Interrogatory

1. **References: EB-2008-0188 Attachment D pages 1-7**
   EB-2007-0713 Exhibit D3 Tab2 Schedule 1Attachment #1&Attachment#2

   a) Compare the supporting Tables for 2005 and 2006 CDM Programs filed in the 2009 Application to the previous application (second reference). Provide a list with explanations for all changes.

   b) Why are customer equipment costs not listed in Attachment D? Provide a list and explanation of *any changes* from EB-2007-0713 Exhibit D3 Tab 2 Schedule 1 Attachment #1

   c) Confirm that the data in Attachment D is the same as provided to Elenchus Research Associates for the review/verification/audit. If not, provide a list and explanation of all differences.

Response

a) EB-2007-0713 Exhibit D3-2-1, Attachments 1 & 2, updated December 14, 2007, contain exactly the same information as EB-2008-0188 Attachment D, except that the customer equipment costs are not included, as explained in part b) below.

b) The customer equipment costs are not listed in Attachment D because Hydro Ottawa is only applying for LRAM for 2007 for these 2005 and 2006 CDM programs. Customer equipment costs are only used as an input for determining SSM. SSM for Hydro Ottawa's 2005 and 2006 CDM programs was claimed as part of EB-2007-0713 and cannot be claimed again.

c) The data in Attachment D is the same as provided to Elenchus Research Associated for review.

Interrogatory

2. **Reference: EB-2008-0188 Attachment D pages 1-7**

a) Provide a Table of measure life assumptions for all residential/small commercial programs (and individual measures) in the same order as Attachment D. Indicate source(s) relied on. Comment on persistence of measures installed in 2005/2006 including the air conditioner retirement.

b) Provide a comparison (differences only) of kw/kwh savings (gross and net), measure life and free ridership assumptions for all measures in Attachment D with those listed in the 2009 OPA Measures and Input Assumptions List www.powerauthority.on.ca/Page.asp?PageID=122&ContentID=6701&SiteNodeID=404.

Response

a) The following tables provide the measure life assumptions for all residential/small commercial programs (and individual measures) with energy savings, in the same order as Attachment D. The source for all measures is the Ontario Energy Board's (the "Board") *Inputs and Assumptions for Calculating Total Resource Cost*, issued March 28, 2008, (the "Inputs and Assumptions") except for the 2006 Direct Energy ECM & AC program, as indicated below.

2005 Programs		
Program	Measure	Measure Life (Years)
Co-Branded Mass Markets	Compact fluorescent bulb[1]	4
	LED Christmas lights	30
	Programmable thermostat	18
	Indoor timer	20
	Outdoor timer	20
Energy Audit Support and Incentives	Water Heater Blanket	6
	Compact fluorescent bulb	4
Fridge Bounty	Removal of secondary refrigerator	6
Social Housing-Power Play	Showerhead	12
	Tank wrap	6

[1] As per SeeLine Group Inc.'s *Total Resource Cost Test Assessment of the '2005 Lighten Your Electricity Bill' Program* Report, February 2006, it is assumed that the average wattage sold during this program was 15W.

1

2005 Programs continued		
Program	Measure	Measure Life (Years)
Social Housing-Power Play	Cold Water Detergent	1
	Aerators	12
	Compact fluorescent bulb	4
	Pipe insulation	6
	Clothes Dryer Rack	10
	Timer	20
Social Housing-Water Heater Tune up	Water Heater Blanket	6
Overall Support Program	Compact fluorescent bulb	4
	LED Christmas lights	30

2

2006 Programs		
Program	Measure	Measure Life (Years)
Co-branded Mass Markets Events Van School Initiative Spring Retail Fall Every Kilowatt Counts (EKC)	Compact fluorescent bulb	4
Spring Retail	Timer	20
	Programmable Thermostat	18
Fall EKC	Baseboard Programmable Thermostat	18
	Motion Sensors	10
	Programmable Thermostat	18
	Dimmer Switch	10
	LED Christmas lights	30
Electric Avenue	Electric Thermal Storage Units	18
	Tank wrap	6
	Showerhead	12
	Aerators	12
	Pipe wrap	6
	Compact fluorescent bulb	4
Energy Audit Support and Incentives	Tank wrap	6
	Compact fluorescent bulb	4
	LED Exit sign retrofit kit	25
Project Porch Light	Compact fluorescent bulb	4
Direct Energy ECM & AC[2]	ECM furnace fan	15
	High SEER Central AC	14

