	251
Dunnville	1520	2	1	218	3	29	1267
Durham	383	4	7	150	9	8	205
Dutton	73	1	2	54		2	14
Earlton	264			192		15	57
Echo Bay	62			13	2	2	45
Eganville	53			8			45
Elliot Lake	1099	8	2	314	1	57	717
Elmira	640	2	5	423	1	11	198
Elmvale	211	0	10	99	5	9	88
Elora	45		2	27	2	3	11
Embrun	939	5	6	451	1	7	469
Emo	136			32	2		102

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Englehart	13			12		1	
Erin	148	0	0	47	1	5	95
Espanola	2213	8	15	1013	4	81	1092
Essex	2277	4	22	1115	5	86	1045
Exeter	1597	0	2	630	6	34	925
Fenelon Falls	966	4	4	329	0	11	618
Fergus	2722	6	16	1110	8	52	1530
Flesherton	53					5	48
Fonthill	1008	0	1	690	0	0	317
Fordwich	21			8			13
Forest	377	0	6	61	2	5	303
Fort Erie	1990	1	6	771	4	63	1145
Fort Frances	1462	12	3	395	7	36	1009
Frankford	9			2			7
Gananoque	1182	1	2	437	1	30	711
Garson	226		3	119	2	3	99
Georgetown	8713	24	48	5616	8	174	2843
Geraldton	33	0	0	31	1	1	0
Glencoe	184	8	0	66	2	1	107
Gloucester	8588	150	347	2963	167	318	4643
Goderich	2580	5	5	992	0	24	1554
Gooderham	16	10		6			
Gore Bay	76	0	0	27	0	4	45
Gorrie	32			31			1
Grand Bend	251	10	30	115	1	4	91
Grand Valley	189		2	34		2	151
Gravenhurst	906	2	2	255	0	33	614
Griffith	48						48
Grimsby	1867	2	5	690	0	27	1143
Guelph	5778	28	196	1698	32	409	3415
Hagersville	168		1	69		15	83
Haileybury	51	0	0	32	1	2	16
Haliburton	781	0	1	267	0	7	506
Hamilton	10294	27	44	4794	15	543	4871
Hammond	33	1	1	2			29
Hanmer	648	26	2	204	0	17	399
Hannon	977		12	877	5	28	55
Hanover	5036	9	14	3317	16	80	1600
Harcourt	6			6			
Harriston	11			7			4

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Harrow	221	1	0	124	1	2	93
Hartington	90		1	45		2	42
Havelock	327	0	6	200	6	7	108
Hawkesbury	917	47	7	254	0	39	570
Hearst	560	21	3	255	1	34	246
Hilton Beach	3			3			
Hornepayne	137			61			76
Huntsville	4234	43	98	1175	14	117	2787
Ignace	29		1	24			4
Ilderton	19			1			18
Ingersoll	1717	1	0	448	3	22	1243
Ingleside	85			39		3	43
Innisfil	570	1	5	248	2	3	311
Inverary	9			7		1	1
Iroquois	2			2			
Iroquois Falls	1356	2	2	433	2	13	904
Islington	1625	4	4	543		55	1019
Jarvis	47		6	37		4	
Kanata	5804	82	241	2164	56	229	3032
Kapuskasing	2576	17	5	839	1	58	1656
Keewatin	83		2	62		19	
Kemptville	2072	5	19	593	6	14	1435
Kenora	2003	10	19	624	2	60	1288
Keswick	1050	1	7	237	2	13	790
Killaloe	80			38			42
Kincardine	2149	56	22	1016	1	57	997
Kingston	11595	149	269	4595	91	504	5987
Kingsville	444		4	175		23	242
Kinmount	17			16		1	
Kirkland Lake	824	12	0	325	3	24	460
Kitchener	23661	131	449	10410	173	897	11601
La Salette	6			6			
Lakefield	670	0	5	264	2	15	384
Lambeth	50		1	9	1	9	30
Lancaster	107		3	62			42
Langton	2					2	
Leamington	2627	12	12	1467	14	56	1066
Levack	72			48	2	3	19
Lindsay	4126	21	26	1924	12	104	2039
Linwood	12			11		1	

