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December 8, 2009

Kirsten Walli
Board Secretary
Ontario Energy Board,
2300 Yonge St.
Suite 2700, P.O. Box 2319
Toronto, Ontario
M4P 1E4

Dear Ms. Walli:

Re: Oakville Hydro Electricity Distribution Inc.
Oakville Hydro's Revised Responses to Vulnerable Energy Consumers Coalition (VECC) Interrogatories on 2010 Electricity Distribution Rate Application – EB-2009-0271

Please find enclosed Oakville Hydro's revised responses to the interrogatories of the Vulnerable Energy Consumers Coalition (VECC) in the above-noted proceeding.

Oakville Hydro has corrected formatting issues that occurred during the conversion to pdf. Oakville Hydro has corrected the page orientation on page 27, Table 5 – Source of Input Assumptions for Each Residential Program and page 33, Table 8 – List of 2008 CDM Program Inputs so that the entire table is visible. Oakville Hydro has also corrected the superscripted references on Page 36, Table 9 – Input Assumptions and kWh Savings Comparison Table which had been formatted as regular numerals.

In addition, the 2006 TRC calculators provided by the OPA that Oakville Hydro had omitted from the original submission have been inserted following the response to interrogatory number 28 (e).

These corrections and additions do not change or affect in any way Oakville Hydro's responses to these interrogatories.

Yours Truly,

Cristina Birceanu
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IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c.O.15, Sch. B;

AND IN THE MATTER OF an Application by Oakville Hydro Electric Distribution Inc. for an Order or Order setting just and reasonable rates commencing May 1, 2010.

Oakville Hydro Electricity Distribution Inc.
Responses to Interrogatories

Vulnerable Energy Consumers Coalition (VECC)

Filed: November 20, 2009

Index

Question #1

Reference: Exhibit 2/Tab 4/Schedule 1, page 1

a) Please provide copies of the Oakville Hydro capital budgets as approved by the full Oakville Hydro Board for each year 2006-2009 inclusive.

RESPONSE:

These budgets are provided in the following appendices:

Appendix VECC 1 – 2006, 2007, 2008 and 2009 Capital Budgets.

b) Please provide an explanation for any material variances between actual capital spending and the approved budget for each year, 2006-2008 inclusive.

RESPONSE:

Historically, the annual actual capital spending has been less then the budgeted capital spending. This is caused by many uncontrollable factors such as delays in the project, emergency maintenance to attend to, uncontrolled road work or widening not anticipated but required, and other customer changes.

c) For 2009, please indicate whether Oakville Hydro is on track to spend the approved budgeted amount.

RESPONSE:

Based on the most current information available and the actual year-to-date capital expenditures, Oakville Hydro believes that it is on track to spend the approved budgeted amount.

Question #2

Reference: Exhibit 2/Tab 4/Schedule 3, page 9

a) Please provide a breakdown, by vehicle, of the 2009 spending on vehicles of $323,500.

RESPONSE:

The following is the breakdown of the 2009 capital spending on vehicles:

Replace 1996 Chevrolet pick-up	$ 29,000
Replace 1997 Chevrolet pick-up	31,500
Replace 1999 Meter van	35,000
Replace 1999 P&C Splinter Van	82,000
Replace 2000 Ford Dump truck # 61	62,000
Replace 2000 Ford Dump truck # 62	62,000
Replace 2 reel trailers	22,000
Total	$ 323,500

Question #3

Reference: Exhibit 2/Tab 4/Schedule 4, page 8 and Appendix B, page 1 and page 4

a) Please provide a copy of the Building Envelope Condition Assessment Report dated June 20, 2005.

RESPONSE:

Please see Appendix VECC 3.

b) Please provide a breakdown of the $180,000 for roof replacement.

RESPONSE:

Details of the roof replacement cost:

ITEM	AMOUNT
Membrane and insulation replacement	$152,000
Windswept corners and support rectification	$12,000
Undercoating alteration	$16,000
TOTAL COST	**$180,000**

c) Please provide details with respect to the $50,000 spending on "General Office."

RESPONSE:

The $50,000 spending on "General Office" is for leasehold improvements each year. This typically includes general office renovations and office furniture. Due to the value of these items they are not detailed individually.

Question #4

Reference: Exhibit 2/Tab 4/Schedule 6, page 1

a) Please explain how the 58% labour burden was calculated.

RESPONSE:

The labour burden has been calculated taking the cost of all the payroll benefits provided to the union and dividing those costs by the number of hours worked. The union benefits include the following:

Accidental Death & Dismemberment
Apprenticeship Training
Boot Allowance
Canada Pension Plan
Dental
Driver's Licence & renewals
Drug Plan
Employer Health Tax
Safety Eye Glasses
Life Insurance
Long Term Disability
OMERS
Semi Private Hospital Coverage
Unemployment Insurance
Uniforms (clothing)
Uniforms – dry cleaning
Vision Care
Workers' Compensation
Bereavement
Illness
Inclement weather
Safety Meetings
Statutory Holidays
Vacation

Please explain how the 50% supervisor burden was calculated.

RESPONSE:

The 50% Supervisory burden is to recover management wages & benefits which are not directly allocated to maintenance and capital jobs. Costs recovered in this burden include the following:

- Salaried professional Engineering managers and supervisors
- Salaried Operations Manager and crew foreman
- Salaried Protection & Control Manager
- Occupancy cost for the Engineering, Operations and P&C staff
- General administration costs of these departments

Question #5

Reference: Exhibit 2/Tab 4/Schedule 7, Table 20, page 2

a) Please comment on the 2007 performance in "Underground Cable Locates Completed within Five Days."

RESPONSE:

For some months throughout 2007, Oakville Hydro was below the standard of completing underground locates for customers within 5 days, 90% of the time due to the volume of requests and available locating resources. Additional resources have been allocated to the locating function since 2007.

Question #6

Reference: Exhibit 4/Tab 1/Schedule 1, page 3 and
Exhibit 4/Tab 2/Schedule 2, page 10

a) Please explain why Oakville Hydro is budgeting for larger percentage increases in salary for non-union staff than for union staff.

RESPONSE:

Management increases were lower in 2009 than the actual 3.8% received by the senior levels in the union and trades group of union employees in 2009 who report to management supervisors. These additional dollars for 2010 are necessary to correct the pay compression that was created.

b) Please indicate when the 2009 compensation study will be completed, who is conducting the study. If available, please provide a copy of the study.

RESPONSE:

The Mercer compensation study has not been completed. It is in progress with the consulting firm and the results have not yet been presented to Oakville Hydro Corporation. The study encompasses Oakville Hydro and its affiliates. It is expected that the final report will be available by mid December 2009.

c) Please provide a copy of the compensation study that was performed in 2006.

RESPONSE:

Oakville Hydro has filed the study in confidence according to the Board's *Practice Direction on Confidential Filings* (the "Practice Direction"). The study has been designated as Appendix VECC # 6c). The Compensation study conducted by Hay Group in 2006 contains confidential employee information – specifically, it sets out detailed compensation data of specific postitions of the Applicant. The Compensation Study also included employees of the affiliates, and that information has been excluded from both the confidential and redacted copies being filed, as they are not relevant to this proceeding.

Appendix F of the OEB's *Practice Direction on Confidential Filings* (the "Practice Direction") provides, in part, that "Subject to limited exceptions, the Board is prohibited from releasing personal information." The information in the Hay Report related to salaries for individual positions effectively identifies the salaries of individuals, as in many cases there is only one person occupying each of the identified positions. Oakville Hydro submits that in the absence of any

overriding formal disclosure requirements, salary information is highly sensitive personal information, and its public disclosure could expose those individuals to pecuniary harm in the employment market as it could affect their competitive positions with other potential employers. Information of this kind is protected from disclosure under Section 21 of the *Freedom of Information and Protection of Privacy Act* ("FIPPA").

Oakville Hydro is prepared to provide unredacted copies of this material to parties' counsel and experts or consultants provided that they have executed the OEB's form of Declaration and Undertaking with respect to confidentiality and that they comply with the Practice Direction, subject to Oakville Hydro's right to object to the OEB's acceptance of a Declaration and Undertaking from any person.

In keeping with the requirements of the Practice Direction, Oakville Hydro is filing with the Board a confidential, unredacted version of the Hay Report. The unredacted version of the document has been placed in a sealed envelope marked "Confidential".

Question #7

Reference: Exhibit 4/Tab 2/Schedule 2, page 10

a) Please provide details with respect to the $20,000 budgeted for professional development of qualified professional engineers.

RESPONSE:

The $ 20,000 budgeted for professional development of a qualified professional engineer, is for the tuition for one of Oakville Hydro's employees to obtain his MBA. This expense required to provide the business acumen to a management position and forms part of Oakville Hydro's succession planning process.

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Question #8

Reference: Exhibit 4/Tab 2/Schedule 2, page 11, "Appendix 2-H"

a) Please explain fully why the separate line item for inflation does not result in double counting of inflation embedded in any of the other line items.

RESPONSE:

There is no double counting in the expenses. The separate line for inflation is to account for the inflation of ongoing costs included in the opening balance, to which Oakville Hydro has added or subtracted specific items that were either: 1) not included in the prior year, or 2) were included in the prior year and are not going to reoccur in the current year.

b) Do the other line items represent actual costs incurred for Oakville Hydro? If so, please explain why "an estimate of 3% was used" for 2006-2009.

RESPONSE:

Yes, the other line items represent actual costs incurred by Oakville Hydro that were not identified specifically on a line item above. In other words it represents the amount to balance to the totals.

The estimate of inflation of 3% is to account for cost increases of the expenses included in the opening balance. The line items shown in the chart only summarize the specific items as identified in the previous pages of Cost Drivers. The cost of the balance of the expenses is forecast to increase by inflation only (3%).

Question #9

Reference: Exhibit 4/Tab 2/Schedule 5, pp 4-6 and Appendix A

a) Please discuss fully how Oakville Hydro has determined that its estimated costs associated with IFRS changes are reasonable and in line with estimates of other, comparably sized utilities.

RESPONSE:

a) Oakville Hydro issued an RFP to 4 CA firms to quote for their assistance on the implementation of IFRS. The RFP requested, among other requirements, the following:

- Diagnostic assessment of the impact of implementation on reporting practices, business functions and the information technology systems.
- The assessment will provide a detailed comparison of the company's current accounting practices to IFRS, outlining the impacted areas.
- A high level project plan outlining the scope of the conversion project, the key phases, respective timeframes and key information required.

The successful respondent to the RFP was KPMG, who is providing this same service to many other LDCs in southern Ontario. They have seen Oakville Hydro's cost estimates and knowing how Oakville Hydro has decided to staff the project, have advised that these cost estimates are in line with other comparably sized utilities.

Oakville Hydro has included a copy of the RFP and a copy of KPMG's response and presentation.

b) Please indicate when the cost estimates for IFRS compliance were made.

RESPONSE:

The cost estimates were made and presented to Oakville Hydro's Audit & Finance Committee on August 6, 2009.

c) Please indicate how the cost estimates for IFRS compliance reflect the latest Exposure Draft.

RESPONSE:

The cost estimates reflect Oakville Hydro putting in place new processes to gather data starting January 1, 2010 at a granularity level that will allow it to respond to changes that may come out of the exposure draft whether or not it is approved.

The estimate does not include costs to fair value assets should the exposure draft be rejected

Question #10

Reference: Exhibit 3/Tab 1/Schedule 2, page 1

a) Please provide a schedule setting out the rates and volumes by customer class supporting the 2010 test year revenues reported in Table 1.

RESPONSE:

See Oakville Hydro's response to the Board Staff's Interrogatory #31.

b) Please clarify whether the rates used in part (a) included:
- **Charges for LV recovery**
- **Smart Meter charges**
- **Discounts for transformer ownership where applicable.**

RESPONSE:

The amounts used in part (a) do not include LV charges, Smart Meter charges, and Discounts for transformer ownership.

c) Please reconcile the 2010 revenues by class reported in Table 1 with those reported in Exhibit 3/Tab 2/Schedule 1, page 53.

RESPONSE:

The 2010 revenues by class reported in Table 1 were calculated based upon the percentage revenue by class using forecasted 2010 volume at existing 2009 rates. These percentages were then applied to the base revenue requirement for the 2010 test year. See OEB Interrogatory #31.

The revenues reported in Exhibit 3/Tab 2/Schedule 1, page 53 are based upon the proposed rate structure.

The following table provides the 2010 revenues by class based upon the 2010 forecast at existing 2009 rates and the proposed revenues by rate class.

	2010 Test Year	
	Existing Rate Structure	**Proposed Rate Structure**
Distribution revenue		
Residential	$20,668,344	$18,301,418
GS<50 kW	$4,856,278	$4,856,278
GS 50 to 999 kW	$5,885,832	$7,697,951
GS 1000 to 4999 kW	$1,277,945	$1,277,945
Large Use	$0	$0
Street Light	$145,698	$746,003
Sentinel	$430	$15,661
Unmetered Scattered Load	$206,995	$146,268
Total	$33,041,523	$33,041,523

Question #11

Reference: Exhibit 3/Tab 2/Schedule 1, page 1, lines 6-7

a) In its EB-2007-0680 Report (page 33) the Board directed Toronto Hydro to work with other parties to understand differences in load forecast methodologies employed. Has Oakville had any discussions with Toronto Hydro regarding changes it may be implementing in its load forecast methodology? If yes, what was the outcome and how are they reflected in Oakville's current approach?

RESPONSE:

Oakville Hydro has not had any discussions with Toronto Hydro regarding the changes that it may be implementing in its load forecast methodology.

The Independent Electricity System Operator (IESO) has developed a new Load Forecasting Forum in response to interest from local distribution companies. This Forum is designed to discuss issues that impact and support demand and load forecasting activities and will address topics such as economic and weather drivers, model demonstration and discussions on forecasting challenges.

The IESO uses multivariate econometric equations to estimate the relationships between demand and drivers, including weather, economic data and calendar variables to produce load forecasts. Oakville Hydro participated in the IESO Forum in November 11, 2009 and it plans to participate in any future Forums offered by the IESO and to implement any new forecasting techniques in their next rebasing application.

Question #12

Reference: Exhibit 3/Tab 2/Schedule 1, page 13

a) What is the definition and source for the population variable used in the regression analysis?

RESPONSE:

As stated in Exhibit 3, Tab 2, Schedule 1, Page 14, the source for the population variable used in the regression analysis is the Report-Administrative Services Committee – Best Planning Estimates of Population, Occupied Dwelling Units and Employment for the Period of 2007-2021 – Town of Oakville (the Report).

The population variable is defined as the official Census population as reported by Statistics Canada, not adjusted for undercounting. It is an official count of the Town of Oakville's population.

Please see a copy of the Report in the Oakville Hydro's response to Board Staff' interrogatory no. 9 - Appendix OEB 9

b) If the data source for "population" does not provide monthly values, what is the frequency of the historical data and how were the monthly values established?

RESPONSE:

The source data provided annual population data. Monthly values were derived by spreading the annual growth evenly to each month in the year.

Question #13

Reference: Exhibit 3/Tab 2/Schedule 1, page 9-13 and page 15

a) The discussion on page 15 suggests that it is the exclusion of the Large Use explanatory variable that gives rise to the Population variable having a "negative" coefficient in some Model Versions. Please re-estimate the model using Version #1 (with Dwelling Units) but also include the Large Use variable. Please provide the results in a format similar to that for the other versions and contrast the results with those for Version #5.

RESPONSE:

Oakville Hydro has run Version 1 (with dwelling Units) of the load forecast including Large Use variable, and has referred to this as Version 6. Version 6 results and the comparison with the previous five versions results are presented in the following tables:

Table 1 - Version 6 Statistical Results

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.96
R Square	0.91
Adjusted R Square	0.91
Standard Error	4,237,124.54
Observations	137.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	9	2.40497E+16	2.67219E+15	148.8415878	4.92731E-63
Residual	127	2.28006E+15	1.79532E+13		
Total	136	2.63297E+16			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-97,963,731.36	15,195,082.46	-6.45	0.00	-128,032,056.96	-67,895,405.76	-128,032,056.96	-67,895,405.76
Heating Degree Days	25,824.39	2,573.26	10.04	0.00	20,732.37	30,916.41	20,732.37	30,916.41
Cooling Degree Days	232,407.28	15,072.87	15.42	0.00	202,580.78	262,233.77	202,580.78	262,233.77
Ontario Real GDP Monthly %	671,119.76	165,227.46	4.06	0.00	344,164.44	998,075.09	344,164.44	998,075.09
Number of Days in Month	3,367,063.12	471,961.53	7.13	0.00	2,433,136.43	4,300,989.81	2,433,136.43	4,300,989.81
Spring Fall Flag	-4,631,097.08	1,055,961.41	-4.39	0.00	-6,720,654.11	-2,541,540.05	-6,720,654.11	-2,541,540.05
Number of Peak Hours	52,842.02	24,064.21	2.20	0.03	5,223.29	100,460.74	5,223.29	100,460.74
Blackout Flag	-7,213,344.55	4,351,532.62	-1.66	0.10	-15,824,242.19	1,397,553.10	-15,824,242.19	1,397,553.10
Dwelling Units=V9	29.41	425.97	0.07	0.95	-813.50	872.32	-813.50	872.32
Large User	1.39	0.27	5.24	0.00	0.87	1.92	0.87	1.92

Table 2 – Summary Versions Results

Summary Versions Results	Sensitivity Actual versus Predicted %					
Year	V1	V2	V3	V4	V5	V6
1998	-2.93%	-1.08%	-1.59%	-2.10%	-1.65%	-1.70%
1999	2.05%	1.20%	2.31%	1.81%	1.57%	1.57%
2000	0.36%	-0.56%	-0.64%	0.11%	0.04%	0.06%
2001	1.63%	0.85%	0.56%	0.79%	0.45%	0.48%
2002	0.97%	0.38%	0.29%	0.76%	0.62%	0.65%
2003	0.39%	0.20%	0.09%	0.46%	0.46%	0.47%
2004	-1.48%	-1.42%	-1.36%	-1.51%	-1.43%	-1.43%
2005	-1.66%	-0.89%	-1.28%	-1.26%	-1.04%	-1.04%
2006	-0.32%	0.33%	0.16%	-0.18%	-0.02%	-0.03%
2007	-0.69%	1.14%	0.07%	-0.14%	0.15%	0.14%
2008	-0.24%	-0.76%	1.45%	0.10%	0.14%	0.13%
Regression Statistics						
Multiple R	94.59%	95.39%	95.15%	95.47%	95.57%	95.57%
R Square	89.47%	90.98%	90.53%	91.15%	91.34%	91.34%
Coefficient - Population	N/A	11,277.76	N/A	-90.14	20.15	N/A
Coefficient- Dwelling Units	-1,220.58	N/A	N/A	N/A	N/A	29.41
Coefficient Large User	N/A	N/A	N/A	N/A	1.40	1.39
2009 partial Weather Normal - 11-year average [GWh]	1,597	1,510	1,654	1,564	1,551	1,556
2010 Weather Normal - 11-year average [GWh]	1,575	1,348	1,653	1,560	1,551	1,556

Version 1: with Dwelling Units
Version 2: with Dwelling Units and Population
Version 3: Without customer growth indicator (without population and dwelling units)
Version 4: excluding Large Use as variable and consumption
Version 5: with Large Use as variable
Version 6: with Dwelling Units and Large Use

b) Does the Large Use variable used in the model include just the usage for Customer A or for all historical Large Users?

RESPONSE:

The "Large Use" variable includes just the usage for Customer A.

c) If the Large Use variable in the model includes the usage for all Large Users, what adjustment was made to capture the 2005 transfer of one Large User to the GS 1,000 – 4,999 class?

RESPONSE:

Not applicable.

d) If the Large Use variable in the model includes just Customer A, how does the model specification account for the major change in Large User usage that occurred in 2005?

RESPONSE:

Please see Exhibit 3, Tab 2, Schedule 1, Page 14 to 15 (Assumptions used for historical wholesale kWh) and the answer to the interrogatory #13 (e).

e) The discussion on page 15 (lines 13-15) states that the usage by the two previous large use customers (lost in 2002 and 2005) was excluded from the "purchases" used in the load forecast analysis.

- **Please explain more fully and provide a schedule setting out precisely the adjustments made to the historical purchase data used in the regression modeling.**
- **In making this "exclusion", how does the regression analysis undertaken account for the fact that Customer C1 was not entirely "lost"?**

RESPONSE:

Note: Customer C2 was not entirely lost; Customer C1 was entirely lost.

It was decided to eliminate Customer C1 and Customer C2 from both the purchased and sales parts of the model. The metered amounts were removed from the sales and an uplifted amount (up-lifted by 1.0045) was removed from purchases. When initially running the model, it was evident that the inclusion of the large users Customer C1 and Customer C2 were skewing the results. Due to the loss of two large users, the model could not properly predict future purchases because the significant decrease in purchases was affecting the regression analysis.

Because data was only readily available from 1999 onward, and the Customer C1 and C2 loads are very consistent, it was decided to estimate loads for 1998 based

on averages of actual loads - the estimated loads were removed from the purchases for 1998.

Customer C1 was entirely lost on May 1, 2002 when it was connected directly to Hydro One transmission system and became a market participant.

The regression analysis undertaken accounts for the fact that Customer C2 was not entirely lost by adding in a "proxy" usage and purchase, from 1998 to the point in 2005 when load significantly decreased. After Customer C2 ceased major production, they still continued as a significant customer (GS 1,000 – 4,999 kW class). It was decided to add back in the model from 1998 onward, their typical monthly load after their production slowdown. The monthly load included was based on typical Customer C2 monthly consumption.

Table 1, below, precisely sets out the adjustments made to the historical purchase data used in the regression modeling.

Year	Month	Purchases Including Customer C1 & C2	Customer C1 Usage	Customer C1 Purchases [2x1.0045]	Customer C2 Usage (kWh)	Customer C2 Purchases (kWh) [5x1.0045]	Proxy Consumption of Customer C2 (as GS 1,000-4,999)	Proxy purchases of Customer C2 (as GS 1,000-4,999) [7x1.0045]	Total adjusted purchases [1-3-6+8]
		1	2	3	5	6	7	8	9
1998	January	159,618,242	26,590,192	26,709,848	19,280,159	19,366,920	1,440,220	1,446,701	114,988,175
1998	February	144,700,611	26,049,868	26,167,092	19,019,433	19,105,020	1,385,281	1,391,515	100,820,013
1998	March	157,708,913	28,551,289	28,679,770	19,076,233	19,162,076	1,352,720	1,358,807	111,225,875
1998	April	141,082,305	26,117,398	26,234,926	19,191,317	19,277,678	1,372,120	1,378,295	96,947,995
1998	May	150,679,787	27,645,038	27,769,440	19,516,591	19,604,415	1,196,736	1,202,121	104,508,053
1998	June	162,666,984	27,873,741	27,999,173	19,867,601	19,957,005	1,065,964	1,070,761	115,781,567
1998	July	176,331,940	19,312,291	19,399,197	18,389,166	18,471,917	1,024,104	1,028,712	139,489,538
1998	August	176,036,662	27,954,315	28,080,110	19,434,236	19,521,690	1,088,406	1,093,304	129,528,166
1998	September	158,415,507	25,331,754	25,445,747	18,178,916	18,260,721	1,030,005	1,034,640	115,743,680
1998	October	151,199,141	26,627,346	26,747,169	19,035,636	19,121,296	1,028,475	1,033,103	106,363,778
1998	November	169,316,570	26,607,547	26,727,281	17,752,530	17,832,416	1,089,681	1,094,585	125,851,457
1998	December	162,426,965	25,301,064	25,414,919	19,361,619	19,448,746	1,206,281	1,211,709	118,775,008
1999	January	173,752,655	29,729,233	29,863,015	18,427,879	18,510,804	1,440,220	1,446,701	126,825,537
1999	February	141,155,215	27,690,463	27,815,070	17,763,624	17,843,560	1,385,281	1,391,515	96,888,100
1999	March	165,826,021	31,044,951	31,184,653	18,419,152	18,502,038	1,352,720	1,358,807	117,498,137
1999	April	143,005,148	28,795,859	28,925,440	13,242,170	13,301,760	1,372,120	1,378,295	102,156,242
1999	May	141,973,369	28,521,430	28,649,776	13,471,238	13,531,859	1,196,736	1,202,121	100,993,855
1999	June	172,006,530	29,923,109	30,057,763	18,545,353	18,628,807	1,065,964	1,070,761	124,390,721
1999	July	181,324,309	21,159,077	21,254,293	19,250,606	19,337,234	1,024,104	1,028,712	141,761,495
1999	August	171,244,192	29,988,313	30,123,260	19,156,400	19,242,604	1,088,406	1,093,304	122,971,632
1999	September	164,752,622	28,569,213	28,697,774	19,006,881	19,092,412	1,030,005	1,034,640	117,997,075
1999	October	158,140,737	29,356,252	29,488,355	17,934,874	18,015,581	1,028,475	1,033,103	111,669,904
1999	November	161,704,615	29,275,340	29,407,079	19,310,771	19,397,669	1,089,681	1,094,585	113,994,451
1999	December	171,517,522	28,633,878	28,762,730	19,532,285	19,620,180	1,206,281	1,211,709	124,346,321
2000	January	178,628,797	30,703,963	30,842,131	19,264,330	19,351,019	1,440,220	1,446,701	129,882,348
2000	February	164,147,501	28,869,206	28,999,117	17,543,475	17,622,421	1,385,281	1,391,515	118,917,478
2000	March	167,497,171	30,926,019	31,065,186	19,320,281	19,407,222	1,352,720	1,358,807	118,383,569
2000	April	152,632,350	27,270,099	27,392,814	17,042,734	17,119,426	1,372,120	1,378,295	109,498,404
2000	May	162,287,897	29,309,968	29,441,863	18,804,203	18,888,822	1,196,736	1,202,121	115,159,334
2000	June	170,890,135	29,245,642	29,377,247	19,241,879	19,328,467	1,065,964	1,070,761	123,255,181
2000	July	166,850,814	19,623,458	19,711,764	19,979,828	20,069,737	1,024,104	1,028,712	128,098,026
2000	August	184,095,967	29,189,120	29,320,471	19,904,623	19,994,194	1,088,406	1,093,304	135,874,606
2000	September	162,734,899	25,113,874	25,226,886	19,092,199	19,178,114	1,030,005	1,034,640	119,364,538
2000	October	159,720,380	27,417,832	27,541,212	19,585,333	19,673,467	1,028,475	1,033,103	113,538,803
2000	November	165,703,668	25,840,580	25,956,863	19,075,403	19,161,242	1,089,681	1,094,585	121,680,148
2000	December	180,579,290	25,593,974	25,709,147	19,563,319	19,651,354	1,206,281	1,211,709	136,430,498

2001	January	175,944,323	20,620,499	20,713,291	15,157,297	15,225,505	1,440,220	1,446,701	141,452,228
2001	February	158,231,250	24,655,111	24,766,059	17,629,354	17,708,686	1,385,281	1,391,515	117,148,020
2001	March	170,562,663	27,441,822	27,565,310	19,693,526	19,782,147	1,352,720	1,358,807	124,574,013
2001	April	152,238,486	24,060,091	24,168,361	18,930,805	19,015,994	1,372,120	1,378,295	110,432,426
2001	May	157,522,086	25,103,715	25,216,682	18,174,960	18,256,747	1,196,736	1,202,121	115,250,778
2001	June	171,016,588	24,452,473	24,562,509	16,900,250	16,976,301	1,065,964	1,070,761	130,548,539
2001	July	170,028,132	17,154,339	17,231,534	19,962,550	20,052,381	1,024,104	1,028,712	133,772,929
2001	August	192,537,146	24,685,513	24,796,597	19,962,550	20,052,381	1,088,406	1,093,304	148,781,470
2001	September	161,102,149	22,312,174	22,412,579	19,207,168	19,293,600	1,030,005	1,034,640	120,430,610
2001	October	158,655,378	23,107,955	23,211,941	19,851,332	19,940,663	1,028,475	1,033,103	116,535,877
2001	November	159,475,322	24,706,722	24,817,902	18,846,100	18,930,907	1,089,681	1,094,585	116,821,097
2001	December	166,097,211	21,675,341	21,772,880	18,861,274	18,946,150	1,206,281	1,211,709	126,589,891
2002	January	172,315,557	25,307,072	25,420,954	19,034,053	19,119,706	1,440,220	1,446,701	129,221,598
2002	February	157,066,179	22,984,692	23,088,123	17,209,994	17,287,439	1,385,281	1,391,515	118,082,132
2002	March	166,860,679	24,792,364	24,903,930	18,382,032	18,464,751	1,352,720	1,358,807	124,850,806
2002	April	160,126,824	24,343,543	24,453,088	19,188,320	19,274,667	1,372,120	1,378,295	117,777,363
2002	May	137,885,531			20,058,749	20,149,013	1,196,736	1,202,121	118,938,639
2002	June	149,777,649			19,371,665	19,458,837	1,065,964	1,070,761	131,389,572
2002	July	180,277,274			20,244,342	20,335,442	1,024,104	1,028,712	160,970,545
2002	August	170,936,183			19,950,836	20,040,615	1,088,406	1,093,304	151,988,872
2002	September	154,962,876			19,722,171	19,810,921	1,030,005	1,034,640	136,186,595
2002	October	136,466,283			13,986,435	14,049,374	1,028,475	1,033,103	123,450,012
2002	November	137,309,819			15,704,113	15,774,782	1,089,681	1,094,585	122,629,622
2002	December	150,173,779			18,906,386	18,991,465	1,206,281	1,211,709	132,394,024
2003	January	158,703,963			20,009,000	20,099,041	1,440,220	1,446,701	140,051,623
2003	February	140,766,682			16,076,312	16,148,655	1,385,281	1,391,515	126,009,541
2003	March	147,830,676			19,823,097	19,912,301	1,352,720	1,358,807	129,277,182
2003	April	137,214,274			19,356,531	19,443,635	1,372,120	1,378,295	119,148,933
2003	May	137,614,546			19,747,382	19,836,245	1,196,736	1,202,121	118,980,422
2003	June	143,513,798			16,619,524	16,694,312	1,065,964	1,070,761	127,890,247
2003	July	163,423,534			19,932,134	20,021,829	1,024,104	1,028,712	144,430,417
2003	August	158,915,035			18,098,868	18,180,313	1,088,406	1,093,304	141,828,026
2003	September	142,659,780			19,643,428	19,731,824	1,030,005	1,034,640	123,962,596
2003	October	140,518,035			18,905,776	18,990,851	1,028,475	1,033,103	122,560,287
2003	November	142,346,295			19,200,413	19,286,815	1,089,681	1,094,585	124,154,064
2003	December	153,489,028			19,886,488	19,975,978	1,206,281	1,211,709	134,724,760
2004	January	168,373,369			20,072,833	20,163,161	1,440,220	1,446,701	149,656,909
2004	February	147,110,688			18,616,201	18,699,974	1,385,281	1,391,515	129,802,229
2004	March	148,657,799			19,031,034	19,116,673	1,352,720	1,358,807	130,899,932
2004	April	133,590,609			17,769,081	17,849,042	1,372,120	1,378,295	117,119,861
2004	May	141,208,153			20,374,687	20,466,373	1,196,736	1,202,121	121,943,901
2004	June	149,735,849			19,699,922	19,788,572	1,065,964	1,070,761	131,018,038
2004	July	156,369,802			20,448,150	20,540,167	1,024,104	1,028,712	136,858,348
2004	August	158,216,468			20,157,509	20,248,217	1,088,406	1,093,304	139,061,555
2004	September	153,214,077			19,629,864	19,718,198	1,030,005	1,034,640	134,530,519
2004	October	142,949,183			19,874,014	19,963,447	1,028,475	1,033,103	124,018,838
2004	November	140,214,027			15,593,896	15,664,068	1,089,681	1,094,585	125,644,543
2004	December	151,945,636			13,325,977	13,385,944	1,206,281	1,211,709	139,771,402

2005	January	156,915,436	13,242,558	13,302,149	1,440,220	1,446,701	145,059,987
2005	February	138,087,684	11,940,854	11,994,588	1,385,281	1,391,515	127,484,611
2005	March	147,047,058	13,145,768	13,204,924	1,352,720	1,358,807	135,200,942
2005	April	128,319,602	7,427,082	7,460,504	1,372,120	1,378,295	122,237,393
2005	May	124,083,028	7,320,928	7,353,872	1,196,736	1,202,121	117,931,277
2005	June	158,485,564	2,042,296	2,051,486	1,065,964	1,070,761	157,504,838

f) Please provide any other recent projections of Ontario GDP growth for 2009 and 2010 that Oakville is aware of and compare the year over year growth rates with those prepared by the Ontario Ministry of Finance.

RESPONSE:

On October 22, 2009 the Ontario Minister of Finance provided a fall update to the 2009 Ontario Economic Outlook and Fiscal Review. In this review the 2009 GDP was updated from -2.5% to -3.5% and the 2010 GDP was updated from 2.3% to 2.0% (please see the "Economic Outlook and Fiscal Review" in the Oakville Hydro's answer to the Board Staff question # 10- Appendix OEB 10 – page 5)

Oakville Hydro has updated its Load Forecast with the above updated 2009 and 2010 Ontario Real GDP, and the results show decreases of 0.31% and of 0.77% in forecast purchases for 2009 and 2010 respectively.

Oakville Hydro is requesting the Board its load forecast be updated with Ontario Real GDP of -3.5% for 2009 and 2.0% for 2010 when final rates are determined.

Comparison: Prefiled versus Updated Load Forecast results

Sensitivity Actual versus Predicted			
Year	**prefiled**	**updated with the very last 2009 & 2010 GDP**	
1998	-1.65%	-1.67%	
1999	1.57%	1.57%	
2000	0.04%	0.04%	
2001	0.45%	0.46%	
2002	0.62%	0.63%	
2003	0.46%	0.46%	
2004	-1.43%	-1.43%	
2005	-1.04%	-1.04%	
2006	-0.02%	-0.01%	
2007	0.15%	0.16%	
2008	0.14%	0.16%	
Regression Statistics			
Multiple R	95.57%	95.59%	
R Square	91.34%	91.37%	
Coefficient - Population	20.15	16.74	
Coefficient- Dwelling Units	N/A	N/A	
Coefficient Large User	1.40	1.38	variance
2009 partial Weather Normal - 11-year average [GWh]	1,551	1,546	-0.31%
2010 Weather Normal - 11-year average [GWh]	1,551	1,539	-0.77%

Question #14

Reference: Exhibit 3/Tab 2/Schedule 1, pages 16-23

a) Please confirm that the "Billed" values set out in Table 1 are customer billed kWhs.

RESPONSE:
Table 1 includes:
From 2002 to 2008: billed and accrued (unbilled) kWh
2009 Bridge and 2010 Test: forecasted billed kWh

b) Do the historical energy and customer values for the GS>1,000 kW class shown in Table 2 include those for the Large User (Customer C2) that was transferred to this class in 2005.

RESPONSE:

Yes.

c) Do the historical energy and customer values for the GS 50-999 class shown in Table 2 include the usage by the Large Use customer recently reclassified to this class?

RESPONSE:

The historical energy and customer values for the GS 50-999 kW class do not include the Large Use customer (Customer A); the Large User was reclassified to GS 50-999 kW in July 2009.

d) Why is the loss factor used to determine billed 2010 loads estimated based on the 2002-2008 period (see page 22) when the regression analysis covers the 1998-2008 period? What is the average loss factor over the 1998-2008 period?

RESPONSE:

Oakville Hydro's total system load (i.e. purchases) is available dating back to January 1998 but due to a change of the billing system, the billed consumption is available starting 2002. Therefore, Oakville Hydro decided to calculate the loss factor based on historical 2002-2008 data.

For more details, please see Oakville Hydro's response to Board Staff Interrogatory #10 (c).

e) With respect to Table 2, what is the 2009 predicted sales using "normal weather" for all 12 months?

RESPONSE:

The 2009 predicted sales using "normal weather" for all 12 months would be 1,494,277,606 kWh versus the original result of 1,494,122,042 kWh (i.e. 0.01% higher).

f) With respect to Table 2, please calculate the predicted "weather normal" sales for 2002-2008 by using the "weather normal variables" as opposed to actual weather HDD and CDD values.

RESPONSE:

Oakville Hydro used the average HDD and CDD values for the months of 2010 to predict weather normal sales for 2002-2008; Oakville Hydro used the 2002-2008 actual historical loss factor.

The results are presented in the following table:

Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads	Total forecasted sales	Total sales using actual HDD CDD for 2002-2008 and 11 year average for 2009 and 2010	Sensitivity: forecast vs actual
Energy (GWh)										
2002	517	143	504	218	7	0.1	4	1,394	1,418	-1.73%
2003	502	143	522	235	11	0.2	4	1,416	1,413	0.21%
2004	516	147	539	237	11	0.2	4	1,455	1,454	0.03%
2005	538	158	557	215	10	0.1	4	1,481	1,540	-3.83%
2006	542	169	566	205	11	0.1	4	1,497	1,501	-0.24%
2007	555	170	576	202	11	0.1	4	1,518	1,539	-1.34%
2008	562	177	596	171	11	0.1	4	1,521	1,512	0.61%
2009 (B)	547	176	592	163	12	0.1	4	1,494	1,494	0.01%
2010 (T)	545	179	600	157	13	0.1	4	1,497	1,495	0.15%
Number of Customers/Connections										
2002	44,243	4,010	756	17	13,948	271	615	63,860	63,860	0.00%
2003	46,192	4,249	756	17	14,431	248	629	66,522	66,522	0.00%
2004	48,272	4,395	758	17	14,828	244	642	69,156	69,156	0.00%
2005	49,953	4,539	760	17	15,261	243	658	71,431	71,431	0.00%
2006	51,485	4,614	774	17	15,571	241	661	73,363	73,363	0.00%
2007	52,971	4,701	781	17	15,890	240	669	75,269	75,269	0.00%
2008	54,636	4,809	813	17	16,025	237	675	77,211	77,211	0.00%
2009 (B)	56,591	4,957	823	17	16,400	232	685	79,704	79,704	0.00%
2010 (T)	58,617	5,109	833	17	16,783	227	696	82,281	82,281	0.00%

Question #15

Reference: Exhibit 3/Tab 2/Schedule 1, pages 23-29

a) To what does Oakville attribute the significant (>4%) increase in GS 50-999 kW customers in 2008?

RESPONSE:

As shown in the table below, Oakville Hydro experienced increased growth in the GS 50 to 999 kW class beginning in July of 2007. This increased growth was primarily related to new commercial, retail and restaurant establishments in Oakville. A significant portion of the growth can be attributed to a new retail and entertainment complex located at Wyecroft Road and the QEW. This new complex added approximately 70 General Service customers in 2007 and 2008. Of these 70 customers, 10 GS 50 to 999 kW were added in the second half of 2007 and 8 were added in 2008. The remainder of the new customers in this new complex are in the GS < 50 kW Class.

GS 50 to 999 kW Customer Counts

Month	2007 Customer Count	2008 Customer Count	% Growth 2008	2009 Customer Count	% Growth 2009
Jan	776	802	3.35%	828	3.24%
Feb	776	805	3.74%	829	2.98%
Mar	777	805	3.60%	830	3.11%
Apr	777	806	3.73%	831	3.10%
May	777	807	3.86%	834	3.35%
Jun	775	808	4.26%	833	3.09%
Jul	779	813	4.36%	837	2.95%
Aug	780	814	4.36%	844	3.69%
Sep	783	817	4.34%	847	3.67%
Oct	786	823	4.71%	852	3.52%
Nov	788	827	4.95%		
Dec	796	829	4.15%		
Average	**781**	**813**	**4.12%**	**837**	**3.27%**

b) Are the average annual usage values shown in Table 9 derived from the data in Table 2?

RESPONSE:

Yes, the historical annual usage values shown in Table 9 are derived from data in Table 2.

c) If the pre-2005 usage reported for GS 1,000-4,999 includes that for Customer C2, please confirm that this will distort the calculation of the growth rate in usage for the class as shown in Table 10. If the customer is included in the class, please recalculate the values shown in Tables 9 and 10 for this class excluding this customer.

RESPONSE:

Oakville Hydro confirms that the pre-2005 usage reported for GS 1,000-4,999 kW class includes the adjusted consumption for Customer C2 as presented in the response to interrogatory 13 (c), (d) and (e). As a result, the pre-2005 adjusted consumption does not distort the calculation of the growth rate in usage for the class as shown in Table 10.

Oakville Hydro excluded Customer C2 usage from 2002 to 2008 sales, reduced the number of GS>1000 kW customers from 17 to 16, and recalculated Table 9 and Table 10. These tables follow below:

Table 9

Historical Annual Usage per Customer

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads
Annual kWh Usage Per Customer/Connection							
2002	11,888	36,281	679,145	12,953,584	535	455	7,069
2003	10,842	33,484	688,582	13,779,690	752	651	6,039
2004	10,681	33,422	710,514	13,926,665	764	648	6,945
2005	11,190	36,123	761,166	13,047,738	686	613	6,768
2006	10,546	36,773	733,468	11,931,662	687	595	6,461
2007	10,622	36,670	747,262	12,077,571	683	617	6,387
2008	10,231	36,556	728,098	10,023,543	684	573	5,803

Table 10

Growth Rate in Usage Per Customer/Connection

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads
Growth Rate in Usage Per Customer/Connection							
2002							
2003	-8.80%	-7.71%	1.39%	6.38%	40.62%	43.16%	-14.57%
2004	-1.49%	-0.19%	3.19%	1.07%	1.53%	-0.57%	15.00%
2005	4.77%	8.08%	7.13%	-6.31%	-10.23%	-5.33%	-2.55%
2006	-5.76%	1.80%	-3.64%	-8.55%	0.24%	-2.88%	-4.53%
2007	0.72%	-0.28%	1.88%	1.22%	-0.70%	3.69%	-1.15%
2008	-3.68%	-0.31%	-2.56%	-17.01%	0.22%	-7.23%	-9.15%
Geometric Mean	-2.47%	0.13%	1.17%	-4.18%	4.18%	3.91%	-3.24%

The resulted geometric mean for the growth rate in GS > 1000 kW class usage changed immaterially from -4.30% to -4.18%

Please note that the excluded 2006 to 2008 consumption is actual historical consumption for Customer C2.

Oakville Hydro believes that its approach, which considers Customer C2, is more appropriate; the forecast should take in consideration all components. A preferential exclusion of one or more components could derive to result distortions.

d) On page 9 Oakville states that population is a customer growth indicator. Please comment on the consistency between i) the population growth assumptions for 2009 and 2010 underlying the projection of total purchases and ii) the forecast for customer growth set out in Table 8.

RESPONSE:

Population Growth		Customer Growth (Table 2 and Table 8)		Forecast Annual kWh Usage per Residential Customer		Total Forecasted Purchases (without adjustments)	
2008 to 2009	2009 to 2010	2008 to 2009	2009 to 2010	2008 to 2009	2009 to 2010	2009	2010
%	%	%	%	%	%	GWh	GWh
2.07%	1.86%	3.23%	3.23%	-2.47%	-2.47%	1,551	1,551

Based on Table 2 and Table 8 figures, Oakville Hydro has developed the above analysis. The forecast population growth is more than 1 percent lower than forecast customer growth which takes in consideration all customer classes, not only residential. In addition, Oakville Hydro has been converting Condominium units in its territory from bulk to unit metering, which means that the number of residential customers increases, while the level of consumption does not change, or it could decrease.

As shown in the above table, the forecast annual usage per residential customer offsets the population growth. The descendent trend in annual residential customer usage is attributed to strong conservation measures developed in Oakville Hydro's service area.

e) Table 8 shows a decline average use in 2008 for both the GS 50-999 and GS>1,000 classes which will affect the calculated geometric mean for each class. To the extent these declines are due to the recent economic recession, is it reasonable that this decline be projected forward to 2010?

RESPONSE:

Oakville Hydro believes that it is reasonable that the decline in electricity usage be projected forward to 2010. Beside the economic recession which is predicted to continue in 2010 (please see the Oakville Hydro's response to the Board Staff's interrogatory # 10 – Appendix OEB 10), Oakville Hydro expects to see more energy conservation initiatives developed in its jurisdiction.

f) Residential and GS<50 classes annual usage per customer values set out in Table 9 will be influenced weather in the year concerned).

- **Given this fact, please confirm that the calculated growth rates for these two classes will be affected by historical variations in weather.**
- **Why is it appropriate to use the growth rate in usage per customer/connection (non weather-normalized) to forecast usage for 2008 and 2009?**

RESPONSE:

Table 9 shows 2002-2008 historical (actual not forecasted) annual usage per customer.
Oakville Hydro forecasted customer usages for 2009 and 2010.

- Residential and GS<50 kW growth rates in usage will be influenced by the weather conditions in the year concerned.

- It is appropriate to use the growth rate in usage per customer/connection to forecast usage for 2009 and 2010 because:
    - While the historical consumption was affected by historical weather conditions, the 2009 and 2010 usage will be affected by forecast weather conditions
    - Not all customer classes are weather sensitive (e.g. Street Lighting, Sentinel Lighting, USL)
    - Not all classes have the same level of weather sensitivity (e.g. GS 50 to 999 kW, and GS > 1000 kW)

g) Please provide the Hydro One information relied on in order to determine the weather sensitivity by rate class (page 28).

RESPONSE:

The Hydro One information that Oakville Hydro relied upon to determine the weather sensitivity by rate class is provided in the table below. Residential and GS < 50 kW classes are assumed 100% weather sensitive.

General Service 50 to 999kW	2004 kWh (Actual)	2004 kWh (Weather Corrected)	%
Weather sensitive load	472,941,464	475,334,936	80.28%
Non-weather sensitive load	116,182,905	116,182,905	19.72%
TOTAL	589,124,369	591,517,841	

General Service 1000 to 4999kW	2004 kWh (Actual)	2004 kWh (Weather Corrected)	
Weather sensitive load	63,595,172	64,020,523	14.58%
Non-weather sensitive load	372,504,333	372,504,333	85.42%
TOTAL	436,099,505	436,524,856	

h) Given that residential uses include lighting, cooking and refrigeration, why is it reasonable to assume that the Residential class is 100% weather sensitive?

RESPONSE:

Oakville Hydro has assumed that 100% of Residential is weather sensitive based on Oakville Hydro 's understanding of the weather normalization process used by Hydro One to provide weather normalized load data for the cost allocation study

The data shows that GS > 50 to 999 kW and GS 1000 to 4999 kW customers have a certain percentage of load that is weather sensitive and non-weather sensitive. The data also shows that for Street Lighting, Sentinel Lighting and USL the total actual weather amounts and the total normalized amounts are the same which suggest they are not weather sensitive. The data shows the classes that are partially weather sensitive and those that are 100% non-weather sensitive but the Residential and GS<50 loads did not fall into these two categories. As a result, Oakville Hydro concluded that Residential and GS<50 loads are 100% weather sensitive. If these classes were partially weather sensitive then Hydro One would have provided similar information as was provided for the GS > 50 customers.

i) Please provide a schedule that sets out the average use per customer for each class as forecast for 2009 and 2010.

RESPONSE:

Please see Exhibit 3, Tab 2, Schedule 1, Page 27, table 11.

j) Please provide a schedule setting the average weather normalized use per customer for each class based on the data provided by Hydro One Networks for Oakville's 2007 Cost Allocation filing and indicate the year the data is based on. In doing so, please include the correction to the GS>1000 class referred to at Exhibit 7/Tab 1/Schedule 2, page 1.

RESPONSE:

The following information is provided in Exhibit 7/Tab 1/Schedule 3, page 2 and is based on 2004 data. The portions of the table pertaining to the data provided by Hydro One Networks and for Oakville Hydro's corrected Cost Allocation Filing are reproduced here for the convenience of the Board and the Parties.

Hydro One Weather Normalized Data
From Table 4

	Hydro One Load Data			Corrected Hydro One Load Data		
Customer Class	Weather Normalized kWh	# of Customers /Connections	Normalized Average Use	Weather Normalized kWh	# of Customers /Connections	Normalized Average Use
Residential	502,709,215	49,016	10,256	502,709,215	49,016	10,256
General Service Less than 50 kW	142,065,541	4,472	31,768	142,065,541	4,472	31,768
General Service 50 to 999 kW	562,012,200	762	737,549	562,012,200	762	737,549
General Service 1,000 to 4,999 kW	414,750,457	17	24,397,086	191,524,795	17	11,266,164
Large User	78,709,242	1	78,709,242	78,709,242	1	78,709,242
Street Lighting	10,159,275	15,062	674	10,159,275	15,062	674
Sentinel Lighting	152,489	237	643	152,489	237	643
Unmetered Scattered Load	4,066,543	646	6,295	4,066,543	646	6,295
Total	1,714,624,964	70,213	24,420	1,491,399,302	70,213	21,241

Question #16

Reference: Exhibit 3/Tab 2/Schedule 1, pages 32-48

a) The regression analysis performed by Oakville included historical data up to May 2009 (page 5). Please explain why the purchase trends up to this point in time will not capture: i) the loss of Customer B in mid-2008; ii) the reduction in sales to Customer C in 2008; and iii) the loss of sales to Customer D in mid-2008.