[2]Measure lives obtained from *Select Residential CDM Technology Assessments for the Conservation Bureau, Division of Ontario Power Authority*, SeeLine Group Inc., September, 2006.

2006 Programs continued		
Program	Measure	Measure Life (Years)
Keep Cool RAC Retirement	Room AC Retirement	12
	High SEER Room AC	12
SLED Exchange 2006	LED Christmas lights	30
Fridge Bounty	Removal of secondary refrigerator	6
	Removal of secondary freezer	6
	Compact fluorescent bulb	4
	LED Christmas lights	30
Residential Load Control	Programmable thermostat	18
Social Housing-Low Income Tune up	Tank Wrap	6
	Pipe Wrap	6
	Showerhead	12
	Aerator	12
Social Housing-Powerplay Tune up	Showerhead	12
	Tank Wrap	6
	Cold Water Detergent	1
	Aerator	12
	Compact fluorescent bulb	4
	Pipe insulation	6
	Clothes Dryer Rack	10
	Timer	20
Overall Support Program	Compact fluorescent bulb	4

With respect to persistence, Hydro Ottawa has followed the Board's Guidelines for Electricity Distributor Conservation and Demand Management, EB-2008-0037, issued on March 28, 2008, Section 3.4.3 which states:

> "Distributors should account for the persistence of a CDM measure in accordance with the inputs and assumptions posted on the Board's website"[3]

The Inputs and Assumptions posted on the Board's website state:

> '… persistence is a measure of how long a CDM measure is kept in place by the customer. There is a compelling argument for accounting for persistence in the assessment of CDM cost effectiveness, especially for measures which are easily replaced such as compact fluorescent light bulbs. However, at this time, distributors should assume 100% persistence in assessing CDM cost effectiveness unless otherwise updated by the Board. While persistence is not

[3]Guidelines for Electricity Distributor Conservation and Demand Management, EB-2008-0037, March 28, 2008, pg. 15.

> likely 100%, for practicality, it is necessary to make some simplifying assumptions.'[4]

It is reasonable to assume that the persistence of removing the room air conditioner under the Keep Cool RAC retirement program is 100%, because the retired room air conditioner was replaced by a high SEER air conditioner with a measure life of 18 years.

b) The table below compares the measure life and gross kWhs for all measures in Attachment D with energy savings, with the 2009 OPA Measures and Input Assumptions. It was only possible to compare gross kWhs and measure life as:

> "Free ridership rates and other adjustment factors are not included in any of the OPA Measures and Assumptions Lists."[5]

[4] OEB Inputs and Assumptions for Calculating Total Resource Cost, March 28, 2008, pg. 1.
[5] 2009 OPA Measures and Assumptions List (Mass Market), November 26, 2008, pg. 1.

Measure	OEB		OPA	
	Measure Life (Years)	Gross kWh	Measure Life (Years)	Gross kWh
Compact fluorescent bulbs[6]	4	104	8	43
LED Christmas Lights[7]	30	13	5	13.7
Programmable thermostat[8]	18	1,625	15	2,201
Indoor timer[9]	20	186.2	10	219
Outdoor timer	20	292	10	41.1
Water Heater Blanket	6	270	Under Review	
Removal of 2nd refrigerator	6	1,200	9	940.3
Showerhead (LIA)[10]	12	545.6	10	377
Tank wrap (LIA)	6	270	Not Recommended	
Cold Water Detergent (LIA)	1	623	Not Recommended	
Aerators (LIA)	12	33.5	10	22
Pipe insulation (LIA)	6	76	6	38
Clothes Dryer Rack	10	229	Not Recommended	
Baseboard Programmable Thermostat	18	1,466	15	75.1
Motion Sensors	10	208.8	10	64
Dimmer Switch	10	139.2	10	72.2
ETS Units	18	217.3	Not included	
Tank wrap	6	270	6	38
LED Exit sign retrofit kit	25	237	Not included	
ECM furnace fan intermittent[11]	15	364	Not included	
High SEER Central AC	14	351	18	167
High SEER Room AC	12	88	9	96.4