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Lion's Head	386	4		216		17	149
Listowel	2606	8	15	825	2	52	1704
Little Current	60	1	1	55		3	
Lively	577	2	0	186	4	9	376
Lombardy	10			10			
London	24884	150	658	14075	229	1272	8500
Long Lac	4			4			
L'Orignal	8	5		2		1	
Ltl Current	1			1			
Lucknow	226		2	65		1	158
Lyndhurst	13			12		1	
Madoc	347	0	1	64	1	4	277
Manitouwadge	193	1	0	82	0	2	108
Manitowaning	18			13			5
Manotick	1704	0	0	1045	0	0	659
Marathon	263	13	3	98	4	10	135
Markdale	257		1	121			135
Markham	10672	105	493	5694	144	522	3714
Marmora	14	0	0	14	0	0	0
Massey	130			50	1		79
Matheson	216			36			180
Mattawa	400	0	2	126	0	1	271
Mcgregor	56			6			50
Meaford	249	2	9	88	1	8	141
Midland	3681	11	5	1590	7	90	1978
Mildmay	89	0	0	44	0	4	41
Millbrook	14			5		2	7
Milton	4745	39	181	1785	18	209	2513
Milverton	66			5		1	60
Minden	690	2	11	455	4	8	210
Mississauga	26703	164	469	12023	105	1217	12725
Mitchell	205	2	0	91	2	1	109
Moonbeam	32			17	1	1	13
Morrisburg	1033	4	0	383	1	20	625
Mount Albert	122		1	43			78
Mount Brydges	25			11			14
Mount Forest	779	2	1	316	1	17	442
Napanee	2993	27	12	1303	2	73	1576
Nepean	17497	213	408	3181	131	406	13158
Nestor Falls	8			8			

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
New Hamburg	414	2	3	167		2	240
New Liskeard	1704	8	8	537	3	97	1051
Newbury	906	1	1	468	3	16	417
Newcastle	336	5	16	139	6	16	154
Newmarket	12539	65	225	2900	54	289	9006
Niagara Falls	10585	47	122	5408	52	379	4577
Niagara On The Lake	6			6			
Nipigon	65			59		1	5
Noelville	83	0	0	40	0	0	43
North Bay	5685	109	87	2962	36	252	2239
North Gower	18			17		1	
Norwich	296	1	6	218		10	61
Norwood	241	1	1	102		7	130
Oakville	7179	33	265	2754	43	406	3678
Odessa	116		1	74	1	8	32
Omemee	29			27		2	
Orangeville	6081	12	109	3771	26	141	2022
Orillia	4328	48	72	2040	47	141	1980
Orleans	3334	46	218	1553	66	97	1354
Oshawa	13124	66	242	7436	53	546	4781
Ottawa	23071	208	225	8872	71	513	13182
Owen Sound	4554	60	103	2272	36	134	1949
Paris	1150	2	13	384	3	28	720
Parkhill	270	0	0	262	2	3	3
Parry Sound	1603	17	12	373	2	40	1159
Pefferlaw	145	4	2	24	1	12	102
Pembroke	7885	43	52	5994	13	133	1650
Penetanguishene	79			22		2	55
Perth	1693	8	13	1166	4	54	448
Peterborough	8815	62	180	4498	76	306	3693
Petrolia	1052	0	4	280	8	16	744
Pickering	4800	3	5	1665	1	88	3038
Picton	1081	7	14	304	0	24	732
Plevna	19			19			
Point Edward	181	4	4	118	2	3	50
Pointe Aux Roches	19			15		4	
Pontypool	50			32	2		16
Port Colborne	1444	5	13	687	2	105	632
Port Dover	107		3	29		1	74
Port Elgin	523	5	5	116	3	12	382