RESPONSE:

In Oakville Hydro's opinion, at least 5 year of historical data is required for a multifactor regression methodology in order to produce a good forecast trend.

The lost load related to Customer B, C, and D does not have such long history to produce an effect on the predicted 2009 and 2010 purchases.

b) Please re-estimate the regression model (page 6) but for 2008 and 2009 (January – May) adjust the monthly purchase data so that it reflects the average 2003-2007 usage for each of these three customers. Please provide:

- **The results in a format similar to that on page 6, and**
- **A revised projection for 2009 and 2010 similar to that set out in Table 4.**

RESPONSE:

Oakville Hydro has adjusted the 2008 and 2009 actual monthly purchases with 2003 to 2007 monthly average consumption of Customer B, C, and D (kWh billing data for Customer D is available as far as May 2003; therefore the monthly average consumption for Customer D reflects the average 2004-2007).

The regression model results are as follows:

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.95
R Square	0.91
Adjusted R Square	0.90
Standard Error	4,377,619.85
Observations	137.00

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	9	2.36799E+16	2.6311E+15	137.2971424	5.1072E-61
Residual	127	2.43377E+15	1.91636E+13		
Total	136	2.61137E+16			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-92,824,994.20	15,753,036.64	-5.89	0.00	-123,997,410.41	-61,652,577.99	-123,997,410.41	-61,652,577.99
Heating Degree Days	26,148.74	2,657.85	9.84	0.00	20,889.33	31,408.14	20,889.33	31,408.14
Cooling Degree Days	235,124.83	15,569.29	15.10	0.00	204,316.02	265,933.64	204,316.02	265,933.64
Ontario Real GDP Monthly %	754,954.55	157,243.49	4.80	0.00	443,798.06	1,066,111.03	443,798.06	1,066,111.03
Number of Days in Month	3,337,475.78	487,599.61	6.84	0.00	2,372,604.17	4,302,347.40	2,372,604.17	4,302,347.40
Spring Fall Flag	-4,526,211.95	1,091,061.13	-4.15	0.00	-6,685,225.00	-2,367,198.90	-6,685,225.00	-2,367,198.90
Population	-96.30	142.28	-0.68	0.50	-377.84	185.25	-377.84	185.25
Number of Peak Hours	52,233.27	24,862.23	2.10	0.04	3,035.40	101,431.13	3,035.40	101,431.13
Blackout Flag	-7,224,638.56	4,497,265.25	-1.61	0.11	-16,123,914.77	1,674,637.65	-16,123,914.77	1,674,637.65
Large User	1.57	0.26	5.92	0.00	1.04	2.09	1.04	2.09

Oakville Hydro has recalculated Table 4 as following:

Table 4
Oakville Hydro's Total System Purchases
GWh

	Actual	Predicted	% Difference
1998	1,380	1,355	-1.8%
1999	1,401	1,423	1.6%
2000	1,470	1,476	0.4%
2001	1,502	1,512	0.7%
2002	1,568	1,580	0.8%
2003	1,553	1,560	0.4%
2004	1,580	1,553	-1.7%
2005	1,673	1,651	-1.3%
2006	1,631	1,621	-0.6%
2007	1,681	1,672	-0.5%
2008	1,597	1,619	1.4%
2009 (7 months- WN)	0	1,516	
2010 (WN)	0	1,512	

c) The determination of customer class shares of total purchases/sales considers per customer usage growth and customer count through to the end of 2008. As result, please explain why the calculation of the class shares does not already account for the changes in operations for Customers B, C and D.

RESPONSE:

The determination of annual customer usage growth is based on a geometric mean applied to five historical annual usages per customer. In Oakville Hydro's opinion, the geometric mean result can not entirely capture the 2008 loss of load and reflect it in 2009 and 2010 projections (a fraction of one element from five elements of the geometric mean calculation)

d) Please recalculate Tables 10 through 14 but for the GS 50-999 and GS > 1000 classes use the period 2002 to 2007 to calculate the growth rate per customer connection for Table 10 and use 2007 as the "base" for purposes of determining projected usage per customer for Table 11.

RESPONSE:

Oakville Hydro recalculated Tables 10 through 14 as requested, but it considers that the load forecast methodology should be applied consistently among classes.

Table 10

Growth Rate in Usage Per Customer/Connection

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads
Growth Rate in Usage Per Customer/Connection							
2002							
2003	-8.80%	-7.71%	1.39%	5.97%	40.62%	43.16%	-14.57%
2004	-1.49%	-0.19%	3.19%	1.00%	1.53%	-0.57%	15.00%
2005	4.77%	8.08%	7.13%	-5.74%	-10.23%	-5.33%	-2.55%
2006	-5.76%	1.80%	-3.64%	-8.23%	0.24%	-2.88%	-4.53%
2007	0.72%	-0.28%	1.88%	-0.11%	-0.70%	3.69%	-1.15%
2008	-3.68%	-0.31%			0.22%	-7.23%	-9.15%
Geometric Mean	-2.47%	0.13%	1.93%	-1.55%	4.18%	3.91%	-3.24%

Table 11
Forecast Annual kWh Usage per Customer/Connection

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads
Forecast Annual kWh Usage per Customers/Connection							
2009	9,978	36,602	742,150	9,855,832	713	595	5,615
2010	9,732	36,649	756,474	9,702,810	743	618	5,434

Table 12

Non-normalized Weather Billed Energy Forecast

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads	Total
Non-normalized Weather Billed Energy Forecast (GWh)								
2009	565	181	611	168	12	0	4	1,540
2010	570	187	630	165	12	0	4	1,569

Table 13
Weather Sensitivity by Rate Class

Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads
Weather Sensitivity						
100%	100%	80%	15%	0%	0%	0%

Table 14

Alignment of Non-normal to Weather Normal Forecast

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 kW	Street Lighting	Sentinel Lighting	Unmetered Loads	Total
Non-normalized Weather Billed Energy Forecast (GWh)								
2009	565	181	611	168	12	0	4	1,540
2010	570	187	630	165	12	0	4	1,569
Adjustment for Weather (GWh)								
2009	-21	-7	-18	-1	0	0	0	-46
2010	-33	-11	-29	-1	0	0	0	-75
Weather Normalized Billed Energy Forecast (GWh)								
2009	544	175	593	167	12	0	4	1,494
2010	537	176	601	164	12	0	4	1,495

Question #17

Reference: Exhibit 3/Tab 3/Schedule 1, page 6

a) Why doesn't Oakville charge its affiliates an interest rate equivalent to its own deemed cost of debt (i.e, what the Board estimates it could borrow at)?

RESPONSE:

Based on the current economy and confirmation with the bank, Oakville Hydro's affiliates could obtain a third party loan from a bank at approximately 5%. Therefore, charging the deemed interest rate of 7.62% would not be the current market rates for the affiliates. The affiliate businesses will do what they believe is in the best interest of their business. If the rate of interest is excessive, they will obtain a third party loan. This will result in a reduction of interest income for Oakville Hydro and increase distribution rates to customers.

b) Does Oakville expect that its cost of borrowing from the bank would be higher than the cost to its affiliates and, if so, why?

RESPONSE:

No, Oakville Hydro does not expect so. However, neither Oakville Hydro nor its affiliates has borrowed funds from the bank for any reason. Oakville Hydro has not incurred any new debt and continues to have only debt from its shareholder.

Question #18

Reference: Exhibit 7/Tab 1/Schedule 2, pages 3-7

a) Please explain why the Distribution Revenues for the Residential class change between the corrected filing (page 6) and the corrected filing with the transformer ownership allowance removed (page 7).

RESPONSE:

The distribution revenues for the corrected filing (page 6) are from Oakville Hydro's approved 2006 EDR and include the transformer allowance discount. The distribution revenues for the corrected filing with the transformer allowance removed (page 7) exclude the transformer allowance amounts allocated by class in the approved 2006 EDR. The transformer allowance amounts that were allocated to each class of customers are provided in the response to Question #18 b).

b) Please provide a table that sets out the amount of the $419,793 transformer allowance discount that was received by the customers in each class.

RESPONSE:

The amount of the transformer allowance that was allocated to each class is provided in the table below.

	Distribution Revenue		
Rate Class	With Transformer Allowance Correction	Without Transformer Allowance Correction	Tranformer Allowance
Residential	16,218,852	15,964,814	254,038
General Service Less than 50 kW	3,733,988	3,675,502	58,486
General Service 50 to 999 kW	4,336,769	4,268,841	67,927
GS> 50-TOU	-	-	-
General Service 1,000 to 4,999 kW	1,432,298	1,409,864	22,434
Large User	785,432	773,130	12,302
Street Lighting	105,877	104,218	1,658
Sentinel Lighting	802	790	13
Unmetered Scattered Load	187,338	184,403	2,934
Total	26,801,354	26,381,561	419,793

Question #19

Reference: Exhibit 7/Tab 1/Schedule 3

a) Please provide the calculation of Customer Unit costs per month (Sheet O2) including miscellaneous revenues in the calculation (page 1, lines 14-17).

RESPONSE:

Sheet O2 including miscellaneous revenues is provided in the following pages.

2010 Test Year Cost Allocation Information Filing
Oakville Hydro Inc.
EB-2009-0271 EB-2009-0271
Friday, August 28, 2009

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - Second Run

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	6	7	8	9
	Residential	General Service Less than 50 kW	General Service 50 to 999 kW	General Service Greater than 1,000 kW	Large User	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	$2.86	$6.90	$43.57	-$81.41	$0.00	$0.20	$0.21	$2.48
Customer Unit Cost per month - Directly Related	$3.87	$10.09	$65.83	-$47.16	$0.00	$0.40	$0.41	$4.00
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$10.95	$19.11	$91.26	$560.42	$0.00	$9.96	$16.64	$9.56
Fixed Charge per approved 2009 IRM	$14.72	$31.09	$199.71	$3,160.88	$0.00	$0.31	$0.04	$15.05

Scenario 1

Accounts included in Avoided Costs Plus General Administration Allocation

			1	2	3	5	6	7	8	9
USoA Account #	Accounts	Total	Residential	General Service Less than 50 kW	General Service 50 to 999 kW	General Service Greater than 1,000 kW	Large User	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
	Distribution Plant									
1860	Meters	$12,294,854	$6,560,475	$2,122,622	$3,537,769	$73,989	$0	$0	$0	$0
	Accumulated Amortization									
	Accum. Amortization of Electric Utility Plant - Meters only	($6,597,911)	($3,520,613)	($1,139,084)	($1,898,508)	($39,705)	$0	$0	$0	$0
	Meter Net Fixed Assets	**$5,696,944**	**$3,039,862**	**$983,538**	**$1,639,260**	**$34,284**	**$0**	**$0**	**$0**	**$0**
	Misc Revenue									
4082	Retail Services Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4084	Service Transaction Requests (STR) Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4090	Electric Services Incidental to Energy Sales	$0	$0	$0	$0	$0	$0	$0	$0	$0
4220	Other Electric Revenues	($481,462)	($241,385)	($61,189)	($136,368)	($11,180)	$0	($29,500)	($398)	($1,442)
4225	Late Payment Charges	($282,834)	($130,317)	($63,254)	($65,404)	($23,153)	$0	($85)	($3)	($617)
	Sub-total	*($764,296)*	*($371,701)*	*($124,444)*	*($201,772)*	*($34,333)*	*$0*	*($29,585)*	*($402)*	*($2,059)*
	Operation									
5065	Meter Expense	$279,859	$149,332	$48,316	$80,528	$1,684	$0	$0	$0	$0
5070	Customer Premises - Operation Labour	$101,435	$72,262	$6,298	$1,027	$21	$0	$20,690	$279	$858
5075	Customer Premises - Materials and Expenses	$241,087	$171,749	$14,969	$2,441	$50	$0	$49,176	$664	$2,039
	Sub-total	*$622,381*	*$393,342*	*$69,583*	*$83,996*	*$1,755*	*$0*	*$69,866*	*$943*	*$2,896*
	Maintenance									
5175	Maintenance of Meters	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Billing and Collection									
5310	Meter Reading Expense	$548,439	$287,993	$99,934	$153,140	$7,371	$0	$0	$0	$0
5315	Customer Billing	$685,273	$454,486	$138,407	$67,042	$1,657	$0	$42	$36	$23,604
5320	Collecting	$183,760	$121,873	$37,115	$17,978	$444	$0	$11	$10	$6,330
5325	Collecting- Cash Over and Short	$0	$0	$0	$0	$0	$0	$0	$0	$0
5330	Collection Charges	($291,870)	($193,573)	($58,950)	($28,554)	($706)	$0	($18)	($15)	($10,053)
	Sub-total	$1,125,602	$670,778	$216,506	$209,605	$8,767	$0	$35	$30	$19,880
	Total Operation, Maintenance and Billing	$1,747,983	$1,064,120	$286,088	$293,601	$10,522	$0	$69,901	$974	$22,777
	Amortization Expense - Meters	$547,936	$292,376	$94,597	$157,665	$3,297	$0	$0	$0	$0
	Allocated PILs	$108,623	$57,888	$18,755	$31,321	$658	$0	$0	$0	$0
	Allocated Debt Return	$288,215	$153,597	$49,764	$83,107	$1,747	$0	$0	$0	$0
	Allocated Equity Return	$213,740	$113,907	$36,905	$61,632	$1,296	$0	$0	$0	$0
	Total	**$2,142,201**	**$1,310,187**	**$361,667**	**$425,554**	**($16,812)**	**$0**	**$40,316**	**$572**	**$20,718**

Scenario 2

Accounts included in Directly Related Customer Costs Plus General Administration Allocation

			1	2	3	5	6	7	8	9
USoA Account #	**Accounts**	**Total**	**Residential**	**General Service Less than 50 kW**	**General Service 50 to 999 kW**	**General Service Greater than 1,000 kW**	**Large User**	**Street Lighting**	**Sentinel Lighting**	**Unmetered Scattered Load**
	Distribution Plant									
1860	Meters	$12,294,854	$6,560,475	$2,122,622	$3,537,769	$73,989	$0	$0	$0	$0
	Accumulated Amortization									
	Accum. Amortization of Electric Utility Plant - Meters only	($6,597,911)	($3,520,613)	($1,139,084)	($1,898,508)	($39,705)	$0	$0	$0	$0
	Meter Net Fixed Assets	$5,696,944	$3,039,862	$983,538	$1,639,260	$34,284	$0	$0	$0	$0
	Allocated General Plant Net Fixed Assets	$689,174	$372,019	$118,844	$194,444	$3,867	$0	$0	$0	$0
	Meter Net Fixed Assets Including General Plant	$6,386,118	$3,411,881	$1,102,382	$1,833,705	$38,150	$0	$0	$0	$0
	Misc Revenue									
4082	Retail Services Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4084	Service Transaction Requests (STR) Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4090	Electric Services Incidental to Energy Sales	$0	$0	$0	$0	$0	$0	$0	$0	$0
4220	Other Electric Revenues	($481,462)	($241,385)	($61,189)	($136,368)	($11,180)	$0	($29,500)	($398)	($1,442)
4225	Late Payment Charges	($282,834)	($130,317)	($63,254)	($65,404)	($23,153)	$0	($85)	($3)	($617)
	Sub-total	*($764,296)*	*($371,701)*	*($124,444)*	*($201,772)*	*($34,333)*	*$0*	*($29,585)*	*($402)*	*($2,059)*
	Operation									
5065	Meter Expense	$279,859	$149,332	$48,316	$80,528	$1,684	$0	$0	$0	$0
5070	Customer Premises - Operation Labour	$101,435	$72,262	$6,298	$1,027	$21	$0	$20,690	$279	$858
5075	Customer Premises - Materials and Expenses	$241,087	$171,749	$14,969	$2,441	$50	$0	$49,176	$664	$2,039
	Sub-total	*$622,381*	*$393,342*	*$69,583*	*$83,996*	*$1,755*	*$0*	*$69,866*	*$943*	*$2,896*
	Maintenance									
5175	Maintenance of Meters	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Billing and Collection									
5310	Meter Reading Expense	$548,439	$287,993	$99,934	$153,140	$7,371	$0	$0	$0	$0
5315	Customer Billing	$685,273	$454,486	$138,407	$67,042	$1,657	$0	$42	$36	$23,604
5320	Collecting	$183,760	$121,873	$37,115	$17,978	$444	$0	$11	$10	$6,330
5325	Collecting- Cash Over and Short	$0	$0	$0	$0	$0	$0	$0	$0	$0
5330	Collection Charges	($291,870)	($193,573)	($58,950)	($28,554)	($706)	$0	($18)	($15)	($10,053)
	Sub-total	*$1,125,602*	*$670,778*	*$216,506*	*$209,605*	*$8,767*	*$0*	*$35*	*$30*	*$19,880*
	Total Operation, Maintenance and Billing	$1,747,983	$1,064,120	$286,088	$293,601	$10,522	$0	$69,901	$974	$22,777
	Amortization Expense - Meters	$547,936	$292,376	$94,597	$157,665	$3,297	$0	$0	$0	$0
	Amortization Expense - General Plant assigned to Meters	*$112,423*	*$60,687*	*$19,387*	*$31,719*	*$631*	*$0*	*$0*	*$0*	*$0*
	Admin and General	$1,004,001	$610,698	$163,656	$169,885	$5,938	$0	$40,605	$538	$12,681
	Allocated PILs	$121,763	$64,972	$21,022	$35,036	$733	$0	$0	$0	$0
	Allocated Debt Return	$323,081	$172,394	$55,778	$92,964	$1,944	$0	$0	$0	$0
	Allocated Equity Return	$239,596	$127,847	$41,365	$68,942	$1,442	$0	$0	$0	$0
	Total	**$3,332,487**	**$2,021,393**	**$557,448**	**$648,041**	**($9,825)**	**$0**	**$80,921**	**$1,110**	**$33,399**

Scenario 3

Minimum System Customer Costs Adjusted for PLCC - High Limit Fixed Customer Charge

			1	2	3	5	6	7	8	9
USoA Account #	Accounts	Total	Residential	General Service Less than 50 kW	General Service 50 to 999 kW	General Service Greater than 1,000 kW	Large User	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
	Distribution Plant									
1565	Conservation and Demand Management Expenditures and Recoveries	$0	$0	$0	$0	$0	$0	$0	$0	$0
1830	Poles, Towers and Fixtures	$0	$0	$0	$0	$0	$0	$0	$0	$0
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1830-4	Poles, Towers and Fixtures - Primary	$5,374,822	$3,828,990	$333,721	$54,418	$1,110	$0	$1,096,329	$14,805	$45,450
1830-5	Poles, Towers and Fixtures - Secondary	$109,690	$78,230	$6,818	$1,012	$0	$0	$22,399	$302	$929
1835	Overhead Conductors and Devices	$0	$0	$0	$0	$0	$0	$0	$0	$0
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1835-4	Overhead Conductors and Devices - Primary	$4,993,731	$3,557,503	$310,059	$50,559	$1,032	$0	$1,018,596	$13,755	$42,227
1835-5	Overhead Conductors and Devices - Secondary	$554,859	$395,721	$34,490	$5,118	$0	$0	$113,304	$1,530	$4,697
1840	Underground Conduit	$0	$0	$0	$0	$0	$0	$0	$0	$0
1840-3	Underground Conduit - Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1840-4	Underground Conduit - Primary	$4,092,162	$2,915,231	$254,081	$41,431	$845	$0	$834,699	$11,272	$34,604
1840-5	Underground Conduit - Secondary	$2,728,108	$1,945,663	$169,577	$25,162	$0	$0	$557,089	$7,523	$23,095
1845	Underground Conductors and Devices	$0	$0	$0	$0	$0	$0	$0	$0	$0
1845-3	Underground Conductors and Devices - Bulk Delivery	$0	$0	$0	$0	$0	$0	$0	$0	$0
1845-4	Underground Conductors and Devices - Primary	$11,536,804	$8,218,747	$716,316	$116,805	$2,384	$0	$2,353,219	$31,778	$97,556
1845-5	Underground Conductors and Devices - Secondary	$7,691,203	$5,485,298	$478,078	$70,939	$0	$0	$1,570,569	$21,209	$65,110
1850	Line Transformers	$14,817,456	$10,565,622	$920,860	$139,524	$0	$0	$3,025,184	$40,852	$125,413
1855	Services	$9,244,264	$5,757,163	$1,003,546	$744,548	$0	$0	$1,648,410	$22,260	$68,337
1860	Meters	$12,294,854	$6,560,475	$2,122,622	$3,537,769	$73,989	$0	$0	$0	$0
	Sub-total	*$73,437,954*	*$49,308,641*	*$6,350,167*	*$4,787,286*	*$79,360*	*$0*	*$12,239,797*	*$165,287*	*$507,416*
	Accumulated Amortization									
	Accum. Amortization of Electric Utility Plant -Line Transformers, Services and Meters	($36,854,409)	($24,676,040)	($3,230,358)	($2,515,487)	($42,321)	$0	($6,057,292)	($81,798)	($251,113)
	Customer Related Net Fixed Assets	$36,583,545	$24,632,601	$3,119,808	$2,271,799	$37,039	$0	$6,182,505	$83,489	$256,304
	Allocated General Plant Net Fixed Assets	$4,499,432	$3,014,545	$376,976	$269,474	$4,177	$0	$791,214	$10,685	$32,361
	Customer Related NFA Including General Plant	$41,082,977	$27,647,146	$3,496,784	$2,541,273	$41,217	$0	$6,973,718	$94,173	$288,665
	Misc Revenue									
4082	Retail Services Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4084	Service Transaction Requests (STR) Revenues	$0	$0	$0	$0	$0	$0	$0	$0	$0
4090	Electric Services Incidental to Energy Sales	$0	$0	$0	$0	$0	$0	$0	$0	$0
4220	Other Electric Revenues	($481,462)	($241,385)	($61,189)	($136,368)	($11,180)	$0	($29,500)	($398)	($1,442)
4225	Late Payment Charges	($282,834)	($130,317)	($63,254)	($65,404)	($23,153)	$0	($85)	($3)	($617)
4235	Miscellaneous Service Revenues	($530,585)	($351,894)	($107,164)	($51,908)	($1,283)	$0	($32)	($28)	($18,276)
	Sub-total	*($1,294,881)*	*($723,595)*	*($231,608)*	*($253,680)*	*($35,616)*	*$0*	*($29,618)*	*($430)*	*($20,335)*

	Operating and Maintenance									
5005	Operation Supervision and Engineering	$260,160	$181,891	$17,988	$5,317	$23	$0	$52,080	$703	$2,159
5010	Load Dispatching	$194,763	$136,168	$13,466	$3,980	$17	$0	$38,988	$526	$1,616
5020	Overhead Distribution Lines and Feeders - Operation Labour	$55,388	$39,461	$3,439	$558	$11	$0	$11,298	$153	$468
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	$16,859	$12,011	$1,047	$170	$3	$0	$3,439	$46	$143
5035	Overhead Distribution Transformers- Operation	$67	$48	$4	$1	$0	$0	$14	$0	$1
5040	Underground Distribution Lines and Feeders - Operation Labour	$214,605	$152,952	$13,331	$2,095	$27	$0	$43,794	$591	$1,816
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	$18,676	$13,311	$1,160	$182	$2	$0	$3,811	$51	$158
5055	Underground Distribution Transformers - Operation	$6,738	$4,804	$419	$63	$0	$0	$1,376	$19	$57
5065	Meter Expense	$279,859	$149,332	$48,316	$80,528	$1,684	$0	$0	$0	$0
5070	Customer Premises - Operation Labour	$101,435	$72,262	$6,298	$1,027	$21	$0	$20,690	$279	$858
5075	Customer Premises - Materials and Expenses	$241,087	$171,749	$14,969	$2,441	$50	$0	$49,176	$664	$2,039
5085	Miscellaneous Distribution Expense	$236,872	$165,609	$16,378	$4,841	$21	$0	$47,418	$640	$1,966
5090	Underground Distribution Lines and Feeders - Rental Paid	$0	$0	$0	$0	$0	$0	$0	$0	$0
5095	Overhead Distribution Lines and Feeders - Rental Paid	$0	$0	$0	$0	$0	$0	$0	$0	$0
5096	Other Rent	$0	$0	$0	$0	$0	$0	$0	$0	$0
5105	Maintenance Supervision and Engineering	$7,712	$5,392	$533	$158	$1	$0	$1,544	$21	$64
5120	Maintenance of Poles, Towers and Fixtures	$49,584	$35,324	$3,079	$501	$10	$0	$10,114	$137	$419
5125	Maintenance of Overhead Conductors and Devices	$102,969	$73,363	$6,394	$1,033	$19	$0	$21,005	$284	$871
5130	Maintenance of Overhead Services	$103,416	$64,406	$11,227	$8,329	$0	$0	$18,441	$249	$764
5135	Overhead Distribution Lines and Feeders - Right of Way	$89,610	$63,842	$5,564	$902	$17	$0	$18,279	$247	$758
5145	Maintenance of Underground Conduit	$32,979	$23,505	$2,049	$322	$4	$0	$6,730	$91	$279
5150	Maintenance of Underground Conductors and Devices	$64,053	$45,651	$3,979	$625	$8	$0	$13,071	$177	$542
5155	Maintenance of Underground Services	$289,789	$180,476	$31,459	$23,340	$0	$0	$51,674	$698	$2,142
5160	Maintenance of Line Transformers	$101,449	$72,339	$6,305	$955	$0	$0	$20,712	$280	$859
5175	Maintenance of Meters	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	*$2,468,070*	*$1,663,892*	*$207,403*	*$137,369*	*$1,918*	*$0*	*$433,654*	*$5,856*	*$17,978*
	Billing and Collection									
5305	Supervision	$202,959	$134,606	$40,992	$19,856	$491	$0	$12	$11	$6,991
5310	Meter Reading Expense	$548,439	$287,993	$99,934	$153,140	$7,371	$0	$0	$0	$0
5315	Customer Billing	$685,273	$454,486	$138,407	$67,042	$1,657	$0	$42	$36	$23,604
5320	Collecting	$183,760	$121,873	$37,115	$17,978	$444	$0	$11	$10	$6,330
5325	Collecting- Cash Over and Short	$0	$0	$0	$0	$0	$0	$0	$0	$0
5330	Collection Charges	($291,870)	($193,573)	($58,950)	($28,554)	($706)	$0	($18)	($15)	($10,053)
5335	Bad Debt Expense	$276,587	$83,772	$44,388	$57,463	$79,166	$0	$0	$11,798	$0
5340	Miscellaneous Customer Accounts Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Sub-total	*$1,605,147*	*$889,156*	*$301,886*	*$286,924*	*$88,424*	*$0*	*$48*	*$11,839*	*$26,871*
	Sub Total Operating, Maintenance and Biling	*$4,073,217*	*$2,553,048*	*$509,289*	*$424,294*	*$90,342*	*$0*	*$433,702*	*$17,695*	*$44,849*
	Amortization Expense - Customer Related	$2,909,322	$1,960,891	$248,794	$192,114	$3,531	$0	$477,735	$6,451	$19,805
	Amortization Expense - General Plant assigned to Meters	$733,981	$491,755	$61,495	$43,959	$681	$0	$129,069	$1,743	$5,279
	Admin and General	$2,339,699	$1,465,194	$291,337	$245,506	$50,986	$0	$251,937	$9,769	$24,970
	Allocated PILs	$781,913	$526,481	$66,681	$48,556	$792	$0	$132,141	$1,784	$5,478
	Allocated Debt Return	$2,074,697	$1,396,945	$176,928	$128,836	$2,101	$0	$350,617	$4,735	$14,535
	Allocated Equity Return	$1,538,591	$1,035,971	$131,210	$95,545	$1,558	$0	$260,017	$3,511	$10,779
	PLCC Adjustment for Line Transformer	$427,955	$384,806	$33,504	$5,071	$0	$0	$0	$0	$4,574
	PLCC Adjustment for Primary Costs	$962,135	$864,112	$75,235	$12,275	$253	$0	$0	$0	$10,259
	PLCC Adjustment for Secondary Costs	$508,675	$457,614	$34,905	$5,466	$0	$0	$0	$0	$10,690
	Total	$11,257,775	**$7,000,159**	**$1,110,481**	**$902,317**	**$114,121**	**$0**	**$2,005,599**	**$45,259**	**$79,838**

b) One of the principles on page 4 is that revenue to cost ratios should not move away from 100%. However, Oakville's proposed residential ratio for 2011 I moving away from 100% relative to the 2010 ratio. Please reconcile.

RESPONSE:

As a result of responding to this interrogatory Oakville Hydro discovered it had made an error in the 2011 value and it has been adjusted as shown below.

Proposed Revenue to Cost Ratios

Rate Class	2010 Cost Allocation results	Oakville Hydro's proposal			Target Ranges
		2010	2011	2012	**%**
Residential	122.59%	109.27%	109.27%	108.20%	85-115
GS < 50 kW	112.94%	112.94%	110.00%	108.00%	80-120
GS 50 to 999 kW	66.16%	85.00%	85.00%	85.00%	80-180
GS > 1000 kW	144.83%	144.83%	126.50%	124.00%	80-180
Sentinel Lights	3.33%	36.66%	53.33%	70.00%	70-120
Street Lighting	11.02%	40.51%	55.25%	70.00%	70-120
USL	163.13%	120.00%	120.00%	120.00%	80-120

Note: 2011 and 2012 Street Lighting and Sentinel Lighting incremental revenue will be assigned to Residential, GS< 50 kW and GS> 1000 Kw classes

Question #20

Reference: Exhibit 8/Tab 1/Schedule 2, page 2

a) Please provide a schedule that for each class includes the following columns:

1) **Allocated 2010 Revenue Requirement – per Sheet O1, line 35**
2) **Proposed Revenue to Cost Ratio**
3) **Proposed Service Revenue Allocation (1 x 2)**
4) **Allocation of Miscellaneous Revenues – per Sheet O1, line 19**
5) **Proposed Allocation of Base Distribution Revenue Requirement (3-4)**

RESPONSE:

			Total	Residential	General Service Less than 50 kW	General Service 50 to 999 kW	General Service Greater than 1,000 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load	Existing in original submission EB-2009-0271
Allocated 2010 Rev. Req. (Sheet O1, line 35)	1	Revenue Requirement (includes NI)	**$35,134,764**	$17,777,159	$4,594,725	$9,621,419	$919,737	$2,035,217	$45,689	$140,817	CA sheet O1,line 35
Proposed Rev. To Cost ratio	2			109.27%	112.94%	85.00%	144.83%	40.51%	36.66%	120.00%	Exhibit 8, Tab 1, Schedule 1, Page 2
Proposed service Rev. Allocation (1X2)	3			$19,424,933	$5,189,350	$8,178,206	$1,332,100	$824,442	$16,751	$168,980	Exhibit 8, Tab 1, Schedule 2, Page 2, Table 2
Allocation of Miscellaneous Rev. (sheet O1, line 19)	4	Miscellaneous Revenue (mi)	**$2,093,240**	$1,123,858	$333,072	$479,805	$54,154	$78,535	$1,090	$22,725	CA sheet O1,line 19
Proposed Allocation of Base Distribution Rev. Req. (3-4)	5			$18,301,075	$4,856,278	$7,698,401	$1,277,945	$745,907	$15,661	$146,255	Exhibit 8, Tab 1, Schedule 2,Pge 4,Table 3
Total Base Revenue Requirement (1- 5)	6	Distribution Revenue (sale)	**$33,041,524**	$20,668,344	$4,856,278	$5,885,832	$1,277,945	$145,698	$430	$206,995	CA sheet O1, line 18

Question #21

Reference: Exhibit 8/Tab 1/Schedule 2, page 8

a) The Board's EB-2007-0667 Guideline (page 12) sets the upper limit for the MSC at 120% of avoided costs plus the allocated customer costs. Please re-do the summary table on page 8 with this adjustment.

RESPONSE:

Oakville Hydro has provided below the calculated MSC at 120% of avoided costs plus the directly related costs.

Summary

	1	2	3	4		6	7
	Residential	General Service Less than 50 kW	General Service 50 to 999 kW	General Service Greater than 1,000 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	$3.39	$8.93	$63.75	$86.89	$0.35	$0.36	$2.73
Customer Unit Cost per month - Directly Related	$4.40	$12.12	$86.01	$121.13	$0.55	$0.56	$4.25
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$11.98	$22.89	$116.64	$735.01	$10.11	$16.80	$12.00
Fixed Charge per approved 2009 IRM	$14.72	$31.09	$199.71	$3,160.88	$0.31	$0.04	$15.05
Proposed Monthly 2010 Fixed Charges	$14.08	$34.88	$294.66	$3,662.59	$1.84	$1.69	$12.33
120% Avoided Costs + Directly Related	$9.35	$25.26	$179.71	$249.63	$1.07	$1.10	$8.37

b) explain why the Distribution Revenues for the Residential class change between the corrected filing (page 6) and the corrected filing with the transformer ownership allowance removed (page 7).

RESPONSE:

Please refer to response to interrogatory #18.

Question #22

Reference: Exhibit 7/Tab 1/Schedule 6, page 6

a) Please provide the currently approved loss factors for Oakville in the same format at Table 21.

RESPONSE:

The currently approved loss factors for Oakville Hydro are provided in the same format in Exhibit 8/Tab 2/ Schedule 5/ Page 3.

Question #23

Reference: Exhibit 8/Tab 2/Schedule 1

a) Please explain why Oakville did not seek adjustments to its 2009 rates to account for the load losses due to Customers B, C and D.

RESPONSE:

Oakville Hydro considered that distribution revenue loss due to customer load loss would be better addressed in its Cost of Service proceeding.

b) Is this the first notification that Oakville has provided the Board regarding the lost revenues associated with Customers A, B, C and D? If not, please provide copies of any earlier correspondence to the Board on this issue.

RESPONSE:

Yes, this is the first notification that Oakville Hydro has provided the Board regarding the lost revenues associated with Customer A, B,C, and D.

c) For each customer please segment the calculation of lost revenue calendar year and provide Oakville's estimate of the total lost revenue by calendar year.

RESPONSE:

Please see Oakville Hydro's response to the Board Staff's interrogatory # 35.

d) Please explain why the loss of load associated with each customer is not considered a separate event (per the Filing Guidelines Appendix of the Board's Report (page v)) for purposes of determining eligibility as a Z-factor.

RESPONSE:

It is Oakville Hydro's opinion that the current economic recession, which has caused the loss of load, is an individual event and that the threshold used for materiality analysis should be applied to the total loss of revenue.

e) Is it Oakville's position that any deviation in revenues of more than 0.5% from forecast should be eligible (in terms of materiality) for Z-factor treatment? If no, please explain why the circumstances in the application should qualify.

RESPONSE:

It is Oakville Hydro's position that any significant loss of load that induces a distribution revenue loss more than 0.5% of the approved revenue requirement should be eligible for Z – factor treatment.

Question #24

Reference: Exhibit 8/Tab 2/Schedule 8

a) Please check the 6.6% total bill impact reported for Residential 250 kWh use. If incorrect, please determine if the source of the error impacts any on the other reported bill impacts.

RESPONSE:

Oakville Hydro has corrected a formula error in the Bill Impact table. The total correct total bill impact is 3.27%. Oakville Hydro has verified that the error was limited to the Residential 250 kWh calculation.

RESIDENTIAL

Consumption			2009 BILL			2010 BILL			IMPACT		
			Volume	RATE $	CHARGE $	Volume	RATE $	CHARGE $	$	%	% of Total Bill
250 kWh		Monthly Service Charge			13.72			14.11	0.39	2.84%	49.55%
Loss Factor		Distribution (kWh)	250.00	0.0150	3.75	250.00	0.0156	3.90	0.15	4.00%	13.70%
2009	1.0525	Smart Meter Rider (per month)			1.00			1.69	0.69	69.00%	5.94%
2010	1.0396	LRAM & SSM Rider (kWh)	250.00			250.00	0.0002	0.05	0.05	#DIV/0!	0.18%
		Regulatory Assets (kWh)	250.00	0.0000	0.00	250.00	(0.0012)	(0.29)	(0.29)	#DIV/0!	(1.01%)
		Revenue Loss Recovery	250.00		0.00	250.00	0.0002	0.06	0.06	#DIV/0!	0.20%
		Sub-Total A- Distribution			**18.47**			**19.52**	**1.05**	**5.67%**	**68.55%**
		RTSR- Network (kWh)	263.13	0.0053	1.39	259.89	0.0055	1.43	0.03	2.23%	5.01%
		RTSR-Connection (kWh)	263.13	0.0051	1.34	259.89	0.0046	1.18	(0.16)	(11.77%)	4.16%
		Sub- Total B (including Sub-Total A) - Delivery			**21.21**			**22.13**	**0.92**	**4.34%**	**77.71%**
		Wholesale Market Rate	263.13	0.0052	1.37	259.89	0.0052	1.35	(0.02)	(1.23%)	4.75%
		RRRP (kWh)	263.13	0.0013	0.34	259.89	0.0013	0.34	(0.00)	(1.23%)	1.19%
		DRC (kWh)	263.13	0.0070	1.84	259.89	0.0070	1.82	(0.02)	(1.23%)	6.39%
		Cost of Power Commodity (kWh)	263.13	0.0057	1.50	259.89	0.0057	1.48	(0.02)	(1.23%)	5.20%
		Total Bill Before Taxes			**26.26**			**27.12**	**0.86**	**3.27%**	**95.24%**
		GST		5.00%	1.31		5.00%	1.36	0.04	3.27%	4.76%
		Total Bill			**27.57**			**28.47**	**0.90**	**3.27%**	**100.00%**

Question #25

Reference Exhibit 9/Tab 3/Schedule 1, Appendix B and C

a) Provide support/details of the Residential SM Unit costs (procurement and installation).

RESPONSE:

Exhibit 9, Tab 3, Schedule 1, Appendix C set out the estimated costs in total and on a per meter basis for:

- procurement and installation of the components of the AMI system
- customer information system
- incremental operating and maintenance activities
- changes to ancillary systems

The advanced metering communication, control computer, area network, and other AMI will serve all smart meters (i.e. residential and GS<50 kW). Therefore, to provide a separate SM Unit cost for residential only it is not possible.

In Exhibit 9, Tab 3, Schedule 1, Page 4, Table 11. Oakville Hydro presented the estimated cost per installed smart meter as of $218.62.

b) If there are delays in receiving OEB approval of the 2009 rate rider what will be the impact on the forecast installation schedule? Please discuss.

RESPONSE:

Delays in receiving OEB approval of the 2010 smart meter rate rider will put at risk Oakville Hydro's source of financing these investments. The amount of funds assured in 2010 by the increased rate rider (from $1.00 to $1.69) is roughly $353,000. Oakville Hydro will need to find external financing source in order to comply with Ministry of Energy's requirement to complete smart meter installations by the end of 2010. The financing costs would add to customer costs related to smart meters.

On October 5, 2009, Oakville Hydro started the procurement and installation of smart meters at residential locations. We have committed to our vendor for procurement and hired third party service providers for installation.

There will be no impact on the forecast installation schedule, but there will be an impact on customer 2011 bill when Oakville Hydro will apply for Smart Meter cost recovery through rate riders.

If approved, the increased rate rider would phase in rate impacts of smart meter rate adjustments to the customer over a multi-year time frame.

Question #26

Reference: Exhibit 9/Tab 3/Schedule 1, Appendix C and Appendix 2-S

a) Provide a cash flow projection showing SM rate adder revenue and SM expenditures by Month for the 2009 rate year.

RESPONSE:
Please see the following cash flow projection of SM rate adder revenue and SM expenditures for the 2009 rate year.

		Actual May-09	Actual Jun-09	Actual Jul-09	Actual Aug-09	Actual Sep-09	Forecast Oct-09	Forecast Nov-09	Forecast Dec-09	Forecast Jan-10	Forecast Feb-10	Forecast Mar-10	Forecast Apr-10
Revenue	Amount collected from customers	17,765	37,177	57,385	60,826	62,757	59,499	59,499	59,499	59,499	59,499	59,499	59,499
Expenses	Operating Costs	5,094	6,466	5,569	9,398	40,686	15,250	15,250	15,250	23,151	23,151	23,151	23,151
	Capital Costs	$0	$0	$3,487	$33,864	$420,545	$1,087,417	$1,087,229	$1,087,229	$718,517	$718,517	$718,517	$718,517
		5,094	6,466	9,056	43,262	461,231	1,102,667	1,102,479	1,102,479	741,668	741,668	741,668	741,668
Net Cash Flow		**$ 12,671**	**$ 30,711**	**$ 48,330**	**$ 17,564**	**$ (398,474)**	**$ (1,043,168)**	**$ (1,042,980)**	**$ (1,042,980)**	**$ (682,169)**	**$ (682,169)**	**$ (682,169)**	**$ (682,169)**
Total 2009 rate year cash flow impact		$ (6,147,004)											

b) Show the impact of delays in approval /implementation of the SM rate rider increase, including any revisions needed to accommodate the shortened recovery period.

RESPONSE:

Oakville Hydro has worked the requested scenarios, and its analysis show a decrease of $353,998 (from $2,064,515 to $1,710,517) in funds if the requested rate rider is not approved. Please see Exhibit 9, Tab 3, Schedule 1, Appendix C, Page 13 and the following calculation of the smart meter funding adder at the actual rate of $1.00.

Oakville Hydro has committed to its vendor for the acquisition of smart meters according to its implementation plan. Oakville Hydro has also committed to the OEB for a full Smart Meter implementation by November 2010.

As discussed in response to interrogatory #25 (b) above, there will be no impact on the forecast installation schedule, but it will be an impact on customer 2011 bill when Oakville Hydro will apply for Smart Meter cost recovery through rate riders.

If approved, the increased rate rider would phase in rate impacts of smart meter rate adjustments to the customer over a multi-year time frame.

Smart Meter Funding Adder

	Opening	Fund Adder	Int. Rate	Interest	Closing	
Jan-06	$ -	$ -	6.00%	$ -	$ -	
Feb-06	$ -	$ -	6.00%	$ -	$ -	
Mar-06	$ -	$ -	6.00%	$ -	$ -	
Apr-06	$ -	$ -	4.14%	$ -	$ -	
May-06	$ -	$ -	4.14%	$ -	$ -	
Jun-06	$ -	$ -	4.14%	$ -	$ -	
Jul-06	$ -	$ -	4.59%	$ -	$ -	
Aug-06	$ -	$ 3,106	4.59%	$ -	$ 3,106	
Sep-06	$ 3,106	$ 14,665	4.59%	$ 12	$ 17,783	
Oct-06	$ 17,783	$ 14,916	4.59%	$ 68	$ 32,767	
Nov-06	$ 32,767	$ 49,262	4.59%	$ 125	$ 82,154	
Dec-06	$ 82,154	$ 13,202	4.59%	$ 314	$ 95,670	
Jan-07	$ 95,670	$ 16,465	4.59%	$ 366	$ 112,502	
Feb-07	$ 112,502	$ 14,432	4.59%	$ 430	$ 127,364	
Mar-07	$ 127,364	$ 16,917	4.59%	$ 487	$ 144,768	
Apr-07	$ 144,768	$ 13,696	4.59%	$ 554	$ 159,018	
May-07	$ 159,018	$ 17,988	4.59%	$ 608	$ 177,613	
Jun-07	$ 177,613	$ 13,947	4.59%	$ 679	$ 192,240	
Jul-07	$ 192,240	$ 16,964	4.59%	$ 735	$ 209,940	
Aug-07	$ 209,940	$ 15,698	4.59%	$ 803	$ 226,440	
Sep-07	$ 226,440	$ 16,126	4.59%	$ 866	$ 243,432	
Oct-07	$ 243,432	$ 14,431	5.14%	$ 1,043	$ 258,906	
Nov-07	$ 258,906	$ 18,037	5.14%	$ 1,109	$ 278,052	
Dec-07	$ 278,052	$ 13,586	5.14%	$ 1,191	$ 292,829	
Jan-08	$ 292,829	$ 17,768	4.08%	$ 996	$ 311,593	
Feb-08	$ 311,593	$ 13,811	4.08%	$ 1,059	$ 326,464	
Mar-08	$ 326,464	$ 16,026	4.08%	$ 1,110	$ 343,600	
Apr-08	$ 343,600	$ 15,553	3.35%	$ 959	$ 360,112	
May-08	$ 360,112	$ 16,321	3.35%	$ 1,005	$ 377,439	
Jun-08	$ 377,439	$ 16,300	3.35%	$ 1,054	$ 394,792	
Jul-08	$ 394,792	$ 17,639	3.35%	$ 1,102	$ 413,533	
Aug-08	$ 413,533	$ 14,680	3.35%	$ 1,154	$ 429,367	
Sep-08	$ 429,367	$ 17,182	3.35%	$ 1,199	$ 447,747	
Oct-08	$ 447,747	$ 15,640	3.35%	$ 1,250	$ 464,637	
Nov-08	$ 464,637	$ 16,780	3.35%	$ 1,297	$ 482,715	
Dec-08	$ 482,715	$ 15,313	3.35%	$ 1,348	$ 499,376	
Jan-09	$ 499,376	$ 17,231	2.45%	$ 1,020	$ 517,626	
Feb-09	$ 517,626	$ 15,229	2.45%	$ 1,057	$ 533,912	
Mar-09	$ 533,912	$ 17,905	2.45%	$ 1,090	$ 552,908	
Apr-09	$ 552,908	$ 14,694	1.00%	$ 461	$ 568,063	
May-09	$ 568,063	$ 17,765	1.00%	$ 473	$ 586,301	
Jun-09	$ 586,301	$ 37,177	1.00%	$ 489	$ 623,966	
Jul-09	$ 623,966	$ 57,385	0.55%	$ 286	$ 681,638	
Aug-09	$ 681,638	$ 60,826	0.55%	$ 312	$ 742,776	
Sep-09	$ 742,776	$ 62,757	0.55%	$ 340	$ 805,873	actual
Oct-09	$ 805,873	$ 59,499	0.55%	$ 369	$ 865,742	forecasted
Nov-09	$ 865,742	$ 59,499	0.55%	$ 397	$ 925,637	
Dec-09	$ 925,637	$ 59,499	0.55%	$ 424	$ 985,561	
Jan-10	$ 985,561	$ 59,499	0.55%	$ 452	$ 1,045,511	
Feb-10	$ 1,045,511	$ 59,499	0.55%	$ 479	$ 1,105,490	
Mar-10	$ 1,105,490	$ 59,499	0.55%	$ 507	$ 1,165,495	
Apr-10	$ 1,165,495	$ 59,499	0.55%	$ 534	$ 1,225,528	
May-10	$ 1,225,528	$ 64,575	0.55%	$ 562	$ 1,290,666	
Jun-10	$ 1,290,666	$ 64,575	0.55%	$ 592	$ 1,355,833	
Jul-10	$ 1,355,833	$ 64,575	0.55%	$ 621	$ 1,421,029	
Aug-10	$ 1,421,029	$ 64,575	0.55%	$ 651	$ 1,486,256	
Sep-10	$ 1,486,256	$ 64,575	0.55%	$ 681	$ 1,551,513	
Oct-10	$ 1,551,513	$ 64,575	0.55%	$ 711	$ 1,616,799	
Nov-10	$ 1,616,799	$ 64,575	0.55%	$ 741	$ 1,682,116	
Dec-10	$ 1,682,116	$ 64,575	0.55%	$ 771	$ 1,747,462	
Jan-11	$ 1,747,462					
		$ 1,710,517				

Question #27

Reference: Exhibit 10/Tab 1/Schedule 3, page 1 and Schedule 2, Table 1

Preamble
The reduction in distribution revenue is calculated on the foregone volumes resulting from CDM activities by class and at the variable distribution rates applicable to the years 2006, 2007, 2008 and 2009. No data was available for 2005.

a) Provide a schedule for the Residential Sector CDM programs that breaks down by measure the components of the LRAM claim and the total kwh and kw for each year 2006-2009 (including showing separately carry forward of prior years' savings)
i. Third tranche Programs
ii. OPA Funded programs
iii. Other e.g. Rate funded programs

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

b) Provide a reconciliation of the Residential Sector kWh savings in the Schedule with those shown in Exhibit 10 Tab 1 Schedule 2 Page 1 of 1 Table 1.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

c) **Provide the as filed Carrying Cost Calculation/Schedule for the Residential LRAM claim**.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

d) Provide a schedule that shows the derivation of the Residential rate riders based on the kwh savings breakdown and carrying costs provided in response to parts a and c) of this IR. Reconcile this with Exhibit 10 Tab 1 Schedule 2 Table 1

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

Question #28

Reference: Exhibit 10/Tab 1/Schedule 3, page 1

Preamble:
In Exhibit 10, Tab 1, Schedule 6, Appendix C, the IndEco Third Party Review of Oakville Hydro Electricity Distribution Inc.'s LRAM/SSM provides a summary of requested SSM amounts (Table2) and a summary of requested LRAM amounts (Table 5).

a) Does Oakville Hydro agree that the OEB Guidelines Section 7.5 indicate that savings and LRAM claims should be based on the "Best Available" input assumptions at the time that the LRAM/SSM claim was prepared?