Comparison of the inputs and assumptions between the Board's Inputs and Assumptions List and the OPA Measures and Assumptions List should be done with caution. In preparing the above table, an attempt was made to compare like

[6] As per SeeLine Group Inc.'s *Total Resource Cost Test Assessment of the '2005 Lighten Your Electricity Bill' Program* Report, February 2006, it is assumed that the average wattage sold during this program was 15W.
[7] As per SeeLine Group Inc.'s *Total Resource Cost Test Assessment of the '2005 Lighten Your Electricity Bill' Program* Report, February 2006, it is assumed that 50% of the LED lights sold were those replacing a 5 watt string and the remaining 50% replaced a mini light string.
[8] Forced-Air Electric Heating and Space Cooling
[9] As per SeeLine Group Inc's *Total Resource Cost Test Assessment of the '2005 Lighten Your Electricity Bill' Program* Report, February 2006, it is assumed that 50% of the timers are for air conditioners and 50% for lights.
[10] LIA refers to Low Income Assumptions in the 2009 OPA Measures and Assumptions List.
[11] Select Residential CDM Technology Assessments for The Conservation Bureau, Division of Ontario Power Authority, SeeLine Group Inc., September 2006.

technologies to like technologies, however it was not always possible and it is not always clear what assumptions have been made in determining the savings and measure life.

Until such time as the Board concludes its proceeding EB-2008-0352, electricity distributors should continue to use those inputs and assumptions approved by the Board. Any changes should be on a go forward basis. At the time of Hydro Ottawa's third party assessment, the Board's inputs and assumptions were still in effect.

Interrogatory

3. **Reference Exhibit B Tab1Schedule 2 Page 5 Table 2**

a) For the Electric Avenue provide the breakdown of participants/units between water heater measures and CFLs. Also provide the kwh savings for each. Compare to participation shown in Table 1 of EB-2007-0713 (D3/2/1 Attachment #1 pg 2).Comment on why the 15 Education and Energuide Audit participants are/are not included.

b) For Energy Audit Support and Incentives provide the 2007 *incremental* participants/units. Explain why # SLED exchanges are lower than the 2005/2006 number of 4,330 shown in Table 1 of EB-2007-0713 (Attachment #1 D3/2/1 pg 2). Is Hydro Ottawa claiming LRAM/SSM for continuing savings from 2005/2006 exchanges and/or 2007 units only. Please explain.

c) Overall Program Support -explain why the number of CFLs is lower than in Table 1 of EB-2007-0713 (D3/2/1 Attachment#1 pg 2). Confirm there are no savings attributable to Program Support in the 2007 LRAM/SSM claim.

Response

a) For Electric Avenue, the following table shows the breakdown of participants/units with the associated kWh savings:

Measure	Units	Annual kWhs/Measure	Total per Measure
Powerpack (includes CFL)	20	109.1	2,182
Tank wrap	10	270	2,700
Showerhead	10	545.6	5,456
Aerator-Kitchen	10	33.5	335
Aerator-Bathroom	10	33.5	335
Pipe wrap	10	76	760
Total	70		11,768

EB-2008-0188 Exhibit B-1-2, Table 2 contains the same information related to the Electric Avenue programs as EB-2007-0713 Exhibit D3-2-1, Attachment #1, except for the inclusion of Education and Energuide Audit participants in

Attachment #1. The 15 Education and Energuide Audit participants were not included in Exhibit B-1-2, Table 2 as there are no energy savings associated with an audit.

b) EB-2008-0188 Exhibit B-1-2, Table 2 shows only those Energy Audit Support and Incentives participants for 2005 and 2006 Programs. It does not contain any 2007 *incremental* participants/units. These would be shown in Attachment E.

