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January 28, 2009

*Delivered by Courier*

Ontario Energy Board  
P.O. Box 2319  
27<sup>th</sup> Floor  
2300 Yonge Street  
Toronto, ON M4P 1E4

Attention: Kirsten Walli  
Board Secretary

Re: North Bay Hydro Distribution Limited (EB-2009-270)  
2010 Electricity Distribution Rate (Cost of Service) Application  
Responses to 1<sup>st</sup> Round Interrogatories

Dear Ms. Walli:

Please find attached a complete copy of the Board Staff's first round of interrogatory responses. This submission should replace the one that was filed on January 19, 2010.

The following questions have been updated with responses:

Question # 26, part b	page # 48 and Appendix "G"
Question # 27	page # 51 and Appendix "F"

In accordance with Procedural Order No. 1, two hard copies of this submission will be sent via courier. An electronic copy of the response in PDF format will be submitted through the Ontario Energy Board's Regulatory Electronic Submission System.

An electronic copy of the response in PDF format will be forwarded via email to the Intervenor as follows:

Energy Probe

- a) David MacIntosh, Energy Probe
- b) Randy Aiken, Aiken & Associates

Donald Rennick

- a) Donald Rennick, Independent Participants

School Energy Coalition

- a) John De Vellis, Shibley Righton LLP
- b) Wayne McNally, Ontario Education Services Corporation

Vulnerable Energy Consumers Coalition

- a) Michael Buonaguro, Public Interest Advocacy Centre
- b) William Harper, Econalysis Consulting Services Inc.

These responses are respectfully submitted for the Board's review and consideration.

Sincerely,

*Original signed by*

Cindy Tennant  
Finance Manager  
North Bay Hydro Distribution Limited  
(705) 474-8100 (310)

**Board Staff Interrogatories  
North Bay Hydro Distribution Limited  
2010 Electricity Distribution Rates  
EB-2009-0270**

**1. Letters of Comment**

- a) Has North Bay Hydro Distribution Limited (NBHDL) sent letters replying to the two letters of comment filed with the Board Secretary from Michel and Carmen Cazabon and from Terry Whelan? If so, please provide copies of the replies for the record of this case.

**Response:**

NBHDL responded to both of these letters. Attached as Appendix "A" please find copies of the questions and responses.

- b) Following publication of the Notice of Application, has BVHDL received other letters of comment? If so, please provide a copy or description, and a copy of the reply if any.

**Response:**

NBHDL received one other inquiry by email from Roger Lamothe. Attached as Appendix "B" please find a copy of this response. No other inquiries were received by phone or by customers in person on this matter.

- c) If no reply has been sent, does NBHDL intend to respond to the comments?

**Response:**

All customer inquiries have been responded to.

**2. 2010 Contributions and Grants**

*Ref: Exhibit 2, p. 29*

Forecast contributions are less than \$600,000, compared to over \$1 million in 2009 and nearly \$1.5 million actual in 2008.

Please explain the basis for NBHDL's forecast of contributions.

**Response:**

The basis for NBHDL's forecast of contributions is formed by applying contribution percentages to annual expenditures per project category, and if applicable, specific identified projects. Contribution amount is based on the DSC, and governing by laws.

The reduction of forecasted contributions from 2008 to 2010 can be explained by the following:

2008

- Enormous road reconstruction program for the City of North Bay which required major changes to a number of our lines. Contributions from the City of North Bay were in excess of \$700k, which is well above the annual average for road relocation contributions.

2009

- One large expansion and one large rebuild of a line to accommodate a proposed development, both at 100% contribution amounts, totaling over \$224k.
- Higher number of Subdivisions forecasted based on information received in 2008 from developers and the City of North Bay

2010

- There are no major expansions forecasted for 2010 and subdivision and road relocation projects expenditures are forecasted at the annual average, which in turn, lowers contribution amounts.

**3. Population in the Regression Model**

*Refs: Exhibit 3 pp. 15 and 23, and Appendix 3-A*

The population data used in the load forecast is frozen at the year-end 2008 amount, despite a steady monthly increase up to that point.

- a) Please provide a set of monthly population amounts to the end of 2010 that would continue the historic growth pattern, and provide a new fitted value of the energy forecast using the larger population variable for 2010 as an input to the econometric equation.

**Response:**

A set of monthly population amounts to the end of 2010 that continues the historic growth pattern is provided below. The 2010 billed energy forecast assuming these revised population numbers is 564,528,538 kWh.

Month	Population
Jan-09	54,683
Feb-09	54,703
Mar-09	54,723
Apr-09	54,743
May-09	54,763
Jun-09	54,783
Jul-09	54,803
Aug-09	54,822
Sep-09	54,842
Oct-09	54,862
Nov-09	54,882
Dec-09	54,902
Jan-10	54,922
Feb-10	54,942
Mar-10	54,962
Apr-10	54,982
May-10	55,002
Jun-10	55,022
Jul-10	55,042
Aug-10	55,061
Sep-10	55,081
Oct-10	55,101
Nov-10	55,121
Dec-10	55,141

- b) Base on the results in part (a) while also considering the weak t-statistic for population in Table 3-7 'Statistical Results', does NBHDL wish to alter the adjustment(s) it has submitted in Table 3-18 'Alignment of Non-normal 1 to Weather Normal Forecast'?

**Response:**

Considering the weak t-statistic for population, NBHDL has rerun the regression analysis excluding the population variable and the resulting 2010 billed load forecast is 562,603,744 kWh. Since this is essentially the same forecast as is in the Application NBHDL does not wish to alter the adjustment(s) it has submitted in Table 3-18 'Alignment of Non-normal 1 to Weather Normal Forecast'.

**4. Economic Activity in the Regression Model**

*Refs: Exhibit 3, p. 14 (line 29), and p. 17 (Table 3-8)*

- a) Please describe how the Ontario Monthly GDP index is used in NBHDL's econometric model, in particular where observed values are used and where forecast values are used.

**Response:**

For the months Jan 1999 to Dec 2008 the Ontario Monthly GDP index is used in regression analysis to determine the prediction formula outlined in Exhibit 3, page 14. For the months of May 2009 to Dec 2010 the Ontario Monthly GDP index is used as a variable in the prediction formula to forecast NBHDL's monthly energy purchases.

- b) Does NBHDL have access to data for actual economic activity that is more local in nature than the provincial data that has been used in the econometric model?

**Response:**

NBHDL does not have access to data for actual economic activity that is more local in nature than the provincial data that has been used in the econometric model.

- c) Has NBHDL considered whether differences between local and provincial economic activity may be responsible for the pattern of regression residuals found in Table 3-8 'Total System Purchase', in which the annual differences between actual and predicted purchases appear to have the same sign for several years in a row?

**Response:**

NBHDL has not considered whether differences between local and provincial economic activity may be responsible for the pattern of regression residuals found in Table 3-8 'Total System Purchase', since the annual differences between actual and predicted purchases only have the same sign for two to three years in a row.



**5. CDM Adjustments to the Load Forecast**

*Refs: Exhibit 3, p. 17-18, and Exhibit 10, Appendix 10-A*

- a) Please describe the CDM programs that NBHDL will deliver, including a breakdown between the future results of ongoing programs and any new programs that are expected to result in the adjustments shown in Table 3-9.

**Response:**

As per page 17 and 18 Of Exhibit 3 in 2009 NBHDL delivered the Electricity Retrofit Incentive Program (ERIP), Power Savings Blitz (Direct Install) and Appliance Retirement programs.

For simplicity the 3 programs delivered in 2009 were assumed to have 50% of their annual impact in 2009 and 100% impact in 2010.

In 2010 NBHDL will be delivering the same CDM programs with the same targets in addition to a street lighting retrofit that will be completed by the City of North Bay. Again for simplicity these 4 programs delivered in 2010 would have a 50% impact in terms of kwh their annual savings in 2010 and 100% in 2011. Also a very large retrofit by an industrial customer in 2009 was removed from forecasted results in 2010 to ensure results were not biased.

NBHDL did not adjust the load forecast from other earlier CDM programs completed under the Third Tranche initiative or from initiatives delivered directly by the OPA.

The following table summarizes results.

	2009 KWH Impact	2010 KWH Impact
2009 CDM Programs	2,363,756	4,727,510
2010 CDM Programs		2,501,192
Load Forecast Impact (with losses)	2,477,216	7,575,680

- b) Please provide any assumptions about the percentage of NBHDL's customers that are predicted to participate in the main programs in 2010, as a means of showing that it is reasonable to make the adjustments in Table 3-9 in addition to the large number of completed projects detailed in Appendix 10-A.

**Response:**

NBHDL has assumed that it will be delivering ERIP, Direct Install, Appliance Retirement programs in addition to a street lighting retrofit by the City of North Bay. NBHDL will achieve the same participation rates and results in 2010 compared to 2009. The following table summarizes targeted customer numbers versus total potential.

Program	2010 Targeted Number of Customers	Total Potential Customer Base
ERIP	14	412
Direct Install	293	2,500
Appliance Retirement	440	20,915

NBHDL feels that the results for ERIP and Direct Install are entirely achievable given the carry over of uncompleted projects that commenced in 2009 and a number of new projects identified through previous activities. The Appliance Retirement program has been delivered in various iterations for a number of years and has reached a steady state in terms of its annual results. In addition NBHDL has assumed that the City of North Bay will be retrofitting its street lighting system in 2010. NBHDL has experimented with several new fixture types and light sources to help the City find an effective alternative for high pressure sodium fixtures. The current street lighting fixtures are end of life. As noted in 5 a) a large retrofit completed by an industrial customer in 2009 was not part of 2010 forecasted results.

**6. Smart Grid**

*Ref: Exh 4, pp. 24-25*

- a) Please provide a more complete description of the Residential Pilot that NBHDL will conduct, including any expenditures or savings that NBHDL expects the participating customers to incur.

**Response:**

The Province has indicated its desire to move towards a Smart Grid and NBHDL is interested in learning how residential customers, particularly those in the north can participate in a way that allows cost savings. The north has a large amount of electric heat either as the primary heating system or as supplemental to natural gas. Also there is a large population of electric water heaters and in the winter the incoming water temperature is just above freezing. North Bay has a very large percentage of retirees somewhere between 30-35% of all homes. NBHDL is interested in installing in-home devices with these types of customers (in addition to low income) that will allow real time reading of smart meters so customers can monitor electricity consumption as it occurs at a location readily accessible by the customer. NBHDL wants to install technology that allows customers to control electric water heating or space heating through devices available on the market today. NBHDL wants customers to be able to decide when they want to operate equipment in response to consumption and pricing information. NBHDL is not aware of any similar initiatives by other northern utilities that would allow realistic evaluation of the technologies. Costs for each customer are forecasted as follows:

In Home Display	\$500
Control Devices	\$1000
Monitoring/Education/Admin	\$1000
Total per Customer	\$2500
Targeted # of Customers	20
Total Costs	\$50,000

Potential results in terms of electricity saved or shifted by customers are not known at this point, hence the need for the pilot.

- b) Please indicate how the cost of the Industrial and Residential Pilots relate to NBHDL's capitalization policy, and explain why the cost of the pilot projects should not be capitalized under that policy.

**Response:**

Although NBHDL's does not have a formal capitalization policy the intent is to follow Generally Accepted Accounting Principles and the guidelines set out in the OEB Accounting Procedures. Upon further review of the values included in the Industrial and Residential Pilot programs NBHDL has determined that \$20,000 of the Industrial Pilot project should have been capitalized instead of being included in OM&A expenses. Please refer to the table below that breaks out the detail of each program. NBHDL will include this correction as part of the updated RRWF requested in question #27.