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Port Hope	1134	17	24	514	11	36	532
Port Loring	77			30		9	38
Port Mcnicoll	14		1	11		2	
Port Perry	3303	7	13	493	7	76	2707
Port Rowan	113	0	13	58	0	7	35
Port Stanley	210		2	44	1		163
Powassan	152	0	0	125	0	2	25
Prescott	2003	6	1	976	0	48	972
Preston/Cambridge	449			134			315
Princeton	15			14			1
Providence Bay	7			5			2
Red Lake	165	0	1	94	0	12	58
Renfrew	2913	0	46	1227	1	50	1589
Richards Landing	111	4	3	60		6	38
Richmond	220	0	4	42	1	1	172
Richmond Hill	3391	90	220	1623	94	407	957
Ridgetown	343	1	0	129	2	16	195
Ridgeway	7			1	1	2	3
Rockland	1022	5	6	310	4	55	642
Rockwood	245	2	2	121		8	112
Russell	760		3	150		7	600
Ruthven	72		5	57		6	4
Sarnia	6870	22	129	2970	39	250	3460
Sarsfield	79			64			15
Sauble Beach	321	1	9	75	3	2	231
Saugeen Shores	229			118			111
Sault Ste. Marie	8245	218	74	3803	46	466	3638
Schomberg	14			14			
Schreiber	21			3			18
Scotland	23	0	0	23	0	0	0
Seaforth	2						2
Selkirk	231		1	107		1	122
Shedden	6			6			
Shelburne	901	0	6	280	0	8	607
Simcoe	2622	2	28	975	3	145	1469
Sioux Lookout	370	0	0	86	3	12	269
Sioux Narrows	4			3		1	
Smiths Falls	2602	0	2	1015	2	57	1526
Smithville	223	1	3	84	4	5	126
South Porcupine	584	0	1	190	0	0	393

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Southampton	147	1	2	55	1	3	85
Spanish	63			34		2	27
Spencerville	137		7	55	2	3	70
Springfield	36	15		21			
St Isidore	10			10			
St Jacobs	939		5	442	1	18	473
St Marys	100		3	60	2	2	33
St. Catharines	13452	63	296	6857	117	653	5466
St. Mary's	2576	0	63	1590	8	16	899
St. Thomas	2977	12	32	1612	18	169	1134
Stayner	72			3	3	4	62
Stirling	217	1	1	165	3	1	46
Stittsville	1245	1	2	266	2	7	967
Stoney Creek	4428	0	7	3347	3	60	1011
Stoney Point	71	12		39		2	18
Stouffville	1098	0	1	172	3	37	885
Stratford	2775	10	46	1121	11	55	1532
Strathroy	3664	1	8	1771	16	126	1742
Sturgeon Falls	2253	14	7	927	0	46	1259
Sudbury	16218	133	130	5567	75	511	9802
Sunderland	412		8	165	2	5	232
Sundridge	350			94		1	255
Sutton	161			6			155
Sutton West	540	0	0	161	0	2	377
Sydenham	53			12		2	39
Tamworth	22	2		8			12
Tara	144	2		49		2	91
Tavistock	43	0	2	25	0	0	16
Tecumseh	1373		16	764	3	24	566
Terrace Bay	10		1	4		4	1
Thamesville	28			22		2	4
Thessalon	348	0	0	108	1	1	238
Thornbury	177	1	4	73		1	98
Thorndale	149	1		36		1	111
Thornhill	1975	12	0	1120	0	104	739
Thorold	32			21		2	9
Thunder Bay	10625	28	130	4155	39	501	5772
Tilbury	1427	5	15	762	7	54	584
Tillsonburg	6075	7	14	3163	5	73	2813
Timmins	1752	35	6	419	2	40	1250