The 3,400 SLEDs shown in Table 2 agrees with the number shown in Table 1 of the December 14, 2007 version of EB-2007-0713 Exhibit D3-2-1. Hydro Ottawa is claiming LRAM for continued savings from 2005 and 2006 SLED exchanges. In addition, Hydro Ottawa is claiming savings from 2007 SLED exchanges.

c) Table 1 of EB-2007-0713 (D3/2/1 pg. 4) dated November 16th, 2007 was updated by Table 1 of EB-2007-0713, in Exhibit D3-2-1 dated December 14, 2007. In this updated Table the number of CFLs is 29,500 which agrees with Table 2 of EB-2008-0188, Exhibit B-1-2. There are savings attributable to Program Support in the 2007 LRAM claim because in 2005 and 2006 Program Support included CFLs and Seasonal LEDs and these measures continue to have savings in 2007 which affect the 2007 LRAM.

Interrogatory

4. **Reference Exhibit B Tab1Schedule 2 Page 6 Table 3**

a) Provide a full explanation of the changes between the Residential kw/kwh savings shown in Table 3 and the corresponding values shown in Tables 4 and 5 of EB-2007-0713 (D3/2/1 pgs 10-12).

b) Provide support for the Gross and Effective Net kw load reductions for each program/measure with specific reference to the OEB TRC Guide and/or the OPA Measures and Input Assumptions List - www.powerauthority.on.ca/Page.asp?PageID=122&ContentID=6701&SiteNodeID=404.

Response

a) Tables 4 and 5 of EB-2007-0713 Exhibit D3-2-1 provide the kW/kWh savings for Hydro Ottawa's 2005 and 2006 Residential/Small Commercial CDM Programs, incorporating the Partially Effective Factors as appropriate. EB-2008-0188 Exhibit B-1-2, Table 3 on page 6 provides the kW/kWh savings based on a full year for 2007. The following table shows the details of the calculations:

2005 Residential/Small Commercial Programs	Table 4 of Exhibit D3-2-1, column 7 Fully Effective kWh Savings	Table 4 of Exhibit D3-2-1, column 3 2005 Partially Effective Factor	Table 4 of Exhibit D3-2-1, column 9 LRAM Effective 2005 kWh Savings	Table 3 of Exhibit B-1-2, column 3: 2005 Contribution Net kWh; Partially Effective Factor = 1 LRAM Effective 2007 kWh Savings
Co-branded Mass Markets	2,775,870	0.25	693,967	2,775,870
Energy Audit and Support and Incentives				
Water Heater Tune Up	14,364	0.50	7,182	14,364
Cool Shop Program	112,560	0.29	32,830	112,560
Fridge Bounty	627,480	0.60	366,030	627,480
Social Housing	67,532	0.50	33,766	67,532
Overall Support Program	2,886,668	0.33	962,223	2,886,668
SubTotal	6,484,474			6,484,474

2006 Residential Programs	Table 5 of Exhibit D3-2-1, column 6 Fully Effective kWh Savings	Table 5 of Exhibit D3-2-1, column 3 2006 Partially Effective Factor	Table 5 of Exhibit D3-2-1, column 8 LRAM Effective 2006 kWh Savings	Table 3 of Exhibit B-1-2, column 3: 2006 Contribution Net kWh; Partially Effective Factor = 1 LRAM Effective 2007 kWh Savings
Co-branded Mass Markets				
HomeShow 2006 CFLs	98,860	0.75	72,645	98,860
CFLs/Spring Retail EKC	13,415,595	0.67	8,943,730	13,415,595
Fall EKC	8,337,752	0.25	2,084,438	8,337,752
Electric Avenue	13,941	1.0	13,941	13,941

