Interrogatory

1. **References: Exhibit B, Tab 1, Schedule 3, Table 3**

a) Provide Support/details of the 2006-2009 Residential Class SM Unit costs (procurement and Installation).

b) Provide Support/details of the 2006-2010 Residential Class SM AMI, communications and back office costs (procurement and installation).

c) Provide Support/details of the 2008-2010 Commercial Class GS<50 kW SM Unit costs (procurement and installation).

d) Provide Support/details of the 2008-2010 Commercial Class GS<50kW SM Unit costs (procurement and installation).

e) Provide Support/details of the 2008-2010 Commercial Class GS>50 kW SM Unit costs (procurement and installation).

f) Provide Support/details of the 2008-2010 Commercial Class GS>50kw SM Unit costs (procurement and installation).

Response

a)-f) Hydro Ottawa does not maintain records of the capital costs associated with the Smart Metering program by Customer Classes, however it is possible to assign the costs to the relevant rate classes based on the number of meters installed and forecasted to be installed. Please see the following table.

As originally explained in Hydro Ottawa's evidence related to the Smart Meter Combined Proceeding (EB-2007-0063) Hydro Ottawa is installing some Smart Meters for customers in the GS > 50 kW classes. These costs were found to be prudent in the Board's Decision to Hydro Ottawa's Motion related to the Combined Proceeding Decision (EB-2007-0748)[1]. The provincial meter data management and repository (MDM/R) has not been designed to support customers with demand, therefore costs associated with this aspect of the project were not allocated to the GS > 50 kW classes.

Capital Spending by Calendar Year by Customer Class ($000)

	2006 Actual[2]	2007 Actual[1]	2008 Actual	2009 Forecast	2010 Budget
Residential Class – meters ($000)	$15,259	$7,486	$9,104	$4,126	$1,036
Residential Class – other costs ($000)	832	161	750	1,207	71
GS < 50 kW – meters ($000)	123	2,727	3,999	1,909	1,393
GS < 50 kW – other ($000)	7	13	104	191	11
GS > 50 kW classes – demand meters only ($000)	155	477	616	284	278
Total	$16,376	$10,864	$14,575	$7,717	$2,789

[1] Ontario Energy Board Decision and Order, EB-2007-0748, Page 4, issued September 21, 2007
[2] Does not include work on customer-owned equipment. Per the Board's Decision as part of Proceeding EB-2007-0063, the actual capital spending for 2006 was reduced by $2,896,862 to reflect meter credits received in 2006 and used in 2007. This amount therefore shifted from the 2006 to 2007 capital expenditures for the purposes of Smart Meter funding.

Average Meter Unit Cost, 2006-2010[3]

	($)
Residential Class	136
GS < 50 kW Class	427
GS > 50 kW Classes	724

[3] As noted previously, this is an estimate based on an allocation of costs by number of meters of certain types installed.

Interrogatory

2. References: Exhibit B, Tab 1, Schedule 3, Table 3

a) Provide a breakdown of the O&M costs for meters installed in 2006-2010 between the Residential, GS<50kW and GS>50kW classes.

Response

a) Hydro Ottawa does not maintain records of Operating and Maintenance expenses for the Smart Metering program by Customer Classes, however it is possible to assign the costs to the relevant rate classes based on the number of meters installed and forecasted to be installed. Please see the following table:

O&M Costs by Customer Class ($000)

	2007 Actual	2008 Actual	2009 Forecast	2010 Budget
Residential Class	$558	$628	$1,009	$2,057
GS < 50 kW Class	45	88	159	789
Total	$603	$716	$1,168	$2,845

Note that there were no O&M costs in 2006 and any incremental O&M costs for the GS > 50 kW Class are not considered material. The increase in 2010 is related to registration of accounts to the provincial MDM/R and the roll out of time-of-use rates.

Interrogatory

3. **References: Exhibit B, Tab 1, Schedule 3, Page 6 and Attachment G**

a) Based on the rate class split in capital and operating costs provided in the response to VECC IR#1 and #2 provide a schedule that shows the amount to be recovered (including carrying costs) and the May-December 2010 Rate Rider by rate class and compare this to the aggregate $1.68 per month per metered customer.

b) Is Ottawa Hydro recording its Smart Meter Costs by class in the smart meter variance accounts 1555 and 1556? If not, why not?