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

b) Does Oakville Hydro agree that in the case estimation of 2006 -2009 savings, this means using the best available 2007 and 2008 input assumptions, which were and are those of the OPA Measures and Input Assumptions List? If not explain why not.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

c) Explain why the independent review of 2009 lost revenue associated with 2006 -2009 savings did not use the latest OPA input assumptions in Tables 7,8,9 for several residential mass market measures with the exception of Table 8 for 2007 (notably CFLs, Low Flow Showerheads 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)

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

d) Confirm that Indeco did not make any adjustments to the 2006-2008 input values for the above measures and used those provided by OH.

RESPONSE:
Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

e) Provide a Copy of the 2007 OPA Every Kilowatt Counts Program Calculator.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

f) Confirm whether OH reported to the OPA on the 2007 EKC campaign using Mass Market measures assumptions (particularly CFLs) specified in the OPA 2007 EKC Program Calculator.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

g) Confirm whether or not the LRAM claim for 2006, 2007 and 2008 related to third tranche programs is based on using the OEB Guide values for CFLs, showerheads and PTs, not the OPA EKC Calculator or OPA 2008/2009 Measures values.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

h) Confirm whether the 2008 claim for OPA programs is based on the OPA 2008 Measures and input assumptions for CFLs, Low Flow Showerheads and PTs.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

Question #29

References: i) Exhibit 10/Tab 1/Schedule 6, Appendix B:
ii) Exhibit 10/Tab 1/Schedule 6, Appendix C, page 10, Table 1

a) Provide a Table in the format below that shows for each of the Residential Programs for each year, which source(s) of input assumptions underpin the claimed kWh and kW savings. (Note entries below are illustrative only). Indicate for OPA- Funded Programs whether the 2007 Every Kilowatt Counts (EKC) Calculator or the OPA Measures for 2008 was used.

LRAM Claim	Third tranche Incl. 2006 Carryover	Rate funded	OPA Funded	Verification(s)
2006	OEB Guide	OEB Guide	OPA EKC Calculator	Indeco
2007	OEB Guide	OEB Guide	OPA EKC Calculator	Indeco
2008	OPA Measures	OPA Measures	OPA Measures	Indeco
SSM Claim				
2006	OEB Guide	OEB Guide	OPA EKC Calculator	Indeco
2007	OEB Guide	OEB Guide	OPA EKC Calculator	Indeco
2008	OPA Measures		OPA Measures	indeco

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

b) Provide a complete list by measure by year of the input assumptions used to prepare the residential kWh and kW load impacts in Exhibit 10, Tab 1, Schedule 6, Appendix C Tables 2 and 3 and associated LRAM and SSM claims. In particular provide the detailed input assumptions for all mass market measures including CFLs and PTs.

i. kWh and kW savings
ii. Free ridership
iii. Cost of measure
iv. Measure life
v. Source(s)/authority(ies) for assumption(s)

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

Question #30

Reference: Exhibit 10/Tab 1/Schedule 6, Appendix C-Indeco Report Page 12 and Appendix Tables 7 , 8 and 9

a) **Confirm/correct/complete the following Input Assumptions and Kwh savings Comparison Table (based on Exhibit 10 Tab1 Schedule 6 Appendix B) in the format below for Residential Mass Market measures and Social Housing. Include any missing programs related to CFLs, PTs and Seasonal Lights**:

Program	Efficient Measure	Participants As filed	Filed unit kw savings assumption	Free Ridership	Net Kwh Per Filed LRAM Claim	OPA 2007 EKC Calc or 2008 Measures List	Free Ridership	Adjusted Net kwh OPA 2008 Measures List
2006								
Third Tranche	CFls 13/15w		106.7	10%		43	30%	
EKC Spring	E Star CFl 15w	18,932	104	10%		43	30%	
	PTs	231	216	10%		159	10%	
EKC Fall	E Star CFl 15w	28,070	104	10%		43	30%	
	PTs	445	216	10%		55	54%	
EKC Fall	SLED Xmas Lights	6,756	45	5%		43	30%	
OTHER	CFLs							
TOTAL 2006 kwh								
2007								
Third Tranche	13/15 watt CFL		109.0	10%		43	30%	
EKC 2007	E Star CFl 15w	34,238	43	30%		43	30%	
	E Star CFL 20w+	5,574	62	22%		43	30%	
	Porch light CFL	7,205	43	24%		43	24%	
Cool Savings	PTs	268	55	54%		55	64%	
OTHER	CFLs							
TOTAL 2007 kwh								
2008								
Third Tranche	CFls 13/15w		106.7	10%		43	30%	
OPA Cool Savings Rebate	PTs	396	54	54%		54	64%	
OTHER	CFLs							
TOTAL 2008 kwh								
TOTAL CUMULATIVE KWH SAVINGS								

RESPONSE:

Please see Appendix VECC - Indeco Responses.

b) Comment on the material differences between the result of using updated input assumptions (available in 2007) and reflected in the 2008 and 2009 OPA Measures List now adopted by the OEB?

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

c) Provide a revised version of Exhibit 10 Tab 1 Schedule 6 Appendix C Page 11 of 18 Table 2 using the updated kW and kWh savings based on OPA 2008/2009 Measures List input assumptions now adopted by the OEB.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

d) Provide a revised version of Exhibit 10 Tab 1 Schedule 6 Appendix C Page 12 of 18 Table 3 using the kWh savings based on OPA 2008/2009 Measures List input assumptions now adopted by the OEB.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

e) Provide a revised version of the schedule provided in response to VECC IR #25 part a) adjusted to reflect the OPA 2008/2009 measures and input assumptions list for CFLs and PTs provided in part a) of this IR.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

f) Adjust the as filed Carrying costs to reflect the revised LRAM amounts resulting from the answer to part c and d).

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

Question #31

Reference: Exhibit 10/Tab 1/Schedule 2, page 1, Table 1

a) Provide a revised Rate rider calculation using the complete set of updated OPA assumptions from the 2008/2009 Measures List for the Residential Sector LRAM/SSM claims.

RESPONSE:

2010 Test Year - LRAM and SSM Rate Rider using revised LRAm and SSM amounts as per VECC's request

	Amounts (2005 to 2008)		Billing Units (2010)		Rate Riders			Three Year Rate Rider	Four Year Rate Rider	Number of Years to Use	Rate Rider to Use
	LRAM	SSM			LRAM	SSM	Total	Total	Total	(3 or 4)	Total
Rate Class	$	$		Metrics	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	4	$/unit (kWh or kW)
Residential	$412,458	$77,937	545,392,460	kWh	0.0008	0.0001	0.0009	0.0003	0.000225		0.0002
GS 50 to 999 kW	$20,863	$1,159	1,655,087	kW	0.0126	0.0007	0.0133	0.0044	0.003326		0.0033
GS >1000 kW		-$2,015	265,326	kW	0.0000	-0.0076	-0.0076	-0.0025	-0.001899		-0.0019
Total	$433,321	$77,081									

b) Provide Revised Bill impacts using the complete set of updated OPA assumptions from the 2008/2009 Measures List for the Residential Sector LRAM/SSM claims.

RESPONSE:

LRAM and SSM - Bill Impacts - in VEC's requested version

Consumption per Month	Mothly Dollar Impact	Total Bill
Residential 800 kWh	$ 0.16	0.23%
General Service 50 to 999 kW 64,000 kWh and 160 kW	$ 0.53	0.01%
General Service >1000 kW 1,000,000 kWh and 2,200 kW	$ (4.18)	0.00%

c) Comment on the timing/implementation of the Rate Riders given the above revisions

RESPONSE:

In its application EB-2009-0271 submitted on August 28, 2009, Oakville Hydro stated that the recovery of the LRAM and SSM over 4 years satisfactorily mitigates the rate impact to customers, and that further mitigation is not required.

Given the fact that the amount calculated in 31(a) based on VECC's request is lower than Oakville Hydro's LRAM and SSM claim, to keep the residential bill impact at the same level, Oakville Hydro would request a 2-year term recovery if the Board orders a revision in the assumptions. However, Oakville Hydro believes that the LRAM and SSM claim as filed is based on the best available input assumptions.

Oakville Hydro has calculated the rate rider and the bill impacts for 2-year term recovery as following:

2010 Test Year - LRAM and SSM Rate Rider using revised LRAM and SSM amounts as per VECC's request

	Amounts (2005 to 2008)		Billing Units (2010)		Rate Riders			Two Year Rate Rider
	LRAM	SSM			LRAM	SSM	Total	Total
Rate Class	$	$		Metrics	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)
Street Lighting	$412,458	$77,937	545,392,460	kWh	0.0008	0.0001	0.0009	0.0004
USL	$20,863	$1,159	1,655,087	kW	0.0126	0.0007	0.0133	0.0067
GS >1000 kW		-$2,015	265,326	kW	0.0000	-0.0076	-0.0076	-0.0038
Total	$433,321	$77,081						

LRAM and SSM - Bill Impacts - in VEC's requested version

Consumption per Month	Mothly Dollar Impact	Total Bill
Residential 800 kWh	$ 0.16	0.23%
General Service 50 to 999 kW 64,000 kWh and 160 kW	$ 0.53	0.01%
General Service >1000 kW 1,000,000 kWh and 2,200 kW	$ (4.18)	0.00%

Question #32

Reference: No Reference

a) Provide a copy of the Residential Sector/Mass market (and If applicable Social Housing Sector) Report(s) that OH provided to OPA , including the detailed breakdown of measures, unit savings, participants and other assumptions.

RESPONSE:

Please see Appendix VECC - 27 to 30, 32 for Indeco's response to this interrogatory.

b) Provide any correspondence from OPA confirming its acceptance of the Reports(s).

RESPONSE:

Please see Appendix VECC 32 b for Indeco's response to this interrogatory.

Question #33

Reference: Exhibit 2/Tab 4/Schedule 4, page 1

a) Please indicate whether the proposed capital spending for 2010 includes any spending for the connection of renewable energy generators or associated system expansion/upgrade requirements. If yes, please indicate what the spending levels are and where they are incorporated in the budget.

RESPONSE:

The proposed capital spending for 2010 does not include spending for the connection of renewable energy generators or associated systems. The rules for these activities have just recently been introduced.

Oakville Hydro Electricity Distribution Inc

2006 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior to 2006	Remaining Budget	2006 Budget Total	Future Years Expenditures
27.6 kV Additions						
Winston Churchill Blvd. 06-44A	2006	370,000		370,000	150,000	220,000
Remote Controlled Switch Installations F44E, 06-44D	2005	355,000	136,125	218,875	235,000	
Palermo TS - Replace 2 Feeders E44B	2006	100,000		100,000	20,000	
Speers Rd, Cross Ave to Kerr St 27.6 KV F44A	2005	900,000	636,635	263,365	270,000	
Following are development dependent - not under Hydro control						
Wyecroft Road, Burloak to McPherson Rd	2006	190,000		190,000	190,000	
McPherson Rd, Wyecroft Road to CNR	2006	170,000		170,000	50,000	120,000
Burloak Dr, CNR TO SSRD - 27.6KV Extension	2004	60,000		60,000	60,000	
	Subtotal	2,145,000	772,760	1,372,240	975,000	340,000
Rebuild Underground Distribution System						
Retrofit PMH Switchgear with Vista 06-45A	2006	366,000		366,000	266,000	100,000
Switchgear Refurbishment Program 06-45B	2006	225,000		225,000	125,000	100,000
Replace Poletrans 06-45C	2006	466,000		466,000	366,000	100,000
Kerr St - Add and/or Upgrade Neutral 06-45D	2006	45,000		45,000	45,000	
Rebuild Underground Distribution System Miscellaneous 06-45E	2006	450,000		450,000	450,000	
Splice Replacement Program 06-45F	2006	200,000		200,000	200,000	
Devon Area Rebuild F45A	2005	390,000	358,454	31,546	45,000	
Lancaster Area Rebuild F45B	2005	225,000	91,013	133,987	130,000	
	Subtotal	2,367,000	449,467	1,917,533	1,627,000	300,000
Rebuild Overhead Distribution System						
Iroquois Shore Rd 06-46A	2006	70,000		70,000	70,000	
Pole Replacements 06-46B	2006	250,000		250,000	250,000	
Re-Insulate Along QEW Corridor 06-46D	2006	403,000		403,000	403,000	
Re-Insulate Along Trafalgar Road 06-46C	2006	244,000		244,000	244,000	
Replace/Rebuild Backlot Overhead	2002	3,675,000	369,958	3,305,042	1,445,000	1,850,000
Rebuild Overhead Distribution System Miscellaneous 06-46F	2006	500,000		500,000	500,000	
CNR Right-Of-Way Access	2006	100,000		100,000	100,000	
Chartwell Rd - Lakeshore Rd to Cornwall Rd F46A	2006	105,000		105,000	115,000	
	Subtotal	5,347,000	369,958	4,977,042	3,127,000	1,850,000
New Development / Services (Dependent on development - no Hydro control)						
Residential Subdivisions & Townhouses inspection & energization	2006	2,000,000		2,000,000	1,525,000	425,000
Residential Underground 06-53	2006	50,000		50,000	50,000	
New General Services 06-54	2006	600,000		600,000	600,000	
	Subtotal	2,650,000	0	2,650,000	2,175,000	425,000

Oakville Hydro Electricity Distribution Inc

2006 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior to 2006	Remaining Budget	2006 Budget Total	Future Years Expenditures
Supervisory Control & Communications						
Replace / Upgrading of Switch RTU's C58A, E58A, F58A, 06-58A	2002	400,000	59,736	340,264	240,000	100,000
Battery Charger Upgrades D59B, E58B, F58B, 06-58B	2003	140,000	1,877	138,123	95,000	40,000
Scada Software & Hardware Additions C58D, 06-58C	2002	125,000	7,241	117,759	110,000	
Digital Radio Conversion E58C	2004	200,000	77,093	122,907	125,000	
Subtotal		865,000	145,947	719,053	570,000	140,000
Distribution Meters / Wholesale Meter Upgrades 06-61A						
Distribution Meters - new commercial & residential replacement	2006	338,860		338,860	338,860	
Wholesale metering at Transformer stations	2006	481,700		481,700	481,700	
Subtotal		820,560	0	820,560	820,560	0
Vehicles				0		
Replace 1994 Pickup Truck #34 06-62C	2006	30,000		30,000	30,000	
Replace 1995 P&C Bucket Truck #35 06-62B	2006	220,000		220,000	220,000	
Replace 1997 Pickup Truck #45 06-62E	2006	42,000		42,000	42,000	
Replace 1997 Pickup Truck #46 06-62D	2006	30,000		30,000	30,000	
Replace 1998 Pickup Truck #47 06-62F	2006	36,000		36,000	36,000	
Replace 1998 Single Bucket Truck #50 06-62A (ordered)	2006	253,000		253,000	253,000	
Subtotal		611,000	0	611,000	611,000	0
Major Tools & Safety Equipment						
Line Department 06-05A	2006	50,000		50,000	50,000	
Protection & Control Department 06-05B	2006	50,000		50,000	50,000	
Metering Department 06-05C	2006	30,000		30,000	30,000	
Subtotal		130,000	0	130,000	130,000	

Oakville Hydro Electricity Distribution Inc

2006 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior to 2006	Remaining Budget	2006 Budget Total	Future Years Expenditures
Administration - IT						
GIS	2006	364,500		364,500	50,000	270,000
Bill Print and Mailing	2005	25,000	3,242	21,758	18,000	
CIBS (Harris) Extra Modules	2005	64,950	42,179	22,771	20,000	
Computer Room Power Upgrades	2006	27,500		27,500	27,500	
Disaster Recovery Plan (DRP)	2006	120,000		120,000	110,000	10,000
Document Management System	2004	112,955	88,002	24,953	24,000	
Document Scanning	2006	92,000		92,000	92,000	
EAM/ERP Upgrade	2005	1,610,000	738,950	871,050	600,000	
E-Mail Upgrades	2004	23,919	8,087	15,832	14,000	
Engineering Upgrades	2006	29,000		29,000	29,000	
ESI Laptop	2006	5,000		5,000	5,000	
Website Re-design	2005	20,000	12,653	7,347	5,000	
Mapping services	2003	65,000	31,048	33,953	30,000	
Primestone software	2005	85,800	44,149	41,651	30,000	
Network Management - SMS & wireless access	2005	77,000	29,814	47,186	45,000	
PC Upgrades (For new systems)	2006	19,500		19,500	19,500	
Software Purchases -Office Suite	2006	20,000		20,000	20,000	
Telephone Recording System	2005	50,000	25,884	24,116	20,000	
	Subtotal	2,812,124	1,024,008	1,788,117	1,159,000	280,000
Administration -Buildings						
Add (2) new cameras to cover garage doors at Redwood	2006	22,000		22,000	22,000	
Additional Connection to Emergency Generator	2006	10,000		10,000	10,000	
Building column repairs	2006	50,000		50,000	50,000	
Corp - Joint Burl-Oak project	2006	150,000		150,000		150,000
Corp - Severance & Sewer Service to Pole Yard	2006	66,500		66,500	66,500	
Expansion of security room	2006	5,000		5,000	5,000	
General Office	2006	50,000		50,000	50,000	
Interior Painting	2006	25,000		25,000	25,000	
New Operating large Garage doors	2006	8,000		8,000	8,000	
Redwood Square - Building envelope repairs (caulking)	2005	150,000	60,719	89,281	90,000	
Repair or replace patio concrete	2006	3,500		3,500	3,500	
Replace parking lot curbing	2006	16,650		16,650	16,650	
Replacement of HVAC coolants	2006	12,000		12,000	12,000	
Replace existing fire & safety System @ Redwood	2006	110,000		110,000	110,000	
Replacement of Fire exit signs	2006	16,000		16,000	16,000	
Replacement of HVAC units	2006	15,000		15,000	15,000	
Siemens building management software upgrade	2006	15,000		15,000	15,000	
Tyco Security Software upgrade	2006	20,000		20,000	20,000	
	Subtotal	744,650	60,719	683,931	534,650	150,000
TOTALS		**23,056,334**	**3,221,036**	**19,835,298**	**14,521,210**	**4,855,000**

Oakville Hydro Electricity Distribution Inc

2006 EDI CDM Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior to 2006	Remaining Budget	2006 Budget Total	Future Years Expenditures
Smart Meter, Intelligent Network	2005	1,100,000	105,997	994,003	600,000	394,003
Multi-residential Interval Metering	2005	500,000	7,300	492,700	400,000	92,700
Digester Gas	2005	300,000		300,000	100,000	200,000
Solar	2006	50,000		50,000	50,000	-
Peak Demand Reduction	2006	500,000		500,000	400,000	100,000
Voltage Conversion	2006	400,000		400,000	200,000	200,000
		2,850,000	113,297	2,736,703	1,750,000	986,703

Oakville Hydro Electricity Distribution Inc

2007 EDI Capital Budget Summary

CLASSIFIED BY URGENCY

Uncontrolled & Development Related	3,029,250
Safety & Immediate Service Reliability	6,518,303
Short Term System Improvements	4,939,150
Long Term System Improvements	2,068,580
Conversation & Demand Side Management	1,395,371
	17,950,654

Oakville Hydro Electricity Distribution Inc

2007 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior to 2007	Remaining Budget	2007 Budget Total	Future Years Expenditures
Substations						
Arkendo MS - Construct New Substation F05A	2005	1,200,000	-	1,200,000	150,000	1,050,000
Cross MS - Replace LV PILC Circuits (07-05A)	2007	195,000		195,000	195,000	-
Pinegrove MS - Replace HV & LV Circuits (07-05B)	2007	215,000		215,000	215,000	-
Substation Upgrades (F05D, 06-05C, 07-05C)	2005	200,000		200,000	200,000	-
Substation Temperature/Fan Controls (07-05D)	2007	75,000		75,000	75,000	-
Substation Equipment Refurbishment (07-05E)	2007	75,000		75,000	75,000	-
	Subtotal	1,960,000	-	1,960,000	910,000	1,050,000
Road Widening (Dependent on road work - no Hydro control)						
Rebuild for Road Widening Misc. (06-15A, 07-15A)	2006	170,000	60,000	110,000	110,000	(0)
Dundas / Sixteen Mile Creek (E15B, 07-15B)	2005	696,000	445,000	251,000	251,000	(0)
	Subtotal	866,000	505,000	361,000	361,000	(0)
Alterations & Improvements for Load Transfer & System Security						
Submersible Transformer Tops (07-16A)	2007	60,000		60,000	60,000	-
Commercial Vault Top Replacements (07-16B)	2007	72,000		72,000	72,000	-
Below grade Switch Additions/replacements (07-16C)	2007	100,000		100,000	100,000	-
Surge Protection 06-16D	2006	50,000		50,000	50,000	-
Remote Fault Indication (06-16E)	2004	75,000		75,000	75,000	-
Improve Neutral Grounding (06-16F)	2006	50,000		50,000	50,000	-
	Subtotal	407,000	-	407,000	407,000	-
Voltage Conversion						
Woodhaven Park Area Rearlot Zone 2 (07-41A)	2007	200,000		200,000	200,000	-
South of Lakeshore Rd (05-41B)	2005	600,000	50,000	550,000	550,000	-
Transformer Replacements (07-42)	2007	150,000		150,000	150,000	-
	Subtotal	950,000	50,000	900,000	900,000	-
27.6 kV Additions						
Winston Churchill Blvd. (06-44A)	2006	370,000	-	370,000	370,000	-
Switch at Kerr St. Pumping Station (07-44A)	2007	90,000		90,000	90,000	-
Winston Park Switching Improvements (07-44B)	2007	250,000		250,000	250,000	-
Remote Controlled Switch Installations (06-44D)	2006	180,000	60,000	120,000	120,000	-
Palermo TS - Replace 2 Feeders E44B	2005	20,000		20,000	20,000	-
Remote Controlled Switch Installations (07-44C)	2007	180,000		180,000	180,000	-
Following are development dependent - not under Hydro control:						
Wyecroft Road, Burloak to McPherson Rd (06-44B)	2006	190,000	10,000	180,000	180,000	(0)
McPherson Rd, Wyecroft Road to CNR (06-44C)	2006	170,000		170,000	170,000	-
	Subtotal	1,450,000	70,000	1,380,000	1,380,000	(0)

Oakville Hydro Electricity Distribution Inc

2007 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior to 2007	Remaining Budget	2007 Budget Total	Future Years Expenditures
Rebuild Underground Distribution System						
Retrofit PMH Switchgear with Vista (06-45A, 07-45A)	2006	741,000	186,000	555,000	555,000	-
Switchgear Refurbishment Program (06-45B, 07-45B)	2006	450,000	75,000	375,000	375,000	-
Replace Poletrans (06-45C, 07-45C)	2006	966,000	366,000	600,000	600,000	-
Kerr St - Add and/or Upgrade Neutral (07-45D)	2007	50,000		50,000	50,000	-
Rebuild Underground Distribution System Misc (07-45E, 07-45I)	2007	415,000		415,000	415,000	-
Splice Replacement Program (06-45F)	2006	200,000	125,000	75,000	75,000	-
Holten Heights Area Secondary Rebuild (07-45F)	2007	235,000		235,000	235,000	
McCraney Express Feeder Rebuild (07-45G)	2007	285,000		285,000	285,000	-
4 KV Feeder Replacement Bronte Creek Bridge (07-45H)	2007	105,000		105,000	105,000	-
	Subtotal	3,447,000	752,000	2,695,000	2,695,000	-
Rebuild Overhead Distribution System						
Iroquois Shore Rd (06-46A)	2006	70,000	-	70,000	70,000	-
Lyons Lane Rebuild (07-46A)	2007	110,000		110,000	110,000	-
Pole Replacements (07-46B)	2007	300,000		300,000	300,000	-
Reinsulate Sixth Line (07-46C)	2007	203,000		203,000	203,000	-
Reinsulate/Rebuild Jones/Hixon (07-46D)	2007	384,000		384,000	384,000	-
Replace/Rebuild Backlot Overhead (05-46E, 06-46E, 07-46E)	2005	4,500,000	485,000	4,015,000	2,565,000	1,450,000
Rebuild Overhead Distribution System Miscellaneous (06-46F)	2006	500,000	300,000	200,000	200,000	-
Rebuild Lakeshore Rd W west of Bronte Creek (07-46F)	2007	220,000		220,000	220,000	-
CNR Right-Of-Way Access (06-46G)	2006	100,000	75,000	25,000	25,000	-
Rebuild Overhead Distribution System Miscellaneous (07-46G)	2007	500,000		500,000	500,000	-
	Subtotal	6,887,000	860,000	6,027,000	4,577,000	1,450,000
New Development / Services (Dependent on development - no Hydro control)						
Res Subdiv & Townhouses - inspect & energization (06-50A, 07-50A)	2006	100,000	(1,753)	101,753	9,000	92,753
Subdivision Design & Installation(05-50C, 06-50C, 07-50C)	2005	2,825,000		2,825,000	1,200,000	1,625,000
Residential Underground (06-53, 07-53)	2006	135,000	41,250	93,750	93,750	0
New General Services (06-54, 07-54)	2006	1,200,000	516,000	684,000	684,000	0
	Subtotal	4,260,000	555,497	3,704,503	1,986,750	1,717,753
Supervisory Control & Communications						
Replace / Upgrading of Switch RTU's (06-58A, 07-58A)	2006	250,000	10,000	240,000	240,000	-
Battery Charger Upgrades (03-58B, 04-58B, 05-58B, 06-58B, 07-58B)	2003	170,000	5,000	165,000	165,000	-
Scada Software & Hardware Additions (02-58D,03-58C, 07-58C)	2002	130,000		130,000	130,000	-
Digital Radio Conversion (04-58C)	2004	125,000	50,000	75,000	75,000	-
	Subtotal	675,000	65,000	610,000	610,000	-
Distribution Meters / Wholesale Meter Upgrades 06-61A						
Install Retro-Fit Meters (07-60A)	2007	-		-	-	-
Mapping services (02-60)	2002	30,000	-	30,000	30,000	-
Distribution Meters (07-61A)	2006	265,000	-	265,000	265,000	-
	Subtotal	295,000	-	295,000	295,000	-

Oakville Hydro Electricity Distribution Inc

2007 EDI Capital Budget Summary

		Year Initiated	Total Project Budget	Spent Prior to 2007	Remaining Budget	2007 Budget Total	Future Years Expenditures
Vehicles							
Replace 1995 P&C Bucket Truck # 35	(06-62B)	2006	220,000	3,296	216,704	216,704	-
Replace Single Bucket Truck # 48	(07-62A)	2007	247,400		247,400	247,400	-
Replace Digger/Derrick # 51,# 60	(07-62B)	2007	314,000		314,000	314,000	-
Replce Service Body # 73	(07-62C)	2007	37,800		37,800	37,800	-
Replace Locate Van # 55	(07-62D)	2007	32,400		32,400	32,400	-
Replace Sherman Reilly Tensioner	(07-62E)	2007	7,100		7,100	7,100	-
		Subtotal	858,700	3,296	855,404	855,404	-
Major Tools & Safety Equipment							
Line Department	(07-65A)	2007	50,000		50,000	50,000	-
Protection & Control Department	(07-65B)	2006	50,000		50,000	50,000	-
Metering Department	(07-65C)	2007	30,000		30,000	30,000	-
		Subtotal	130,000	-	130,000	130,000	-
Administration - IT							
GIS (02-64L)		2002	320,000	150,000	170,000	100,000	70,000
Network Management - SMS & wireless access (03-64M)		2003	30,000	10,000	20,000	20,000	-
CIBS (Harris) Extra Modules (04-64S)		2004	20,000	3,000	17,000	17,000	-
Primestone software (05-64C)		2005	30,000	17,221	12,779	12,000	779
EAM/ERP Upgrade (05-64B)		2005	871,000	497,962	373,038	370,000	3,038
Engineering Upgrades (06-64B)		2006	29,000	16,000	13,000	13,000	-
Disaster Recovery Update (06-64G)		2006	120,000	81,601	38,399	38,399	-
Data Centre Upgrade (07-64A)		2007	120,000		120,000	120,000	-
Redundant Data Centre (07-64B)		2007	210,000		210,000	210,000	-
Harris Upgrade (07-64C)		2007	78,000		78,000	58,000	20,000
Great Plains Upgrade (07-64D)		2007	90,000		90,000	90,000	-
		Subtotal	1,918,000	775,784	1,142,216	1,048,399	93,817
Administration -Buildings							
Redwood Square - Building envelope repairs (2007)		2005	26,080		26,080	26,080	-
Corp - Severance & Sewer Service to Pole Yard (2006)		2006	66,500		66,500	66,500	-
General Office (2007)		2007	50,000		50,000	50,000	-
Replace existing fire & safety System at Redwood (2006, 2007)		2006	130,000		130,000	130,000	-
Replacement of HVAC units (2007)		2007	15,000		15,000	15,000	-
Install new 5 ton A/C unit in computer room (2007)		2007	37,150		37,150	37,150	-
Replace Concrete Entrance at Sunset MS (2007)		2007	9,000		9,000	9,000	-
Replace doors from garage to Meter Shop (2007)		2007	8,000		8,000	8,000	-
Replace Existing Security System at Redwood Square (2007)		2007	45,000		45,000	45,000	-
Replace two security cameras (2007)		2007	9,000		9,000	9,000	-
Ventiliation System for P&C battery storage area (2007)		2007	4,000		4,000	4,000	-
		Subtotal	399,730	-	399,730	399,730	-
CDM Projects							
Conservation & Demand Side Management Initiatives		2006	2,898,430	1,503,059	1,395,371	1,395,371	
TOTALS			27,401,860	5,139,636	22,262,224	17,950,654	4,311,570

Oakville Hydro Electricity Distribution Inc

2008 EDI Capital Budget Summary

CLASSIFIED BY URGENCY

Uncontrolled & Development Related	2,052,100
Safety & Immediate Service Reliability	5,381,000
Short Term System Improvements	3,763,300
Long Term System Improvements	3,526,230
Conversation & Demand Side Management	
	14,722,630

Oakville Hydro Electricity Distribution Inc
2008 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior 2008	Remaining Budget	2008 Budget Total	Future Years Expenditures
Substations						
Arkendo MS - Construct New Substation (05-05A)	2005	1,200,000	40,000	1,160,000	1,160,000	-
Substation Equipment Upgrades (04-05A)	2004	45,000	10,000	35,000	35,000	-
Spare Substation Transformer (08-05A)	2008	300,000	-	300,000	300,000	-
Speers MS - PILC Cable Replacement (08-05B)	2008	70,000	-	70,000	70,000	-
Substation Upgrades (06-05C, 07-05C)	2006	150,000	40,000	110,000	110,000	-
Substation Equipment Upgrades (08-05C)	2008	75,000		75,000	75,000	-
Substation Temperature/Fan Controls (07-05D)	2007	75,000	-	75,000	75,000	-
Substation Oil Breaker Retrofits (08-05D)	2008	250,000	-	250,000	-	250,000
Substation Equipment Refurbishment (07-05E, 08-05E)	2007	150,000	-	150,000	105,000	45,000
Substation Fibre Optic Network (08-05F)	2008	100,000	-	100,000	100,000	-
	Subtotal	2,415,000	90,000	2,325,000	2,030,000	295,000
Road Widening (Dependent on road work - no Hydro control)						
Rebuild for Road Widening Misc. (07-15A, 08-15A)	2007	375,000	172,500	202,500	202,500	-
	Subtotal	375,000	172,500	202,500	202,500	-
Alterations & Improvements for Load Transfer & System Security						
Submersible Transformer Tops (08-16A)	2008	30,000	-	30,000	30,000	-
Commercial Vault Top Replacements (08-16B)	2008	45,000	-	45,000	45,000	-
Below grade Switch Additions/replacements (07-16C)	2007	100,000	-	100,000	-	100,000
Remote Fault Indication (06-16E)	2006	75,000	-	75,000	75,000	-
	Subtotal	250,000	-	250,000	150,000	100,000
Voltage Conversion						
Woodhaven Park Area Rearlot Zone 2 (07-41A)	2007	200,000	-	200,000	200,000	-
Allan MS (08-41A)	2008	600,000	-	600,000	300,000	300,000
South of Lakeshore Rd (05-41B)	2005	800,000	400,000	400,000	400,000	-
Underground / Overhead Transformers (08-42)	2008	150,000	-	150,000	150,000	-
	Subtotal	1,750,000	400,000	1,350,000	1,050,000	300,000
27.6 kV Additions						
Winston Churchill Blvd. (06-44A)	2006	370,000	20,000	350,000	-	350,000
Wyecroft Road - Additional CCT (08-44A)	2008	455,000	-	455,000	455,000	-
Winston Park Switching Improvements (07-44B)	2007	250,000	-	250,000	-	250,000
Alternate HV Feed to Redwood Transformer (08-44B)	2008	126,000		126,000	126,000	-
Remote Controlled Switch Installations (06-44D)	2006	180,000	60,000	120,000	-	120,000
Palermo TS - Replace 2 Feeders (04-44B)	2004	100,000	35,000	65,000	65,000	-
Remote Controlled Switch Installations (07-44C)	2007	180,000	-	180,000	-	180,000
	Subtotal	1,661,000	115,000	1,546,000	646,000	900,000

Oakville Hydro Electricity Distribution Inc
2008 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior 2008	Remaining Budget	2008 Budget Total	Future Years Expenditures
Rebuild Underground Distribution System						
Retrofit PMH Switchgear with Vista (07-45A, 08-45A)	2007	700,000	280,000	420,000	220,000	200,000
Switchgear Refurbishment Program (07-45B, 08-45B)	2007	465,000	100,000	365,000	200,000	165,000
Replace Poletrans (07-45C, 08-45C)	2007	1,150,000	450,000	700,000	500,000	200,000
McCraney Area - Primary Rebuild (08-45D)	2008	540,000	-	540,000	540,000	-
Rebuild Underground Distribution System Misc (07-45E)	2007	165,000	80,000	85,000	-	85,000
Holten Heights Area Secondary Rebuild (07-45F, 08-45E)	2007	600,000	115,000	485,000	-	485,000
Loop Feed to Marlborough Crt Plaza (08-45F)	2008	85,000	-	85,000	85,000	-
Rebuild Underground Distribution System - Misc (08-45G)	2008	200,000	-	200,000	-	200,000
	Subtotal	3,905,000	1,025,000	2,880,000	1,545,000	1,335,000
Rebuild Overhead Distribution System						
Mississaga St - Rebecca St to Lake Ontario (08-46A)	2008	180,000	-	180,000	180,000	-
Bridge Rd. (08-46B)	2008	360,000	-	360,000	360,000	-
Reinsulate Dundas St (08-46C)	2008	200,000	-	200,000	200,000	-
Reinsulate Upper Middle Road (08-46D)	2008	275,000	-	275,000	275,000	-
Replace/Rebuild Backlot Overhead (05-46E, 06-46E, 07-46E)	2005	4,500,000	1,700,000	2,800,000	1,500,000	1,300,000
West River St, Seneca Dr, Timberlane, West St, Cudmore Rd (08-46E)	2008	215,000	-	215,000	215,000	-
Rebuild Lakeshore Rd W west of Bronte Creek (07-46F)	2007	220,000	9,000	211,000	-	211,000
Chalmers St, Tecumseh Cr, Mohawk Rd (08-46F)	2008	124,000	-	124,000	124,000	-
Burton Rd, Patricia Dr, Weighton Dr, Waneta Dr, Weybourne Rd (08-46G)	2008	270,000	-	270,000	270,000	-
Applewood St, Cherry Hill Rd, Meadowood Cr, Nelson St (08-46H)	2008	146,000	-	146,000	146,000	-
Tweedsdale Cr, Sandwell Dr, Brookfield Dr, Lakewood Dr (08-46I)	2008	280,000	-	280,000	280,000	-
Waverley, Tansley, Wren, Selkirk, Stanbury, Seabourne (08-46J)	2008	470,000	-	470,000	-	470,000
Sybella Dr (08-46K)	2008	60,000	-	60,000	60,000	-
Pole Replacements (08-46L)	2008	500,000	-	500,000	500,000	-
Rebuild Overhead Distribution System - Miscellaneous (08-46M)	2008	175,000	-	175,000	-	175,000
Access Improvements to Pole Line - CN ROW (08-46N)	2008	50,000	-	50,000	50,000	-
	Subtotal	8,025,000	1,709,000	6,316,000	4,160,000	2,156,000
New Development / Services (Dependent on development - no Hydro control)						
Distribution System Inspection/Energization (08-50A)	2008	-	-	-	-	-
New Services (08-50B)	2008	-	-	-	-	-
Residential Underground (07-53, 08-53)	2007	400,000	270,000	130,000	130,000	-
New General Services (07-54, 08-54)	2007	1,500,000	780,000	720,000	720,000	-
	Subtotal	1,900,000	1,050,000	850,000	850,000	-
Supervisory Control & Communications						
Replace / Upgrading of Switch RTU's (06-58A, 07-58A, 08-58A)	2006	350,000	80,000	270,000	130,000	140,000
Battery Charger Upgrades (04-58B, 05-58B, 06-58B, 07-58B, 08-58B)	2004	175,000	10,000	165,000	165,000	-
Control Room Radio System (03-58C, 07-58C)	2003	121,000	7,000	114,000	-	114,000
Install Remote Fault Indicators (08-58C)	2008	50,000	-	50,000	50,000	-
Digital Radio Conversion (04-58C, 08-58D)	2004	177,000	5,000	172,000	172,000	-
	Subtotal	873,000	102,000	771,000	517,000	254,000

Oakville Hydro Electricity Distribution Inc
2008 EDI Capital Budget Summary

	Year Initiated	Total Project Budget	Spent Prior 2008	Remaining Budget	2008 Budget Total	Future Years Expenditures
Distribution Meters / Wholesale Meter Upgrades 06-61A						
Mapping services (02-60)	2002	30,000	15,000	15,000	15,000	-
Distribution Meters (08-61A)	2008	178,000	-	178,000	178,000	-
	Subtotal	208,000	15,000	193,000	193,000	-
Vehicles						
Replace 1995 P&C Bucket Truck (# 35) (06-62B)	2006	220,000	12,000	208,000	150,000	-
Replace 2000 Double Bucket (# 58) (08-62A)	2008	440,000	-	440,000	440,000	-
Replace 1980 Tandem Pole Trailer (08-62B)	2008	38,000	-	38,000	38,000	-
Replace 1997 Arrow Board Trailer (08-62C)	2008	9,000	-	9,000	9,000	-
Modify 1991 Hiab 450 Crane on Truck (# 23) (08-62D)	2008	27,000	-	27,000	27,000	-
New Underground Service Truck (08-62E)	2008	156,000	-	156,000	156,000	-
Upgrades to Equipment on 2006 U/G Truck (# 74) (08-62F)	2008	35,000	-	35,000	35,000	-
	Subtotal	925,000	12,000	913,000	855,000	-
Major Tools & Safety Equipment						
Line Department (07-65A, 08-65A)	2007	100,000	25,000	75,000	75,000	-
Protection & Control Department (08-65B)	2008	30,000	-	30,000	30,000	-
Metering Department (07-65C, 08-65C)	2007	60,000	15,000	45,000	45,000	-
	Subtotal	190,000	40,000	150,000	150,000	-
Administration - IT						
GIS - Implement System for Control Room (02-64L)		320,000	85,145	234,855	100,000	134,855
EAM/ERP Upgrade (05-64B)		600,000	497,962	102,038	-	102,038
Data Centre Upgrade (07-64A)		151,600	125,508	26,092	25,000	1,092
Redundant Data Centre (07-64B)		269,900	121,620	148,280	30,000	118,280
Harris Upgrade (07-64C)		78,000	0	78,000	78,000	-
Great Plains Upgrade (07-64D)		90,000	74,975	15,025	-	15,025
SCADA Upgrade (08-64A)		765,000	25,000	740,000	740,000	-
SMI ((10) Oakville Condo Installations) Hardware (08-64B)		21,600	0	21,600	21,600	-
SMI (Residential Roll-out - London RFP) (08-64C)		302,500	0	302,500	-	302,500
CIS Enhancements (08-64D)		12,000	0	12,000	12,000	-
ITRON Data Capture Hardware (08-64E)		36,665	20,000	16,665	8,500	8,165
Phone System Upgrade (Redundancy and/or VOIP) (08-64F)		152,000	0	152,000	43,000	109,000
GIS - Purchase Land based for Oakville (08-64G)		145,000	0	145,000	20,000	125,000
ERP Enhancements (08-64H)		164,500	0	164,500	45,000	119,500
Security Audit (08-64I)		45,000	0	45,000	30,000	15,000
Network (Client) Upgrades (08-64J)		104,500	0	104,500	104,500	-
Microsoft Office SharePoint Server (MOSS) (08-64K)		57,000	0	57,000	32,000	25,000
Microsoft Exchange (2007) Upgrade (08-64L)		23,000	0	23,000	23,000	-
Workspace for IT (08-64M)		20,000	0	20,000	20,000	-
Systems' Documentation (daleparsons.com) (08-64N)		49,900	0	49,900	14,000	35,900
				-		-
	Subtotal	3,408,165	950,210	2,457,955	1,346,600	1,111,355

Oakville Hydro Electricity Distribution Inc
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	Year Initiated	Total Project Budget	Spent Prior 2008	Remaining Budget	2008 Budget Total	Future Years Expenditures
Administration -Buildings						
Redwood Building Envelope Repairs (interior, operations area)	2008	10,230	-	10,230	10,230	-
Replacement of HVAC units	2008	15,000	-	15,000	15,000	-
Install Smart Controller Irrigation System	2008	8,300	-	8,300	8,300	-
Install & Monitor (10) Substations For HVAC, Lighting and Security	2008	60,000	-	60,000	60,000	-
Replace Carpet atRedwood Square Office	2008	20,000	-	20,000	20,000	-
General Office	2008	50,000	-	50,000	50,000	-
Interior Office Renovations @ Redwood Square	2008	5,000	-	5,000	5,000	-
Extension of Building Automation System	2008	50,000	-	50,000	50,000	-
Replacement of Security Cameras (2)ea	2008	9,000	-	9,000	9,000	-
	Subtotal	227,530	-	227,530	227,530	-
Payments to Developers						
Distribution System Installation (08-50C)	2008	1,000,000	-	1,000,000	800,000	200,000
TOTALS		27,112,695	5,680,710	21,431,985	14,722,630	6,651,355

Oakville Hydro Electricity Distribution Inc
2009 EDI Capital Budget Summary

	Major Categoy	Year Initiated	Total Project Budget	Spent Prior to Oct 15 2008	Forecast to end of 2008	Remaining Budget	Incr/(decr) from Prior Years	2009 Budget Total	Future Years Expenditures
SUBSTATIONS									
Arkendo MS (F05A)	Long Term System Improvements	2005	$ 1,200,000	$ 173,067	$ 1,080,000	120,000	180,000	300,000	
Spare Substation Transformer (08-05A)	Safety & Immediate Service Reliability	2008	300,000	218,917	250,000	50,000	(30,000)	20,000	-
Speers MS - PILC Cable Replacement (08-05B)	Safety & Immediate Service Reliability	2008	70,000	2,697	2,697	67,303	3,297	70,600	-
Substation Fibre Optic Network (08-05F)	50% Short Term System Improvements, 50%Long term System Improvements	2008	100,000	1,302	20,000	80,000	-	80,000	-
						-		-	-
Margaret MS Replace Transformer (09-05A)	Safety & Immediate Service Reliability	2009	300,000			300,000		300,000	-
Substation Oil Breaker Retrofits (09-05B)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	650,000			650,000		650,000	-
Substation Equipment Refurbishment (09-05C)	Short Term System Improvements	2009	75,000			75,000		75,000	-
Substation Equipment Upgrades (09-05D)	Short Term System Improvements	2009	115,000			115,000		115,000	
		Subtotal	1,610,000	222,916	272,697	1,337,303	(26,703)	1,610,600	-
ROAD WIDENING (DEPENDENT ON ROAD WORK - NO HYDRO CONTROL)									
Rebuild for Road Widening Misc. (08-15A)	Uncontrolled & Development Related	2008	150,000	-		150,000		150,000	-
Rebuild for Road Widening - Miscellaneous (09-15A)	Uncontrolled & Development Related	2009	165,000			165,000		165,000	-
		Subtotal	315,000	-	-	315,000	-	315,000	-
ALTERATIONS & IMPROVEMENTS FOR LOAD TRANSFER & SYSTEM SECURITY									
Submersible Transformer Tops (Residential) (09-16A)	Safety & Immediate Service Reliability	2009	75,000			75,000		75,000	-
Vault Top Replacements (Commercial) (09-16B)	Safety & Immediate Service Reliability	2009	100,000			100,000		100,000	-
Surge Protection Improvements - SW Oakville (09-16C)	Safety & Immediate Service Reliability	2009	45,000			45,000		45,000	-
		Subtotal	220,000	-	-	220,000	-	220,000	-
VOLTAGE CONVERSION									
Woodhaven Park Area Rearlot Zone 2 (07-41A)	Long Term System Improvements	2007	200,000	-	50,000	150,000	86,000	236,000	-
Eliminate Allan MS (08-41A)	33% Safety & Immediate Service Reliability,33% Short term Improvements, 33% Long Term Improvements	2008	600,000	-	30,000	570,000		570,000	-
									-
Underground/Overhead Transformers Replacements (09-42)	Safety & Immediate Service Reliability	2009	150,000			150,000		150,000	-
		Subtotal	950,000	-	80,000	870,000	86,000	956,000	-

Oakville Hydro Electricity Distribution Inc
2009 EDI Capital Budget Summary

	Major Categoy	Year Initiated	Total Project Budget	Spent Prior to Oct 15 2008	Forecast to end of 2008	Remaining Budget	Incr/(decr) from Prior Years	2009 Budget Total	Future Years Expenditures
27.6 kV ADDITIONS									
Palermo TS - Purchase 2 Feeders and insulate (E-44B)	Short Term System Improvements	2004	100,000	-	35,000	65,000		65,000	-
Remote Controlled Switch Installations (09-44C)	Safety & Immediate Service Reliability	2009	200,000			200,000		200,000	-
Rebecca/Jones Add Circuit (09-44A)	52% Short Term System Improvements, 48%Long term System Improvements	2009	290,000			290,000		290,000	-
North Service Rd E/Joshua Creek Dr Add Cicruit (transfer load) (09-44B)	30% Safety & Immediate Service Reliability & 41% Short Term System Improvements, 29% Long Term System Improvements	2009	492,000			492,000		492,000	-
		Subtotal	1,082,000	-	35,000	1,047,000	-	1,047,000	-
REBUILD UNDERGROUND DISTRIBUTION SYSTEM									
Retrofit Padmount Switchgear with Vista (07-45A, 08-45A)	Safety & Immediate Service Reliability	2007	700,000	55,268	180,268	519,732	(9,732)	510,000	-
Switchgear Refurbishment Program (07-45B, 08-45B)	Short Term System Improvements	2007	465,000	67,255	242,255	222,745	(6,745)	216,000	-
Replace Poletrans (connected U/G) (08-45C)	54% Safety & Immediate Service Reliability, 46% Short Term System Improvements	2008	650,000	13,181	23,181	626,819	(819)	626,000	-
McCraney Area - Primary Rebuild (08-45D)	Safety & Immediate Service Reliability	2008	540,000	6,599	6,599	533,401	(401)	533,000	-
Rebuild Underground Distribution System - Misc (08-45G)	Safety & Immediate Service Reliability	2008	200,000	66,769	100,000	100,000	(25,000)	75,000	-
Transformer Bushing Insert Replacements (09-45C)	Safety & Immediate Service Reliability	2009	200,000			200,000		200,000	-
Modular Termination Replacement Program (09-45A)	Short Term System Improvements	2009	110,000			110,000		110,000	-
Loop Feed to Bronte Harbour Club (09-45B)	Safety & Immediate Service Reliability	2009	50,000			50,000		50,000	-
		Subtotal	2,915,000	209,071	552,303	2,362,697	(42,697)	2,320,000	-
REBUILD OVERHEAD DISTRIBUTION SYSTEM									
Replace/Rebuild Backlot Overhead (06-46E, 07-46E)	50% Short Term System Improvements, 50%Long term System Improvements	2005	3,500,000	1,359,372	1,559,372	1,940,628	50,082	1,990,710	-
Rebuild Lakeshore Rd W west of Bronte Creek (07-46F)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2007	220,000	8,927	8,927	211,073	4,000	215,073	-
Waverley, Tansley, Wren, Selkirk, Stanbury, Seabourne (08-46J)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2008	470,000	12,401	70,000	400,000	82,000	482,000	-
Pole Replacements (08-46L)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2008	500,000	144,743	400,000	100,000		100,000	-
Rebuild Overhead Distribution System - Miscellaneous (08-46M)	Safety & Immediate Service Reliability	2008	175,000	70,507	125,000	50,000		50,000	-
Access Improvements to Pole Line - CN ROW (08-46N)	Safety & Immediate Service Reliability	2008	50,000	4,362	4,362	45,638		45,638	-
								-	-
Replace Crossing of Sixteen Mile Creek at CNR (09-46A)	Safety & Immediate Service Reliability	2009	300,000			300,000		300,000	-