Spring Every Kilowatt Counts Final Results

Table 2 - In-Store Coupon Totals

	All products	Baseboard pStats	Dimmers	Energy Star CFL's	Motion Sensor Switch	pStat	Seasonal LEDs
Toronto	99327	678	3134	46094	947	4491	43983
Tottenham	728	1	9	302		7	409
Trenton	4944	15	22	1499	2	62	3344
Tweed	74	5	0	42	0	5	22
Uxbridge	4465	19	28	1643	2	110	2663
Val Caron	1206	13	13	206	3	1	970
Vankleek Hill	552		1	300	1	4	246
Vaughan	512	5	1	159	2	12	333
Verona	40			2			38
Virgil	834	1	19	418	7	28	361
Wainfleet	36	1		31		2	2
Walkerton	237	1	1	54	0	3	178
Wallaceburg	1301	0	5	336	3	28	929
Wasaga Beach	1363	0	57	423	4	25	854
Waterdown	1373	0	28	499	2	6	838
Waterdown	1373	0	28	499	2	6	838
Waterloo	10153	44	159	2997	48	187	6718
Watford	177			39	2	1	135
Wawa	5			4			1
Welland	3763	11	47	1648	14	110	1933
Wellandport	34		1	28	1	1	3
Wellesley	12			6	4	2	
Wellington	17		2	8			7
West Lorne	234		2	156		9	67
Westport	20	1		11			8
Wheatley	40		1	31		4	4
Whitby	8969	47	292	3127	83	520	4900
White River	336			70		4	262
Wiarton	292	0	1	64	0	8	219
Winchester	457			62		9	386
Windsor	31186	99	667	14557	132	1111	14620
Wingham	543	0	1	300	0	10	232
Woodbridge	2407	18	65	882	20	304	1118
Woodstock	5642	20	119	2439	36	307	2721
Wyoming	203	0	0	43	0	2	158
Zurich	26			15		3	8
Other Cities / Retailer Head Offices	112364	2	3	91963	1	4601	15794

Fall EKC		
Technology	Number of Participants	Free Ridership
Compact Fluorescent Bulbs	1540834	10.00%
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	238572	5.00%
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	238572	5.00%
Programmable Thermostat - Space Heating, Existing Single Family Detached	8724	10.00%
Programmable Thermostat - Space Cooling, Existing Single Family Detached	22694	10.00%
pStat Baseboard	1876	10.00%
Dimmer	24900	10.00%
Motion Sensor	8931	10.00%

Fall EKC				
Technology	Summer Peak kW Savings	Winter Peak kW Savings	Annual kWh Savings in Year	Lifecycle kWh Savings
Compact Fluorescent Bulbs	0	31895.26	144,776,723	4
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	0.00	4306.22	9554788.58	30
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	0.00	1586.50	3650143.95	30
Programmable Thermostat - Space Heating, Existing Single Family Detached	0.00	1358.39	11513315.75	18
Programmable Thermostat - Space Cooling, Existing Single Family Detached	3329.14	0.00	3249482.27	18
pStat Baseboard	0.00	1688.18	2475371.00	18
Dimmer	0.00	2016.90	3114990.00	10
Motion Sensor		1085.12	1679921.10	20
Total	3329.14	43936.55	180,014,736	1,350,290,233

Fall EKC					
Technology	TRC Benefits	Incremental Equipment Costs	Program Costs	TRC Net Benefits	TRC B/C Ratio
Compact Fluorescent Bulbs	\$34,383,833.38	\$2,496,150.40		\$31,887,683	13.77
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	\$17,309,646	\$453,286		\$16,856,360	38.19
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	\$6,596,632	\$453,286		\$6,143,346	14.55
Programmable Thermostat - Space Heating, Existing Single Family Detached	\$11,994,681	\$471,117		\$11,523,564	25.46
Programmable Thermostat - Space Cooling, Existing Single Family Detached	\$5,998,031	\$1,225,449		\$4,772,582	4.89
pStat Baseboard	\$2,804,393	\$101,291		\$2,703,102	27.69
Dimmer	\$1,927,894	\$448,200		\$1,479,694	4.30
Motion Sensor	\$1,283,000	\$56,265		\$1,226,735	22.80
Utility Program Costs			\$ 5,089,954.38		
Total	\$82,298,110	\$5,705,044	\$5,089,954	\$71,503,112	16.17