2006 Residential Programs Continued	Table 5 of Exhibit D3-2-1, column 6 Fully Effective kWh Savings	Table 5 of Exhibit D3-2-1, column 3 2006 Partially Effective Factor	Table 5 of Exhibit D3-2-1, column 8 LRAM Effective 2006 kWh Savings	Table 3 of Exhibit B-1-2, column 3: 2006 Contribution Net kWh; Partially Effective Factor = 1 LRAM Effective 2007 kWh Savings
Energy Audit and Support and Incentives				
Powerwise Tune Ups	19,092	0.50	9,546	19,092
Project Porch light	21,594,827	0.25	5,398,707	21,594,827
Direct Energy ECM & AC	94,124	0.67	62,750	94,124
Keep Cool RAC Retirement	1,112,742	1.0	1,112,742	1,112,742
SLED Exchange 2006	60,918	1.0	60,918	60,918
Fridge Bounty				
Fridge Retirement	3,240,000	0.50	1,620,000	3,240,000
Freezer Retirement	1,208,520	0.29	352,485	1,208,520
PowerWise Power Pack	742,688	0.50	371,344	742,688
Residential Load Control	188,276	1.0	188,276	188,276
Social Housing	545,927	0.5	272,964	545,927
Overall Support Program				
Ottawa Eco-Fair	14,720	0.67	9,813	14,720
Employee Conservation Awareness	11,364	1.0	11,364	11,364
Sub Total	53,502,090			53,502,090
Total				59,986,564

b) The Gross and Effective Net kW load reductions for each program/measure in EB-2008-0188 Exhibit B-1-2, Table 3, for which the kW reduction is used in the calculation of the 2007 LRAM, are shown in the table below:

2005 Programs	Units	Gross kW/unit[1]	Gross kW	Free ridership	Net kW
Leveraging Energy Conservation and Load Management					
2 lamp T12 to T8	5,444	0.017	92.55	10%	83.29

2006 Programs	Units	Gross kW/unit	Gross kW	Free ridership	Net kW
Leveraging Energy Conservation and Load Management					
1 lamp T12 to T8	9,198	.011	101.18	10%	92.25
2 lamp T12 to T8	15,864	.017	269.69	10%	244.77
3 lamp T12 to T8	1,178	.024	28.27	10%	25.45
4 lamp T12 to T8	1,389	.034	47.23	10%	42.86
1 T12 to HP T8	51	.015	.77	10%	.67
2 T12 to HP T8	4,969	.026	129.19	10%	115
4 T12 to HP T8	126	.051	6.43	10%	5.74
LED Exit signs	923	.027	24.92	10%	22.43
Custom Projects	1	120.6	120.6	30%	84.42
Total					633.59

Note that the kW savings for Residential and Small Commercial are not shown above as they are only shown on EB-2008-0188 Exhibit B-1-2, Table 3 for illustrative purposes and are not used in any calculation.

[1] Leveraging Energy Conservation and/or Demand Management Program, Task 3 Report Prescriptive Program Equipment Selection Background Document, Marbek Resource Consultants Ltd., July 9, 2005.

Interrogatory

5. **Reference: Exhibit B Tab1Schedule 2 Page 7 and Attachment E**

a) Confirm that Hydro Ottawa is not claiming an SSM for 3rd tranche CDM in 2007.

b) Confirm that Hydro Ottawa is not eligible for an SSM for OPA-funded programs.

Response

a) Hydro Ottawa is not claiming an SSM for 3rd tranche CDM programs in 2007.

b) Hydro Ottawa is not eligible for an SSM for OPA-funded programs and is not claiming an SSM for OPA-funded programs.

Interrogatory

6. **Reference: Exhibit B Tab1Schedule 2 Page 9 Table 7 and Attachment E**

a) For the Residential Class provide a Schedule (or a version of Attachment E) corresponding to Column 3 of Table 7 that provides the details of 2007 programs in terms of participants, free ridership, costs and gross and net kw/kwh savings from 2007 programs. Provide the sources for the input assumptions.

b) Indicate which, if any, programs/measures for which an LRAM is being claimed for 2007 are OPA-funded.

c) Has Hydro Ottawa provided a report to OPA on OPA-funded 2007 programs/measures and has OPA confirmed/accepted the Report with/without review/verification. Provide a copy of the Report(s).