**Industrial Real Time Pilot Project**

	Total	Capital	Expense	Justification
Meters including installation	10,000	10,000		owned by NBHDL fits definition of an asset as per Article 410 of the OEB Accounting Procedures Handbook
Monitoring Equipment	5,000		5,000	owned by the customer should not be included as part of NBHDL assets
Customer Incentive	10,000		10,000	funds supplied to customer to participate in the program to offset any expenditures they incur
Administration	5,000		5,000	
Total per Customer	30,000	10,000	20,000	
# of Customers	2			
Total Program	60,000	20,000	40,000	

**Residential Real Time Pilot Project**

	Total	Capital	Expense	Justification
In home Displays	500		500	owned by the customer should not be included as part of NBHDL assets
Control Devices	1,000		1,000	owned by the customer should not be included as part of NBHDL assets
Monitoring/Education/ Admin	1,000		1,000	
Total per Customer	2,500	-	2,500	
# of Customers	20			
Total Program	50,000	-	50,000	

**7. Management and Executive Salaries and Benefits**

*Ref: Exhibit 4, p. 60*

- a) Please confirm that the inflation rate assumed for management and executive salaries is 3%, along with the other employees mentioned in the first bullet on p. 60.

**Response:**

- a) NBHDL confirms that the inflation rate assumed for management and executive salaries is 3%, along with the other employees mentioned in the first bullet on p. 60. To clarify the 3% is an annual rate; the union contract rates change on April 1<sup>st</sup> of each year therefore 9/12 of the rate or 2.25% for the union members was used for the 2010 test year. Management salaries normally change on January 1<sup>st</sup> so the full 3% was used for that group of employees.
- b) Please confirm that an inflation rate of 2.3% is used for other O&M categories (per Exh 8, p. 8), and explain why a higher rate is assumed for compensation.

**Response:**

NBHDL confirms that an inflation rate of 2.3% is used for other O&M categories. NBHDL assumed a rate of 3% for compensation due to the fact that the prior three years rate increases averaged 3.25%. Note as per a) above that due to the timing of the rate increase the affect is 2.25% for the 2010 test year.

8. **LEAP**

*Refs: Table 2-14A 2010 Capital Expenditures 1 – General Assets, and Exhibit 4, p. 53*

NBHDL is including \$15,000 in account 5415 Community Relations for the LEAP initiative, in response to the Board's requirement for assistance to low-income consumers. It also has a capital expenditure of \$26,899 in account 1925, also called LEAP.

- a) Please identify how much of the \$15,000 amount relates to existing programs and how much too new program(s).

**Response:**

The \$15,000 amount relates to new program(s). The amount was derived by using the suggested guideline of .12% of the revenue requirement for the 2010 test year.

- b) Please provide a brief description of LEAP in account 1925, and if it is related to assistance for low income consumers please include an explanation.

**Response:**

Account 1925 described as LEAP of \$26,899, is related to assistance for low income consumers. Currently NBHDL's Customer Information Systems does not have the ability to manage multiple "classes" of customers in regards to billing options, payment terms, interest rates, past due criteria or deposit rules. Therefore NBHDL has included this amount as an estimate to customize the system to handle the suggested rules and guidelines around this group of customers.

## 9. Affiliate Services

*Ref: Exhibit 4, p. 71*

- a) Please provide a more complete description of NBHDL's use of the dark fibre service that it purchases from its affiliate NBHS, and a description of how the market-based price was established for the service.

### **Response:**

NBHDL uses several metres of NBHS dark fibre to haul information from substations and towers located throughout the distribution system back to NBHDL's office. For example the dark fibre links to the towers allows for the accumulation and flow of smart meter data from the AMI system. This will be a critical link in settlement through the provincial MDMR. NBHS has an inventory of the lengths of dark fibre utilized by NBHDL. NBHDL is charged the same commercial rate structure that NBHS uses for other dark fibre customers. NBHDL only uses dark fibre when other service is not available, not secure or is too costly to install.

## 10. Purchases from Non-Affiliates

*Ref: Exhibit 4, p. 72*

- a) Please describe the service that will be purchased from Mearie Management Inc. for "Benefits", including how the amount of \$581,810 is established.

### **Response:**

The services that will be purchased from Mearie Management Inc. for "Benefits" is shown in the table below. The amount of \$581,810 was established by using the forecasted benefit costs by benefit type for 2009, plus the increase related to the new employees, plus the suggested 2010 rate and plan increases provided by NBHDL's Mearie Management advisor.

#### Mearie Management Summary

	<u>Mearie Management Rate Increases</u>	<u>2009 Forecast</u>	<u>New Employees</u>	<u>% Increase</u>	<u>Changes to plan</u>	<u>2010 Test</u>
<b><u>Active Employees</u></b>						
Life Insurance	5%	9,229	1,758	549		11,537
Long-term disability plan	3%	42,599	8,114	1,521		52,234
Extended Health Care	9%	131,473	25,043	14,086	4,512	175,115
Dental Benefits	3%	46,096	8,780	1,646	9,058	65,581
		229,397	43,695	17,803	13,571	304,466
<b><u>Retiree Benefits</u></b>						
Dental	3%	48,886		1,467		50,353
Health	9%	169,493		15,254		184,747
Life Insurance	6%	39,852		2,391		42,243
		258,231	0	19,112	0	277,343
Total		487,628	43,695	36,916	13,571	581,809

- b) Please describe the service that will be purchased from Sungard Public Service for “System Provider Training”, including how the amount of \$102,914 is established.

**Response:**

The services that will be purchased from Sungard Public Service for “System Provider/ Training” are shown in the table below. The Sungard H.T.E. maintenance fee was calculated by using the 2009 maintenance fee increased by new modules purchased for 2010, inflation and exchange. The training amount was determined by assessing the required training by employee related to the H.T.E. system. NBHDL employees have not received any system training since the initial installation back in 1998 H.T.E until fiscal 2009.

Sungard Public Sector

	2009 Bridge Year	2010 Test
H.T.E. Annual Maintenance Fee	83,906	87,914
H.T.E. Training	16,438	15,000
Total System Provider/Training	<u>100,344</u>	<u>102,914</u>



**11. Harmonized Sales Tax**

It is likely that the PST and GST will be harmonized effective July 1, 2010. Unlike the GST, the PST is included as an OM&A expense and is also included in capital expenditures. If the GST and PST are harmonized, corporations would experience changes in OM&A expenses and capital expenditures.

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

- a) Would NBHDL agree to the establishment of a variance account to capture the expected reductions in OM&A and capital expenditures?

**Response:**

NBHDL would agree to the establishment of a variance account to capture the expected reductions in OM&A and capital expenditures if it becomes a directive from the Board. NBHDL believes that this is an industry issue and that a public consultation process should take place so that all alternatives are considered. NBHDL would also like to note that the recording of differences from PST & GST harmonization will increase costs due to the following:

- 1) NBHDL's H.T.E. system is not capable of tracking the "PST & GST harmonization" variances therefore it would need to be tracked manually
- 2) Extra training for the Accounts Payable staff to ensure the proper level of understanding between the old PST and GST rules and the new HST rules to properly record the variances.

- b) Are there other alternatives that the Board might consider to reflect the expected reductions in OM&A and capital expenditures?

**Response:**

Considering the effect on the transitional rules for large businesses and the fact that expenses that were previously PST exempt will now attract HST, NBHDL is not comfortable in suggesting other alternatives for the Board to consider.

**12. PILs**

*Ref: Exhibit 4, p. 82*

- a) Please provide details of the forecast reserves, comparable to the “Continuity of financial statement reserves (not deductible)” schedule that has been filed for 2008, as a means of supporting the forecast balances \$4,993,106 (beginning of 2010) and \$5,284,743 (end of 2010).

**Response:**

Details of the forecast reserves, comparable to the “Continuity of financial statement reserves (not deductible)” schedule that has been filed for 2008, as a means of supporting the forecast balances \$4,993,106 (beginning of 2010) and \$5,284,743 (end of 2010) is presented in Appendix “C”.

- b) Please provide details of the forecast tax reserves, comparable to the “Continuity of financial statement reserves (not deductible)” schedule that has been filed for 2008, as a means of supporting the forecast balances \$ 1,201,494 (beginning of 2010) and \$ 1,202,546 (end of 2010).

**Response:**

Details of the forecast tax reserves, comparable to the “Continuity of financial statement reserves (not deductible)” schedule that has been filed for 2008, as a means of supporting the forecast balances \$ 1,201,494 (beginning of 2010) and \$ 1,202,546 (end of 2010) is presented in Appendix “C”.

Please confirm why it is correct to include in the Additions to Accounting Income the tax reserves at the beginning of the year and the financial statement reserves at year-end, while including in the Deductions from Accounting Income the tax reserves at year-end and the financial statement reserves at the beginning of the year.

**Response:**

Tax reserves at the end of the previous year are considered taxable income for the current year; therefore it is correct to include in the Additions to Accounting Income the tax reserves at the beginning of the year. Tax reserves at the end of the year are not included in the determination of taxable income under the Canadian income tax act, therefore the tax reserves at year end are deducted from accounting income. Since Financial statement reserves are not permitted under the Canadian income tax act the balance at year end is added to the accounting income and conversely the balance at the beginning of the year is deducted from accounting income in the determination of income for tax purposes.

- c) With respect to the two additions to accounting income for charitable donations and Ontario tax credits, please explain why there are no offsetting amounts that are necessary to include in the deductions from accounting income.

**Response:**

With regards to the charitable donations the offsetting deduction to arrive at taxable income was missed in the tax calculation for both 2009 and 2010. The affect on taxes payable for 2009 is an increase of \$1,980 and \$2,696 for 2010. With regard to the Ontario tax credits there are no offsetting amounts since these amounts are to be included in the determination of taxable income.

**13. SSS Administration Charge**

*Ref: Exh 3, p. 26 and Exh 6, p. 3*

Table 3-23 shows total Other Revenue before RSVA Interest at \$751,484. The Revenue Deficiency Calculation in Table 6-1 shows Other Operating Revenue at \$825,116.

Please confirm that difference is due to the SSS Administration Charge, and that \$825,116 is the appropriate alternative to use to determine the Base Revenue Requirement to be generated from Distribution Rates.

**Response:**

NBHDL confirms that difference is due to the SSS Administration Charge, and that \$825,116 is the appropriate alternative to use to determine the Base Revenue Requirement to be generated from Distribution Rates.

**14. Affiliate Administration Fee**

*Ref: Exh 3, p. 26 and Exh 4, p. 61*

- a) Please confirm that the decrease in the Affiliate Administration Fee is the result of ending the customer service provided to North Bay Hydro Services water heater customers. If not confirmed, please describe the reason for the decrease in this source of revenue.

**Response:**

The decrease in the Affiliate Administration Fee is a result of North Bay Hydro Services (NBHS) paying their own invoices related to the water heater business which attracts a 15% management fee. In 2009 NBHDL paid \$206,722 included in the \$214,622 of purchases shown in the table below for NBHS, in 2010 these transactions will disappear and the related 15 % management fee will decrease by \$31,016. This decrease in management fee is offset by other contracted services charges that are expected to increase as per the table below.

NBHDL's application may not have been clear enough on the customer service comments related to the water heater business. In 2010 MBHS will hire their own customer services representative which will relieve NBHDL's customer service staff of this service. The NBHS employee will be paid through NBHDL payroll system therefore NBHDL will charge NBHS for the wages and burdens related to this employee, plus they will attach the 15% administration fee to this expense. Due to this arrangement the amount for contracted services does not show a decrease nor does the Affiliate Administration Fee.

Note the summary table below has been revised for the line" From NBHDL to NBHS for Contracted Services" from \$169,873 in 2009 to \$233,192 and from \$180,304 to \$254,263. This change is due to the service charges for rent, IT, HR and Billing being missed when compiling this summary table.

