UNDERTAKING J1.1

Undertaking

TO PROVIDE THE TOTALS ALLOCATED TO PROVINCIAL RATEPAYERS AND TO HYDRO ONE BRAMPTON RATEPAYERS FOR GREEN ENERGY CAPITAL INVESTMENTS FOR 2010 AND FOR 2011

Response

Please note, the table referred to in the compendium refers to Exhibit 4 Tab 2 Schedule 5.1 Appendix G in our original application. This table was part of HOBNI's Green Energy Plan this plan has not been updated.

The following table reflects accurately the capital spend for the 2010 & 2011 year based on CGAAP.

Allocation of Cost Responsibility based on HOB Direct Benefit Percentages						
HOBNI Green Energy Investment	**2010**			**2011**		
	Gen	**Prov**	**HOB**	**Gen**	**Prov**	**HOB**
Expansions (up to threshold)	-	-	-	-	$158,437	$36,563
Renewable Enabling Improvements	-	$288,000	-	-	$98,000	-
Smart Grid (SCADA Only)	-	$347,500	$347,500	-	$195,000	$195,000
Smart Grid (Other)	-	-	$20,000	-	-	$341,000
Sub Totals	$0	$635,500	$367,500	$0	$451,437	$572,563
Total	$1,003,000			$1,024,000		

UNDERTAKING J1.2

Undertaking

EXPLAIN THE DIFFERENCE BETWEEN NUMBERS IN ENERGY PROBE INTERROGATORY NO. 16 AND EXHIBITS KT1.2 AND KT1.3.

Response

KT1.2 and KT1.3 were developed in IFRS and the table in Interrogatory No. 16 was based on CGAAP but based on a prior version of overhead rates.

In KT1.3, developed in IFRS, the SCADA amounts for all years were incorrect, in particular 2011 should be $289,000 equally shared as illustrated in the updated table below:

Allocation of Cost Responsibility															
HOBNI Green Energy Investment	**2011**			**2012**			**2013**			**2014**			**2015**		
	Gen	**Prov**	**HOB**	**Gen**	**Prov**	**HOB**	**Gen**	**Prov**	**HOB**	**Gen**	**Prov**	**HOB**	**Gen**	**Prov**	**HOB**
OM&A	$250k	-	-	$250k	-	-	$250k	-	-	$250k	-	-	$250k	-	-
Expansions (up to threshold)	-	$134k	$31k	-	$137	$32k	-	$140k	$32k	-	$142k	$33k	-	$145k	$34k
Renewable Enabling Improvements	-	$83k	-	-	$84k	-	-	$86k	-	-	$88k	-	-	$89k	-
Smart Grid (SCADA Only)	-	$144.5k	$144.5k	-	$147.5k	$147.5k	-	$150.5k	$150.5k	-	$153.5k	$153.5k	-	$156.5k	$156.5k
Smart Grid (Other)	-	-	$330k	-	-	$337k	-	-	$344k	-	-	$351k	-	-	$358k

UNDERTAKING J1.3

Undertaking

TO RECONCILE NUMBERS IN NOVEMBER 8TH LETTER WITH NUMBERS IN ENERGY PROBE INTERROGATORY NO. 16.

Response

The November 8th update is correct. The values used in Energy Probe Interrogatory 16, are in CGAAP using previous version of overhead rates (Please refer to HOBNI'S response to J1.1).

1) For Year 2010, GEA capital value was adjusted to $1,003,000 from $1,033,000 due to updates in overhead rates.
2) For Year 2011, GEA capital value was adjusted to $1,024,000 from $1,050,000 due to updates in overhead rates.

UNDERTAKING J1.4

Undertaking

TO EXPLAIN WHY PROVINCIAL SMALL BUSINESS TAX RATE DOES NOT APPLY TO HYDRO ONE BRAMPTON.

Response

We confirm that Hydro One Brampton is eligible for the Ontario small business deduction. The benefit of this deduction for 2011 is estimated to be $5,632.

UNDERTAKING J1.5

Undertaking

TO CONFIRM NUMBER USED TO CALCULATE REVENUES AT EXISTING RATES AND RATES FOR 2011.

Response

Hydro One Brampton notes that the summation of 2011 KWs provided in Table 2 of Exhibit 3, Tab 2, Schedule 1 is incorrect. A corrected table is provided below.

Additionally Hydro One Brampton confirms that the KW values used to calculate the distribution rates were correct and sum to the 5,745,177 KW provided in the corrected table below

Summary of Weather Normalized Load Forecast

	2003 Actual	2004 Actual	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Weather Normal	2011 Weather Normal
Actual kWh Purchases	3,438,503,351	3,606,734,355	3,848,828,345	3,854,274,114	3,958,591,768	3,915,443,564	3,727,941,968		
Predicted kWh Purchases	3,454,916,499	3,546,950,265	3,848,828,345	3,833,699,583	3,988,592,061	3,915,428,135	3,759,311,464	3,821,797,458	3,898,527,442
Billed kWh	3,329,496,978	3,483,144,427	3,723,506,554	3,718,723,113	3,839,000,000	3,791,763,566	3,611,622,564	3,698,071,300	3,772,317,241
Residential									
Customers	91,671	98,355	104,822	109,778	114,119	119,060	121,041	122,377	123,660
kWh	918,500,653	933,248,820	1,066,310,557	1,041,609,067	1,102,238,845	1,093,569,512	1,088,557,819	1,099,386,751	1,107,769,581
GS<50									
Customers	6,512	6,648	6,892	7,075	7,294	7,437	7,529	7,728	7,893
kWh	261,424,109	264,116,354	288,084,106	282,703,766	298,781,693	288,052,193	278,899,780	285,620,803	290,725,436
USL									
Connections	1,105	1,130	1,159	1,207	1,250	1,267	1,280	1,287	1,300
kWh	7,522,732	5,817,642	5,528,171	5,294,847	5,047,284	5,109,078	5,104,985	5,013,040	4,899,876
GS>50									
Customers	1,357	1,393	1,364	1,402	1,417	1,491	1,554	1,544	1,552
kWh	996,032,849	1,045,707,603	1,083,191,856	1,080,817,874	1,109,791,374	1,116,951,693	1,081,007,720	1,097,553,564	1,123,789,074
kW	2,726,683	2,792,673	2,901,457	2,962,866	3,039,974	3,064,109	3,049,119	3,008,017	3,079,920
Intermediate									
Customers	126	124	121	119	117	116	114	110	106
kWh	845,121,401	922,964,134	954,061,083	950,418,593	942,048,351	872,587,042	788,185,444	816,592,994	832,077,628
kW	1,956,285	2,104,962	2,167,872	2,137,488	2,106,615	1,976,551	1,839,970	1,844,198	1,879,169
Large Use									
Customers	4	3	3	4	5	6	6	6	6
kWh	281,784,328	290,325,102	304,422,360	334,087,722	355,306,260	388,700,963	342,523,390	365,387,029	383,275,616
kW	531,189	505,001	515,785	589,471	639,861	712,935	696,851	664,899	697,451
SLR									
Customers	2	2	2	2	2	2	2	2	2
kWh	19,110,906	20,964,771	21,908,421	23,791,245	25,786,193	26,793,084	27,343,426	28,517,120	29,780,031
kW	58,415	60,474	65,522	70,150	76,385	79,929	81,921	84,878	88,637
Total									
Customer/Connections	100,777	107,656	114,361	119,587	124,204	129,379	131,525	133,054	134,519
kWh	3,329,496,978	3,483,144,427	3,723,506,554	3,718,723,113	3,839,000,000	3,791,763,566	3,611,622,564	3,698,071,300	3,772,317,241
kW from applicable classes	5,272,572	5,463,110	5,650,636	5,759,975	5,862,835	5,833,524	5,667,861	5,601,992	5,745,177

UNDERTAKING J1.6

Undertaking

TO REVIEW HOW CUSTOMER FORECASTS IN TABLE 8 WERE DERIVED, AND PROVIDE GROWTH RATES USED.

Response

The decline in the GS > 50 class is due to a drop in GS > 50 customers in late 2009 due to a reclassification of customers. The actual customer counts for 2009 on a month by month basis are provided in the table below. This is why the exponentially smoothed average number of customers for 2009 of 1,549 is greater than the average forecast number of customers for 2010 of 1,544. Hydro One Brampton utilized actual values for January and February of 2010 in completing their forecast. The actual number of GS > 50 customers in January of 2010 was 1,536 which is below the average number of customers for 2009.

		2009							
		RES	USL	GS<50	GS>50	Intermediate	LU	ST	TOTAL
Historic Customer Count	January	120546	1280	7496	1532	116	6	2	**130978**
	February	120596	1280	7497	1535	116	6	2	**131032**
	March	120697	1280	7507	1542	115	6	2	**131149**
	April	120743	1280	7490	1558	115	6	2	**131194**
	May	120836	1280	7486	1568	116	6	2	**131294**
	June	120918	1280	7489	1570	114	6	2	**131379**
	July	121070	1280	7500	1575	114	6	2	**131547**
	August	121201	1280	7517	1579	114	6	2	**131699**
	September	121267	1280	7523	1583	113	6	2	**131774**
	October	121405	1280	7604	1532	113	6	2	**131942**
	November	121519	1280	7616	1536	110	6	2	**132069**
	December	121692	1280	7620	1534	111	6	2	**132245**

To answer the next part of this question, Hydro One Brampton's Customer/Connection forecast on a month by month basis is provided in the following table:

		2010							
		RES	USL	GS<50	GS>50	Intermediate	LU	ST	TOTAL
Bridge and Test Forecast	January	121786	**1281**	7668	1536	112	6	2	**132391**
	February	121899	**1282**	7665	1541	112	6	2	**132507**
	March	**122005**	**1283**	**7679**	**1542**	**112**	6	2	**132628**
	April	**122111**	**1284**	**7692**	**1542**	**111**	6	2	**132749**
	May	**122217**	**1285**	**7706**	**1543**	**111**	6	2	**132871**
	June	**122323**	**1287**	**7720**	**1544**	**111**	6	2	**132992**
	July	**122430**	**1288**	**7733**	**1544**	**110**	6	2	**133113**
	August	**122536**	**1289**	**7747**	**1545**	**110**	6	2	**133235**
	September	**122643**	**1290**	**7761**	**1546**	**109**	6	2	**133357**
	October	**122749**	**1291**	**7775**	**1546**	**109**	6	2	**133478**
	November	**122856**	**1292**	**7788**	**1547**	**109**	6	2	**133600**
	December	**122963**	**1293**	**7802**	**1548**	**108**	6	2	**133722**
	Average	**122377**	**1287**	**7728**	**1544**	**110**	**6**	**2**	**133054**

Actual data for January and February was used as it was the most up to date information available at the date the forecast was completed.

The growth rates used for 2010 are as follows:

RES	USL	GS < 50	GS > 50	INTERMEDIATE
1.05%	1.03%	2.15%	0.53%	-3.96%

In order to forecast on a month by month basis, these values were broken down using the following formula:

RES	USL	GS < 50	GS > 50	INTERMEDIATE
0.0869%	0.0855%	0.1777%	0.0439%	-0.3362%

UNDERTAKING J1.7

Undertaking

TO ASK HYDRO ONE NETWORKS TO PROVIDE SOURCE DATA THAT LED TO FIGURE OF 7,662 GIGAWATT HOURS.

Response

We believe that the correct reference in the undertaking question should be 7,762 Gigawatt hours. The provincial CDM impact (in GWh) presented in Exhibit 3, Tab 2, Schedule 2, Table 1 was prepared by Hydro One Networks in May 2010. As explained in Exhibit A, Tab 12, Schedule 3, page 7, lines 2-10, for 2008-2012, Hydro One Networks uses the cumulative CDM impacts provided by the OPA consistent with the IPSP submitted to the Board in August 2007. Annual CDM impact for 2010-2012 was adjusted to account for the recent economic recession and its impacts on industrial customers and the new CDM targets for LDCs for the 2011-2014 period. The adjustment was based on a forecast judgment of postponing CDM impacts from 2010 to 2011 and 2012. Hydro One Networks has load forecasting working group meetings with the OPA and IESO staff to discuss load forecast and CDM assumptions. To date, the official CDM target for the province is still the 2007 IPSP.

Table 1 of Exhibit 3, Tab 2, Schedule 2 (presented below) shows the annual CDM impacts assumed by Hydro One Networks compared to the CDM impacts in 2007 IPSP. The provincial CDM impact in this table pertains to the CDM reduction used in the load forecast of Hydro One Brampton, which includes other CDM impacts (such as codes and standards, federal and provincial government programs) that are incremental to the LDC CDM program target assigned to Hydro One Brampton as discussed in page 11-14 in the OPA's report entitled "Advice to the Ontario Energy Board: CDM Target Allocation for Ontario LDCs" attached as Appendix B in the Board's letter to LDCs for EB-2010-0215 dated June 22, 2010.

Table 1
Provincial CDM Impact (in GWh)

	Provincial CDM Impact Assumed in 2007 IPSP		Provincial CDM Impact Assumed in this Rate Case	
	Incremental	Cumulative since 2008	Incremental	Cumulative since 2008
2008	814	814	814	814
2009	1,146	1,960	1,146	1,960
2010	4,908	6,868	3,416	5,376
2011	1,885	8,753	2,386	7,762
2012	1,909	10,662	2,900	10,662

Note 1: CDM impact is presented at generation station level weather normal
Note 2: Cumulative CDM impact of 10,662 GWh remains the same by 2012

The figure 7,762 GWh pertains to the provincial CDM impact to be achieved over the 2008-2011 period. The incremental CDM impact between 2009 and 2011 is about 5,802 GWh (7,762 GWh minus 1960 GWh). To be conservative, Hydro One Brampton is assuming 2,386 GWh of CDM for 2011 in this rate case.

UNDERTAKING J1.8

Undertaking

TO REVIEW AND CONFIRM THERE IS NO DOUBLE COUNTING FOR SALARY OF NEW CDM HIRE.

Response

We have confirmed that there has been no double counting for salary associated with the new CDM hire.

UNDERTAKING J1.9

Undertaking

CONFIRM THERE IS NO DOUBLE-COUNTING INVOLVED FOR SALARY OF CDM HIRE, VERSUS COST RECOVERY SOUGHT IN CDM APPLICATION, AND ENSURE THAT RATES APPLICATION IS CONSISTENT WITH APPENDIX A OF CDM CODE.

Response

In light of Appendix A in the CDM Code issued September 16th, 2010, the cost recovery for the new position is now included in the cost of the OPA Tier One Programs. The code specifically states:

2.2 In order to determine the costs associated with Non Rate-Regulated Activities, a distributor shall use an activity analysis to assess the nature and extent of the functions being performed throughout the distribution company to undertake the Non Rate-Regulated Activities. The analysis must include the identification of all activities performed within the distribution company regardless of whether or not these activities directly or indirectly support Non Rate-Regulated Activities.

2.3 The activity analysis referred to in section 2.2 must include the following Marginal Costs and Allocable Costs, where applicable:

(a) all salaries and labour costs including benefits;
(b) contractor expenses;
(c) billing and collection;
(d) customer care, advertising, and marketing;
(e) administration and general expenses;
(f) IT costs;
(g) office equipment; and
(h) any other cost that a distributor can show is relevant and necessary for the program analysis.

There is an administrative component to all Tier One Programs will provide a cost recovery for the CDM hire.

In light of this recent code Hydro One Brampton will not require funding for the salary of the CDM hire in revenue requirement.

UNDERTAKING J1.10

Undertaking

TO PROVIDE UPDATED NUMBERS FOR CHART IN RESPONSE TO BOARD STAFF IR NO. 16.

Ref: Exhibit 4 / Tab 2 / Schedule 1.1 – Summary of OM&A Expenses

On Page 1, Table 1 provides a summary of OM&A expenses for the period from 2006 to 2011.

a) Please use the same format as shown in Table 1 to provide the OM&A expenses based on CGAAP (see below).

b) Please use the same format as shown in Table 1 to provide the OM&A expenses based on CGAAP and exclude Smart Meter related costs. (see below).

Response

a) Exhibit 4, Tab 2, Schedule 1.1, Table 1 is revised and shown below based on CGAAP:

	2006 Board Approved	2006 Actuals	Variance 2006BA - 2006 Actuals	2007 Actuals	Variance 2007 - 2006 Actuals	2008 Actuals	Variance 2008 - 2007 Actuals	2009 Actuals	Variance 2009 - 2008 Actuals	Bridge Year (BY) 2010	Variance BY 2010 - 2009 Actuals	Test Year (TY) 2011	Variance TY - BY
Operation	2,720,134	3,350,836	630,702	3,079,156	(271,680)	3,544,751	465,594	3,815,041	270,290	4,900,708	1,085,667	4,559,988	(340,720)
Maintenance	2,700,089	3,023,980	323,891	3,091,210	67,230	3,374,105	282,895	3,159,226	(214,879)	3,590,436	431,210	3,904,606	314,170
Billing and Collecting	3,512,796	3,775,564	262,768	3,820,263	44,699	4,324,468	504,205	4,897,921	573,454	4,632,782	(265,139)	5,656,663	1,023,881
Community Relations	256,376	1,018,450	762,075	797,999	(220,451)	371,587	(426,412)	363,138	(8,449)	570,000	206,862	640,000	70,000
Administrative and General	4,558,610	4,986,820	428,210	5,137,182	150,361	5,558,770	421,588	5,601,103	42,334	6,699,374	1,098,271	7,415,178	715,804
Total OM&A Expenses	13,748,005	16,155,651		15,925,811		17,173,680		17,836,429		20,393,300		22,176,435	
Variance from previous year			2,407,646		(229,840)		1,247,870		662,748		2,556,871		1,783,135
Percent change (year over year)			17.51%		-1.42%		7.84%		3.86%		14.34%		8.74%
Percent change: Test year vs Most Current Actuals		24.33%											
Average for 2006-2009		6.95%											
Compound Annual Growth Rate (for 2006 to 2009)		1.69%											

b) Exhibit 4, Tab 2, Schedule 1.1, Table 1 is revised, shown in CGAAP excluding Smart Meters.

	2006 Board Approved	2006 Actuals	Variance 2006BA - 2006 Actuals	2007 Actuals	Variance 2007 - 2006 Actuals	2008 Actuals	Variance 2008 - 2007 Actuals	2009 Actuals	Variance 2009 - 2008 Actuals	Bridge Year (BY) 2010	Variance BY 2010 - 2009 Actuals	Test Year (TY) 2011
Operation	2,720,134	3,350,836	630,702	3,066,429	(284,407)	3,538,599	472,170	3,490,575	(48,024)	4,073,261	582,686	3,015,071
Maintenance	2,700,089	3,023,980	323,891	3,091,210	67,230	3,374,105	282,895	3,159,226	(214,879)	3,590,436	431,210	3,904,606
Billing and Collecting	3,512,796	3,775,564	262,768	3,820,263	44,699	4,324,468	504,205	4,897,921	573,454	4,632,782	(265,139)	5,656,663
Community Relations	256,376	1,018,450	762,075	797,999	(220,451)	371,587	(426,412)	363,138	(8,449)	570,000	206,862	640,000
Administrative and General	4,558,610	4,986,820	428,210	5,137,182	150,361	5,558,770	421,588	5,601,103	42,334	6,699,374	1,098,271	7,415,178
Total OM&A Expenses	13,748,005	16,155,651		15,913,083		17,167,528		17,511,963		19,565,853		20,631,518
Variance from previous year			2,407,646		(242,568)		1,254,445		344,435		2,053,890	
Percent change (year over year)			17.51%		-1.50%		7.88%		2.01%		11.73%	
Percent change: Test year vs Most Current Actuals		17.81%										
Average for 2006-2009		6.48%										
Compound Annual Growth Rate (for 2006 to 2009)		1.58%										

UNDERTAKING J1.11

Undertaking

TO PROVIDE STAND-ALONE RATE RIDER FOR SMART METERS UP TO AND INCLUDING THE END OF 2009, AND SEPARATE CALCULATION FOR 2010 STUB PERIOD.

Response

The following tables provide the information requested.

Table 1: Summary of 2007 to 2009 Revenue Requirement for Smart Meters Installed Between 2007 and 2009.

	2006	2007	2008	2009	Total
Return on rate base	-	162,687	533,944	1,047,289	1,743,920
Operating expenses	-	4,728	6,152	324,466	335,345
Depreciation expenses	-	143,404	483,748	969,455	1,596,608
PILs	-	32,721	91,924	185,565	310,210
Revenue Requirement	**-**	**343,540**	**1,115,769**	**2,526,775**	**3,986,083**

Table 2: Summary of 2010 Revenue Requirement for Smart Meters Installed between 2007 and 2009.

	2010
Return on rate base	1,293,100
Operating expenses	827,407
Depreciation expenses	1,258,223
PILs	228,455
Revenue Requirement	**3,607,184**

Table 3: Summary of 2010 to 2014 Revenue Requirement for Smart Meters Installed in 2010 and 2011.

	2010	2011	2012	2013	2014	Total
Return on rate base	164,303	356,563	361,517	323,557	285,596	1,491,536
Operating expenses	48,940	103,522	103,522	103,522	103,522	463,028
Depreciation expenses	332,276	486,502	486,502	486,502	486,502	2,278,283
PILs	(64,667)	(28,155)	113,237	111,942	111,235	243,593
Revenue Requirement	**480,853**	**918,431**	**1,064,778**	**1,025,523**	**986,855**	**4,476,440**

Table 4: Disposition Rider and Funding Adder for Smart Meters Installed Between 2007 and 2009

2011 Smart Meter Rate Rider Application	
Final Disposition Rider (2006 to 2009 Smart Meters)	
Revenue Requirement:	
2006 Rate Year Entitlement	-
2007 Rate Year Entitlement	343,540
2008 Rate Year Entitlement	1,115,769
2009 Rate Year Entitlement	2,526,775
	3,986,083
Smart Rate Rider Billed:	
2006 Rate Year Billed May 1/06 - April 30/07	-
2007 Rate Year Billed May 1/07 - April 30/08	(964,337)
2008 Rate Year Billed May 1/08 - April 30/09	(978,674)
2009 Rate Year Billed May 1/09 - Dec 31/09	(1,191,228)
	(3,134,239)
Smart Meter Costs for Recovery	851,845
Forecasted Number of Customers	132,427
Number of Months	12
Rate Rider	0.54
Funding Adder (2006 to 2009 Smart Meters)	
Revenue Requirement:	
2010 Rate Year Entitlement	3,607,184
	3,607,184
Smart Rate Rider Billed:	
2010 Rate Year Forecast Jan 1/10 - December 31/10	(1,595,953)
Smart Meter Costs for Recovery	2,011,231
Forecasted Number of Customers	133,888
Number of Months	12
Funding Adder	1.25

Table 5: Ongoing Funding Adder for Smart Meters Installed Between 2010 and 2011

2011 Smart Meter Rate Rider Application	
Ongoing Funding Adder (2010 and 2011 Smart Meters)	
Revenue Requirement:	
2010 Rate Year Entitlement	480,853
2011 Rate Year Entitlement	918,431
2012 Rate Year Entitlement	1,064,778
2013 Rate Year Entitlement	1,025,523
2014 Rate Year Entitlement	986,855
	4,476,440
Smart Rate Rider Billed:	
	-
Smart Meter Costs for Recovery	4,476,440
Forecasted Number of Customers	133,888
Number of Months	48
Funding Adder	0.70

UNDERTAKING J1.12

Undertaking

TO REFILE UPDATE TO CHART CONTAINED IN RESPONSE TO BOARD STAFF INTERROGATORY NO. 10 TO INCLUDE INFORMATION FROM THE NOVEMBER 8, 2010 LETTER.