Response

a) Hydro Ottawa believes that calculating rate class specific funding adders would be contrary to direction provided by the Ontario Energy Board (the "Board"). Furthermore, since Hydro Ottawa has not tracked all costs by class, the allocation of costs to each class provided in VECC IR#1 and #2 is approximate. While initially Hydro Ottawa had separate rate adders for residential and general service customers, subsequent direction from the Board, as outlined below, has been to maintain one funding adder for Smart Meters to be applied to all metered customers.

On March 21, 2006 the Board issued their Decision on a number of Generic Issues related to 2006 Rate Applications, including Smart Meters (RP-2005-0020/EB-2005-0529). The Board's Generic Decision stated the following with respect to Toronto Hydro's proposal for SM variance accounts: "The first is a capital variance account which incorporates return on investment and amortization components. The second is a smart meter Operations

Maintenance & Administration variance account that will reflect actual amounts spent plus carrying costs. The Board accepts this approach."[1]

This Decision was followed by the June 13, 2006 letter which provided accounting guidance for the SM variance accounts. Appendix A of that letter (copy attached) required that sub-accounts be kept for various categories of costs but not for the various customer classes. As a result, Hydro Ottawa did not maintain a breakdown of costs by customer class.

In a letter dated October 13, 2006 the Board provided clarification on the accounting for SM by saying "As there have been variance accounts established and for simplicity, the Board did not make any distinction for purposes of setting rates between the meter costs for residential and non-residential customers. Furthermore, the Generic Decision stated that this smart meter revenue will be allocated to all metered customers and recovered through the monthly service charges."[2]

On January 29, 2007 the Board issued an Addendum for 2007 SM Rates which stated that "The rate adder will be derived applying the above calculation based on the distributor forecast number of installed meters. The 2007 smart meter adder will be applied to all metered customers as described in the 2006 Generic Decision and will be added to the fixed charge rate by class of customer."[3] The 2007 Smart Meter Rate Adder Model, which was issued at the same time, only allowed for the calculation of one SM rate adder. Hydro Ottawa followed the directions of the Addendum and the Model and as a result had a Smart Meter Adder of $1.74 per month per metered customer approved as part of the 2007 IRM Rate Application (EB-2007-0544, Decision issued April 12, 2007).

[1] Generic Decision with Reasons (RP-2005-0021/EP-2005-0529), March 21, 2006, page 6
[2] Letter from the OEB entitled Filing of Smart Meter Investment Plans for the 2006 Rate Year, October 13, 2006, page 2
[3] Report of the Board on 2nd Generation Incentive Regulation for Ontario's Electricity Distributors Addendum for Smart Metering Rates, January 29, 2009, page i

Hydro Ottawa has continued to follow the Board's direction and maintain one Smart Meter funding adder for 2008-2010.

b) Hydro Ottawa is not recording its Smart Meter Costs by class in the smart meter variance accounts 1555 and 1556. In recording Smart Meter costs in the variance accounts 1555 and 1556, Hydro Ottawa is following the directions provided by the Board in Guideline G-2008-0002 Smart Meter Funding and Cost Recovery, issued October 22, 2008, which refer to the Board's letter of June 13, 2006 discussed above.

Attachment 1 – Ontario Energy Board letter entitled Smart Meters and Low Voltage Accounting Matters arising from the Board's 2006 EDR Decision on Common or Generic Issues Board File No. EB-2006-0136, Appendix A

APPENDIX A

Accounting Guidance for the Smart Meter Variance Accounts

Account 1555, Smart Meter Capital and Recovery Offset Variance Account

Debit: Revenue 4080
Credit: Variance Account 1555

To record the recoveries of smart meter funding included in the fixed charge rate for each class of customer.

Debit: Variance Account 1555
Credit: Bank/Accounts Payable XXXX

To record capitalized direct costs related to the smart meter program.

Appropriate sub-accounts shall be used in account 1555 to segregate costs into various categories of cost.

Carrying charges will apply to the monthly opening principal balance in the variance account at a rate of interest prescribed by the Board. A sub-account shall be used to separately record these carrying charges.

Records shall be maintained at an appropriate level to permit Board review and verification of amounts recorded therein.

Disposition of the variance account balance will not be considered in the Board's annual reviews of electricity non-commodity accounts under Bill 23.