Instructions for Calculating Total Resource Cost Test Results
2006 Fall Every KiloWatt Counts Campaign

Part 1

a. Enter Discount Rate (refer to page 5 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Discount Rate **4.00%**

b. Enter number of coupons redeemed by technology.

Products	Number of Coupons
Baseboard Programmable Thermostats	7503
Dimmers	24900
Energy Star CFL's	538753
Motion Sensor Light Switch	8931
Programmable Thermostat	50430
Seasonal LED Lights	477143

c. Enter program dollars (refer to page 10 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Program Costs: **\$ 5,089,954**

Part 2

Program Total Resource Cost Test Results

Calculation of Program TRC Benefits

Sum of TRC Benefits for all technologies

Calculation of Program TRC Costs

Sum of TRC Costs for all technologies plus Program Costs

Calculation of Program TRC Net Benefits

= TRC Benefits - TRC Costs

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 53

Question:

Ref: Response to Interrogatory from VECC #33 (d)

Preamble: The response states:

d) We received TRC calculators from the 2006 OPA for the Spring and Fall EKC program, along with spreadsheets of program results, but these were not used in our LRAM/SSM application. We are unclear as to whether or not it is these that VECC is requesting. We do not have any other 2007 OPA Every Kilowatt Counts Program Calculator. Copies of the 2006 TRC calculators provided by the OPA are attached.

a) Provide copies of the OPA TRC calculators noted in the response

Response:

These are discussed in the response to VECC Question #52.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 54

Question:

Ref: Response to Interrogatory from VECC #33 (f)

Preamble: The response states:
f) The LRAM claim for 2005, 2006 and 2007 **third tranche** programs is based on the input assumptions in Table 14. As indicated in the Table, and as discussed above, the LRAM calculation for CFLs and programmable thermostats are *not* based on using the OEB Guide values or the OPA EKC Calculator.

a) Identify and provide a copy of Table 14 - The Indeco report does not have a Table14

Response:

The text reference to Table 14 is to the table that appears on the same page as the reference, Question 4.33 p. 4 of 4 and labeled Table 1: Source of LRAM assumptions for the BHI third tranche programs.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 55

Question:

Ref: Response to Interrogatory from VECC #33 (g)

Preamble: The response states:
g) For CFLs and PTs, the 2008 claim for **OPA programs** is based on the program-specific inputs listed in the 2006-2008 OPA Conservation Results for Burlington Hydro provided by the OPA. In the application as filed, preliminary results from the OPA were used. In the amended tables that are in this document, the final results which only became available on 10 November are used. These differ from the OPA 2008/2009 Measures and Assumptions list in some cases. As indicated in the response to Question #33c, the program-specific inputs provided by the 2006-2008 OPA Conservation Results for Burlington Hydro are a more appropriate basis for estimating the savings and LRAM attributed to all applicable measures (including CFLs and PTs). Low Flow Showerheads are not part of BHI's 2008 claim for OPA programs.

- a) Provide copies of the 2006-2008 OPA Conservation Results for Burlington Hydro.
- b) Map the results to the as filed 2006-2008 LRAM claim from OPA programs.
- c) Map/compare to the LRAM Claim using OPA Measures and assumptions List as requested in VECC IR#35 part (d) Table 3.