Response

a) Exhibit 2, Tab 5, Schedule 1, Table 1 based on CGAAP is shown below:

OEB #	Description	2006	2007	2008	2009	2010	2011
1805	Land	-	-	-	-	-	-
1806	Land Rights	58,458	19,170	7,069	23,226	382,183	188,730
1808	Buildings and Fixtures	1,123,351	1,630,659	1,283,556	602,472	(111,526)	954,118
1815	Transformer Station Equipment - Normally Primary above 50 kV	3,474	12,600	3,803,296	257,953	1,350,397	1,322,017
1820	Distribution Station Equipment - Normally Primary below 50 kV	639,781	192,033	169,870	279,295	1,218,113	897,450
1830	Poles, Towers and Fixtures	5,802,455	5,777,486	4,388,180	7,129,091	6,430,395	5,178,672
1835	Overhead Conductors and Devices	2,191,510	1,983,311	2,073,555	2,214,142	1,984,066	908,261
1840	Underground Conduit	2,284,568	2,102,665	1,926,785	4,665,139	3,426,401	3,449,723
1845	Underground Conductors and Devices	6,352,682	23,445,365	16,144,870	7,731,744	11,247,011	13,122,671
1850	Line Transformers	3,160,025	2,278,674	5,378,129	6,208,233	4,833,940	6,019,092
1855	Services	714,723	793,538	544,543	613,536	658,286	753,937
1860	Meters	1,170,387	6,157,185	6,392,693	9,445,080	1,022,200	584,138
1908	Buildings and Fixtures	-	-	-	-	(0)	-
1915	Office Furniture and Equipment	47,337	86,526	84,367	2,570	527,283	165,606
1920	Computer Equipment - Hardware	453,294	476,458	155,453	70,653	839,101	300,002
1925	Computer Software	226,383	508,907	184,032	-	-	-
1930	Transportation Equipment	714,607	1,355,127	90,483	215,003	1,970,232	2,255,407
1935	Stores Equipment	19,150	-	-	-	(0)	-
1940	Tools, Shop and Garage Equipment	152,979	287,536	156,761	159,036	380,553	103,174
1950	Power Operated Equipment	-	-	-	-	(0)	-
1955	Communication Equipment	50,146	102,028	78,757	117,318	41,032	131,128
1960	Miscellaneous Equipment	16,025	15,620	12,711	8,554	0	-
1980	System Supervisory Equipment	195,795	208,555	144,806	64,979	98,867	151,467
1995	Contributions and Grants - Credit	(4,471,257)	(18,528,211)	(16,082,800)	(12,704,438)	(11,565,266)	(14,349,930)
2055	Construction Work in Progress--Electric	682,425	1,964,208	(1,397,746)	798,274	0	-
2040	Electric Plant Held for Future Use	-	-	3,554,454	258,332	(0)	-
1610	Miscellaneous Intangible Plant - TS CIP	-	-	-	5,118,257		-
1610	Miscellaneous Intangible Plant - Software CIP	-	-	-	84,843	-	-
1610	Miscellaneous Intangible Plant - TS in-service	-	-	-	(130,042)	5,266,065	-
1610	Miscellaneous Intangible Plant - Software in-service	-	-	-	61,000	961,235	545,351
	Total	**21,588,299**	**30,869,441**	**29,093,824**	**33,294,250**	**30,960,565**	**22,681,013**

b) Exhibit 2, Tab 5, Schedule 1, Table 1 based on CGAAP excluding Smart Meter costs is shown below:

OEB #	Description	2006	2007	2008	2009	2010	2011
1805	Land	-	-	-	-	-	-
1806	Land Rights	58,458	19,170	7,069	23,226	382,183	188,730
1808	Buildings and Fixtures	1,123,351	1,630,659	1,283,556	602,472	(111,526)	954,118
1815	Transformer Station Equipment - Normally Primary above 50 kV	3,474	12,600	3,803,296	257,953	1,350,397	1,322,017
1820	Distribution Station Equipment - Normally Primary below 50 kV	639,781	192,033	169,870	279,295	1,218,113	897,450
1830	Poles, Towers and Fixtures	5,802,455	5,777,486	4,388,180	7,129,091	6,430,395	5,178,672
1835	Overhead Conductors and Devices	2,191,510	1,983,311	2,073,555	2,214,142	1,984,066	908,261
1840	Underground Conduit	2,284,568	2,102,665	1,926,785	4,665,139	3,426,401	3,449,723
1845	Underground Conductors and Devices	6,352,682	23,445,365	16,144,870	7,731,744	11,247,011	13,122,671
1850	Line Transformers	3,160,025	2,278,674	5,378,129	6,208,233	4,833,940	6,019,092
1855	Services	714,723	793,538	544,543	613,536	658,286	753,937
1860	Meters	1,105,012	910,865	484,492	782,066	1,022,200	584,138
1908	Buildings & Fixtures	-	-	-	-	(0)	-
1915	Office Furniture and Equipment	47,337	86,526	84,367	2,570	527,283	165,606
1920	Computer Equipment - Hardware	453,294	476,458	155,453	70,653	839,101	300,002
1925	Computer Software	226,383	508,907	184,032	-	-	-
1930	Transportation Equipment	714,607	1,355,127	90,483	215,003	1,970,232	2,255,407
1935	Stores Equipment	19,150	-	-	-	(0)	-
1940	Tools, Shop and Garage Equipment	152,979	287,536	156,761	159,036	380,553	103,174
1950	Power Operated Equipment	-	-	-	-	(0)	-
1955	Communication Equipment	50,146	102,028	78,757	117,318	41,032	131,128
1960	Miscellaneous Equipment	16,025	15,620	12,711	8,554	0	-
1980	System Supervisory Equipment	195,795	208,555	144,806	64,979	98,867	151,467
1995	Contributions and Grants - Credit	(4,471,257)	(18,528,211)	(16,082,800)	(12,704,438)	(11,565,266)	(14,349,930)
2055	Construction Work in Progress--Electric	682,425	1,964,208	(1,397,746)	798,274	0	-
2040	Electric Plant Held for Future Use	-	-	3,554,454	258,332	(0)	-
1610	Miscellaneous Intangible Plant - TS CIP	-	-	-	5,118,257		-
1610	Miscellaneous Intangible Plant - Software CIP	-	-	-	84,843	-	-
1610	Miscellaneous Intangible Plant - TS in-service	-	-	-	(130,042)	5,266,065	-
1610	Miscellaneous Intangible Plant - Software in-service	-	-	-	61,000	961,235	545,351
	Total	**21,522,924**	**25,623,120**	**23,185,623**	**24,631,236**	**30,960,565**	**22,681,013**

UNDERTAKING J1.13

Undertaking

TO REFILE AN UPDATED TABLE 1 CONTAINED ON PAGE 28 OF EXHIBIT K1.5 TO INCLUDE INFORMATION FROM THE NOVEMBER 8, 2010 LETTER.

Response

Table 1: Rate Base Calculations Summary

Table 1 Summary of Rate Base							
Description	**2006 Board Approved**	**2006 Actual**	**2007 Actual**	**2008 Actual**	**2009 Actual**	**2010 Bridge**	**2011 Test**
Opening Balance Gross Fixed Assets	351,758,493	384,136,113	404,647,864	433,205,354	462,676,170	490,620,681	523,568,279
Closing Balance Gross Fixed Assets	368,501,151	404,647,864	433,205,354	462,676,170	490,620,682	523,568,279	547,510,734
Average Gross Fixed Assets	360,129,822	394,391,988	418,926,609	447,940,762	476,648,426	507,094,480	535,539,506
Opening Balance Accumulated Depreciation	143,041,521	169,258,534	183,765,121	199,241,008	215,299,494	232,711,777	251,648,320
Closing Balance Accumulated Depreciation	155,544,566	183,765,121	199,241,008	215,299,494	232,711,777	251,648,320	264,585,434
Average Accumulated Depreciation	149,293,043	176,511,827	191,503,065	207,270,251	224,005,636	242,180,049	258,116,877
Opening Net Book Value	208,716,972	214,877,579	220,882,743	233,964,346	247,376,676	257,908,904	271,919,959
Closing Net Book Value	212,956,585	220,882,743	233,964,346	247,376,676	257,908,905	271,919,959	282,925,300
Average Net Book Value	210,836,778	217,880,161	227,423,544	240,670,511	252,642,790	264,914,431	277,422,629
Working Capital	256,007,904	283,451,085	291,888,329	293,021,651	303,349,708	355,979,875	357,255,274
Working Capital Allowance -15%	38,401,186	42,517,663	43,783,249	43,953,248	45,502,456	53,396,981	53,588,291
Rate Base	249,237,964	260,397,824	271,206,794	284,623,759	298,145,246	318,311,412	331,010,920

UNDERTAKING J1.14

Undertaking

TO PROVIDE ANSWER AS TO TOTAL AMOUNT OF REGULATORY ASSETS THAT WERE DENIED BY THE BOARD FOR THE 2001 TO 2005.

Response

The balances of all Regulatory Assets were approved for recovery by the Board for the period from 2001-2005 with the exception of transition costs. Hydro One Brampton opted to use the Minimum Review filing approach and therefore wrote off 10% ($158,078) of the balance of transition costs before December 31, 2004.

UNDERTAKING J2.1

Undertaking

TO FILE CDM STRATEGY.

Response

CDM Strategy submitted see below:

Hydro One Brampton Networks Inc.
175 Sandalwood Pkwy West
Brampton, Ontario L7A 1E8
Tel: (905) 840 6300
www.HydroOneBrampton.com

BY COURIER

November 1, 2010

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Walli:

Hydro One Brampton Networks Inc. Filing of CDM Strategy and Application for Board-Approved CDM Programs

Please find attached two paper copies of the confidential version and redacted version of Hydro One Brampton Networks' CDM strategy and Application for Board-Approved CDM Programs. In order to uphold the integrity of the RFP process Hydro One Brampton Networks Inc. asks for confidential treatment of the unredacted version of the strategy and Application specifically Exhibit C, Tab 1 Schedule 2.

On September 16, 2010, the Ontario Energy Board ("OEB" or "Board") issued the final Conservation and Demand Management ("CDM") Code for Electricity Distributors under Section 70.2 of the *Ontario Energy Board Act, 1998* ("the Act"). The Board developed the new CDM Code ("the Code") in accordance with the Minister of Energy and Infrastructure's directive dated March 31, 2010, that was issued to the Board under sections 27.1 and 27.2 of the Act.

Hydro One Brampton Networks Inc. ("Hydro One Brampton") understands that the Code is an important component of the Board's efforts to promote CDM consistent with the Government of Ontario's policies. The purpose of the Code is to set out the obligations and requirements with which licensed distributors must comply with in relation to the CDM targets to be set out in their licences, including the filing of a CDM Strategy. The Code also sets out the conditions and rules that licensed distributors are required to follow if they choose to use Board-Approved CDM Programs to meet the CDM Targets.

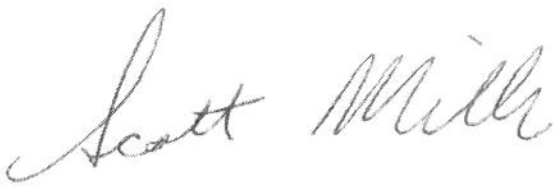
The attached Plan ("the Plan") combines Hydro One Brampton's CDM Strategy and Application for OEB-Approved CDM Programs. The Plan includes a description of how Hydro One Brampton intends to achieve its CDM Targets of 46 MW and 194 GWh over the period 2011-2014. The Plan includes all components required by the Code for submission of a CDM Strategy

and Board-Approved CDM programs. The Plan will help ensure that Hydro One Brampton meets its CDM targets in a cost-effective manner and provides value to ratepayers.

This redacted version of The Plan has been filed through the Board's Regulatory Electronic Submission System ("RESS"), with two copies being delivered to the Board by courier. After receiving an acknowledgment letter from the Board confirming that the CDM Strategy is complete, Hydro One Brampton will make its CDM Strategy available for public review at its main office at 175 Sandalwood Parkway West and on its website.

For more information please contact Scott Miller at 905-452-5504

Sincerely,



Scott Miller

Manager Regulatory Affairs

Hydro One Brampton Networks Inc.

FILING OF CDM STRATEGY AND APPLICATION FOR BOARD-APPROVED CDM PROGRAMS

EXHIBIT A:
ADMINISTRATION

EXHIBIT A

TAB 1

Exhibit List

Exhibit	Tab	Schedule	Contents
A			**Administration**
	1	1	Exhibit List
	1	2	Application
B			**Evidence**
	1	1	2011 to 2014 Conservation and Demand Management Plan Summary
	1	2	2011 to 2014 Conservation and Demand Management Strategy
	2	1	2011 to 2014 Conservation and Demand Management Budget for Board-Approved Programs and Cost Recovery
C			**Supporting Material**
	1	1	Detailed Description of OPA-Contracted CDM Programs
	1	2	Detailed Description of Board-Approved CDM Programs

ONTARIO ENERGY BOARD

IN THE MATTER OF *the Ontario Energy Board Act, 1998*; AND IN THE MATTER OF an Application by Hydro One Brampton Networks Inc.

For an Order or Orders confirming the 2011 to 2014 Conservation and Demand Management Strategy and approving funding for the 2011 to 2014 Board-Approved Conservation and Demand Management Programs

APPLICATION

1. The Applicant is Hydro One Brampton Networks Inc. ("Hydro One Brampton"), a subsidiary of Hydro One Inc. The Applicant carries on the business as a local distribution company operating in Brampton Ontario.

2. Hydro One Brampton hereby applies to the Ontario Energy Board (the "Board"), pursuant to section 78 of the *Ontario Energy Board Act, 1998* ("the *OEB Act*"), for confirmation of the 2011 to 2014 Conservation and Demand Management Strategy ("CDM Strategy"). A Board confirmation of Hydro One Brampton's CDM Strategy will endorse:

    a. the suite of Conservation and Demand Management Programs that Hydro One Brampton put forward to achieve its 2011 to 2014 Conservation and Demand Management Targets; and

    b. Hydro One Brampton's anticipated energy and peak demand savings achievements for OPA-Contracted and Board-Approved CDM Programs for the 2011 to 2014 period.

3. Hydro One Brampton also seeks approval of the 2011 to 2014 Board-Approved Conservation and Demand Management Programs Application for 2011 to 2014 in accordance with the Conservation and Demand Management Code for Electricity Distributors. The six Board-Approved Conservation and Demand Management Programs included in this application are Community Education Events, Neighbourhood Benchmarking, Monitoring and Targeting, Small Commercial Energy Management and Load Control, Municipal and Hospital Energy Efficiency Performance, and Double Return Plus.

4. Hydro One Brampton seeks approval of its Board-Approved Conservation and Demand Management Application which will provide $7.9 million to fund the six Board-Approved CDM programs that are listed above during the 2011 to 2014 period. The Board's approval will enable payments from the Independent Electricity System Operator (the "IESO") in accordance with section 78.5(1) of the *OEB Act*.

5. Hydro One Brampton also requests approval of a variance account that will be used to record the difference between the funding awarded for Board–Approved Conservation and Demand Management Programs and the actual spending incurred to carry out these programs.

6. Hydro One Brampton requests a written hearing on this application.

7. The written evidence filed with the Board may be amended from time to time prior to the Board's final decision on the Application. Further, the Applicant may seek meetings with Board Staff in an attempt to identify and reach agreements to settle issues arising out of this Application.

8. Hydro One Brampton requests that a copy of all documents filed with the Board by each party to this Application be served on the Applicant and the Applicant's counsel as follows:

a) The Applicant:

Mr. Scott Miller
Regulatory Affairs Manager
Hydro One Brampton Networks Inc.

Mailing Address:	175 Sandalwood Pkwy West
	Brampton, ON L7A 1E8
Telephone:	(905) 452-5504
Fax:	(905) 840-1915
Electronic access:	smiller@hydroonebrampton.com

b) The Applicant's counsel:

Mr. Michael Engelberg
Assistant General Counsel
Hydro One Networks Inc.

Address for personal service:	15th Floor, North Tower
	483 Bay Street
	Toronto, ON M5G 2P5
Mailing Address:	15th Floor, North Tower
	483 Bay Street
	Toronto, ON M5G 2P5

Telephone: (416) 345-6305
Fax: (416) 345-6972
Electronic access: mengelberg@HydroOne.com

DATED at Toronto, Ontario, this 1st day of November, 2010.

HYDRO ONE NETWORKS INC.

By its counsel,

_____

Michael. Engelberg

EXHIBIT B:

EVIDENCE

EXHIBIT B

TAB 1

2011 TO 2014 CONSERVATION AND DEMAND MANAGEMENT PLAN SUMMARY

On September 16, 2010, the Ontario Energy Board ("OEB" or "Board") issued the final Conservation and Demand Management ("CDM") Code for Electricity Distributors under Section 70.2 of the *Ontario Energy Board Act, 1998* ("the Act"). The Board developed the new CDM Code ("the Code") in accordance with the Minister of Energy and Infrastructure's directive, dated March 31, 2010, that was issued to the Board under sections 27.1 and 27.2 of the Act. The directive set out the total of the CDM Targets that the must be allocated to respective distributors. A reduction of 1,330 MW and 6,000 GWh is required on a Province-wide basis by the end of 2014.

Hydro One Brampton Networks Inc. ("Hydro One Brampton") understands that the Code is an important component of the Board's efforts to promote CDM consistent with the Government of Ontario's policies. The purpose of the Code is to set out the obligations and requirements with which licensed distributors must comply in relation to the CDM targets to be set out in their licenses, including the filing of a CDM Strategy. The Code also sets out the conditions and rules that licensed distributors are required to follow if they choose to use Board-Approved CDM Programs to meet the CDM Targets.

Hydro One Brampton's Plan ("the Plan") combines Hydro One Brampton's CDM Strategy and Application for Board-Approved CDM Programs. It leverages Hydro One Brampton's experience in implementing and managing CDM programs. The Plan includes a description of how Hydro One Brampton intends to achieve its CDM Targets of 46 MW and 194 GWh over the period 2011-2014. The Plan includes all components required by the Code for submission of a CDM Strategy and Application for Board-Approved CDM programs (More information on filing requirement is attached to this exhibit as Appendix A). The Plan provides a detailed roadmap to ensure that Hydro One Brampton meets its CDM targets in a cost-effective manner and provides value to ratepayers.

Hydro One Brampton will take full advantage of the OPA-Contracted CDM Programs, which are expected to achieve approximately 83% of Hydro One Brampton's CDM targets. To achieve the remaining 17%, Hydro One Brampton will undertake Board-Approved CDM programs. Figure 1 summarizes Hydro One Brampton's anticipated peak savings, and energy savings achievements for OPA Contracted and Board-Approved CDM Programs for the 2011 to 2014 period.

Figure 1 - Annual Incremental Peak and Energy Savings from OPA Contracted and Board-Approved CDM Programs

Savings	2011	2012	2013	2014	Total (2011-2014)
Annual Incremental Peak (kW) savings	9,200	16,100	16,100	4,600	46,000
Annual Energy savings (MWh)	38,800	67,900	67,900	19,400	194,000

Figure 2 summarizes annual milestones for the combination of OPA-Contracted and Board Approved CDM Programs and shows that 100% of Hydro One Brampton's targets will be reached by the end of 2014.

Figure 2 – Annual Milestones

Milestone	2011	2012	2013	2014
Stage	Stage 1 - Program launch	Stage 2 - Programs settle/provide fine tuning	Stage 3 – Program matures	Stage 4 – Program full performance
% of target MW	20%	55%	90%	100.00%
% of target MWh	20%	55%	90%	100.00%

The stages that are identified include initiative launch, fine tuning, settling and full performance.

The forecasted budget requirement for OPA-Contracted and OEB- Approved programs is $39.6 million and $7.9 million respectively.

Currently, Hydro Brampton One has not included any CDM benefits that may result from the implementation of Time-of-Use pricing. Hydro One Brampton may revise its forecast to reflect CDM benefits in the future when more information is available on the CDM impacts of Time-of Use pricing.

Hydro One Brampton is applying for six Board-Approved programs:

- Community Education Program
- Neighbourhood Benchmarking
- Monitoring & Targeting
- Small Commercial Energy Management and Demand Response ("DR") Initiative
- Municipal & Hospital Efficiency Performance
- Double Return Plus

The costs of the above programs are reflected in this Application. Detailed information on each proposed Board-Approved Program can be found at Exhibit B, Tab 1, Schedule 2, Section 4 and Exhibit C, Tab 1, Schedule 2.

Hydro One Brampton views the proposed Board-Approved CDM Programs as a key element for meeting its distributor license condition. These proposed programs are cost-effective as they

have all passed both the Total Resource Cost ("TRC") Test and the Program Administration Cost ("PAC") Test. In addition to quantifiable energy and peak demand savings, they will provide additional benefits such as enhanced customer service, CDM sustainability, market transformation and engagement of all customer types.

2011 TO 2014 CONSERVATION AND DEMAND MANAGEMENT STRATEGY

1.0 Introduction

The specific CDM energy and peak savings targets allocated by the Board to Hydro One Brampton are 194 GWh and 46 MW respectively. The Hydro One Brampton Conservation and Demand Management ("CDM") Strategy provides a description of how Hydro One Brampton intends to achieve its CDM Targets over the 2011–2014 period. It provides a basis for the activities required to achieve the Hydro One Brampton CDM targets, while also aligning with the Company's strategic drivers of Innovation, Stewardship, Excellence and Safety. This Strategy is also consistent with the Ontario Government's vision of a conservation-oriented and more environmentally-conscious Province.

The Strategy addresses the following:

- Factors considered in developing the Hydro One Brampton CDM Strategy
- An overview of the OPA-Contracted Programs that Hydro One Brampton will undertake
- An overview of the proposed OEB-Approved Programs that have been developed
- How CDM programs will be offered to all customer types
- How Hydro One Brampton coordinated with other LDCs and Stakeholders
- How Hydro One Brampton plans to monitor and control the programs

2.0 Factors Considered in Developing the Hydro One Brampton CDM Strategy

Hydro One Brampton has taken into account a number of factors in developing the Hydro One Brampton CDM Strategy. The following section discusses the key aspects that were considered by Hydro One Brampton to ensure that the CDM Strategy is comprehensive and prudent:

Identify and Understand CDM Potential

The first step in developing the CDM strategy was to examine Hydro One Brampton's customer base from a CDM perspective. A third party consultant assisted to prepare an analysis of CDM potential for Hydro One Brampton. The consultant's analysis indicated that approximately 83% of Hydro One Brampton's CDM target can be achieved through OPA-Contracted Programs and that the implementation of Board-Approved Programs is essential for Hydro One Brampton to achieve its allocated CDM targets.

Develop Non-Duplicative Board-Approved Programs

The CDM code stipulates that distributors cannot apply for Board-Approved programs that duplicate existing OPA-Contracted CDM programs.

All Board-Approved CDM programs proposed in this Application are designed to target untapped areas and they are not duplicative of the existing OPA-Contracted CDM programs. The distinctions between these Board-Approved Programs and the existing OPA-Contracted CDM Programs are further discussed in section 4 of this exhibit. Detailed descriptions of both the OPA-Contracted Programs and the requested Board-Approved Programs can be found at Exhibit C, Tab 1, Schedules 1 and 2, respectively.

Leverage Extensive Experience and Proven Success

Hydro One Brampton, in conjunction with Hydro One Networks, has extensive experience in developing, implementing and delivering CDM initiatives. Since 2005, Hydro One Brampton has actively and effectively served its customer delivering a range of CDM programs and initiatives. These programs achieved annualized savings of 985 kW and resulted in over 31 MW in peak demand savings over the period to September 2007.

Achieving Cost Effectiveness

Cost effectiveness is an important element of Hydro One Brampton's CDM program portfolio, which consists of both OPA-Contracted Province-Wide and Board-Approved CDM Programs.

The cost effectiveness of all OPA-Contracted CDM Programs has been verified by the OPA. Hydro One Brampton plans to take full advantage of all these cost effective OPA-Contracted CDM programs, which are expected to help achieve approximately 83% of the Hydro One Brampton CDM targets.

Hydro One Brampton plans to achieve the rest of the CDM target (approximately 17%) by delivering Board-Approved CDM Programs. All requested Board-Approved CDM programs included in this Application are cost-effective, as required by the CDM Code. They have passed both the Total Resource Cost ("TRC") Test and the Program Administration Cost ("PAC") Test. The results of the TRC and PAC tests for each Board-Approved Program can be found at Exhibit C, Tab 1, Schedule 2. In addition, Hydro One Brampton will monitor and evaluate to help ensure that the cost-effectiveness results remain in line with estimates.