Oakville Hydro Electricity Distribution Inc
2009 EDI Capital Budget Summary

	Major Categoy	Year Initiated	Total Project Budget	Spent Prior to Oct 15 2008	Forecast to end of 2008	Remaining Budget	Incr/(decr) from Prior Years	2009 Budget Total	Future Years Expenditures
Replace In-Line Switches at TSs (09-46B)	Safety & Immediate Service Reliability	2009	205,000			205,000		205,000	-
Reinsulate Speers Rd (09-46C)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	270,000			270,000		270,000	-
Reinsulate Bronte Rd (09-46D)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	340,000			340,000		340,000	-
Replace/Rebuild Rear Lot Distribution (09-46E)	25% Safety & Immediate Service Reliability & 25% Short Term System Improvements, 50% Long Term System Improvements	2009	785,000			785,000		280,000	505,000
Pole Replacements (09-46F)	53% Safety & Immediate Service Reliability & 47% Short Term System Improvements	2009	750,000			750,000		750,000	-
Southview Dr& Pinegrove Rd (09-46G)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	470,000			470,000		470,000	-
Devon Rd (09-46H)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	200,000			200,000		200,000	-
Maplehurst Ave/Wellington Dr&Others (09-46I)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	320,000			320,000		320,000	-
Tisdale St/ Tower Dr & Others (09-46J)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	200,000			200,000		200,000	-
Felan Ave& Margaret Dr (09-46K)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	76,000			76,000		76,000	-
Trudale Ct (09-46L)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	99,000			99,000		99,000	-
Sovereign St & East St (09-46M)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	83,000			83,000		83,000	-
Rebuild Overhead Distribution System - Various Area (09-46N)	50% Safety & Immediate Service Reliability & 50% Short Term System Improvements	2009	154,000			154,000		154,000	-
Access Improvements to Pole Line - CN ROW (09-46O)	Safety & Immediate Service Reliability	2009	50,000			50,000		50,000	-
		Subtotal	9,217,000	1,600,313	2,167,661	7,049,339	136,082	6,680,421	505,000
NEW DEVELOPMENT / SERVICES									
(DEPENDENT ON DEVELOPMENT - NO HYDRO CONTROL - OAKVILLE HYDRO'S SHARE)									
Residential Underground (07-53, 08-53,09-53)	Uncontrolled & Development Related	2008	285,000	80,000	90,000	195,000	(55,000)	140,000	-
New General Services (07-54, 08-54,09-54)	Uncontrolled & Development Related	2008	1,600,000	1,000,000	1,100,000	500,000	160,000	660,000	-
						-		-	
						-			
		Subtotal	1,885,000	1,080,000	1,190,000	695,000	105,000	800,000	-
SUPERVISORY CONTROL & COMMUNICATIONS									
Replace / Upgrading of Switch RTU's (06-58A, 07-58A, 08-58A)	Safety & Immediate Service Reliability	2006	350,000	159,567	200,000	150,000		150,000	-
Control Room Radio System (Vehicles) (07-58C)	Short Term System Improvements	2007	100,000	5,817	5,817	94,183	-	94,183	-
Digital Radio Conversion (for switches) (04-58C, 08-58D)	Safety & Immediate Service Reliability	2004	250,000	87,692	100,000	150,000	(73,000)	77,000	-

Oakville Hydro Electricity Distribution Inc
2009 EDI Capital Budget Summary

	Major Categoy	Year Initiated	Total Project Budget	Spent Prior to Oct 15 2008	Forecast to end of 2008	Remaining Budget	Incr/(decr) from Prior Years	2009 Budget Total	Future Years Expenditures
Replace/Upgrade Line Switch RTUs (09-58A)	Safety & Immediate Service Reliability	2009	150,000			150,000		150,000	-
Battery Charger Upgrades (09-58B)	Safety & Immediate Service Reliability	2009	100,000			100,000		100,000	-
Install Remote Fault Indicators (09-58C)	Safety & Immediate Service Reliability	2009	100,000			100,000		100,000	-
		Subtotal	1,050,000	253,076	305,817	744,183	(73,000)	671,183	-
DISTRIBUTION METERS / WHOLESALE METER UPGRADES 06-61A									
Distribution Meters Commercial & New Condominiums (09-61A)	Uncontrolled & Development Related	2009	328,000			328,000		328,000	-
Condo Retrofits to Individual Metering (09-61B)	Uncontrolled & Development Related	2009	312,000			312,000		312,000	-
		Subtotal	640,000	-	-	640,000	-	640,000	-
VEHICLES									
Replace Warehouse pickup # 36 -1996 Chevy Pickup (09-62A)	Safety & Immediate Service Reliability	2009	29,000			29,000		29,000	
Replace pickup # 45 (1997 Chevy Pickup)	Safety & Immediate Service Reliability	2009	31,500			31,500		31,500	
Replace meter van # 54 (1999 Chevy Van) (09-62C)	Safety & Immediate Service Reliability	2009	35,000			35,000		35,000	
Replace P&C dept # 56 (1999 Splinter Van to carry load)(09-62D)	Safety & Immediate Service Reliability	2009	82,000			82,000		82,000	
Replace line dept dump truck # 61 (2000 Ford Diesel) (09-62E)	Safety & Immediate Service Reliability	2009	62,000			62,000		62,000	
Replace line dept dump truck # 62 (2000 Ford Diesel) (09-62F)	Safety & Immediate Service Reliability	2009	62,000			62,000		62,000	
Replace two reel trailers # 394 & # 398 (09-62G)	Safety & Immediate Service Reliability	2009	22,000			22,000		22,000	
		Subtotal	323,500	-	-	323,500	-	323,500	-
MAJOR TOOLS & SAFETY EQUIPMENT									
Tools-Line (09-65A)	Safety & Immediate Service Reliability	2009	50,000			50,000		50,000	
Tools - P&C (09-65B)	Safety & Immediate Service Reliability	2009	30,000			30,000		30,000	
Tools-Meter (09-65C)	Safety & Immediate Service Reliability	2009	30,000			30,000		30,000	
		Subtotal	110,000	-	-	110,000	-	110,000	-
PAYMENT TO DEVELOPERS									
Distribution System Installation (09-50C)-Payment to	Uncontrolled & Development Related	2009	800,000			800,000	-	800,000	-
TOTAL DISTRIBUTION SYSTEM			**21,117,500**	**3,365,376**	**4,603,478**	**16,514,022**	**184,682**	**16,493,704**	**505,000**

Oakville Hydro Electricity Distribution Inc
2009 EDI Capital Budget Summary

Major Categoy	Year Initiated	Total Project Budget	Spent Prior to Oct 15 2008	Forecast to end of 2008	Remaining Budget	Incr/(decr) from Prior Years	2009 Budget Total	Future Years Expenditures
ADMINISTRATION - IT								
SCADA Upgrade (08-64A)	2008	765,000	138,189	513,189	251,811	-	251,811	-
SMI ((10) Oakville Condo Installations) Hardware (08-64B)	2008	21,600	5,059	8,559	13,041	(3,041)	10,000	-
Phone System Upgrade (Redundancy and/or VOIP) (08-64F)	2008	152,000	14,829	14,829	137,171		137,171	0
Security Audit (08-64I)	2008	45,000	13,330	13,330	31,670	(11,670)	20,000	-
Microsoft Office SharePoint Server (MOSS) (08-64K)	2008	57,000	0	15,000	42,000		17,000	25,000
Web Site Rebuild (09-64A)	2009	40,000			40,000		40,000	-
Audio-Visual Upgrades (09-64B)	2009	31,000			31,000		31,000	-
Data Analysis Improvements (09-64C)	2009	20,000			20,000		20,000	-
Firewall Upgrade (09-64D)	2009	14,500			14,500		14,500	-
Data Archiving / Storage (09-64E)	2009	33,800			33,800		33,800	-
Microsoft SA (Licenses) (09-64F)	2009	84,940			84,940		84,940	-
Document Management Adds (09-64G)	2009	36,000			36,000		36,000	-
Harris DB change - SQL (09-64H)	2009	41,000			41,000		41,000	-
PC Upgrades (09-64I)	2009	45,000			45,000		45,000	-
ADP Upgrade (09-64K)	2009	50,000			50,000		50,000	-
ERP - Upgrade to 10.0 (09-64L)	2009	78,000			78,000		78,000	-
ERP - Enhancements (09-64M)	2009	50,000			50,000		50,000	-
ERP - ELCON (09-64N)	2009	25,000			25,000		25,000	-
	Subtotal	1,589,840	171,407	564,907	1,024,933	(14,711)	985,222	25,000
ADMINISTRATION - BUILDINGS								
Redwood building envelope repairs (interior, operations area)	2009	5,000	-		5,000		5,000	-
Install & monitor (10) substations for HVAC, Lighting and Security	2009	70,000	-		70,000		70,000	-
Replace carpet @ Redwood Square	2009	80,000	-		80,000		80,000	-
General office	2009	50,000	-		50,000		50,000	-
Interior office renovations @ Redwood Square	2009	5,000	-		5,000		5,000	-
Extension of building automation system	2009	55,000	-		55,000		55,000	-
Replace & install garage high speed bay doors and operators	2009	70,000			70,000		70,000	-
Replace & install (2) slide gate operators in compound	2009	8,000			8,000		8,000	-
Retrofit existing lighting at (19) substations	2009	10,500			10,500		10,500	-
	Subtotal	353,500	-	-	353,500	-	353,500	-
TOTALS		23,060,840	3,536,783	5,168,385	17,892,455	169,971	17,832,426	530,000

2009 Budget Total	
Carryover	7,892,186
2009 Projects	9,940,240
	17,832,426

Oakville Hydro Electricity Distribution Inc.
Capital Budget 2009

Substations

Oakville currently has 20 substations in the older part of Oakville that are ageing. The substations reduce the voltage level to 4kV or 13.8 kV to supply the lower voltage distribution networks. The company needs to make necessary equipment upgrades to batteries, chargers and other equipment for effective data communications. In some substations there is a need to replace oil circuit breakers; an integral part of the protection system, that are over 40 years old. Substations also require ongoing refurbishment of switchgear and transformers.

Road Widening (Dependent on road work - no Hydro control)

These are costs incurred to relocate hydro facilities due to widening of road work by the Town of Oakville, Region or MTO. The company has no control of these projects, and is advised accordingly by the Town, Region or MTO. The company is aware that Lakeshore Rd W, west of Mississaga St and Cornwall Rd, east of Maplegrove Dr. may be affected.

Alterations & Improvements for Load Transfer & System Security

This category includes the upgrading and replacing of submersible transformer tops and commercial vault tops that are in poor condition. Also included is the addition of switches and fault indicators to improve load transfers and increase distribution system security.

Voltage Conversion

This category consists of funds required to convert loads from a lower voltage distribution system (4 kV) to a higher voltage distribution system (27.6 kV). This is done primarily to control the load on the 4 kV system and to support substation changes or eliminations. It is planned to eliminate Allan MS, a substation located in a confined space, which presents safety concerns as well as operations and maintenance difficulties.

27.6 kV Additions

This category includes the addition of 27.6 kV overhead and underground circuits, and switches, throughout the network. The additions are required due to new developments and load growth or to improve system operations.

Rebuild Underground Distribution System

This category comprises of improvements required to our underground infrastructure. There is a need to refurbish older switchgear and replace switchgear that are in harsh environmental areas. In addition, this includes rebuilds of underground cable systems that are ageing and experiencing failure. New duct, cable, and in some cases transformers, are installed to improve reliability in the service area.

Rebuild Overhead Distribution System
This category consists mainly of replacing older overhead pole lines throughout the system. The projects are prioritized based on age, physical condition and pole testing results. During the rebuilds, pole framing is upgraded to current standards.

Also included is a multi-year project in various areas of Oakville where the pole lines are installed in the back of residential yards. The company plans to continue working on rebuilding, replacing and rerouting the lines to safer areas.

New Development / Services (Dependent on development - no Hydro control)
This category includes the costs of designing and installing electrical distribution systems required for new subdivisions and commercial areas being developed in Oakville.

Supervisory Control & Communications
This category encompasses costs associated with improving and upgrading communications between the Control room and remote devices throughout the system. This will enable better response time, improve system security and allow for improved operations. Also included is the installation of remote fault sensors at key locations to reduce outage durations and customer interruptions.

Distribution Meters / Wholesale Meter Upgrades
Commercial meters installed at new sites.

Vehicles
Replacement of some ageing fleet.

Major Tools & Safety Equipment
This category is for tools required to safely perform work in various departments.

IT Systems
The largest capital expenditure in this category is a required SCADA upgrade. SCADA is software that monitors the power distribution network and enables operators to remotely re-direct power through the network in response to outages and switching orders. The system also enables operators to diagnose and respond to power fluctuations and outages more quickly. Improved monitoring and data analysis will reduce the customer impact of power outages.

Administration -Buildings
These are costs to the Oakville Hydro premises at 861 Redwood Square for security, HVAC, office renovations

and carpeting.

Payments to Developers

This is a required payment to Developers after they have donated the assets for a subdivision. This is a regulatory requirement under the OEB Distribution System Code, and the OEB provides the methodology for the calculation of the payment.

PREMIER / LEVAQUE INC.
Roof Consulting & Architectural / Building Technologies

BUILDING ENVELOPE

CONDITION ASSESSMENT

REPORT

FOR

OAKVILLE HYDRO
ELECTRICITY DISTRIBUTION INC.
861 REDWOOD SQUARE
OAKVILLE, ONTARIO

Prepared for:	BRESSER Construction Management Inc.
Premier / Levaque inc. Project #	058802-01a
Date:	June 20, 2005

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email: info@premierlevaque.ca • Website: www.premierlevaque.ca

BUILDING ENVELOPE CONDITION ASSESSMENT REPORT

FOR

OAKVILLE HYDRO ELECTRICITY DIST. INC.

891 Redwood Square
Oakville, ON

Prepared For:

Bresser Construction Management Inc.

Date:

June 20, 2005

PREMIER / LEVAQUE INC.
Roof Consulting and Architectural / Building Technologies

May 27, 2005

Bresser Construction Management Inc.
56 Port Royal Trail
Toronto, Ontario, M1V 2G8

Attention: Mr. Norman Bresser

Re: Oakville Hydro Electricity Distribution Inc.
Building Envelope Assessment Report
(Premier/Levaque Inc. Project No. 058802-01a)

Dear Mr. Bresser,

This is concerning our recent building envelope assessment of part of the structure at 861 Redwood Square in the municipality known as The Town of Oakville, Ontario. The property and buildings are currently occupied by Oakville Hydro Electricity Distribution Inc.

We received a further mandate to carry out a detailed review of previously identified moisture related concerns at the original portion of the building. Please refer to Premier/Levaque Inc. Condition Assessment – Preliminary Report dated April 05, 2005. This allowed us to assess the current conditions, determine extent of interior damage, and determine causes and potential remedial actions required. Additional review of previously identified concerns as well as interior destructive testing was authorized as part of this review.

Thermographic assessment of the building exterior and roof were conducted on the night of Friday April 29th with follow-up field review and destructive testing conducted on Tuesday May 10th. In attendance for all or part of the investigation were the following:

- Premier/Levaque Inc – Jean-Guy Levaque, Andrew Pawlak
- Bresser Constr. Mgmt. – Norman Bresser, Ed Whiteside
- Thorn Services – Doug Thorn and assistant Paul Houston
- 3 qualified interior contractors provided by Bresser.

Doug Thorn, Thorn Consulting, contributed observations and comments as part of window and exterior wall portions of this report. Refer to attached appendix.

The report is organized such that major items and recommendations are identified in the main body with individual buildings having a sub-section with detailed reporting and photos of major items.

2410 Meadowpine Blvd. Suite 101 • Mississauga ON L5N 6S2 • Tel (905) 819-1600 Fax (905) 819-1800 • info@premierlevaque.ca

PART 1 Overview

1.1 Qualifications

.1 Site, building mechanical, electrical and structural were not included as part of this report. Any reference to these items is strictly in relation to building envelope concerns and is not a judgement of their condition.

.2 The newer addition towards the south of the property was not included in this assessment.

.3 Interior access, permitting detailed review and destructive testing at required locations, was arranged via Bresser Construction Management and the cooperation of the staff of Oakville Hydro was informative and instrumental in completing this assessment.

.4 Interior review was limited to exterior wall locations as related to the building envelope and identified roof leak locations.

.5 Condition Assessment Report, conducted by Premier/Levaque Inc., dated April 05, 2005, identified performance related concerns with the integrity of the building envelope as well as anomalous results on the interior. Recommendation for further assessment was made at the time of report submission given the unknown nature and extent of the damage to the building structure at this location.

1.2 Background

.1 In total there is one primary building on the property. Improvement of the property dates to circa 1994, with a significant addition at the south half within the last number of years.

.2 Generally speaking the structure appears to be purpose built with the same occupancy by the owner since construction. Current use is a two storey single tenant usage office and communications centre.

.3 Windows and doors are typically commercial type with double glazed thermal glazing. Doors were not taken into consideration at this time.

.4 Building finishes are precast concrete primarily with some glazed curtain wall type portions.

.5 Roof construction is built-up conventional type membrane.

.6 Building structural construction primarily is of steel posts and beams with poured concrete foundation. Interior walls are metal stud with gypsum wallboard with roof deck being corrugated metal.

PART 2 Findings/Summary

2.1 General Notes

.1 Refer to individual report sections for detailed descriptions of findings.

2.2 Exterior Walls

.1 As evidenced in the thermographic images, excessive heat loss and moisture intrusion was observed at most vertical joint locations.

.2 Sealants at precast panel joints are aged and failing, with extensive failure noted at north and east elevations. Split, cracked and separated sealants are permitting ingress of water.

.3 Poor sealant and air/vapour seal was evident at joint between existing building and newer addition.

.4 Exterior wall sealants typically have an effective service life of 7-10 years. Given the buildings current age of just over eleven years it is to be expected that the sealants will not continue to provide reasonable watertight performance. Given our findings of extensive sealant failure at many locations, it is our opinion that the watertight integrity of the building envelope is being compromised by these failing sealants.

2.3 Windows

.1 Window system is in generally good condition with no failed thermal units noted. Interior assessment established lack of insulation and interior sealant and vapour retarder around window frames.

2.4 Roof

.1 Extensive blistering on the roof membrane along the south half of the roof.

.2 Perimeter flexible membrane is in poor condition at seams and corners. Seals at these locations appear suspect.

.3 Leak at northeast quadrant was sourced to the roof drain piping on the interior side. A mechanical joint is faulty and in need of repair.

2.5 Interior Review of Walls

.1 North wall of Room 163 had visible moisture damage. Destructive analysis determined that the wall assembly was wet with the presence of mould confirmed via laboratory analysis. It should be noted that the wall was constructed with 2 layers of gypsum wallboard, with sparse mould on the interior side.

.2 Typical at most destructive test locations was lack of continuous vapour retarder seals. This permits moisture to condense within the wall assembly and around metal columns.

.3 Extensive water damage around the window frames at Rooms 163, 164, 120, 131, 212 and 237 was investigated with destructive testing revealing water intrusion from the precast wall panel joints as well as from the horizontal transition of the precast columns to window frame transitions.

PART 3 Recommendations

Recommendations are laid out in the recommended order of implementation.

Water intrusion is occurring at several locations around the building as a result of extensive sealant failure. Prior to completing interior repairs it is essential to address the exterior concerns as currently identified.

The exterior precast concrete joint sealants are in need of immediate replacement. Given the nature of the work and the age of the sealants it is our recommendation that a complete removal and reapplication procedure be implemented. Partial replacement of failed locations will result in further failures in the coming years with potential interior damage recurring. Replacement will entail complete removal of existing, cleaning of surfaces and priming to ensure good adhesion of new seals. Recommend that work commence on the north elevation at the west corner and progress around towards the east and then south down the east elevation continuing around the south end to the tie-in joint to the newer addition.

As part of the precast joint sealant work it is recommended to seal the back side of the precast to precast connector joints and ensure slope to exterior weeps are created.

A complete exterior resealing around window frames is recommended to be completed at the same time as the exterior resealing. This work would also permit the opportunity to install a spray foam sealant around all window frames to create an insulated space with air/vapour seal properties

Room 163 requires immediate attention following exterior repairs being completed at the northwest corner. Mould is considered a workplace hazard and needs to be addressed by the owner/employer as per Ontario Health & Safety Regulations. Given the extent it is likely a Type 1 removal, subject to a hazard risk review - which requires limited containment, use of respirator masks, double bagging of the contaminated materials and disposal in a waste bin. A mould remediation company can be retained to complete this portion of the work or a qualified drywall contractor can complete the work provided they are familiar with the required precautions.

Interior damage as a result of the various water intrusion locations (Rooms 163, 164, 120, 131, 212, and 237) has resulted in the requirement to complete several major repairs following exterior resealing. Water damaged locations require removal of damaged materials with reinstallation of new insulation and continuous air/vapour seals prior to installation of new wallboard. As well, interior resealing of precast wall joints and plates within repair area should be addressed.

The roof is at the midpoint of its design life and can perform to the intended age provided immediate preventative maintenance and repairs are completed to identified deficiencies. Blisters and failing membrane flashings require attention prior to causing premature failure. Recommend that this work be scheduled for fall 2005 and can be completed independent of the other work.

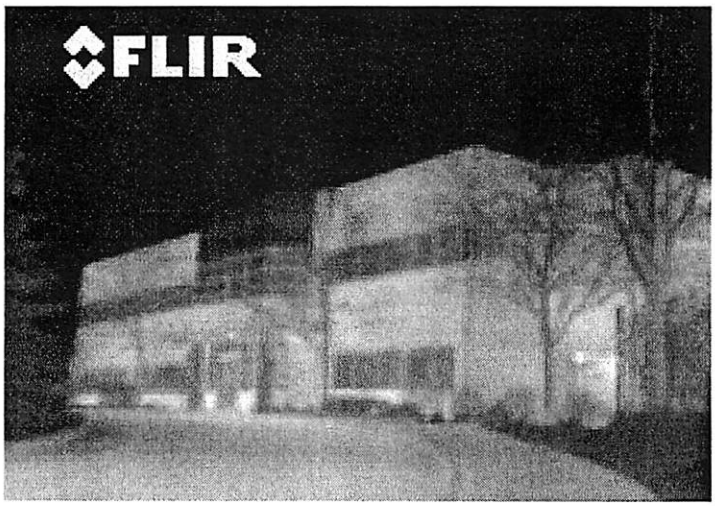
Correcting the lack of continuous vapour retarder at wall column locations as well as proper sealant around precast wall panel connector plates would require localized demolition of interior column finishes. This work is not as critical as other identified work and should be monitored for a full season following above repairs with scheduled capital budgeting the following two years. Approximately 32 such columns may need to be addressed at each floor level.

Report Prepared by

Andrew Pawlak

Project Manager

EXTERIOR THERMOGRAPHIC SCAN



PART A Findings & Observations

A.1 General

.1 Exterior thermographic scan conducted on the evening of April 29, 2005. Jean Guy-Levaque and Andrew Pawlak of Premier/Levaque as well as Ed Whiteside of Bresser Construction Management were present for the scan.

.2 Primary focus of the thermographic scan was the 1994 orginal construction portion of the building. Both the pre-cast concrete wall panels and the roofing were scanned; however, the roofing portion is addressed as part of the Roofing Section.

.3 Thermographic scanning identifies subsurface moisture and air leakage locations by differentiating temperature differentials. Glazing is not scannable due to the glass acting as a reflector for the thermographic imaging equipment. As well, pre-cast concrete can be scanned for air leakage at joints and cracks as well as identifying moisture within the concrete itself, but will not identify moisture behind the material given its composition.

.4 Overall the building envelope appears to be in satisfactory condition, excepting noted deficiencies.

A.2 Review of Walls

.1 Thermographic scan revealed several locations of suspected moisture/air leakage. Majority of problems are related to poor sealants at transitions of details and material types, covered in detail in Exterior Review subsection.

.2 In reference to identified interior leak locations the thermographic scanning confirmed heat loss at vertical precast joint locations. Most significant was the area at the northwest corner, which coincides with interior leak location identified in Room 163.

.3 Heat loss due to air leakage was identified at most second storey sill locations at the north and east elevations. This condition suggests failed sealants which can permit moisture entry.

Photo A-1.

-West Elevation at Grid 3, second floor level at roof.

-White area near top indicates extensive heat loss near parapet location.

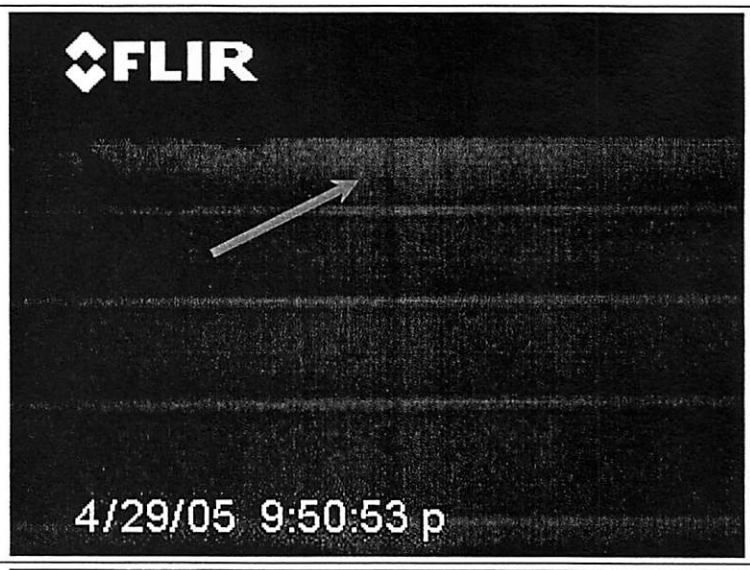


Photo A-2.

-North elevation at west side, Grid 2 and Ey.

-Extensive heat loss at inside corner at second floor level.

-Room 163 is directly below this location.

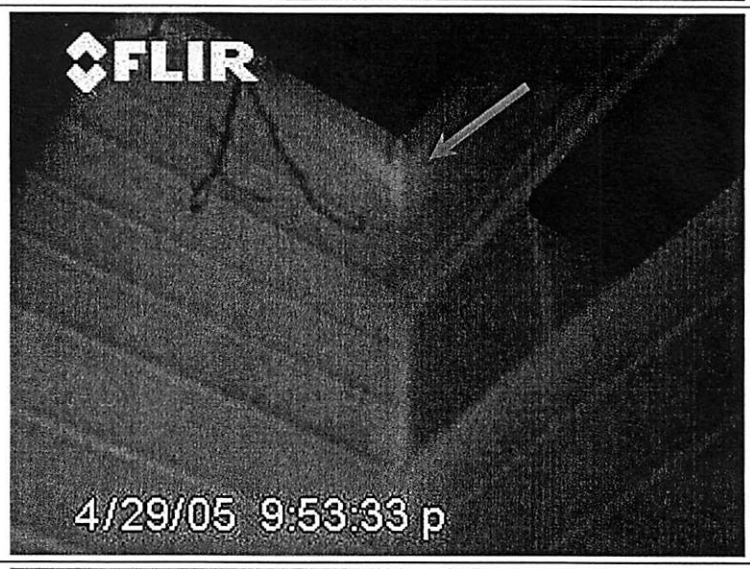


Photo A-3.

-Same as Image T-2 but taken at ground floor level.

-Continued heat loss is diminished at lower level. Sealant at the lower location is in much better condition than above.

Photo A-4.

-Same location at T-2 but taken from further back to offer an overall view.

-Note the extensive heat loss visible as evidenced by the white zones.

Photo A-5.

-Outside corner at north elevation at west side along Grid 2 and E.

-Sealant at outside corner is in poor condition and evidence of heat loss and moisture retention is evident.

-Inside corner is also exhibiting significant thermal concerns as a result of failed sealant.

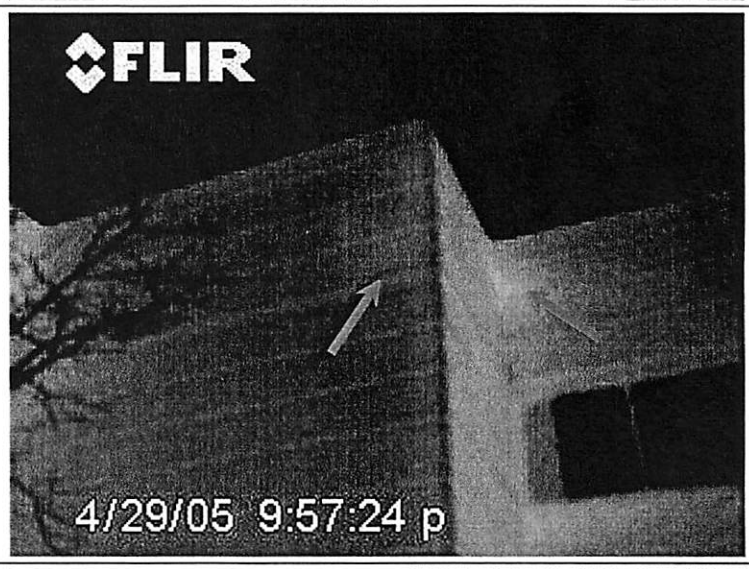


Photo A-6.

-View of north elevation looking from west to east.

-Note the telltale white zones evident at the second storey precast concrete sill locations where sealant has failed vertical joints.

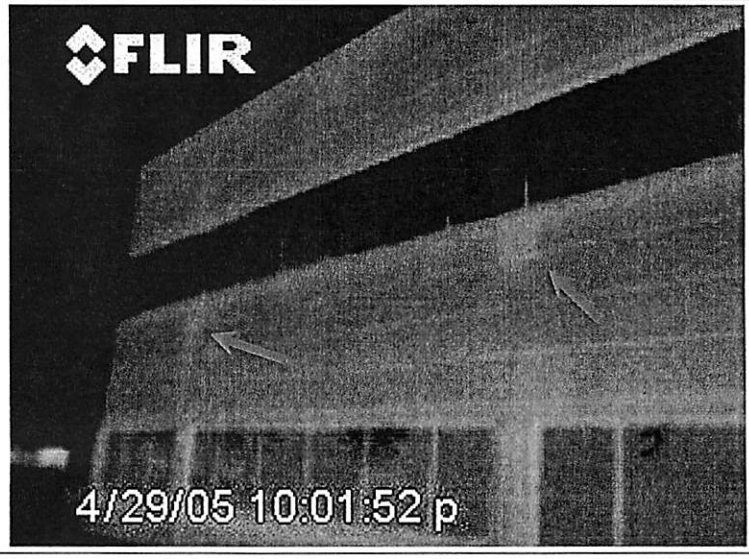


Photo A-7.

-North elevation at Grid D.

-Typical close-up view of thermal anomaly at precast wall panel at vertical joint.

-Sealant has failed resulting in heat loss and moisture intrusion.

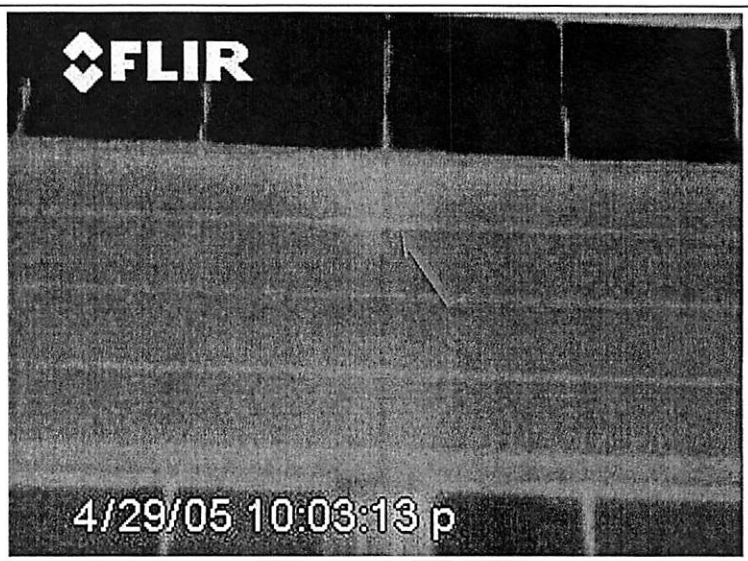


Photo A-8.

-North elevation at main floor window sill along grid B.

-Heat loss at window sill and frame locations. Lack of insulation and vapour seal combined with poor sealant.

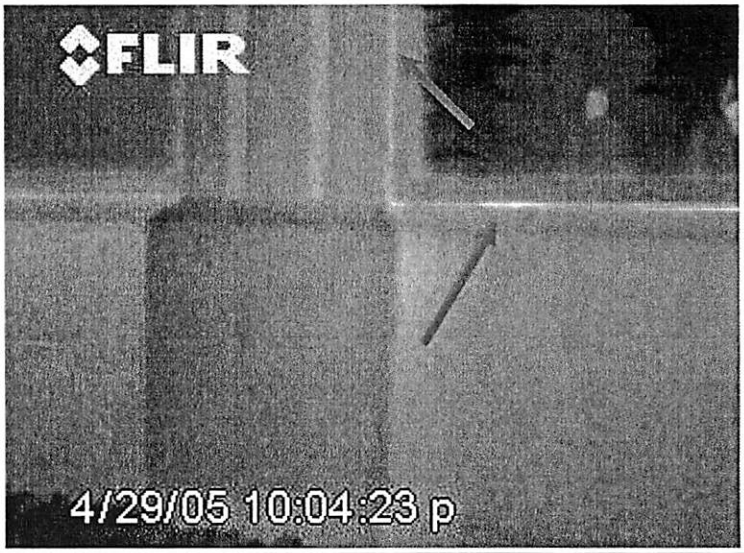


Photo A-9.

-North elevation along Grid B at second storey.

-Suspected moisture / air leakage at radiating from window sill downwards along expansion joint.

-Note office with leaks is at window to immediate left of arrows.

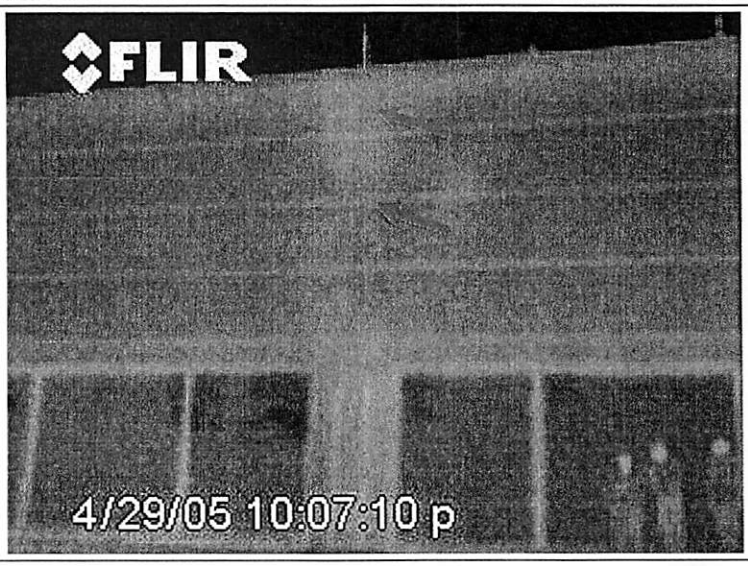


Photo A-10.

-Northeast corner looking from east to west at grid Ay.

-Vivid indication of heat loss at corner joints of precast panels at both upper and lower portions of second storey.

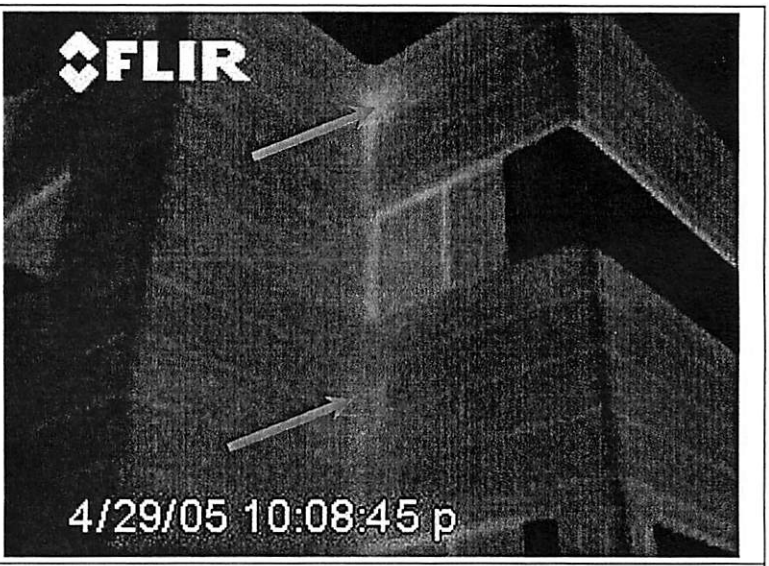


Photo A-11.

-Northeast corner looking from north to south along Grid Ax.

-White zones indicate heat loss at walls, indicating moisture entry points related to interior scan anomalies.

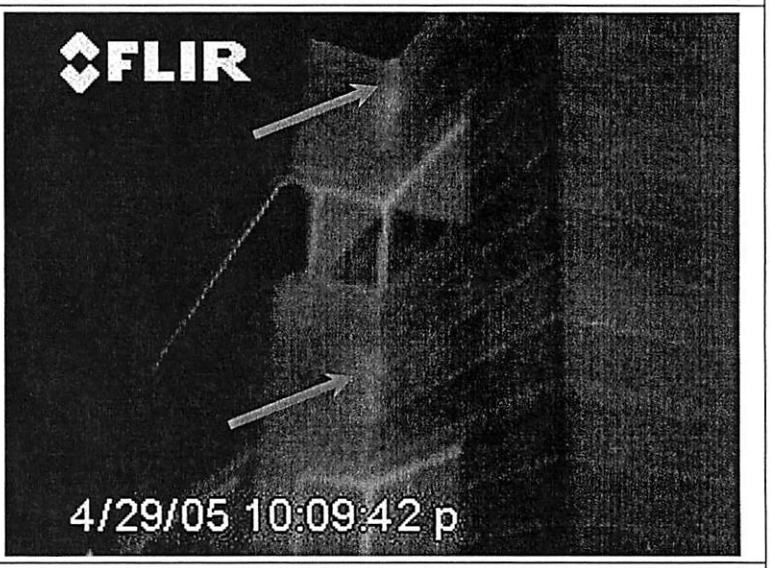


Photo A-12.

-East elevation looking at second storey along Grid 3.

-White zones indicate heat loss at walls, indicating moisture entry points related to interior scan anomalies.

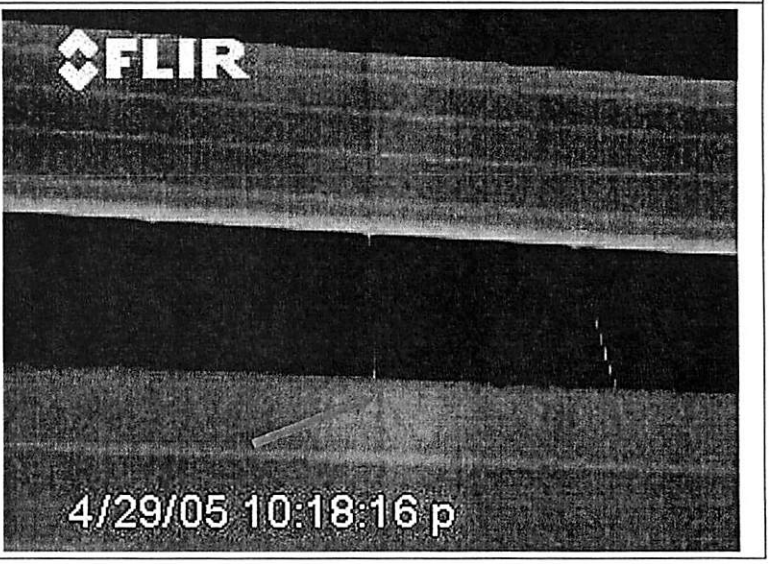


Photo A-13.

-Southeast corner at Grid 6.

-Extensive white zones at inside corner indicate significant heat loss.

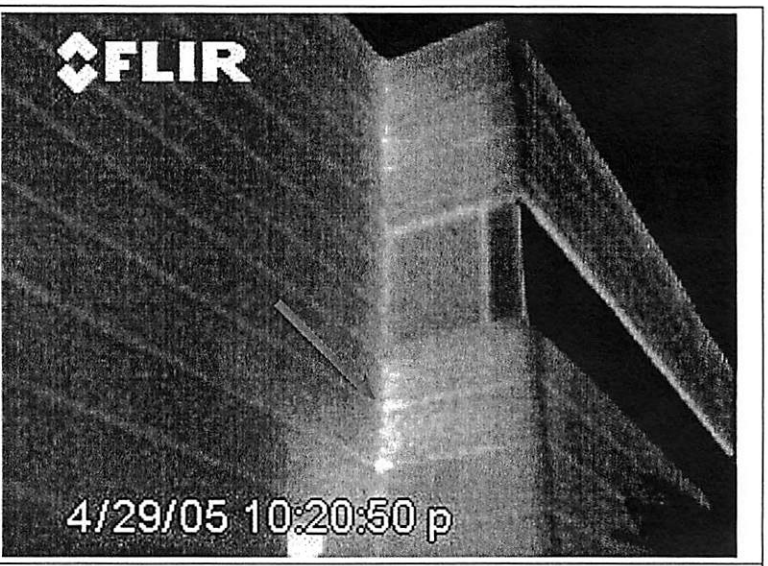


Photo A-14.

-Southeast corner at Grid 7 at tie-in to building addition.

-Extensive white zones at inside corner indicate significant heat loss.

-Note the horizontal heat loss signature at both top and bottom of window.

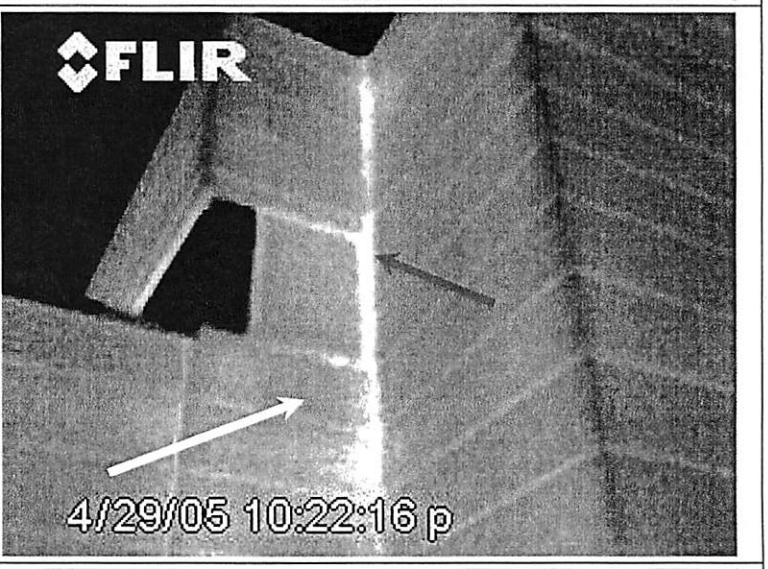


Photo A-15.

-Southwest corner at Grid 7 at receiving area.

-Extensive white zones at inside corner indicate significant heat loss.

Photo A-16.

-Southeast corner at transition from existing to newer addition, taken from lower level roof.

-Extensive white zones at inside corner indicate significant heat loss.

EXTERIOR REVIEW

PART B Findings & Observations

B.1 General

.1 Exterior wall construction is primarily precast concrete wall panels and a combination curtain wall and commercial glazing system.

.2 Precast wall panels appear to be in sound condition with one stress crack noted along the west elevation towards the north end.

.3 The area above the main entrance at west side and blending into the Presidents office and offices on either side was Kawneer Canada 1600 series curtainwall.

.4 The strip windows are Kawneer Canada 501 series (discontinued), based upon the "rain screen principle and pressure equalization" and incorporating exterior "mullion less" vertical framing.

B.2 Review of Walls

.1 Wall composition is an exposed aggregate pre-cast concrete panel with horizontal and vertical joints between panels. Weep hole tubes are located at vertical joint locations.

.2 In general the sealants used at the precast joints are aged and have performed to the design service life. Typically sealants have a 7 to 10 year design life and most sealants on this structure at 11 years of age.

.3 Thermographic scan (refer to Section A of the report) revealed several locations of suspected moisture/air leakage specifically at the second storey vertical precast joints and at inside and outside corners. Majority of problems are related to poor sealants at transitions of details and material types.

.4 In general the precast panels appear to be in good condition with no significant concrete failures noted.

.5 One stress crack was evident in the precast concrete panels along the west elevation towards the north side at the second floor level. The crack is appears to be small with no discernable heat loss found during the thermographic scan; however, this should be monitored and if the condition worsens may necessitate being x-rayed and/or structurally assessed and reinforced.

.6 Sealant failure was observed at a majority of the second storey window sill vertical precast joint locations at the north and east elevations. These failures are contributing to water ingress issues on the interior.

.7 Horizontal sealant failure at precast column locations between first floor window frames, specifically at top of window location.

.8 Past localized sealant repairs were evident, with many cases appearing to have the new sealant applied over the existing. In many cases, the sealant application was poorly adhered and has prematurely failed.

.9 Transition at southeast corner from existing to new building sections has several apparent deficiencies. Large opening was visible at underside of precast panel at low level roof transition. As well, the vertical joint has the sealant applied to the rough exposed aggregate face of the existing side of the concrete precast. This type of seal is very difficult to achieve and maintain.

.10 Missing some "weep provisions" to base of the vertical precast concrete joints.

.11 Questionable as to the current condition of the "inserted plastic weep tubes" in the vertical joints, as to whether they are obstructed and / or functioning as intended given the small diameter of the tube.

.12 Lack of sealant around light fixtures mounted onto the precast panels. Noted as part of interior review that sealant at through hole for wiring is non existent.

.13 Evidence of water trapped behind horizontal joints weeping out at failed sealant locations. Note that the day of the exterior review it had not rained in 48 hours.

B.3 Review of Windows

.1 Report from Thorn Services, refer to Appendix, addresses window specific issues in detail.

.2 Generally the windows and doors themselves are in good condition for their age. The window system is a "rain screen and pressure equalization" type and incorporating exterior "mullion less" vertical framing.

.3 No evidence of failed thermal units or leaks from the window mullions.

.4 Sealant at sides and tops of windows is typically applied to the exposed aggregate portion of the precast. Typically the sealant around the windows is intact and sound, but aged.

.5 Poor seal at transition from sides to top of window frame was noted at first floor along the east elevation at lunchroom location.

.6 Some minor loose trim locations and or attempts to tape/seal exterior gaps were noted around windows at the second storey above the lunch room area. Reset trim and remove tape/seals prior to significant problems arising.

Photo B-1.

-North elevation at midpoint. Looking down from roof to second storey sill location.

-Sealant repair location with failure at sloped sill location.

-Typical condition at most precast joints at second storey along north and east elevations.