**Table 4-19 Summary of Affiliated Products and Services**

Product & Services Provided		Activity	2006 Actual	2007 Actual	2008 Actual	2009 Bridge Year	2010 Test Year	Pricing Methodology
From NBHDL	To NBHS	Loan Interest	66,648	66,648	66,648	-	-	5% on principle balance as per loan agreement
NBHD	NBHS	Purchases	308,801	329,248	331,906	214,622	8,064	Cost of materials/contractor fees
NBHD	NBHS	Contract Services	54,226	48,599	98,574	233,192	254,263	Cost of labour as per time sheets plus burdens, billing services, rent, Human Resources and IT services
NBHD	NBHS	Management Fee	54,454	56,667	64,572	67,172	39,349	15% of purchase and contract services
NBHD	NBHS	Joint pole attachment Fee	19,579	20,920	22,395	22,395	22,395	as per approve rates \$22.35 per attachment
Total			503,708	522,082	584,094	537,381	324,071	
NBHD	CNB	Power Purchase	1,731,388	1,891,518	1,739,831	1,777,830	1,735,869	Market based
NBHD	CNB	Street Light Energy	339,425	373,048	318,967	323,505	369,365	Market based
NBHD	CNB	Construction Activity	332,475	436,177	356,492	183,215	153,754	Legislated cost sharing formula
NBHD	CNB	Street Light Maintenance	137,485	150,781	99,485	102,121	104,828	Cost basis
Total			2,540,773	2,851,524	2,514,775	2,284,550	2,258,988	
CNB	NBHD	Loan Interest	975,550	975,550	975,550	975,550	975,550	5% on principle balance as per loan agreement
CNB	NBHD	Property Taxes	78,522	80,391	78,422	62,429	64,292	assessment at market price
CNB	NBHD	IT Services	80,124	92,500	83,689	85,200	87,160	as per service agreement
CNB	NBHD	Vehicle Fuel	62,861	66,420	88,435	86,300	88,320	bulk price plus 5% markup
Total			1,197,057	1,214,861	1,226,096	1,209,479	1,215,322	
NBHS	NBHD	Fibre Rental	25,315	25,315	25,315	25,315	25,315	Market based

- b) Please describe the activity that is forecast to generate revenue in 2010 of \$39,349, and confirm whether it is an activity that is expected to continue generating revenue after 2010.

**Response:**

The activity that is forecasted to generate revenue in 2010 of \$39,349 is shown in the table above. The \$39,349 is the 15% management fee attached to the Purchases of \$8,064 and the Contracted Services of \$254,263. The purchases and contracted services and the accompanying pricing methodology are outlined in the application Exhibit #4 page 69. These activities are expected to continue generating revenue after 2010.

**16. Embedded Distributor**

*Ref: Exhibit 1, p. 36*

- a) Please provide information on the amount of electricity delivered by NBHDL to Hydro One at the two delivery points (at Bond Street and at Highway 11) during 2008, and forecast to be delivered in 2010.

**Response:**

NBHDL delivered the following amount of electricity to the two Hydro One delivery points in 2008:

- Bond Street 3,501,300 kwh
- Highway 11 362,927 kwh

At the Bond Street location demand in the summer months is typically 440kW and demand in winter is 890kW. At Highway 11 demand in summer is just over 50kW and in the winter 80kW.

Discussions with Hydro One indicated there would not be significant change in these volumes for 2010 therefore the load forecast was not adjusted.

- b) Please provide a brief description of the distribution facilities that are used to serve the load, and an explanation of whether the load on the facilities is partly for customers in NBHDL's service area or only for Hydro One.

**Response:**

The Bond Street delivery point is supplied by a 22kv sub-transmission circuit originating from North Bay Transformer Station. This circuit supplies 3 NBHDL customers and 1 Municipal Substation before the delivery point to Hydro One.

The Highway 11 delivery point is supplied by the 12.470 kv 14F3 circuit which supplies approximately 340 NBHDL customers before the delivery point to Hydro One.

Please provide information on the form of the billing by NBHDL to Hydro One, the rates charged in 2008 and proposed for 2010, and the amount of revenue in 2008 and forecast for 2010.

**Response:**

Hydro One is billed as retail General Service 50 to 2,999 kW customer of NBHDL for energy, RTSR and distribution charges. Billing is monthly on NBHDL's CIS billing system.

Rates charged in 2008 are as follows:

- January to April 2008 – Distribution Volumetric - \$2.1981/kW  
Service Charge (on 30 days) - \$314.23
- May to December 2008 – Distribution Volumetric - \$2.1783/kW  
Service Charge (on 30 days) - \$311.40

Proposed 2010 rates are as follows:

- Service Charge (on 30 days) - \$329.78
- Distribution Volumetric - \$2.3014/kW
- LRAM & SSM Rider - \$.0679/kW
  
- Distribution Revenue for 2008 is \$24,869

2010 Forecast Revenue is \$27,514.

**17. Unmetered Scattered Load ("USL") Service Charge**

*Ref: NBHDL Cost Allocation Model Sheet I6 'Customer Data', and Exhibit 9, p. 24*

The information in the cost allocation filing shows that NBHDL serves 21 USL customers (252 bills annually), and there are 140 connections

- a) Please provide a list of how many connections each USL customer has.

**Response:**

NBHDL incorrectly showed 140 connections. This count was derived from the 2006 Cost Allocation Study. The correct number of connections is 76. 20 of the 21 customers have 1 connection each and 1 customer has 56 connections.

- b) Please provide a calculation of what the USL monthly service charge would be if it were charged on a “per connection” basis.

**Response:**

Based on the information provided in part a) the following calculation shows what the USL monthly service charge would be if it were charged on a “per connection basis”:

<b>2010 - Per Connection Calculation</b>		
Total Net Rev. Requirement	\$	12,052
Current Fixed Charge Split		53.86%
Total Fixed Revenue	\$	6,491
# of Connections		76
Total Fixed Revenue / Connection	\$	85.41
# of Months		12
<b>Monthly Per Connection Charge</b>		<b>7.12</b>

- c) Please provide a calculation of the bill impact on the customer with the most connections and the customer with the least connections if the service charge provided in part b) were to be charged in place of the “per customer” charged that is proposed by NBHDL.

**Response:**

A calculation of the bill impact on the customer with the most connections and the customer with the least connections if the service charge provided in part b) were to be charged in place of the “per customer” charged that was proposed in the rate application is provided below. All other 2010 proposed rates were kept the same in order to see the impact of the monthly service charge only. It should be noted that NBHDL only has one customer with multiple connections.



### Unmetered Scattered - Monthly Bill Impact - Customer with Most Connections

		2010 Bill-Customer			2010 Bill-Connection			Impact		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
<b>Consumption</b>	Monthly Service Charge			25.70	56	7.1175	398.58	372.88	1,450.89%	14.45%
<b>20,000 kWh</b>	Distribution (kWh)	20,000	0.0165	330.00	20,000	0.0165	330.00	0.00	0.00%	11.96%
<b>56 # of connections</b>	LRAM & SSM Rider (kWh)	20,000	0.0024	48.00	20,000	0.0024	48.00	0.00	0.00%	1.74%
	Regulatory Assets (kW)	20,000	0.0003	5.20	20,000	0.0003	5.20	0.00	0.00%	0.19%
	<b>Sub-Total - Distribution</b>			<b>408.90</b>			<b>781.78</b>	<b>372.88</b>	<b>91.19%</b>	<b>28.34%</b>
	RTSR - Network	20,960	0.0049	102.14	20,960	0.0049	102.14	0.00	0.00%	3.70%
	RTSR - Connection	20,960	0.0043	90.40	20,960	0.0043	90.40	0.00	0.00%	3.28%
	<b>Sub-Total - Delivery</b>			<b>601.44</b>			<b>974.32</b>	<b>372.88</b>	<b>62.00%</b>	<b>35.32%</b>
	Wholesale Market Rate	20,960	0.0065	136.24	20,960	0.0065	136.24	0.00	0.00%	4.94%
	DRC	20,000	0.0070	140.00	20,000	0.0070	140.00	0.00	0.00%	5.08%
	Cost of Power Commodity (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.00%	1.55%
	Cost of Power Commodity (kWh)	20,210	0.0660	1,333.88	20,210	0.0660	1,333.88	0.00	0.00%	48.35%
	<b>Sub-Total - Other Charges</b>			<b>2,254.32</b>			<b>2,627.20</b>	<b>372.88</b>	<b>16.54%</b>	<b>95.24%</b>
	GST		5.00%	112.72		5.00%	131.36	18.64	16.54%	4.76%
	<b>TOTAL BILL</b>			<b>2,367.03</b>			<b>2,758.55</b>	<b>391.52</b>	<b>16.54%</b>	<b>100.00%</b>

### Unmetered Scattered - Monthly Bill Impact - Customer with Least Connections

		2010 Bill-Customer			2010 Bill-Connection			Impact		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
<b>Consumption</b>	Monthly Service Charge			25.70	1	7.1175	7.12	(18.58)	(72.31%)	14.11%
<b>400 kWh</b>	Distribution (kWh)	400	0.0165	6.60	400	0.0165	6.60	0.00	0.00%	13.08%
<b>1 # of connections</b>	LRAM & SSM Rider (kWh)	400	0.0024	0.96	400	0.0024	0.96	0.00	0.00%	1.90%
	Regulatory Assets (kW)	400	0.0003	0.10	400	0.0003	0.10	0.00	0.00%	0.21%
	<b>Sub-Total - Distribution</b>			<b>33.36</b>			<b>14.78</b>	<b>(18.58)</b>	<b>(55.70%)</b>	<b>29.30%</b>
	RTSR - Network	419	0.0049	2.04	419	0.0049	2.04	0.00	0.00%	4.05%
	RTSR - Connection	419	0.0043	1.81	419	0.0043	1.81	0.00	0.00%	3.58%
	<b>Sub-Total - Delivery</b>			<b>37.21</b>			<b>18.63</b>	<b>(18.58)</b>	<b>(49.93%)</b>	<b>36.93%</b>
	Wholesale Market Rate	419	0.0065	2.72	419	0.0065	2.72	0.00	0.00%	5.40%
	DRC	400	0.0070	2.80	400	0.0070	2.80	0.00	0.00%	5.55%
	Cost of Power Commodity (kWh)	419	0.0570	23.89	419	0.0570	23.89	0.00	0.00%	47.36%
	Cost of Power Commodity (kWh)	0	0.0660	0.00	0	0.0660	0.00	0.00	0.00%	0.00%
	<b>Sub-Total - Other Charges</b>			<b>66.63</b>			<b>48.05</b>	<b>(18.58)</b>	<b>(27.89%)</b>	<b>95.24%</b>
	GST		5.00%	3.33		5.00%	2.40	(0.93)	(27.89%)	4.76%
	<b>TOTAL BILL</b>			<b>69.97</b>			<b>50.45</b>	<b>(19.51)</b>	<b>(27.89%)</b>	<b>100.00%</b>

**18. Retail Transmission Service Rates**

*Ref: Exhibit 8, p. 8*

Over the two year period shown in Table 8-10, what has been the approximate percentage of the wholesale transmission cost that is paid to IESO and what percentage is paid to Hydro One Distribution as the host distributor?

**Response:**

The approximate percentage of the wholesale transmission cost paid to the IESO is 97.37% and 2.63% to Hydro One Distribution as the host distributor.

**19. Low Voltage Adder**

*Ref: Exhibit 8, p. 6*

- a) Please confirm that NBHDL's Low Voltage cost consists only of Hydro One's service charge, the ST Common Line rate, and the regulatory asset rate riders.

**Response:**

- a) NBHDL confirms that the Low Voltage cost consists only of Hydro One's service charge, the ST Common Line rate, and the regulatory asset rate riders. The service charge was missed in error in NBHDL's explanation of the low voltage expense in Exhibit 8, pg. 6.

- b) Please provide a calculation of NBHDL's annual LV cost without Rate Rider # 4, i.e. the S.T. Common Line rate at \$0.55 per kW, detailing the component parts of the calculation.