Maximize Administrative Efficiency

Hydro One Brampton has been working with Hydro One Networks Inc. leveraging their expertise on this current CDM Strategy.

Working with Hydro One Networks Inc. has enabled Hydro One Brampton to capitalize on the relationships that Hydro One Networks Inc. has developed to maximize administrative efficiencies and synergies (e.g. working with gas distributors, electricity distributors, social service agencies, joint RFP, deployment, delivery).

All currently requested Board-Approved CDM Programs are economic as they have passed the cost-effectiveness tests (TRC and PAC). To the extent that there is future uptake from other distributors, that future uptake will increase overall administrative efficiency and improve the cost-effectiveness measures for these programs. Any subsequent material reduction in future program expenditures will be reported to the OEB as part of the annual CDM report submission.

Ensure CDM Program Coverage for All Customer Types

Hydro One Brampton has ensured that CDM programs are offered for all customers types. In addition to the existing OPA-Contracted CDM programs, a suite of distinct Board-Approved

CDM programs will address Hydro One Brampton's specific customer types and segments. This mix of programs (both OPA-Contracted and Board-Approved) will ensure the needs of Hydro One Brampton's customers are met. Please refer to Figure 6 in Section 5 of this Exhibit, which shows the coverage for residential, commercial and industrial customers.

Ensure that Potential Risks can be Mitigated

Hydro One Brampton is fully committed to achieving its CDM target. Risk mitigation is essential to ensuring success. Hydro One Brampton has identified the following activities that are intended to mitigate potential risks:

- Hydro One Brampton has relied on its own experience in program implementation and delivery along with Hydro One Networks Inc.'s extensive experience and proven success to identify and design effective programs.

- Hydro One Brampton proposes a diverse CDM program portfolio that covers multiple customer segments to minimize the risk of differences between program plans and actual experience.

- Hydro One Brampton will monitor evaluate and promptly address any differences between program plans and actual experience.

3.0 OPA-Contracted Programs

Hydro One Brampton intends to take full advantage of the OPA-Contracted Programs which are expected to deliver approximately 83% of the Hydro One Brampton CDM target. This estimate was achieved through a customer-based analysis approach to ensure the integrity of the estimate. As mentioned in Section 2.0 of this document, Hydro One Brampton worked with a third party consultant to undertake a CDM potential analysis. The results of a consultant's study supported the Company's analysis indicating that, to achieve its target by 2014, Hydro One Brampton will need to rely on both OPA-Contracted and OEB Approved Programs.

Figure 3 provides an overview of the OPA-Contracted programs which Hydro One Brampton intends to undertake. Included in the figure are estimates of the projected budget, estimates of total projected reduction in peak demand and total projected reduction in electricity consumption for each of the programs.

The amounts for each OPA-Contracted initiative were derived by applying the estimated percentage of Hydro One Brampton participation to the total OPA provincial budget. The OPA is in the process of finalizing the funding mechanism. Any potential changes to the funding mechanism are not expected to be material. As a result, any changes to the requested Board-Approved CDM programs will not be significant and will be handled through the proposed variance account.

Figure 3: OPA-Contracted Province-Wide Programs to be Undertaken by Hydro One Brampton

Estimated Net MW - 2011 - 2014 Cumulative

Customer Segment	Net MW reduced*	Net GW.h saved*	Projected Budget**
Mass Marketing (Total)	5.2	29.2	
Appliance Retirement	0.6	7.9	
Residential New Construction	3.3	6.7	5.0
Res Demand Reduction	4.6	0.0	14.0
Res Low Income			
Total Residential	**13.8**	**43.7**	**19.0**
CI&I New Construction	0.3	1.7	
C&I ERIP	9.8	86.2	14.5
Commercial DR	4.9	-	0.5
Total Commercial	**15.0**		**15.0**
		87.9	
Industrial both ERIP and Industrial Accelerator	2.1	46.4	4.4
Industrial DR	7.1		1.2
Total Industrial		**46.4**	**5.6**
	9.2		
TOTAL	**38**	**178**	**39.6**

* *Numbers may not add up due to rounding*

** *Estimated budgets are allocated as a percentage of estimated customer segment participation for each of the individual initiatives within the province-wide programs. They include costs and incentives paid directly by the distributor.*

The $39.6 million is based on the OPA's projected budget for all these CDM programs. The total budget has been divided between the costs for which the LDCs are responsible (60% Consumer, 88% Commercial, 88% Industrial) and those for which the OPA is responsible (40% Consumer, 12% Commercial, 12% Industrial). The LDC portion is then expressed on a $/kW basis. These rates were then applied to the projected savings which Hydro One Brampton expects to achieve in all these programs.

Please refer to Exhibit C, Tab 1, Schedule 1 for detailed program descriptions of the OPA-Contracted Programs.

4.0 Requested Board-Approved Programs

4.1 Need for Board-Approved Programs

The March 31, 2010, Directive by the Minister of Energy and Infrastructure allows distributors to meet their CDM targets through initiatives under the OPA-Contracted CDM Programs and OEB-Approved CDM Programs. The OPA has indicated that its Programs are expected to achieve 1,037 MW of the 1330 MW provincial target, leaving the difference to be addressed by other OEB-Approved programs.

Hydro One Brampton intends to take full advantage of initiatives under OPA-Contracted Programs, which are expected to satisfy approximately 83% of the Hydro One Brampton CDM target. In addition to the OPA-Contracted programs, Hydro One Brampton requires a range of OEB-Approved Programs in order to satisfy the remainder of its allocated CDM target.

Hydro One Brampton has considered a series of programs as potential OEB-Approved Programs. After review of these potential programs, Hydro One Brampton has selected the six programs that appear in Figure 4 for OEB approval.

Figure 4: Board-Approved CDM Programs

Initiative Name	Projected Budget ($)	Total Projected Reduction in Peak Provincial Demand (MW)	Total Projected Reduction in Electricity Consumption (GWh)	Cost Effectiveness Tests	
				TRC Ratio	PAC Ratio
Community Education Events	177,000	0.020	1.394	1.4	1.1
Neighborhood Benchmarking	1,550,000	0.950	30.5	1.2	1.2
Monitoring & Targeting	1,435,000	1.623	3.533	1.4	1.2
Small Commercial Energy Management and Load Control	1,525,000	2.000	2.00	1.7	1.3
Municipal and Hospital Energy Efficiency Performance	794,000	.220	5.10	1.4	1.1
Double Return Plus	2,374,000	11.000	30	11	6
Total	**7,855,000**	**15.813**	**72.43**		

The MW and MWh estimates are based on Hydro One Networks Inc. past programs' and data from third party consultants.

Hydro One Brampton plan on offering the 6 proposed OEB Approved Programs, that were developed by Hydro One Networks Inc.. Hydro One Networks Inc. has carried out cost effectiveness tests, including Total Resource Cost ("TRC") and Program Administrative Cost ("PAC") tests.

The Program mix of the proposed OEB Approved Programs is essential for Hydro One Brampton to meet its CDM target. These programs offer a range of benefits including engagement of all customer sectors, CDM sustainability, and market transformation.

The requested Board-Approved programs also address customer needs that are not currently met by the OPA-Contracted Programs. These programs are expected to help pave the way for a new level of CDM commitment for LDCs, as envisioned by the *Green Energy and Green Economy Act*. OEB-Approved Programs are a key component for Hydro One Brampton to meet its CDM requirements as set out by its distributor's license conditions.

The requested Board-Approved programs address all customer segments of residential, commercial of various sized-businesses, and industrial. In addition to the cost-effectiveness and demand and energy savings of the proposed programs, several other factors were also considered. For example, the Neighborhood Benchmarking program is the only program that addresses behavioral changes based on peer comparisons and influence.

Other programs, such as the Double Return Plus, empower customers to manage and reduce their own peak demand (as compared to other dispatchable demand response programs). This program will achieve reductions that stem from the customer's behavioral change, and promise persistent results that are expected to go beyond the life of the program. The Double Return Plus program will achieve high TRC and PAC ratios. It is intended to meet most of the untapped potential for customers to reduce their peak demand.

The Small Commercial Energy Management and Load Control program will provide programs for small commercial customers. The small commercial customer group requires a robust program to encourage them to participate in CDM initiatives. This program represents a threshold investment to engage this group of customers.

A key feature of the requested Board-Approved programs is integrating conservation and demand management in customers' day-to-day operations as individuals and as businesses irrespective of their size. These program features are expected to help transform the CDM market in general as well as assist Hydro One Brampton to better address its customers' CDM needs and achieve its mandated CDM targets.

Figure 5 provides an overview of the annual MW and MWh savings and the projected cost budgets for the Board Approved Programs.

Figure 5: Board-Approved CDM Programs (Annual Results and Budget)

	2011	2012	2013	2014	Total
Annual MW by year end	4.739	8.750	12.207	15.813	15.813
Annual MWh	7,912	17,846	21,512	25,161	72,431
Total Budget ($M)	1.79	2.07	2.08	1.92	7.86

Please refer to Exhibit C, Tab 1, Schedule 2 for the program descriptions for all of the OEB-Approved Programs.

4.2 Non-duplication with OPA-Contracted Program Initiatives

All Board-Approved CDM programs proposed in this Application were designed to target customer segments and/or customer needs that have not been addressed by the existing OPA programs and therefore they are not duplicative of the OPA CDM programs. Detailed descriptions of both the OPA Programs and the requested Board-Approved Programs can be found in Exhibit C, Tab 1, Schedule 1 and 2. As compared to OPA-Contracted Programs, Hydro One Brampton's proposed OEB-Approved Programs have the following distinct value proposition to Hydro One Brampton's customers.

Community Education

The OPA-Contracted programs do not provide an initiative similar to the Community Education Program. This program focuses on customer education and promotes the exchange of information between the utility and its customers at local community events. This program relies on a face-to-face interaction with the customer building on the history of Hydro One Brampton's customer outreach programs that have been in place since 2005. Hydro One Brampton has been

very active in engaging its customers at many civic events and these have been integral in the success of the residential programs that have been offered.

The OPA-Contracted Consumer Enabling Initiative offers online educational tools and does not address face-to-face interaction. Hydro One Brampton has a large English as a second language customer base where face-to-face interaction has had a history of being successful in delivery of programs.

Neighbourhood Benchmarking (also known as Social Benchmarking)

Neighbourhood Benchmarking is non-duplicative from all OPA-Contracted Program as it is the only program that addresses behavioural changes based on peer comparisons and influence. This program provides customers with a customized home energy report that offers insights about their individual energy use as well as a comparison with their neighbourhood energy use. Customer load profile data collected from the smart meter will be used to help identify areas of opportunity for conservation and recommendations will be specifically tailored to meet the needs of the specific customer.

Neighbourhood Benchmarking has proven successful in other jurisdictions, where pilots/programs have shown that significant savings can be achieved from "benchmarking" individuals' consumption relative to that of their neighbours.

Monitoring and Targeting (M&T)

This program is non-duplicative of OPA-Contracted Programs, as it provides a monitoring and targeting system to customers with less than 15 GWh consumption. This customer segment has been excluded from participating in the Industrial Accelerator Program. The M&T offers software which measures energy efficiency per unit of production. This provides a baseline against which improvements are measured. By continually monitoring energy efficiency, customers are enabled to track and adjust their consumption.

The proposed M&T program provides funding for the adoption of a monitoring and targeting system that helps medium-sized commercial and industrial customers to better understand their

energy performance, to benchmark their consumption against other similar businesses for best practices, and to achieve sustainable proactive behavioural and process changes. Under the Industrial Accelerator OPA Program, M&T equipment is provided only to industrial customers with energy consumption of at least 15 GWh and with average peak load of 200 kW and above. This program extends the sustainable behavioural change to industrial customers who would not have access to M&T systems under the Industrial Accelerator Program. The M&T is expected to provide sustainable behavioural and process changes to the target customer group. M&T educational and coaching approach aims at influencing the leaders and the middle management of the respective organizations to support CDM, an approach that is only provided by this program to achieve sustainable results.

Small Commercial Energy Management and Load Control

The Small Commercial Demand Response Program is distinct from other OPA-Contracted programs, as it targets small commercial customers (between 50kW and 200KW) that are not currently provided with load control and energy management offerings from other programs.

This program will also be extended to smaller commercial customers (below 50 kW). The needs of this distinct customer segment will not be met under the enhanced OPA Province-Wide program (which is designed to meet residential needs) as supported by the projected uptake of just 1% by the small commercial customer segment.

Under this program, customers are offered Energy Management System ("EMS") devices that are activated with a programmable feature that meets their business needs during business hours.

The business needs of the small business customer are sensitive to time-of-use ("TOU") rates. Accordingly, this program allows the customer to shift and/or reduce their load from on-peak to off-peak periods to take advantage of the TOU rate structure.

Municipal and Hospital Energy Efficiency Performance

The Municipal and Hospital Energy Efficiency Performance Program provides financial rewards to the Municipality and the Hospital for overall electrical energy efficiency reductions within

facilities and across their portfolio of accounts. This program is not duplicative of the OPA Commercial CDM Programs because it focuses on overall energy efficiency performance whereas the OPA Commercial CDM Programs focus on savings achieved solely by technology efficiency or equipment replacement. The program will offer the key elements required to assist this financially constrained sector in the pursuit of sustained and deeper energy savings beyond traditional or proposed Province-wide CDM programs.

As a program participant, the customer is committed to, and incented for continuous energy efficiency actions and improvements year over year. Participants will be required to sign a Memorandum of Understanding ("MoU") committing to the development of a comprehensive Energy Conservation Action Plan and are asked to commit to participation in the program until December 31, 2014. The program will assist participants to develop and implement energy management processes that include ongoing electrical consumption benchmarking, as well as employee engagement and training, behavioral changes and commitment from all levels of the organization. The focus on continuous energy management process is expected to produce sustainable behavioral change with persistent energy and demand savings. The comprehensive approach of this program is expected to transform these segments of the broader public sector by going beyond technology based incentives to embed energy efficiency and conservation as a core best practice amongst management, operations and employees.

This program could be further extended to the other public sector institutions.

Double Return Plus

The Double Return Plus Program is not duplicative of the OPA Demand Response Programs because it is based on non-dispatchable load control and it also aims at reducing energy consumption. By contrast, the OPA Province-wide Demand Response programs are based on dispatchable load control and, as a result, have minimal energy savings. Non-dispatchable load control means that it is left to the customer's discretion whether they wish to reduce their peak demand and the time at which they reduce demand given the customers business needs and production cycles. Dispatchable load control, on the other hand, means that the customer must respond to the IESO's request that they curtail a contracted amount of their load or face penalties

(e.g., under Demand Response 3) for not doing so. Another difference between the two programs is that the Double Return Plus initiative provides an incentive to customers for reducing their own peak demand which may occur at a different time than the system peak demand. The OPA Demand Response programs specifically target system peak demand. Further, a key requirement of the Double Return Plus program is that it excludes those customers who have signed up for either, the OPA Demand Response or Demand Response 3 programs.

The proposed Double Return program is a commercial and industrial (C/I customers with average demand above 200 kW) demand response and energy efficiency initiative that attempts to reduce the system peak load and energy consumption through behavioural changes and/or a load balancing system. This program also provides participants with a range of behind-the-meter customer services, including energy efficiency education, site-specific technical assistance, employee engagement tools, and customer specific online load tracking information. The objective of this program is to allow the customer to reduce their own peak demand which may occur at a different time than the system peak demand. This approach provides the customers with more flexibility and options to manage their facilities and therefore it is expected to improve energy efficiency, encourage behaviour changes, produce more sustainable and persistent energy and demand savings, and lower the overall system peak demand.

It should be noted the OPA had already approved the Double Return Program as a Custom Program distinct from the OPA's Demand Response 1/Demand Response 3 programs, and all three programs coexisted in the marketplace in 2008 and 2009.

5.0 Program Mix

Hydro One Brampton currently serves approximately 133,000 customers. Hydro One Brampton is a summer peaking utility with a typical customer mix. Hydro One Brampton have approximately 123,600 residential customers and 9,400 general service customers (approximately 7,800 below 50 kW and 1,600 above 50 kW).

Hydro One Brampton's Diverse CDM Program Portfolio

Hydro One Brampton's CDM program portfolio provides offerings to all customer types. In addition to the existing OPA-Contracted CDM programs, the Board-Approved CDM programs will address Hydro One Brampton's customer types and segments. This mix of programs (both OPA-Contracted and Board-Approved) will help ensure that the needs of all Hydro One Brampton's customers are met.

Hydro One Brampton's portfolio of 2011-2014 Residential Programs encourages customers, including low-income customers, to purchase and install energy efficient products and empowers them with the tools they need to reduce energy and save money. These programs will help drive the homes of the future toward being smart, integrated and efficient.

Hydro One Brampton's portfolio of CDM programs also cater to the needs of its business customers. For example, the OPA "Commercial Program" is directed at Hydro One Brampton's small business customers. In addition, Hydro One Brampton's portfolio includes an innovative program for the institutional sector, based on energy performance that rewards the municipality and hospital for their energy efficiency efforts.

Hydro One Brampton's industrial programs provide operational improvements for energy efficiency, as well as peak demand reductions.

As part of the tracking and review process, all CDM programs will be monitored closely on an ongoing basis. Performance issues related to specific customer types or segments will be corrected by adjusting current programs and/or implementing additional programs or delivery strategies. This will ensure complete coverage of all Hydro One Brampton's customer base.

Figure 6 provides a summary of Hydro One Brampton's CDM Program Portfolio coverage by customer type:

Figure 6: CDM Program Coverage by Customer Type

CDM Programs / Customer Types	Residential		Commercial	Industrial
	Regular	*Low Income*		
OPA Programs				
1 Year Round Instant Rebates (Conservation Card / Coupon Booklet)	√	√		
2 Bi-Annual Instant Rebate Event (Retailer Event)	√	√		
3 Appliance Retirement Program	√	√		
4 Bi-annual Appliance Exchange Events	√	√		
5 HVAC On-line Rebates Program	√	√		
6 New Construction Program	√	√		
7 Midstream Incentives Program	√	√		
8 Customer Enabling Initiatives*	√	√		
9 Low Income Program		√		
10 Residential Demand Response Initiative	√	√		
11 Commercial program (ERIP and PSB)			√	
12 Demand Response 1 - Commercial			√	
13 Demand Response 3 - Commercial			√	
14 Demand Response 1 - Industrial				√
15 Demand Response 3 - Industrial				√
16 Industrial Accelerator				√
17 ERIP Industrial				√
Board-Approved Programs				
1 Community Education Program	√	√		
2 Neighbourhood Benchmarking	√	√		
3 Monitoring & Targeting			√	√
4 Small Commercial Energy Management and Demand Response (DR)			√	
5 Municipal & Hospital Efficiency Performance (M-HEEP)			√	
6 Double Return Plus			√	√

6.0 Coordination

Hydro One Brampton's Past CDM Involvement

Over the past years, Hydro One Brampton has played a key role in driving conservation activities and initiatives in Brampton.

In 2004/2005, Hydro One Brampton embarked on the design of its CDM initiatives which formed a portfolio of programs funded under Market Adjustment Revenue Requirement ("MARR"). The portfolio consisted of a mix of CDM programs across all sectors and some were considered as leading-edge. For example, Hydro One Brampton in conjunction with Hydro One Networks Inc. implemented an innovative demand response technology consisting of a web-enabled residential setback thermostat. This technologically innovative concept (SmartStat) was subsequently adopted by the OPA and was offered across the Province, as part of the Province-wide PeakSaver initiative.

Hydro One Brampton has worked with other LDCs in the past to more effectively and efficiently deliver CDM programs and initiatives. An example is the delivery of the Powerhouse – Renewable Energy Technologies Funding Program which was a joint cooperative effort by the Ministry of Energy, Enersource, and Hydro One Networks Inc. where interest free loans were offered to customers who installed renewable energy technologies in their homes.

7.0 Monitor and Control

Hydro One Brampton plans to closely monitor ongoing and projected CDM expenditures and accomplishments. Deviations from plans will be identified and corrective action will be taken. Program variances will be reviewed on a regular basis. Any significant change in circumstances will be reported to the OEB as part of the annual CDM report submission. In the event that fund transfers in excess of 30% are required, Hydro One Brampton will make an application to the Board as required by section 3.2 of the CDM Code.

EXHIBIT B

TAB 2

2011 TO 2014 CONSERVATION AND DEMAND MANAGEMENT BUDGET FOR BOARD-APPROVED PROGRAMS AND COST RECOVERY

1.0 Board Approval of Funding and Variance account

Hydro One Brampton seeks approval of CDM funding for Board-Approved CDM Programs of $1.79 million for 2011, $2.07 million for 2012, $2.08 million for 2013 and $1.92 million for 2014.

In accordance with the CDM Code, Hydro One Brampton follows all of the Board's accounting policies and procedures specified for CDM activities. A fully-allocated costing methodology will be followed, in accordance with Appendix A of the CDM Code, for all CDM programs. Program funding and program expenditures from all Board-Approved CDM Programs will be kept separate from Hydro One Brampton's distribution operations.

After Board approval, payments from the Independent Electricity System Operator (the "IESO") in accordance with section 78.5(1) of the *Ontario Energy Board Act, 1998* will provide $7.86 million to fund Board-Approved CDM programs during the 2011 to 2014 period.

Hydro One Brampton also seeks approval for a Board-Approved CDM Program Variance Account which will be used to record any differences between the funding awarded for Board-Approved CDM Programs and the actual spending for these programs.

2.0 Proposed Funding Process

In order to enable the completion of the Board Approved Programs, Hydro One Brampton requires funding. To achieve the required funding, Hydro One Brampton proposes that the funding for 2011 – 2014 Board-Approved CDM Programs be provided at the beginning of each month, over a four-year period starting January 1, 2011.

The following table provides the breakdown of Hydro One Brampton's CDM funding requirement for Board-Approved CDM Programs, by year:

Figure 7: Hydro One Brampton's Funding Requirement for Board-Approved CDM Programs

Funding to be provided annually	$1,788,000	$2,067,000	$2,084,000	$1,916,000	$7,855,000
Corresponding monthly payments	$149,000	$172,000	$174,000	$160,000	

The proposed monthly payments are determined by dividing the projected annual budget requirement by 12.

The Board-Approved CDM Program Variance Account will be used to record the difference between the funding awarded and the actual spending incurred. Hydro One Brampton proposes that the disposition of any balance in this variance account be dealt with at the end of 2014.

This variance account will be managed in the same manner as existing Hydro One Brampton variance accounts. It will be updated monthly and interest will be applied at the Board-approved rate.

EXHIBIT C

SUPPORTING MATERIAL

EXHIBIT C

TAB 1

DETAILED DESCRIPTION OF OPA-CONTRACTED CDM PROGRAMS

Hydro One Initiatives Under OPA – Contracted Province-Wide CDM Programs

Residential Programs

1. Year Round Instant Rebates
2. Bi-Annual Instant Rebate Events
3. Appliance Retirement Initiative
4. Bi-Annual Appliance Exchange Events
5. HVAC On-line Rebates Initiative
6. New Construction Initiative
7. Midstream Incentives Initiative
8. Consumer Enabling Initiatives
9. Low Income Initiative
10. Residential and Small Commercial Demand Response Initiative

Commercial and Institutional Programs

11. Commercial and Institutional Province Wide Initiative
    - Electricity Retrofit Incentive Program ("ERIP") Commercial
    - Direct Install
12. Demand Response 1 ("DR1") - Commercial
13. Demand Response 3 ("DR3") – Commercial

Industrial Programs

14. DR1 - Industrial
15. DR3 – Industrial
16. Industrial Accelerator
17. Industrial ERIP

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 1

Initiative Name: **YEAR ROUND INSTANT REBATES**

Conservation Card / Coupon Booklet

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential Customers

Initiative Description:

This is an energy efficiency initiative that provides customers with year round instant rebates at participating retailers for a variety of low cost, easy to install measures.

Background:

This is a year round initiative that offers instant rebates to customers towards the purchase of low cost, easy to install measures. The distribution of a series of product rebate coupons directly to each home presents the opportunity for customers to redeem these rebates at any time throughout the year.