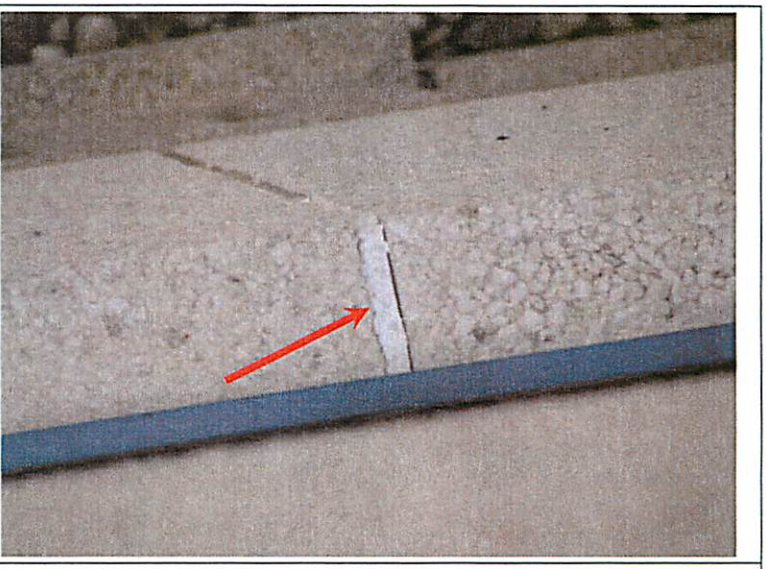


Photo B-2.

-North elevation at east side, looking from roof down to first storey sill.

-Typical sealant failure at original sealant location.

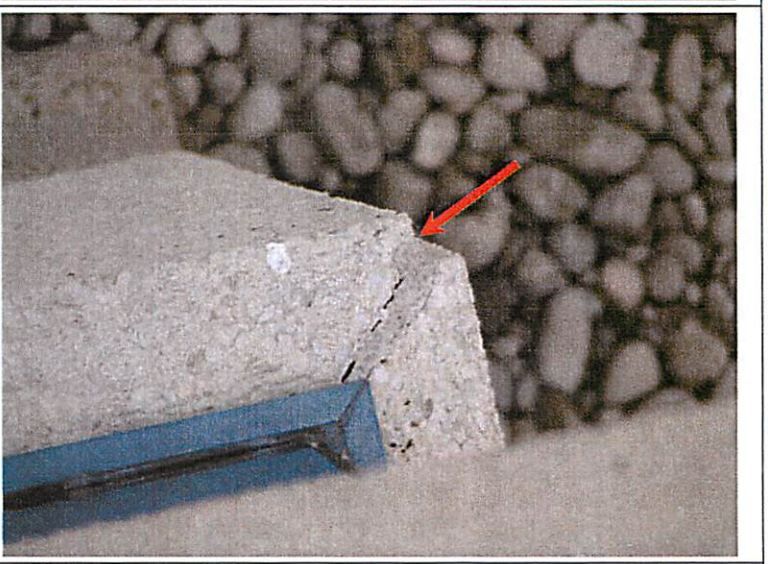


Photo B-3.

-East side light fixture adjacent to lunch room location. Taken from roof looking downwards.

-Interior leakage is adjacent to this location.

-Note lack of exterior sealant around the light fixture.

-Previous partial sealant repair is visible at top portion of joint.

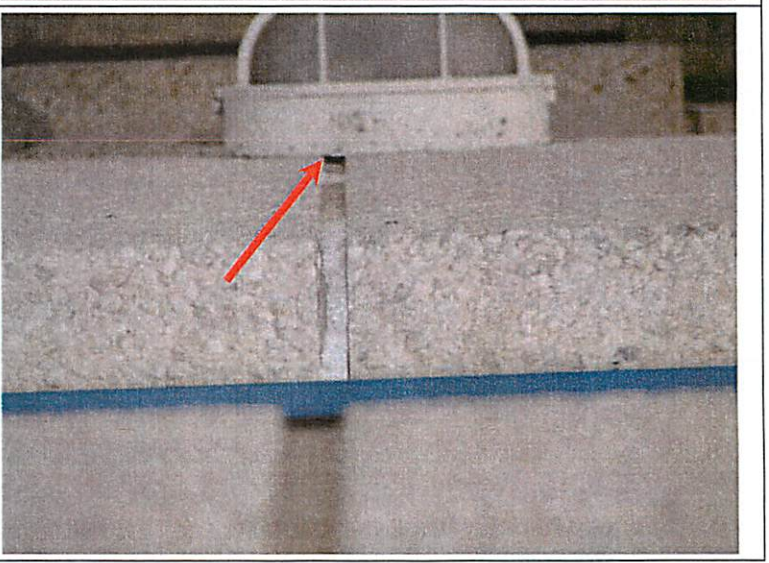


Photo B-4.

-Similar to Photo 3 above but taken from fixture immediately to the north.

-Sealant failure is evident at window sill location.

Photo B-5.

-Inside corner at northwest side adjacent to Room 163. View taken from ground looking upwards.

-Sealant failure due to split in the aged material in a sporadic line.

-Inside corner is also exhibiting significant thermal concerns as a result of failed sealant.

Photo B-6.

-View of northwest outside corner at roof level. Taken from ground level looking upwards.

-Failure of aged sealant with cracking and splits evident, but most predominant near the top portion.

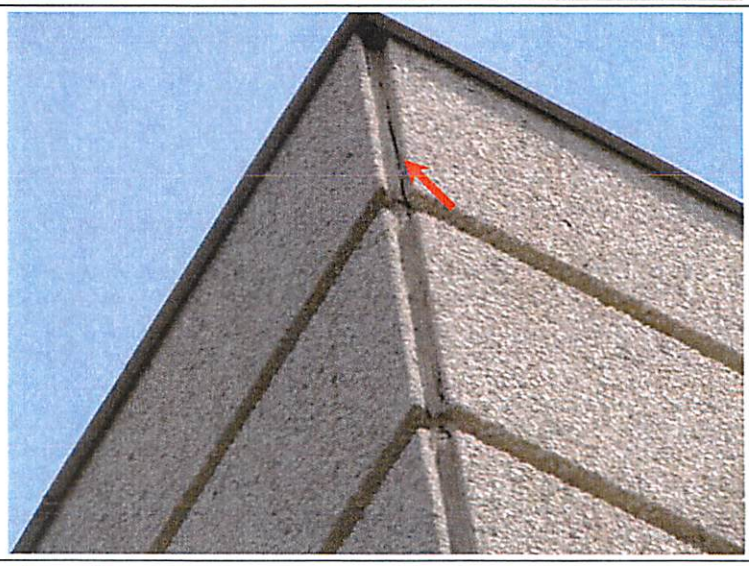


Photo B-7.

-North elevation at Grid D.

-Replacement sealant at horizontal column joint adjacent to window has separated from concrete panel at top side.

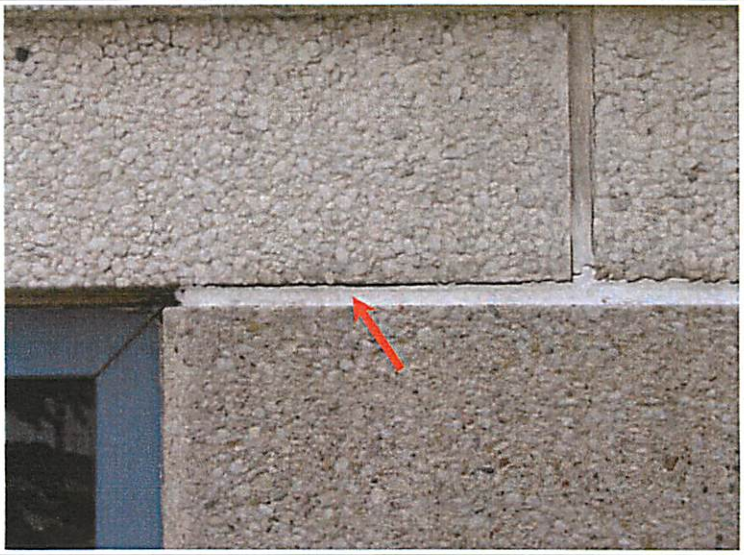


Photo B-8.

-Typical view of vertical joint with partial sealant reapplication.

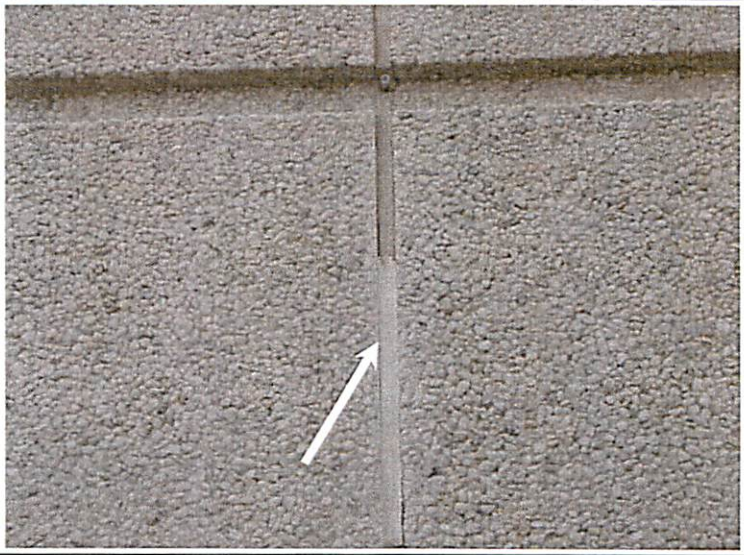


Photo B-9.

-Detail view of typical condition along east elevation of first storey window to precast panel transition.

-Horizontal sealant has separated from adhesion with concrete.

-Gap at corner transition from precast joint to window frame sealant.

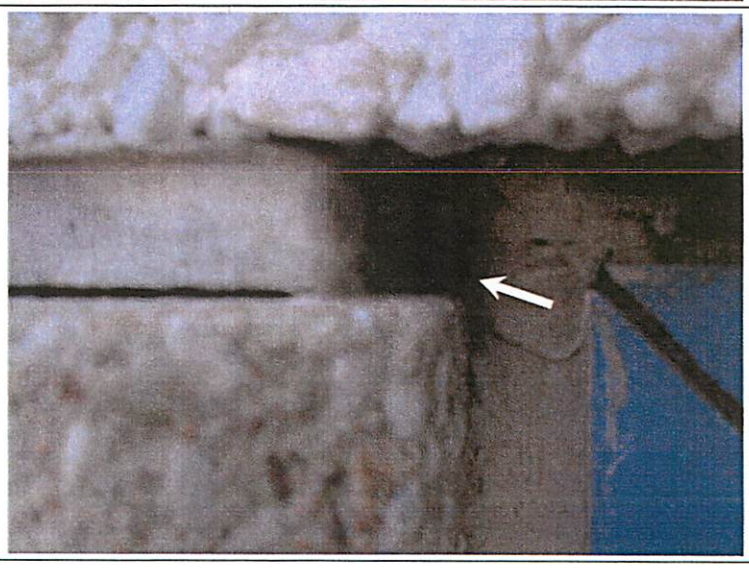


Photo B-10.

-Typical detail view of failed horizontal selant at window column location.

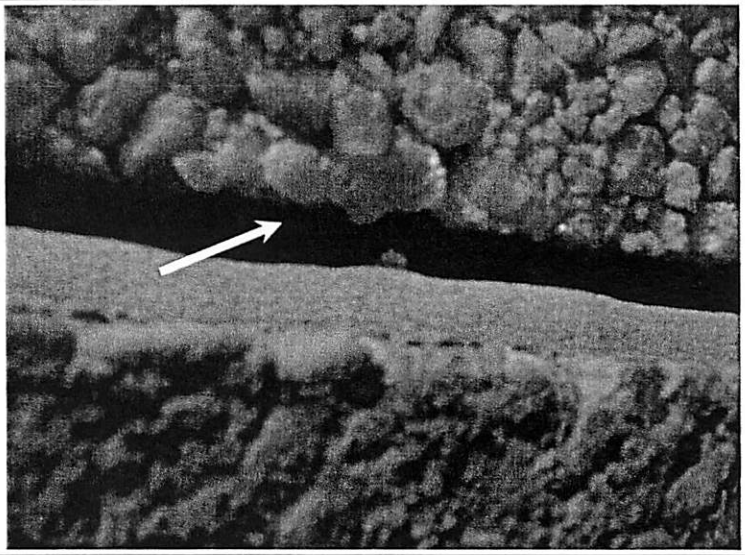


Photo B-11.

-Aged and brittle sealant has poor adhesion.

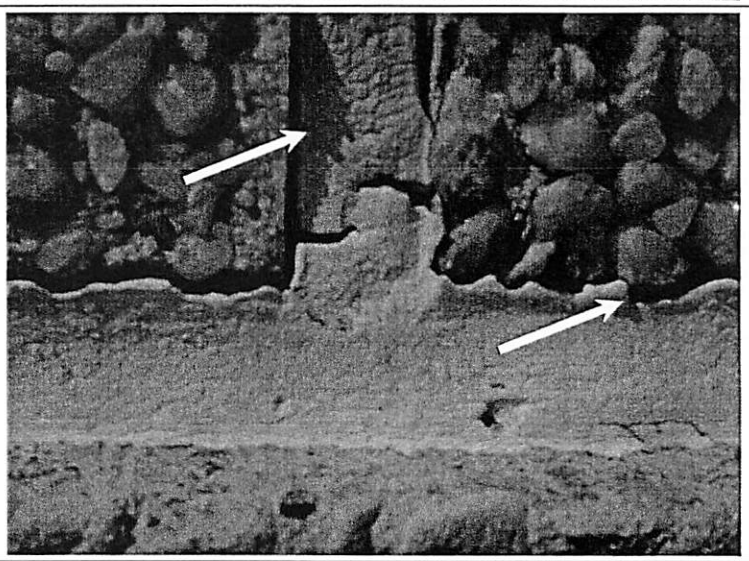


Photo B-12.

-Moisture trapped within the precast expansion joint location is wicking out at this horizontal joint.

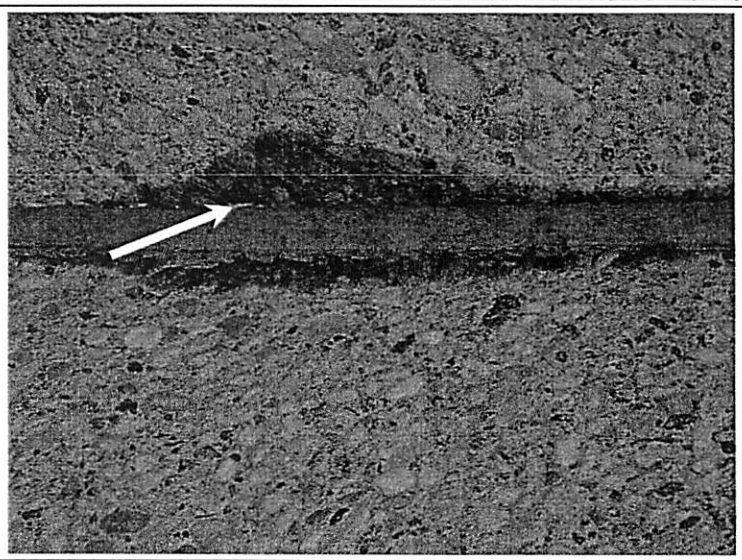


Photo B-13.

-East elevation at lunchroom area. View of window sill with water draining out at corner below the glazing frame.

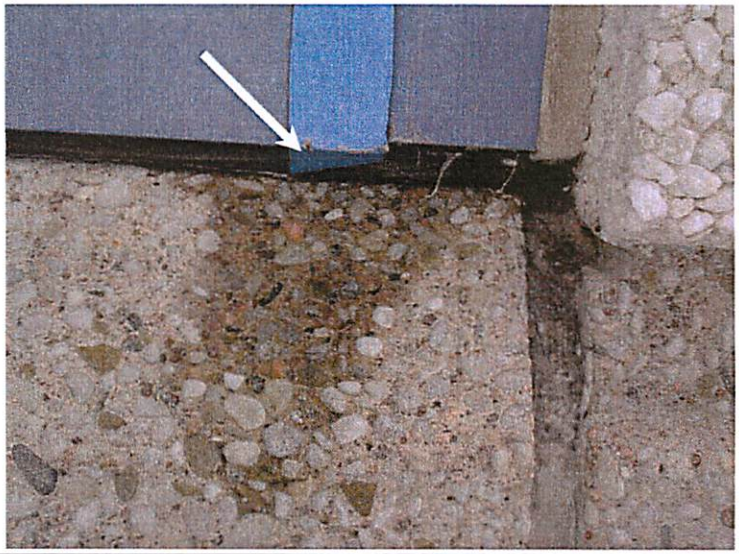


Photo B-14.

-Bottom of window sill at second level as taken from adjacent lower roof at southeast corner.

-Sealant has been improperly installed at window frame base, thus prevent outflow of water from within the window.

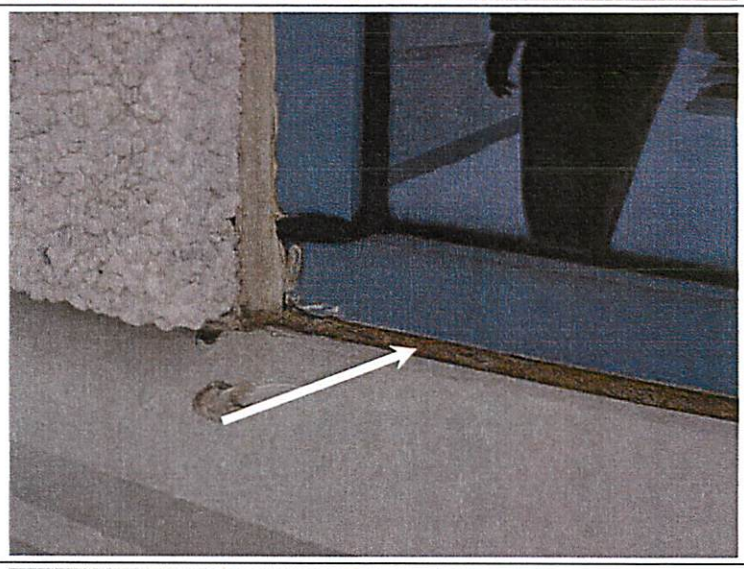


Photo B-15.

-Detail view of southeast corner looking at underside of window header.

-Note the water drips and staining at the window frame cap. Moisture appears to be draining out from the precast panel behind the drip edge.

ROOF REVIEW

PART C Findings & Observations

C.1 General

.1 Roof construction is a convention built-up type system with asphalt and gravel top pour. The exterior parapet walls are typically 3 0 high and are clad with sheet metal.

.2 Access to main roof level is via mechanical room.

.3 This Roof Review section incorporates both thermographic and daytime photos.

.4 Cut–test verification of suspected anomalies was conduct with no finding of moisture within the roof assembly. Bothwell Accurate Roofing was utilize to conduct the roof cut-tests and complete permanent roof membrane repairs.

C.2 Review of Roof

.1 Thermographic scan revealed several locations of suspected subsurface moisture. Daytime review and cut-test verification did not find moisture within the assembly at the identified locations. The anomalous readings were a result of localized heavy asphalt pour and/or additional membrane application.

.2 Cut-tests confirmed the roof assembly as the following:

(a) Asphalt and gravel top pour
(b) 4-ply organic felt and asphalt membrane
(c) 3 thick Polyisocyanurate insulation with glass fibre scrim facers
(d) Kraft vapour retarder
(e) Metal deck

.3 Significant blistering of the membrane was observed along the south half of the roof. Given the lack of a protective cover board, this is a common problem with this type of installation and was corrected by the insulation manufacturers in the mid 90 s by requiring the application of a cover board. Blisters are a potential leak location if they break or are stepped on.

.4 Membrane flashings around perimeter are a single ply flexible membrane (FR40) set in asphalt. Observed poor condition at laps and seams of this membrane; however, failure was not evident as yet.

.5 Roof surface is clear and free of significant debris. Drains appear to be clear and little evidence of standing water.

.6 Asphalt bleed out is evident around perimeter and at a few locations within the field of the roof. Exposed asphalt will degrade from UV exposure and may prematurely affect the longevity of the roof membrane.

.7 During cut-test verification of perimeter, a minor split in the membrane flashing material was discovered. Potential for further splits at the perimeter locations is more likely as the roof ages. The split was repaired following the cut test verification.

.8 One leak was reported within the second floor office space in the northwest quadrant. Interior review of the leak indicated a problem with the mechanical joint of the interior drain pipe.

Photo C-1. -Thermographic view of southwest section of roof. -Excess heat signature located at perimeter of roof. .	
Photo C-2. -Thermographic image with white (hot) area identified at northeast corner. -Daytime verification confirmed that the anomaly was a result of excessive asphalt pour in this corner.	

Photo C-3.

-Corresponding daytime image of Photo C-2 indicating visible excess asphalt pour at this location.

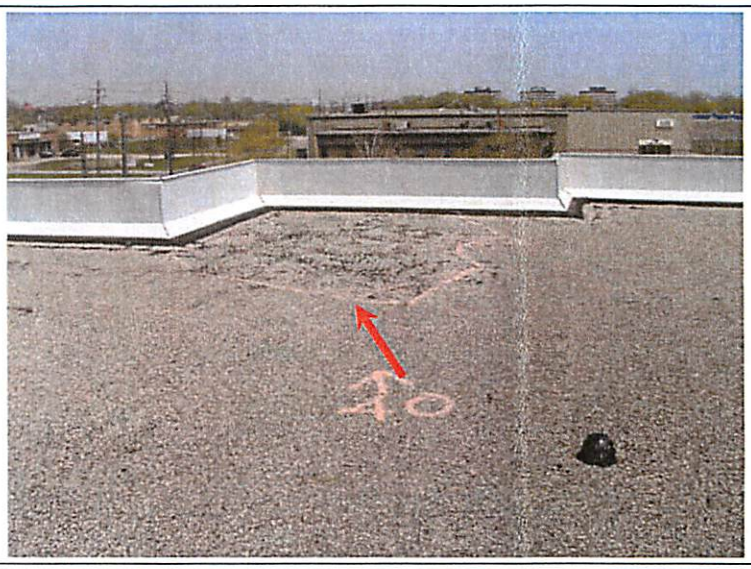


Photo C-4.

-Thermographic view of southeast corner of roof.

-Suspect location identified by white zone on roof.

-See Photo C-5

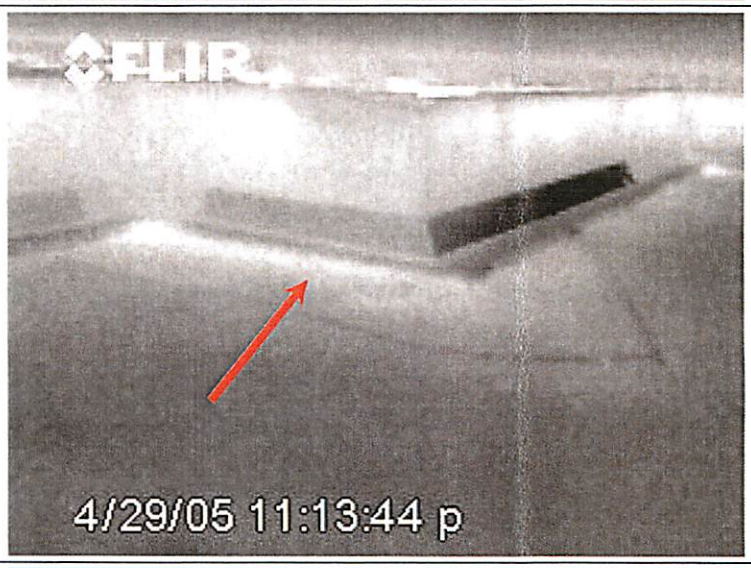


Photo C-5.

-Corresponding daytime image of Photo C-4 indicating excess asphalt pour.

-Some of the heat signature could be a result of the excess insulation value around perimeter due to a double layer of insulation.

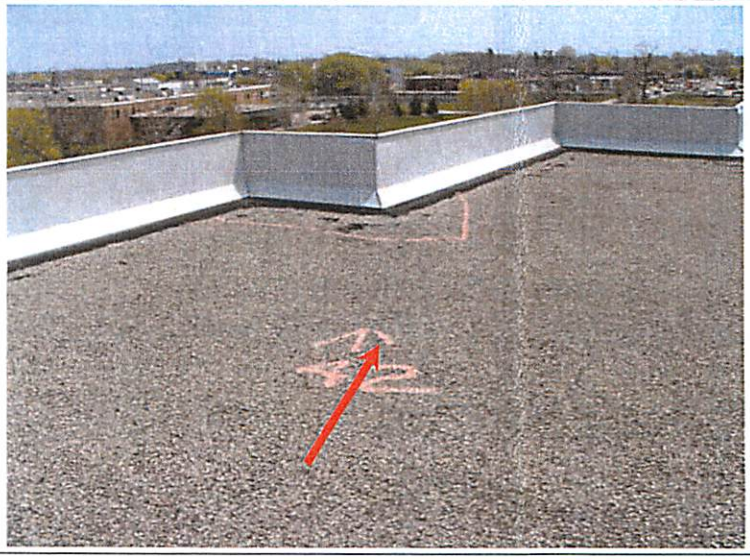


Photo C-6.

-Thermographic view taken from penthouse roof looking southeast.

-Note the heat signature around the roof vent and chimney, which is common.

-Sporadic splotchy areas within the field of the roof are corresponding to roof membrane blistering.

Photo C-7.

-Thermographic view of main roof taken from penthouse looking to northeast.

-Localized weak white spots correspond to blistering of the roof membrane.

Photo C-8.

-South end of roof at midsection.

-'X' on trhe roof signifies a large blister.

Photo C-9. -Split found in the membrane flashing at an inside corner prior to cut-test verification. -Split was repaired following the cut-test verification.	
Photo C-10. -Cut test taken on roof to verify suspect anomaly as identified during thermographic scan. -In all cases of verification the assembly was confirmed to be dry.	

INTERIOR REVIEW

PART D Findings & Observations

D.1 General

.1 Interior moisture related damage was documented in our preliminary findings on our initial report and the exterior investigation carried and documented in the preceding sections of this report

.2 The nature of moisture ingress is primarily a result of precast joint sealant failure, primarily at the north and east elevations. As well, some interior damage at southeast corner appears to be attributable to suspect tie-in of original building to newer addition.

.3 Interior portion of outside walls is a typical gypsum wallboard construction with vapour retarder and insulation backing mounted on metal stud framing.

.4 Interior review of exterior walls was focused on the following locations:

(a) Room 163
(b) Room 164
(c) Room 120
(d) Room 131
(e) Room 212
(f) Room 237

.5 Although we had some concern with the boardroom (room 206) destructive analysis was not conducted due to the location and wall covering.

.6 Destructive testing was carried out on Tuesday May 10. Premier/Levaque directed the testing utilizing three qualified contractors provided by Bresser Management.

.7 Generally, the interior finishes are well maintained and appear to be in good repair, excluding the identified concerns. Interior is either heated or cooled, depending on time of year, and no excessive interior moisture generation or humidity was evidenced.

.8 Mould was suspected and confirmed by lab analysis at only one location, Room 163.

D.2 Room 163 Review

.1 Room 163 at the northwest corner of the building exhibits extensive moisture related damage to the exterior north wall immediately east of the window. Exterior review has identified several failed sealant locations within the vertical precast joints at both inside and outside corners.

.2 Destructive interior analysis of this location revealed a double layer (1/2 layer on a 5/8" layer) of drywall with extensive interlayer moisture.

.3 The double layer of drywall has created a condition that prevents the second layer from drying out within the assembly – thus moisture remains for an extended time.

.4 The vapour retarder is a polyethylene type that is not fully sealed at ends or around window frame. Loose batts insulation filled the cavity. This condition permits the exterior water leakage to wet the drywall.

.5 Dark matter on the substrate materials (second layer of drywall and insulation) was suspected to be mould. Samples were taken to Lex Scientific of Guelph, Ontario for laboratory analysis.

.6 Lab results returned from Lex confirmed finding of mould spores within the materials as follows: Aspergillus, Penicillium, Cladosporium and Alternaria. It should be noted that the mould spores are confined within the wall assembly and are not visible on the surface.

.7 Most of these are common spores which are found in small amounts in most locations both indoors and out. The concentrations varied from sparse to extensive at several sample locations within the wall assembly. In extensive concentrations certain species of these spores are pathogenic and can cause significant health concerns from exposure.

.8 Please refer to the Lex Scientific Analytical Report included in the Appendix.

D.3 Interior Review – General

.1 Lack of continuous vapour retarder was noted at all cut-test locations. This condition permits moist warm air to escape and condense within the wall assembly. As well, moisture entering from failed exterior sealant is permitted to wet the drywall and cause interior damage.

.2 Extensive water damage at Room 130 appears to be a result of several deficiencies of horizontal and vertical sealants, lack of sealant around exterior electrical light fixture and poor seal at window side to header corner at exterior. Continuous and longterm moisture damage has resulted in widespread damage to both the wallboard and metal stud framing.

.3 Although only suspected, the location of the outdoor smoking area and the likelihood of the doors constantly opening and closing during cold winter months may be contributing to moisture related problems on either side of the door. This could result from the exchange of interior and exterior air causing condensation within the adjacent materials. It may be worth confirming and possibly adding a second set of doors.

.4 Lack of continuous vapour retarder around columns was noted at all cut test locations where the columns were present.

.5 At window frames no seal of vapour retarder was present. As well, a lack of insulation and interior sealant in the window frame to precast panels was noted. This condition is not uncommon for construction of this era; however, is contrary to manufacturers printed literature.

.6 Interior heat loss findings identified in our original report are a combination of moist conditions and cold drafts as a result of poor air/vapour seals from interior and exterior sealant failures.

.7 Water staining was visible on the inboard side of precast panels confirming that water entry from the exterior is occurring.

.8 Water staining was noted at interior faces of window frames at second floor locations. This is likely due to the water entering through the precast joints and running down the wall and filling the top u-channel portion of the window frame and exiting at the corner frame joints. This is also resulting is drywall damage at the window frame openings.g

Photo D-1.

-Room 163 at north wall.

-First layer of drywall is cut back and removed to expose second layer of drywall.

-Note the black substance on the second layer has been confirmed to be mould spores.

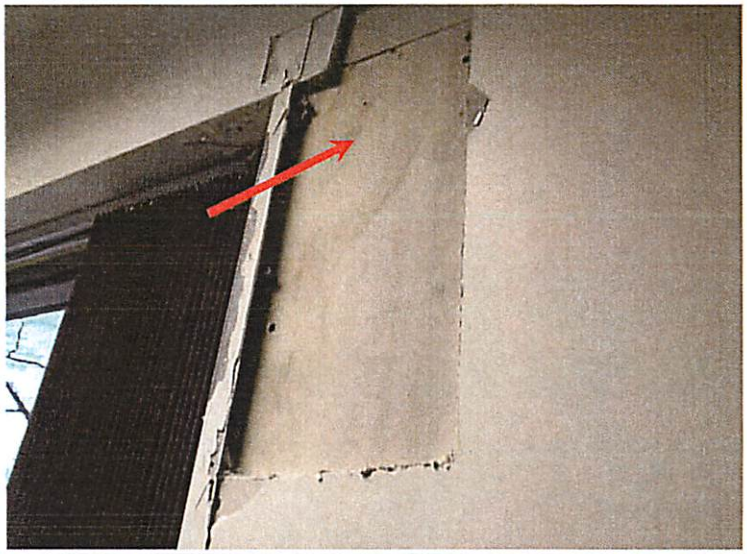


Photo D-2.

-Room 163 at north wall with drywall and stud framing removed around window opening.

-The vapour retarder is not sealed to the window frame.

Photo D-3.

-Room 163 at north wall looking up from opening to view precast plate.

-Interior sealant of vertical precast joint is not continuous behind the plate. This condition permits moisture to enter the interior.

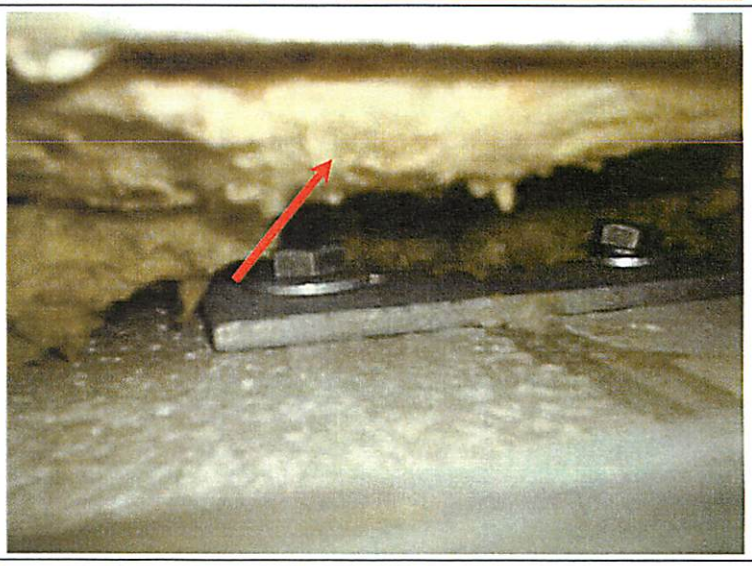


Photo D-4.

-Room 164 at northwest corner.

-Some water staining is visible at top portion of image.

-This location did not have a continuous vapour seal, thus resulting in excess heat loss.

-Location was dry at time of review.

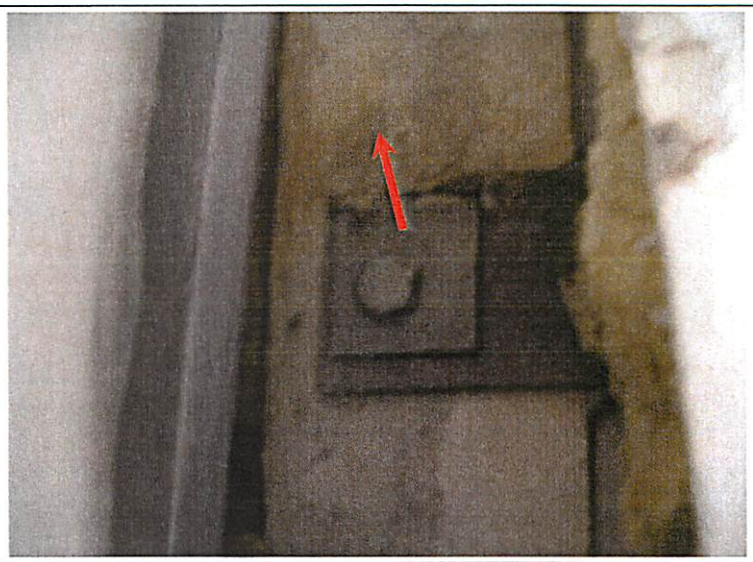


Photo D-5.

-Room 131 (lunchroom) along the east wall.

-Extensive water damage to the drywall around the window frame was evident.

Photo D-6.

-Room 131 view of window header.

-Corroding metal stud and trim as well as extensive drywall damage.

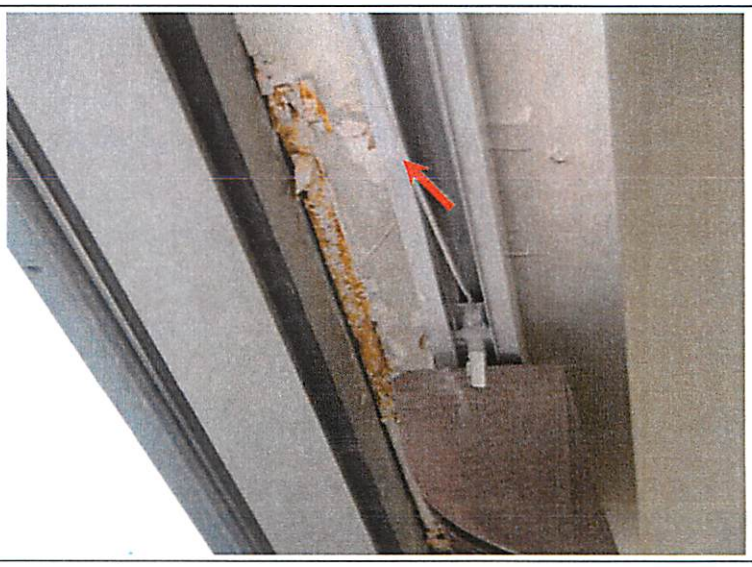


Photo D-7.

-Room 131 cut-test above window at column junction.

-Vapour retarder is not continuous around the column and is not sealed to column.

Photo D-8.

-Room 120 at northeast corner.

-Batt insulation is wet; however, the moisture was prevented from damaging the interior drywall due to the presence of the vapour retarder (cut-away in this image).

-Note the water staining on the vertical metal track above the plate at top left of photo.

Photo D-9.

-Room 120 at northeast corner at floor level.

-Water is pooled in the base between the precast panel and the metal stud sill plate. An electrical romex wire is running loose along this location.

-Sealant at interior side of precast at base is poorly adhered.

-Insulation was wet at this location.

-Sealant was present at interior side of drywall to floor.

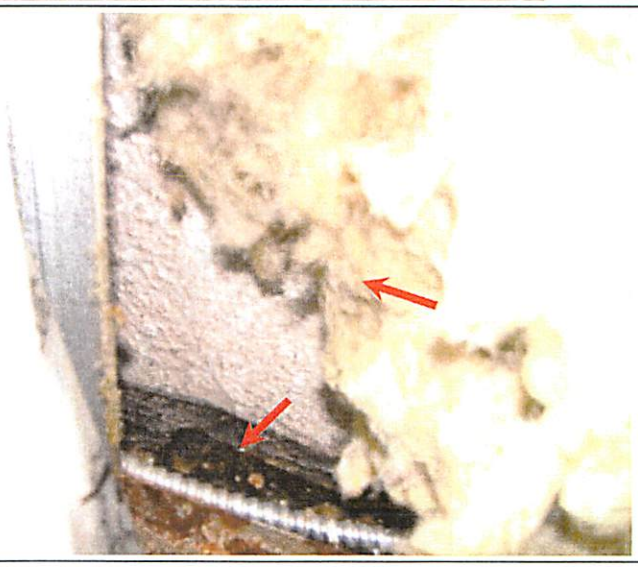


Photo D-10.

-Room 120, view looking up into ceiling space above the column location.

-Spray foam insulation is in place around transition from drywall to metal and around the steel column.

Photo D-11.

-Stair 2 at southwest corner, immediately above and adjacent to Room 163.

-Water staining is visible on the wood spacer.

-Note the vapour retarder from the north wall in not continuous.

Photo D-12.

-Same location as Photo D-11 but looking down to lower portion.

-Water staining on the bottom of the I-beam is evident..

Photo D-13.

-View of second floor at Room 212 looking up to ceiling space.

-Spray foam insulation is present at transitions around metal framing and roof decking.

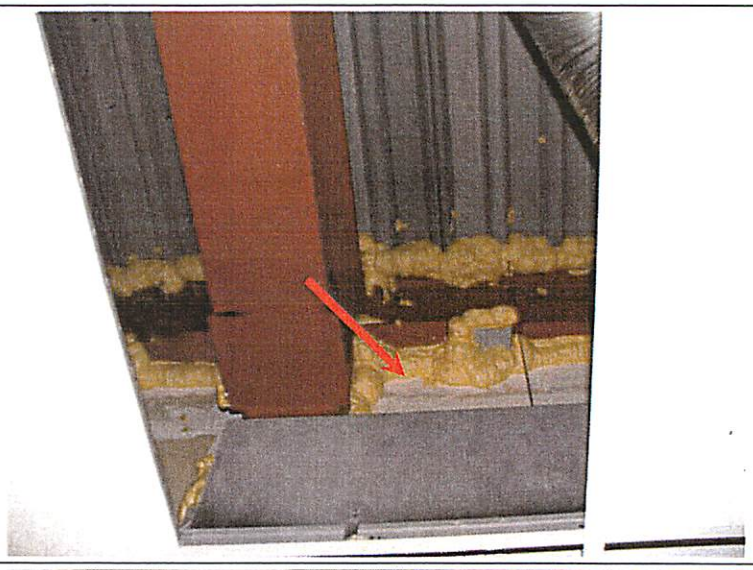
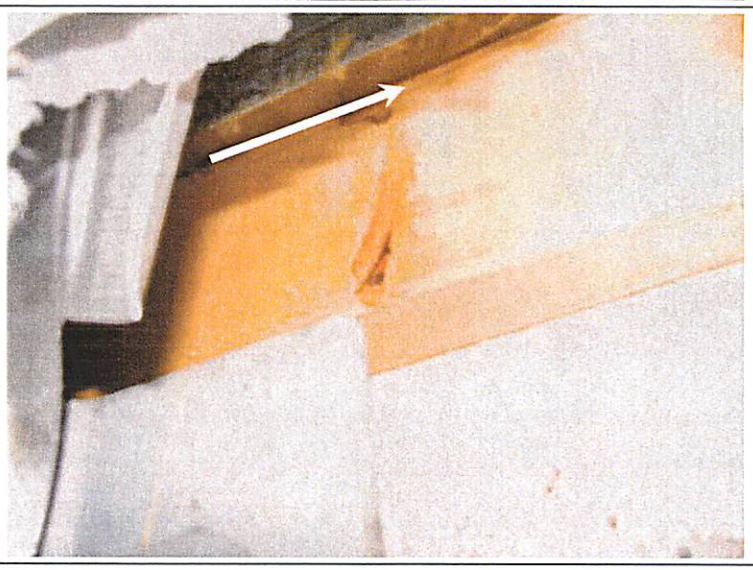


Photo D-14.

-Bottom of window sill at Room 212.

-Wood blocking to underside of window frame. No air/vapour seal present.



Solutions for a Working World

May 19, 2005

ANALYTICAL REPORT

Mould Identification of One Bulk Sample
LEX File #: 08050613
Reference #: Office N°163

Mr. Jean-Guy Levaque
Premier/Levaque Inc.
2410 Meadowpine Blvd.
Mississauga, ON, L5N 6S2

Dear Mr. Levaque,

On May 17, 2005, LEX Scientific Inc. received one bulk sample for mould identification.

The requested work has been completed and the results are contained in this report.

If you have any questions about this report, please do not hesitate to contact me.

Yours sincerely,

German Leal, B.Sc.
Laboratory Manager

Attachment

2 Quebec Street, Suite 204 Guelph, Ontario N1H 2T3
Phone: 519.824.7082 Fax: 519.824.5784 Toll Free: 1.800.824.7082
e-mail: admin@lexscientific.com Website: www.lexscientific.com

Methods

Bulk sample was examined using a Zeiss Axioplan Universal Research Microscope and a WILD Research Macroscope.

Results

Table 1: Results of Examination of Bulk Sample for Mould

LEX Sample #	Client's Sample #	Sample Description	Types of Mould Identified
1.1	163	Insulation – black spot	Sparse conidia consistent with *Aspergillus/Penicillium* sp. and *Cladosporium* sp.
1.2	163	Insulation – other areas	Conidia consistent with *Alternaria* sp. and *Cladosporium* sp. Extensive conidia consistent with *Aspergillus/Penicillium* sp.
1.3	163	Drywall – white side	Sparse conidia consistent with *Aspergillus/Penicillium* sp.
1.4	163	Drywall – grey area	Sparse conidia consistent with *Alternaria* sp. and *Cladosporium* sp. Extensive conidia consistent with *Aspergillus/Penicillium* sp.
1.5	163	Debris on drywall – small pieces	Extensive conidia consistent with *Alternaria* sp. and *Aspergillus/Penicillium* sp. Sparse conidia consistent with *Cladosporium* sp.

Raman Verma, M.Sc.
Analyst

LEA
2 Quebec Street, Suite 204, Guelph, ON N1H 2T3
Fax: 519-824-5784
lab@lexscientific.com

Contact:
Name JEAN-GUY LEVAQUE
Company PREMIER/LEVAQUE INC.
Address 2410 MEADOWPINE BLVD SUITE 101
Phone (905) 819-1600 Ext. Fax
Cell (416) 540-9755 e-mail
Project Name/No. OFFICE N°163. P.O. No.
Sampling Date Location OAKVILLE ONTARIO
Special Instructions

Send initial results by: Fax ☐ Phone ☐ Cell ☐ e-mail ☐ choose one only

FOR ASBESTOS, BULK, PLM ANALYSIS: TAT REQUIRED: **Immediate 6-Hours 1-Day 2-Days 3 - 5 Days**

lab use	Sample ID	Sample Description / Matrix	Layered?	Layering: Describe each layer to be analyzed
			No Yes	
			No Yes	
			No Yes	
			No Yes	
			No Yes	
			No Yes	
			No Yes	
			No Yes	
			No Yes	
			No Yes	
			No Yes	

Use Page 2(a) for additional PLM samples — Each layer will be charged as a separate analysis

- ☐ Asbestos, Air, PCM
- ☐ Asbestos, TEM, Chatfield
- ☐ Asbestos, TEM, Conventional
- ☐ Asbestos, TEM NOB Gravimetric
- ☐ Fungal Spore, Air-O-Cell, Count, ID
- ☐ Fungal Spore, ID
- ☐ Mould, Culture, Count
- ☐ Mould, Culture, Count, ID
- ☐ Lead
- ☐ Radon
- ☐ Formaldehyde
- ☐ UFFI
- ☐ Particle Size
- ☐ Gravimetric analysis
- ☐ Microscopic analysis
- ☐ SEM/EDXA
- ☐ Other analysis (not listed)

TAT REQUIRED: (Not all TATs are available for all tests. Please contact Sample Reception for information)

Immediate 6-Hours 1-Day 2-Days 3-Days 4-Days 5-Days 6-Days 7 - 10 Days 12-Days 2-Weeks

lab use	Sample ID	Sample Description / Matrix	Additional details for requested analysis
	163	Up to 5 samples. Identify different types of colonies.	

Use Page 2(b) for additional samples

Authorization signature: J. G. L. (signature and full name must appear on the form for work to proceed) Date: May 16, 2005

(AIDOR)

THORN SERVICES

ALUMINUM / GLASS
CONSULTANT TS

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Exterior Building Envelope

Condition Assessment and Audit Review Report for:

Oakville Hydro
Electricity Distribution Inc.

Located at
861 Redwood Square,
Oakville, Ontario

Specific Review and Report pertaining to the Aluminum Windows, Curtainwall, Glass and Glazing; Adjacent and Interfacing Precast / Precast Caulking.

Prepared for:
Bresser Construction Management Inc.

Prepared in conjunction with:
Premier / Levaque Inc.

Prepared by Thorn Services (Div. of 1039203 Ontario Inc.)
Doug Thorn M.A.A.T.O., A.Sc.T.
Architectural Technologist
Member of OBEC (Ontario Building Envelope Council)

Date Prepared: June 2005

Reader please note that this Condition Assessment and Audit Review Report is to be included with and read in conjunction with the report(s) as prepared by Premier / Levaque Inc. the prime Consultant.

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Exterior Building Envelope Condition Assessment and Audit Review Report for: Oakville Hydro Electricity Distribution Inc.

➢ A) Introduction

Thorn Services was retained in conjunction with Premier / Levaque Inc. by Bresser Construction Management Inc. to:

a) review, evaluate and assess the present / existing conditions of the Oakville Hydro (original) two storey office building with regards specifically to the exterior windows and curtainwall forming the building envelope.
b) prepare a report as to findings, summation and recommendations.
c) provide digital photograph's of the existing.
d) establish (where possible) a remedial program, when requested.
e) report on any adjacent building components that may have an impact on the performance of the building envelope windows and curtainwall.

The information within this report is based upon either information as provided and / or observed at the time of this firms site review(s). There was minimal destructive investigation done, all observations were performed from only accessible grades, floors and / or roof top.

Conditions of materials will possibly have changed if and when remedial action may be undertaken. Budget estimates are based upon current material and labour costs at the time of the report preparation, inflation / escalation costs should be allowed for by the Client.

This report as prepared is for the sole discretionary use of Bresser Construction Management and Oakville Hydro. Unaltered copies of either the printed matter (hard copy) and / or the CD ROM are permitted for their usage.

➢ B) Observations of Existing Building Envelope Conditions:

1) The existing aluminum strip windows, glass and glazing are:

a) Kawneer Company Canada 501 Pre-Glazed series system.
b) this window system is designed as an interior (shop) glazed strip window based upon utilizing the "rain screen and pressure equalization" systems. The intent of this design was so that all glazing could be done from the inside of the building thereby eliminating the need for exterior access equipment.

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1.c) the system design is incorporating internal baffles, gaskets, weep and drain provisions, with the main building air / vapour barrier envelope membrane to be sealed to the framing and the exterior "snap caps" as a decorative feature neatly concealing the internal provisions.
d) the system utilizes a "dry / dry glazing system" with the use of a neoprene vertical weather seal keyed in gasket (in lieu of a silicone weather seal).
e) the window system design was also that of allowing the pre-glazed modules to rotate and snap into a site installed top and bottom "track system".
f) the interior drywall materials surrounding the strip windows are those areas of main concern.