Account 1556, Smart Meter OM&A Variance Account

Debit: Variance Account 1556
Credit: OM&A contra account 5695

To record incremental OM&A expenses and amortization related to the smart meter program.

Separate sub-accounts within the OM&A contra account shall be created for the following categories of expenses: operating, maintenance, administration and depreciation or amortization.

Carrying charges will apply to the monthly opening principal balance in the variance account at a rate of interest prescribed by the Board. A sub-account shall be used to separately record these carrying charges.

Records shall be maintained at an appropriate level to permit Board review and verification of amounts recorded therein.

Disposition of the variance account balance will not be considered in the Board's annual reviews of electricity non-commodity accounts under Bill 23.

Interrogatory

4. **Reference: Exhibit B, Tab 1, Schedule 2, Table 2**

Preamble: Table 2 below outlines the 2007 OPA Programs and measures for which Hydro Ottawa Hydro will be seeking recovery for 2007 LRAM

a) Indicate whether or not the lost revenue associated with 2007 OPA Programs used the latest OPA input assumptions for residential mass market measures and Affordable/Social housing (notably CFLs, SLEDs and PTs) as demonstrated in the following OPA documents:
   i. OPA 2007 EKC Program Calculator
   ii. OPA 2008/2009 measures and Assumptions list (now adopted by the OEB).

b) Indicate whether or not the Hydro Ottawa LRAM claim for 2007 includes any carry forward savings from third tranche programs.

c) If so, provide schedules showing by measure and year the Supporting kwh and L:RAM savings

Response

a) The lost revenue associated with 2007 OPA Programs (i.e. $223,802) was calculated using the input assumptions obtained from the sources shown in the table below. The Gross Annual Energy Savings per Unit (kWh) assumptions used for the 2007 Every Kilowatt Counts Program agree with both the OPA 2008 EKC Program Calculator and the OPA 2009 Mass Market Measures and Assumptions V1.02, April 2009, with two exceptions as noted below.

Program	Gross Annual Energy Savings per Unit (kWh)	Attribution
2007 Great Refrigerator Roundup Program (GRRP)	Quantec LLC., Seeline Group Inc. Final Report "Impact and Process Evaluation of Ontario Power Authority's Great Refrigerator Roundup Program " Table 15 (copy attached). Note that the OPA's 2009 Mass Market Measures and Assumptions V1.02, April 2009 was updated using the above GRRP Report.	Quantec LLC., Seeline Group Inc. Final Report "Impact and Process Evaluation of Ontario Power Authority's Great Refrigerator Roundup Program" Table 19 for Part Use Ratio and Table 27 for Free Rider % (copies attached).
2007 Every Kilowatt Counts	Navigant "Final Evaluation Report: 2007 Every Kilowatt Counts Program" Table 2 (copy attached)	Navigant "Final Evaluation Report: 2007 Every Kilowatt Counts Program" Table 10 (copy attached)
2007 Summer Savings	Results are Hydro Ottawa specific, no assumptions made.	Navigant "Final Evaluation Report: 2007 Summer Savings Program" page 12

The two exceptions are as follows:

1) For Solar Lights under the 2007 Every Kilowatt Counts program, the annual savings shown on the spread sheet are 32.8 kWh, yet in the Navigant Final Evaluation Report: 2007 Every Kilowatt Counts Program, Table 2 shows 4.81 kWh, as does the OPA's 2009 Assumptions list.
2) Also the Navigant Report shows the average free ridership for non Project Porchlight CFLs at 24% (Table 8) however in the spreadsheet 78% is used for non free riders (or 22% for free riders).

The OPA has provided Hydro Ottawa with an explanation of the differences and a copy of that email is attached. Note that the total energy savings and resulting LRAM do not change.

b) The Hydro Ottawa LRAM claim for 2007 contained in this 2010 3GIRM Rate Application does not include any carry forward savings from third tranche

programs. The applied for LRAM is only for 2007 CDM programs funded by the OPA.

c) N/A

Attachment 1 – Quantec LLC., Seeline Group Inc. Final Report "Impact and Process Evaluation of Ontario Power Authority's Great Refrigerator Roundup Program" Table 15, page 36

Attachment 2 - Quantec LLC., Seeline Group Inc. Final Report "Impact and Process Evaluation of Ontario Power Authority's Great Refrigerator Roundup Program" Table 19, page 42