Note: There will also be an opportunity for customers to take advantage of instant rebates during bi-annual retailer promotions (see *Bi-Annual Retailer Events Initiative*).

Initiative Elements:

- Consumers are eligible for year round instant rebates at participating retailers for a variety of low cost, easy to install measures
- Measures purchased are traceable to the customer and the LDC service territory via a coding mechanism
- Initially the initiative will be launched using a coupon booklet and then there are plans to transition to a Conservation Discount Card
- OPA RFP process to support the transition from coupons to Conservation Discount Card (process pending)
- The following incentives will be offered under this initiative:

Year Round Measures	Incentives 2011 - 2014
ENERGY STAR qualified Standard CFLs (2011 only)	$1.00 (packages of 3 or less) $3.00 (packages of 4 or more)
ENERGY STAR qualified Specialty CFLs	$3.00 (packages of 2 or less) $5.00 (packages of 3 or more)
ENERGY STAR qualified Fixtures (including ENERGY STAR ceiling fans)	$10.00 (3+ sockets, ceiling fan) $3.00 (less than 3 sockets)
Lighting Control Products (Hard wired)	$3.00
Hot Water Pipe Wrap	$0.50 for three
Electric Water Heater Blanket	$4.00
Weatherstripping	$2.00 (V Strip or Foam Tape) $3.00 (Door Kit)
Heavy Duty Plug In Timer	$4.00
Advanced Powerstrips	$4.00
Clotheslines	$5.00
Baseboard Programmable Thermostats	$10.00 (packages of 2 or less) $30.00 (packages of 3 or more)

Purpose of the Initiative:

- Maximize participation – ease of transaction for consumer, accepted at a wide range of retailers, year-round availability of rebates
- Maximize LDC goodwill and profile with consumer – multiple touch points/uses that connect the offer with the LDC for the consumer
- Optimize cost effectiveness – processing costs, rebates payable (i.e. to those consumers who have been influenced by the marketing and promotion)
- Track savings and allocate appropriately to each LDC – product purchases are traceable back to the LDC customer (traceable to the LDC) rather than where they are purchased (location of retail store)
- Data benefits of Conservation Card - each consumer's energy efficient purchasing behavior can be tracked enabling cross-promotion of additional initiatives in which the consumer might be interested based on past purchases and participation.
- Development of a loyalty initiative to reward consumers who participate in multiple initiatives (based on data collected from Conservation Card) .

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 2

Initiative Name: **BI-ANNUAL INSTANT REBATE EVENTS**

Retailer Events

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Bi-annual events (Spring & Fall)

Target Customer Type(s): Residential Customers

Initiative Description:

Utilities and retailers will work together to promote the *Instant Rebates Program* by holding bi-annual retailer events (Spring and Fall). Twice a year, participating retailers will host month-long rebate events. The events are intended to promote instant rebates for low cost measures and capture the attention of the "impulse shopper".

Background:

This offer is a carry forward of the *Every Kilowatt Counts, Power Savings Events*. The initiative has been enhanced to include local marketing and engagement by LDC's. The bi-annual retailer events are intended to capture the attention of the "impulse buyer" who is already engaged in the sales cycle. The events will highlight the value of the instant rebates and prompt the customer to take action and use in-store coupons (or the Conservation Card when available) to purchase eligible products. The bi-annual retailer events will now provide an opportunity for LDCs to have an in-store presence at retailer locations throughout their community(s).

Initiative Elements:

- Bi-annual promotion of instant rebates at local retailer sites (during months of April & October)
- Each promotion will be a month long event
- Customers are encouraged to take advantage of the instant rebates through in-store coupons available for a variety of low cost, easy to install measures
- The product list for the bi-annual events and the year-round rebates will be the same, as will the rebate amounts

- This initiative is targeted to the impulse buyer who is already engaged in the sales cycle (shopping at retailer location)

- In-store customers will be encouraged to take advantage of the instant rebates which are also available year round (using in-store coupons or Conservation Card)

- The following incentives will be offered (please note that from within this product list there will be different products promoted in the Spring vs. Fall events, in cases where product usage is seasonal in nature):

Year Round Measures	**Incentives 2011 - 2014**
ENERGY STAR qualified Standard CFLs (2011 only)	$1.00 (packages of 3 or less) $3.00 (packages of 4 or more)
ENERGY STAR qualified Specialty CFLs	$3.00 (packages of 2 or less) $5.00 (packages of 3 or more)
ENERGY STAR qualified Fixtures (including ENERGY STAR ceiling fans)	$10.00 (3+ sockets, ceiling fan) $3.00 (less than 3 sockets)
Lighting Control Products (Hard wired)	$3.00
Hot Water Pipe Wrap	$0.50 for three
Electric Water Heater Blanket	$4.00
Weatherstripping	$2.00 (V Strip or Foam Tape) $3.00 (Door Kit)
Heavy Duty Plug In Timer	$4.00
Advanced Powerstrips	$4.00
Clotheslines	$5.00
Baseboard Programmable Thermostats	$10.00 (packages of 2 or less) $30.00 (packages of 3 or more)

Purpose of the Initiative:

- Capture the attention of consumers who are shopping at their local retailer and encourage them to purchase energy efficient products that they wouldn't otherwise have intended to purchase

- Encourage retailers to change their product assortment and promotional strategies to place increased emphasis on energy efficient product alternatives

- Encourage retailers to allocate resources to undertake additional promotional activities that encourage consumers to purchase and install the energy efficient products featured in the instant-rebate initiative (as well as any other energy saving products that the retailer may wish to promote)

- Educate retail staff on the features and benefits of energy efficient products so they can increase consumers' understanding of these products and their energy efficiency potential

- Encourage retailers to work with their LDCs to educate consumers on the features and benefits of energy efficient products

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 3

Initiative Name: **APPLIANCE RETIREMENT INITIATIVE**

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential Customers

Initiative Description:

This is an energy efficiency initiative that offers FREE pick up and decommissioning of old refrigerators, freezers, room air conditioners and dehumidifiers.

Background:

This initiative was originally launched in 2007 by the OPA as a province-wide initiative (aka. *Appliance Retirement Program* or *Great Refrigerator Round-Up Program*). The initiative has been enhanced to include a municipal pick-up element, where applicable, and a retail channel for pick-up upon replacement.

Initiative Elements:

- Customers are offered FREE pick-up and decommissioning of old appliances (old refrigerators, freezers, room air conditioners and dehumidifiers)
- Customers can book appointment on-line (electronically) or by phone
- Centralized call centre operated by OPA for scheduling of appointments (toll-free line)
- OPA contracted third-party handles pick-up and decommissioning process
- Secondary appliances must be 15 yrs old, capacity of 10 – 27 cubic feet and msut be in good working condition
- Coordination with local municipal appliance pickup is encouraged, where feasible, at the LDC's initiative
- Coordination of pickup of old fridge/freezer by retailers will be undertaken - at time when retailer delivers a new appliance to customer
- OPA provides report of initiative results specific to LDC territory

- The following is an outline of the customer incentives:

Appliance Retirement Measures	Incentives 2011 - 2014
Refrigerator	Free Pickup and Decommissioning
Freezer	Free Pickup and Decommissioning
Room Air Conditioner (secondary)	Free Pickup and Decommissioning
Dehumidifier (secondary)	Free Pickup and Decommissioning

Purpose of the Initiative:

- Achieve energy and demand savings through the retirement and/or replacement of old, inefficient refrigerators, freezers, window/room air conditioners and dehumidifiers
- Discourage the use of old, inefficient appliances
- Facilitate environmental benefits through proper decommissioning and recycling of old appliances.

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 4

Initiative Name: **BI-ANNUAL APPLIANCE EXCHANGE EVENTS**

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Bi-annual events

Target Customer Type(s): Residential Customers

Initiative Description:

This initiative involves bi-annual, appliance exchange events. Exchange events are held at local retail locations and customers are encouraged to bring in their old *room air conditioners and dehumidifiers* in exchange for coupons/discounts towards the purchase of new energy efficient equipment.

Background:

This initiative was originally launched in 2007 (aka. *Keep Cool Program*) and the exchange events were managed primarily by the OPA. Customers were encouraged to visit participating retailers on pre-scheduled dates and "trade-in" or exchange their old appliances. Customers who participated received an incentive (coupon or discount) towards the purchase of new, energy efficient equipment. The initiative has been enhanced to include local marketing and provides an opportunity for LDC's to become more involved by having an in-store presence at retailer locations within their respective communities.

Initiative Elements:

- Bi-annual exchange events will be held at local retailers (Spring & Fall)
- Retailers solicited at the head office level by the OPA
- Customers encouraged to bring in their old room air conditioners and dehumidifiers to participating retailer locations in exchange for rebates
- For the Spring Event, the rebate will be a coupon towards the purchase of a high efficiency replacement unit ($50 Replacement Coupon)
- For the Fall Event, the rebate will be in the form of a gift card ($25 Gift Card)

- A gift card will be offered during the Fall event, as replacement units are typically not stocked during this time of the year

- Appliances are decommissioned in an environmentally friendly manner; decommissioning process is centrally managed by the OPA

- The following incentives will be offered:

Exchange Event Measures	**Incentives 2011 - 2014**
Room Air Conditioner	$50 Replacement Coupon (Spring) $25 Gift Card (Fall)
Dehumidifier	$50 Replacement Coupon (Spring) $25 Gift Card (Fall)

Purpose of the Initiative:

- Achieve energy and demand savings through the retirement and/or replacement of old, inefficient window /room air conditioners and dehumidifiers.

- Discourage the re-use of old, inefficient appliances.

- Facilitate environmental benefits through proper decommissioning and recycling of old appliances.

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 5

Initiative Name: **HVAC ON-LINE REBATES INITIATIVE**

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential Customers

Initiative Description:

This is an energy efficiency initiative that provides rebates for the replacement of old heating or cooling systems with high efficiency furnaces (equipped with electronically commutated motors) and Energy Star qualified central air conditioners.

Background:

The HVAC rebates initiative has been in market since 2006 (aka. *Cool Savings Program*). The initiative has been enhanced to include LDC's in the delivery of the initiative and there is also a new contractor training element. As part of this initiative, consumers will be eligible for rebates on replacement of qualifying furnaces with electronically commutated motors and central air conditioners. Training will be available for contractors to educate them on quality installation principles. LDC's will be involved in the recruitment of contractors; this will be supported by OPA recruitment efforts. The HVAC rebates will be delivered to consumers through participating contractors and will be centrally fulfilled by the OPA, as in the past.

Initiative Elements:

- Customers will be eligible for rebates on qualifying HVAC equipment
- Rebates available for replacement of central air conditioners and furnaces with electronically commutated motors
- Customers can book appointment on-line or by phone
- Rebates will be available through on-line process which will be centrally managed and fulfilled by the OPA
- Contractor training will be available to support quality installation (including initial assessment to ensure right-sizing of equipment)

- OPA will provide a report of the initiative results specific to the LDC territory
- The following is an outline of the customer incentives:

HVAC Measures	Incentives 2011 - 2014
High Efficiency Furnaces equipped with ECM	$250
ENERGY STAR qualified Central Air Conditioner	$250 (SEER 14.5) $400 (SEER 15)

Purpose of the Initiative:

- Resource acquisition will be achieved by encouraging consumers to purchase and install energy efficient HVAC equipment when replacing existing equipment.
- The new energy efficient HVAC equipment will generate both energy and peak demand savings.
- Capability building will be achieved by training contractors on quality installation principles.

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 6

Initiative Name: **NEW CONSTRUCTION INITIATIVE**

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential Customers

Initiative Description:

This is an energy efficiency initiative that provides incentives to homebuilders for constructing new homes that are efficient, smart and integrated (applicable to new single family dwellings).

Background:

This is a new initiative under the Consumer Program and will be offered for the first time in the market, beginning January 2011. The objective of this initiative is to ensure that single family homes of the future are constructed to be efficient, smart and integrated. The initiative encourages and rewards homebuilders for constructing efficient, smart and integrated single family homes. Consumers are also informed through education about the value of purchasing an energy efficient, smart and integrated home (including increased comfort, lower energy costs and environmental benefits).

Initiative Elements:

- Homebuilders are offered incentives to promote the construction of new homes that are "efficient, smart and integrated"
- Incentives are provided in four key categories, as follows:

    1. Incentives to install electricity efficiency measures as determined by a prescriptive list and via a custom option;
    2. Incentives for installing devices for demand response (phased implementation anticipated);
    3. Incentives for homebuilders who meet or exceed aggressive efficiency standards using the EnerGuide performance rating system;
    4. Incentives for training on energy efficiency building techniques and practices.

- Measures target end uses with the highest potential for electricity savings and demand reduction including lighting, cooling coupled with electronically commutated furnace motor, as well as plug loads.

- The initiative will capture and fund fossil fuel savings (i.e. natural gas, oil, propane) to encourage market transformation through improving the building envelope to achieve higher EnerGuide performance ratings.

- The initiative will be delivered by LDCs throughout the province.

- Local engagement of builders will be the responsibility of the LDC and will be supported by OPA air cover driving builders to their LDC for additional information.

- LDC's will be responsible for reviewing and approving applications and conducting site verifications.

- Data collection and reporting will also be the responsibility of the LDC.

- OPA will be responsible for rebate fulfillment.

- The following is a list of the measures which will be incentivized for builders:

New Construction Measures	**Incentives 2011 - 2014**
All-off Switch	$50.00
ECM Motors	$50.00
SEER 15 CAC	$30.00
Lighting Control Products	$3.00
Fixtures (single socket, multi-socket, niche)	$15.00 (niche) $10.00 (3+ sockets) $3.00 (less than 3 sockets)
Custom Project	TBD
EnerGuide 83 Whole Home	$500/Home
EnerGuide 85 Whole Home	$1,000/Home
Residential Demand Response Devices	TBD
Training	TBD

Purpose of the Initiative:

- To motivate builders to incorporate electric energy efficient technologies in the design and construction of new homes

- To drive market awareness through advertising and other mediums

- To educate the builder and consumer on the benefits of energy efficiency in the home

- To increase consumer awareness and trigger increased consumer demand

- To overcome builder's concerns about trained and available trades to install the technologies and to overcome the trades concerns about liability with the installation of the technologies (training programs to be developed and offered to both).

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 7

Initiative Name: **MIDSTREAM INCENTIVES INITIATIVE**

Retailers, Cable & Satellite TV Providers & Pool Contractors

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Retailers, Cable & Satellite TV Providers & Pool Contractors

Initiative Description:

This is an incentive program for midstream channel partners who can directly influence the consumers' product selection. Midstream incentives will be provided to retailers, cable and satellite providers and pool contractors to encourage them to stock and promote energy efficient equipment.

Background:

This is an incentive initiative for midstream electronics retailers, cable and satellite providers and pool contractors. The initiative is meant to encourage midstream providers to change their product selection, assortment and promotional strategies to place increased emphasis on energy efficient product alternatives. Incentives for retailers will encourage them to stock and promote high-efficiency televisions. Incentives for cable and satellite television service providers will encourage the adoption of set-top boxes and network configurations that deliver energy-efficiency gains. Incentives for pool contractors will encourage proper selection and right-sizing of pool equipment.

Initiative Elements:

- Retailers will be encouraged to gear their offerings and promotions to feature the most energy efficient alternatives to consumers who have already decided to purchase new equipment.

- OPA will be responsible for developing relationships with retailers, cable and satellite TV providers

- OPA will also be responsible for hiring a Program Manager for this initiative

- OPA will be responsible for contractor training, i.e. pool contractors
- OPA will be responsible for providing incentives to retailers, cable and satellite TV providers
- LDC's will be responsible for educating consumers about the benefits of purchasing energy efficient equipment
- The midstream incentives will include:

Midstream Measures	**Incentives 2011 - 2014**
Pool measures	\$50 (2011 – 2012) \$30 (2013 – 2014)
Televisions	\$20
Set-top boxes	\$12

Purpose of the Initiative:

- A midstream rather than downstream consumer incentive will be employed to avoid creating additional demand for and proliferation of televisions in households.
- Encourage retailers and cable/satellite distributors to change their product assortment and promotional strategies to place increased emphasis on efficient product alternatives
- Educate pool contractors on the benefits to their customers of right sizing a pool pump to maximize energy efficiency
- Increase awareness of energy consumption of devices among consumers at point of sale through staff knowledge and signage
- Increase retailer/service provider promotion of energy efficient product alternatives

OPA – Contracted Province-Wide CDM Program (Tier 1)

RESIDENTIAL PROGRAM

Initiative Number: 8

Initiative Name: **CONSUMER ENABLING INITIATIVES**

Online Energy Audit Tool / Online Customer Education Program

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential Customers

Initiative Description:

Consumer enabling initiatives will provide the consumer with the web-based information they need to make informed decisions. The online tools will help educate consumers about the benefits of conservation and help promote the Consumer Conservation Programs. The consumer enabling initiatives include:

a) Online home energy audit

b) On-line consumer education

Background:

The enabling initiatives are intended to provide the residential consumer with the information and the tools that they need to "get started" and help them make informed decisions. These online tools will be accessible to customers via the local utility website.

Initiative Elements

- An **On-line energy audit tool** (examining both gas and electricity usage) will be made available to consumers. An online calculator will enable the consumer to rapidly assess their home's energy usage/performance and direct them to energy efficiency initiatives that will be of most benefit to them.

- LDCs will be able to host the audit tool on their website through an interface.

- The data entered by the consumer will be saved and the information will be available for market research purposes for each LDC to enhance their understanding of their customer base and their behaviours.

- A robust **online education component** will be produced and will be integrated into all applicable elements of the marketing materials and on-line audit tool

Purpose of the Initiative:

- To provide consumers with the information they need to make informed choices.
- To move to a *customer centric model (*i.e. move the focus from the end-use to the *end-user*).
- To introduce a holistic approach to energy management.
- To ensure that consumers are empowered to take steps towards energy efficiency and influence behavioural change.
- To build a consistent thread that brings together the conservation efforts at home, at work, and in the community, to further the Culture of Conservation in Ontario.

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 9

Initiative Name: **LOW INCOME INITIATIVE**

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential Customers

Initiative Description:

This is a turn-key initiative for low income customers. It offers residents the opportunity to take advantage of FREE, TURN-KEY installation of energy efficient measures that improve the comfort of their home, increase efficiency and help them save money.

Background:

This is a new initiative that has been specifically developed to meet the needs of the low income consumer. This is a comprehensive initiative that involves a variety of activities intended to improve the energy efficiency of low income homes. The initiative is intended to reduce electricity demand, provide consumers with the information they need to manage their energy use and influence behaviour change that will support these outcomes. The initiative will pay 100% of costs for the purchase and installation of the electricity saving products.

The process begins with an in-home audit which will identify the opportunities within the home. The installation measures range from basic measures (CFL's, weather-stripping, water heater blanket and more) to a full list of extended measures (light fixtures, air conditioning units, freezers, refrigerators, dehumidifiers, draft-proofing and insulation).

Initiative Elements:

OUTREACH

The initiative leverages five customer outreach channels, as follows:

1. **Blitz Participants**. Households come into the initiative via a *neighbourhood blitz*; whereby, neighbourhoods are targeted by income and/or propensity for electric heat. Households who agree to participate via the *neighbourhood blitz* move to the basic audit process.

2. **Self-Initiated Respondent.** Households responding to air coverage, print media, or via word-of-mouth referrals may opt-in to the initiative. Households opting into the initiative

will contact an intake center, flow through the outbound pre-screening protocol, and be scheduled for a referral audit.

3. **Community Partner Referral.** Households receiving social assistance via a government agency, community-based organization, or non-profit who pass through the initiative referral screen are queued for outbound pre-screening. Examples of community referral partners include: social service providers, local housing agencies, food banks, etc.

4. **LDC Priority Referral.** Households struggling with utility bill affordability, at-risk for utility service disconnect, and/or have pending high-bill complaints may be considered an LDC Priority account. When LDC Priority accounts pass through the initiative referral screen, these households are queued for outbound pre-screening.

5. **Extended Measures Referral.** In 2012, a gas initiative linkage is envisioned (independent of desired integration). This linkage promotes a Gas Audit Extension; whereby, qualifying low-income households are screened for electric savings. *Qualifying households* that pass an extended measures selection protocol are scheduled for an extended measures visit. Examples include: referrals from Enbridge's TAPS program and Union Gas Helping Homes Conserve Program.

GAS COMPANY ENGAGEMENT

The initiative design includes coordinating efforts with gas utilities, as follows:

Gas Audit Extension. An extension to the gas utility DSM audit allowing for the installation of basic measures II in homes that participate in the gas utility initiatives.

Electric Audit Extension. An extension to the basic audit delivered by the LISFH program to allow for the installation of basic measures III (gas utility measures).

IN HOME AUDITS

Three types of energy audits will be offered to low income consumers, as follows:

1. **Basic Audit.** An in-home consultation offered to households passing the health and safety protocol. The in-home consultation uses basic measure screening protocols to determine which basic measures will be installed and facilitates eligibility verification. For homes with natural gas service, basic measures III will be installed in program years 2012 forward (pending coordination of Low Income Single Family Home (LISFH) program with gas utility initiatives). For *qualifying households* the in-home consultation continues with extended measures selection and a weatherization opportunity screening. Customers are advised of the pending work orders for an extended measures visit and a weatherization audit. As part of the basic audit, each home will be screened for eligibility in the gas-utility weatherization program and utility-led DR and Home Energy Management Systems programs. If the home is eligible for these programs, a DSM program referral and/or LDC program referral will be made with customer consent as provided for within the energy education.

2. **Weatherization Audit.** An in-home consultation proceeds with air infiltration_measure installation and envelope measures selection. In homes requiring envelope treatment, a home weatherization visit work order is created and the customer is advised of a pending weatherization visit.

3. **Referral Audit.** An in-home consultation offered to households passing the health and safety protocol. The in-home consultation provides basic measures and facilitates eligibility verification. For *qualifying households* the in-home consultation continues with extended measures selection and a weatherization audit. Where opportunities have been identified, customers are advised of the pending work orders associated with a pending extended measures visit and/or home weatherization visit.

INSTALLATION MEASURES

The initiative will offer consumers several energy efficiency and demand reduction measures. Different packages of measures will be offered based on eligibility determined during the audit. These packages include:

1. **Basic Measures I.** A prescriptive set of measures that include energy education and information (how to use measures, conservation behaviours, energy management vis a vis time-of-use rates), low-cost weatherization measures, and the installation of the following energy efficiency measures: CFLs, DWH pipe wrap, DWH blanket, low flow faucet aerators, low flow showerheads, engine block timers, and powerbars with integrated timers.

2. **Basic Measures II.** An incremental set of electric measures that compliment the electric measures provided within the gas DSM audit. The anticipated measures include powerbars with integrated timers, CFLs, and engine block timers.

3. **Basic Measures III.** The installation of programmable thermostats for gas furnaces (would be funded by gas utilities).

4. **Extended Measures Visit.** Delivery agents responding to an extended measures work order will schedule appointments with the customers, deliver the specified measures, remove existing equipment/appliances, and install the specified measures. The current list of extended measures includes the following set of Energy Star qualified measures: light fixtures, air conditioning units, freezers, refrigerators, and dehumidifiers. Programmable thermostats will be reviewed as a potential measure for inclusion in 2012 for baseboard systems. At the end of the visit, customers will be notified of a possible quality assurance visit that would be scheduled within the next 30 days.

5. **Home Weatherization Visit.** Delivery agents responding to a home weatherization work order will follow the air infiltration measure installation protocol to provide draft proofing along with the requested attic, wall, and basement insulation. Following the completion of home weatherization, customers will be notified of the need for a quality assurance visit to be scheduled within the next 30 days.

HEALTH & SAFETY MEASURES

There are two aspects to health and safety which will be addressed in this initiative

1) the safety of initiative delivery staff working in the home and

2) the state of repair of the home itself and the impact of this state of repair on opportunities for conservation retrofits

QUALITY ASSURANCE / MONITIORING & VERIFICATION

- Once the installation of measures has been completed in a participating home, the participant will receive a follow-up call or visit to a) confirm their satisfaction with the initiative and b) gather information for initiative EMV.