Response:

- a) The results are provided in response to question 49.
- b) The results from the OPA are incorporated into the Tables presented in response to VECC #32 under the appropriately named program, beginning on Question 4.32p.5 of 30 for ERIP and PSB and p.9 of 30 for EKC and p.12 of 30 for Cool Savings, Refrigerator Roundup and other OPA programs
- c) Table 1 compares the results for the OPA programs produced using the following inputs:
 - The preliminary 2008 OPA results from the 2006-2008 OPA Conservation results for Burlington Hydro provided by the OPA. This is as filed in the original application.
 - The final 2008 OPA results from the 2006-2008 OPA Conservation results for Burlington Hydro provided by the OPA. This is as filed in the amended application as described in response to VECC IR#33 part g.
 - The final 2008 OPA participant rates using the OPA Measures and Assumptions List. This is as filed in response to VECC IR#35 part d.

Table 1 - Comparison between LRAM claims from the original filing, the amended filing and from the response to VECC IR#35 part d)

Program	Year	As originally filed with preliminary 2008 OPA results using 2006-2008 OPA Results for BHI	As amended with final 2008 OPA results using 2006-2008 OPA Results for BHI	As filed in VECC IR#35 part d), with final OPA participant rates and using the OPA M&A list
Residential Coupon Program - EKC	2006	\$290,338	\$290,338	\$121,725
	2007	\$108,077	\$77,435	\$75,284
	2008	\$11,183	\$29,585	\$24,865
The Great Refrigerator Roundup	2007	\$6,550	\$6,550	\$8,481
	2008	\$6,980	\$9,233	\$10,816
Cool Savings Rebate	2006	\$8,398	\$7,559	\$3,914
	2007	\$15,698	\$15,698	\$16,280
	2008	\$4,472	\$5,378	\$5,720
peaksaver®	2008	\$0	\$662	\$2,657
Social housing	2007	\$6,174	\$6,174	\$6,181
Electricity Retrofit Incentive Program (ERIP)	2007	\$3,621	\$3,621	\$3,621
	2008	\$5,723	\$8,941	\$8,941
Renewable Energy Standard Offer Program (RESOP)	2007	\$209	\$209	\$216
Summer Savings/Sweepstakes	2007	\$81,049	\$81,049	\$81,048
	2008	\$0	\$3,239	\$2,995
Secondary fridge retirement pilot	2006	\$4,511	\$4,511	\$3,543
High performance new construction	2008	\$70	\$70	\$49
Power Savings Blitz	2008	\$6,424	\$5,165	\$5,045
TOTAL		\$559,477	\$555,418	\$381,381

As previously stated, the 2006-2008 OPA Conservation results for Burlington Hydro provided by the OPA is more appropriate to use than the generic OPA Measures and Assumptions list. As such, the amended LRAM amounts in column 2 of Table 1 are those that are claimed.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 56

Question:

Ref: Response to Interrogatory from VECC #34 (b)

Preamble: Using input assumptions reflected in the 2008/ 2009 OPA Measures and Assumptions list instead of the program-specific inputs provided in the 2006-2008 OPA Conservation Results for Burlington Hydro would decrease the estimated energy savings for CFLs, PTs and seasonal lights by 44%. However, as stated in the response to Question #33b, the program-specific inputs provided in the 2006-2008 OPA Conservation Results for Burlington Hydro are a more appropriate basis for estimating energy savings of OPA funded programs, and the Residential Coupon program. Inputs for the 2005 Public education and outreach program have been updated to be consistent with the 2008/2009 OPA Measures and Assumptions.

- a) Clarify which programs in Table 1 Column 1 are Third Tranche, OPA and Post third tranche.
- b) Provide a modified version of Table 1 that has additional columns showing the Program specific OPA assumptions and results that BHI is relying on and provide extensive foot notes showing the sources of these assumptions.
- c) Comment on the apparent triple standard for input assumptions that BHI is proposing to apply to its CDM portfolio as opposed to the OPA 2008/2009 Measures and assumptions list.
 - i. Third Tranche and post third tranche programs- OPA 2008/2009 Measures list
 - ii. Third Tranche and post third tranche programs- BHI Independent lighting expert
 - iii. OPA programs -Program specific assumptions as per the OPA reports on BHI savings

Response:

- a) The program funding source is shown in the first column. If the first column is blank, the funding source is of the same type as the previous program.
- b) The table is below.