Attachment 3 - Quantec LLC., Seeline Group Inc. Final Report "Impact and Process Evaluation of Ontario Power Authority's Great Refrigerator Roundup Program" Table 27, page 48

Attachment 4 – Navigant "Final Evaluation Report: 2007 Every Kilowatt Counts Program" Table 2, page 11

Attachment 5 - Navigant "Final Evaluation Report: 2007 Every Kilowatt Counts Program" Table 10, page 29

Attachment 6 – Email from OPA to Hydro Ottawa, January 7, 2010

Table 14. Weighted Per-Unit Savings – Top Freezer Fridge 10 to 14 CF

Appliance Type	Size (Cubic Feet)	Age (Years Old)	Annual Savings from Retirement- Not Replaced (kWh)	Annual Savings from Retirement and Replacement with Standard Efficiency unit (kWh)	Annual Savings from Retirement and Replacement with ENERGY STAR unit (kWh)	Weighted Annual Savings (kWh)
Top Freezer Fridge	10 to 14	10 to 12	690	271	334	511
Top Freezer Fridge	10 to 14	13 to 15	859	441	504	681
Top Freezer Fridge	10 to 14	16	915	496	559	736
Top Freezer Fridge	10 to 14	GT 16	1,078	660	723	900
Top Freezer Fridge	10 to 14	LT 10	608	190	252	430

Utilizing the same method presented above, the evaluation team determined the weighted average savings associated with possible appliance type, size, and age scenarios. It is important to note that these values were determined using the distribution of participation unique to 2007 and the survey responses provided by 2007 participants. While this "ground up" approach to determining program savings yields accurate results for 2007, it is critical to understand that future changes in the distribution of appliances participating in the GRRP and in participant replacement practices will alter the weighted values presented in Table 15, Table 16 and Table 17.

Table 15 and Table 16 present the weighted gross per-unit savings for each GRRP appliance and appliance type. Again, these values were generated using the methodology presented above and weighted according to appliance type, size, and age. Essentially, the values presented in the table below represent the per-unit savings generated by the removal of each appliance or appliance type in 2007.

Table 15. Per-Unit Gross Savings by Appliance

Appliance	Annual Energy Savings (kWh)	Winter Demand Savings (kW)	Summer Demand Savings (kW)
Freezer	515.4	0.060	0.059
Refrigerator	744.7	0.077	0.064
Window Air Conditioner	240.2	-	0.243
Small Freezer	338.5	0.039	0.038
Small Refrigerator	490.0	0.050	0.041

Table 18 illustrates how the part-use factors for each of the three categories above were applied to the observed annual weighted average energy savings for refrigerators, freezers, and compact units. Again, recall from the previous section that these values account for the percentage of participants who retired their appliance without replacing it, who replaced it with an ENERGY STAR unit, and who replaced it with a standard efficiency appliance. Note that room air conditioners were not included in the part-use analysis since such appliances are typically turned off and on, unlike refrigerators and freezers. Assumptions regarding the hours of operation for room air conditioners account for these usage patterns in the calculation of gross savings (see Chapter 5).

Table 18. Calculation of Part-Use Factors

	Refrigerator			Freezer			Compact Units		
Operational Status	**Percent of Recycled Units**	**Part-Use Factor**	**Adjusted Per-Unit Energy Savings (kWh/Yr)**	**Percent of Recycled Units**	**Part-Use Factor**	**Adjusted Per-Unit Energy Savings (kWh/Yr)**	**Percent of Recycled Units**	**Part-Use Factor**	**Adjusted Per-Unit Energy Savings (kWh/Yr)**
Not in Use	8.0%	-	-	4.0%	-	-	10.2%	-	-
Used Part Time	15.0%	0.29	212.2	7.0%	0.32	165.4	17.3%	0.37	156.6
Used Full Time	77.0%	1.00	744.7	89.0%	1.00	515.4	72.4%	1.00	429.1
Weighted Average			**604.8**			**470.3**			**338.1**

After determining the part-use factors and associated adjusted annual energy savings, the evaluation team determined each appliance's part-use ratio. The ratio, calculated simply by dividing the average part-use adjusted annual savings by the full-time annual savings (in the case of refrigerators – 604.8 / 744.7 = 0.812), can then be used to accurately account for the percentage of time participating units were actually in use.