- DEMAND RESPONSE

- The initiative will also consider the feasibility and potential savings that could be achieved by funding the cost of In Home Display measures for low-income customers who want to participate in the Residential Demand Response initiative but a) do not qualify for a device at no-cost and b) cannot afford to pay the incremental cost of the device themselves.

Purpose of the Initiative:

- Assist low income customers in managing electricity costs

- The initiative employs a "house as a system" approach, providing opportunities for electric energy efficiency in each area of the home

- Install energy efficiency measures in low income homes that will produce long-term, sustainable energy savings – i.e. Reduce provincial electricity demand and consumption

- Physical installation of energy efficiency measures provide long-term sustained financial savings to consumers and this will help reduce the reliance on financial assistance programs

- Enhance the social safety net for low income consumers

OPA – Contracted Province-Wide CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 10

Initiative Name: **RESIDENTIAL AND SMALL COMMERCIAL DEMAND RESPONSE INITIATIVE**

Year(s) of Operation for the Initiative: July 2011- December 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential customers

Initiative Description:

This is an initiative that provides residential customers the tools they need to actively manage their energy use in a time-of-use (TOU) environment. The initiative provides customers with access to price and real-time consumption data and offers an option to participate in demand response load control.

Background:

This initiative offers a free programmable thermostat (or load control switch) and offers a financial incentive for allowing load control of central air conditioners and electric water heaters during peak times. This program has been enhanced to include window air conditioners and pool pumps.

The initiative has been further enhanced for 2011 – 2014 to take advantage of recent policy changes, market developments and technology advancements. The new demand response devices will be able to accommodate the use of smart plugs, smart strips, smart appliances and more emerging technologies.

The initiative will now offer residential customers two participation options, as follows:

1. **Participation with demand response**

2. **Participation without demand response**

While general service customers under 50kW are eligible to participate in the PeakSaver Program; so far less than one percent of this customer group has participated in the program. This is primarily due to the fact that PeakSaver Program is designed to respond to the needs of residential customers

The above mentioned enhancements were designed for the residential sector, accordingly, penetration of small commercial sector continues to be at an assumed 1% only.

Initiative Elements:

- Participation with demand response will offer higher incentives, higher levels of subsidization and more participation options (due to fact that demand response yield higher avoided costs)

- All participants will receive access to price and real-time consumption info

CUSTOMER OPTIONS:

The following is an outline of options available for customers who choose to participate in the initiative but with NO demand response:

Non-Demand Response Offers

Device(s)	Charge / Incentive to Participant
HEI	[redacted]
HEI + IHD	[redacted]

(Note: Definitions: HEI = Home Energy Interface, IHD = In Home Display)

The following is an outline of the options available for residential customers who choose to participate in the initiative WITH demand response:

Demand Response Offers

Device(s)	Charge / Incentive to Participant
HEI + Switch	**Without IHD –** [redacted] **With IHD –** [redacted]
HEI + Thermostat	**Without IHD –** [redacted] **With IHD –** [redacted]
Dashboard	[redacted]

(Note: Definitions: HEI = Home Energy Interface, IHD = In Home Display)

Purpose of the Initiative:

- To build demand response capacity in the residential sector to achieve maximum cost effective peak demand reduction

- To empower residential participants by providing them with price and real-time electricity consumption information and equip them with tools to actively manage their energy use in a TOU environment

- To increase conservation and demand response awareness in the residential sector through improved education on the benefits of peak demand reduction, reduced energy consumption, TOU pricing and energy management tools

- This program has not been redesigned to address the business needs of business customers

OPA – Contracted Province-Wide CDM Program

COMMERCIAL AND INSTITUTIONAL PROGRAM

Initiative Number: 11

Initiative Name: **COMMERCIAL AND INSTITUTIONAL INITIATIVE**

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Commercial, Institutional, and Agricultural Customers

Initiative Description:

The C&I Initiative offers financial incentives to customers for the upgrade of existing equipment to energy efficient equipment. The program also promotes the inclusion of energy efficient measures in new buildings through the New Construction element included with this initiative.

This initiative builds on the success of the current Electricity Retrofit Incentive Program (ERIP) being offered to Commercial, Industrial, Institutional and Agricultural customers. Financial incentive payments of up to $400/kW or $0.05/kWh for lighting measures, $800/kW or $0.10/kWh for all other measures; to maximum of 50% of project costs are available to customers.

The direct install initiative, marketed as Power Savings Blitz (PSB) under this program is offered to small commercial customers with less than 50kW of average monthly demand. This initiative will offer turn-key lighting and electric hot water heater measures with a value up to $1,000 at no cost to qualifying small businesses. Small businesses are also able to take advantage of a turn-key cooling maintenance offering as well as ERIP incentives for measures not covered by the standard direct install initiative.

Background:

The Electricity Retrofit Incentive Program (ERIP), initially developed for the business markets, promoted energy efficiency measures such as lighting, HVAC, high efficiency motors and agri-business measures. The 2011-2014 initiative has been enhanced to include initiative elements such as energy audits and roving Energy Managers in order to increase customer participation.

The PSB program addresses many of the barriers small business owners have, such as lack of conservation knowledge and access to capital. An opportunity exists to assist in a market transformation by advancing the change from T12 to T8 fluorescent lighting.

Initiatives directed medium to large facilities will include design and delivery elements such as account management, and application administration support.

Initiatives directed at smaller facilities, on the other hand, will be based on prescriptive approaches to measures and incentives, typically featuring standardized application forms.

Specific initiative elements include:

Equipment Replacement (ERIP)

The ERIP initiative primarily focuses on equipment replacements. Equipment replacement projects have traditionally been categorized in ERIP as either Prescriptive or Custom. The Prescriptive approach utilizes a list of specific measures for which the incentive is prescribed. The Custom approach requires a more sophisticated, and in some cases complex, process to determine the potential for demand reductions or energy savings.

The Program will continue these two approaches, but will also include an Engineered approach.

- The Engineered approach will provide the customer with potential for additional incentives for the equipment to be installed and will provide a more straight-forward process than the Custom approach, with simplified calculations of energy and demand savings. The incentives available under the Engineered approach are the same as for the Custom approach, but the actual amount would be based on data provided by the customer.

Incentives for Engineered and Custom projects are:

- $400/kW or $0.05/kWh for lighting measures (whichever is higher) to a maximum of 50% of the project costs.

- $800/kW or $0.10/kWh for non-lighting measures (whichever is higher) including lighting controls to a maximum of 50% of the project costs.

Participant incentives for Prescriptive projects are as per the Prescriptive forms/worksheets which specify the dollar amount per unit installed, with no maximum amount payable for the project.

Direct Installed Lighting – Power Savings Blitz (PSB)

The Direct Installed Lighting initiative targets customers in the General Service <50kW account category. Participation for the existing version of this initiative, the Power Savings Blitz, has been very high. In addition to offering eligible customers up to $1,000 in equipment upgrades at no charge, standard prescriptive incentives will now be available for eligible equipment beyond the initial $1,000 limit. There will also be a similar initiative for servicing of space cooling equipment, as described below.

Customers can participate in this initiative one of three ways:

i. Door-to-door approach: An LDC representative, Assessor or Lighting Contractor would visit potential participants and, where the customer is determined to be eligible for the

component, the assessment would proceed directly or be scheduled. This is the approach commonly used for the Power Savings Blitz.

ii. Self-selection approach: Through the new on-line registration system (iCon), by creating a user profile for this Program and choosing to apply for this initiative. Upon submission the application would be forwarded to the LDC that services the customer's business location as determined by postal code. The LDC would instruct a service provider (i.e., an Assessor or Lighting Contractor) to contact the customer to schedule an on-site assessment.

iii. Referral approach: In connection with the Direct Serviced Space Cooling initiative, an LDC representative, Assessor, or HVAC Contractor may identify an opportunity for a customer to participate in the Direct Installed Lighting initiative. Should the customer desire to participate, the customer would proceed as per either the self-selection approach or the door-to-door approach.

Direct Serviced Space Cooling

The Direct Serviced Space Cooling initiative is available to customers with roof-top or ground-mounted air conditioning systems with a capacity of 25 tons or less. The initiative is intended to target the same customer base as the Direct Installed Lighting initiative, although in some cases customers in the General Service >50 kW account category will also be eligible. Basing the eligibility criteria on air conditioner size is intended to simplify the determination of possible participants by HVAC Contractors. This initiative provides for up to [redacted] of services and labour to service the customer's air-conditioning unit(s).

Customers participate in this initiative as per the Direct Installed Lighting initiative.

To be eligible, customers must confirm that they do not have an existing service agreement for the air-conditioning unit and that the unit was not serviced during the previous calendar year.

Existing Building Commissioning

Any customer in the General Service >50 kW or Large User account categories with single buildings/premises greater than 50,000 square feet in size and with chilled water plants will be eligible to participate in the Existing Building Commissioning initiative of the Program. The services that would qualify include (i) the development of a plan for commissioning activities, (ii) the procurement of devices and/or software associated with commissioning activities and (iii) third party services for building commissioning.

A building owner participates in this initiative by hiring a Commissioning Agent, who must provide two references from past projects OR be certified (by the AEE, ASHRAE or BCA).

New Construction – All Buildings and Customer Types

The New Construction initiative of the C&I Program will provide incentives for new buildings to exceed existing codes and standards for energy efficiency. Similar to the Equipment

Replacement initiative, the New Construction initiative utilizes both Prescriptive and Custom approaches.

Participant incentives for Prescriptive projects are as per the Prescriptive forms/worksheets, which specify the kW and KWh assumption per unit installed, and determine the resulting incentive at a rate of $250/ kW. For new multi-family buildings, incentives for appliances are determined on a dollar amount per unit installed. Incentives for Custom will depend on the level of savings achieved, to a maximum of 50% of the project cost. In addition, there are incentives for building modeling to maximum of [redacted] as well as incentives for Design Decision-Makers (e.g. designers, architects and engineers) that were involved in the building design.

Pre-Project Assessments

For this initiative, eligible participants will receive incentives to complete energy audits or studies of potential energy and demand savings from equipment replacement projects, operational practices and procedures, and participation in demand response initiatives. The incentives are intended to cover up to 50% of the cost of the energy audit, based on requirements commensurate with the size and complexity of the buildings. The energy audits must be completed by a professional engineer, a certified engineering technologist, an architect, or a Certified Energy Manager; customers can select their own Energy Auditor meeting these criteria.

Capability Building

The C&I Program will offer CDM market capability building activities for CDM service providers such as training and certification.

Purpose of the Initiative:

The objectives of the Program are to:

- Assist owners and operators of C&I buildings, farms, and multi-family residences achieve reduced demand and energy savings through the purchase and operation of energy efficient equipment.
- Provide education to tenants and occupants, particularly with respect to multi-family buildings, regarding in-suite energy efficiency and demand response opportunities; and
- Facilitate a culture of conservation among these communities and the equipment supply chains that serve them.

OPA – Contracted Province-Wide CDM Program

COMMERCIAL PROGRAM

Initiative Number: 12

Initiative Name: DEMAND RESPONSE 1 - COMMERCIAL

Please note Initiative 12 and Initiative 14 describe the same program but have been outlined separately as the program is offered to multiple sectors

Years(s) of Operation for the Initiative: Jan. 1, 2011 - Dec. 31, 2014

Initiative Frequency: Year Round

Target Customer Type(s): Industrial and Commercial customers of 50 kW or greater with interval meter

Initiative Description:

DR1 is a demand response initiative for industrial and commercial customers, of 50 kW or greater to reduce the amount of power being used during certain periods of the year. This initiative has a schedule of 1600 hours per year where activations of up to 100 hours may occur with no obligation on customers to participate. This initiative makes payments for actual load reduction only. There are no payments or set-offs associated with a participant deciding not to participate, or where a participant has indicated willingness to perform and then not followed through.

The initiative is managed by third party program administrators procured by the OPA or the LDCs. Marketing of the initiative and customer registration may be done by both Demand Response Providers and the LDC. The LDC will be responsible for promotion of the DR1 initiative and for registering customers. LDC's may see registering of DR1 customers as a means for growing potential customers for the DR3 Initiative. Once a potential customer has expressed interest in participation, the LDC will register the customer with the Third Party Initiative Operator by completing a customer form containing the basic information about the customer, the contracted MW amount to which the customer believes has the ability to offer during any one activation, along with a confirmation by the LDC that the customer can provide such demand response capability.

Background:

The DR1 Initiative, a voluntary initiative, was launched in 2007 and grew to a peak capability of 417 MW. Its intent was to encourage participation by providing customer payments for reduction in the use of electricity relative to a baseline, whenever the 3-hour pre-dispatch market price, as published hourly by the IESO, exceeds a Floor Price agreed to by the OPA and initiative participant. The initiative participant was entitled to be paid the strike price for the

MWh reduction for a minimum 3 hour period. With the advent of the DR3 Initiative, the DR1 Initiative underwent a change that sought to set initiative rates that better reflect its voluntary nature relative to the firm commitment required of DR3 Initiative participants. As such, a significant portion of DR1 participants have transitioned to either the DR2 (now discontinued) or DR3 Initiative.

- Development of the DR1 and DR3 Initiatives was done in consultation with industry and through advice obtained from neighbouring markets. The demand response initiatives that will be the focus of the LDC customer base will be DR1 and DR3. While these initiatives were reviewed for potential changes, these initiative designs and potential changes were stakeholdered in April 2010. In addition, an Industrial Program Change Management Committee has been established to manage change to the DR initiatives in an organised and ongoing manner.

Initiative Elements:

The DR1 Initiative is delivered by Demand Response Providers, under contract to the OPA. The OPA administers contracts with all Demand Response Providers and Direct Participants that provide in excess of 5MW of demand response capacity.

- OPA to provide administration including settlement, measurement and verification and dispatch.
- Awareness Education
- Marketing and promotion carried out by LDCs (Demand Response Providers may choose to co-promote with LDC's)
- Direct Selling and Promotional Materials to improve awareness

Purpose of the Initiative:

The objective of the DR1 Industrial Initiative is to achieve maximum cost effective peak demand reduction and energy savings, increase conservation awareness and contribute to the creation of a culture of conservation in Ontario.

OPA – Contracted Province-Wide CDM Program

COMMERCIAL PROGRAM

Initiative Number: 13

Initiative Name: **DEMAND RESPONSE 3 - COMMERCIAL**

Please note Initiative 13 and Initiative 15 describe the same program but have been outlined separately as the program is offered to multiple sectors

Years(s) of Operation for the Initiative: Jan. 1, 2011 and Dec. 31, 2014

Initiative Frequency: Year Round

Target Customer Type(s): Industrial and Commercial customers with a peak demand greater than 50 kW

Initiative Description

The DR3 initiative is open to commercial and industrial customers with a peak demand greater than 50 kW. In comparison to the DR1, which is a voluntary initiative, the DR3 initiative is a contractual resource that provides significant financial benefits for participants, reliability and operational benefits for the electricity system, and financial benefits for all electricity customers as it is an economic alternative to procurement of new generation capacity.

The DR3 Initiative comes with specific contractual obligations requiring commercial and industrial participants to reduce their use of electricity relative to a baseline when called upon. This initiative makes payments for participants to be on standby and energy payments for the actual energy reduction provided during a demand response event. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year.

The initiative is delivered by Demand Response Providers, under contract to the OPA or the LDCs. The LDCs will provide important marketing and customer outreach support in a collaborative approach with Demand Response Providers.

Background

The DR3 Initiative, introduced to Ontario in 2008, has produced a significant level of interest among both industrial and commercial loads. The initiative is delivered to market primarily through OPA contracts with Demand Response Providers. These providers, also known as "Aggregators", aggregate multiple customers willing to provide demand response. The initiative requires participants to make a firm commitment to provide demand response capability upon demand. Large participants who can provide greater than 5 MW of demand response capability have the option to contract directly with the OPA. Participants are asked to place themselves on

standby 1,600 hours per year, of which they may be required to provide demand response for up to 100 or 200 hours each year. Each demand response call is for a four hour period. While this initiative continues to grow, it remains flexible to change, in order to accommodate learning's from the market.

Initiative Elements

Initiative is delivered by Demand Response Providers, under contract to the OPA. The OPA administers contracts with all Demand Response Providers and Direct Participants that provide in excess of 5 MW of demand response capacity.

- Marketing and promotional activities carried out by LDCs.
- OPA to provide administration including procurement operational services such as settlement, measurement and verification and dispatch.
- Direct Participants and Demand Response Providers receive a standby notice. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year.
- Large participants who can provide greater than 5 MW of demand response capability have the option to contract directly with the OPA.
- Participant to confirm within one hour when it is anticipated that they will under perform compared to their contractual commitment.
- Participants must register a measurement and verification plan as part of their initial application for a contract and with every subsequent update to the overall project.

Purpose of the Initiative

The purpose of the DR3 initiative is to provide significant financial benefits for participants, reliability and operational benefits for the electricity system and financial benefits for all electricity customers. Emphasis is to achieve maximum cost effective peak demand reduction and energy savings, increase conservation awareness and contribute to the creation of a culture of conservation in Ontario.

OPA – Contracted Province-Wide CDM Program

INDUSTRIAL PROGRAM

Initiative Number: 14

Initiative Name: **DEMAND RESPONSE 1 - INDUSTRIAL**

Please note Initiative 12 and Initiative 14 describe the same program but have been outlined separately as the program is offered to multiple sectors

Years(s) of Operation for the Initiative: Jan. 1, 2011 and Dec. 31, 2014

Initiative Frequency: Year Round

Target Customer Type(s): Industrial and Commercial customers of 50 kW or greater with interval meter

Initiative Description:

DR1 is a demand response initiative for industrial and commercial customers, of 50 kW or greater to reduce the amount of power being used during certain periods of the year. This initiative has a schedule of 1600 hours per year where activations of up to 100 hours may occur with no obligation on customers to participate. This initiative makes payments for actual load reduction only. There are no payments or set-offs associated with a participant deciding not to participate, or where a participant has indicated willingness to perform and then not followed through.

The initiative is managed by third party program administrators procured by the OPA or the LDCs. Marketing of the initiative and customer registration may be done by both Demand Response Providers and the LDC. The LDC will be responsible for promotion of the DR1 initiative and for registering customers. LDC's may see registering of DR1 customers as a means for growing potential customers for the DR3 Initiative. Once a potential customer has expressed interest in participation, the LDC will register the customer with the Third Party Initiative Operator by completing a customer form containing the basic information about the customer, the contracted MW amount to which the customer believes has the ability to offer during any one activation, along with a confirmation by the LDC that the customer can provide such demand response capability.

Background:

The DR1 Initiative, a voluntary initiative, was launched in 2007 and grew to a peak capability of 417 MW. It's intent was to encourage participation by providing customer payments for reduction in the use of electricity relative to a baseline, whenever the

3-hour pre-dispatch market price, as published hourly by the IESO, exceeds a Floor Price agreed to by the OPA and initiative participant. The initiative participant was entitled to be paid the strike price for the MWh reduction for a minimum 3 hour period. With the advent of the DR3 Initiative, the DR1 Initiative underwent a change that sought to set initiative rates that better reflect its voluntary nature relative to the firm commitment required of DR3 Initiative participants. As such, a significant portion of DR1 participants have transitioned to either the DR2 (now discontinued) or DR3 Initiative.

- Development of the DR1 and DR3 Initiatives was done in consultation with industry and through advice obtained from neighbouring markets. The demand response initiatives that will be the focus of the LDC customer base will be DR1 and DR3. While these initiatives were reviewed for potential changes, these initiative designs and potential changes were stakeholdered in April 2010. This Business Case addresses all of the issues raised. In addition, an Industrial Program Change Management Committee has been established to manage change to the DR initiatives in an organised and ongoing manner.

Initiative Elements:

The DR1 Initiative is delivered by Demand Response Providers, under contract to the OPA. The OPA administers contracts with all Demand Response Providers and Direct Participants that provide in excess of 5MW of demand response capacity.

- OPA to provide administration including settlement, measurement and verification and dispatch.
- Awareness Education
- Marketing and promotion carried out by LDCs (Demand Response Providers may choose to co-promote with LDC's)
- Direct Selling and Promotional Materials to improve awareness

Purpose of the Initiative:

The objective of the DR1 Industrial Initiative is to achieve maximum cost effective peak demand reduction and energy savings, increase conservation awareness and contribute to the creation of a culture of conservation in Ontario.

OPA – Contracted Province-Wide CDM Program

INDUSTRIAL PROGRAM

Initiative Number: 15

Initiative Name: DEMAND RESPONSE 3 - INDUSTRIAL

Please note Initiative 13 and Initiative 15 describe the same program but have been outlined separately as the program is offered to multiple sectors

Years(s) of Operation for the Initiative: Jan. 1, 2011 and Dec. 31, 2014

Initiative Frequency: Year Round

Target Customer Type(s): Industrial and Commercial customers with a peak demand greater than 50 kW.

Initiative Description

The DR3 initiative is open to commercial and industrial customers with a peak demand greater than 50 kW. In comparison to the DR1, which is a voluntary initiative, the DR3 initiative is a contractual resource that provides significant financial benefits for participants, reliability and operational benefits for the electricity system, and financial benefits for all electricity customers as it is an economic alternative to procurement of new generation capacity.

The DR3 Initiative comes with specific contractual obligations requiring commercial and industrial participants to reduce their use of electricity relative to a baseline when called upon. This initiative makes payments for participants to be on standby and energy payments for the actual energy reduction provided during a demand response event. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year.

The initiative is delivered by Demand Response Providers, under contract to the OPA or the LDCs. The LDCs will provide important marketing and customer outreach support in a collaborative approach with Demand Response Providers.

Background

The DR3 Initiative, introduced to Ontario in 2008, has produced a significant level of interest among both industrial and commercial loads. The initiative is delivered to market primarily through OPA contracts with Demand Response Providers. These providers, also known as "Aggregators", aggregate multiple customers willing to provide demand response. The initiative requires participants to make a firm commitment to provide demand response capability upon demand. Large participants who can provide greater than 5 MW of demand response capability have the option to contract directly with the OPA. Participants are asked to place themselves on

standby 1,600 hours per year, of which they may be required to provide demand response for up to 100 or 200 hours each year. Each demand response call is for a four hour period. While this initiative continues to grow, it remains flexible to change, in order to accommodate learning's from the market.

Initiative Elements

Initiative is delivered by Demand Response Providers, under contract to the OPA. The OPA administers contracts with all Demand Response Providers and Direct Participants that provide in excess of 5 MW of demand response capacity.

- Marketing and promotional activities carried out by LDCs.
- OPA to provide administration including procurement operational services such as settlement, measurement and verification and dispatch.
- Direct Participants and Demand Response Providers receive a standby notice. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year.
- Large participants who can provide greater than 5 MW of demand response capability have the option to contract directly with the OPA.
- Participant to confirm within one hour when it is anticipated that they will under perform compared to their contractual commitment.
- Participants must register a measurement and verification plan as part of their initial application for a contract and with every subsequent update to the overall project.

Purpose of the Initiative

The purpose of the DR3 initiative is to provide significant financial benefits for participants, reliability and operational benefits for the electricity system and financial benefits for all electricity customers. Emphasis is to achieve maximum cost effective peak demand reduction and energy savings, increase conservation awareness and contribute to the creation of a culture of conservation in Ontario.

OPA – Contracted Province-Wide CDM Program

INDUSTRIAL PROGRAM

Initiative Number: 16

Initiative Name: **THE INDUSTRIAL ACCELERATOR**

Years(s) of Operation for the Initiative: Jan. 1, 2011 and Dec. 31, 2014

Initiative Frequency: Year Round

Target Customer Type(s): Industrial Customers

Initiative Description

The Industrial Accelerator Initiative is an energy management initiative that includes both financial incentives for capital projects and enabling initiatives. It is open to industrial companies that are customers of an Ontario electric LDC and are not insolvent.

This initiative offers industrial customers the opportunity to access capital incentives to assist with the implementation of system optimization projects. The incentives are available through the LDC. The initiative is open to distribution connected industrial and commercial customers with projects or portfolio projects that are expected to generate at least 350 MWh of annualized electricity savings or, in the case of Micro-Projects, 100 MWh of annualized electricity savings.