**Response:**

	kW	Rate	Rate Rider #4	Rate Rider #5	Net Rate	Rate Excluding Rate Rider #4	2006 Reg Assets	2008 Reg Assets	Annual Cost
Service Charge (3 points)		\$ 183.92	\$ (65.78)	\$ 0.13	\$ 118.27	\$ 184.05			\$ 6,625.80
2006 Reg. Assets							\$ 542.12		\$ 6,505.44
2008 Reg. Assets	36,475.21							\$ (887.12)	\$ (887.12)
Common Charge	36,475.21	\$ 0.55	\$ (0.20)	\$ -	\$ 0.35	\$ 0.55			\$ 20,061.37
<b>Total</b>									<b>\$ 32,305.49</b>

2006 Reg. Assets:			%	\$
	LV (1550)	\$ 26,001	5.212711	\$ 542.12
	OEB (1508)	\$ 1,140	0.228549	\$ 23.77
	Network (1584)	\$ (4,763)	-0.954892	\$ (99.31)
	Connection (1586)	\$ (17,390)	-3.486367	\$ (362.58)
	<b>Total</b>	<b>\$ 4,988</b>		<b>\$ 104.00</b>

2008 Reg. Assets - based on volumetric credit of \$0.01/kW:

	Province Wide \$	NBHDL %
Network (1584)	\$ (4,257,700)	574.25%
Connection (1586)	\$ 1,903,440	-256.72%
LV (1550)	\$ 1,803,260	-243.21%
OEB Costs (1508)	\$ (3,920)	0.53%
PILS (1592)	\$ (189,950)	25.62%
Smart Meter Minimum pre May 2007	\$ 3,370	-0.45%
Smart meter excess functionality	\$ 630	-0.08%
Smart Meter minimum post May 2007	\$ (570)	0.08%
	<b>\$ (741,440)</b>	<b>100.00%</b>

**20. Bills Impacts**

*Ref: Exhibit 8, p. 21*

- a) Please provide a more complete version of Appendix 8-A with customers in each class covering various monthly consumption amounts, as specified in the 2010 Filing Requirement, Appendix 2-R.

**Response:**

A more complete version of Appendix 8-A with customers in each class covering various monthly consumption amounts, as specified in the 2010 Filing Requirement, Appendix 2-R, is provided in Appendix "D".

*Ref: Exhibit 8, p. 23*

- b) In the calculation of the bill impact for Sentinel Lights, the 2010 amount in the row “Sub-total - Other Charges” appears to be too large, which in turns affects the total bill impact. Please check this calculation, and if found to be in error please provide a corrected calculation.

**Response:**

In the calculation of the bill impact for Sentinel Lights, the 2010 amount in the row “Sub-total - Other Charges” had a calculation error, which in turn affected the total bill impact. A corrected bill impact calculation has been provided as part of the response to part a) above.

**21. Total Loss Factor**

*Ref: Exhibit 8, p. 10*

- a) Please provide a brief explanation of what is meant by “AQEW” and “Kinetiq”.

**Response:**

“AQEW” is the Total Allocated Quantity of Energy Withdrawn by the Market Participant (NBHDL) from the IESO-controlled grid for use in Ontario for the applicable portion of the Settlement Period.

“Kinetiq” is the settlement software that NBHDL’s service bureau uses to collect, store and manage NBHDL’s metering data.

“AQEW” in this context means NBHDL’s historical records of monthly IESO kwh values. Our settlement service bureau uses “Kinetiq” software to also store historical IESO kwh values.

*Ref: Exhibit 8, p. 11, lines 13-15*

- b) Please provide a brief explanation of the effect of de-registering meters on the losses associated with the points of supply listed in this reference.

**Response:**

Hydro One owned all metering inside the transformer stations supplying NBHDL prior to de-registration. At Trout Lake Transformer Station which supplies between 75-80% of NBHDL's load, Hydro One metered their feeders and station service and NBHDL's load was calculated by summing total station load and subtracting Hydro One feeder load and station service load. NBHDL was billed on the basis of calculation as opposed to actual metered load on its feeders prior to de-registration. NBHDL has no evidence to confirm the accuracy of this billing process. In addition NBHDL is of the opinion that Hydro One's meters and associated equipment was very old and had been in service for several decades. Hydro One did not provide evidence of Measurement Canada accuracy compliance after this metering was placed in service. NBHDL's experience with mechanical metering is that readings tend to be low over time and therefore under-record actual consumption. NBHDL cannot confirm this suspicion as this metering equipment was owned by Hydro One.

The de-registration process was largely completed in 2005 and early 2006. All new metering and associated equipment was installed at this time and NBHDL was billed by the IESO on actual metered data not calculations. Based on this history and experience NBHDL thought it prudent to calculate losses on 3 complete years of data after the de-registration process was completed as this is the most accurate data available. Extending line loss analysis to 5 years would include 2 years of less accurate information.

Ref: Exhibit 8, p. 12, Table 8-12

- c) Please give a breakdown of the amount of electricity in the first row of the table for at least one of the years in two amounts, one part being the electricity delivered through IESO-controlled delivery points and the other part being the electricity delivered through embedded Hydro One Distribution Low Voltage (or Sub-transmission) delivery points.

**Response:**

Please find below Exhibit 8, Table 8-12 with the additional two rows above "A" marked as "A1" and "A2". A1 represents two Hydro One feeders MS#3 and MS#7 each with losses of 3.4% as inputs to Delivery Point 105340. For 2007 the total load on MS#7 was 11,206,552.1 kwh and on MS#3 was 4,942,158.0 kwh for a total of 16,148,710.1 kwh. The Hydro One loss factor of 3.4% increased the value "With Losses" to 16,697,766.3 kwh.

Table 8-12 Total Loss Factor Calculation					
	Description	2006	2007	2008	Total
A1	Hydro One MS#3 and MS#7 (Inputs to Trout Lake TS Delivery Point 105340)		16,148,710		
A2	Difference (Excludes MS#3 and MS#7 above)		578,490,183		
A	"Wholesale" kWh IESO Without Losses (Total of Delivery Points 105340 and 100279)	581,595,644	594,638,894	590,931,792	1,767,166,329
B	"Wholesale" kWh for Large Use customer(s)				
C	Net "Wholesale" kWh (A)-(B)	581,595,644	594,638,894	590,931,792	1,767,166,329
D	"Retail" kWh (Distributor)	560,321,499	570,440,203	567,021,540	1,697,783,242
E	"Retail" kWh for Large Use Customer(s)				
F	Net "Retail" kWh (D)-(E)	560,321,499	570,440,203	567,021,540	1,697,783,242
G	Loss Factor [(C)/(F)]	1.037968	1.042421	1.042168	1.040867
H	Distribution Loss Adjustment Factor (3 year avg.)				1.040867
I	Supply Facility Loss Factor (3 year avg.)	1.007165	1.006729	1.006722	1.006870
J	Total Loss Factor				1.048018

- Response:**

delivery points.

[illegible][illegible]

	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI
1												
2												
3												
4												
5												
6												
7												
8												
9												
10	Pricing	Price Reason	Previous Balance	Payment	Budget Billing Plan	Electricity					Total Current Charges	Outstanding Balance
						Usage	Rate	Amount	Delivery	GST (87086-5821-RT0001)		
11	Spot Price	mbedded WMP	\$562.50	-\$562.50	\$0.00	331116	0.0000	\$0.00	\$538.74	\$26.94	\$565.68	\$565.68
12	Spot Price	mbedded WMP	\$10,221.06	-\$10,221.06	\$0.00	1415904	0.0000	\$0.00	\$11,704.75	\$585.24	\$12,289.99	\$12,289.99
13	Spot Price	mbedded WMP	\$1,199.89	-\$1,199.89	\$0.00	1084787	0.0000	\$0.00	\$1,462.95	\$73.15	\$1,536.10	\$1,536.10
14												
15			\$11,983.45	-\$11,983.45	\$0.00				\$13,706.44	\$685.33	\$14,391.77	\$14,391.77

## 22. Specific Service Charges

*Ref: NBHDL Conditions of Service, p. 28*

NBHDL includes a “general administration fee” in its Conditions of Service for unauthorized energy use.

- a) Has NBHDL charged this fee to any customers, and if so how much revenue has been generated?

### **Response:**

The Conditions of Service referencing a ‘general administration fee’ is no longer current. NBHDL revised our Conditions of Service in June 2006. The following is taken from NBHDL’s current Conditions of Service related unauthorized energy use. Disconnection and reconnection costs will apply as well payment of estimated energy used, and all costs incurred by NBHDL including inspections, repair costs and agent fees.



<p><b>North Bay Hydro Distribution Limited</b></p> <p><b>Conditions of Service</b></p>	<p><b>Number:</b> NBHDLCOS – 220 – 02</p> <p><b>Issue Date:</b> June, 2006</p>
<p><b>Unauthorized Energy Use</b></p>	<p><b>Review Date:</b> November, 2007</p>

### 1. Preamble

*Energy* usage that is not recorded by a *Measurement Canada* approved meter, and/or where the *Person* using *energy* does not have a *Distribution Services Agreement* with North Bay Hydro Distribution Limited (NBHDL) is considered unauthorized *energy* usage. This includes, but not limited to, fraud, abuse, theft of power, and *energy diversion*.

### 2. Disconnection

NBHDL reserves the right to *disconnect* any *Person*, or *Consumer*, for causes, not limited to, *energy diversion*, fraud, or abuse on the part of the *Person* or *Consumer*. Reconnection may not occur until the *Consumer* or *Person* rectifies the condition and provides full payment to NBHDL of estimated *energy* used, all costs incurred by NBHDL arising from unauthorized *energy* use, including inspections, repair costs, agent fees, and the cost of *disconnection* and reconnection. Refer to NBHDLCOS-240-03 Deposits.

### 3. Criminal Code

Unauthorized use of *energy* is a criminal offence, and the North Bay Police Services will be notified of all occurrences.

- b) In NBHDL's view, should this fee be included on the tariff sheet?

#### Response:

Refer to response to a). NBHDL does not have a "general administrative fee" in our current Conditions of Service.

**23. Allocation of Deferral and Variance Accounts**

*Ref: Exhibit 9, Table 9-7 'Load Forecast Data', (p. 15)*

- a) Please provide a brief description of how NBHDL made its 2010 forecast of energy to be supplied to Non-RPP Customers for the Residential, General Service < 50 kW, General Service 50 – 2999 kW, and Sentinel Lighting classes.

**Response:**

NBHDL made its 2010 forecast of energy to be supplied to Non-RPP Customers for the Residential, General Service <50kW, General Service >50kW, and Sentinel Lighting classes based on historical 2008 percentage by class.

- b) Please provide a forecast of the billing kilowatts of the non-RPP customers in the General Service 50 – 2999 kW class.

**Response:**

Using the same methodology answered in 23 a) the billing kilowatt of the non-RPP customers in the General Service 50 - 2999 kW class would be 548,923 kW.

## 24. Regulatory Asset Rate Riders

*Ref: Exhibit 9, Table 9-9 'Deferral and Variance Account Rate Riders', (p. 17)*

Table 9-9 provides a calculation of two rate riders for each class that would recover RSVA and non-RSVA balances respectively.

- a) Please provide rate riders by rate class for each class that would recover the balance in the Global Adjustment sub-account of Account 1588 from non-RPP customers only.

### **Response:**

The following table provides the applicable rate riders in response to a) above.

Rate Class	Proposed Rate Rider	Billing Determinant
Residential RPP		kWh
Residential non-RPP	\$ 0.00162	kWh
General Service <50 kW RPP		kWh
General Service <50 kW non-RPP	\$ 0.00162	kWh
General Service 50 to 2999 kW RPP		kW
General Service 50 to 2999 kW non-RPP	\$ 0.56728	kW
Intermediate non-RPP	\$ 0.84894	kW
Sentinel Lighting RPP		kW
Sentinel Lighting non-RPP	\$ 0.58329	kW
Street Lighting non-RPP	\$ 0.57645	kW
Unmetered Scattered Load non-RPP		kWh

- b) Does NBHDL have the billing capability to have two rate riders by rate class: one for RPP customers and another for non-RPP customers?

### **Response:**

NBHDL does not have the billing capability to have two rate riders by rate class.

Please provide rate riders by rate class that would recover the aggregate balance of all of the other accounts (i.e. excluding the Global Adjustment sub-account of Account 1588) for which NBHDL has requested disposition.

**Response:**

The following table provides the applicable rate riders in response to c) above.