Response

a) The table below provides details of the Residential class 2007 CDM programs from Attachment E, including units, free ridership, gross and net kWh savings corresponding to EB-2008-0188 Exhibit B-1-2, Column 3 of Table 7. Note that costs have not been included as Table 7 refers to LRAM and costs are not a part of this calculation. The sources for the input assumptions are as follows:

- Units – Company Data such as invoices
- Gross kWh savings – OEB Inputs and Assumptions for Calculating Total Resource Cost (the "OEB Inputs and Assumptions"), issued March 28, 2008, except for CFLs which came from the SeeLine Report[1].
- Free ridership – OEB Inputs and Assumptions, except for Social Housing which used the Toronto Hydro Decision EB-2007-0096.
- Partially Effective Factor – Hydro Ottawa staff developed based on start and end date of program and type of program.

[1] SeeLine Group Inc.'s *Total Resource Cost Test Assessment of the '2005 Lighten Your Electricity Bill' Program* Report, February 2006.

2007 Residential Programs	2007 kWhs as shown in Column 3 of Table 7 of Exhibit B-1-2	Units * Net kWh *(EF)	Units	Free-ridership	Gross kWh savings/ unit	Net kWh savings/unit = Gross kWh - Freeridership	Effectiveness Factor (EF)
Energy Audit Support and Incentives	453,614						
13 W CFLs		443,290	6,453	10%	109	98.1	0.7
Water Tank Wrap		3,411	19	5%	270	256.5	0.7
SLEDS		6,913	558	5%	13	12.4	1.0
Fridge and Freezer Bounty	803,850						
Refrigerators		462,240	535	10%	1,200	1,080	0.8
Freezers		207,360	320	10%	900	810	0.8
13 W CFLs		134,250	1,710	10%	109	98.1	0.8
Residential Load Control	40,396						
Programmable Thermostat-cooling		21,393	166	10%	159.1	143.2	0.9
Programmable Thermostat-heating		19,003	16	10%	1,466.3	1,319.7	0.9
Social Housing	228,479						
13 W CFLs		132,918	1,759	1%	109	98.1	0.7
Water Tank Wrap		25,259	135	1%	270	256.5	0.7
Kitchen Aerators		3,519	151	1%	33.6	33.3	0.7
Shower heads		57,078	151	1%	545.5	540.1	0.7
Bathroom aerators		3,333	143	1%	33.6	33.3	0.7
Pipe insulation		6,372	121	1%	76	75.2	0.7
Total	1,526,339						

b) Hydro Ottawa is not claiming LRAM for any 2007 programs funded by the OPA, at this time. Evaluation of these programs is still continuing and may result in an application in a future proceeding.

c) Hydro Ottawa has not provided one comprehensive report to the OPA on OPA-funded 2007 programs/measures. For each of the four OPA funded programs delivered by Hydro Ottawa in 2007, the reporting method to the OPA was as follows:

Program	Reporting Method
The Great Refrigerator Round-up	OPA obtained the number of refrigerators and freezers picked up in Hydro Ottawa's service territory directly from the 1-800 #. Hydro Ottawa's program expenditures on marketing were reported to the OPA using invoices.
Summer Sweepstakes Program	Hydro Ottawa provided the OPA with a data base of participating customers and kWhs saved.
Electricity Retrofit Incentive Program	Hydro Ottawa provided the OPA with copies of each of the applications.
peaksaver	Hydro Ottawa provided the OPA with invoices for the equipment.

To date, Hydro Ottawa has received no feedback from the OPA concerning these 2007 programs.

Interrogatory

7. **Reference: Exhibit B Tab1Schedule 2 Pages 9 and 10**

a) Add a row(s) to Table 8 that provides the balances in the LRAM Account that supports the carrying cost calculations

b) Provide a schedule (or additional columns) that maps the kwh/kw savings to the customer classes leading to the results in Table 9.