The capital incentive for this initiative is up to $200/MWh for eligible costs with a

cap of 70% of projects costs or a one year pay back. This level is based on an

analysis of typical capital costs for large system optimizations and the propensity for industry to pursue projects with a one year simple payback.

This initiative will be delivered by the LDCs with technical support provided by a centrally procured technical resource.

Background

- Ontario has not had a fully functioning energy management initiative for industrial customers, other than the ability to receive incentives for high efficiency motors and efficiency lighting under the ERIP Initiative. To build on this gap and address the needs of the larger industrial businesses, the Industrial Accelerator Initiative, will be delivered by the OPA to large transmission connected industrial loads. To support this initiative, the OPA has hired a number of account managers to proactively pursue energy management opportunities within the industrial segment. Development of long term relationships with industrial customers is considered necessary to ensure a sustainable momentum in moving projects forward considering

the long timelines normally associated with project approvals, not to mention that energy efficiency initiatives must compete against production related initiatives for capital dollars.

Initiative Elements:

- This initiative is up to $200/MWh for eligible costs with a cap of 70% of projects costs or a one year pay back.
- Funding for Pre-Feasibility and Feasibility Studies
- Funding for Energy Managers (Industrial Employed Energy Managers and Roving Energy Managers)
- Funding for Monitoring & Targeting systems
- Meter lending library
- End Use Training
- Energy Manager Training
- Employee Awareness & Senior Management Leadership
- LDC Key Account Managers

Purpose of the Initiative

1. Implementing system optimization projects in systems which are intrinsically complex and capital intensive
2. Increasing the capability of companies to implement energy management and system optimization projects
3. Increasing the capability of technical, financial and other consultants and the supply chain to deliver energy efficiency and energy management services in Ontario

OPA – Contracted Province-Wide CDM Program

INDUSTRIAL PROGRAM

Initiative Number: 17

Initiative Name: ELECTRICITY RETROFIT INCENTIVE PROGRAM – INDUSTRIAL ERIP

Years(s) of Operation for the Initiative: Jan. 1, 2011 and Dec. 31, 2014

Initiative Frequency: Year Round

Target Customer Type(s): Industrial,

Initiative Description:

The industrial initiative is designed to offer financial incentives to customers for upgrades of existing equipment to energy efficient equipment. The program also promotes the inclusion of energy efficient measures in new buildings through the New Construction element included with this initiative.

The equipment replacement initiative (ERIP) is offered to industrial facilities, however, given the Industrial Accelerator (IA) program is best suited to evaluate complex industrial energy efficiency applications, industrial projects with an annual savings exceeding 100MWh per year must apply to the Industrial Accelerator Program. ERIP custom applications that exceed the 100MWh limit, will be referred to the IA program, unless approval is received from the LDC to proceed under ERIP.

Background:

The Electricity Retrofit Incentive Program (ERIP), initially developed for the business markets, contained energy efficiency measures for lighting and high efficiency motors. The initiative has been enhanced to include initiative elements such as feasibility studies and roving Energy Managers to maximize energy savings potential.

Initiative Elements:

Initiatives directed medium to large facilities will include design and delivery elements such as account management, and application administration support.

Initiatives directed at smaller facilities, on the other hand, will be based on prescriptive approaches to measures and incentives, typically featuring standardized application forms.

Equipment Replacement (ERIP)

The ERIP initiative primarily focuses on equipment replacement. Equipment replacement projects have traditionally been categorized in ERIP and other similar programs as either Prescriptive or Custom. The Prescriptive approach utilizes a list of specific measures for which the incentive is prescribed. The Custom approach requires a more sophisticated, and in some cases complex, process to determine the potential for demand reductions or energy savings. The Program will continue these two approaches, but will also include an Engineered approach.

- The Engineered approach will provide the customer with potential for additional incentives for the equipment to be installed and will provide a more straight-forward process than the Custom approach, with simplified calculations of energy and demand savings. The incentives available under the Engineered approach are the same as for the Custom approach, but the actual amount would be based on data provided by the customer.

Incentives for Engineered and Custom projects are:

- $400/kW or $0.05/kWh for lighting measures (whichever is higher) to a maximum of 50% of the project costs.

- $800/kW or $0.10/kWh for non-lighting measures (whichever is higher) including lighting controls to a maximum of 50% of the project costs.

Participant incentives for Prescriptive projects are as per the Prescriptive forms/worksheets which specify the dollar amount per unit installed, with no maximum amount payable for the project.

New Construction – All Buildings and Customer Types

The New Construction initiative of the Industrial Program will provide incentives for new buildings to exceed existing codes and standards for energy efficiency. Similar to the Equipment Replacement initiative, the New Construction initiative utilizes both Prescriptive and Custom approaches.

Participant incentives for Prescriptive projects are as per the Prescriptive forms/worksheets, which specify the kW and KWh assumption per unit installed, and determine the resulting incentive at a rate of $250/ kW. Incentives for Custom will depend on the level of savings achieved, to a maximum of [redacted] of the project cost. In addition, there are incentives for building modeling to maximum of $[redacted] as well as incentives for Design Decision-Makers (e.g. designers, architects and engineers) that were involved in the building design.

A building owner participates in this initiative by hiring a Commissioning Agent, who must provide two references from past projects OR be certified (by the AEE, ASHRAE or BCA).

Capability Building

The C&I Program will offer CDM market capability building activities for CDM service providers such as training and certification.

HYDRO ONE BRAMPTON PROPOSED BOARD-APPROVED CDM PROGRAMS

Residential Programs

1. Community Education Initiative
2. Neighborhood Benchmarking

Commercial and Industrial Programs

3. Monitoring and Targeting Initiative
4. Small Commercial Energy Management and Load Control Initiative
5. Municipal – Hospital Efficiency Performance
6. Double Return Plus Initiative

Board-Approved CDM Programs

RESIDENTIAL PROGRAM

Initiative Number: 1

Initiative Name: Community Education Initiative

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year Round Initiative

Target Customer Type(s): Residential Customers

1. Initiative Description

This initiative focuses on customer education and promotes the exchange of information between Hydro One Brampton and its consumers at local community events.

Hydro One Brampton projects attendance at these local community events to reach approximately 20,000 people per year for the duration of the initiative. The delivery of the initiative will rely on a community events partner to help represent Hydro One Brampton and its conservation programs at such events with personnel, displays and promotional collateral.

2. Non Duplicative Features of the Initiative

The OPA Contracted programs do not provide an initiative similar to the Community Education Program. This program focuses on customer education and promotes the exchange of information between the electricity distributor and its customers at local community events. This program relies on a face-to-face interaction with the customer which has proven to be successful in changing social norms and influencing customer behaviour for Hydro One Brampton customers.

3. Background

Hydro One Brampton is committed to promoting a culture of conservation in Ontario. It plays an active role as "Leaders in the Community" and participates in a variety of annual community events, which provide the Company the opportunity to educate residential customers on the importance of conservation and provide them with the tools they need to help them save energy.

Hydro One Brampton serves over 133,000 customers, 123,975 of which are residential customers. Promoting a culture of conservation to Hydro One Brampton's customers using typical mass marketing techniques can be expensive and not have the desired uptake. By attending local community events, Hydro One Brampton gets an opportunity to engage in "face-to-face" discussions. These discussions allow the Company to educate its consumers on the topic of conservation and promote its CDM programs. Previous experience has proven this

approach to be an effective way to promote conservation and reach a deeper level of discussion with Hydro One Brampton's customers (beyond the bill insert). Face-to-face engagement allows the Company to educate consumers, answer questions, remove barriers and drive participation for other CDM programs.

4. Initiative Elements

Initiative elements are:

- Plan to participate in up to 8 – 12 community events each year across Brampton
- Educate consumers on the topic of conservation using various techniques (including brochures, banners, promotional items, etc.)
- Actively promote and market Hydro One Brampton's conservation programs
- Distribute energy efficient products which will encourage customers to "get started" with low cost no cost measures (eg. Compact fluorescent lamp giveaways, power bars, etc.)
- Distribute conservation literature and tips on ways to save energy and save money
- Incorporate Time-of-Use messages and promote conservation actions that will help customers better manage their energy bill

5. Purpose of the Initiative

- Customer education (on both Conservation and Time-of-Use)
- Build strong customer relationships that promote conservation culture
- Deliver face-to-face conservation messages
- Drive participation for all Conservation Programs
- Remove barriers which have prevented customers from participating in conservation programs in the past
- Influence social norms in local communities – social change strategy to promote a culture of conservation
- Distribute low cost energy efficient measures which provide energy savings results

6. Projected reduction in Peak Electricity Demand (MW)

Hydro One Brampton has used the OPA's Measures and Assumptions Lists to calculate the peak demand reduction for the 2011 to 2014 period. Coincident peak demand reduction by the end of 2014 is projected to be 20kW.

Total Peak Reduction (MW) 2011-2014					
	2011	2012	2013	2014	Total Coincident Peak Demand Reduction by the end of 2014 (MW)
Community Education Initiative (MW)	0.004	0.009	0.015	0.02	0.02

7. Projected Reduction in Electricity Consumption (MWh):

Hydro One Brampton has used the OPA's Measures and Assumptions Lists to calculate the energy consumption reduction for the 2011 to 2014 period. Projected energy consumption reduction by 2014 is projected to be 760MWh

Total Energy Reduction (MWh) 2011-2014					
	2011	2012	2013	2014	Total Energy Reduction Cumulative (2011-2014)
Community Education Initiative (kW)	116	271	426	581	1,394

8. Projected Budget

The total projected budget for the four year initiative is $176,880 inclusive of $[redacted] in energy efficient giveaways.

Community Education Initiative - Budget ($) 2011-2014*					
	2011	2012	2013	2014	Total 2011-2014
Marginal costs					
Fixed costs					
Event Planning and Administration	$ [redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Post-Event Reporting (Events Evaluation)	$ [redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Fixed costs	$ [redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Allocable costs					
Fixed Costs					
Overhead	$ [redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Fixed Costs	$ [redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Program Costs	$ [redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Incentives (promotional giveaways)	$ [redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Budget**	**$ 44,220**	**$ 44,220**	**$ 44,220**	**$ 44,220**	**$ 176,880**

9. Cost-Effectiveness Tests Results

- TRC: 1.9
- PAC: 1.1

10. Draft Evaluation plan

Hydro One Brampton will ensure that the Community Events initiative will be evaluated in accordance with the OPA's EM&V Protocol guidelines. A Draft Evaluation Plan is attached. The initiative Final Evaluation plan will be prepared by an independent third party. The selection of the evaluation criteria and detailed elements of the Evaluation Plan will be determined by the independent third party. Measurement and verification of initiative peak demand savings (kW) and electricity savings (kWh) results will be conducted by a third party review contractor selected through an RFP process from the OPA's "Third Party Vendor of Record" list once the initiative is approved.

The following is a DRAFT EVALUATION PLAN TEMPLATE:

COMMUNITY EVENTS INITIATIVE

OPA DRAFT EVALUATION PLAN TEMPLATE

Program Description	**Description (see section 1 & 4)** **Key Program Elements (see section 4)** **Goals and Objectives (see section 2 & 5)** **Program Theory (see section 3)** **Program Timing** Program Launch Date: January 1st, 2011 All program elements are expected to be deliverable commencing immediately after the program launch date. Program end date: December 31, 2014 **Estimated Participation and Results (see sections 6, 7 & 9)** **Draft Budget (see Section 8)**
Conservation Measures	**Equipment based Measures:** Assumptions for measures considered eligible under the initiative that are included in the OPA's Measures and Assumptions List.
Evaluation Goals and Objectives	**Evaluation Goals and Objectives** • i) Process Design Effectiveness • ii) Program Administration Effectiveness • iii) Measures and Assumptions Review • iv) Establish gross and net energy savings and demand reductions achieved

	• v) Estimate Program Cost Effectiveness • vi) Special Provisions
Evaluation Deliverables	**Evaluation Deliverables** • Final Program Evaluation Plan • Annual Report – elements • Final Report
Evaluation Description	The elements of the Evaluation Goals and Objectives are anticipated to include (but are not limited to) those listed in the corresponding sections below. It is expected that these elements will be reviewed, discussed, evaluated or analyzed as appropriate and according to the OPA's EM&V Protocols to ensure that they meet the Program Evaluation Goals and Objectives during the **Draft Evaluation Plan development phase**. Review of these elements will assist Hydro One Brampton in determining and/or validating the appropriateness of the program design, administration and measures assumption elements and whether adjustments are necessary in order to successfully deliver the Initiative and to achieve the anticipated Goals and Objectives and estimated participation and results.
Evaluation Elements	**i) Program Process Design Effectiveness - Evaluation criteria:** • Goals of program • Staffing and training • Program timing and timelines • Use of new procedures and best practices • Eligibility and participants – original assumptions vs. actual • Events implementation – results of program participation from event • Incentives and motivation for participation • Customer satisfaction feedback – participant satisfaction • Non participant feedback • Monitoring and tracking procedures • Roles and responsibilities of team members and stakeholders • Reporting procedures **ii) Program Administration Effectiveness - Evaluation Criteria:** • Program statistics – including participants, calculations of energy and demand reductions etc. • Program Impact Evaluation • Market Effects Assessment • Pre and post Project Analysis Assessment • Marketing Effectiveness Assessment

	• Expense Reporting • Market Participant review **iii) Measures and Performance Assumptions Review:** • Prescriptive Measures Assumptions Review • Custom Measures Assumptions Review • Behavioural and Performance Assumptions Review **iv) Gross and Net Energy Savings and Demand Reductions Achieved: **To be performed by a 3rd party based on the OPA's EM&V protocols** • Measurement and verification of program energy and demand savings achieved • Net to Gross ratio (including free rider rate) • Audit and Verification of project completion **v) Program Cost Effectiveness:** • Verification of program expenditures • Verification of program funding and payments • Cost benefit Analysis – funding vs. program performance
Special Provisions	**Special Provisions:** N/A
Data Collection Responsibilities to Support Program Evaluation	**This area is still under development and will be completed with the assistance of a third party EM&V expert to ensure complete and appropriate collection of data to support Program evaluation.** • **List of Planned Events (Dates, Locations, Contacts, Nature of Event, Anticipated Attendance)** • **List of Completed Events (Dates, Locations, Contacts, Nature of Event & Actual Attendance Numbers)** • **List of Planned Giveaways (Descriptions & Anticipated Numbers)** • **List of Actual Giveaways Distributed (Descriptions & Final Numbers)**

Evaluation Schedule & Budget

Evaluation Deliverable	Budget	Date
Draft Evaluation Plan	TBD	TBD
Final Evaluation Plan	TBD	TBD
Verification of Projects	TBD	TBD
Verification of Energy Reductions	TBD	TBD
Verification of Program Costs	TBD	TBD
Draft Final Evaluation Report	TBD	TBD
Final Evaluation Report	TBD	TBD
Total Evaluation Budget	TBD	

Evaluation Team

Organization	Name	Title/Accountability
Hydro One Brampton	TBD	Program Manager
Hydro One Brampton	TBD	Energy Services Supervisor
3rd Party (Final Evaluation Plan Development)	TBD	TBD
3rd Party Measurement and verification Contractor (selected from OPA "Third Party Vendor of Record" list	TBD	TBD

Board-Approved CDM Program

RESIDENTIAL PROGRAM

Initiative Number: 2

Initiative Name: Neighbourhood Benchmarking

Year(s) of Operation for the Initiative: 2011 to 2014

Initiative Frequency: Year round

Target Customer Type(s): Residential

1. Initiative Description:

Customers will receive a paper-based "Home Energy Report" that offers insights about their individual energy use as well as a comparison with their neighbourhood energy use. Hydro One Brampton plans to distribute 25,000 reports to targeted Residential customers, who will receive a paper-based report as well as password protected, web-access to the data.

2. Non Duplicative Features of the Initiative

Neighbourhood Benchmarking is non-duplicative from all OPA Contracted Initiatives as it is the only program that addresses behavioural changes based on peer comparison and influence. This program provides customers with a customized Home Energy Report that offers insights about their individual energy use as well as a comparison with their neighbourhood energy use.

Neighbourhood Benchmarking has been proven successful in other jurisdictions, where pilots/programs have show that significant savings can be achieved by benchmarking household energy usage and comparing it to the neighbours (ie. peer group with similar attributes).

3. Background

This program is centred on a paper-based "Home Energy Report" which is mailed to consumers that offers insights about their individual energy use and offers a comparison with their neighbourhood energy use. The neighbourhood comparison data helps consumers understand "how they are doing" in comparison to their neighbours. The information motivates them to take action and reduce their household energy use.

The information shown on the report is customized to meet the needs of each individual household. In each case, customer load profile data collected from the smart meter will be used to help identify the areas of opportunity (i.e. to improve energy efficiency and promote conservation). The "Home Energy Report" will translate the individual energy usage patterns into meaningful insights coupled with targeted action steps. The report will offer energy recommendations that are specifically tailored to meet the needs of the customer.

This Initiative is organized around two concepts – motivating behaviour change and providing relevant, targeted information to the consumer. The Initiative is based on proven behavioural science which indicates that an effective way to motivate people is to provide peer context for their energy use. This is accomplished by dynamically creating a 100 home comparison group for each home that only compares homes with similar characteristics (square footage, heating type, billing cycle, geographic proximity, etc.). This behavioural science driven model has proven results with over 20 U.S. utilities which indicate that people will take action to conserve energy when they are made aware of how their energy usage pattern compares with their neighbours (or peers). It is important to note that this Initiative is based on a similar social marketing concept which contributed to the success of our provincial recycling Initiative, ie. Blue Box Program.

The software platform required to support this Initiative will incorporate these behavioural science techniques along with detailed statistical analysis and intelligent customer segmentation modeling. The results of the Home Energy Reporting system will be measured using a simple test and control group methodology. By using test and control groups, Hydro One Brampton will be able to isolate and cleanly evaluate the impact of the program. This test and control methodology has already been endorsed in the California Evaluators Protocols and the guidelines for the National Action Plan for Energy Efficiency, which was jointly produced by the US Department of Energy and the Environmental Protection Agency.

Hydro One Brampton plans to distribute the "Home Energy Reports" to 25,000 customers who will also be provided web access to their data. This same number of customers will be represented in both the "test" and "control" groups. This represents a conservative implementation approach which will allow Hydro One Brampton to monitor and manage customer feedback and mitigate any potential risks associated with a new program.

4. Initiative Elements

The key initiative elements are:

A *Home Energy Report* (paper-based report card) is mailed to customers on a regular basis throughout the year (typically several days after bill mailing)

The mailing schedule is pre-determined and intended to serve as reminders to help influence behaviour change

The information provided to the customer in the report card includes:

Comparison of current, individual usage to approximately 100 closest "neighbours" or "peers"

Comparison of current individual usage to the top 20% most "efficient neighbours"

Comparison of historical usage pattern (last 12 months) to historical "neighbourhood" usage

Comparison of current individual usage to historical usage, i.e. "same time last year"

Helpful information regarding "typical household energy use" broken down into categories – heating (or cooling), water heating, other appliances and electronics

Recommendations and promotion of LDC conservation programs

The specific, personalized insights provided allow customers to make informed decisions regarding their energy use and prompts them to take action and conserve energy

The software platform delivers messages to the customer using three communication channels:

Comparative Home Energy Reports – mailed to customers several times a year, simple to understand, designed to reach and engage customers

Consumer Energy Web Portal – available to those customers who are receiving the Home Energy Report Card. Customers will receive password protected access to web-based info which allows them to learn more about their energy use, share best practises and gain insight into efficiency tips

Call Centre Support – provided by Hydro One Brampton staff

5. Purpose of the Initiative

The objective is to provide customers with peer group information. This information is intended to motivate them to take action, conserve energy and encourage new behaviours. The initiative has both a measurable energy efficiency component as well as a customer education component.

At a higher level, the purpose of this initiative is to:

- achieve measurable energy conservation results (kW & kWh savings)
- support market transformation by encouraging behaviour change
- educate residential customers about the benefits conservation and provide helpful household hints
- promote participation in provincial conservation programs

6. Projected Reduction in Peak Electricity Demand (MW):

Hydro One Brampton projects the **coincident peak demand reduction by the end of 2014** to be 0.95 MW.

Total Peak Reduction (MW) 2011-2014					
	2011	2012	2013	2014	Total Coincident Peak Demand Reduction by the end of 2014 (MW)
Neighbourhood benchmarking (MW)	0.295	0.95	0.95	0.95	0.95

7.Projected Reduction in Electricity Consumption (MWh)

Projected energy consumption reduction by 2014 is projected to be 30,407 MWh

Total Energy Reduction (MWh) 2011-2014					
	2011	2012	2013	2014	Total Energy Reduction Cumulative (2011-2014)
Neighbourhood benchmarking (MWh)	3,041	9,122	9,122	9,122	30,407

8. Projected Budget

The estimated total initiative cost is approximately $ 1.5 million, which includes administrative costs, marketing costs, and behind the meter services.

Neighbourhood Benchmarking - Budget ($) 2011-2014*

	2011	2012	2013	2014	Total 2011-2014
Marginal costs					
Fixed costs					
Administrative costs	$				
Setup and data management	$				
Home emergy reports and Web	$				
Advanced Features	$				
Data Transfers	$				
EM&V	$				
Total Fixed costs	$				
Allocable costs					
Fixed Costs					
Overhead	$				
Total Fixed Costs	$				
Total Program Costs	$				
Incentives	$ -	$ -	$ -	$ -	$ -
Total Budget	$ 439,829	$ 370,253	$ 370,253	$ 370,328	$ 1,550,664

* Consistent to the third- party delivery model of this staged initiative, all program costs are fixed

9. Cost Effectiveness Tests Results:

- TRC: 1.2
- PAC: 1.2

10. Draft Evaluation Plan:

Hydro One Brampton will ensure that the Neighbourhood Benchmarking initiative will be evaluated in accordance with the OPA's EM&V Protocol guidelines . A Draft Evaluation Plan is attached. The initiative Final Evaluation Plan will be prepared by an independent third party. The selection of the evaluation criteria and detailed elements of the Evaluation Plan will be determined by the independent third party. Measurement and verification of initiative peak demand savings (kW) and electricity savings (kWh) results will be conducted by a third party review contractor selected through an RFP process from the OPA's "Third Party Vendor of Record" list once the initiative is approved.

The following is a DRAFT EVALUATION PLAN TEMPLATE:

NEIGHBOURHOOD BENCHMARKING INITIATIVE

OPA DRAFT EVALUATION PLAN TEMPLATE

Program Description	**Description (see section 1)** **Key Program Elements (see section 4)** **Goals and Objectives (see sections 5, 6 and 7)** **Program Theory (see section 3)** **Program Timing** Program Launch Date: July 1, 2011 All program elements are expected to be deliverable commencing immediately after the program launch date. Program end date: December 31, 2014 **Estimated Participation and Results (see sections 4, 6, 7 & 9)** **Draft Budget (see Section 8)**
Conservation Measures	*Equipment based Measures:* N/A *Non Equipment based Measures may include:* • Behavioural Change.
Evaluation Goals and Objectives	**Evaluation Goals and Objectives** • i) Process Design Effectiveness • ii) Program Administration Effectiveness • iii) Establish gross and net energy savings and demand reductions achieved

	• iv) Estimate Program Cost Effectiveness • v) Special Provisions
Evaluation Deliverables	**Evaluation Deliverables** • Final Program Evaluation Plan • Annual Report – elements • Final Report
Evaluation Description	The evaluation elements of the Evaluation Goals and Objectives are anticipated to include (but are not limited to) those listed in the corresponding sections below. It is expected that these elements will be reviewed, discussed, evaluated or analyzed as appropriate and according to the OPA's EM&V Protocols to ensure that they meet the Program Evaluation Goals and Objectives during the **Draft Evaluation Plan development phase**. Review of these elements will assist Hydro One Brampton in determining and/or validating the appropriateness of the program design, administration and measures assumption elements and whether adjustments are necessary in order to successfully deliver the Initiative and to achieve the anticipated Goals and Objectives and estimated participation and results.