Table 19. Part-Use Ratios by Appliance

Appliance	Part-Use Ratios
Refrigerator	0.812
Freezer	0.912
Small Freezer	0.788
Small Refrigerator	0.788
Room Air Conditioner	1.000

Findings

Utilizing the weighted per-unit savings presented in Table 15 and Table 16 and the part-use factors determined above, the aggregate annual gross energy and demand savings generated by the GRRP in 2007 is presented in Table 20.

Findings

As evident in the table above, there was a significant disparity between the stated intentions of the GRRP participants and the actual disposal undertaken by surveyed non-participants. This inconsistency is further evident in

Table 27 which totals the observed Scenarios 1 and 3 free-ridership presented above in Table 22 and Table 26, and calculates program NTG using participant and non-participant results.

As a result of this disparity, the evaluation team followed the approach used in the most recent evaluation of California utilities' statewide appliance recycling program and averaged the participant and non-participant responses. This approach allows for the reported actions of the actual program participants to be considered, though it tempers the stated intentions of the participants utilizing the stated disposal methods used by survey non-participants. The average NTG will serve as the evaluation's final determination of the program's NTG for each appliance.

Table 27. GRRP Net-to-Gross Ratios

Appliance	Participant Net-To-Gross Ratio	Non-Participant Net-To-Gross Ratio	Average Program Net-To-Gross Ratio
Refrigerator	0.410	0.555	0.482
Freezer	0.452	0.550	0.501
Room Air Conditioner	0.431	N/A	0.431
Compact Unit	0.382	N/A	0.382

A comparison to the NTG resulting from similar appliance recycling programs is provided in Table 28. As evident in the table, NTG have varied widely based on the program itself and the methodology utilized to evaluate it. While the 2007 GRRP is lower than several of the cited programs, it falls comfortably when the range of NTG observed in the past decade..

Table 2: 2007 Every Kilowatt Counts Key Measure Assumptions

		Annual Energy Savings (kWh)									Peak Demand Saving (kW)		Other		
Number	Measure Name	Winter Peak	Winter Mid	Winter Off Peak	Summer Peak	Summer Mid	Summer Off Peak	Shoulder Mid	Shoulder Off-Peak	Annual Total	Winter	Summer	O&M Savings ($/year)	Incremental Cost ($)	Life (years)
1	15 W CFL Bulbs (Spring & Fall)	3.75	3.49	8.36	0.76	4.15	7.63	6.36	8.51	**43.02**	**0.0121**	**0.0013**	$0.99	$4.00	8
2	20W + CFLs Bulbs (Spring & Fall)	5.42	5.04	12.07	1.10	6.00	11.02	9.19	12.29	**62.14**	**0.0175**	**0.0019**	$0.99	$4.38	8
3	Project Porchlight CFLs	3.75	3.49	8.36	0.76	4.15	7.63	6.36	8.51	**43.02**	**0.0121**	**0.0013**	$0.99	$2.25	8
4	Energy Star Ceiling Fan	7.84	7.29	17.45	1.59	8.67	15.93	13.29	17.78	**89.84**	**0.0253**	**0.0028**	$2.96	$47.00	10
5	Furnace Filter - Average House	4.54	4.73	13.39	2.56	2.28	5.11	1.71	3.39	**37.72**	**0.0083**	**0.0112**		$4.00	1
6	Solar Lights	0.00	0.00	0.00	0.00	0.63	3.14	0.24	0.80	**4.81**	**0.0000**	**0.0000**		$4.75	5
7	Outdoor Motion Sensor	12.11	11.03	37.11	0.00	9.19	34.67	18.27	37.44	**159.82**	**0.0541**	**0.0000**		$16.20	10
8	Dimmer Switch	2.06	1.92	4.59	0.42	2.28	4.19	3.50	4.68	**23.65**	**0.0066**	**0.0007**	$1.48	$13.00	10
9	Energy Star Light Fixtures	10.54	9.78	24.46	1.90	11.25	22.41	17.65	24.88	**122.88**	**0.0366**	**0.0056**	$1.47	$24.00	16
10	SLEDs (including SLED exchange)	3.52	3.52	6.66	0.00	0.00	0.00	0.00	0.00	**13.70**	**0.0061**	**0.0000**	$1.00	$8.70	5
11	T8	3.25	3.02	7.23	0.66	3.59	6.60	5.51	7.37	**37.23**	**0.0105**	**0.0012**		$22.00	18
12	Programmable Thermostat	12.31	12.83	36.28	0.04	0.28	0.71	4.23	8.45	**75.13**	**0.0222**	**0.0000**		$25.00	15
13	Power Bar with Timer	4.57	5.14	13.33	3.09	6.31	15.00	10.16	14.77	**72.38**	**0.0090**	**0.0063**		$21.00	10
14	Lighting Control Devices	5.20	5.88	20.25	10.54	5.59	6.57	8.73	9.47	**72.23**	**0.0168**	**0.0185**	$0.99	$20.80	10