Rate Class	Proposed Rate Rider	Billing Determinant
Residential RPP	\$ 0.00013	kWh
Residential non-RPP	\$ 0.00013	kWh
General Service <50 kW RPP	\$ 0.00016	kWh
General Service <50 kW non-RPP	\$ 0.00016	kWh
General Service 50 to 2999 kW RPP	-\$ 0.03768	kW
General Service 50 to 2999 kW non-RPP	-\$ 0.03768	kW
Intermediate non-RPP	-\$ 0.16685	kW
Sentinel Lighting RPP	-\$ 0.42121	kW
Sentinel Lighting non-RPP	-\$ 0.42121	kW
Street Lighting non-RPP	-\$ 1.43883	kW
Unmetered Scattered Load non-RPP	\$ 0.00026	kWh

- c) If NBHDL were to establish a separate rate rider to dispose of the balance of the Global Adjustment sub-account of Account 1588, please provide NBHDL's view as to whether this rate rider would be applicable to MUSH ("Municipalities, Universities, Schools and Hospitals") sector customers.

**Response:**

NBHDL's view is that if a separate rate rider were created to dispose of Global Adjustment sub-account 1588 balances that a portion would apply to MUSH sector customers. NBHDL notes that in this context that the definition of customer should be expanded to include meters. One MUSH sector customer may be served by several meters. NBHDL has not completed a thorough analysis; however some MUSH sector customers may have never been on RPP rates or transitioned off RPP rates as early as 2004. Some MUSH customers opted to sign with retailers and if they were served by multiple meters then the transition may have occurred over a few months for a single customer.

If the answer to g) is in the negative, does NBHDL have the capability in its billing system to exclude MUSH sector customers to which the separate rate rider for the disposition of the Global Adjustment sub-account of Account 1588 balance would apply?

**Response:**

For limitations of the billing system please refer to 24 b). NBHDL notes that applying a Global Adjustment rate rider to the MUSH customers that moved off RPP would be an onerous and time consuming process given the number of years, the number of customers and the number of meters involved in such calculations.

**25. Service Quality**

*Ref: Exhibit 4, p. 61*

Please provide a description of the service quality indicator that applies to the Customer Service Representatives, including the target level for the indicator, together with a brief explanation of what it means to have achieved 67% in 2008.

**Response:**

The service quality indicator that is referenced to the Customer Service Representatives is the Telephone Service Factor (TSF). The description of this service quality indicator is the percentage of calls to the utility's general inquiry number that are answered within 30 seconds. The TSF standard is 65% or better. NBHDL's actual performance for 2008 of 67% means that they have performed 2% better than the required standard.

**26. LRAM / SSM**

*Ref: Exhibit 10, Page 6 of 22*

NBHDL is applying for recovery of a Lost Revenue Adjustment Mechanism ("LRAM") amount of \$321,318 to recover revenue lost from programs implemented from 2005-2008, a Shared Savings Mechanism ("SSM") amount of \$124,447 and carrying charges totaling \$17,237. It appears that North Bay Hydro has used the OEB Assumptions list when calculating its LRAM claim. On January 27, 2009, by way of letter to all licensed electricity distributors, the Board indicated that it would be adopting the Ontario Power Authority's ("OPA") Measures and Assumptions list for use by distributors for the purposes of applications for new distribution rate-funded CDM programs, LRAM and SSM. Further, in the Board's decision on LRAM to Horizon Utilities (EB-2009-0192/EB-2009-0158), dated October 8, 2009, the Board noted in its findings that "what is clear is the underlying principle of LRAM, which is that distributors are to be kept whole for revenue that they have forgone as a direct consequence of implementing CDM programs." In the same Decision, the Board goes on to state that "utilities should always use the most current input assumptions which have been adopted by the Board when preparing their applications because these assumptions represent the best estimate of the impact of the programs."

- a) Please provide the rationale for why NBHDL has not used the most recently published OPA Measure and Assumption list when calculating its LRAM claim.

**Response:**

The submission covers the recovery of LRAM and SSM for selected Third Tranche programs delivered by North Bay Hydro (NBHDL) from 2005 to April 30, 2008. It also includes the LRAM recovery for the OPA programs delivered by the OPA that were considered final by the OPA for 2006 and 2007. Forgone revenue is calculated to the end of 2009 and carrying charges for LRAM are calculated to September 30, 2009.

In part NBHDL's response to question 26 a) can be answered with additional and/or highlighted information contained in Exhibit #10. Some of the submission is repeated here for convenience. This question is divided into three parts and are related to Third Tranche and describe the methodology: Part 1) for the larger customers including General Service > 50 kW, General Service < 50 kW and Un-metered Scattered Load (traffic lights); Part 2 for customers making like-for-like changes including General Service > 50 kW and General Service < 50 kW customers and Part 3) for Residential customers.

As per section 1.4 of Exhibit 10 submitted to the Board on October 26, 2009, the inputs and assumptions found on the Board's website are used wherever possible and where not, a suitable proxy is selected for the required inputs. Sections 3.0, 3.1 and 3.11 of the each of the four annual reports explained each of the common measures and sections 3.6, 3.7 and 3.8 provided an overview of the custom measures. Both the common and custom measures were included

in an appendix for each of the annual reports by segment. Although not part of the filing guidelines included in sections 9.2 and 9.3 of the Guidelines, each measure used for LRAM and SSM was included in Appendix 10-A of Exhibit 10. These were modified as per section 1.4 of Exhibit 10 and organized by segment as was the case of the annual reports.

For further information related to this section please refer to the Bob Mason & Associates Third Party Review.

## **Part 1: Methodology for Larger Customers**

This part includes General Service > 50 kW, General Service < 50 kW and Traffic Lights. This part represents 74 of the 100 projects. This group represents 90.27% of the kWh savings for the total of parts 1 and 2. Part 2 which represents the remaining 26 projects has a different agreement and methodology to calculate the TRC screening and incentive levels which provides faster results.

### **1.1 Delivery Channels**

Various delivery channels were used to develop projects with customers. For example NBHDL hosted various meetings and information sessions targeted at both General Service customers and larger commercial and industrial customers. NBHDL made arrangements with various local allies such as consultants, contractors and suppliers to conduct audits. These allies proved most useful to assist with the development and implementation of projects. NBHDL educated some customers and several other contractors and consultants on Demand Reduction Programs who were not auditors who also initiated projects.

Part of the mandate with the various delivery channels was to encourage and educate the customers on energy conservation and present NBHDL any potential project for review and a TRC screening analysis. Customers and allies understood that installations had to meet all regulations and improve the lighting levels where required, ensure controls operate as designed and high quality energy efficient equipment was installed. As a result of this approach NBHDL is not aware of any complaints on lighting levels, the operation of motors, fans, chillers, heating systems, air conditioning or thermal envelope improvements.

To pass the TRC screening analysis the various consultants understood the advantages of installations resulting in the largest energy savings and the use of long life equipment. Thus many projects did not result in simply like-for-like changes but such things as: a) permanent wiring changes resulting in the removal of fixtures, installation of manual switches, occupancy sensors, zone controllers, Enterprise Buildings Integrator (EBI); b) reductions in the number of ballasts per fixture; c) use of long life lamps; and d) use of fewer and smaller high efficient motors for pumps, circulations and fans.

This approach involved the calculation of kWh peak kW saved for many of these

projects. This is discussed later in this section.

## **1.2 Data Collection**

Once NBHDL approved a potential project with a third party, an audit was conducted by that third party. The information submitted by the third party included what exists at the premises such as types and numbers of lamps, fixtures and ballasts, wattage of each fixture, motor sizes, control systems, hours of use and operation. The submission included the estimated cost, types and numbers of lamps, fixtures and ballasts, wattage of each fixture, motor sizes, control systems and hours of use. The report showed the kWh energy savings, equipment life, simple payback (years or months), and explanation of costs, assumptions and recommendations. The submission had to satisfy the customer and provide the same or better quality than the base case for such technologies as lighting, heating ventilation and air conditioning, controls and thermal envelope.

The customer provided the third party with the operating characteristics of the building and equipment if available. This information was necessary to calculate the most accurate estimated energy savings. Once this information was submitted by the third party to NBHDL it is reviewed by NBHDL and its consultants to ensure accuracy and completeness.

When a third party auditor was not available, the customer provides the data to an NBHDL consultant who utilized the same steps as per above.

NBHDL used the report as a basis to conduct the necessary technology screening analysis as per the Guidelines. To pass the screening analysis the total project was considered. If the project failed, various measures were eliminated until the project passed. When the project or the modified project was completed the incentive was calculated from the peak kW reductions for both winter and summer tabulated in the TRC calculations. NBHDL prepared an agreement for presentation to the customer.

## **1.3 Agreement**

The agreement included various schedules depending on the type of project. One schedule summarized the project, providing expected results and the calculated incentive based on the available information. A second schedule contained the detail of work to be done such as retrofits, removals and replacements, estimated costs, operating time, energy savings, customer savings, equipment life and simple payback. When a measure did not have a load profile and a suitable proxy did not exist on the inputs and assumptions included on the Board's website, an additional schedule was included containing the expected profile of the equipment based on input from the customer or their consultant. With the above information the TRC calculations were not necessarily based on averages of the Board's website but unique operating



characteristics for the customer. Where that information was not available, the quantities from the Board's website were used unless the information was available from another similar project. The agreement was executed by both the customer and NBHDL.

#### **1.4 Verification**

Once the project was completed a walk through audit was conducted by a NBHDL consultant. In that walk through the consultant identified any changes from the plan, obtaining a list of material installed as well as labour and material costs. This information was analyzed by a second consultant and modified as necessary to ensure the material matches what was installed. A new spreadsheet was prepared with the actual costs and material installed. If there are any other changes such as operating hours of various areas, base case altered, additional installations or less work accomplished, the data was updated and input into the tool for recalculating the TRC and incentives. These changes were presented to the customer and the incentive paid based on these revised calculations. In some cases there was no change from the agreement as the all work went as planned and actual labour costs were the same as quoted.

#### **1.5 Sample Calculations**

The following samples are included here to provide some of the mechanics to calculate energy savings for the majority of the projects for large customers.

For most measures the following formula was used to calculate the annual kWh saved. In some cases the energy had to be divided into seasons while in others monthly. However for most installations the annual load profile was used to provide seasonal kWh.

Annual kWh saved = (kW/unit \* N \* H) base - (kW/unit \* N \* H) efficient  
kW /unit is the specified wattage of equipment for base and efficient  
N is the number of units  
H is the operating time of each unit

##### **1.5.1 Lighting**

For lighting, total wattage of installed equipment (ballast and lamps) was calculated and equipment life recorded from technical reference material and hours usage. The calculations were based on a common formula for annual kWh saved. The incremental costs of \$44.36 were the complete actual costs from invoices for labour and material for lamps and ballasts. Equipment Life is dependent on the shortest life component which in this case was the lamps at 26,000 hours.

Below is an example of an office building from the submission:

Annual Operating Hours = 3120

Life of Lamp is 26000 hours

Base Case 2-4ft T12's 40 watt lamps is 82 watts

Efficient Case 2-4ft 28 watt lamps 45 watts

Annual kWh saved =  $(.082 * 1 * 3120)$ base -  $(.045 * 1 * 3120)$ efficient = 115 kWh

Peak Summer kW saved = .030

Peak Winter kW saved is .032

Equipment Life is 8.33 years.

### **1.5.2 Controls**

For occupancy sensors the average reduction of 30% was used from the OEB tables for many installations. The kWh savings were calculated from the total installed wattages of fixtures that are controlled by each occupancy sensor. This was determined from either a manual check during verification or a schedule provided by the customer's contractor or consultant upon completion.

Sometimes these installations were very complicated using zone controllers with different setting for different areas. For example one building had eight different zones where the lighting was on for 8110 hours per year in all eight areas. The wattage for each area was determined and the settings of the zone controller used to calculate the annual kWh savings. Three different settings were required for the eight zones reducing zones 4, 5, 6 and 7 totalling 15,170 watts to 2730 hours; reducing zone 8 totalling 2,050 watts to 4680 and zones 1, 2 and 3 totalling 15,580 watts to 6571 hours. This resulted in an annual kWh savings of 112,624 for this customer. Various examples of controllers can be found in sections 3.6, 3.7 and 3.8 of each of the annual reports. Many had free riders of 30% as they were custom projects.

### **1.5.3 Thermal Envelope Improvements**

One new building was going to be constructed according to the base requirements of the building code for various parts of the construction. After discussions with the consultant, heat loss calculations were done by the consultant on the basic installation and on a more efficient installation. The more efficient installation proved economic to the customer and proceeded based on annual energy saving of 108,736 kWh.