Evaluation Elements	**i) Program Process Design Effectiveness - Evaluation criteria:** • Goals of program • Program timing and timelines • Use of new procedures and best practices • original assumptions vs. actual • Customer satisfaction feedback – participant satisfaction • Non participant feedback • Monitoring and tracking procedures • Roles and responsibilities of team members and stakeholders • Reporting procedures **ii) Program Administration Effectiveness - Evaluation Criteria:** • Program statistics – including participants, calculations of energy and demand reductions etc. • Marketing Effectiveness Assessment • Budget versus Actual Reporting

	• Market Participant review **iii) Measures and Performance Assumptions Review:** • Behavioural and Performance Assumptions Review **iv) Gross and Net Energy Savings and Demand Reductions Achieved:** ****To be performed by a 3rd party based on the OPA's EM&V protocols** • Measurement and verification of program energy and demand savings achieved • Net to Gross ratio (including free rider rate) • Audit and Verification as required by Code **v) Program Cost Effectiveness:** • Verification of program expenditures versus budget
Special Provisions	**Special Provisions:** N/A

Data Collection Responsibilities to Support Program Evaluation

This area is still under development and will be completed with the assistance of a third party EM&V expert to ensure complete and appropriate collection of data to support Program evaluation.
Data collection on the following elements may be included:

- **Historical energy data related to TEST GROUP & CONTROL GROUP (to support Baseline)**
- **Total Number of Reports Sent to Customer**
- **Total Number of Recommended Measures**
- **Measured Impacts on Demand & Energy Consumption**

Evaluation Schedule & Budget

Evaluation Deliverable	Budget	Date
Draft Evaluation Plan	TBD	TBD
Final Evaluation Plan	TBD	TBD
Verification of Projects	TBD	TBD
Verification of Energy Reductions	TBD	TBD
Verification of Program Costs	TBD	TBD
Draft Final Evaluation Report	TBD	TBD
Final Evaluation Report	TBD	TBD
Total Evaluation Budget	TBD	

Evaluation Team

Organization	Name	Title/Accountability
Hydro One Brampton	TBD	Program Manager
Hydro One Brampton	TBD	Energy Services Supervisor
3rd Party (Final Evaluation Plan Development)	TBD	TBD
3rd Party Measurement and verification Contractor (selected from OPA "Third Party Vendor of Record" list	TBD	TBD

Board-Approved CDM Program

COMMERCIAL PROGRAM

Initiative Number: 3

Initiative Name: Mid and Large Commercial and Industrial Monitoring and Targeting Initiative

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): Medium and large commercial businesses with average demand above 200 kW; industrial customers with average demand over 200 kW and annual energy consumption of up to 15 GWh

1. Initiative Description

The proposed Monitoring & Targeting (M&T) initiative is offered to industrial customers with annual energy consumption of up to 15GWh and to commercial businesses with average demand above 200kW. Potential participants will be offered financial incentive to install a monitoring and targeting system that assesses the energy use against key performance indicators such as productivity. M&T will assist these customers to better understand their energy performance. It will also give the participants an opportunity to benchmark their consumption against best practices by other similar businesses. The initiative is intended to enable customers to achieve sustainable behavioural and continuous improvements. The initiative will be offered between 2011 and 2014.

This initiative offers financial incentives toward an M&T system up to a maximum of [redacted] per M&T installation as well as performance incentives up to [redacted] MWh for achieved energy savings. In addition, the participants will receive a full range of behind-the-meter services to assist customers to implement energy efficiency improvements.

The initiative delivery will be carried out by various third party vendors, although Hydro One Brampton will be the primary point of contact for participants and interested customers. M&T system providers as well as energy managers will also play a key role in the delivery of the initiative by providing on-going assistance to customers throughout the project cycles.

2. Non Duplicative Features of the Initiative

The distinct elements of the initiative are:

- In the OPA's Industrial Accelerator (IA) initiative, M&T is offered merely as an enabler to assist with capital projects. The proposed M&T initiative, by contrast, is a

comprehensive, all-encompassing initiative that will assist participants to undertake M&T as the main project and not merely as an enabler.

- This initiative will also provide a full range of behind-the meter services (e.g. customized website with specific customer consumption information, on-site visits and M&T workshops), not offered in the OPA-contracted initiatives.

3. Initiative Elements

The key initiative offerings include:

M&T system funding: the proposed initiative offers financial assistance of [redacted] per expected kW savings, up to a maximum of [redacted] towards the purchase of an M&T system. Customers that agree to install an M&T system will be required to commit contractually to a minimum term of four years.

Performance Incentives: this initiative offers the participants a performance incentive of [redacted] based on four year annualized verified energy savings, which will be paid out in annual instalments.

Behind-the-meter services: this initiative will offer on-going technical services including:

- customized on-line information
- expert site visits
- project management assistance
- employee engagement kits
- M&T workshops

Additional initiative offerings include:

Operational and process driven improvements: the proposed initiative will help customers understand the impact of operational and process improvements to achieve energy savings and help identify low-cost or no-cost opportunities.

Educational component: the proposed initiative will provide training sessions and workshops to educate customers on energy efficiency drivers and their energy usage.

Buy-in from senior management: The initiative will ensure that customer's senior management fully support the M&T project to establish it as a continuous improvement process.

4. Purpose of the Initiative

The M&T initiative will offer the key elements required to assist the medium to large C&I sectors in the successful pursuit of continuous and deeper energy savings beyond the traditional C/I CDM programs that focus only on technology or equipment replacement.

5. Projected Reduction in Peak Provincial Electricity Demand (MW):

Projected coincident peak demand reduction by end of 2014 is 1.6MW.

Total Peak Reduction (MW) 2011-2014					
	2011	**2012**	**2013**	**2014**	**Total Coincident Peak Demand Reduction by end of 2014 (MW)**
M&T Peak Demand reduction (MW)	0	0.541	1.082	1.623	1.623

*Savings are assumed to begin 2012 because of the nature of the initiative and business cycle

6. Projected Reduction in Electricity Consumption (MWh):

Projected energy consumption reduction by 2014 is estimated at 3,533 MWh.

Total Energy Conservation Reduction (MWh) 2011-2014					
	2011	**2012**	**2013**	**2014**	**Total Energy Reduction Cumulative (2011-2014)**
M&T Energy Consumption reduction (MWh)	0	592	1,183	1,758	3,533

*Savings are assumed to begin 2012 because of the nature of the initiative and business cycle

7. Projected budget

The total cost of the initiative will be $1.4 million, inclusive of approximate $[redacted] incentives to customers.

Program Budget ($) 2011- 2014						
Pogram costs		**2011**	**2012**	**2013**	**2014**	**Total 2011-2014**
Marginal costs						
Fixed						
Administrative costs	$					
Marketing & Site visits	$					
EM&V	$					
Total Fixed	$					
Variable						
M&T System*	$					
Total variable	$					
Total Marginal costs	$					
Allocable costs						
Fixed Allocable	$					
Variable Allocable	$					
Total Allocable costs	$					
Total Program Cost	$					
Incentives 20 cents per kWh	$					
Total Program Budget	$	314,152	$ 434,074	$ 434,074	$ 252,906	$ 1,435,206

8. Cost Effectiveness Tests Results:

- TRC: 1.6
- PAC: 2.0

9. Draft Evaluation Plan:

Hydro One Brampton will ensure that the Monitoring and Targeting Initiative will be evaluated in accordance with the OPA's EM&V Protocol guidelines. A Draft Evaluation Plan is attached. The initiative Final Evaluation Plan will be prepared by an independent third party. The selection of the evaluation criteria and detailed elements of the Evaluation Plan will be determined by the independent third party. Measurement and verification of initiative peak demand savings (kW) and electricity savings (kWh) results will be conducted by a third party review contractor selected through an RFP process from the OPA's "Third Party Vendor of Record" list once the initiative is approved.

The following is a DRAFT EVALUATION PLAN TEMPLATE:

MID AND LARGE COMMERCIAL & INDUSTRIAL MONITORING AND TARGETING INITIATIVE

OPA DRAFT EVALUATION PLAN TEMPLATE

Program Description	**Description: See Section 1** **Key Program Elements: See Sections 2 and 3** **Goals and Objectives: See Section 4** **Program Theory: See Sections 3 and 4** **Program Timing** Program Launch Date: January 1, 2011 Program End Date: December 31, 2014 **Estimated Participation and Results: See Sections 3,4,5,6 and 8** **Draft Budget: See Section 7**
Conservation Measures	Non Equipment based measures may include: • Process driven changes Equipment based measures include: N/A
Evaluation Goals and Objectives	**Evaluation Goals and Objectives** • i) Process Design Effectiveness • ii) Program Administration Effectiveness • iii) Measures and Assumptions Review • iv) Establish gross and net energy savings and demand reductions

	achieved • v) Estimate Program Cost Effectiveness • vi) Ensure Level of Customer Satisfaction
Evaluation Deliverables	**Evaluation Deliverables** • Draft Evaluation Plan • Final Program Evaluation Plan • Annual Report – Elements • Final Report
Evaluation Description	The evaluation elements of the Evaluation Goals and Objectives are anticipated to include (but are not limited to) those listed in the corresponding sections below. It is expected that these elements will be reviewed, discussed, evaluated or analyzed as appropriate and according to the OPA's EM&V Protocols to ensure that they meet the Program Evaluation Goals and Objectives during the **Draft Evaluation Plan development phase**. Review of these elements will assist Hydro One in determining and/or validating the appropriateness of the program design, administration and measures assumption elements and whether adjustments are necessary in order to successfully deliver the Initiative and to achieve the anticipated goals and objectives and estimated participation and results.

1

Evaluation Elements	**i) Program Process Design Effectiveness - Evaluation criteria:** • Goals of program • Staffing and training • Program timing and timelines • Incentives and motivation for participation • Participant satisfaction feedback • Non participant feedback back – participant satisfaction • Monitoring and tracking procedures • Reporting procedures **ii) Program Administration Effectiveness - Evaluation Criteria:** • Program statistics – including participants, calculations of energy and demand reductions etc. • Program Impact Evaluation • Pre and post Project Analysis Assessment • Marketing Effectiveness Assessment

	• Actual versus Budget Reporting • Market Participant review **iii) Measures and Performance Assumptions Review:** • Custom Measures Assumptions Review • Behavioural and Performance Assumptions Review **iv) Gross and Net Energy Savings and Demand Reductions Achieved:** ****To be performed by a 3rd party based on the OPA's EM&V protocols** • Measurement and verification of program energy and demand savings achieved • Net to Gross ratio (including free rider rate) • Audit and Verification of project completion **v) Program Cost Effectiveness:** • Verification of program expenditures versus budget • Verification of incurred payments
Special Provisions	**N/A**
Data Collection Responsibilities to Support Program Evaluation	**This area is still under development and will be completed with the assistance of a third party EM&V expert to ensure complete and appropriate collection of data to support Program evaluation.** Data collection on the following elements may be included: • Historical account consumption data • Number of participants • Program incentives • Customer site attributes • Program delivery metrics • Interviews with Initiative designers, delivery agents administrators • Interviews with market allies and market channel reps • Interviews with participants and non-participants • M&T system costs (supported by invoices)

Evaluation Schedule & Budget

Evaluation Deliverable	Budget	Date
Draft Evaluation Plan	TBD	TBD
Final Evaluation Plan	TBD	TBD
Verification of Projects	TBD	TBD
Verification of Energy Reductions	TBD	TBD
Verification of Program Costs	TBD	TBD
Draft Final Evaluation Report	TBD	TBD
Final Evaluation Report	TBD	TBD
Total Evaluation Budget	TBD	

Evaluation Team

Organization	Name	Title/Accountability
Hydro One Brampton	TBD	Program Manager
Hydro One Brampton	TBD	Energy Services Supervisor
3rd Party (Final Evaluation Plan Development)	TBD	TBD
3rd Party Measurement and verification Contractor (selected from OPA "Third Party Vendor of Record" list	TBD	TBD

Board-Approved CDM Program

COMMERCIAL PROGRAM

Initiative Number: 4

Initiative Name: Small & Mid Size Commercial Energy Management and Load Control Initiative ("CEMLC")

Year(s) of Operation for the Initiative: July 2011- December 2014

Initiative Frequency: Year round

Target Customer Type(s): Small and medium size General Service customers with average monthly peak demand of up to 200kW

1. Initiative Description:

This is an Energy Management and Demand Response Initiative that aims at helping approximately 8516 small and medium size General Service customers with average monthly peak demand of up to 200kW to reduce their energy consumption by 2GWh and peak system demand by 2MW over the term of the initiative. Hydro One Brampton expects to enrol approximately 550 customers by the end of 2014.

The program will offer an Energy Management System as well as load control devices (e.g., switches) for end-use control. The Energy Management System (EMS) included in this initiative will assist in initiating load control events as well as help customers to achieve energy savings.

This initiative will be delivered through a third-party vendor selected through a competitive bidding process. The implementation vendor will be responsible for marketing, installing and maintaining all equipment, and tracking and reporting results. Hydro One Brampton staff will coordinate the initiative deployment and provide assistance to the vendors, as needed, while ensuring that the program delivery milestones, targets and timelines are met.

Hydro One Brampton will issue an RFP to select a viable demand response system with the required energy management functions for the participating customers to use. The selected EMS system will meet the functional and technical requirements of both Hydro One Brampton and the program participants. Rigorous system acceptance testing will be performed on the selected system based on well-defined test conditions to ensure the suitability of the system for program deployment.

2. Non Duplicative Features of the Initiative

The distinct elements of the initiative are:

a. The proposed initiative is solely designed to meet the needs of small commercial customers with up to 200kW load. This initiative stands in contrast to the OPA-contracted Residential Demand Response initiative which is primarily intended to meet the needs of residential customers. Although the OPA initiative has been offered to small commercial customers (under 50kW load), over the last three years the participation rate has remained very limited.

b. Another distinct feature of the proposed initiative is the targeting of a broader commercial customer group compared to the OPA Residential Demand Response initiative. The proposed initiative is offered to customers below 50kW and is extended to customers with peak load greater than 50kW and up to 200kW.

c. The proposed initiative is distinct from the OPA residential Demand Response as it provides customers with an EMS system that can assist them to take full advantage of TOU rates. Unlike the OPA Residential Demand Response, the proposed initiative covers the monthly fee required to allow the customers to have access to the full use of the EMS system that is installed in their premises. As a result, the system is used for both demand response and the customers' energy efficiency/TOU purposes.

d. One of the distinct features of this program is the offering of technical assistance to the participants on an on-going basis. At the point of installation customers will receive training from the EMS installers for programming the EMS system to save energy and take advantage of TOU rates. The program will also provide online technical support to customers throughout the year.

3. Initiative Elements

The key initiative offerings include:

- The program offers an Energy Management system plus installation including end-use load control devices such as a switch. The value of this offering including installation cost is estimated at approximately [redacted]

- To allow the customer to exploit the full potential of the EMS system Hydro One Brampton will cover the monthly EMS access fee on behalf of the customer - valued at [redacted] over four years.

- Participants in the load control events will receive a [redacted] incentive per event up to 15 events in a year.

- At the point of installation customers will receive training from the EMS installers for programming the EMS system to save energy and take advantage of TOU rates. The program will also provide online technical support to assist the customers to program the EMS system.

4. Background

While general service customers under 50kW are eligible to participate in the *PeakSaver* Program, so far less than one percent of this customer group has participated in the program. This is primarily due to the fact that the *PeakSaver* Program is designed to respond to the needs of residential customers. This is the foundation of the need for the proposed initiative – i.e., to specifically address the needs of the small commercial customers.

5. Purpose of the Initiative

The purpose of this initiative is two fold:

1. Provide Customer Benefits: provide business customers with an Energy Management System (EMS) that would help them monitor and control their energy consumption and/or bills in a time-of-use (TOU) environment. This will help customers manage their energy consumption and change their behaviour in a sustainable manner.

2. Provide System Benefits: enable the utility to install a load control device in customers' businesses which, when activated, will reduce system peak load and increase the reliability of the electricity grid.

6. Projected Reduction in Peak Provincial Electricity Demand (MW):

Projected coincident peak demand reduction by the end of 2014 is 19.6MW.

Total Peak Reduction (MW) 2011-2014					
	2011	**2012**	**2013**	**2014**	**Total coincident peak demand reduction by end of 2014 (MW)**
Small Commercial Energy Management System Load Control (MW)	0.28	0.85	1.40	2.00	2.00

7. Projected Reduction in Electricity Consumption (MWh):

Projected energy consumption reduction by 2014 is estimated at 2,000MWh.

Total Energy Consumption Reduction (MWh) 2011-2014					
	2011	**2012**	**2013**	**2014**	**Total Cumulative (2011-2014)**
Small Commercial Demand Response (MWh)	123	381	633	863	**2,000**

8. Projected Budget

The total projected budget for this initiative is $1.52 million, inclusive of [redacted] million in customer incentives

Program Budget Small Commercial Demand Response ($) 2011-2014

	2011*	2012	2013	2014	Total 2011-2014
Marginal costs					
Fixed costs					
Administrative costs	$				
Marketing	$				
Turn-key vendor	$				
EM&V	$				
Total Fixed Costs	$				
Variable Costs					
Turn-Key Vendor (Load Control + EMS installation)	$				
Total Variable Costs	$				
Allocable costs					
Fixed Overhead	$				
Variable Overhead	$				
Total Program Costs	$				
Incentives	$				
Total Budget	**$ 221,037.41**	**$ 423,521.25**	**$ 434,616.86**	**$ 445,710.46**	**$1,524,884.98**

* The program is expected to start July 2011 to be in line with the evaluation of the OPA Pilot on EMS /Load Cotrol technologies

9. Cost Effectiveness Tests Results

- TRC: 1.7
- PAC: 1.9

10. Draft Evaluation Plan:

Hydro One Brampton will ensure that the Commercial Energy Management and Load Control Initiative will be evaluated in accordance with the OPA's EM&V Protocol guidelines. A Draft Evaluation Plan is attached. The initiative Final Evaluation Plan will be prepared by an independent third party. The selection of the evaluation criteria and detailed elements of the Evaluation Plan will be determined by the independent third party. Measurement and verification of initiative peak demand savings (kW) and electricity savings (kWh) results will be conducted by a third party review contractor selected through an RFP process from the OPA's "Third Party Vendor of Record" list once the initiative is approved.

The following is a DRAFT EVALUATION PLAN TEMPLATE:

SMALL AND MID SIZE COMMERCIAL ENERGY MANAGEMENT AND LOAD CONTROL

OPA DRAFT EVALUATION PLAN TEMPLATE

Program Description	**Description: See Sections 1 and 2** **Key Program Elements: See Section 2** **Goals and Objectives: See Sections 1 and 3** **Program Theory: See Sections 2,3 and 4** **Program Timing** Program Launch Date: July 1st, 2011 All program elements are expected to be deliverable commencing immediately after the program launch date. Program end date: December 31, 2014 **Estimated Participation and Results: See Sections 1,6 ,7 and 9** **Draft Budget: See Section 8**
Conservation Measures	Behavioural Changes Energy Management System Load control service (included in the EMS system)
Evaluation Goals and Objectives	**Evaluation Goals and Objectives** • i) Process Design Effectiveness • ii) Program Administration Effectiveness • iii) Establish gross and net energy savings and demand reductions achieved • iv) Estimate Program Cost Effectiveness

Evaluation Deliverables	**Evaluation Deliverables** • Draft Evaluation Plan • Final Program Evaluation Plan • Annual Report – elements • Final Report
Evaluation Description	The evaluation elements of the Evaluation Goals and Objectives are anticipated to include (but are not limited to) those listed in the corresponding sections below. It is expected that these elements will be reviewed, discussed, evaluated or analyzed as appropriate and according to the OPA's EM&V Protocols to ensure that they meet the Program Evaluation Goals and Objectives during the **Draft Evaluation Plan development phase**. Review of these elements will assist Hydro One Brampton in determining and/or validating the appropriateness of the program design, administration and measures assumption elements and whether adjustments are necessary in order to successfully deliver the Initiative and to achieve the anticipated Goals and Objectives and estimated participation and results.

1

Evaluation Elements	**i) Program Process Design Effectiveness - Evaluation criteria:** • Staffing and training • Program timing and timelines • Use of new procedures and best practices • Eligibility and participants – original assumptions vs. actual • Procedure for load control event implementation – results of program participation from event • Motivation for participation and incentive level • Customer satisfaction feedback – participant satisfaction • Non participant feedback • Program management monitoring procedures • Roles and responsibilities of team members and stakeholders • Reporting procedures **ii) Program Administration Effectiveness - Evaluation Criteria:** • Program statistics – including participants, calculations of energy and demand reductions etc. • Marketing Effectiveness • Actual versus Budget Reporting

	• Market Participant review **iii) Measures and Performance Assumptions Review:** • Custom Measures Assumptions Review • Behavioural and Performance Assumptions Review **iv) Gross and Net Energy Savings and Demand Reductions Achieved:** ****To be performed by a 3rd party based on the OPA's EM&V protocols** • Measurement and verification of program energy and demand savings achieved • Net to Gross ratio (including free rider rate) • Audit and Verification of project completion **v) Program Cost Effectiveness:** • Verification of program expenditures versus budget • Verification of program funding and payments • Cost benefit Analysis – funding vs. program performance
Special Provisions	**N/A**
Data Collection Responsibilities to Support Program Evaluation	**This area is still under development and will be completed with the assistance of a third party EM&V expert to ensure complete and appropriate collection of data to support Program evaluation.** Data collection on the following elements may be included: • Historical account consumption data • Number of participants • Program incentives • Customer site attributes • Program delivery metrics • Interviews with Initiative designers, delivery agents administrators • Interviews with market allies and market channel reps • Interviews with participants and non-participants
Evaluation	

Schedule & Budget

Evaluation Deliverable	Budget	Date
Draft Evaluation Plan	TBD	TBD
Final Evaluation Plan	TBD	TBD
Verification of Projects	TBD	TBD
Verification of Energy Reductions	TBD	TBD
Verification of Program Costs	TBD	TBD
Draft Final Evaluation Report	TBD	TBD
Final Evaluation Report	TBD	TBD
Total Evaluation Budget	TBD	

Evaluation Team

Organization	Name	Title/Accountability
Hydro One Brampton	TBD	Program Manager
Hydro One Brampton	TBD	Energy Services Supervisor
3rd Party (Final Evaluation Plan Development)	TBD	TBD
3rd Party Measurement and verification Contractor (selected from OPA "Third Party Vendor of Record" list	TBD	TBD

Board-Approved CDM Program

COMMERCIAL PROGRAM

Initiative Number: 5

Initiative Name: Municipal – Hospital Energy Efficiency Performance

Year(s) of Operation for the Initiative: 2011- 2014

Initiative Frequency: Year round

Target Customer Type(s): All Municipal facilities and the Williams Osler Heath Center in Brampton

1. Initiative Description:

The Municipal and Hospital Energy Efficiency Performance Program provides monetary incentives to municipal and hospital customers for overall electrical energy efficiency reductions within facilities and across their portfolio of accounts. By requiring participants to commit to continuous electrical energy management and efficiency actions and improvements year over year, Hydro One Brampton expects that the unique offerings of the Initiative will assist in transforming this segment of the broader public sector to entrench energy efficiency and energy conservation as a core best practice within their organizations.

The key elements and comprehensive approach of the Initiatives seek to assist this historically hard to reach sector in the pursuit of sustained and deeper energy savings by going beyond technology based incentives offered in traditional or proposed province wide commercial CDM programs.

The initiative is expected to be made available to the City of

Brampton and the William Osler Health Centre

Delivery of the initiative will be carried out by Hydro One Brampton and contracted resources and experts in the field of energy Conservation and Demand Management (CDM).

Incentives available to participating customers for each year of participation include:

1. [redacted] toward tools, training and/or memberships offering energy and demand consumption benchmarking, tracking and targeting; Conservation Action Plan development assistance, technical training and energy management best practices.

2. Up to [redacted] of the cost (to a maximum of [redacted]) for pre-assessment and/or audit of energy intense facilities within a portfolio. Participating facilities are eligible for one pre-assessment and audit incentive within the initiative delivery period (2011 to 2014).

3. Participating facilities will be eligible to receive a financial incentive at [redacted] for overall energy performance improvements.