Further details underlying these key assumptions are provided in *Appendix A: Prescriptive Input Assumptions*.

Note that the energy and demand impacts of the three CFL-related measures at the top of Table 2 reflect NCI's finding through the survey that approximately 3% of CFLs purchased through the EKC program replaced existing CFLs in the purchasers' homes. This is perhaps not surprising given the length of time that CFLs have been available. Unfortunately, respondents were not asked whether the CFL being replaced was still working or whether they would otherwise have replaced it with another CFL anyway. Nonetheless, the energy savings and peak demand impacts above reflect this finding – 3% of CFLs purchased through the program are not yielding any incremental energy savings and peak demand impacts over the existing bulb (a CFL in these cases).

In all cases, the annual operating and maintenance savings shown are based on avoided incandescent costs given due to either: 1) the longer life of the various EKC lighting measure (eg, CFL) or 2) the beneficial impacts of the EKC lighting control devices (eg, dimmers) in terms of extending the life of the incandescent bulb controlled by the device.

free-ridership for the other group). Although the total number of respondents comprising this second group was relatively low, use of a unique free-ridership estimate for this group based on their weighted free-ridership was considered appropriate given the relative immaturity of T8 fixtures and power bars with timers in the consumer marketplace relative to the other products. Although Energy Star® light fixtures are also relatively immature in the consumer marketplace – and hence could have been grouped with T8 lights and power bars with timers – the free-ridership among Energy Star® light fixture EKC coupon redeemers was much higher than for the T8 fixtures and power bars with timers. Given this, the responses of the Energy Star® light fixture EKC coupon redeemers were grouped with the other products yielding the free-ridership rate of 45% given above.

Based on this, the free-ridership for the non-CFL EKC products was estimated to be as shown in Table 10.

Table 10: Estimated Free-Ridership for Non-CFL EKC Products

Product	***Estimated Free-Ridership***
Energy Star® Ceiling Fan	45%
Furnace Filter	45%
Outdoor Solar Lights	15%
Outdoor Motion Sensor	45%
Dimmer Switch	45%
Energy Star® Light Fixtures	45%
SLEDs	51%
T8	23%
Programmable Thermostat	45%
Power Bar with Timer	23%
Lighting Control Devices	45%

No information was available regarding the free-ridership rate for the "Green the Season" SLEDs, so the free-ridership for SLEDs purchased through this component of the EKC program was assumed to be the same as for the other SLEDs purchased through the program.

Spillover

Given sample size and survey length limitations, spillover was only explored for CFLs. Analysis of the motivations and influences on CFL purchasers who did not use EKC coupons

From: James Yue [James.Yue@powerauthority.on.ca]
Sent: January 7, 2010 2:24 PM
To: Scott, Jane
Subject: 2007 EKC measures & assumptions - Hydro Ottawa LRAM interrogatory responses

Hi Jane,

We did some investigation of the discrepancies and hopefully the responses below resolve the issues.

Response on issue #1 – discrepancy in annual savings for the 2007 Every Kilowatt Counts program – Solar Light measure, between the 2006-8 OPA Conservation Program Results - Hydro Ottawa report (32.8 kWh/yr) and the Final Evaluation Report: 2007 Every Kilowatt Counts Program by Navigant Consulting (Evaluation Report) and OPA 2009 Mass Market Measures & Assumptions List (4.81 kWh/yr).

An error was made in the participation and unit energy savings numbers in the reports but the overall energy savings result is correct and remains the same.