2) Attached herein are scanned copies from the Kawneer Company Canada of the typical 501 head, sill, jamb and mullion details showing all components & material application as intended.

3) The strip windows during the destructive investigation:

a) on the inside have minor to severe areas of water damaged drywall around the interior perimeters at both the first and second floors.
b) when the inner perimeter drywall was carefully removed for observation it is noted that the main building poly air / vapour barrier was not sealed by any means (caulking / tape) to the aluminum window frame especially at the corners.
c) all the inner perimeter glazing neoprene and frame neoprene wedges are all still tight and snug thereby still exerting compression to the various components as required by design.
d) the exterior head and sill glazing neoprene is snug in place although short in some corners due to shrinkage with age.
e) the exterior vertical neoprene weatherseal does not fully exert side wall compression to the glass edges and is short at the top and bottom due to shrinkage with age.
f) the exterior perimeter caulking between the "snap caps" and the precast appears to be sound and intact. The sealant at the sill locations is set back to the inside edge and thereby not visibly obstructing the "weep / drain holes" in the underside of the sill "snap cap".
g) there are some locations on the 1st floor where the "butt joint" in the sill starter / base track appears to have had sealant separation, these may have also occurred on the 2nd floor. These joints are +/- 20'-0" apart.
h) note that the system design is such that any exterior water entry into the sill glazing cavity (see notes d & e above) is to find its way to the drilled "weep / drain holes" and to exit to the exterior.

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3.i) interior horizontal aluminum surfaces appear to have "white stains" possibly as a result of water borne calcium / lime having leaked through the upper head to vertical frame joints and / or through the frame to frame assembly screws. The only source to create these stains is from the back side of the precast above the windows.
j) there are some exterior cap and neoprene joints which have had a surface application of either sealant and / or "blue skin" self adhesive membrane applied in order to attempt to stop any possible water entry into the window system. The joints in the exterior caps would only assist in allowing water to escape from within the glazing cavity especially if the weep holes in the underside were obstructed.
k) during this investigation there was no visible fibre glass and / or spray foam insulation within the window frame perimeter cavities.

4) The main entrance upper feature area a non destructive investigation:

a) is that of a Kawneer Company Canada 1600 series (old style) curtainwall system.
b) this "rain screen and pressure equalization" system is designed as an exterior "wet / dry" glazed system with all materials installed from the exterior.
c) the interior drywall materials at the jambs of the curtainwall have some noticeable damage but not to the same degree as that of the windows noted above.
d) exterior perimeter caulking appears to be intact and adhering between finished caps and the precast.
e) unknown at this time is if the roof junction to the back of precast has been properly sealed; the cavity between the precast and the roof has been insulated; the inner perimeter junction of the main building poly air / vapour barrier sealed to the curtainwall backsections?
f) the underside of the horizontal caps appears to have the drilled weep holes as per the manufacturers installation instructions.
g) this was a non destructive investigation as no equipment was available to access the exterior façade.

5) The precast façade and related precast to precast joints:

a) exterior observations found precast to precast caulking joints both vertical and horizontal partially and severely failed. The caulked joints where wide open thereby allowing water into the precast panel cavities.

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5.b) exterior precast caulking to window perimeter caulking was found not to be adhering to one another at some 1st floor locations.
c) exterior roof parapet flashing over precast at various junctions found the caulked joints failed. At this time not able to verify if precast to precast joints under roof / parapet flashing have been thoroughly caulked.
d) exterior vertical caulked joints had plastic tubes inserted within the caulking just above the base of the joints. It is questionable as to whether or not the tubes are open & not obstructed.
e) when an inner destructive investigation was done at a floor level the precast to footing caulking was found to be damp and possibly not adhering.
f) when an inner destructive investigation was done at a vertical to horizontal panel to panel connection there was no caulking around the connection plate perimeter and / or over the anchor bolt connections to complete the inner joint seal.
g) at exterior light fixture locations on the precast surfaces no exterior perimeter caulking was visible to indicate that the fixture and / or the base had been sealed.

- **C) Summary and suggested recommendations for remedial repair:**

The following summation and suggested recommendations have been prepared where materials were visible and accessible from the exterior that being either at grade or from a roof level and from the interior office floors is herein presented for your consideration.

- 1) Regarding the aluminum strip windows and main curtainwall (where applicable):

.1 - These windows did not have a destructive investigation done as:

a) all interior glazing gaskets are tight fitting and not easily removable without the use of tools.
b) all frame to frame joints visibly have sealant squeeze indicating that the frames were sealed during assembly.
c) exterior horizontal glazing gaskets in various locations are short at the corners but this is a inherent expected condition of the material and its application.
d) exterior vertical neoprene weatherseal gaskets not a tight fit between the sealed units at various locations and this is a inherent expected condition of the material and its application.
e) items c & d were not removed as replacement materials are not easily available.

1).1f) exterior horizontal caps were not removed to check the inner "weep holes" as this would involve cutting out of the exterior caulking (no inner caulking in place) thereby leaving the perimeter openings vulnerable to the elements. The underside of these caps (where visible) did have the caulking recessed to the back of the cap and thereby not obstructing the "weep holes" in the underside of the cap.

.2 - The following is suggested remedial items for consideration of the strip windows and the main entrance curtainwall locations. This remedial work should be co-coordinated with that of the precast and roofing so that there is a cost efficient undertaking, co-ordination between trades and minimal disruption to the occupants.

a) remove the exterior perimeter caulking between the aluminum caps and the precast. In the case of the main curtainwall this may also involve removal of the inner "prime seal" if the roof conditions under the flashing are found to be fully sealed and intact.
b) check the perimeter cavities prior to the application of a continuous "moderate expansion" spray foam insulation into the cavity. The spray foam should fill the window frame cavity and that of the cavity between the frame and the stud(s) and capturing the poly "air / vapour barrier" especially at the corners in order to complete the "main building air barrier envelope". Care should be used so as not to deform the window frames. The inner drywall should be intact and act as a backstop to the spray foam and the foam should be kept within the frames.
c) the exterior sill caps should be removed in order to check the "weep holes" in the concealed glazing leg at the base of the sealed units. These holes should be unobstructed and if only two per horizontal an additional two (2) centre holes should be carefully drilled.
d) while exterior caps are removed the sill frame track / sill frame "butt joint seals"; the inner base corners at the underside of the neoprene weatherseal and the base of the vertical joint of the coupling / split mullion should be checked and resealed.
e) while exterior caps are removed check the precast to precast horizontal and vertical caulked joints which are concealed by the aluminum framing, if joints appear open or failing they should be properly redone and sealed.
f) new exterior perimeter caulking should be applied in accordance with the manufacturer in a colour to match the finished caps. Note the sill caulking is to be applied first between the frame and the precast and then the horizontal caps reapplied.
g) exterior horizontal neoprene glazing gaskets where short at the corners could be sealed with a "black silicone" to limit water entry into the glazing cavity.

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1).2h) the exterior base of the neoprene weatherseal to that of the reapplied horizontal cap should be resealed with "black silicone".
i) interior horizontal glazing gaskets if short at the corners should be neatly sealed with a "black silicone". This would be done only to ensure that if any water had possibly entered into the inner cavity is not drawn to the inside under "negative" building pressure conditions.

- 2) Regarding the observations of the precast to precast caulked joints:

The following is suggested remedial actions for consideration. All exterior caulking to be replaced and in accordance with the Precast Industry published "Best Practice Guide" and the sealant manufacturers published practices. Fully tool sealants into precast aggregates.

a) remove all exterior precast caulking horizontally and vertically.
b) identify and locate the inner precast to precast connection plates and finish the interior caulked joints from the exterior by reaching through the open joint.
c) at any roof parapet conditions ensure that the upper (formerly exterior) caulked joint (under any wood blocking) is fully sealed.
d) the base of all vertical inner caulked joints is to be sloped from the inside to the outside to positively drain any water within the cavity to the exterior.
e) the base of all exterior vertical joints is to have "weep / drain hole" provisions properly and suitably located.
f) the inner base caulking between the precast and the top of the footing should be resealed by reaching through the joint from the exterior.
g) the exterior base caulking between the precast and the top of the footing should have "weep / drain hole" provisions.

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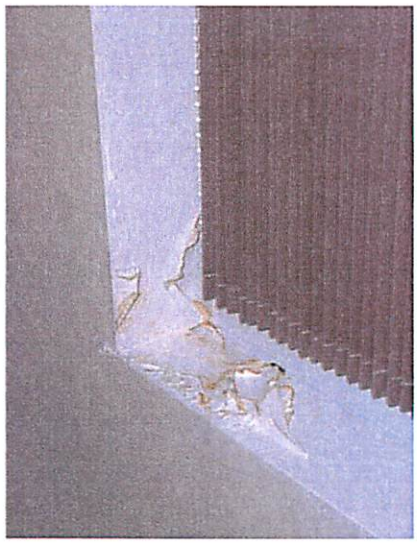
➢ **D) Photographs of existing conditions:**


Typical interior perimeter details of damaged drywall, paint and wall paper.

Caulking failures at window to precast

Caulking failure of horizontal to vertical joint

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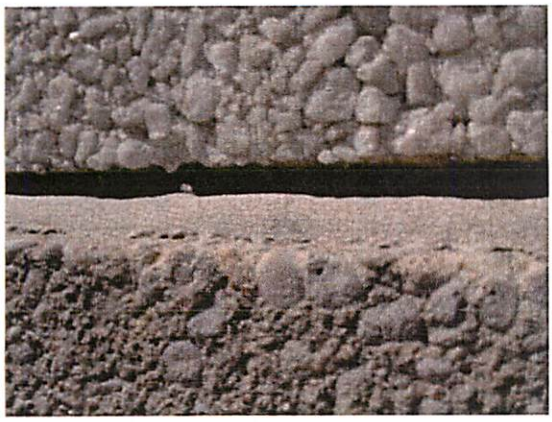
➢ **D) Photographs of existing conditions continued:**



Typical of failed caulking joints

Evidence of moisture trapped within the caulked cavities weeping through the joint between the caulking and the precast. Note that I had not rained for a few days.

Condition found at the 2nd floor, south west corner between the window, the precast and the roof parapet flashing.

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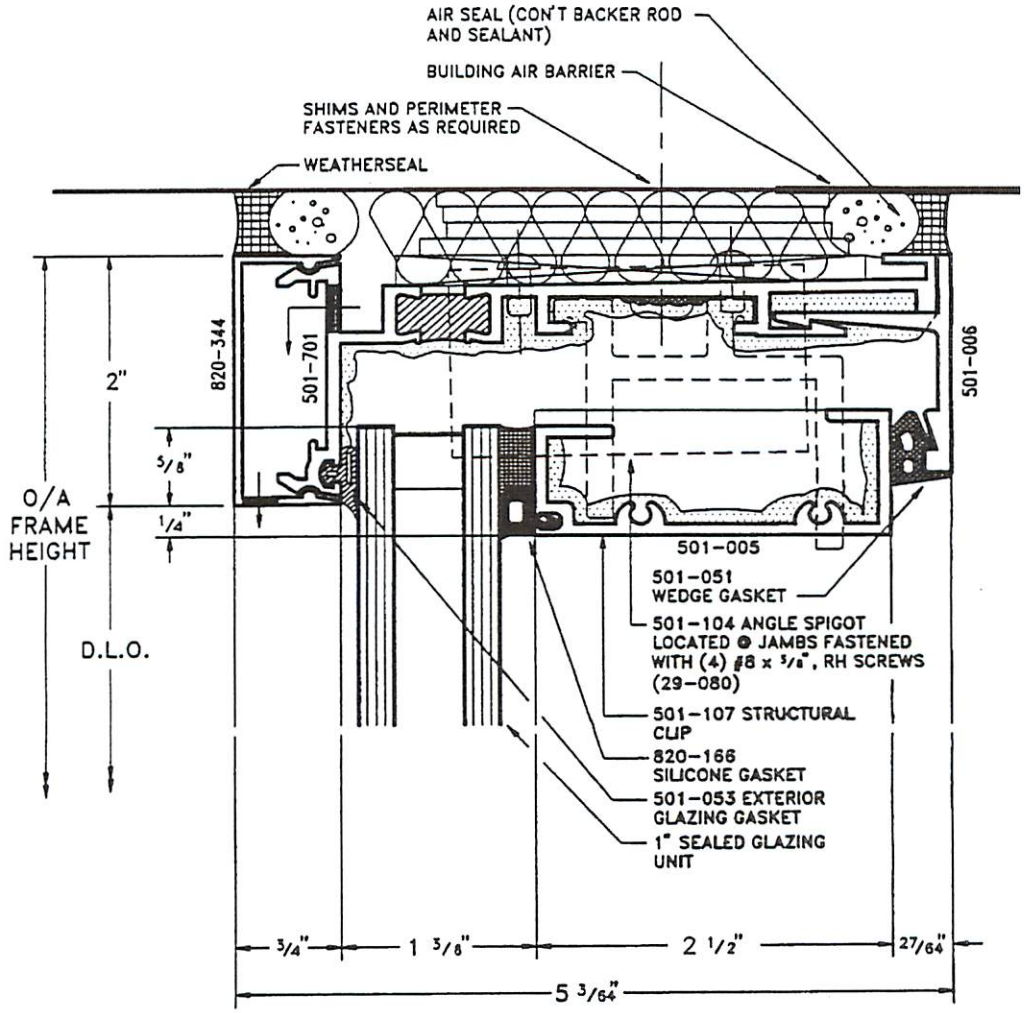
➢ **E)** Typical Kawneer 501 relevant details:



Kawneer COMPANY CANADA LIMITED	501 PRE-GLAZED WINDOW HEAD		1
	JUNE 1994	PAGE 2	

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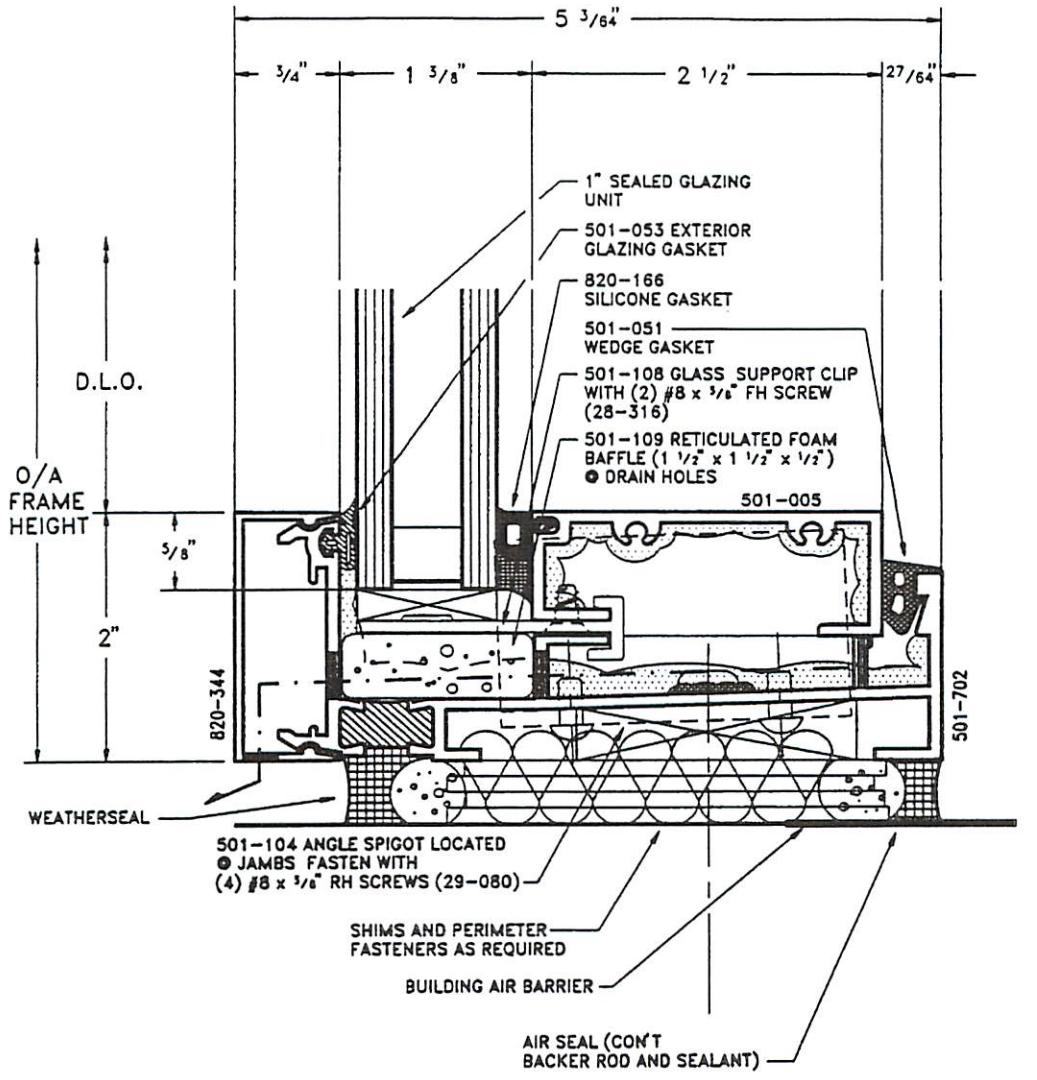
➢ **E)** Typical Kawneer 501 relevant details continued:



Kawneer COMPANY CANADA LIMITED	501 PRE-GLAZED WINDOW SILL		2
	JUNE 1994	PAGE 3	

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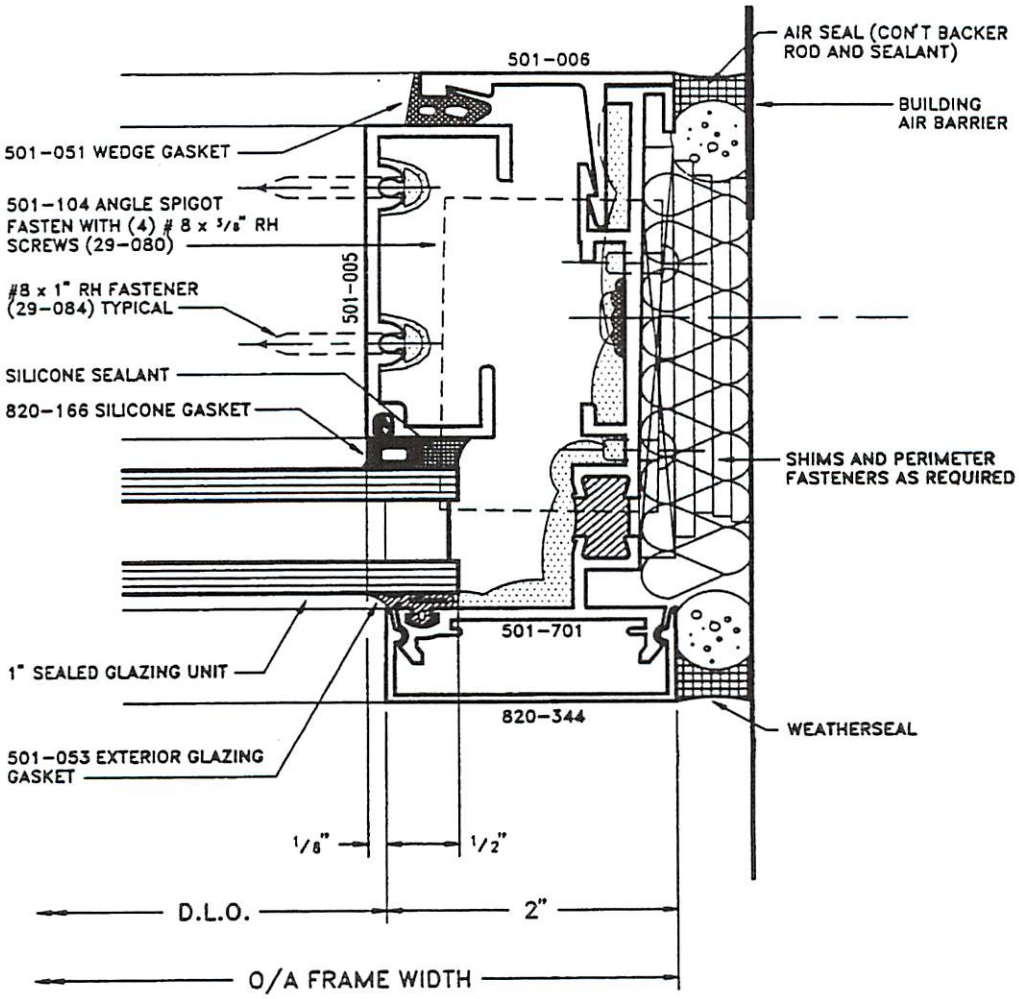
➢ **E)** Typical Kawneer 501 relevant details continued:



Kawneer COMPANY CANADA LIMITED	501 PRE-GLAZED WINDOW JAMB		3
	JUNE 1994	PAGE 4	

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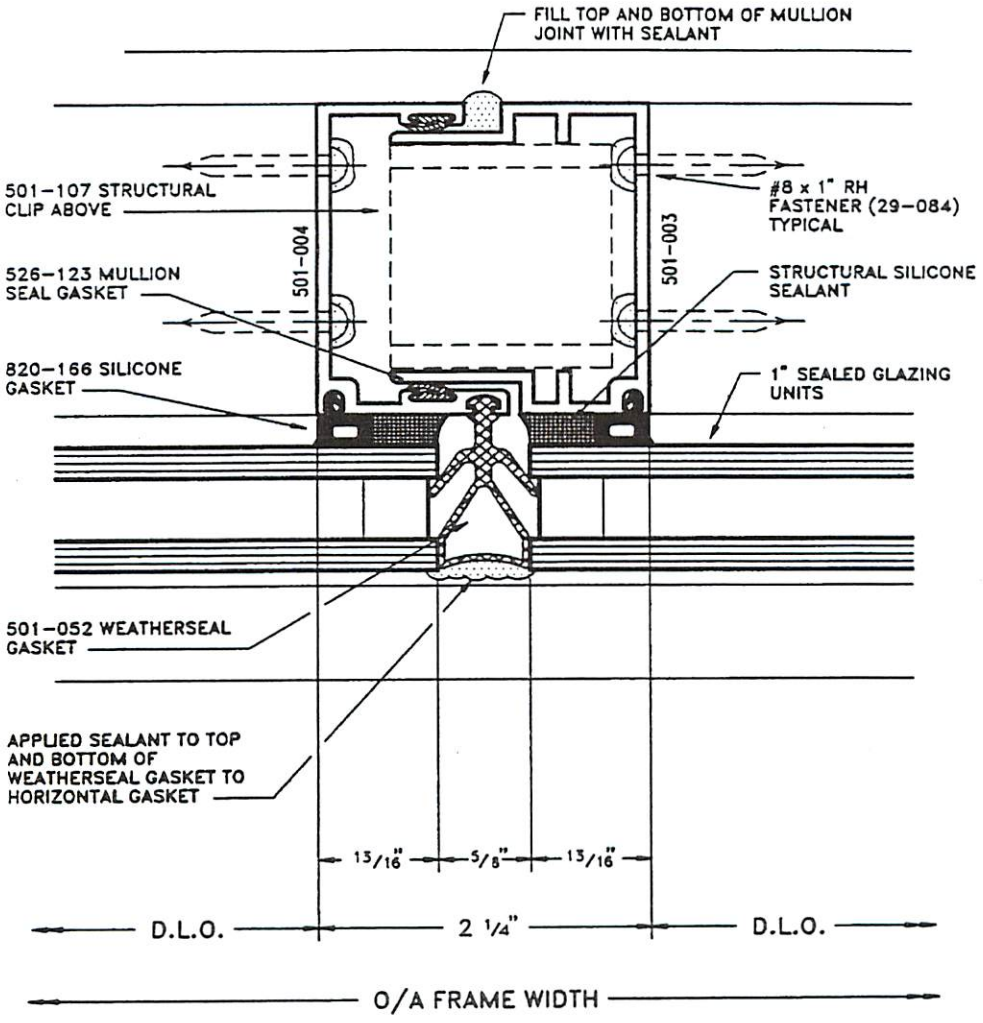
➢ **E)** Typical Kawneer 501 relevant details continued:



Kawneer COMPANY CANADA LIMITED	501 PRE-GLAZED WINDOW TYPICAL MULLION	4
	JUNE 1994 / PAGE 5	

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Any questions pertaining to the contents of this report and subsequent (faxed) report(s) should be addressed to Mr. Doug Thorn, M.A.A.T.O., A.Sc.T. of Thorn Services.

Without prejudice this report pertains only to the work and materials as specifically requested and the comments herein are only on operations and items that were accessible, visible and / or being undertaken at the time of our review. Additional information may have been provided / obtained from the site foreman(s) at the time of this visit.

This review / report does not relieve the subcontractor(s) of responsibilities and compliance with the construction and contract documents.

This review / report is for the clients / design / build contractors review, any and all actions undertaken for remedial work to be performed are up to their sole discretion.

As the site / field reviews performed by Thorn Services are only periodical the principal contractor (site foreman) will be responsible for ensuring that all workmanship and materials comply with industry standards, municipal / governing codes.

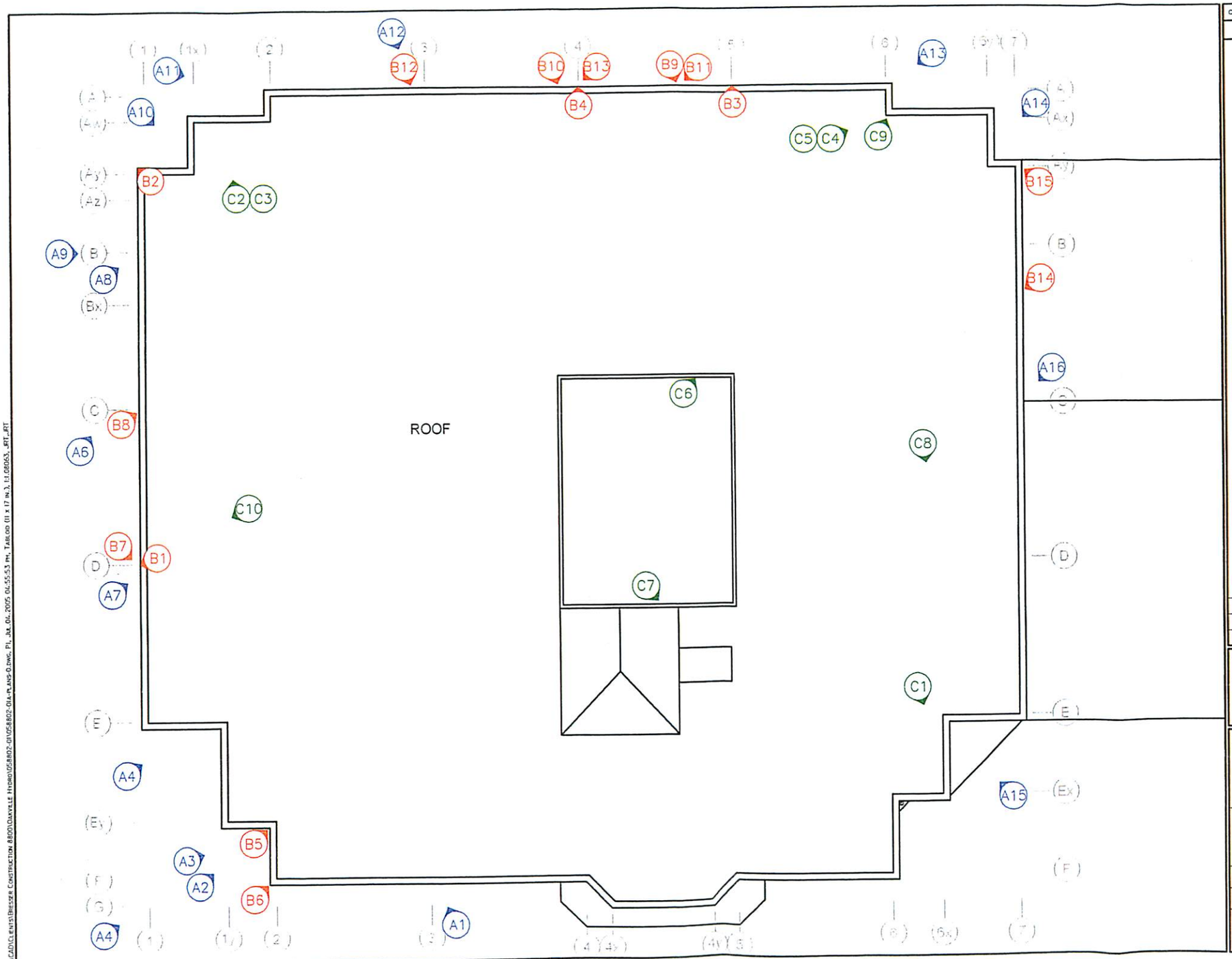
Thorn Services does not profess to provide a "leak proof" building envelope of the related materials but the services and knowledge provided are to assist the client, the contractor and the subcontractors (trades) in reducing potential areas of material failure.

I trust that you will find all of the above in order and to your satisfaction. Should you have any questions and / or concerns kindly contact the undersigned.

Sincerely,
THORN SERVICES

Faxed Yes [ ]
No [X]

W. D. Thorn, M.A.A.T.O., A.Sc.T.
Architectural Technologist
Member of OBEC (Ontario Building Envelope Council)



CONTRACTOR TO VERIFY ALL CONDITIONS AND DIMENSIONS ON SITE

LEGEND

- A# — DENOTES EXTERIOR THERMOGRAPHY
- B# — DENOTES EXTERIOR PHOTOGRAPHS
- C# — DENOTES ROOF PHOTOGRAPHS AND THERMOGRAMS

NO.	REVISION	DATE

PREMIER / LEVAQUE INC.
ROOF CONSULTING & ARCHITECTURAL/BUILDING TECHNOLOGIES
2410 MEADOWPINE BLVD., SUITE 101
MISSISSAUGA, ONTARIO, L5N 6S2
TEL: 905-819-1600 FAX: 905-819-1800
email: info@premierlevaque.ca

PROJECT:
BRESSER CONTRUCTION MANAGEMENT INC.
OAKVILLE HYDRO
REDWOOD SQUARE
OAKVILLE, ONTARIO

DRAWING TITLE:
ROOF PLAN
PHOTO LOCATIONS

DRAWN:	JRT	DATE:	JUN.24.05
VERIFIED:		SCALE:	NTS
PROJECT No:	058802-01a	DWG No:	P1

COMPARATIVE REVIEW OF SENIOR MANAGEMENT COMPENSATION

Presented to

Oakville Hydro Corporation

L. Pierre Chabot – Senior Consultant
Michael Yeung - Consultant

April 2006

(LDC only — Edited for VECC)

TABLE OF CONTENTS

INTRODUCTION

Hay Group Limited was retained by Oakville Hydro Corporation to perform a review of the compensation packages currently in effect for 8 Senior Management positions.

In this report we present the following:

- A summary of our approach to conduct the study,
- Our findings and observations regarding current cash compensation levels,
- A comparative analysis of Oakville Hydro Corporation's current benefits, pension and perquisites arrangements,
- Our recommendations, and
- Additional information on our methodology.

I. SCOPE OF THE PROJECT

1. Positions covered by the analysis

The following positions are covered under this analysis:

- President & CEO
- CFO & Board Secretary
-
-
- Director, Engineering
- Director, Operations
- Director, Information Technology
- Manager, Human Resources

2. Nature of the review

Oakville Hydro's objective was to review the following elements:

- Base salary
- Short term incentives
- Total annual cash
- Benefits
- Pension
- Perquisites

II. APPROACH TO CONDUCT THE ANALYSIS

The approach that we followed and the activities we performed to conduct the analysis are described below.

1. Job and organizational information

To conduct the analysis, we relied on the following information that was provided to us by Oakville Hydro Corporation:

- Organizational information including annual revenues, employee population, areas of activities
- A job description for each of the 8 positions under review
- Base salary, annual incentive and perquisites levels for each position
- Information pertaining to the current benefits package at OHC
- Information pertaining to the current pension arrangements at OHC

2. Job analysis and review

To ensure a proper understanding of the positions covered by the analysis, all job descriptions were reviewed by the Hay consultant.

Confirmation of the duties and accountabilities, clarifications and additional information about the positions was received at a meeting held on March 16 with Mr. Alex Bystrin, President & CEO.

APPROACH, *(cont'd)*

3. Job evaluation

In order to enhance and facilitate comparisons with the external markets, each position was evaluated using Hay's Guide Chart methodology. This methodology determines the relative value of positions using the following factors:

Know-How

- Practical, specialized, scientific, etc.
- Management knowledge
- Human relation skills

Problem Solving

- Thinking environment
- Thinking challenge

Accountability

- Freedom to act
- Magnitude
- Impact

Working Conditions

- Physical effort, Physical environment, Sensory attention & mental Stress

Each position was evaluated based on the information received and confirmed by Oakville Hydro.

The positions were evaluated by 2 Hay consultants and results are consistent with evaluations of similar positions found in comparable organizations given their nature and scope.

We present the evaluation results in Appendix C.

APPROACH, *(cont'd)*

4. Market(s) of reference

At the onset, Oakville Hydro and Hay Group selected a sample that included 49 comparators from Hay's current database of industrial sector organizations. The selected sample was made up of companies from the following subgroups:

- **Local distribution companies** (8)
- **Utilities** (10)
- **Technology/communications companies** (17)
- **Other Ontario industrials** (14)

Since the beginning of the project, information from Burlington Hydro and Hydro Ottawa was received and the two organizations were added to the list, bringing it up to 51.

As agreed upon, the positions were analyzed as follows:

- All positions were compared to the overall comparator group.
- The positions of Director, Engineering, and Director, Operations were also compared to the subgroup made of the Local Distribution Companies.

When comparing benefits, pension and perquisites, all positions were compared to the overall group.

We show the list of all companies included in this study in Appendix D.

III. Findings

A. Comparisons to market average – cash compensation

The following chart provides the readers with a quick summary of the position of the current compensation levels for Senior Management positions in relation to the average found in the comparator group(s). A minus number indicates that the current compensation item lags the market by the specified percentage.

Exhibit 1. Competitive positioning against market average

All organizations

Positions	Hay Points	Actual Base Salary	Actual Total Cash [1]	Actual Total Remuneration[2]
President & CEO		- 14%	0%	- 5%
Director, Engineering		- 1%	1%	- 1%
Director, Information Technology		2%	10%	8%
Director, Operations		2%	11%	18%
CFO & Board Secretary		13%	21%	19%
Manager, Human Resources		1%	4%	3%

Selected Local Distribution Market

Director, Engineering		- 7%	- 6%	- 9%
Director, Operations		- 5%	1%	5%

Selected Technology Market

[1] Actual Total Cash = Actual Base Salary + Bonus Payout
[2] Actual Total Remuneration = Actual Total Cash + Total Benefit Value

FINDINGS, *(cont'd)*

Comments

1. The position of **President and CEO** is the only one whose base salary lags behind market in a material way when compared to the market average. The current lag is of **12%** when compared to base salary policies, (midpoints) and **14%** when compared to actual salaries paid.

   The position fares better when we compare its actual total cash compensation to the average found in the market. However, this is due in large part to the fact that the last bonus paid to the incumbent, (50% of base) was worth **166%** of the target level set for the position, (30%).

2. The current base salary and total cash figures for the positions of Director of Engineering, Director of Operations, Director, Information Technology and Manager, Human Resources compare well to the average of the comparator groups.

   The variances identified in relation to actual base salaries range from a **lag of 7%** for the Director, Engineering to a **lead of 2%** for the Director, Information Technology. Results are similar when we compare Oakville Hydro's midpoints to the average midpoints found in the comparator groups.

   The variances identified in relation to total cash compensation range from a **lag of 6%** for the Director, Engineering to a **lead of 11%** for the Director, Operations. Again, in this case, the last bonus amounts paid explain in good part the variances that we identified.

3. Based on our analysis and findings, the current compensation for the **CFO and Board Secretary** leads the market noticeably. Actual base salary is **13% above average** while total cash compensation is **21% above market average**, (this can also be explained in part by a last bonus paid worth 140% of target).

FINDINGS, *(cont'd)*

B. Comparisons to market third quartile, (P75) – cash compensation

Oakville Hydro expressed a wish to compare levels of compensation to the market(s)' third quartile (P75) level. The chart below presents the ratios of compensation levels for Senior Management positions in relation to their comparator group(s), at third quartile. Minus numbers indicate lags to the market by the specified percentage.

Exhibit 2. Competitive positioning against market third quartile, (P75)

All organizations

Positions	Hay Points	Actual Base Salary	Actual Total Cash [1]	Actual Total Remuneration[2]
President & CEO		- 22%	- 14%	- 17%
Director, Engineering		- 9%	-8%	- 8%
Director, Information Technology		- 5%	2%	0%
Director, Operations		- 5%	3%	10%
CFO & Board Secretary		5%	13%	11%
Manager, Human Resources		- 6%	-2%	- 5%
Selected Local Distribution Market				
Director, Engineering		- 14%	- 12%	- 19%
Director, Operations		- 11%	-5%	- 8%
Selected Technology Market				

[1] Actual Total Cash = Actual Base Salary + Bonus Payout
[2] Actual Total Remuneration = Actual Total Cash + Total Benefit Value

FINDINGS, *(cont'd)*

Comments

The impact when comparing the current compensation levels at Oakville Hydro to the third quartile levels of the selected comparator groups can be summarized as follows:

1. The **President and CEO** salary lags behind market in a material way. The current lag is **21%** when compared to base salary policies and **22%** when compared to actual salaries paid.

   The position still lags the market when we compare its actual total cash compensation to the average found in the market. Despite the above target bonus last paid to the incumbent there is still a lag of **14%**

2. The current base salaries for the other Senior Managers, with the exception of the CFO and Board Secretary all lag the reference markets from a low of 5%, (Information Technology and Operations) to a high of 14%, ( ).

   The lags identified in relation to total cash compensation range from a low of 2%, (Human Resources) to a high of 15%, ( ). However, three positions, (Information Technology, Operations and CFO) show a lead when compared to the comparator groups.

   Again, in the case of total cash compensation, the last bonus amounts have a noticeable impact on the variances that we identified.

3. Based on our analysis and findings, the current compensation for the CFO and Board Secretary still leads the market. Actual base salary is 5% above the market while total cash compensation is 13% above market , (this can also be explained in part by a last bonus paid worth 140% of target).

In Appendix A, we present a series of exhibits that will provide the details analysis by position. Where a position has been compared to two groups, the information related to each group is presented on a separate page.

FINDINGS, *(cont'd)*

C. Comparisons – benefits value

1. All positions with the exception of the CFO & Board Secretary, and Director, Operations, lag behind market averages when considering the value of their benefits, pension and perquisite arrangements, (referred to as the Total Benefit Value). The lag goes from a low of 2% below average to a high of 30% below average.

   All positions with the exception of the Director, Operations, lag behind market third quartile when considering the value of their benefits, pension and perquisite arrangements, (referred to as the Total Benefit Value). The lag goes from a low of 9% below average to a high of 49%.

2. It must be noted however that Total Benefit Value grows in direct correlation with the position's cash compensation but at the same time, will have a decreasing impact on the position's Total Remuneration.

3. In the case of the Director, Operations, the lead over market average is 5% when compared to other LDCs and 35% when compared to the overall group. While these differences are large, they can be explained mostly by the fact that the position is provided with a vehicle.

4. Nevertheless, the above numbers do indicate that the benefits, pension and perquisite arrangements currently in effect at Oakville Hydro are behind the various markets and will require some attention. Specific issues are highlighted in a subsequent section of our report.

FINDINGS, *(cont'd)*

Total benefit value - Oakville current programs and plans

Pension provision

Oakville Hydro offers a registered defined benefit pension plan under the Ontario Municipal Employees Retirement System (OMERS) with retirement compensation arrangements for executives with earnings in excess of the maximum limit under the Income Tax Act.

Benefits provision

The core benefits that Oakville Hydro provides to the executives include the following items:

1. Extended health and dental coverage;
2. Life and accident insurance; and
3. Short-term and long-term disability.

Perquisites provision

Only selected executives are covered by the following perquisites items:

1. A monthly car allowance of $650 for the President & Chief Executive Officer;
2. A pickup truck for the Director, Operations;
3. ETR tolls at a rate of $1,200 per year for the Director, Information Technology; and
4. Executive medicals at a rate of $1,500 for selected executives.

As the provision of the pickup truck and the ETR tolls were not reported as job requirements we have considered them as perquisites rather than expenses for business purposes.

FINDINGS, *(cont'd)*

Total benefit value - market comparison

In this section, we offer our comments as to the competitive stance of Oakville Hydro's non-cash programs in relation to the targeted group of companies. Appendix B offers the reader a quick-reference chart of Oakville Hydro's non-cash compensation as it compares to 40 of the selected organizations. It also provides Hay Group's observations pertaining to each benefit-plan feature.

The fourth column in Appendix B shows symbols that are meant to assist in the review of each component under review. The equal sign (=) identifies those elements that are within the standards of the targeted market. To be within market standards Oakville Hydro's benefits feature under review must be similar to 50% or more of the market. Single plus (+) or minus (-) signs point to elements that are over or below the market, but not in a significant way. Double plus (++) and minus (--) signs are meant to draw the reader's attention to components that are well above market or lag significantly below market and are likely to impact the overall value of Oakville Hydro's non-cash compensation package.

Please note that each plan feature is assessed in isolation. The purpose of this section is to provide the client with prevalence market positioning for each measurable component of executive benefits in relation to the selected market. The reader is reminded that within specific benefit coverage areas, features well below the market norm may offset the value of features assessed as generous. Moreover, some non-cash components have a greater intrinsic value than others. For example, a strong pension plan will have a much greater impact on the value of the total package than a generous life insurance benefit. Therefore, caution is advised in making broad conclusions pertaining to non-cash compensation without considering the aggregate value of a benefits package as a whole.

FINDINGS, *(cont'd)*

Total benefit value - market comparison

General conclusion and main observations

Within the framework of this analysis, it is Hay Group's view that Oakville Hydro non-cash compensation arrangements for the Chief Executive Officer and other executives are below the targeted compensation markets with the exception of the Director, Operations position.

The following bullets describe instances where Oakville Hydro's plans and programs are below market:

- Oakville Hydro's **basic life insurance** coverage is set at 150% and 175% of base salary, which is slightly **lower** than the market. The typical coverage is 200% of base salary.
- Oakville Hydro's **accidental death and dismemberment** coverage is $10,000 with an additional $10,000 life coverage, which is well below the market standard of 200% of base salary.
- Oakville Hydro's **pension plan,** (OMERS) is competitive in the market. However, the employee contribution rate is higher than the market standard. **This has the effect of lowering the value of the benefit to the employees.**
- The **vacation schedule** is less competitive during the first two years of employment but is well aligned to the market thereafter. We caution that this practice could negatively impact the organization's efforts to recruit at the Senior Management level.
- The overall Oakville Hydro's **executive perquisite** package is below market. For instance, the $650 car allowance for the President and CEO is not competitive in the market.
- The practice of providing items such as a pickup truck, ERT tolls and $1,500 medical examination fees but limiting its application to only a few selected executives is not common in the market.

FINDINGS, *(cont'd)*

Total Benefit Value - Market Comparison

The following describe instances where Oakville Hydro's plans and programs compete well with the market:

- Eighty-three percent of the employers in the targeted market offer **dependent life insurance** to their employees. Oakville Hydro offers this coverage for spouses.
- Oakville Hydro has a sick leave accumulation plan for **short term disability** purposes. *These sick leave accumulation plans are not as common in the market as they once were. In fact, many employers eliminated such plans due to the liability that they created upon employees' termination or retirement.*
- The maximum accumulation of 125 days is in line with market practices. This type of coverage is most commonly implemented to cover employees during **extended sick leaves** or to cover the **waiting period** related to acceptance of long term disability benefits. It would appear that Oakville Hydro's current plan would penalize Senior Management employees that have shorter lengths of service.
- Oakville Hydro's **long term disability** coverage at 70% of earnings up to a maximum benefit of $10,000 per month is competitive.
- Oakville Hydro's **health care benefits** are aligned with the market.
- Oakville Hydro's **dental care benefits are** well aligned with the market.

FINDINGS, *(cont'd)*

Long-term incentives

Oakville Hydro, like most LDCs, does not offer long-term incentives to its Senior Management positions. About 24% of the comparators found in the overall comparator group offer long-term incentive plans to some or all of their executive positions. We have not considered long-term incentives in any of our comparative analyses. However, Oakville Hydro wished to use comparators outside of its specific sector and, for information purposes only, we are reporting the market average and P75 present values of long-term incentives for each surveyed position.

Canadian Selected Market (N=51)

Positions	Hay Points	# of Organizations at matching value	# of organizations providing LTI	LTI present value at average (as % of base)	LTI present value at P75 (as % of base)
President & CEO		24	11	51%	77%
Director, Engineering		48	11	28%	53%
Director, Information Technology		48	11	26%	53%
Director, Operations		48	8	24%	50%
CFO & Board Secretary		48	8	23%	48%
Manager, Human Resources		47	4	18%	*

* *Insufficient data to report*

IV. RECOMMENDATIONS

1. Position of President and CEO

Based on market positioning, we would recommend the following adjustments to the President and CEO's current compensation package.

- Base Salary should be adjusted by 10 to 15 % to close the gap that currently exists in relation to the average of (design) and (actual) found in the market.
- The current monthly car allowance level of $650 should be reviewed and adjusted upward to a range between $750 and $800 which would position him between the average and third quartile amount levels in the market for positions of similar value.

2. Setting the Corporation's compensation policy

We are unaware of the intentions of Oakville Hydro as to the market level at which it wishes to set its compensation policy.

Many factors must be considered when establishing such a policy for the Senior Management positions:

- The level of competition that exists in the market for the skills required by the various positions. The Board must determine whether it can attract and retain the right individuals by setting policy at average or median or if it needs to target higher.
- The Board must determine if setting policy at a certain level for Senior Management would create a ripple effect throughout the organization. If past practice has been to have an homogeneous approach for all levels, changing the conditions now would certainly create a number of situations or questioning that would need to be managed.

RECOMMENDATIONS, *(cont'd)*

- Should the Board wish to set the compensation policy at above average it will also have to determine the impact of such a policy on the various components of the compensation package. For example, it could set a policy that would state that all components of the compensation package must be at the same level, (i.e. base salary, annual incentives and annual total cash would all be set at P75).
- Alternatively, the policy could be set on a basis where different elements would be at different points in the market. In such a scenario, total cash could be set at P75 while base salaries would remain at market average. The gap would be filled by larger than average bonus targets, thereby increasing the leveraged aspect of the overall compensation package.
- In the same line of thought, some organizations have substantially decreased their investment in benefits in the past years and have re-assigned the savings to cash compensation. Others, based on their demographics have implemented very rich benefits plans which, even when coupled to average cash compensation programs, have been a successful tool in their efforts to retain people.

The issues at the centre of the determination of a compensation policy go far beyond the scope of a market analysis. However this analysis does provide the Board with some of the information that it will need to make a decision.

Members must keep in mind that the most important part of the process to change an existing compensation policy is the approach that the organization selects to migrate from the current situation to the new, targeted one. In situations such as this, evolution is the key word. Changes must be phased in over time if the organization does not want to confront problems that it wished to prevent by bringing in the new policy, (turnover, loss of skills, de-motivation). The implementation of the changes must be done at a pace that will permit individuals to adapt to the new reality.

RECOMMENDATIONS, *(cont'd)*

3. Benefits, Pension and Perquisites

If Oakville Hydro wishes to consider changes to its non-cash compensation that will have an impact on the positions' total remuneration, we recommend that it consider the following:

- Reduce the employee's contribution rate for the pension plan. *(If possible)*
- Consider providing additional perquisite benefits, such as memberships or financial planning.
- Increase the uniformity of benefits to the Senior Management group in areas such as car benefits, medical examinations, etc.

Appendices

Appendix A.

POSITION BY POSITION ANALYSIS

Appendix 1-A

Oakville Hydro Corporation

President & CEO

Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Selected Group (N = 24)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Page A3 has been removed. It contains confidential information referring to a position that is not in the LDC.

Page A-4 has been removed. It contains confidential information referring to a position that is not in the LDC.

Page 45 has been removed. It contains confidential information referring to a position that is not in the LDC.