This initiative could be further extended to the other public sector institutions.

2. Non Duplicative Features of the Initiative

This multi phase initiative is non duplicative as it goes beyond technology specific incentives to help remove barriers to continuous energy efficiency practices and allow participants to realize deeper savings. The unique Initiative benefits and incentive structure are designed to encourage the sector to focus on whole buildings, systems and processes within their account portfolio, and to adopt energy efficiency technical, management, and organizational best practices. Offering monetary incentives for **overall energy efficiency and peak demand performance** rather than technology alone, allows flexibility for this budget constrained sector to implement corporate initiatives and processes that may realize efficiencies with less capital investment.

The initiative will include unique value-added elements or participation requirements not offered in any other commercial CDM program in Ontario. As a participant in the Initiative, the customer commits to, and is incented for, continuous energy efficiency actions and improvements year over year. Participants will be required to sign a Memorandum of Understanding (MoU) committing to: The assembly of a cross functional team; the development of a comprehensive Energy Conservation Action Plan; ongoing electrical energy consumption and demand benchmarking, tracking and target setting; employee engagement and training; and commitment from top levels of the organization. A commitment to re-invest incentives realized from energy and peak demand reductions in to further energy efficiency actions will also be encouraged.

3. Initiative Elements

The value proposition to customers participating in the Municipal and Hospital Energy Efficiency Performance Initiative includes the following unique elements:

- Compile and provide useful historical energy consumption data for eligible accounts within the hospital or municipal portfolio
- A signed Memorandum of Understanding ("MoU") committing to:
  - assembly of a cross functional team including top level management
  - development of an Energy Conservation Action Plan
  - annual benchmarking and monitoring of electrical energy usage
  - set annual reduction targets
  - continuous action and implementation of energy efficient initiatives

- participation in the Initiative to December 31, 2014

- to direct any incentive monies related to energy efficiency actions back in to Energy Efficiency initiatives within the organization (encouraged)

- [redacted] toward tools, training and/or memberships that help achieve energy and demand consumption benchmarking, tracking and targeting; Conservation Action Plan development assistance, technical training and energy management best practices.

- CDM Specialist – including consultation and review of current vs. best practices for management, operations and technology

- Up to [redacted] of the cost (to a maximum of [redacted] for pre-assessment and/or audit of energy intensive facilities within a portfolio. Participants are eligible for one pre-assessment and audit incentive within the Initiative delivery period (2011 to 2014).

4. Background:

The unique elements of the municipal and hospital initiative seek to remove the barriers faced by this sector by enabling and encouraging the pursuit of ongoing energy and peak demand reduction opportunities.

For many, facility management and electricity bill payment and accountabilities are decentralized, and equipment upgrade projects are often reactive. Energy efficient projects also compete with non-discretionary projects and budget constraints. These barriers are thought to have impacted the limited participation from this sector in technology based provincial CDM programs to date. This Initiative seeks to remove these barriers.

5. Purpose of the Initiative:

The Municipal Efficiency Performance initiative will offer the key elements required to assist this broader public sector in the successful pursuit of continuous and deeper energy savings beyond the traditional commercial CDM programs that focus only on technology or equipment replacement. Using a comprehensive delivery model and performance based incentive approach; the sector will be enabled to make appropriate technology, process, management and organizational decisions that best fit their business, community and facility needs.

6. Projected Reduction in Peak Electricity Demand (MW)

The Initiative is expected to achieve approximately 0.22 MW of peak reduction by the end of 2014.

Total Peak Reduction (MW) 2011-2014					
	2011	2012	2013	2014	Total Coincident Peak Demand Reduction by end of 2014 (MW)
Municipal - Hospital Energy Performance (MW)	0.06	0.10	0.16	0.22	0.22

7. Projected Reduction in Electricity Consumption (MWh):

The Initiative is expected to achieve 5,097 MWh cumulative energy reduction by the end of 2014.

Total Energy Reduction (MWh) 2011-2014					
	2011	2012	2013	2014	Total Energy Reduction Cumulative (2011-2014)
Municipal - Hospital Energy Performance (MWh)	407	955	1,557	2,178	5,097

8. Projected Budget

The estimated budget to deliver the Municipal and Hospital Efficiency Performance Initiative is $0.8M including $[redacted] in incentives. Administrative, marketing and 3rd party delivery and EM&V costs are included in the estimated budget.

Municipal - Hospital Energy Efficiency Performance ($) 2011-2014					
	2011*	2012	2013	2014	Total 2011-2014
Marginal costs					
Fixed costs					
Administrative costs	$				
Marketing (includes tools and Employee Engagement)	$				
CDM specialist	$				
EM&V	$				
Total Fixed Costs	$				
Variable Costs					
Third Party Project Review	$				
Membership/ Tools/Training	$				
Performance Review / Audits	$				
Total Variable Costs	$				
Allocable costs					
Fixed Overhead	$				
Variable Overhead	$				
Total Program Costs	$				
Incentives	$				
Total Budget	$ 175,655	$ 201,171	$ 206,932	$ 209,790	$ 793,548

9.Cost Effectiveness Test Results

- TRC: 1.4
- PAC: 1.1

10. Draft Evaluation Plan

This initiative focuses on reducing Municipal and Hospital peak demand and energy consumption through behavioural changes and equipment upgrades. The equipment upgrade component falls under the measures included in the OPA's M&A List, while other component assumptions are based on consultations with industry experts. Consequently, Hydro One Brampton has partially varied from the OPA Measures and Assumptions Lists.

Hydro One Brampton will ensure that the Municipal – Hospital Energy Efficiency Performance Initiative will be evaluated in accordance with the OPA's EM&V Protocols. A Draft Evaluation Plan is attached based on the most current version available on the Power Authority website as of Oct. 15, 2010. A Final Evaluation Plan will be prepared by an independent third party after OEB approval of the Initiative. The selection of the evaluation criteria and detailed elements of the Evaluation Plan will be determined by the independent third party. Measurement and verification of initiative peak demand savings (kW) and electricity savings (kWh) results will be

conducted by a third party review contractor selected through an RFP process from the OPA's "Third Party Vendor of Record" list.

The following is a DRAFT EVALUATION PLAN TEMPLATE:

OPA DRAFT EVALUATION PLAN

MUNICIPAL - HOSPITAL EFFICIENCY PERFORMANCE

DRAFT EVALUATION PLAN TEMPLATE

Program Description	**Description (see Section 1)** **Key Program Elements ((see sections 2, and 3)** **Goals and Objectives (see sections 1 and 5)** **Program Theory (see section 1 and 3)** **Program Timing** Program Launch Date: January 1st, 2011 All program elements are expected to be deliverable commencing immediately after the program launch date. Roving Energy Manager consultation, membership in sector specific Energy performance or monitoring programs or associations, participating account identification and benchmarking will be the key elements offered early in program delivery and throughout the four years of the program for as long as the customer(s) accounts are still eligible or participating. Customer enrolment end date: June 30th, 2012. Program end date: December 31, 2014 **Estimated Participation and Results (see sections 1,6, 7 & 9)** **Draft Budget (see Section 9)**
Conservation Measures	*Equipment based Measures:* The Initiative will focus on energy efficient lighting, controls, motors, pumps and HVAC systems, however, will allow for and financially incent retrofitting of other proven energy efficient technologies. Assumptions for measures considered eligible under the initiative that are not included under the OPA's Measures and Assumptions List have been, or will be, developed by a 3rd party based on the OPA's EM&V Protocols.

	Non Equipment based Measures may include: • Retro commissioning • Continuous Optimization (Maintenance) • Employee awareness • Historical energy usage benchmarking • Comparison to best in class and peer buildings (social benchmarking), • Energy efficiency best practices (management, operations, technical etc) • Monitoring and target setting • Training and capability building • Building or system auditing • Ongoing membership with organizations offering tools, resources, capacity building and peer consultation focusing on energy use benchmarking, monitoring, tracking, target setting and reductions.
Evaluation Goals and Objectives	**Evaluation Goals and Objectives** • i) Process Design Effectiveness • ii) Program Administration Effectiveness • iii) Measures and Assumptions Review • iv) Establish gross and net energy savings and demand reductions achieved • v) Estimate Program Cost Effectiveness • vi) Special Provisions
Evaluation Deliverables	**Evaluation Deliverables** • Final Program Evaluation Plan • Annual Report – elements • Final Report
Evaluation Description	The evaluation elements of the Evaluation Goals and Objectives are anticipated to include (but are not limited to) those listed in the corresponding sections below. It is expected that these elements will be reviewed, discussed, evaluated or analyzed as appropriate and according to the OPA's EM&V Protocols to ensure that they meet the Program Evaluation Goals and Objectives during the **Draft Evaluation Plan development phase**. Review of these elements will assist Hydro One in determining and/or validating the appropriateness of the program design, administration and measures assumption elements and whether adjustments are necessary in order to successfully deliver the Initiative and to achieve

	the anticipated Goals and Objectives and estimated participation and results.

1

Evaluation Elements	**i) Program Process Design Effectiveness - Evaluation criteria:** • Goals of program • Staffing and training • Program timing and timelines • Marketing Plan • Use of new procedures and best practices • Original assumptions vs. actual • Incentives and motivation for participation • Customer satisfaction feedback – participant satisfaction • Non participant feedback • Monitoring and tracking procedures • Roles and responsibilities of team members and stakeholders • Reporting procedures **ii) Program Administration Effectiveness - Evaluation Criteria:** • Program statistics – including participants, calculations of energy and demand reductions etc. • Program Impact Evaluation • Market Effects Assessment • Pre and post Project Analysis Assessment • Marketing Effectiveness Assessment • Actual versus Budget Reporting • Market Participant review **iii) Measures and Performance Assumptions Review:** • Custom Measures Assumptions Review • Behavioural and Performance Assumptions Review **iv) Gross and Net Energy Savings and Demand Reductions Achieved*:** ***To be performed by a 3rd party based on the OPA's EM&V protocols** • Measurement and verification of program energy and demand savings achieved • Net to Gross ratio (including free rider rate) • Audit and Verification of project completion **v) Program Cost Effectiveness:**

	• Verification of program expenditures versus budget • Verification of program funding and payments • Cost benefit Analysis – funding vs. program performance
Special Provisions	**Special Provisions:** N/A
Data Collection Responsibilities to Support Program Evaluation	**This area is still under development and will be completed with the assistance of a third party EM&V expert to ensure complete and appropriate collection of data and evaluation activities to support Initiative evaluation.** Data collection and evaluation activities anticipated to support the evaluation of the initiative may include the following. : • Historical account consumption data • Gross number of participants • Program Costs • Program incentives • Number of and types of measures installed • Actual values of participant inputs (i.e. hrs of operation) used to generate kWh and kW savings estimates • Building or account attributes • Program delivery metrics (i.e. web hits, marketing materials delivered) • Interviews with Initiative designers, delivery agents, administrators • Interviews with market allies and market channel reps • Interviews with participants and non-participants • Observation of field efforts and operation • Base case technology or process data • Project and equipment costs (supported by invoices) • Post project (new measure) data • On site inspection / verification of implemented measures • Copy of customer draft Energy Conservation Action Plan • Energy Efficiency Activities and Actions Report from participants

Evaluation Schedule & Budget

Evaluation Deliverable	Budget	Date
Draft Evaluation Plan	TBD	TBD
Final Evaluation Plan	TBD	TBD
Verification of Projects	TBD	TBD
Verification of Energy Reductions	TBD	TBD
Verification of Program Costs	TBD	TBD
Draft Final Evaluation Report	TBD	TBD
Final Evaluation Report	TBD	TBD
Budget	TBD	

Evaluation Team

Organization	Name	Title/Accountability
Hydro One Brampton	TBD	Program Manager
Hydro One Brampton	TBD	Energy Services Supervisor
3rd Party (Final Evaluation Plan Development)	TBD	TBD
3rd Party Measurement and verification Contractor (selected from OPA "Third Party Vendor of Record" list	TBD	TBD

Board-Approved CDM Program

COMMERCIAL PROGRAM

Initiative Number: 6

Initiative Name: Double Return Plus Initiative (DRP)

Initiative Frequency: Year round

Target Customer Type(s): Commercial and industrial interval metered customers with average peak load of 200 kW or above.

Years of Operation for the Initiative:

2011 to 2014, subject to annual reviews and approvals.

1. Initiative Description

The Double Return Plus Initiative (DRP) targets approximately 523 interval-metered commercial and industrial (C/I) customers with an average monthly peak load in excess of 200 kW. The objective of this Initiative is to reduce the customers' peak demand which, in turn, is expected to reduce the total system peak demand by up to 11 MW. This initiative has an expected program cost of $200/kW inclusive of incentives.

The Double Return initiative has two components: a peak demand reduction and an energy efficiency component. This initiative encourages the customers to reduce their summer peak demand relative to their summer demand in the previous year by at least 5%. The energy efficiency savings will be achieved through the installation of a load management system. The proposed initiative will fund [redacted] of the cost of a load management system, up to a maximum of [redacted]. This initiative will enable customers to control and reduce their summer peak demand as well as achieve sustainable energy savings.

The performance incentive payments will be set equal to double the amount of reduction in distribution charges on the customer's bill resulting from achieving a 5-10% reduction in their peak load. For every dollar the customer saves in reduced distribution charges, the program will provide two dollars in incentive payments.

In addition to performance incentives, this initiative will offer a range of behind-the meter services including online technical services, on-site visits, energy efficiency and demand response workshops, and employee engagement kits.

The program will primarily be delivered directly by Hydro One Brampton with the help of a number of third party vendors to assist with the promotion and delivery of the technical services to the customers.

2. Non Duplicative Features of the Initiative

The unique elements of the initiative are:

- **Non-Dispatchable versus Dispatchable Demand Response:** The DRP initiative is not duplicative of the OPA Demand Response Programs because it is based on non-dispatchable load control and it also aims at reducing energy consumption. By contrast, the OPA Province-wide Demand Response programs are based on dispatchable load control and, as a result, have minimal energy savings. Non-dispatchable load control means that it is left to the customer's discretion whether they wish to reduce their peak demand and the time at which they reduce demand given the customers business needs and production cycles. Dispatchable load control, on the other hand, means that the customer must respond to the IESO's request that they curtail a contracted amount of their load or face penalties (e.g., under Demand Response 3) for not doing so. Further, the OPA had already approved the DRP program as a Custom Program distinct from the OPA's Demand Response 1/Demand Response 3 programs, and all three programs coexisted in the marketplace in 2008 and 2009.

- **Bring demand response and energy efficiency together**: The Initiative equips the customer with the information and tools to meet demand reduction as well as energy savings, all in one initiative. Hydro One Brampton will hire third party vendor(s) so that participants will have access to a range of technical and information services that would help them better understand their energy usage and assist them in identifying areas where they can reduce their energy consumption and shift or shave their peak load. Several tools including workshops, on-line assistance, and written information material would be used to assist customers to reach this goal. The initiative will also offer free expert on-site visits to identify specific opportunities in customers' facilities focusing on loads associated with industrial processes, motors, lighting, compressed air, and electro-technologies. Bringing together demand response and energy efficiency is a unique feature compared to OPA-contracted Demand Response initiatives available in the market

- **No cost - low cost opportunities:** DRP helps identify savings potential at limited and/or no cost to the customer. For example, a change in the customer's behaviour will come at no cost, whereas an installation of a control device would come at low cost. The focus on operational and behavioural changes brings about a culture of conservation in the business markets.

3. Background

The initial Double Return Initiative was designed by Hydro One and offered under Market Adjusted Rate of Return (MARR) funding in 2006/2007. This Initiative was very successful and became popular among Hydro One customers as well as other stakeholders. Further, the OPA approved the Double Return program as a Custom Initiative in 2008/2009 where the program coexisted with the OPA's Demand Response 1/Demand Response 3 programs. The proposed Double Return Plus is a new generation of the original Initiative with enhanced features for the 2011-2014 period.

4. Initiative Elements

While the key success factor for the Double Return has been its design simplicity, three additional components have been added to the original program:

- **Reply Card:** A requirement to submit a "Reply Card" by participating customers. The Reply Card ensures that the customer is interested and committed to the Initiative.

- **Action Plan:** A requirement to complete a multiple choice two-paged "Action Plan" The Action Plan identifies the steps which the customer plans to take to meet the minimum peak load reduction (of at least 5% of the average summer June-August peak load as compared to the previous year) to qualify for the financial incentive.

- **Load Management System:** The availability of financial incentives to enable participants to purchase a Load Management System. The financial incentives will cover [redacted] of the cost of the system up to a maximum of [redacted].

Additional initiative offerings include:

- **Behind the meter services:** this initiative will offer on-going technical services including:

- customized on-line information
- expert site visits/assistance
- Double return plus energy workshops
- employee engagement kits

5. Purpose of the Incentives

The Double Return Plus Initiative will offer the key elements required to assist the medium to large C&I sectors in the successful pursuit of continuous and deeper energy savings beyond the traditional C/I CDM programs that focus only on technology or equipment replacement.

6. Projected reduction in Peak Electricity Demand (MW)

This initiative is projected to achieve approximately 11MW peak reduction by the end of 2014. Peak reduction attributable to the portion of DRP for peak shaving will have one year persistence, while the load balancing component will enhance persistency of results achieved in the initiative

Total Peak Reduction (MW) 2011-2014					
	2011	2012	2013	2014	Total Coincident Peak Demand Reduction by end of 2014 (MW)
Double Return Plus (MW)	4.1	6.3	8.6	11	11

7. Total Projected Reduction in Electricity Consumption (MWh)

This initiative is projected to achieve 30 GWh cumulative energy reduction by 2014. Energy reduction attributable to the portion of DRP for peak shaving will have one year persistence, while the load balancing component will enhance persistency of results achieved in the initiative.

Total Energy Reduction (MWh) 2011-2014					
	2011	2012	2013	2014	Total Energy Reduction Cumulative (2011-2014)
Double Return Plus (MWh)	4,225	6,525	8,591	10,659	30,000

8. Projected Budget

The total cost estimate for the initiative is approximately $2.4M (inclusive of incentives), and includes administrative costs, marketing costs, behind the meter services and incentives against a load balancing system (covering [redacted] of the cost of the system up to a maximum of [redacted]) as well as performance incentives for achieved results for a total of [redacted] (roughly [redacted] per season).

Double Return Plus - Initiative Budget ($) 2011-2014					
	2011	2012	2013	2014	Total 2011-2014
Marginal costs					
Fixed costs					
Administrative costs	$	$	$	$	$
Marketing	$	$	$	$	$
Site visits / Verifications	$	$	$	$	$
EM&V	$	$	$	$	$
Total Fixed Costs	$	$	$	$	$
Variable Costs					
Turn-Key Vendor / Load Balancing	$	$	$	$	$
Total Variable Costs	$	$	$	$	$
Allocable costs					
Fixed Overhead	$	$	$	$	$
Variable Overhead	$	$	$	$	$
Total Program Costs	$	$	$	$	$
Incentives	$	$	$	$	$
Total Budget	$ 593,489	$ 593,489	$ 593,489	$ 593,489	$ 2,373,955

Cost Effectiveness Test Results

- TRC ratio: 11.3
- PAC ratio: 7.4

10. Draft Evaluation Plan

Hydro One Brampton will ensure that the Double Return Plus Initiative will be evaluated in accordance with the OPA's EM&V Protocol guidelines A Draft Evaluation Plan is attached. The initiative Final Evaluation plan will be prepared by an independent third party. The selection of the evaluation criteria and detailed elements of the Evaluation Plan will be determined by the independent third party. Measurement and verification of initiative peak demand savings (kW) and electricity savings (kWh) results will be conducted by a third party review contractor selected through an RFP process from the OPA's "Third Party Vendor of Record" list once the initiative is approved.

The following is a DRAFT EVALUATION PLAN TEMPLATE:

DOUBLE RETURN PLUS

OPA DRAFT EVALUATION PLAN TEMPLATE

Program Description	**Description: See Section 1** **Key Program Elements: See Sections 2 and 4** **Goals and Objectives: See Sections 1 and 5** **Program Theory: See Section 1 and 3** **Program Timing** Program Launch Date: January 1st, 2011 Program end date: December 31, 2014 **Estimated Participation and Results: See Sections 6, 7 and 9** **Draft Budget: See Section 8**
Conservation Measures	Conservation Measures: Behavioural changes Load balancing/Energy Management System
Evaluation Goals and Objectives	**Evaluation Goals and Objectives** • i) Process Design Effectiveness • ii) Program Administration Effectiveness • iii) Measures and Assumptions Review • iv) Establish gross and net energy savings and demand reductions

	achieved • v) Estimate Program Cost Effectiveness
Evaluation Deliverables	**Evaluation Deliverables** • Draft Evaluation Plan • Final Program Evaluation Plan • Annual Report – elements • Final Report
Evaluation Description	The evaluation elements of the Evaluation Goals and Objectives are anticipated to include (but are not limited to) those listed in the corresponding sections below. It is expected that these elements will be reviewed, discussed, evaluated or analyzed as appropriate and according to the OPA's EM&V Protocols to ensure that they meet the Program Evaluation Goals and Objectives during the **Draft Evaluation Plan development phase**. Review of these elements will assist Hydro One Brampton in determining and/or validating the appropriateness of the program design, administration and measures assumption elements and whether adjustments are necessary in order to successfully deliver the Initiative and to achieve the anticipated Goals and Objectives and estimated participation and results.

1

Evaluation Elements	**i) Program Process Design Effectiveness - Evaluation criteria:** • Staffing and training • Program timing and timelines • Use of new procedures and best practices • Marketing Plan • Eligibility and participants – original assumptions vs. actual • Events implementation – results of program participation from event • Motivation for participation and incentive level • Customer satisfaction feedback – participant satisfaction • Non participant feedback • Monitoring and tracking program management • Roles and responsibilities of team members and stakeholders • Reporting procedures **ii) Program Administration Effectiveness - Evaluation Criteria:** • Program statistics – including participants, calculations of energy and demand reductions etc.

	• Program Impact Evaluation • Pre and post Project Analysis Assessment • Marketing Effectiveness Assessment • Actual versus Budget Reporting • Market Participant review **iii) Measures and Performance Assumptions Review:** • Custom Measures Assumptions Review • Behavioural and Performance Assumptions Review **iv) Gross and Net Energy Savings and Demand Reductions Achieved:** ****To be performed by a 3rd party based on the OPA's EM&V protocols** • Measurement and verification of program energy and demand savings achieved • Net to Gross ratio (including free rider rate) • Audit and Verification of project completion **v) Program Cost Effectiveness:** • Verification of program expenditures versus budget • Verification of incentive payments • Cost benefit Analysis – funding vs. program performance
Special Provisions	**N/A**
Data Collection Responsibilities to Support Program Evaluation	• This area is still under development and will be completed with the assistance of a third party EM&V expert to ensure complete and appropriate collection of data to support Program evaluation. • Data collection and evaluation activities anticipated to support the evaluation of the Initiative may include the following: • • Historical account consumption data • Number of participants • Program Costs • Program incentives • Customer site attributes • Program delivery metrics • Interviews with Initiative designers, delivery agents, administrators • Interviews with market allies and market channel reps • Interviews with participants and non-participants • Project and equipment costs (supported by invoices)

- Sample on-site inspection / verification of actions implemented
- Draft of Customer Energy Conservation Action Plan
- Energy Efficiency Activities and Actions Report from participants

Evaluation Schedule & Budget

Evaluation Deliverable	Budget	Date
Draft Evaluation Plan	TBD	TBD
Final Evaluation Plan	TBD	TBD
Verification of Projects	TBD	TBD
Verification of Energy Reductions	TBD	TBD
Verification of Program Costs	TBD	TBD
Draft Final Evaluation Report	TBD	TBD
Final Evaluation Report	TBD	TBD
Total Evaluation Budget	TBD	

Evaluation Team

Organization	Name	Title/Accountability
Hydro One Brampton	TBD	Program Manager
Hydro One Brampton	TBD	Energy Services Supervisor
3rd Party (Final Evaluation Plan Development)	TBD	TBD
3rd Party Measurement and verification Contractor (selected from OPA "Third Party Vendor of Record" list	TBD	TBD