For a second building one customer requested assistance with improving the energy efficiency of 40 existing units and recreation centre. This project was done with a third party who produced Energy Efficient Evaluation Reports using Natural Resources Canada Hot 2000 and ecoEnergy for energuide rating to retrofit Homes. The information produced showed a favourable result for increasing amounts of attic insulation, but not as good for heat recovery ventilation as it failed the TRC screening process and was not supported by NBHDL. The lower quantities derived from the OEB tables were used for Attic Insulation resulting in a savings of 21,648 kWh.

#### **1.5.4 Engineering Calculations and Technical Background Information**

For projects in addition to the above such as free cooling, chillers, parking lot controllers, energy efficient transformer and air conditioning, engineering calculations and/or related technical information was obtained to make the necessary TRC calculations.

#### **1.6 Calculation of Final TRC and Incentives**

Following verification the TRC was recalculated based on any new information. From that information the final incentive amount was calculated and paid. The incentive was delivered to the customer and a release signed. The TRC's were totalled by segment and by project. At year end all utility costs less incentives are included in the TRC calculation.

For the purpose of LRAM and SSM recovery the segments had to be reformatted so that the data was available by customer class. This was accomplished by first removing the portion of any projects that included individual residential meters within the building. These were removed and included in a Demand Reduction section for residential. The portion of LED traffic lights that were unmetered was also removed and placed in the unmetered scattered load class. The remaining metered traffic lights was included with the General Service < 50 kW class. For both the residential portion and traffic lights the utility costs were transferred so that they could be included in the correct customer class. The remainder was reorganized by customer class and the utility costs reallocated based on customer class as opposed to by segment.

#### **Part 2: Methodology for Like-for-Like Changes**

This part includes 6 General Service > 50 kW customers and 20 General Service < 50 kW customers with a total kWh savings of 708,113. Of this total 326,712 kWh savings are in the General Service > 50 kW class, 194,575 kWh savings are in the General Service < 50 kW class and 186,826 kWh for Demand Reduction for Residential. Four of the 20 General Service < 50 kW customers include individual residential meters.

This methodology was set-up to streamline the process for simple like-for like replacements. For these projects a separate TRC screening was done for changes like-for-like based on the default values in the OEB List such as 4000 annual hours for commercial, 2320 hours for Residential (MURB apartments) whether on individual meters or metered in total.

For those that passed the TRC Screening analysis a list of measures was developed with fixed incentives on a per unit basis similar to some of the OPA measures. The fixed incentives were calculated in the same manner as part 1.

## **2.1 Delivery Channels**

The delivery channels were similar to part 1 except more were delivered by fewer suppliers, contractors and consultants.

## **2.2 Data Collection**

The only information required for an agreement was the base case installation and efficiency improvement that included measures from an approved list. This approach of developing a prescriptive list of retrofit measures is similar to the methodology of the OPA programs. The estimated savings and incentive were calculated using information from this list.

## **2.3 Agreement**

The agreement included one schedule with the number of lights to be replaced for each measure. The agreement was executed by both the customer and NBHDL as was the case in part 1.

## **2.4 Verification**

Once the project was completed a walk through audit was conducted by a NBHDL consultant. In that walk through the consultant identified any changes from the plan and made appropriate changes to the schedule. If the customer had invoices including material lists and costs, this information was obtained to assist with the TRC calculation. This information was reviewed by a second consultant and modified as necessary for TRC calculations. If there were any changes such as number of units, additional installations or less work accomplished, the data was updated and input into the tool for recalculating the TRC. The incentives were recalculated based on the revised schedule. These changes were presented to the customer and the incentive paid based on the revised calculations. In most cases there were no changes from the agreement as the all work went as planned.

## **2.5 Calculations**

As per this part 2 the calculations are straight forward utilizing the formula below for lighting to calculate kWh saved. The only lights included on the schedule were changes from T12's to T8's, incandescent changed to either CFL's or LED's.

Annual kWh saved = (kW/unit \* N \* H) base - (kW/unit \* N \* H) efficient  
kW /unit is the specified wattage of equipment for base and efficient  
N is the number of units  
H is the operating time of each unit

The only other components included on the schedule were controls. For occupancy sensors and any others the average reduction of 30% is used from the OEB tables for all installations. The kWh savings are calculated from the total installed wattages of fixtures that are controlled by each occupancy sensor. This is determined from a manual check during verification.

## **2.6 Calculation of Final TRC**

Following verification the TRC was calculated for the first time for the project based on the all available information. The TRC's were totalled by segment and project and combined with those of part 1. At year end all utility costs less incentives are included in the TRC calculation.

For the purpose of LRAM and SSM recovery the segments had to be reformatted so that the data was available by customer class. This was accomplished by first removing the portion of any projects that included individual residential meters within the building. These were removed and included in a Demand Reduction section for residential. For the residential portion of the project utility costs were transferred so that they could be included in the correct customer class. The remainder was reorganized by customer class and the utility costs reallocated based on customer class as opposed to by segment.

## **Part 3: Methodology for Residential Programs**

For the residential programs there was no specific contract with customers for water heater tune-up, refrigerator buy-back, EnerGuide for houses or information based. There were a few contracts with suppliers on the delivery of the programs as addressed below.

The water heater tune-up, refrigerator buy-back and EnerGuide for houses was delivered in partnership with Greening Nipissing, a local non profit environmental group. The home visits by Greening Nipissing were conducted in conjunction with their ongoing program of Green Home Visits on various energy and environmental issues. Greening Nipissing had a package they left with customers on the Green Home Visits. A second package to leave at each home was developed to leave with the customer after a visit on any of the three above programs. Greening Nipissing logged all information related to the visit including all required numbers of units installed.

### **3.1 Water Heater Tune-up**

The water heater tune-up was delivered in partnership with Greening Nipissing, a local non profit environmental group. The target of 300 homes was surpassed as 448 tank wraps were installed. There were more home visits than tank wraps for the following reasons: impossible to install due to tank location, tank was new and the water heater was gas. When at a home with gas water heating, Greening Nipissing often installed one or two compact fluorescent bulbs. When the tank couldn't be wrapped pipe wrap was installed as well as the other components of the program.

NBHDL provided all the materials including tank wraps, pipe wrap, low flow showerheads, faucet aerators and compact fluorescent bulbs. The installed units reported by Greening Nipissing were checked against the materials they were provided.

The Water Heater Tune-up was a highly residential customer focussed program involving several components:

- Wrapping the tank with additional insulation;
- Wrapping at least the first three feet of hot water pipe from the tank with foam or insulating tape;
- Installing low flow showerheads;
- Installing aerators on high use faucets; and
- Installing two compact fluorescents in areas with high operating hours.

While with the customer Greening Nipissing promoted the refrigerator buy-back and EnerGuide for houses programs and was sometimes able to schedule a second visit for those programs. The agreement between Greening Nipissing and NBHDL required Greening Nipissing to provide feedback on the installation and customer contacts. They provided units at satisfactory intervals to show progress against targets. At various times there were minor changes to the delivery and requirements to streamline the process.

The number of units installed were included in section 1.5, table 2 of Exhibit 10.

### **3.2 Refrigerator Buy-back**

The refrigerator buy-back program was delivered in partnership with Greening Nipissing, a local non profit environmental group. In addition another agreement was arranged for a contractor to pickup of the second refrigerator. The target of 300 refrigerators was surpassed as 492 refrigerators were removed. This program was targeted at second refrigerators that were in working order.

The agreement with Greening Nipissing required them to arrange pickup of the second refrigerator, evacuating the refrigerant and tagging for recycling. Greening Nipissing had little hands on work regarding this program but made all arrangements, reported units and provided certificates provided for disposal. Once NBHDL received the required paperwork for the refrigerator a cheque for \$50.00 was paid to the customer. A few customers turned down the money.

### **3.3 EnerGuide for Houses**

The EnerGuide for Houses program was delivered in partnership with Greening Nipissing, a local non profit environmental group.

During 2005 most of the activity was setting up a program with only four installations completed. Of the four three were fuel substitution and the other thermal envelope improvements. To determine annual kWh savings and peak kW savings and TRC calculations proxies for thermal envelope improvements were utilized together with an average cost of \$6,000 per house for the equipment cost.

EnerGuide for Houses was terminated by Natural Resources Canada in 2006 as the NBHDL program was gaining momentum and systems put in place to promote the EnerGuide for Houses program. The intent of the program was to promote the use of this Federal Program and pay for the two blower tests if the customer reached a minimum threshold improvement. This never occurred in either year but there were some related successes early in 2006 to report against the program. There were three blower tests and savings on 39 furnace fans.

The three B-audits (blower door test) that occurred resulted in average annual kWh savings 8,215 kWh at a cost of \$4,400. This was compared to average data from Green Communities Canada of 7,400 kWh and a cost of \$4,000. The TRC was calculated based on the data provided by the customers. The remaining 39 audits were done on gas or oil heated houses, thus no electrical gains were found. Green Communities Canada stated that the average home that implemented these measures saved about 40% or about 300 kWh per year on their furnace fans. The furnace fans and B-audits were reported for 2006 resulting in a large negative TRC for 2006. This program was terminated by NBHDL in 2006.

### **3.4 Residential Information Based**

The residential information based program was delivered in partnership with Greening Nipissing, a local non profit environmental group until mid 2007.

For the years 2005 and 2006 the focus was mostly on promotion and education on electricity conservation using such forums as public presentations, university panels, radio interviews, newspaper articles, trade shows, open houses, meetings with church groups and community groups. Handouts were provided and compact fluorescent bulbs were provided at two functions. The benefits of the CFL was described and information provided on the best location for use in fixtures with highest operating hours to save the most electricity and money.

Handouts were provided and compact fluorescent bulbs were provided at two functions. The use of the CFL's was described and the customers informed that the best location for installation of these new lights was in high use areas to save the most electricity and money.



For the year 2007 the focus continued on the promotion and education on electricity conservation using many of the same forums as in 2006 plus additional ones such as student school meetings, Nipissing First Nations panel discussion, film presentation at the public library and presentation to “fit for life” group. In addition Powercost monitors were given out, a new website was launched on energy conservation and newspaper and radio weekly advertising was increased.

New group meetings were initiated to encourage the use of CFL bulbs and LED Christmas lights. For example the Capitol Centre (a large theatre) was rented and the free screening of a movie attracted attendees with several conservation groups attending. It was promoted as a light exchange which resulted in the return of 1600 incandescent bulbs and 800 CFL’s handed out in return. Other similar activities were initiated resulting in another 200 CFL’s exchanged during Earth day and another 75 CFL bulbs exchanged at a hockey game. Again explanations were given to promote the installation of these bulbs in high use areas.

There were also four more events held where a total of 1950 LED Christmas light strings were handed out in exchange for 2400 incandescent strings exchanged.

For 2008 the information based program included Conservation and Demand Management Report, Community Program, Cheque Presentation, School Campaign Materials, Insert Materials for School Kits, Conservation and Demand Management Campaign for the Community and Project Porchlight. Each of the foregoing is included in the 2008 Annual Report. NBHDL will repeat and expand on Project Porchlight below.

### **3.4.1 Project Porchlight**

NBHDL contracted with Project Porchlight to manage and operate a campaign that would distribute 20,000 CFL’s and further educate the residents of North Bay on the environment and conservation. Project Porchlight began in the latter part of 2007 with the distribution of 3,000 bulbs. During 2008, volunteers, events and field staff personally delivered 17,000 CFL’s.

The final report prepared for the project stated that the program was positive and that most had started using them while those that hadn’t were aware of them. The volunteers reported genuine enjoyment of door-to-door activity in “helping the environment”. There were a few negative comments from the residents such as don’t like the light, does not give off enough heat or they burn out too quickly.

Most residents were aware of the benefits of using energy efficient products and very few didn’t want a bulb. Those that didn’t want a bulb were unsure because they were receiving something for free.

Target audiences were reached through various media outlets, key messages were well received by residences (raising awareness and inspire action). The

promotion of safe handling and recycling of CFL's was well received.