Response

a) All of the carrying cost calculations are based on the 2007 LRAM amount of $1,111,384 as shown in Table 7. In the Table below, information has been added to Table 8 from Exhibit B-1-2 which shows how the carrying costs were calculated.

	LRAM balance at end of 2007	Period of Time Months	Interest Rate	Interest =LRAM balance *months/12*interest rate
Q4 2007[1]	$1,111,384	6	5.14%	$28,563
Q1 2008	$1,111,384	3	5.14%	$14,281
Q2 2008	$1,111,384	3	4.08%	$11,336
Q3 2008	$1,111,384	3	3.35%	$9,308
Q4 2008	$1,111,384	3	3.35%	$9,308
Q1 2009[2]	$1,111,384	4	3.35%	$12,410
Total				$85,206

b) The table below shows how the kWhs/kW from Table 7 relate to the LRAM dollars in Table 9.

[1] For 2007, interest rate for Q4 2007 is applied to ½ of the yearend balance to represent the phasing in of programs.
[2] Q1 2009 actually represents January to April 2009.

Class	Savings from column 2 + column 3 of Table 7 of Exhibit B-1-2	Distribution Rate from column 4 of Table 6 of Exhibit B-1-2	LRAM from column 4 of Table 7 of Exhibit B-1-2	Interest Calculations							LRAM plus Total Interest
				Q4 2007[3] 5.14%	Q1 2008 5.14%	Q2 2008 4.08%	Q3 2008 3.35%	Q4 2008 3.35%	Q1 2009[4] 3.35%	Total Interest	
Residential	58,595,599 kWh	$0.01827/kWh	$1,070,541	$27,513	$13,756	$10,920	$8,966	$8,966	$11,954	$82,075	$1,152,616
General Service <50 kW	377,321 kWh	$0.01797/kWh	$6,780	$174	$87	$69	$57	$57	$76	$520	$7,300
General Service > 50 < 1,500 kW	12,196 kW	$2.54267/kW	$31,010	$797	$398	$316	$260	$260	$346	$2,377	$33,387
General Service > 1,500 < 5,000 kW	1,309 kW	$2.33237/kW	$3,053	$78	$39	$31	$26	$26	$34	$234	$3,287
Total			$1,111,384							$85,206	$1,196,590

[3] For 2007, interest rate for Q4 2007 is applied to ½ of the yearend balance to represent the phasing in of programs.
[4] Q1 2009 actually represents January to April 2009.

Interrogatory

8. **Reference: Exhibit B Tab1Schedule 2 Page 11**

a) As noted earlier is Hydro Ottawa requesting a 2007 for OPA –funded programs? If so please comment on the requirements set out in the OEB Guidelines at page 28.

b) Will the ERA Report be available before the deadline for IRs? Please confirm.

Response

a) Hydro Ottawa is not requesting a 2007 LRAM for OPA-funded programs, at this time, as part of EB-2008-0188. Evaluation of these programs is still continuing and may result in a LRAM application in a future proceeding.

b) The ERA Report was provided to VECC on December 24th, 2008, which was before the deadline for IRs. This report was filed as supplementary evidence to EB-2008-0188 on January 5, 2009.

Interrogatory

9. **ERA Report Pages 17-19**

a) For 2007 Residential Programs funded by OPA, provide a Schedule that compares the Freeridership, unit Energy Savings (kwh and kw) and measure life assumptions used by Hydro Ottawa to the OPA Measures and Input Assumptions Guide referenced earlier.

b) Compute the gross and net savings using OPA assumptions and compare the result to the equivalent savings using Hydro Ottawa shown on Page 19

c) Provide an Opinion as to which input assumptions are relevant for OPA-funded programs-OPA Assumptions or OEB TRC Guide plus other assumptions?

d) Provide support or Working Papers for the Effectiveness Factor calculations for 2005/06 measures and comment on determination of the effective dates for Mass Market measures

e) Comment on the duplication of savings and persistence of certain short life measures such as CFLs and EKCs.

f) Provide an estimate as to how much of the total Residential LRAM claim is attributable to each of CFLs and EKCs