Table 1 – Modified table 1 in response to IR round 1 VECC Q#34 b)

Year	Third tranche including carryover	Post third tranche	OPA funded	Verification(s)	Source of Assumptions
2005	BHI lighting retrofit			IndEco	Professional lighting expert
2005	Public education and outreach			IndEco & SeeLine	OPA M&A list
2006	BHI lighting retrofit			IndEco	Professional lighting expert
2006	Municipal building retrofit			IndEco	Professional lighting expert
2006	Municipal new construction			IndEco	Professional lighting expert
2006		Residential Coupon program		IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2006		Multi-unit residential lighting program		IndEco	Professional lighting expert
2006		General service lighting		IndEco	Professional lighting expert
2006			Cool Savings Rebate	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2006			Secondary fridge retirement pilot	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2007	Home developers program			IndEco	Professional lighting expert
2007	Municipal building retrofit			IndEco	Professional lighting expert
2007	Public education and outreach			IndEco	Professional lighting expert
2007	Staff development program			IndEco	Professional lighting expert
2007		Residential Coupon program		IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2007		Multi-unit residential lighting program		IndEco	Professional lighting expert
2007		General service lighting		IndEco	Professional lighting expert
2007			The Great Refrigerator Roundup	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2007			Cool Savings Rebate	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2007			Social housing	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2007			ERIP	IndEco & OPA	2006-2008 OPA Conservation Results for

Year	Third tranche including carryover	Post third tranche	OPA funded	Verification(s)	Source of Assumptions
					BHI
2007			RESOP	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2007			Summer Savings Sweepstakes	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2008		Residential Coupon program		IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2008			The Great Refrigerator Roundup	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2008			Cool Savings Rebate	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2008			ERIP	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2008			High performance new construction	IndEco & OPA	2006-2008 OPA Conservation Results for BHI
2008			Power Savings Blitz	IndEco & OPA	2006-2008 OPA Conservation Results for BHI

The program specific assumptions can be found in the response to the second round VECC IR#48 for the Third Tranche and Post Third Tranche programs. For the OPA programs the assumptions used are given in Burlington_IRR_VECC_q49_20091221.xls.

- c) There is no triple standard applied. Rather, the 'best' available data are used, consistent with OEB guidelines. There is a hierarchy of data quality, which goes from the use of specific to general data based on data availability. The data in the OPA Measures and Assumptions list are 'generic' data based on a review of the literature. They contain average or typical results for such things as hours of use particular lighting types. Often the data are from studies in other jurisdictions, and are of mixed vintage. The OPA has reviewed these data sources and (sometimes but not always) has recommended which values may be used, or has presented an average value based on this review. Often the range of values in the studies reviewed is very wide.

As examples of some of these limitations in the data, we point to p.18 of the 2009 Commercial and Institutional Measures and Assumptions list where the effective useful life of the CFL fixtures is said to vary between 6,000 and 12,000 hours. In the same document, on p.21, annual operating hours are given for T8s in a multi-unit residential building of 3150 hours and it is noted that this value includes corridor, parking garage, lobby, service rooms and apartments. The specific data for MURB corridors/lobby (5100 hours) are based on a US study from 2005.

In contrast, the hours used in the BHI calculations are based on the lighting expert going into the specific building where the lighting is being installed, looking at the specific use (e.g. corridor, parking garage, lobby, service room or apartment) and talking with the building owner/users about usage patterns. The lighting expert is then able to determine, for example, whether a particular corridor light is likely to be on for 5100 hours, or 8760 hours, or some other value based on whether there are natural sources of light in the corridor, or occupancy sensors, for example. He can report the hours for the laundry facility based on the hours the facility is open, sources of natural light, and the presence of absence of light switches, timers, etc.