None of the extensive activities through the duration of the information based program attracted any TRC benefit, only TRC costs except the exchange of incandescent bulbs for CFL's or LED Christmas lights and Project Porchlight.

NBHDL does not interpret the Information Based Program as a mass market approach but a customer focussed residential program on energy efficiency and the environment that promotes the use of CFL's in high use areas.

In summary NBHDL was intimately involved in developing and delivering third tranche CDM programs. The programs were designed and delivered to maximize results for all parties. Considerable care and effort went into program design, delivery and assessment of results. The methodology and rationale detailed above substantiates NBHDL belief that its approach is sound using actual data for calculations. NBHDL believes the use of the inputs and assumptions contained in the Guidelines dated March 28, 2008 are suitable. The Third Party Report provides contains additional information on the use of the OPA Measures and Assumptions list.

- b) Please provide a revised LRAM claim using the most recently published OPA Measures and Assumptions List. – **Updated January 28, 2010**

**Response:**

Upon due consideration NBHDL accepts that OPA Measures should be used in place of OEB Assumptions and Measures List dated March 28, 2008 to calculate the LRAM claim associated with OPA Residential Programs delivered in Upon due consideration NBHDL accepts that OPA Measures should be used in place of OEB Assumptions and Measures List dated March 28, 2008 to calculate the LRAM claim associated with OPA Residential Programs delivered in NBHDL's franchise in 2006 and 2007. NBHDL feels this change is warranted because these programs are truly Residential Mass Market as opposed to NBHDL's Third Tranche programs that were delivered personally to individual customers by highly qualified staff and contractors.

As evidence NBHDL is enclosing seven tables that change as a result of using OPA Measures in place of the OEB Assumptions and Measures List dated March 28, 2008 for OPA Residential (2006 & 2007). The source of the information used in the initial filing was the Conservation Results forwarded to NBHDL from the OPA for the years 2006, 2007 and 2008. As per NBHDL's October 26, 2009 Board filing ("filing") NBHDL chose to submit only 2006 and 2007 as they were marked final and 2008 was marked as preliminary.

In summary the revised LRAM claim ("revision") is reduced from the initial filing of \$321,318 with carrying charges of \$17,237 to \$273,657 with carrying charges of \$13,895. This is a total reduction in the LRAM claim of \$51,003.

Regarding the seven tables, two new tables 9A and 9B have been introduced and 5 previously submitted in NBHDL's October 26, 2009 filing have been revised. The revised tables from Exhibit 10 include tables 3,4,5,7 and 8. They are numbered the same as the filing, but have an "A" indicating revision. For example Table 3 is now Table 3A. These tables can be found in Appendix G.

**Table 9A – As Filed OPA Conservation Results and 9B – Revised OPA Measures**

These new tables in the revision show the changes from the filing. NBHDL notes that it was a somewhat difficult to match a few of the OPA Conservation Results to the OPA measures, but any differences would not be material to the revised LRAM recovery. The year 2006 did not include winter peak kW, thus the measure is blank and the total winter peak kW savings for each measure is zero. These values are not necessary for this revision. The As Filed OPA Conservation Results (Table 9A) show free ridership of 90% for 2006 and a variety of free riders for 2007. For the Revised Response (Table 9B) NBHDL assumed 70% free riders except for pilots during 2007 which remained at 100%.

The pilots for 2006 were at 90% for free riders and subsequently reduced to 70%. NBHDL notes the Horizon Decision focuses on the CFL 14/15 watt bulbs as an example. NBHDL has adopted the same methodology as the Horizon Decision and for 2006 the change from 60 watt to 15 watt CFL represents 1,606,571 net kWh saving or 83.4% of the total net of 1,926,771 kWh (reference Table 9A, 2006). The changes in the input measures lower the 104.4 kWh per unit to 43.0 kWh per unit and a reduction in free Riders from 90% to 70% lowers the net kWh savings from 1,606,571 kWh to 514,664 kWh (Table 9B, 2006) or a reduction of 1,091,908 net kWh applied towards the LRAM claim. The impact for 2007 is not as significant compared to 2006 as the unit kWh savings are much closer. For 2007 the net kWh savings were reduced from 595,170 kWh (Table 9A, 2007) to 522,789 kWh (Table 9B, 2007) or 72,381 net kWh. To compare to 2006, the reduction in free riders for CFL's is from 78% to 70% and the reduction of net unit kWh does not apply to the 14/15 watt bulbs but does for the change of 75 watt to 20 watt CFL's. The reduction of net unit kWh is from 62.1 (Table 9A, 2007) to 52.6 (Table 9B, 2007). The total results for 2006 and 2007 are a reduction of net savings of 1,164,289 kWh for the CFL's. Other measures show both increases and decreases.

**Table 3A Annual CDM Load Impacts by Program and Class**

The only change on this table for revision is that the gross and net kWh savings have changed under residential for OPA Residential (06 & 07). The result for 2006 and 2007 is a reduction of net savings of 1,180,703 kWh for all measures.

#### **Table 4A LRAM Recovery by Measure**

This table for revision has been changed from filing Table 4. The filing table included lost revenue by program and class. Table 4A for the revision includes the measures for water heater tune-up, refrigerator buy-back, energuide and information based. It also provides separate totals for Third Tranche and OPA Residential (2006 & 2007).

The only change of data on this table is the calculation for OPA Residential (2006 & 2007) under residential. The input for these changes comes from OPA Revised -- Table 9B. The lost revenue from the filing is reduced from \$104,446.41 to \$56,785.66 in this revision, a difference of \$47,661.76. This difference is reflected in the total lost revenue where it has reduced from \$321,318.26 to \$273,657.44.

#### **Table 5A LRAM Carrying Charges**

The filing included carrying charges for LRAM not SSM as does the revision. Table 5A differs from Table 5 in that it includes separate quantities for Third Tranche Residential, OPA Residential (06 & 07) and General Service < 50 kW. Table 5 only included the total carrying charge of \$17,237.28. Table 5A shows total carrying charges of \$13,894.51, a reduction of \$3,342.77. There is more discussion on this below under Table 7A – Rate Riders by Class.

#### **Table 7A Rate Riders by Class**

Table 7A differs from Table 7 in that it includes separate LRAM rate riders for Third Tranche and OPA Residential (06 & 07). The one year rate rider for total residential LRAM reduces from .001066 to .000827. The one year rate rider for total residential LRAM and SSM reduces from .001272 to .001034. The three year rate rider for total residential LRAM and SSM reduces from .000424 to .000345.

#### **Table 8A Rate Impacts by Class for Both LRAM and SSM**

Table 8A is the same as Table 8 except it clarifies it applies only to a three year rate rider. All classes remain the same except the rate rider for total residential decreases. The percent change increase in the variable rate is reduced from 3.79% to 3.08% resulting in a decrease in the average monthly increase in the total bill from \$0.45 to \$0.36.

*Ref: Exhibit 10, Page 22 of 22*

NBHDL notes that it retained Bob Mason & Associates to perform the third party review of its CDM programs as per section 7.5 of the Board's Guidelines for Electricity Distributor Conservation and Demand Management (the "Guidelines") issued on March 28, 2008.

- c) Please provide a copy of the review submitted by Bob Mason & Associates and discuss how NBHDL will implement any of the recommendations made in the third party review.

**Response:**

Please see Appendix "E".

**27. General – Updated January 28, 2010**

*Ref: Exhibit 1, pp. 56-64 'Revenue Requirement Work Form'*

Upon completing all interrogatories from Board staff and intervenors, please provide an updated RRWF with any corrections or adjustments that NBHDL wishes to make to the amounts in the Application version of the RRWF. Include documentation of the corrections and adjustments, such as a reference to an interrogatory response or an explanatory note.

**Response:**

On the following page, a summary provides a listing of corrections or adjustments that NBHDL wishes to make to the amounts in the Application version of the RRWF. An updated RRWF reflecting these changes is provided in Appendix F.

North Bay Hydro Distribution Ltd.  
Summary of Proposed Changes

Reference		Regulated Return on Capital	Regulated Rate of Return	Rate Base	Working Capital	Working Capital Allowance	Amortization	PILs	OM&A	Service Revenue Requirement	Base Revenue Requirement	Gross Revenue Deficiency
	<b>Original Submission October 26, 2009</b>	<b>\$3,302,245</b>	<b>7.14%</b>	<b>\$46,219,722</b>	<b>\$50,481,100</b>	<b>\$7,572,165</b>	<b>\$2,901,108</b>	<b>\$572,640</b>	<b>\$5,779,054</b>	<b>\$12,642,754</b>	<b>\$11,817,638</b>	<b>\$1,839,072</b>
Board Report EB09-2009-0084	Return on Equity Change	\$3,623,934	7.84%	\$46,219,722	\$50,481,100	\$7,572,165	\$2,901,108	\$717,168	\$5,779,054	\$13,108,970	\$12,283,854	\$2,305,288
	Change	\$321,689	0.70%	\$0	\$0	\$0	\$0	\$144,527	\$0	\$466,216	\$466,216	\$466,216
	<i>Change rate from 8.01% to 9.75%</i>											
RPP Price Report Oct.15/09	Cost of Power Change	\$3,628,476	7.84%	\$46,277,644	\$50,867,245	\$7,630,087	\$2,901,108	\$718,182	\$5,779,054	\$13,114,570	\$12,289,454	\$2,310,887
	Change	\$4,541	0.00%	\$57,922	\$386,146	\$57,922	\$0	\$1,015	\$0	\$5,600	\$5,600	\$5,600
	<i>Split RPP vs. Non RPP</i>											
EP # 23	Small Business Tax Credit	\$3,628,476	7.84%	\$46,277,644	\$50,867,245	\$7,630,087	\$2,901,108	\$691,009	\$5,779,054	\$13,087,396	\$12,262,280	\$2,283,714
	Change	\$0	0.00%	\$0	\$0	\$0	\$0	-\$27,174	\$0	-\$27,174	-\$27,174	-\$27,174
	<i>Confirmed \$18,750 decrease in taxes owing</i>											
EP # 21 & 22 Board # 21, part c	Tax Credit Corrections	\$3,628,476	7.84%	\$46,277,644	\$50,867,245	\$7,630,087	\$2,901,108	\$673,516	\$5,779,054	\$13,069,904	\$12,244,787	\$2,266,221
	Change	\$0	0.00%	\$0	\$0	\$0	\$0	-\$17,493	\$0	-\$17,493	-\$17,493	-\$17,493
Board # 17	USL Fixed Cost Change	\$3,628,476	7.84%	\$46,277,644	\$50,867,245	\$7,630,087	\$2,901,108	\$673,516	\$5,779,054	\$13,069,904	\$12,244,787	\$2,266,221
	Change	\$0	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Changing from 'per customer' to 'per connection' basis</i>											
Board # 26, part b	LRAM / SSM Rate Rider Change	\$3,628,476	7.84%	\$46,277,644	\$50,867,245	\$7,630,087	\$2,901,108	\$673,516	\$5,779,054	\$13,069,904	\$12,244,787	\$2,266,221
	Change	\$0	0.00%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Proposed January 28, 2009</b>		<b>\$3,628,476</b>	<b>7.84%</b>	<b>\$46,277,644</b>	<b>\$50,867,245</b>	<b>\$7,630,087</b>	<b>\$2,901,108</b>	<b>\$673,516</b>	<b>\$5,779,054</b>	<b>\$13,069,904</b>	<b>\$12,244,787</b>	<b>\$2,266,221</b>

## **APPENDIX “A”**



74 Commerce Crescent Tel. (705) 474-8100  
P.O. Box 3240 Fax: (705) 495-2756 Administration  
North Bay, Ontario Fax: (705) 474-3138 Engineering/Purchasing  
P1B 8Y5 Fax: (705) 474-8579 Customer Services/Accounting  
Fax: (705) 474-4634 Operations

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Michel Cazabon  
28 Nipissing Crescent  
North Bay, Ontario  
P1A 2V7

December 27, 2009

Re: Application for Distribution Rate Increase EB 2009-0270

Dear Mr. Cazabon,

In November you expressed concern to the Ontario Energy Board Secretary with respect to North Bay Hydro's proposed electricity rate change that was published in the Nugget.