Response

a) Hydro Ottawa has not included any 2007 Residential Programs funded by the OPA, in this application for 2007 LRAM. The review performed by Elenchus Research Associates ("ERA") also did not include any 2007 Residential Programs funded by the OPA. As stated in the ERA Report:

"This audit focused on the third tranche programs and does not include any OPA funded programs."[1]

b) As stated above, Hydro Ottawa has not included any OPA funded programs in the application and therefore has no results to compare.

c) The Ontario Energy Board Guidelines for Electricity Distributor Conservation and Demand Management EB-2008-0037, issued on March 28, 2008 state:

> "The inputs and assumptions for a selection of measures, covering a range of typical CDM activities/technologies in residential, commercial and industrial applications are posted on the Board's website. Distributors should use this data for undertaking benefit-cost analysis of CDM measures and programs. "[2]

Hydro Ottawa is currently following this direction, however notes that the Board is in the process of consulting on a proposal to endorse for use by distributors updated input assumptions that have been developed by the OPA (EB-2008-0352). Hydro Ottawa is awaiting the completion of this consultation. The Board's inputs and measures were in effect at the time of Hydro Ottawa's third party assessment.

d) The Effectiveness Factors for the 2005 and 2006 CDM programs shown on pages 17 and 18 of the ERA Report were used in calculating Hydro Ottawa's Board-approved 2005 and 2006 LRAM. They are not applicable to the 2007 LRAM calculation because based on the life of each measure and 100% persistence, the Effectiveness Factor for 2005 and 2006 programs would be 1 in 2007. Page 19 of the ERA Report shows the Effectiveness Factors for the 2007 measures. These were developed based on an understanding of the type of program, e.g. LED Christmas lights are only used for a short period each year while CFLs would operate all year once they are installed, and the start date of

[1] Hydro Ottawa Independent Third Party Audit of Third Tranche CDM Programs 2005-2007, A Report Prepared by Elenchus Research Associates Inc., Final Report December 15, 2008, pg. 4
[2] OEB Guidelines for Electricity Distributor Conservation and Demand Management EB-2008-0037, pg. 10-11.

each program. The table below provides support for the Effectiveness Factors for the 2007 programs.

Program	Effectiveness Factor	Support
Residential Load Control	0.9	Start date was Jan.1st and all installations were completed by end of February; effectiveness factor = (12/12+10/12)/2 ≈ 0.9
Energy Audit Support and Incentives (all measures except SLEDs)	0.7	Start date was Jan. 1st and program was completed by end of July; effectiveness factor = (12/12+5/12)/2 ≈ 0.7
Energy Audit Support and Incentives - SLEDs	1.0	All SLEDs were distributed before the Christmas season; effectiveness factor = 1.0
Refrigerator Buy Back	0.8	Start date was Jan. 1st and program was completed by end of May; effectiveness factor = (12/12+7/12)/2 ≈ 0.8
Social Housing	0.7	Start date was Jan. 1st and program was completed by end of July; effectiveness factor = (12/12+5/12)/2 ≈ 0.7

e) On page 18 of the ERA Report, CFLs are included that were distributed as part of the Homeshow (987), Events Van (1,868) and School Initiative (210). In addition, there were two Every Kilowatt Counts ("EKC") Retail Programs, one in the spring and one in the fall. These EKC programs entailed the distribution of coupons for a variety of energy saving products including CFLs. There is no duplication of reported savings as the kWhs attributable to CFLs from the EKCs Programs are included under that program and not counted elsewhere.

With respect to the persistence of these programs, please refer to the response to VECC LRAM/SSM question #2a.

f) The table below shows an <u>estimate</u> of the Residential LRAM claim that is attributable to each of CFLs and EKCs:

	MWh	$000	%
Attributable to CFLs (not including CFLs under the EKCs programs)	25,944	$474	44%
Attributable to EKCs programs (including coupons for CFLs)	24,324	$444	42%
Other Programs	8,328	$153	14%
Total Residential LRAM Claim	58,596	$1,071	100%

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