As noted in the Table provided in response to VECC Question 51 BHI's lighting expert noted operating hours (which are the key input assumption determining energy use), and reported variations that reflect usage *in that particular installation*, rather than the generic values in the Measures and Assumptions list. To the extent that the average of all these is higher than the values in the Measures and Assumptions list, that can be deemed to reflect differences between the specific buildings where installations made and the buildings where the averages were calculated, the focusing of the lighting installers on fixtures where usage (and hence savings) will be greater, or both.

Similarly, where there are energy savings estimates prepared as a result of an evaluation, these are based on the specific program, in Burlington or Ontario, in the year the program was delivered.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 57

Question:

Ref: Response to Interrogatory from VECC #35 (a)

- a) With respect to PTs Explain the source of assumptions in the “as filed” column in Table 1.
 - b) Explain why the mapping to the OPA measures and Assumptions List as noted in notes 2-5 provides different (higher) kWh savings).
 - c) Did Indeco verify that the PT s were installed in the heating/ cooling applications corresponding to the OPA Measures and Assumptions list? Provide details of the verification.
 - d) Provide a table showing the #PTs installed in each type of application.
-

Response:

- a) The PT values used in the LRAM claim are from the OPA evaluation results, a copy of which is provided as requested in VECC #49.
- b) The OPA measures and assumptions list identifies the following types of technologies and associated savings:

Technology type	Energy savings kWh/a
Electric baseboard space heating (15% of total heat)	75.1
Cooling & electric FA heating	2063
Space cooling only	138
Gas furnace/heating only	44
Gas furnace/cooling only	138

In contrast, the OPA results of the evaluation identify ten different energy savings levels for the various programs, with little or no information on the types of heating system to which they apply. Consequently, it is was very difficult to respond to VECC’s IR #35 to compare the energy savings used with the values in the OPA Measures and Assumptions list. Assumptions had to be made on the basis of the limited information provided in the OPA results, the program, and the stated energy savings. The Table below shows the mapping of the types above onto the types in the OPA results, based on our best guess of which technology probably applied. We do not have confidence in the mapping, and consider the values from the OPA evaluation to be more meaningful than the assumed value from the Measures & Assumptions (M&A) list.

Measure Name	Unit Savings	Unit Savings	LDC Total (# Units)
	OPA evaluation	OPA M&A list	
Residential Programmable Thermostat	17	75.1	2,344
2007 Programable Thermostat	54	138	99
2008 Programable Thermostat	54	138	387
Programmable Thermostat	55	138	648
Programmable Thermostats - Baseboard	64	75.1	570
Programmable Thermostat	75	75.1	257
Programmable Thermostats	159	138	150
Programmable Thermostats	216	182	224
Programmable Thermostats	522	75.1	431
Programmable Basebaord Thermostats	1,466	2063	26

c) IndEco did not verify that the PTs were installed. The OPA or its contractor did the evaluation of the programs involving PTs. The energy savings per unit are from that evaluation.

d) The number of PTs of each type is shown in the Table above.

Burlington Hydro Inc.
Response to Supplemental Interrogatory
from Vulnerable Energy Consumers Coalition
Question 58

Question:

Ref: Response to Interrogatory from VECC #36

Preamble: “As a result of the availability of OPA’s final program results for 2008 and adjustments made in light of both the Board and VECC interrogatory questions, values for energy savings and both LRAM and SSM claims differ from those presented in the application as filed. The adjustments made are in Table 30.”

- a) Clarify if Table 30 is the same as Table 1 in the response to VECC #36.
- b) If not provide a copy of the referenced Table.

Response:

Yes, where the text discusses Table 30 and Table 31, these appear in the response to VECC #36 as Table 1 (Adjustments made to the LRAM and SSM claims in the application as filed) and Table 2 (Final requested LRAM and SSM amounts in 2010\$), respectively.