Appendix 1-E

Oakville Hydro Corporation

Director, Engineering

Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Selected Group (N = 48)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Appendix 1-F

Oakville Hydro Corporation

Director, Engineering

Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Local Distribution Companies (N = 9)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Appendix 1-G

Oakville Hydro Corporation
Director, Information Technology
Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Selected Group (N = 48)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Appendix 1-H

Oakville Hydro Corporation

Director, Operations

Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Selected Group (N = 48)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Appendix 1-I

Oakville Hydro Corporation

Director, Operations

Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Local Distribution Companies (N = 8)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Appendix 1-J

Oakville Hydro Corporation

CFO & Board Secretary

Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Selected Group (N = 48)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Appendix 1-K

Oakville Hydro Corporation

Manager, Human Resources

Hay Survey Points

	Design Compensation			Actual Compensation			Benefits	
	Base Salary Policy	Bonus Target % (where eligible)	Total Cash Design	Base Salary	Bonus Payout % (where eligible)	Total Cash	Total Benefit Value	Total Remuneration
Oakville Hydro								
Selected Group (N = 47)								
P90								
P75								
P50 (Median)								
P25								
P10								
Average								
Variance from P75								
Variance from Average								
Market Position								

Total Remuneration (in $000)

Notes:

1. Market data based on trend line values of all job functions. *2. Data as of Dec 1 2005.* *3. Total Remuneration = Total Cash + Total Benefit Value*

4. Number of organizations (N) shown represent the total number of organizations with jobs matching at this level.

Appendix B.

SELECTED MARKET PREVALENCE OF BENEFITS FEATURES

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Group Benefits				
Flexible Benefits				
Eligibility	38% of employers offer flexible benefits.	Not provided.	=	
Type of Plan	Among the providers, 67% offer full choice programs or core plus options with flex credits. 33% offer health care spending account.			
Employer Allocation of Flex Credits	A majority of plans allocate a % of base salary plus a flat dollar amount for flex credits. The average % of base salary is 3.35 and the average dollar amount is $1,100.			
Health Spending Account	Health spending account is offered at various rates ranging from $200 to $2,000.			
Unused Flex Credit	20% of plans deposit remaining credits to health care spending account only; 10% of plans can be pay out in the form of cash; 20% forfeited; 50% can deposit remaining credits to health care spending account, RRSP and/or pay in cash.			
Basic Group Life				
Eligibility	98% of the employers offer basic life insurance.	All surveyed executives are eligible for the coverage.	=	**Oakville Hydro's coverage is slightly below market.**
Employer-Paid Premium	78% of plans are employer paid and 22% require employees to share or to pay the full premium cost.	Oakville Hydro pays full premium	=	
Definition of Earnings	90% of plans use base salary for calculation of benefit, 5% use base salary plus bonus for calculation of benefit.	Base salary	=	
Coverage	On average, the coverage is 200% of annual salary.	Option 1 - 150% of annual earnings Options 2 to 4 – 175% of annual earnings	- =	
Retirement Coverage	43% terminate the coverage upon retirement; the remaining plans reduce coverage after retirement.	Reduced benefit is provided based on years of service		

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Optional Group Life				
Eligibility	93% of the employers offer optional life insurance.	All surveyed executives are eligible for the coverage.	=	Oakville Hydro's coverage is aligned with the market, but with limited choices.
Employer-Paid Premium	20% of plans are employer paid or employer shares the premium cost or paid out from the flex credits; 80% of plans are employee paid.	Employees pay premium to the selected option.		
Coverage	Typically, the coverage is offered in $10,000 units up to a maximum of 50 units.	Option 2 – 25% of annual earnings; Option 3 – 75% of annual earnings; and Option 4 – 125% of annual earnings.		
Basic Accidental Death & Dismemberment				
Eligibility	78% of the employers offer basic accidental death and dismemberment benefits.	All surveyed executives are eligible for the coverage.	-	**Oakville Hydro's coverage is below market.**
Employer-Paid Premium	81% of plans are employer paid premium; 19% of plans require employees to share the premium cost.	Oakville Hydro pays 1/3 of the premium.	--	
Coverage	On average, the coverage is 200% of base salary.	$10,000 coverage + additional $10,000 life insurance.		
Optional Accidental Death & Dismemberment				
Eligibility	55% of the employers offer optional accidental death and dismemberment benefits.	Not provided	-	**Oakville Hydro's coverage is below market.**
Employer-Paid Premium	22% of plans are employer paid or employer shares the premium cost or paid out from the flex credits; 78% of plans are employee paid.			
Coverage	Typical coverage is offered in $10,000 units up to a maximum of 50 units.			
Dependent Life Insurance				
Eligibility	83% of employers offer dependent life insurance.	All surveyed executives are eligible for the coverage.	=	Coverage is aligned with the market.
Employer-Paid Premium	36% of plans are employer paid/employer shares the premium cost or paid out from the flex credits; 64% of plans are employee paid.	Employees pay full premium.		
Coverage	Typical spouse maximum coverage is $150,00 Child's maximum between $5,000 and $10,000.	Coverage is available in multiples of $10,000 to a maximum of $250,000.		

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Short Term Disability (STD)				
Eligibility	95% of employers offer short term disability.	All surveyed executives are eligible for the coverage.	=	Oakville Hydro's coverage is in line with the market thought accumulative sick leave is not common in the market.
Definitions of Earnings	Base salary is used in all plans for calculation of benefit.	Base salary	=	
Coverage	▪ 66% of plans are based on service schedule with 70% pay during the first 5 years of services and then increase to 100% pay thereafter. The typical payment period is 26 weeks. ▪ **24% of plans are based on uniform benefit regardless of service with an average of 26 weeks full pay.** ▪ **8% of plans are the combination of the above.** ▪ 3% of plans are based on accumulative sick days	Accumulative sick days at 1.5 days per month up to a maximum of 125 days. (125 working days equivalent to 25 weeks)	=	
Long Term Disability (LTD)				
Eligibility	98% of the employers offer long term disability.	All surveyed executives are eligible for the coverage.	=	Oakville Hydro's coverage is aligned with the market.
Employer-Paid Premium	62% are employer paid. (It is common that a significant number of plans require employees to pay full premium because of the favorable tax treatment of the benefit payment.)	Oakville Hydro pays full premium	=	
Definitions of Earnings	98% of the plans use base salary for calculation of benefit.	Basic salary	=	
Waiting Period	10% of the plans start benefit payments after 105 days; 25% of the plans start benefit payments after 119 days; 60% of the plans start benefit payments after 180 days	6 months (= 180 days)	=	
Coverage	Typical coverage is 60% to 70% of earnings up to a monthly maximum benefit of $6,000 to $15,000.	70% of earnings up to a monthly maximum benefit of $10,000 ($6,500 without medical evidence)	=	

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Health Care Benefits				
Eligibility	100% of employers offer private health care benefits.	All surveyed executives are eligible for the coverage.	=	Oakville Hydro's coverage is well aligned to the market. Most of the Oakville Hydro's plan features are market competitive while some are slightly above or below market.
Employer-Paid Premium	77% are employer paid premium for both employee and family coverage.	Oakville Hydro pays full premium.	=	
Annual Deductible	25% indicated there is an annual deductible; on average, annual deductible for single is $42 and family is $105.	$2 deductible dispensing fee per prescription. No deductible for other expenses.	=	
Reimbursement Rate	Typical reimbursement rate is 80% or 100%.	100% reimbursement.	=	
Hospital Room and Board	94% offer semi-private coverage where 88% of plans reimburse at 100%. 34% offer private coverage where 90% of plans reimburse at 100% of the cost.	Semi-private coverage.	-	
Drugs	94% of health care plans include drug expenses. 35% of the plans reimburse at 80%, 41% of the plans reimburse at 100%, 24% of the plans reimburse between 80% and 100%. 20% of plans provide drugs for smoking cessation and fertility coverage.	100% reimbursement, the plan pays for smoking cessation, preventive immunization vaccines and erectile dysfunction.	+	
Vision Care	80% of employers offer vision care. 15% of the plans reimburse at 80%, and 85% of the plans reimburse at 100%. Average reimbursement is at 97% up to $220 every 2 years.	Glasses and contact lenses coverage at $250 every 2 years.	+	
Hearing Aids	69% cover hearing aids; the average reimbursement is 92% up to $170 per year.		-	
Paramedical	86% included paramedical services; the average reimbursement is 90% up to $530 per year per practitioner.	100% reimbursement at $500 per year per practitioner.	=	
Out of Province Expenses	90% cover out of province expenses; the average reimbursement is 97%.	Yes, provided.	=	
Out of Country Expenses	90% cover out of country expenses; the average reimbursement is 97% up to $600,000 lifetime maximum.	Yes, provided.	=	

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Dental Care Benefits				
Eligibility	100% of employers offer dental care benefit.	All surveyed executives are eligible for the coverage.	=	Oakville Hydro's coverage is well aligned to the market.
Employer-Paid Premium	85% are employer-paid for both employee and family coverage.	Oakville Hydro pays full premium.	=	
Annual Deductible	91% do not require an annual deductible.	No deductible.	=	
Provincial Fee Guide	86% of plans use the current year dental fee guide for reimbursement.	Current year dental fee guide.	=	
Basic Services	Typical reimbursement rate is 90% or 100% for basic, preventive and minor restorative treatments.	100% reimbursement.	=	
Major Services	50% reimbursement is typical for major restorative	50% reimbursement.	=	
Orthodontics	66% of employers offer orthodontics to adults and 88% offer to children. Typical reimbursement rate is 50%.	50% reimbursement.	=	
Maximum Coverage	30% of plans do not have maximum limit for major services. On average, the maximum for major services for the remaining 70% of plans is $1,540 per year. The average lifetime maximum for orthodontics is $2,000.	Orthodontic coverage is provided at $2,250 lifetime maximum and there is no maximum for other treatment.	=	

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Retirement Benefits				
Registered Pension Plan				
Eligibility	33% have a defined benefit (DB) pension plan only, 48% have a defined contribution (DC) plan only and 18% offer a combination of both DB and DC plans.	All surveyed executives are eligible for the defined benefit coverage.	=	Equal to market.
Defined Benefit (DB) Plan				
DB Pension earnings	67% of DB plans use base salary to calculate retirement benefit; 33% of plans use base salary plus other earnings to calculate benefit.	Base salary only.	=	Oakville Hydro's defined benefit plan is well aligned to the executive market. However, the employee contribution rate is at the high side which will lower down the value of the benefits to the employees.
DB Employee Contribution	47% of plans do not require employee contribution. Of those requiring employee contributions, 79% of plans require employees to make contributions at 3.3% to 6.5% of earnings up to the YMPE, then 5% to 9.6% of the excess earnings.	6.5% up to the YMPE and 9.6% for all earnings in excess of the YMPE.	-	
DB Benefit Formula	Benefit levels typically are: - 1.0% to 1.5% of earnings up to YMPE and 1.6% to 2.0% in excess	2% of final average earnings up to a maximum of 35 years of credited service less the CPP offset.	=	
DB Final Average Earnings Period	67% of the plans are based on best-five consecutive year earnings; 33% of the plans are based on best-three consecutive year earnings.	Based on 60 consecutive months of highest contributory earnings.	=	
DB Cost of Living Adjustments	85% of the plans have cost of living adjustments.	Yes, provided.	=	
DB Early Retirement	Unreduced pension is available at age 60 on average; age 55 or 60 plus 30 or 35 years of service; "magic" number 85 or 90.	Reduced and unreduced. Unreduced at least age 55 and 30 years of service; or age plus service at 90 or more.	=	
DB Benefit Maximum	Canada Revenue Agency (CRA) maximum for registered Pension Plans.	Canada Revenue Agency (CRA) maximum for registered Pension Plans.		

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Defined Benefit - Supplemental Executive Retirement Plan (SERP)				
DB SERP	65% of those offered DB plans offer a defined benefit type of SERP plans.	All surveyed executives with salary earnings in excess of the Income Tax Limit are eligible for the Retirement Compensation Arrangement (RCA) coverage.	=	Oakville Hydro's coverage is well aligned to the market.
DB SERP Employee Contribution	77% do not require employee contribution.	No employee contribution is required.	=	
DB SERP Benefit Formula	2% earnings in excess of CRA limit.	2% earnings in excess of CRA limit.	=	
Defined Contribution (DC) Plan				
DC Plan Type	50% are Money Purchase Pension plans; 35% are Group RRSP, and 15% are combination plans.			
DC Pension Earnings	54% of the plans use base salary to calculate benefit; 42% use base salary plus 100% bonus.			
DC Employee Contribution	Employees typically contribute 5% - 7% of earnings.			
DC Employer Contribution	Employers typically match 100% of employee contributions.			
Vesting	38% of plans offer an immediate vested provision while others require a minimum of 2 year vesting period.			
DC Benefit Maximum	Canada Revenue Agency (CRA) maximum for registered Pension Plans.			
Defined Contribution- Supplemental Executive Retirement Plan (SERP)				
DC SERP	23% of those offered DC plans offer a defined contribution type of SERP plans.			
DC SERP Employee Contribution	33% do not require employee contribution.			
DC SERP Benefit Formula	Typically, there is no maximum cap.			

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Holidays and Vacations				
Holidays				
Number of days	Typical at 11 to 12 holidays per annum	11 days	=	Equal to market
Vacations				
Vacations Granted	For non-executive level: Year(s) — Weeks 1 — 2 1 - 5 — 3 6 - 15 — 4 16 - 25 — 5 After 25 — 6 For executive level: Year(s) — Weeks 1 — 3 1 - 15 — 4 16 – 25 — 5 After 25 — 6	Year(s) — Weeks 1 — 2 3 - 8 — 3 9 - 15 — 4 16 - 26 — 5 * After 27 — 6 * 1 additional day in 23rd year up to 5 days	-	**Oakville Hydro's vacation schedule is less competitive during the 1st two years but well aligned to the market thereafter at the executive level.**

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Perquisites and Other Benefits				
Company Car/Car Allowances				
Eligibility	28% offer company car/ allowance at 830 Hay points level. 55% offer company car/ allowance at 1200 Hay points level. 78% offer company car/ allowance at 1500 Hay points level.	Selected executives are eligible for a car benefit.	=	The car allowance for President & CEO (,) is not competitive. A pick up truck for Director, Operations is better than the market at this level.
Type of Plan	64% provide car allowances; 27% provide company leased cars; and 9% provide company car at 830 Hay points level. 45% provide car allowances; 41% provide company leased cars; and 14% provide company car at 1200 Hay points level. 45% provide car allowances; 35% provide company leased cars; and 19% provide company car at 1500 Hay points and above.	President & CEO - a car allowance; Director, Operations - a pick up truck Director, Information technology – ETR Tolls ($1,200 per annum)		
Monthly Car Allowance	Ranging from $300 to $715 with an average of $535 at 830 Hay points level. Ranging from $300 to $1,000 with an average of $640 at 1200 Hay points level. Ranging from $300 to $1015 with an average of $720 at 1500 Hay points and above.	President & CEO - a monthly car allowance at $650.	-	
Capital Cost	Capital cost ranges from $25,000 to $33,000 with an average of $31,000 at 1500 Hay points level. Capital cost ranges from $33,000 to $44,000 with an average of $41,000 at 2000 Hay points and above.	Director, Operations – a pick up truck	+	
Monthly Lease Cost	Monthly lease cost ranges from $530 to $860 with an average of $650 at 1200 Hay points level. Monthly lease cost ranges from $500 to $1,015 with an average of $710 at 1500 Hay points and above.			
Operating Cost	If company owned car, all employers pay for license, insurance, gas and repairs where applicable.			

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Parking				
Eligibility	63% offer parking facilities for which all executives are eligible.	All surveyed executives are eligible for the coverage.	=	Below market
Type of Facility	64% of employers have a company-owned lot.	Parking is provided.		
Employer-Paid cost	88% of employers cover 100% of the cost.			
Fitness Facility				
Eligibility	35% of employers offer onsite fitness facilities for which all employees are eligible.	All surveyed executives are eligible for the coverage.	+	Aligned with market
Type of Facility	The majority of the facilities is onsite and owned by employers.	On-site fitness facility is available.		
Employer-Paid cost	51% of employers cover 100% of the cost; 49% of facilities are subsidized by employers.	Membership of $4.50 is deducted per pay (biweekly pay)		
Club Memberships				
Eligibility	53% of employers offer club memberships at the executive level. 20% of employers offer club memberships at the management level.	Not provided.	-	**Slightly below market**
Type of Memberships	All employers offer fitness club memberships at the management level. 70% of employers offer at least one club membership at the executive level for a country/recreational club, corporate dining or fitness club.			
Employer-Paid cost	90% of employers cover 100% of the cost.			

Appendix B. Selected market prevalence of benefits features

	Selected Market (N=40)	Oakville Hydro	-/=/+	Comment
Financial Counseling/ Tax Preparation				
Eligibility	10% of employers offer Financial Counseling/ Tax Preparation at the management level. 35% of employers offer Financial Counseling/ Tax Preparation at the executive level.	Not provided.	=	Aligned with market.
Employer-Paid cost	100% of employers cover 100% of the cost.			
Frequency of Services	50% of counseling services are provided on an annual basis; 50% are provided 'as needed".			
Service Provider	65% of the services are provided by an outside service advisor.			
Physical Examination				
Eligibility	10% of employers offer physical examination at the management level. 33% of employers offer physical examination at the executive level.	Selected executives are provided.	=	Aligned with market
Employer-Paid cost	All employers cover 100% of the cost			
Flexible Perquisite Account				
Eligibility	8% offer flexible perquisite account	Not provided.	=	Aligned with market
Flexible Perquisite Amount and Arrangement	Typical average annual perquisite amount is from $15,000 to $20,000			

Appendix C.

Evaluation results

The following are the results for the 8 Senior Management positions as evaluated by two Hay consultants.

POSITION	KNOW-HOW GRADE	KNOW-HOW POINTS	PROBLEM SOLVING GRADE	PROBLEM SOLVING POINTS	ACCOUNTABILITY GRADE	ACCOUNTABILITY POINTS	TOTAL POINTS	A	FULL POINTS
PRESIDENT & CHIEF EXECUTIVE OFFICER									
GENERAL MANAGER - CONSTRUCTION & GENERATION									
GENERAL MANAGER - O.H. COMMUNICATIONS									
DIRECTOR, ENGINEERING									
DIRECTOR, INFORMATION TECHNOLOGY									
DIRECTOR, OPERATIONS									
CFO & BOARD SECRETARY									
MANAGER, HUMAN RESOURCES									

Appendix D.

Companies included in the comparator groups

1. Local Distribution Companies (N=10)

- Bluewater Power Distribution Corporation
- Bruce Power
- Burlingtion Hydro
- Enersource Hydro Mississauga
- Fortis Ontario Inc.
- Greater Sudbury Hydro Plus
- Horizon Utilities Corporation
- Hydro Ottawa
- Oshawa PUC Networks Inc.
- Toronto Hydro Corporation

2. Utilities (N=10)

- Emera Inc.
- Enbridge Gas Distribution Inc.
- EPCOR
- Maritime Electric Company
- NB Power Holding Corporation
- Newfoundland Power Inc.
- Nova Scotia Power Inc.
- Ontario Power Generation Inc.
- SaskPower
- Terasen Gas

Appendix D.

Companies included in the comparator groups, *(cont'd)*

3. Technology (N=17)

Alcatel Canada Inc. - Transport Automation
AMR Technologies Inc.
Becton Dickinson Canada Inc.
Bell Canada
Christie Digital Systems Inc.
Cinergy Solutions
FANUC AMERICA Corporation
FundSERV Inc.
Goodrich Aerospace Canada Ltd.
Invacare Canada Inc.
Manitoba Telecom Services Inc.
MDA
NexInnovations Inc.
Saskatchewan Telecommunications
Siemens Canada Limited
Siemens Westinghouse Inc.
TELUS Mobility

4. Other Industrials – Ontario (N=14)

Aecon Group Inc.
Armtec Limited
AT Plastics Inc.
Atotech Canada Ltd.
BOC Canada Limited
Copperweld Automotive Group
CYRO Canada Inc.
GSW Inc.
Ingersoll-Rand Canada Inc.
PPG Canada Inc. - Fine Chemicals Division
Praxair Canada Inc. - Industrial Gas Division
Precision Valve (Canada) Limited
Umicore Canada Inc.
VA TECH Ferranti-Packard Transformers Ltd

Appendix E.

Terms and concepts

Design base salary	Usually, the middle point of a salary range intended to represent the salary an organization is prepared to pay for satisfactory performance. In a seniority driven system, the job rate is typically the same as the salary range maximum.
Actual base salary	The annualized amount paid for work performed on a regular, ongoing basis. It does not include bonus or incentive payments, sales commissions, shift premiums, or overtime payments.
Bonus target	This is the target bonus award expressed as a percentage of base salary. It is the incentive or bonus amount that would typically be paid to an individual for meeting but not exceeding set performance objectives over one year.
Bonus payout	This is the actual bonus paid expressed as a percentage of base salary to reward an individual for performance over a period of one year.
Design total cash	The sum of design base salary and all bonus targets.
Actual total cash	The sum of the actual base salary plus all variable amounts paid through bonus plans. *It does not include long term incentive payments, benefits or perquisites.* If no bonus is paid, this is equal to base salary actual.
Total benefit value	This refers to the value of the employer-paid portion of benefits programs. It is calculated as the design value of the benefits plans less any portion paid by employee.
Total direct compensation	The sum of the actual base salary plus all variable (bonus) amounts paid plus the present value of all long term incentive allocations in place.
Total Remuneration	In the context of the review conducted for Oakville Hydro, it is the sum of the total cash and total benefit value.

Appendix F.

Survey and analysis methodology

1. Data collection and processing

Compensation data from all selected organizations is collected for survey processing. For quality assurance purposes, Hay Group follows up on the data submitted, clarifies various points and ensures validity of the matches.

2. Percentile calculations

Hay Group uses the following method to calculate percentiles:

We rank the data from highest to lowest value and then use the following formula to obtain the data observation that represents the desired percentile:

Observation = [(Total observations - 1) x percentile desired] + 1

e.g. Find the 75th percentile in a group of 13 observations

Observation	=	[	(13 – 1)	x	.75]	+	1
	=	[	12	x	.75]	+	1
	=		9			+	1
	=		10				

... the 10^{th} value up from the lowest value is equal to P75.

P75 or seventy-fifth percentile – divides the top 25% and the lowest 75% values.

P50 (median) or fiftieth percentile – divides the top 50% and the lowest 50% values.

P25 or twenty-fifth percentile – divides the top 75% and the lowest 25% values.

Appendix F.

Survey and analysis methodology, *(cont'd)*

3. Non-cash compensation valuation principles

Hay Group has derived standard assumptions of cash equivalent values, expressed in pre-tax cash equivalents. For non-cash items, which are conditional on the occurrence of an event such as disability, death or continuous employment in an organization, the cash equivalent has been calculated on the basis of the probability of receiving such items using appropriate actuarial assumptions.

Since non-cash items (i.e., most employee benefits and vacations) are a function of earnings, their values vary directly with the earnings level of the positions being reviewed. Therefore, earnings have a significant impact on the economic or aggregate value of the benefits package. The following items have been considered for valuation purposes in this report:

Major Benefit Area	Programs
Health Care Benefits	➢ Healthcare Spending Account/Flex Credits
	➢ Extended Healthcare Coverage / Drug Expenses
	➢ Hospital Room & Board Coverage
	➢ Optical Coverage (Vision Care)
	➢ Dental Coverage
Income Replacement Benefits	➢ Short-Term Disability (Sick Leave/Salary Continuance)
	➢ Long-Term Disability Benefit
Survivor Benefits	➢ Basic / Optional Life Insurance
	➢ Basic / Optional Accidental Death & Dismemberment Insurance
	➢ Dependent Life /Accident Insurance

Appendix F.

Survey and Analysis methodology, *(cont'd)*

Major Benefit Area	Programs
Retirement Benefits	➢ Defined Contribution Pension (Money Purchase) Plan ➢ Defined Benefit Pension Plan ➢ Supplemental Executive Retirement Program (Defined Benefit and/or Defined Contribution Plans) ➢ Defined Contribution with a Defined Benefits Minimum Guarantee
Executive Perquisites	➢ Company Car / Car Allowance ➢ Parking ➢ Fitness Facility ➢ Club Memberships ➢ Financial Counselling / Tax Preparation ➢ Physical Examinations ➢ Flexible Perquisite Account ➢ Loan Programs
Holidays & Vacation	➢ Holidays in excess of 10 days ➢ Vacation & Extended Vacation (In excess of 3 weeks)

Universal employment costs are **not** included when calculating non-cash compensation using the Hay Group standard cost approach. These costs include the average employer payroll taxes for the Canada/ Quebec Pension Plan, Employment Insurance, provincial health care, the value of the first 10 days holidays and the first three weeks of vacation.

Please note that this report "double-counts" holidays provided in excess of 10 days and vacations provided in excess of 3 weeks. They are included as part of cash compensation and as part of non-cash compensation. The latter is necessary to acknowledge differences in vacation practices.

Appendix F.

Survey and analysis methodology, *(cont'd)*

Defined benefit pension valuation — general principles

Standard assumptions of cash equivalent values have been derived for pension plan purposes. **For defined benefit pension valuation** purposes, the cash equivalent has been calculated on the basis of the probability of receiving such a benefit using appropriate actuarial assumptions.

Defined contribution pension valuation — general principles

The current year employer contribution is the present value of the employer-paid portion. Future growth of the investment fund and future interest rate were not considered in the calculation.

Briefing

RE: *Responses to VECC interrogatories (notice of intervention EB-2009-0271) concerning OHEDI's LRAM and SSM claims*

Date: December 8, 2009

Summary

This briefing answers questions from Vulnerable Energy Consumers Coalition (VECC) that address the contents of IndEco Strategic Consultant Inc. (IndEco)'s independent third party review of Oakville Hydro Electric Distribution Inc. (OHEDI)'s 2006-2009 LRAM and SSM claims. LRAM and SSM claims were part of OHEDI's 2010 Electricity Distribution Rate Application.

Question 27:

a) Provide a schedule for the Residential Sector CDM programs that breaks down by measure the components of the LRAM claim and the total kwh and kw for each year 2006-2009 (including showing separately carry forward of prior years' savings)

i. Third tranche Programs

ii. OPA Funded programs

iii. Other e.g. Rate funded programs

Table 1 provides the LRAM and total kWh savings of the residential sector DSM programs broken down by measure. The kW savings are not provided as they do not enter into the LRAM calculations within the residential sector. Table 1 also provides the rate rider breakdown requested in Question 27d.

Table 1 - Energy savings and components of the residential sector LRAM claim, broken down by measure

Source	Program Name	Year	Measure Name	2006 Energy savings (kWh)	2007 Energy savings (kWh)	2008 Energy savings (kWh)	2009 Energy savings (kWh)	Total Measure Energy Savings	Contribution to LRAM (2010$)	Contribution to rate rider ($/kWh)
OPA funded	Cool Savings Rebate Program	2006	Energy Star® Air Conditioner	64,320	64,320	64,320	64,320	257,278	$4,669	0.00000856
		2006	Programmable Thermostats	22,197	22,197	22,197	22,197	88,787	$1,611	0.00000295
		2006	Air Conditioner Tune-Up	46,115	46,115	46,115	46,115	184,461	$3,347	0.00000614
	Cool Savings Rebate Program	2007	ENERGY STAR® Central Air Conditioner		41,620	41,620	41,620	124,859	$2,166	0.00000397
		2007	Programmable Thermostat		10,156	10,156	10,156	30,469	$529	0.00000097
		2007	Furnace with Electronically Commutated Motor		368,302	368,302	368,302	1,104,906	$19,167	0.00003514
		2007	Central Air Conditioning Tune Up		14,954	14,954	14,954	44,862	$778	0.00000143

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Cool Savings Rebate Program	2008	2007 Efficient Furnance with Electronically Commutable Motor		60,813	60,813	121,626	$2,034	0.00000373
	2008	2007 ENERGYSTAR® Central Air Conditioner		5,200	5,200	10,401	$174	0.00000032
	2008	2007 Programable Thermostat		2,579	2,579	5,158	$86	0.00000016
	2008	2007 Central Air Conditioner Tune-ups		0	0	0	$0	0.00000000
	2008	2008 Efficient Furnance with Electronically Commutable Motor		213,263	213,263	426,527	$7,132	0.00001308
	2008	2008 ENERGYSTAR® Central Air Conditioner		20,741	20,741	41,482	$694	0.00000127
	2008	2008 Programable Thermostat		10,083	10,083	20,166	$337	0.00000062
Customer Education Porchlight Program	2008	13 W CFL		79,765	79,765	159,530	$2,667	0.00000489
Great Refrigerator Roundup	2007	Refrigerator	77,334	77,334	77,334	232,002	$4,025	0.00000738
	2007	Freezer	20,955	20,955	20,955	62,864	$1,091	0.00000200
	2007	Small Refrigerator	589	589	589	1,768	$31	0.00000006
	2007	Small Freezer	305	305	305	916	$16	0.00000003
	2007	Window Air Conditioner	104	104	104	311	$5	0.00000001
Great Refrigerator Roundup	2008	Refrigerator		284,309	284,309	568,618	$9,507	0.00001743
	2008	Freezer		76,190	76,190	152,381	$2,548	0.00000467
	2008	Room Air Conditioner		71	71	142	$2	0.00000000

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	peaksaver	2008	Residential Programmable Thermostat			7,614	7,614	15,227	$255	0.00000047
	Renewable Energy Standard Offer Program	2008	Solar Photovoltaic			8,290	8,290	16,581	$325	0.00000060
	Secondary Fridge	2006	Refrigerator Retirement	76,665	76,665	76,665	76,665	306,659	$5,565	0.00001020
	Retirement Pilot	2006	Freezer Retirement	2,486	2,486	2,486	2,486	9,946	$180	0.00000033
	Social Housing – Pilot	2007	Custom Retrofit Projects		171,473	171,473	171,473	514,420	$8,924	0.00001636
	Summer Savings	2007	Household		916,489	916,489		1,832,977	$32,893	0.00006031
	Summer Savings	2008	Households			140,808	50,811	191,618	$3,255	0.00000597
OPA subtotal				*211,783*	*1,834,063*	*2,743,790*	*1,737,305*	*6,526,941*	*$114,010*	*0.00020904*
Third tranche	Customer Education - Cold Water Wash Program	2006	Cold Water Washing (Detergent)	261,660				261,660	$5,375	0.00000986
	Customer Education - EKC	2006	Energy Star® Compact Fluorescent Light Bulb	1,778,814	1,778,814	1,778,814	1,778,814	7,115,255	$129,150	0.00023680
		2006	Electric Timers	87,413	87,413	87,413	87,413	349,651	$6,347	0.00001164
		2006	Programmable Thermostats	44,881	44,881	44,881	44,881	179,522	$3,259	0.00000597
		2006	Energy Star® Ceiling Fans	22,287	22,287	22,287	22,287	89,148	$1,618	0.00000297
		2006	Energy Star® Compact Fluorescent Light Bulb	2,637,455	2,637,455	2,637,455	2,637,455	10,549,818	$191,492	0.00035111
		2006	Seasonal Light	186,984	186,984	186,984	186,984	747,936	$13,576	0.00002489

		Emitting Diode Light String							
	2006	Programmable Thermostats	209,277	209,277	209,277	209,277	837,110	$15,195	0.00002786
	2006	Dimmers	44,057	44,057	44,057	44,057	176,227	$3,199	0.00000586
	2006	Indoor Motion Sensors	23,770	23,770	23,770	23,770	95,080	$1,726	0.00000316
	2006	Programmable Baseboard Thermostats	35,008	35,008	35,008	35,008	140,032	$2,542	0.00000466
Customer Education - EKC	2007	15 W CFL		1,148,336	1,148,336	1,148,336	3,445,007	$59,791	0.00010963
	2007	20 W+ CFLs		269,974	269,974	269,974	809,921	$14,057	0.00002577
	2007	Project Porchlight CFLs		235,452	235,452	235,452	706,355	$12,259	0.00002248
	2007	Energy Star Ceiling Fan		13,640	13,640	13,640	40,921	$710	0.00000130
	2007	Furnace Filter		23,074			23,074	$400	0.00000073
	2007	Solar Lights		18,743	18,743	18,743	56,228	$976	0.00000179
	2007	Outdoor Motion Sensor		38,647	38,647	38,647	115,941	$2,012	0.00000369
	2007	Dimmer Switch		3,642	3,642	3,642	10,926	$190	0.00000035
	2007	Energy Star Light Fixtures		8,989	8,989	8,989	26,967	$468	0.00000086
	2007	SLEDs		60,892	60,892	60,892	182,676	$3,170	0.00000581
	2007	T8		7,466	7,466	7,466	22,397	$389	0.00000071
	2007	Programmable Thermostat		11,090	11,090	11,090	33,270	$577	0.00000106
	2007	Power Bar with Timer		6,781	6,781	6,781	20,344	$353	0.00000065
	2007	Lighting Control Devices		55,928	55,928	55,928	167,785	$2,912	0.00000534
Customer Education - EKC	2008	Air Conditioner/Furnace Filters			7,483		7,483	$125	0.00000023
	2008	Energy Star® Qualified Compact Fluorescent Floods (Indoor &			201,502	201,502	403,005	$6,739	0.00001236

	Outdoor)					
2008	Energy Star® Qualified Light Fixtures	424,335	424,335	848,670	$14,191	0.00002602
2008	Heavy Duty Timers	21,605	21,605	43,209	$723	0.00000132
2008	T8 Fluorescent Fixtures	21,177	21,177	42,354	$708	0.00000130
2008	ENERGY STAR Decorative CFLs	259,014	259,014	518,028	$8,662	0.00001588
2008	ENERGY STAR Dimmable CFLs	52,509	52,509	105,018	$1,756	0.00000322
2008	Power Bars with Timers	2,219	2,219	4,438	$74	0.00000014
2008	Programmable Thermostats - Baseboard	17,796	17,796	35,593	$595	0.00000109
2008	Car block heater timer	0	0	0	$0	0.00000000
2008	Energy Star® Qualified Compact Fluorescent Light Bulbs	362,162	362,162	724,324	$12,112	0.00002221
2008	Lighting Control Devices	86,398	86,398	172,795	$2,889	0.00000530
2008	Awnings	0	0	0	$0	0.00000000
2008	Window Films	0	0	0	$0	0.00000000
2008	Electric Water Heater Blankets	0	0	0	$0	0.00000000
2008	Pipe Wrap	217,209	217,209	434,418	$7,264	0.00001332
2008	Low-Flow Toilets	0	0	0	$0	0.00000000
2008	Keep Cool – Dehumidifier	666	666	1,333	$22	0.00000004
2008	Keep Cool – Room Air Conditioner	253	253	505	$8	0.00000002
2008	Rewards for Recycling – Dehumidifier	25,156	25,156	50,311	$841	0.00000154
2008	Rewards for	7,654	7,654	15,307	$256	0.00000047

	2008	Recycling – Room Air Conditioner Rewards for Recycling - Halogen Lamp			13,027	13,027	26,053	$436	0.00000080
Multi-residential Interval Metering	2006	N/A	406,976	406,976	406,976	406,976	1,627,904	$29,548	0.00005418
Third tranche subtotal			*5,738,581*	*7,379,574*	*9,076,664*	*9,069,181*	*31,264,000*	*$558,692*	*0.00102439*
Total			*5,950,364*	*9,213,637*	*11,820,454*	*10,806,486*	*37,790,941*	*$672,702*	**0.00123343**

b) Provide a reconciliation of the Residential Sector kWh savings in the Schedule with those shown in Exhibit 10 Tab 1 Schedule 2 Page 1 of 1 Table 1.

The residential sector kWh savings in the Schedule (Table 1) total 37,790,941 kWh, which leads to a residential sector LRAM of $672,702. The savings and LRAM differ from those reported in the application as filed (35,431,830 kWh and $633,108, respectively) for three reasons. The first reason was an error on the part of the OPA for the results it reported for the 2006 Cool Savings Rebate Program. For this program (and only this program), the OPA failed to account for Free Ridership. The second reason was an update to the measure inputs of the 2008 Customer Education Porchlight Program to reflect the assumptions used by the OPA for the 2007 Customer Education Porchlight Program. In light of VECCs query, further investigation was made into the appropriate energy savings that ought to be attributed to CFLs in the Porchlight program. The third is that the energy savings and participant rates of the 2008 OPA funded programs have since been updated to their confirmed, finalized values (as discussed in the response to Question 28c).

The non-inclusion of free riders in the 2006 Cool Savings Rebate Program on the part of OPA appears merely to be an oversight on their part.

We have chosen to use the 2007 CFL savings estimates (which are consistent with the 2008/2009 Measures and Assumptions list for the 2008 CFLs in the Porchlight program, even though we feel these underestimate the savings. There are estimates of savings for CFLs in both the OPA and the earlier OEB measures lists, but neither refers specifically to CFLs used in outdoor applications. The OEB one is identified as indoor lighting, and the OPA one appears to be an average of all kinds of applications, not outdoor ones specifically.

The reason for the differences in energy savings between the OPA and earlier OEB estimates of CFL energy savings relates to the hours-of-use. The OEB's TRC Guide estimated CFL use at 8 h/d for 7 months and 4 h/d for 5 months (or an average of 6 1/3 h/d) and the recent OPA Measures and Assumptions List adopts 2.7 h/d (though noting that there is quite a range in the literature). The OPA usage estimate is an average across all CFL applications.

There is evidence to suggest that CFLs used in outdoor residential applications are used for more hours per day than indoor residential CFLs. The most widely quoted, peer-reviewed paper on this adopts a value of 5 h/d for outdoor uses and 3 h/d for indoor uses.[1] Although we consider this outdoor usage estimate to be better for the porchlight program than either the OEB indoor light estimate, or the general OPA estimate, because the OPA estimate was adopted in the final evaluation for the porchlight program in 2007, we used this value for the 2008 Porchlight program. The effect of this is a small drop in the claimed LRAM, however, the change is so small that it does not affect the rate rider.

The previous estimate for the 2008 program had prorated the input assumptions for a 15W CFL found in the 2008 OEB Measures and Assumptions list to a 13W CFL.

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[1] Vine, Edward and Diane Fielding. 2006. An evaluation of residential CFL hours-of-use methodologies and estimates: Recommendations for evaluators and program managers. *Energy and Buildings* 38:1388-1394.

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Finally, the OPA provided final evaluation results for the 2008 programs on 10 November 2009, and these have been incorporated into the calculation of LRAM. (They do not affect SSM.)

The updated values of 37,790,941 kWh for the residential sector's energy savings and $672,702 for the residential sector's LRAM incorporate the three changes discussed above: the Free Ridership of the 2006 Cool Savings Rebate Program, the updated inputs for the 2008 Customer Education Porchlight program and the updated 2008 OPA funded program results.

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c) Provide the as filed Carrying Cost Calculation/Schedule for the Residential LRAM claim.

Because the savings have been updated, the LRAM and carrying costs are also slightly different from the as-filed application. Table 2 shows the lost revenue in dollars of the first year of the program, the multiplier to convert to 2010 dollars (based on Oakville Hydro's weighted average cost of capital), and the resulting carrying cost and total LRAM claim in 2010 dollars. The same methodology and multipliers were used in the application as filed.

Table 2 – Residential LRAM claim, based on lost revenue in dollars of first program year, and carrying costs to convert to 2010$

Funding	Program	Year	Lost revenue (in dollars of first program year)	Multiplier to 2010$	Carrying Cost	Contribution to residential LRAM claim (2010$)
Third tranche	Customer Education - Cold Water Wash Program	2006	$4,056	1.325	$1,319	$5,375
	Customer Education - EKC	2006	$277,747	1.325	$90,354	$368,102
	Customer Education - EKC	2007	$79,594	1.235	$18,670	$98,265
	Customer Education - EKC	2008	$18,645	1.150	$38,758	$57,402
	Customer Education - Porchlight Program	2008	$2,319	1.150	$348	$2,667
	Multi-residential Interval Metering	2006	$22,295	1.325	$7,253	$29,548
Third tranche subtotal					*$156,703*	*$561,359*
OPA	Cool Savings Rebate Program	2006	$7,264	1.325	$2,363	$9,627
	Cool Savings Rebate Program	2007	$18,338	1.235	$4,302	$22,640
	Cool Savings Rebate Program	2008	$7,485	1.150	$2,971	$10,456
	Great Refrigerator Roundup	2007	$4,185	1.235	$982	$5,167
	Great Refrigerator Roundup	2008	$7,920	1.150	$4,137	$12,058
	Renewable Energy Standard Offer Program	2008	$125	1.150	$200	$325
	Secondary Fridge Retirement Pilot	2006	$4,335	1.325	$1,410	$5,745
	Social Housing – Pilot	2007	$7,228	1.235	$1,696	$8,924
	Summer Savings	2007	$26,643	1.235	$6,250	$32,893
	Summer Savings	2008	$26,644	2.235	($23,389)	$3,255
	peaksaver	2008	$26,645	3.235	($26,390)	$255
OPA subtotal					*($25,470)*	*$111,343*
TOTAL					*$131,233*	**$672,702**

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d) Provide a schedule that shows the derivation of the Residential rate riders based on the kwh savings breakdown and carrying costs provided in response to parts a and c) of this IR. Reconcile this with Exhibit 10 Tab 1 Schedule 2 Table 1

Table 1 - updated

2010 Test Year - LRAM and SSM Rate Rider

	Amounts (2005 to 2008)		Billing Units (2010)		Rate Riders			Three Year Rate Rider	Four Year Rate Rider	Number of Years to Use	Rate Rider to Use
	LRAM	SSM			LRAM	SSM	Total	Total	Total	(3 or 4)	Total
Rate Class	$	$		Metrics	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	4	$/unit (kWh or kW)
Residential	$672,702	$123,907	545,392,460	kWh	0.0012	0.0002	0.0015	0.0005	0.000365		0.0004
GS 50 to 999 kW	$20,863	$1,159	1,655,087	kW	0.0126	0.0007	0.0133	0.0044	0.003326		0.0033
GS >1000 kW		-$2,015	265,326	kW	0.0000	-0.0076	-0.0076	-0.0025	-0.001899		-0.0019
Total	$693,565	$123,051									

Table 1 – original version Exhibit 10, Tab 1, Schedule 2, Page 1

2010 Test Year - LRAM and SSM Rate Rider

	Amounts (2005 to 2008)		Billing Units (2010)		Rate Riders			Three Year Rate Rider	Four Year Rate Rider	Number of Years to Use	Rate Rider to Use
	LRAM	SSM			LRAM	SSM	Total	Total	Total	(3 or 4)	Total
Rate Class	$	$		Metrics	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	$/unit (kWh or kW)	4	$/unit (kWh or kW)
Residential	$633,108	$142,025	545,392,460	kWh	0.0012	0.0003	0.0014	0.0005	0.000355		0.0004
GS 50 to 999 kW	$33,241	$1,159	1,655,087	kW	0.0201	0.0007	0.0208	0.0069	0.005196		0.0052
GS >1000 kW		-$2,015	265,326	kW	0.0000	-0.0076	-0.0076	-0.0025	-0.001899		-0.0019
Total	$666,349	$141,170									

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Reconciliation:

Table 3 reconciles the rate rider based on the kWh savings in Question 27 a and c to the rate rider found in Exhibit 10 Tab 1 Schedule 2 Table 1. The difference in LRAM values and SSM values is justified in Table 15. Even with the different LRAM and SSM values, there is no change to the four-year residential rate rider.

Table 3 - Derivation of the residential rate rider based on the kWh savings in Question 27 a and c

Source of LRAM and SSM values	Rate Class	Amounts (2005 to 2008) LRAM $	SSM $	Billing Units (2010)	Metrics	Rate Riders LRAM $/unit (kW	SSM $/unit (kW	Total $/unit (kW	Three year Total $/unit (kW	Four year rate ri Total $/unit (kWh or I	Number of years to use (3 or 4) 4	Rate Rider to use Total $/unit (kWh or kW)
Response to VECC IR Question 27	Residential	$672,702	$123,907	545,392,460	kWh	0.0012	0.0002	0.0015	0.0005	0.000365		0.0004
Exhibit 10 Tab 1 Schedule 2 Table	Residential	$633,108	$142,025	545,392,460	kWh	0.0012	0.0003	0.0014	0.0005	0.000355		0.0004
Difference		$39,594	-$18,118	0		0.00007	-0.00003	0.00004	0.00001	0.00001		**0**

Question #28:

a) Does Oakville Hydro agree that the OEB Guidelines Section 7.5 indicate that savings and LRAM claims should be based on the "Best Available" input assumptions at the time that the LRAM/SSM claim was prepared?

Yes, Oakville Hydro agrees that the OEB Guidelines Section 7.5 indicates that savings and LRAM claims should be based on the "Best Available" input assumptions at the time that the LRAM/SSM claim was prepared.

b) Does Oakville Hydro agree that in the case estimation of 2006 -2009 savings, this means using the best available 2007 and 2008 input assumptions, which were and are those of the OPA Measures and Input Assumptions List? If not explain why not.

The OPA Measures and Input Assumptions List represents the best available *default* assumptions list to be used in the absence of more specific data for the actual installations for the LRAM calculation. In addition, the list has a number of limitations that mean it is impractical or impossible to map implemented measures to the list, either because the list does not include them, or is too general (e.g. does not include outdoor CFLs) or is too specific (e.g. the list provides multiple values for furnaces equipped with ECM motors, but program results may be less aggregated.)

The SSM may be based on the best available information at the beginning of the year the program was launched, not necessarily the most current information. This is indicated in section 7.3 of the OEB Guidelines for Electricity CDM.

For many of Oakville Hydro's programs, the OPA has conducted a program specific evaluation, and calculated results for those specific programs, and these became available after the most current Measures and Assumptions List.[2] Those evaluation results are more appropriate than would be calculations based on the default assumptions in the Measures and Assumptions List, and so we have used those results, provided by the OPA for most mass market programs for 2006, 2007 and 2008.

In some cases, the Measures and Assumptions List does not address the measures implemented by Oakville Hydro. In particular, the Porchlight program for CFLs involved the distribution of 13W CFLs for installation in porches. The OPA measures and assumptions list does not include 13W CFLs, and is for general CFL use, not outdoor applications.

As noted in the OPA e-mail with the results, the OPA states: "All results presented herein are considered final." and "The results provided in the enclosed report are in accordance with current OPA practices and policies for reporting progress against the provincial conservation goals."

c) Explain why the independent review of 2009 lost revenue associated with 2006 -2009 savings did not use the latest OPA input assumptions in Tables 7,8,9 for several

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[2] James Yue (OPA). 2009. *2006-8 OPA Conservation Program Results - Oakville Hydro* E-mail to Gail Boulton; Lesley Gallinger; Stew Lawson; Cristina Birceanu (10 November, 2009)

residential mass market measures with the exception of Table 8 for 2007 (notably CFLs, Low Flow Showerheads 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)

The independent third party review used the "Best Available" input assumptions, in accordance with Board Guidelines. Those assumptions are the following:

- Program-specific inputs listed as 'Final' for the 2006, 2007 and 2008 OPA funded programs (and Customer Education – EKC) in the 2006-2008 OPA Conservation Results for Oakville Hydro provided by the OPA (November 2009);
- Inputs provided by OHEDI for custom programs whose measures are not found in the OPA 2008/2009 Measures and Assumptions list. These programs each have a Free Ridership of 0% as explained in the third party review; and
- Incremental equipment costs for the 2006 Customer Education EKC Program listed in the 2006 EKC calculators provided by the OPA and Energyshop. Equipment costs are used for SSM purposes only. As such, the assumptions present at the beginning of the year that the program was delivered should be used.

As mentioned above, the revised LRAM input assumptions for the 2008 Customer Education – Porchlight Program 13W CFLs used the input assumptions of the 2007 Customer Education Porchlight Program provided in the 2006-2008 OPA Conservation Results for Oakville Hydro (which is consistent with the recent OPA Measures and Assumptions List).

Input assumptions for the Customer Education – Cold Water Wash program used input assumptions from the 2008 OEB Measures and Assumptions list since the 2008/2009 OPA Measures and Assumptions list does not have input assumptions for cold water washing.

The '2006-2008 OPA Conservation Results for Oakville Hydro provided by the OPA'[3] was used as a source of inputs for OPA funded CDM programs (and the Customer Education – EKC program). We have adopted these evaluated results in accordance with Board recommendations that "The Board would consider an evaluation by the OPA or a third party designated by the OPA to be sufficient."[4] The inputs found in the 2006-2008 OPA Conservation Results for Oakville Hydro more appropriately reflect the

[3] Provided by an e-mail from James Yue (OPA) to Oakville Hydro: Gail Burton; Lesley Gallinger; Stew Lawson; Cristina Birceanu dated 10 November 2009. The e-mail is appended

[4] Ontario Energy Board. 2008. *Guidelines for Electricity Distributor Conservation and Demand Management* p.28

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energy savings and TRC for the OPA funded programs and the Customer EKC program than the inputs listed in the OPA 2008/2009 Measures and Assumptions list. Therefore, the OPA evaluation results should be used in calculating energy savings, and LRAM claims.