The original 32.8 kWh/yr/unit was referenced from a separate Final Evaluation Summary for 2007 Every Kilowatt Counts Program based on data supplied by Navigant Consulting. We have contacted Navigant Consulting who performed the data measurements and calculations based in the Final Evaluation Report and they gave the following response:

- An erroneously application of the 15% inclusion factor (explained on page 30 of the Evaluation Report) to the participation data was the source of the discrepancy.
- The 89,720 coupons figure indicated on page 18 of the Evaluation Report was erroneously discounted by the 15% inclusion factor. The number of coupons redeemed was actually **598,130** (89,720 / 0.15). Using the same assumption of 3.4 solar lights / coupon, there were **2,033,642** (598,130 x 3.4) solar lights procured during the 2007 Every Kilowatt Counts Program instead of 305,048 solar lights.
- The correct value for the Gross Unit Annual Energy Savings (kWh) assumption is **4.81** as indicated in the Evaluation Report and OPA 2009 Mass Market Measures & Assumptions List, not 32.8 as indicated in the 2006-8 OPA Conservation Program Results.
- These two revisions offset and result in no net impact in terms of savings results.
- The correct assumptions of **2,033,642** solar lights and **4.81** kWh of Gross Unit Annual Energy Savings result in the province wide total of 10 and 49 GWh of Gross Total Annual Energy Savings and Gross Total Life Time Energy Savings respectively from solar lights as indicated in Table 5 on page 15 of the Evaluation Report.
- The erroneous assumption of 32.8 kWh of Gross Unit Annual Energy Savings was calculated based on the 10 GWh of Gross Total Annual Energy Savings from solar lights divided by erroneously discounted 305,048 (89,720 coupons x 3.4 solar lights / coupon) solar lights.
- Proportionately Hydro Ottawa's share (5.44%) of the provincial solar lights total did not change. Thus Hydro Ottawa's allocation of 2007 EKC – Solar Lights procured is 110,544.

Response on issue #2b – Free Ridership of 1) '15 W CFLs' and 2) '25 W + CFLs' having a free-ridership of 78%

The free-ridership is indeed 24% as stated at the top of page 27 in the Final Evaluation Report: 2007 Every Kilowatt Counts Program by Navigant Consulting. It erroneously included the 2% spill over rate as explained at the bottom of page 29 in the report. Unlike other measures in the list which have spill over set up to be a factor of a product calculation, Navigant Consulting chose to determine spill over as an addend of a sum calculation. Thus the Aggregate Net-to-Gross Adjustment Calculation for these two measures is the following sum:

Aggregate Net-to-Gross Adjustment = (1 – free-ridership) + (spill over)
= (1 – 24%) + (2%)
= 76% + 2%
= 78%

which results in no net impact on previously stated results. Please accept the following revisions:

#	Measure	Free Ridership (%)	Spill Over (%)	Aggregate Net-to-Gross Adjustment (%)
1	15 W CFLs	76	2	78
2	25 W + CFLs	76	2	78

I hope this resolves the two issues. Please let me know if we can be of any more assistance.

James Yue
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Interrogatory

5.Reference: Exhibit B, Tab 1, Schedule 2, Page 6

a) Why is Hydro Ottawa proposing to apply the 2007 LRAM rate rider for only 8 months? Please explain.

b) Show the separate and combined effects of the current CDM rate rider plus the 2007 LRAM rate rider on residential customers for the rate year 2010.

Response

a) Hydro Ottawa is proposing to apply the 2007 LRAM rate rider for 8 months in order to ensure that the lost revenue has been recovered when new distribution rates, which Hydro Ottawa will be applying for to be effective January 1, 2011, are implemented. Note that the amount being collected from the Residential class is sufficiently small enough that even with the LRAM rate rider applied over 8 months, the new rate rider is still lower than the existing LRAM rate rider and therefore the total bill impact for a typical Residential customer using 800 kWh/month is negative (-0.2%).

b) Hydro Ottawa does not have a CDM rate rider since all of its CDM programs are funded through the OPA. During the period January 1, 2010 to April 30, 2010, Hydro Ottawa's residential customers will be charged the current approved LRAM rate rider of $0.0005/kWh.

Hydro Ottawa is proposing a new LRAM rate rider for residential customers of $0.0002/kWh effective May 1, 2010. Since the LRAM rate rider is decreasing, the bill impact on the total bill for a Residential customer using 800 kWh/month after May 1, 2010 is -0.2%. Without this new LRAM rate rider the bill impact would be –0.3%