We are not sure what VECC is referring to when it mentions "The OPA 2007 EKC Calculator" and it was not used in the calculations. There were TRC calculators distributed by the OPA for the Fall and Spring 2006 EKC programs (in 2007)[5]; as mentioned, neither the OPA 2007 EKC Calculator nor the input assumptions within it were used in the LRAM calculations.

d) Confirm that Indeco did not make any adjustments to the 2006-2008 input values for the above measures and used those provided by OH.

IndEco used the final results for 2006, 2007 and 2008 provided by OPA to Oakville Hydro for the calculation of LRAM and SSM. These values differ from the values in Oakville Hydro's annual reports because OPA revised the number of participants and input parameters as a result of the program evaluation.

e) Provide a Copy of the 2007 OPA Every Kilowatt Counts Program Calculator.

We received TRC calculators from the OPA for the Spring and Fall 2006 EKC program, along with spreadsheets of program results, but these were not used in our LRAM/SSM application. We are unclear as to whether or not it is these that VECC is requesting. We do not have any other 2007 OPA Every Kilowatt Counts Program Calculator. Copies of the 2006 TRC calculators provided by the OPA are attached.

[5] EKC 2006 Fall results and 2006 Fall EKC calculator provided by e-mail from Chris Bodanis (EnergyShop) to Mary Craddock dated 3 March 2007. EKC 2006 Spring results and the 2006 Spring EKC calculator provided by e-mail from Raegan Bunker (OPA) to Lesley Gallinger & Mary Craddock dated 2 February 2007. Both e-mails are appended.

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From: Chris Bodanis [mailto:chris.bodanis@energyshop.com]
Sent: Saturday, March 03, 2007 3:30 PM
To: 'MCraddock@oakvillehydro.com'
Cc: 'Raegan Bunker'
Subject: 2006 Fall EKC Results - Oakville

Hi Mary,

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

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

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

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

The final report for the program is to follow.

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

Cheers,

Chris

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

From: Raegan Bunker
Sent: February 2, 2007 6:03 PM
To: 'MCraddock@oakvillehydro.com'
Subject: Spring 2006 EKC Program Report (email 2 of 2)

Dear LDC partner,

As described in the previous email, please find attached your Spring 2006 coupon redemption data report. This report includes two tables.

Table 1 shows:

- the total number of coupons redeemed across the province in the Spring campaign
- the total number of direct mail coupons that were redeemed across the province in the Spring Campaign (from all LDCs)
- the total number of 'in-store' coupons that were redeemed across the province in the Spring Campaign
- the total number of direct mail coupons that were redeemed that were bar-coded with your LDC identifier code

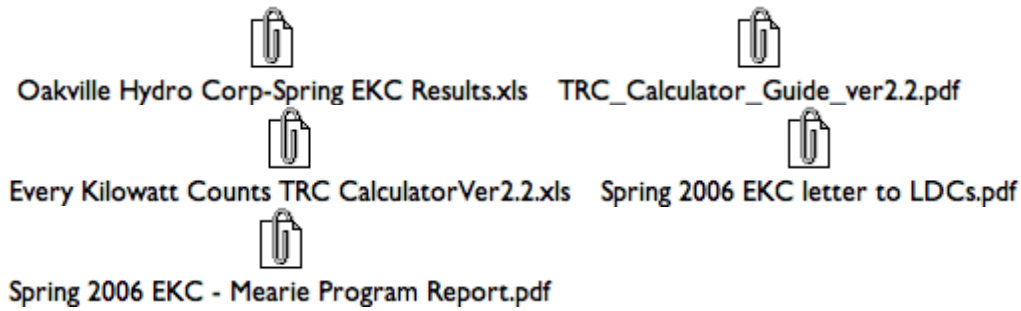
Table 2 shows the breakdown of the total 'in-store' coupons for the entire program, by city in which the store was located where the coupon was redeemed.

Please refer to the TRC analysis tool and the instruction guide provided in the first email for further information on how to use the data provided in these tables.

Cheers,
Raegan

_____

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



Instructions for Calculating Total Resource Cost Test Results
2006 Summer Every KiloWatt Counts Campaign

Part 1
a. Enter Discount Rate (refer to page 5 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

b. Enter number of coupons redeemed by technology.

c. Enter program dollars (refer to page 10 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Part 2
Total Resource Cost Test Results by Technology

Where applicable technology savings assumptions were generated using the Ontario Energy Board Measures List data.
A composite technology savings estimate was derived based on various products eligible for coupon redemption and electricity market share.
For a full discussion of the derivation of the estimates, contact the Ontario Power Authority.
Savings and equipment cost are adjusted in the TRC calculation by the free ridership rate.

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

Calculation of TRC Benefits
= energy/demand savings X avoided cost X participants X (1-free ridership)

Calculation of TRC Costs
= equipment cost X participants X (1-free ridership)

Calculation of TRC Net Benefits
= TRC Benefits - TRC Costs

Part 3
Program Total Resource Cost Test Results

Calculation of Program TRC Benefits
Sum of TRC Benefits for all technologies

Calculation of Program TRC Costs
Sum of TRC Costs for all technologies plus Program Costs

Calculation of Program TRC Net Benefits
= TRC Benefits - TRC Costs

SeeLine Group Ltd.

TOTAL RESOURCE COST TEST CALCULATOR

2006 Summer Every KiloWatt Counts Campaign

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

LDC Information	
Discount Rate	4.00%

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

Part 2. Results by Technology

Total Resource Cost Test Results by Technology (2007 $'s)							
Technology	*TRC Benefits*	*TRC Costs*	*TRC Net Benefits*	*TRC Benefit Cost Ratio*	*Summer Peak kW Savings*	*Net Annual kWh Savings*	*Net Lifecycle kWh Savings*
CFLs	$29,746,946	$2,710,009	$27,036,937	10.98	-	125,325,265	501,301,060
Ceiling Fans	$1,963,957	$279,338	$1,684,620	7.03	159.41	1,570,994	31,419,882
Timers	$7,424,336	$422,078	$7,002,258	17.59	-	6,162,332	123,246,630
Programmable Thermostats	$4,071,010	$954,720	$3,116,290	4.26	734.40	3,202,080	57,637,436

Part 3. Program Results

Total Resource Cost Test Results for Program (2007 $'s)	
TRC Benefits	$43,206,249
TRC Costs	$9,684,299
TRC Net Benefits	$33,521,950
Benefit Cost Ratio	4.46
Total Summer Peak kW Savings	893.81
Total Annual kWh Savings	136,260,670
Total Lifecycle kWh Savings	713,605,008

SeeLine Group Ltd.

Instructions for Calculating Total Resource Cost Test Results
2006 Fall Every KiloWatt Counts Campaign

Part 1

a. Enter Discount Rate (refer to page 5 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Discount Rate **7.35%**

b. Enter number of coupons redeemed by technology.

Products	Number of Coupons	Original values as sent by Raegan	
Baseboard Programmable Thermostats	**36**	**7503**	
Dimmers	**334**	**24900**	
Energy Star CFL's	**3043**	**538753**	
Motion Sensor Light Switch	**70**	**8931**	
Programmable Thermostat	**480**	**50430**	
Seasonal LED Lights	**3832**	**477143**	Revised values based on OH direct mail totals, and in-store in Oakville

c. Enter program dollars (refer to page 10 of the Ontario Energy Board Total Resource Cost Test Guide, Revised October 2, 2006.)

Program Costs: **$** **44,467**

Part 2

Program Total Resource Cost Test Results

Calculation of Program TRC Benefits
Sum of TRC Benefits for all technologies

Calculation of Program TRC Costs
Sum of TRC Costs for all technologies plus Program Costs

Calculation of Program TRC Net Benefits
= TRC Benefits - TRC Costs

Fall EKC		
Technology	**Number of Participants**	**Free Ridership**
Compact Fluorescent Bulbs	8703	10.00%
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	1916	5.00%
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	1916	5.00%
Programmable Thermostat - Space Heating, Existing Single Family Detached	83	10.00%
Programmable Thermostat - Space Cooling, Existing Single Family Detached	216	10.00%
pStat Baseboard	9	10.00%
Dimmer	334	10.00%
Motion Sensor	70	10.00%

Fall EKC					
Technology	**Summer Peak kW Savings**	**Winter Peak kW Savings**	**Annual kWh Savings in Year**	**Measure Life**	**Lifecycle kWh Savings**
Compact Fluorescent Bulbs	0	180.15	817,732	4	3,270,928.00
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	0.00	34.58	76735.80	30	2,302,074.00
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	0.00	12.74	29314.80	30	879,444.00
Programmable Thermostat - Space Heating, Existing Single Family Detached	0.00	12.93	109585.40	18	1,972,537.14
Programmable Thermostat - Space Cooling, Existing Single Family Detached	31.69	0.00	30929.04	18	556,722.72
pStat Baseboard	0.00	8.10	11877.03	18	213,786.54
Dimmer	0.00	27.05	41783.40	10	417,834.00
Motion Sensor		8.51	13167.00	20	263,340.00
Total	**31.69**	**284.07**	**1,131,124**		**9,876,666**

Fall EKC					
Technology	**TRC Benefits**	**Incremental Equipment Costs**	**Program Costs**	**TRC Net Benefits**	**TRC B/C Ratio**
Compact Fluorescent Bulbs	$185,588.78	$14,098.83		$171,490	13.16
LED Christmas Lights (indoor or outdoor) Replacing 5w Christmas Lights C-7 (25 Lights)	$95,173	$3,640		$91,532	26.14
LED Christmas Lights (indoor or outdoor) Replacing Incandescent Mini Lights	$36,270	$3,640		$32,629	9.96
Programmable Thermostat - Space Heating, Existing Single Family Detached	$89,192	$4,484		$84,708	19.89
Programmable Thermostat - Space Cooling, Existing Single Family Detached	$44,781	$11,664		$33,117	3.84
pStat Baseboard	$10,522	$486		$10,036	21.65
Dimmer	$22,617	$6,012		$16,605	3.76
Motion Sensor	$8,761	$441		$8,320	19.87
Utility Program Costs			$ 44,467.00		
Total	**$492,905**	**$44,467**	**$44,467**	**$403,972**	**11.08**

f) Confirm whether OH reported to the OPA on the 2007 EKC campaign using Mass Market measures assumptions (particularly CFLs) specified in the OPA 2007 EKC Program Calculator.

Oakville Hydro did not report to the OPA on the 2007 EKC campaign using Mass Market measures assumptions (particularly CFLs) specified in the OPA 2007 EKC Program Calculator. As discussed above, we do not have such a calculator.

g) Confirm whether or not the LRAM claim for 2006, 2007 and 2008 related to third tranche programs is based on using the OEB Guide values for CFLs, showerheads and PTs, not the OPA EKC Calculator or OPA 2008/2009 Measures values.

The LRAM claim for 2006, 2007 and 2008 third tranche programs is based on the input assumptions in Table 4. As indicated in the Table, and as discussed above, the LRAM calculation for CFLs and programmable thermostats are *not* based on using the OEB Guide values or the OPA EKC Calculator. The exception is the 2008 Porchlight Program, which we are amending to be consistent with the OPA 2007 evaluation of the Porchlight program and the OPA 2008/2009 Measures values. Oakville Hydro did not deliver showerheads to customers or make a claim for doing so.

Table 4 - Source of LRAM assumptions for the OHEDI third tranche programs

Program	Source of LRAM assumptions
2006 Customer Education – Cold Water Wash Program	2008 OEB Measures and Assumptions list
2006 Multi-Residential Interval Metering	Custom program inputs provided by OHEDI
2007 Lighting Retrofit	Custom program inputs provided by OHEDI
2008 Customer Education – Porchlight Program	2006-2008 OPA Conservation Results for Oakville Hydro
2006-2008 Customer Education - EKC	2006-2008 OPA Conservation Results for Oakville Hydro

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h) Confirm whether the 2008 claim for OPA programs is based on the OPA 2008 Measures and input assumptions for CFLs, Low Flow Showerheads and PTs.

For CFLs and PTs, the 2008 claim for OPA programs is based on the program-specific inputs listed in the 2006-2008 OPA Conservation Results for Oakville Hydro provided by the OPA. These differ from the OPA 2008/2009 Measures and Assumptions list in some cases. As indicated in the response to Question #28c, the program-specific inputs provided by the 2006-2008 OPA Conservation Results for Oakville Hydro are a more appropriate basis for estimating the savings and TRC costs attributed to all applicable measures (including CFLs and PTs).

Low Flow Showerheads are not part of OHEDI's 2008 claim for OPA programs.

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Question # 29

a) Provide a Table in the format below that shows for each of the Residential Programs for each year, which source(s) of input assumptions underpin the claimed kWh and kW savings. (Note entries below are illustrative only). Indicate for OPA- Funded Programs whether the 2007 Every Kilowatt Counts (EKC) Calculator or the OPA Measures for 2008 was used.

Table 5 lists the program in italics. The source of input assumptions appears after the colon for each program.

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Table 5 - Source of input assumptions for each residential program

Year	Third tranche rate funded	OPA funded	Verification
2006	*Customer Education – EKC*: 2006-2008 OPA Conservation Results for Oakville Hydro		OPA & IndEco[6]
2006	*Customer Education – Cold Water Wash*: 2008 OEB Measures and Assumptions list		IndEco
2006	*Multi-residential Interval Metering*: OHEDI		IndEco
2006		*Secondary Fridge Retirement Pilot*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2006		*Cool Savings Rebate Program*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2007	*Customer Education – EKC*: 2006-2008 OPA Conservation Results for Oakville Hydro		OPA & IndEco
2007		*Summer Savings*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2007		*Cool Savings Rebate Program*: 2006-2008 OPA Conservation Results for	OPA & IndEco

[6] Where both OPA and IndEco are shown, OPA provided the verified number of participants, free-riders and technology assumptions. IndEco verified the estimation of LRAM and SSM (where appropriate) using these OPA numbers, and discount rates and approved residential distribution rates from Oakville Hydro.

Year	Third tranche rate funded	OPA funded	Verification
		Oakville Hydro	
2007		*Great Refrigerator Roundup*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2007		*Social Housing Pilot*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2008	*Customer Education – EKC*: 2006-2008 OPA Conservation Results for Oakville Hydro		OPA & IndEco
2008	*Customer Education – Porchlight Program*: 2006-2008 OPA Conservation Results for Oakville Hydro[7]		IndEco
2008		*Cool Savings Rebate Program*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2008		*Great Refrigerator Roundup*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2008		*RESOP*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco

[7] These inputs assumptions were used for LRAM calculations only. SSM calculations used the best available information at the beginning of the year the program was launched, as is indicated in section 7.3 of the OEB Guidelines for Electricity CDM. The best available information was the input assumptions for a 15W CFL found in the 2008 OEB Measures and Assumptions list prorated to a 13W CFL.

Year	Third tranche rate funded	OPA funded	Verification
2008		*Summer Savings*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco
2008		*peaksaver*: 2006-2008 OPA Conservation Results for Oakville Hydro	OPA & IndEco

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b) Provide a complete list by measure by year of the input assumptions used to prepare the residential kWh and kW load impacts in Exhibit 10, Tab 1, Schedule 6, Appendix C Tables 2 and 3 and associated LRAM and SSM claims. In particular provide the detailed input assumptions for all mass market measures including CFLs and PTs.

i. kWh and kW savings

ii. Free ridership

iii. Cost of measure

iv. Measure life

v. Source(s)/authority(ies) for assumption(s)

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Table 6 - List of 2006 CDM program inputs

Program	Energy efficient technology	Number of participants /units	Measure life (years)	Free ridership	Demand savings (kW)	Energy savings kWh/a	Incremental equipment cost
Customer Education - Cold Water Wash Program[2]	Cold water clothes washing	600	1	25 / 30[1]	--	623	$10
Customer Education - Spring EKC[3]	CFLs	18,932	4	10%	0	104	$2.50
	Timers	531	20	10%	0	183	$12.50
	PStats	231	15	10%	0.05	216	$65
	Fans	176	20	10%	0.014	141	$25
Customer Education - Fall EKC[4]	EnergyStar® CFL	28,070	4	10%	0	104	$1.62
	SLEDs	6,756	30	10%	0	31	$8.70
	PStats	445	18	10%	0.12	522	$25
	Dimmers	352	10	10%	0	139	$13
	Indoor motion sensors	126	20	10%	0	209	$20
	PStat – baseboard	27	18	10%	0	1,466	$25
Multi-residential Interval Metering[5]	Interval meters	1	20	0%	46.46	406,976	$62,502

1. Free ridership rates used for SSM and LRAM calculations, respectively.
2. Inputs from the 2008 OEB Measures and Assumptions list.
3. Inputs from the 2006-2008 OPA Conservation Results for Oakville Hydro and from a TRC calculator sent from Raegan Bunker of the OPA to Mary Craddock of OHEDI dated February 2, 2007. The TRC Calculator was used for the equipment costs only.
4. Inputs from the 2006-2008 OPA Conservation Results for Oakville Hydro and from a TRC calculator sent from Chris Bodanis of Energyshop to Mary Craddock of OHEDI dated March 3, 2007. The TRC Calculator was used for the equipment costs only, affecting SSM but not LRAM.
5. Energy savings for this program were provided from data on one of ten buildings. Costs are provided from equipment invoices and measure life is an estimate based upon equipment specifications.

Table 7 - List of 2007 CDM program inputs

Program	Energy efficient technology	Number of participants /units	Measure life (years)	Free ridership	Demand savings (kW)	Energy savings (kWh/a)	Incremental equipment cost
Customer Education - EKC[1]	15 W CFL	34,238	8	22%	0.0013	43	-$2
	20 W+ CFLs	5,574	8	22%	0.0019	62	-$1
	Project Porchlight CFLs	7,205	8	24%	0.0013	43	$3.50
	EnergyStar® ceiling fan	276	10	45%	0.0028	90	$47
	Furnace filter	1,113	1	45%	0.0112	38	$12
	Solar lights	4,396	5	87%	0	33	$4.75
	Outdoor motion sensor	440	10	45%	0	160	$16.20
	Dimmer switch	279	10	45%	0.0007	24	$13
	EnergyStar® light fixtures	133	16	45%	0.0056	123	$24
	Seasonal LEDs	9,071	5	51%	0	14	$8.70
	T8 lighting	261	18	23%	0.0012	37	$20
	PStat	268	15	45%	0	75	$25
	Power bar with timer	122	10	23%	0.0063	72	$25
	Lighting control devices	1,408	10	45%	0.0185	72	$20.80

1. Inputs from the 2006-2008 OPA Conservation Results for Oakville Hydro and from the 2008/2009 OPA Measures and Assumptions list.

Note that for the 2008 programs (Table 8), only the Customer Education Porchlight program has equipment costs listed as it is the only 2008 program with an associated SSM claim (LRAM calculations do not require an equipment cost). In the application as filed, the 2008 Customer Education – EKC program also had an associated SSM claim but it has since been removed from the list of programs eligible for SSM. Unlike the 2006 and 2007 versions of that program, the 2008 Residential Coupon program was fully run by the OPA, without involvement from the LDCs so no SSM is being claimed.

Table 8 - List of 2008 CDM program inputs

Program	Energy efficient technology	Number of participants /units	Measure life (years)	Free ridership	Demand savings (kW)	Energy savings (kWh/a)	Incremental equipment cost
Customer Education - EKC	Air Conditioner/Furnace Filters	566	1	65%	0.02	38	
	Energy Star® Qualified Compact Fluorescent Floods (Indoor & Outdoor)	6138	7	63%	0.00	88	
	Energy Star® Qualified Light Fixtures	9526	16	67%	0.00	133	
	Heavy Duty Timers	216	10	67%	0.02	301	
	T8 Fluorescent Fixtures	1733	16	67%	0.00	37	
	ENERGY STAR Decorative CFLs	22108	4	61%	0.00	30	
	ENERGY STAR Dimmable CFLs	1425	6	62%	0.00	98	
	Power Bars with Timers	102	10	59%	0.00	53	
	Programmable Thermostats - Baseboard	601	15	53%	0.00	64	
	Car block heater timer			100%	n/a		
	Energy Star® Qualified Compact Fluorescent Light Bulbs	13086	8	48%	0.00	53	
	Lighting Control Devices	1863	10	55%	0.00	102	
	Awnings	411		100%	0.00	0	
	Window Films	6629		100%	0.00	0	
	Electric Water Heater Blankets	203		100%	0.00	0	
	Pipe Wrap	12208	6	53%	0.00	38	
	Low-Flow Toilets	1597		100%	0.00	0	
	Keep Cool – Dehumidifier	4	12	65%	0.29	500	
	Keep Cool – Room Air Conditioner	4	9	58%	0.14	141	
	Rewards for Recycling – Dehumidifier	114	12	56%	0.29	500	
	Rewards for Recycling – Room Air Conditioner	124	9	56%	0.14	141	
	Rewards for Recycling - Halogen Lamp	99	16	52%	0.01	275	
Customer Education - Porchlight Program LRAM Claim[1]	13 W CFL	2650	8	30%	0.001	43	

Program	Energy efficient technology	Number of participants /units	Measure life (years)	Free ridership	Demand savings (kW)	Energy savings (kWh/a)	Incremental equipment cost
Customer Education - Porchlight Program SSM Claim[1]	13 W CFL	2650	4	10%	0.00	104	$2
Cool Savings Rebate Program	2007 Efficient Furnance with Electronically Commutable Motor	134	15	46%	0.50	837	
	2007 ENERGYSTAR® Central Air Conditioner	64	18	48%	0.17	155	
	2007 Programable Thermostat	104	15	54%	0.03	54	
	2007 Central Air Conditioner Tune-ups	0	5	84%	0.26	235	
	2008 Efficient Furnance with Electronically Commutable Motor	480	18	46%	0.49	819	
	2008 ENERGYSTAR® Central Air Conditioner	318	18	48%	0.14	125	
	2008 Programable Thermostat	408	18	54%	0.03	54	
Great Refrigerator Roundup	Refrigerator	667	9	45%	0.08	775	
	Freezer	198	8	48%	0.08	740	
	Room Air Conditioner	1	4.5	64%	0.20	197	
Summer Savings	Households	235	1	22%	0.20	768	
peaksaver	Residential Programmable Thermostat	489	13	10%	0.87	17	
Renewable Energy Standard Offer Program	Solar Photo-Voltaic	3	20	0%	Custom	Custom	

1. Participant numbers provided by OHEDI. For the LRAM claim, inputs are the same as those used for the 2007 Customer Education – Porchlight Program provided in the 2006-2008 OPA Conservation Results for Oakville Hydro. For the SSM claim, inputs are from the 2008 OEB Measures and Assumptions list for a 15W CFL, prorated to a 13W CFL (the best available information at the beginning of the program year).

Question 30:

a) Confirm/correct/complete the following Input Assumptions and Kwh savings Comparison Table (based on Exhibit 10 Tab1 Schedule 6 Appendix B) in the format below for Residential Mass Market measures and Social Housing. Include any missing programs related to CFLs, PTs and Seasonal Lights.

Table 9 lists the input assumptions used for all CFL, PT and seasonal lights within OHEDI's CDM portfolio as well as the input assumptions for the same measures provided by the 2008/2009 OPA Measures and Assumptions list. Project Porchlight CFLs are not listed in the 2008/2009 OPA Measures and Assumptions list so the assumptions for this program are kept the same as the assumptions filed. There was some difficulty in matching the program measures in the audited results with those from the 2008/2009 OPA Measures and Assumptions list – particularly for PTs. PTs were matched by comparing energy savings and the nature of the program that offered them.

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Table 9 - Input assumption and kWh savings comparison table

Year	Program	Efficient Measure	As filed				OPA 2008 Measures and Assumptions List		
			Participants	Unit energy savings assumption (kWh)	Free ridership	Net energy savings assumption (kWh)	Unit energy savings assumption (kWh)	Free ridership[1]	Net energy savings assumption (kWh)
2006	Customer Education - EKC	Energy Star® Compact Fluorescent Light Bulb	18932	104.4	10%	1,778,814	43	30%	569,841
		Programmable Thermostats	231	216.0	10%	44,881	182[2]	30%	29,412
		Energy Star® Compact Fluorescent Light Bulb	28070	104.4	10%	2,637,455	43	30%	844,906
		Seasonal Light Emitting Diode Light String	6756	30.8	10%	186,984	13.7	30%	64,794
		Programmable Thermostats	445	522.1	10%	209,277	75.1[3]	30%	23,414
		Programmable Baseboard Thermostats	27	1466.3	10%	35,008	2063[4]	30%	38,309
	Cool Savings Rebate Program	Programmable Thermostats	155	159.0	10%	22,197	138[5]	30%	14,984
2007	Cool Savings Rebate Program	Programmable Thermostat	677	54.6	73%	10,156	138[5]	30%	65,407
	Customer Education - EKC	15 W CFL	34238	43.0	22%	1,148,336	43	30%	1,030,558
		20 W+ CFLs	5574	62.1	22%	269,974	52.6	30%	205,220
		Project Porchlight CFLs	7205	43.0	24%	235,452	43.0	24%	235,452
		SLEDs	9071	13.7	51%	60,892	13.7	30%	86,989
		Programmable Thermostat	268	75.1	45%	11,090	75.1[3]	30%	14,115
2008	Cool Savings Rebate Program	2007 Programmable Thermostat	104	54	54%	2,579	75.1[3]	30%	5,488
		2008 Programmable Thermostat	408	54	54%	10,083	75.1[3]	30%	21,455
	peaksaver	Residential Programmable Thermostat	489	17	10%	7,614	75.1[3]	30%	25,707

Year	Program	Efficient Measure	As filed				OPA 2008 Measures and Assumptions List		
			Participants	Unit energy savings assumption (kWh)	Free ridership	Net energy savings assumption (kWh)	Unit energy savings assumption (kWh)	Free ridership[1]	Net energy savings assumption (kWh)
	Customer Education - EKC	Energy Star® Qualified Compact Fluorescent Floods (Indoor & Outdoor)	6138	88	63%	201,502	77.1	30%	331,265
		Programmable Thermostats - Baseboard	601	64	53%	17,796	75.1[3]	30%	31,598
		Energy Star® Qualified Compact Fluorescent Light Bulbs	13086	53	48%	362,162	43	30%	393,902
Total energy savings (kWh)						**7,252,250**			**4,032,814**

1. A free ridership of 30% was used, as this is the default free ridership recommended by the OPA in the absence of program-specific information. The most recent document on Measures and Assumptions does not provide default free-rider rates and recommends using free rider rates from program evaluations, which is what was done wherever these were available.
2. These thermostats were mapped to combined savings of 'Space Cooling Only' and 'Gas Forced Air Heating Only' in the OPA Measures & Assumptions List.
3. These thermostats are assumed to map to 'Baseboard Space Heating' thermostats in the OPA Measures and Assumptions List.
4. These thermostats are assumed to map to 'Forced Air Electric Heating Only' thermostats in the OPA Measures and Assumptions List.
5. These thermostats are assumed to map to 'Space Cooling Only' thermostats in the OPA list Measures and Assumptions List.

b) Comment on the material differences between the result of using updated input assumptions (available in 2007) and reflected in the 2008 and 2009 OPA Measures List now adopted by the OEB.

Using input assumptions reflected in the 2008/ 2009 OPA Measures and Assumptions list instead of the program-specific inputs provided in the 2006-2008 OPA Conservation Results for Oakville Hydro would decrease the estimated energy savings for CFLs, PTs and seasonal lights by roughly 44%. However, as stated in the response to Question #28c, the program-specific inputs provided in the 2006-2008 OPA Conservation Results for Oakville Hydro are a more appropriate basis for estimating energy savings of OPA funded programs and the Customer Education – EKC program.

c) Provide a revised version of Exhibit 10 Tab 1 Schedule 6 Appendix C Page 11 of 18 Table 2 using the updated kW and kWh savings based on OPA 2008/2009 Measures List input assumptions now adopted by the OEB.

Only SSM claims associated with the Customer Education – EKC program were affected by changes as all other programs use custom measures not found on the 2008/2009 OPA Measures and Assumptions list. The free riderships were kept at the values listed in the 2006-2008 OPA Conservation Results for Oakville Hydro since the default free ridership value of 30% used by the 2008/2009 OPA Measures and Assumptions list is to be used only in the absence of program specific free riderships.[8]

Upon review of the 2008 Customer Education – EKC program, we have removed our SSM claim for this program. Unlike the 2006 and 2007 versions of that program, the 2008 Residential Coupon program was fully run by the OPA, without involvement from the LDCs so no SSM is being claimed. Exhibit 10 Tab 1 Schedule 6 Appendix C Page 11 of 18 Table 2 has been modified to exclude this program.

Table 10 provides an update of Exhibit 10 Tab 1 Schedule 6 Appendix C Page 11 of 18 Table 2 using the updated kW and kWh savings based on the 2008/2009 OPA Measures and Assumptions list with the 2008 Customer Education – EKC program removed.

The SSM amounts listed in Table 10 use assumptions from the 2008/2009 OPA Measures and Assumptions list and is being provided solely as a response to Question #30c. It is not the appropriate value to use for the SSM claim because it is based on neither the best available information (which is from the program-specific evaluation), nor the input values that were available at the beginning of the year the programs were introduced.

[8] Ontario Power Authority. 2009. *2009 mass market measures and assumptions* V1.02 (April). p. 1.

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Table 10 – Summary of Net TRC benefits and SSM entitlement in 2010$ based on the OPA Measures & Assumptions List (see text for why these are not an appropriate basis for Oakville Hydro's SSM claim)

Program	Net TRC benefits					SSM amount
	2005	2006	2007	2008	Four-year Net TRC	
Annual C/I Energy Seminar	($1,352)	($2,227)	($36,716)		($40,294)	($2,014.71)
Customer Education - Cold Water Wash Program		$2,626			$2,626	$131.31
Customer Education - EKC		$1,045,564	$1,059,415	$0	$2,104,978	$105,248.92
Customer Education - Porchlight Program				$66,440	$66,440	$3,322.00
Distributed Generation - Digester Gas Program	($3,841)	($6,024)			($9,865)	($493.24)
Distributed Generation - Wind Turbine	($8,679)	($596)			($9,275)	($463.75)
Lighting Retrofit			$34,280		$34,280	$1,713.99
Peak Demand Reduction	($9,177)	($23,853)	($127,401)	$214,387	$53,956	$2,697.82
Solar Panel Program		($42,281)	($3,969)	$339	($45,911)	($2,295.56)
Customer Education - General	($2,576)				($2,576)	($128.81)
Multi-residential Interval Metering	($96,307)	$250,393	($452,738)	($314,082)	($612,734)	($30,636.70)
Total	($121,931)	$1,223,602	$472,870	($32,916)	$1,541,625	**$77,081.25**

d) Provide a revised version of Exhibit 10 Tab 1 Schedule 6 Appendix C Page 12 of 18 Table 3 using the kWh savings based on OPA 2008/2009 Measures List input assumptions now adopted by the OEB.

Table 11 provides an update of Exhibit 10 Tab 1 Schedule 6 Appendix C Page 12 of 18 Table 3 using the kWh savings based on the 2008/2009 OPA Measures and Assumptions list. Programs revised include the Customer Education – EKC program, the Secondary Fridge Retirement Pilot, the Cool Savings Rebate Program and the Great Refrigerator Roundup. Again, the energy savings of the 2008 Porchlight Program reflect the revised inputs discussed in the response to Question #27b.

Since the energy savings listed in Table 11 use generic assumptions from the 2008/2009 OPA Measures and Assumptions list and not from the program specific evaluation, (2006-2008 OPA Conservation Results for Oakville Hydro), they are less appropriate for use in the LRAM claim. Table 11 is being provided solely as a response to Question #30d.

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Table 11 – Cumulative program energy savings by rate class through 2009 based on the OPA Measures & Assumptions List (see text for why these are not an appropriate basis for Oakville Hydro's LRAM claim)

Funding source	Program	Year	Residential (kWh)	GS 50-999 kW (kW)[1]
Third tranche	Multi-residential Interval Metering[2]	2006	1,627,904	
	Lighting Retrofit	2007		18
	Customer Education - EKC	2006	6,644,832	
		2007	5,622,384	
		2008	2,883,910	
	Customer Education - Cold Water Wash Program	2006	261,660	
	Customer Education - Porchlight Program	2008	159,530	
OPA	peaksaver®	2008	66,103	
	Summer Savings	2007	1,832,977	
	Secondary Fridge Retirement Pilot	2006	193,387	
	High Performance New Construction	2008		4
	Cool Savings Rebate Program	2006	213,651	
		2007	1,355,134	
		2008	665,105	
	Great Refrigerator Roundup	2007	387,872	
		2008	845,571	
	Summer Sweepstakes	2008	140,808	
	Social Housing – Pilot	2007	514,420	
	Electricity Retrofit Incentive Program	2008		370
	Renewable Energy Standard Offer Program	2008	862,152	
Total			24,277,400	393

1. Rates for the general service rate class of customers rated at greater than 50kW are on a demand basis (kW), not an energy one (kWh). Only demand reductions expected to persist throughout the year are included. Excluded are peak demand reductions associated with demand response programs which are not anticipated to impact on revenues.

2. Energy savings are those only of the first of ten condominium buildings. Results for the other nine buildings are not available.

e) Provide a revised version of the schedule provided in response to VECC IR #25 part a) adjusted to reflect the OPA 2008/2009 measures and input assumptions list for CFLs and PTs provided in part a) of this IR.

Table 12 provides a revised version of the schedule provided to VECC IR #27 part a) (which is the schedule we understand VECC to be referring to) adjusted to reflect the 2008/2009 OPA Measures and Assumptions list. The free riderships were kept at the values listed in the 2006-2008 OPA Conservation Results for Oakville Hydro since the default free ridership value of 30% used by the 2008/2009 OPA Measures and Assumptions list is to be used only in the absence of program specific free riderships. Some program measures do not match up with measures listed in the 2008/2009 OPA Measures and Assumptions list; for measures with no match, the assumptions used in the original application were kept.

Since the energy savings and LRAM listed in Table 12 use generic assumptions from the 2008/2009 OPA Measures and Assumptions list and not the program-specific evaluation results from 2006-2008 OPA Conservation Results for Oakville Hydro, they are not an appropriate basis for the LRAM claim. Table 12 is being provided solely as a response to Question #30e.

Table 12 - Energy savings and components of the residential sector LRAM claim, broken down by measure and adjusted to reflect the 2008/2009 OPA Measures and Assumptions list (see text for why these are not an appropriate basis for Oakville Hydro's LRAM claim)

Program Name	Year	Measure Name	2006 Energy savings (kWh)	2007 Energy savings (kWh)	2008 Energy savings (kWh)	2009 Energy savings (kWh)	Total measure energy savings (kWh)	Contribution to LRAM (2010$)
Multi-residential Interval Metering	2006	N/A	406,976	406,976	406,976	406,976	1,627,904	$29,540
Customer Education - EKC	2006	Energy Star® Compact Fluorescent Light Bulb	569,841	569,841	569,841	569,841	2,279,365	$41,361
	2006	Electric Timers	67,988	67,988	67,988	67,988	271,951	$4,935
	2006	Programmable Thermostats	29,412	29,412	29,412	29,412	117,650	$2,135
	2006	Energy Star® Ceiling Fans	11,040	11,040	11,040	11,040	44,159	$801
	2006	Energy Star® Compact Fluorescent Light Bulb	844,906	844,906	844,906	844,906	3,379,625	$61,326
	2006	Seasonal Light Emitting Diode Light String	64,794	64,794	64,794	64,794	259,177	$4,703
	2006	Programmable Thermostats	23,414	23,414	23,414	23,414	93,655	$1,699
	2006	Dimmers	5,843	5,843	5,843	5,843	23,370	$424
	2006	Indoor Motion Sensors	5,661	5,661	5,661	5,661	22,645	$411
	2006	Programmable Baseboard Thermostats	38,309	38,309	38,309	38,309	153,235	$2,781
Cool Savings Rebate Program	2006	Energy Star® Air Conditioner	13,739	13,739	13,739	13,739	54,958	$997
	2006	Programmable Thermostats	14,984	14,984	14,984	14,984	59,936	$1,088
	2006	Air Conditioner Tune-Up	24,689	24,689	24,689	24,689	98,757	$1,792
Secondary Fridge Retirement Pilot	2006	Refrigerator Retirement	46,724	46,724	46,724	46,724	186,895	$3,391
	2006	Freezer Retirement	1,623	1,623	1,623	1,623	6,492	$118
Customer Education - Cold Water Wash Program	2006	Cold Water Washing (Detergent)	261,660				261,660	$5,375
Great Refrigerator Roundup	2007	Refrigerator		97,646	97,646	97,646	292,939	$5,082
	2007	Freezer		30,708	30,708	30,708	92,125	$1,598
	2007	Small Refrigerator		589	589	589	1,768	$31
	2007	Small Freezer		305	305	305	916	$16
	2007	Window Air Conditioner		42	42	42	125	$2
Cool Savings Rebate Program	2007	ENERGY STAR® Central Air Conditioner		41,620	41,620	41,620	124,859	$2,166
	2007	Programmable Thermostat		25,660	25,660	25,660	76,980	$1,335
	2007	Furnace with Electronically Commutated Motor		368,302	368,302	368,302	1,104,906	$19,167
	2007	Central Air Conditioning Tune Up		16,130	16,130	16,130	48,390	$839
Customer Education - EKC	2007	15 W CFL		1,148,336	1,148,336	1,148,336	3,445,007	$59,761
	2007	20 W+ CFLs		269,974	269,974	269,974	809,921	$14,050
	2007	Project Porchlight CFLs		235,452	235,452	235,452	706,355	$12,253
	2007	Energy Star Ceiling Fan		13,640	13,640	13,640	40,921	$710
	2007	Furnace Filter		23,074			23,074	$429
	2007	Solar Lights		5,600	5,600	5,600	16,800	$291
	2007	Outdoor Motion Sensor		38,647	38,647	38,647	115,941	$2,011
	2007	Dimmer Switch		3,642	3,642	3,642	10,926	$190
	2007	Energy Star Light Fixtures		8,989	8,989	8,989	26,967	$468
	2007	SLEDs		60,892	60,892	60,892	182,676	$3,169
	2007	T8		7,466	7,466	7,466	22,397	$389
	2007	Programmable Thermostat		11,090	11,090	11,090	33,270	$577
	2007	Power Bar with Timer		6,781	6,781	6,781	20,344	$353
	2007	Lighting Control Devices		55,928	55,928	55,928	167,785	$2,911

Summer Savings	2007	Household		916,489	916,489		1,832,977	$32,893
Social Housing – Pilot	2007	Custom Retrofit Projects		171,473	171,473	171,473	514,420	$8,924
Cool Savings Rebate Program	2008	2007 Efficient Furnance with Electronically Commutable Motor			60,813	60,813	121,626	$2,034
	2008	2007 ENERGYSTAR® Central Air Conditioner			5,200	5,200	10,401	$174
	2008	2007 Programmable Thermostat			6,627	6,627	13,253	$222
	2008	2008 Efficient Furnace with Electronically Commutable Motor			213,263	213,263	426,527	$7,132
	2008	2008 ENERGYSTAR® Central Air Conditioner			20,741	20,741	41,482	$694
	2008	2008 Programmable Thermostat			25,908	25,908	51,816	$866
Customer Education - EKC	2008	Air Conditioner/Furnace Filters			7,483		7,483	$129
	2008	Energy Star® Qualified Compact Fluorescent Floods (Indoor & Outdoor)			177,311	177,311	354,622	$5,929
	2008	Energy Star® Qualified Light Fixtures			390,710	390,710	781,420	$13,066
	2008	Heavy Duty Timers			36,653	36,653	73,306	$1,226
	2008	T8 Fluorescent Fixtures			21,177	21,177	42,354	$708
	2008	ENERGY STAR Decorative CFLs			116,813	116,813	233,625	$3,906
	2008	ENERGY STAR Dimmable CFLs			52,509	52,509	105,018	$1,756
	2008	Power Bars with Timers			3,014	3,014	6,028	$101
	2008	Programmable Thermostats - Baseboard			20,995	20,995	41,990	$702
	2008	Energy Star® Qualified Compact Fluorescent Light Bulbs			294,051	294,051	588,103	$9,833
	2008	Lighting Control Devices			61,016	61,016	122,033	$2,040
	2008	Pipe Wrap			217,209	217,209	434,418	$7,264
	2008	Keep Cool – Dehumidifier			666	666	1,333	$22
	2008	Keep Cool – Room Air Conditioner			253	253	505	$8
	2008	Rewards for Recycling – Dehumidifier			25,156	25,156	50,311	$841
	2008	Rewards for Recycling – Room Air Conditioner			7,654	7,654	15,307	$256
	2008	Rewards for Recycling - Halogen Lamp			13,027	13,027	26,053	$436
Summer Savings	2008	Households			140,808		140,808	$2,434
Customer Education - Porchlight Program	2008	13 W CFL			79,765	79,765	159,530	$2,667
peaksaver	2008	Residential Programmable Thermostat			33,052	33,052	66,103	$1,105
Renewable Energy Standard Offer Program	2008	Solar Photo-Voltaic			8,290	8,290	16,581	$277
Great Refrigerator Roundup	2008	Refrigerator			344,949	344,949	689,898	$11,535
	2008	Freezer			77,766	77,766	155,531	$2,601
	2008	Room Air Conditioner			71	71	142	$2
Total			*2,431,603*	*5,728,418*	*8,168,293*	*7,103,514*	*23,431,828*	**$412,458**

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f) Adjust the as filed Carrying costs to reflect the revised LRAM amounts resulting from the answer to part c and d).

Table 13 - Carrying costs reflecting the LRAM amounts resulting from answers to part c and d.

Funding	Program	Year	Lost revenue (in dollars of first program year)	Multiplier to 2010$	Carrying Cost	Contribution to residential LRAM claim (2010$)
Third Tranc	Customer Education - EKC	2006	$90,980	1.325	$29,597	$120,576
		2007	$79,024	1.235	$18,537	$97,561
		2008	$41,932	1.15	$6,292	$48,224
	Customer Education - Cold Water Wash Program	2006	$4,056	1.325	$1,319	$5,375
	Customer Education - Porchlight Program	2008	$2,319	1.15	$348	$2,667
	Multi-residential Interval Metering	2006	$22,289	1.325	$7,251	$29,540
Third Tranche subtotal					*$63,343*	*$303,943*
OPA	Summer Savings	2007	$26,643	1.235	$6,250	$32,893
		2008	$2,117	1.15	$318	$2,434
	Secondary Fridge Retirement Pilot	2006	$2,648	1.325	$861	$3,509
	Cool Savings Rebate Program	2006	$2,925	1.325	$952	$3,877
		2007	$19,041	1.235	$4,466	$23,508
		2008	$9,670	1.15	$1,451	$11,121
	Great Refrigerator Roundup	2007	$5,450	1.235	$1,278	$6,728
		2008	$12,294	1.15	$1,845	$14,138
	Renewable Energy Standard Offer Program	2008	$241	1.15	$36	$277
	Social Housing – Pilot	2007	$7,228	1.235	$1,696	$8,924
	peaksaver	2008	$961	1.15	$144	$1,105
OPA subtotal					*$19,296*	*$108,514*
Total					*$82,640*	**$412,458**

Table 14 - LRAM and SSM claims reflecting the 2008/2009 OPA Measures and Assumptions list (see text for why these are not an appropriate basis for Oakville Hydro's LRAM and SSM claims)

Rate Class	LRAM	SSM
Residential	$412,458	$77,937
GS 50-999 kW	$20,863	$1,159
GS 1,000-4,999 kW	$0	($2,015)
Total	**$433,321**	**$77,081**

Since the calculated LRAM and SSM values in Table 14 use generic assumptions from the 2008/2009 OPA Measures and Assumptions list and not from 2006-2008 OPA Conservation Results for Oakville Hydro, they are less appropriate values for the

LRAM and SSM claims. Table 14 is being provided solely as a response to Question #30f.

The LRAM and SSM claims that reflect the adjustment listed in Table 15 and the program-specific inputs listed in both the 2006-2008 OPA Conservation Results for Oakville Hydro and the other sources of program inputs listed in response to Question #28c are given in Table 16.. Oakville Hydro is requesting approval of these amounts for its 2006 – 2008 CDM portfolio.

Table 15 - Adjustments made to the LRAM and SSM claims in the application as filed

Adjustment	Adjusts the LRAM claim?	Adjusts the SSM claim?	Justification of the adjustment
Addition of the free ridership missed by the OPA for its 2006 Cool Savings Rebate Program	Yes	No	Response to VECC IR Question 27b
Adjustment of the energy savings for Porchlight CFLs found as part of the 2008 Customer Education EKC program to reflect the assumptions used by the OPA for the 2007 program	Yes	No	Response to VECC IR Question 27b
Update of the results for the 2008 OPA funded programs to their confirmed, finalized values	Yes	No	Response to VECC IR Question 28c
Removal of the 2008 Customer Education EKC program from the list of programs eligible for SSM	No	Yes	Response to VECC IR Question 29b

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Table 16 - LRAM and SSM values claimed by OHEDI for the 2006 - 2008 CDM portfolio

Rate Class	LRAM	SSM
Residential	$672,702	$123,907
GS 50-999 kW	$20,863	$1,159
GS 1,000-4,999 kW	$0	($2,015)
Total	**$693,565**	**$123,051**

Question #32

Reference: No Reference

-a) Provide a copy of the Residential Sector/Mass market (and If applicable Social Housing Sector) Report(s) that OH provided to OPA , including the detailed breakdown of measures, unit savings, participants and other assumptions.

Oakville Hydro did not provide reports of the type described to the OPA.

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From:	Maryanne Wilson
To:	Maryanne Wilson
Subject:	FW: 2006-8 OPA Conservation Program Results - Oakville Hydro Electricity Distribution Inc.
Date:	November 18, 2009 2:20:07 PM
Attachments:	2006-2008 OPA Conservation Results.Oakville Hydro Electricity Distribution In.xls

From: James Yue [mailto:James.Yue@powerauthority.on.ca]
Sent: November 10, 2009 2:57 PM
To: Gail Boulton; Lesley Gallinger; Stew Lawson; Cristina Birceanu
Cc: Raegan Bunker
Subject: 2006-8 OPA Conservation Program Results - Oakville Hydro Electricity Distribution Inc.

Ontario Power Authority™

November 10, 2009

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

Dear Gail, Lesley, Stewart and Cristina,

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

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

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

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

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

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

Allocation methodologies

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

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

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

Report structure

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

1) **Summary**: Provides a portfolio-level summary of the annual resources savings (MW and MWh, net and gross for each) for the 2006, 2007 and 2008 program portfolios. The summary includes both province wide results, as well as the estimated share of those results which occurred in your LDC service territory.
2) **Annual net demand savings – LDC**: Provides a stacked bar graph of the annual net summer peak demand savings (MW) that are estimated to occur within your service territory from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
3) **Annual net energy savings – LDC**: Provides a stacked bar graph of the annual net energy savings (MWh) that are estimated to occur within your service territory from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
4) **Annual net demand savings – Prov**: Provides a stacked bar graph of the annual net summer peak demand savings (MW) that are estimated to occur across the province from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.
5) **Annual net energy savings – Prov**: Provides a stacked bar graph of the annual net energy savings (MWh) that are estimated to occur across the province from 2006 through 2032, as a result of 2006, 2007 and 2008 programs.

6) **Initiative level**: Provides a breakdown of the portfolio-level summary information provided in Summary tab, by individual initiative and year.
7) **Measures**: For each initiative in each year, this tab provides (where available): per unit savings assumptions (summer peak demand savings, annual energy savings, effective useful life), net-to-gross adjustment factors, and participation numbers (provincial and estimated share for your LDC service territory).
8) **Local Distribution Companies**: includes the OEB-Year Book data that was used for results allocation amongst LDCs.

Third party evaluation reports

If you would like to receive a copy of the third-party impact evaluation reports for 2007 third-party program evaluations (Great Refrigerator Roundup, Cool Savings Rebate, Summer Savings and Every Kilowatt Counts) please send a request to james.yue@powerauthority.on.ca. Third-party impact evaluation reports for 2008 are currently being finalized and LDCs will be notified once they are available.

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

With kind regards,

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