One of your concerns was around harmonization of taxes and the application of PST to electricity bills effective July 1, 2010. This is a provincial government issue and we have forwarded your concern to our local MPP for consideration.

I would also like to explain why North Bay Hydro Distribution Limited is seeking a rate increase at this time. It is also important to keep in mind that North Bay Hydro owns and operates the local distribution system that serves you. I believe that some of the issues identified in your email could be with other parties involved in the provincial electricity system. North Bay Hydro has a voluntary Board of Directors made up of local citizens that provide discipline and control of our spending and priorities. Our Board feels that North Bay Hydro is an effective and efficient business that balances many priorities.

The Ontario Energy Board established a multi-year electricity distribution rate setting plan that, commencing with 2008 rates, a limited number of distributors like North Bay Hydro would be identified each year to file a future test year cost of service application. The plan would run for four years enabling each rate regulated distributor in the province to rebase its rates at least once during the four year plan. North Bay Hydro filed its cost of service application for rates effective May 1, 2010. Until another cost of service application is filed in the future (potentially 2013 for rates effective 2014) the process usually allows minor changes in rates during the interim years. At times the rates decrease if inflation is less than a productivity improvement factor that must be achieved. Essentially this proposed rate increase must sustain the business for up to 4 years as the interim filings do not usually generate new revenues.

North Bay Hydro's last cost of service application was filed with the Ontario Energy Board in 2005 for rates that were effective May 1, 2006. The rates that drive revenues for the business decreased significantly at that time and also have decreased between 2006 and 2009.

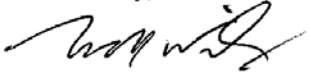


Costs have increased considerably since 2002, for example, transformers, copper, wire, insurance, vehicles, etc have all increased. North Bay Hydro has worked hard to mitigate these costs and the regulatory process in Ontario does not allow annual adjustments, rather several years of impact are accumulated for recovery when the cost of service application is filed.

North Bay Hydro is faced with a significant task of replacing infrastructure that is end of life. Almost 50% of our poles have been in service for approximately 30 years, with about 24% in service more than 50 years. Much of the equipment at our substations has been in service for more than 35 years and in some cases over 70 years. This plant has served customers well however if not systematically replaced according to a defined plan could result in decreased reliability and safety hazards to our staff and the public. It will take North Bay Hydro several years to replace this old equipment. In the interim we must perform additional maintenance to ensure reliability and safety of the system. These capital and maintenance costs are a significant component of the requested rate increase to improve the system that provides you service. Perhaps you have noted significant construction by crews in the Jane Street and Pinewood area and the rebuild of Gormanville Road to supply the new hospital. New revenue is required to continue with this process of modernizing the system that customers rely on for electricity 24 hours a day, year over year.

I hope this helps to explain some of the reasons behind the proposed rate increase and if you have any further questions please do not hesitate to contact me at extension 305.

Yours truly,



Todd Wilcox  
Chief Operating Officer

## **APPENDIX “B”**



74 Commerce Crescent Tel. (705) 474-8100  
P.O. Box 3240 Fax: (705) 495-2756 Administration  
North Bay, Ontario Fax: (705) 474-3138 Engineering/Purchasing  
P1B 8Y5 Fax: (705) 474-8579 Customer Services/Accounting  
Fax: (705) 474-4634 Operations

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Terry Whelan  
643 Norman Avenue  
North Bay, Ontario  
P1B 8C2

December 27, 2009

Re: Application for Distribution Rate Increase EB 2009-0270

Dear Mr. Whelan,

In November you expressed concern to the Ontario Energy Board Secretary with respect to North Bay Hydro's proposed electricity rate change that was published in the Nugget.

One of your concerns was around harmonization of taxes and the application of PST to electricity bills effective July 1, 2010. This is a provincial government issue and we have forwarded your concern to our local MPP for consideration.

You also expressed concern about the impact of smart meters on electricity costs. As you noted, North Bay Hydro has not completed our deployment of smart meters and at this point the transition to time of use rates will not be completed until late 2010. The experience in southern Ontario indicates that in general customers did not experience significant changes in costs when their supplying distribution company adopted this new rate structure. North Bay Hydro monitored a small population of customers in 2008 and early 2009 to assess the impact of the time of use rates and found no real appreciable increase in costs.

I would also like to explain why North Bay Hydro Distribution Limited is seeking a rate increase at this time. It is also important to keep in mind that North Bay Hydro owns and operates the local distribution system that serves you. I believe that some of the issues identified in your email could be with other parties involved in the provincial electricity system. North Bay Hydro has a voluntary Board of Directors made up of local citizens that provide discipline and control of our spending and priorities. Our Board feels that North Bay Hydro is an effective and efficient business that balances many priorities.

The Ontario Energy Board established a multi-year electricity distribution rate setting plan that, commencing with 2008 rates, a limited number of distributors like North Bay Hydro would be identified each year to file a future test year cost of service application. The plan would run for four years enabling each rate regulated distributor in the province to rebase its rates at least once during the four year plan. North Bay Hydro filed its cost of service application for rates effective May 1, 2010. Until another cost of service application is filed in the future (potentially 2013 for

rates effective 2014) the process usually allows minor changes in rates during the interim years. At times the rates decrease if inflation is less than a productivity improvement factor that must be achieved. Essentially this proposed rate increase must sustain the business for up to 4 years as the interim filings do not usually generate new revenues.

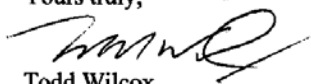
North Bay Hydro's last cost of service application was filed with the Ontario Energy Board in 2005 for rates that were effective May 1, 2006. The rates that drive revenues for the business decreased significantly at that time and also have decreased between 2006 and 2009.

Costs have increased considerably since 2002, for example, transformers, copper, wire, insurance, vehicles, etc have all increased. North Bay Hydro has worked hard to mitigate these costs and the regulatory process in Ontario does not allow annual adjustments, rather several years of impact are accumulated for recovery when the cost of service application is filed.

North Bay Hydro is faced with a significant task of replacing infrastructure that is end of life. Almost 50% of our poles have been in service for approximately 30 years, with about 24% in service more than 50 years. Much of the equipment at our substations has been in service for more than 35 years and in some cases over 70 years. This plant has served customers well however if not systematically replaced according to a defined plan could result in decreased reliability and safety hazards to our staff and the public. It will take North Bay Hydro several years to replace this old equipment. In the interim we must perform additional maintenance to ensure reliability and safety of the system. These capital and maintenance costs are a significant component of the requested rate increase to improve the system that provides you service. Perhaps you have noted significant construction by crews in the Jane Street and Pinewood area and the rebuild of Gormanville Road to supply the new hospital. New revenue is required to continue with this process of modernizing the system that customers rely on for electricity 24 hours a day, year over year.

I hope this helps to explain some of the reasons behind the proposed rate increase and if you have any further questions please do not hesitate to contact me at extension 305.

Yours truly,



Todd Wilcox  
Chief Operating Officer

## **APPENDIX "C"**

CONTINUITY OF RESERVES FOR 2009

Description	Balance at December 31, 2008 Actual Year as per tax returns	Non-Distribution Eliminations	Utility Only Opening Balance	Eliminate Amounts Not Relevant for Test Year Sign Convention: Increase (+) Decrease (-)	Adjusted Utility Balance	Additions	Disposals	Balance for Bridge Year	Change During the Year	Disallowed Expenses
Capital Gains Reserves ss.40(1)			0		0			0	0	
Tax Reserves Not Deducted for accounting purposes										
Reserve for doubtful accounts ss. 20(1)(l)	475,807		475,807		475,807	0	6,006	469,801	-6,006	
Reserve for goods and services not delivered ss. 20(1)(m)	766,147		766,147		766,147	0	34,454	731,693	-34,454	
Reserve for unpaid amounts ss. 20(1)(n)			0		0			0	0	
Debt & Share Issue Expenses ss. 20(1)(e)			0		0			0	0	
Other tax reserves			0		0			0	0	
Total	1,241,954	0	1,241,954	0	1,241,954	0	40,460	1,201,494	-40,460	0
Financial Statement Reserves (not deductible for Tax Purposes)										
General Reserve for Inventory Obsolescence (non-specific)	0		0		0			0	0	
General reserve for bad debts	475,807		475,807		475,807	0	6,006	469,801	-6,006	
Accrued Employee Future Benefits:	4,264,214		4,264,214		4,264,214	259,091		4,523,305	259,091	
- Medical and Life Insurance			0		0			0	0	
-Short & Long-term Disability			0		0			0	0	
-Accumulated Sick Leave			0		0			0	0	
- Termination Cost			0		0			0	0	
- Other Post-Employment Benefits			0		0			0	0	
Provision for Environmental Costs			0		0			0	0	
Restructuring Costs			0		0			0	0	
Accrued Contingent Litigation Costs			0		0			0	0	
Accrued Self-Insurance Costs			0		0			0	0	
Other Contingent Liabilities			0		0			0	0	
Bonuses Accrued and Not Paid Within 180 Days of Year-End ss. 78(4)			0		0			0	0	
Unpaid Amounts to Related Person and Not Paid Within 3 Taxation Years ss. 78(1)			0		0			0	0	
Other			0		0			0	0	
Total	4,740,021	0	4,740,021	0	4,740,021	259,091	6,006	4,993,106	253,085	0

CONTINUITY OF RESERVES FOR 2010

Description	Adjusted Utility Balance	Additions	Disposals	Balance for Test Year	Change During the Year	Disallowed Expenses
Capital Gains Reserves ss.40(1)	0			0	0	
<b>Tax Reserves Not Deducted for accounting purposes</b>						
Reserve for doubtful accounts ss. 20(1)(l)	469,801	1,051	0	470,853	1,051	
Reserve for goods and services not delivered ss. 20(1)(m)	731,693			731,693	0	
Reserve for unpaid amounts ss. 20(1)(n)	0			0	0	
Debt & Share Issue Expenses ss. 20(1)(e)	0			0	0	
Other tax reserves	0			0	0	
<b>Total</b>	<b>1,201,494</b>	<b>1,051</b>	<b>0</b>	<b>1,202,546</b>	<b>1,051</b>	<b>0</b>
<b>Financial Statement Reserves (not deductible for Tax Purposes)</b>						
General Reserve for Inventory Obsolescence (non-specific)	0			0	0	
General reserve for bad debts	469,801	1,051		470,853	1,051	
Accrued Employee Future Benefits:	4,523,305	290,585		4,813,890	290,585	
- Medical and Life Insurance	0			0	0	
-Short & Long-term Disability	0			0	0	
-Accumulated Sick Leave	0			0	0	
- Termination Cost	0			0	0	
- Other Post-Employment Benefits	0			0	0	
Provision for Environmental Costs	0			0	0	
Restructuring Costs	0			0	0	
Accrued Contingent Litigation Costs	0			0	0	
Accrued Self-Insurance Costs	0			0	0	
Other Contingent Liabilities	0			0	0	
Bonuses Accrued and Not Paid Within 180 Days of Year-End ss. 78(4)	0			0	0	
Unpaid Amounts to Related Person and Not Paid Within 3 Taxation Years ss. 78(1)	0			0	0	
Other	0			0	0	
<b>Total</b>	<b>4,993,106</b>	<b>291,636</b>	<b>0</b>	<b>5,284,743</b>	<b>291,636</b>	<b>0</b>

## **APPENDIX “D”**



RESIDENTIAL										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Consumption	Monthly Service Charge			12.53			14.84	2.31	18.44%	54.08%
100 kWh	Distribution (kWh)	100	0.0112	1.12	100	0.0133	1.33	0.21	18.75%	4.85%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	5.36%
	LRAM & SSM Rider (kWh)	100	0.0000	0.00	100	0.0004	0.04	0.04	100.00%	0.15%
	Regulatory Assets (kWh)	100	0.0000	0.00	100	0.0004	0.04	0.04	100.00%	0.15%
	Sub-Total - Distribution			15.76			17.72	1.96	12.45%	64.58%
	RTSR - Network	104	0.0052	0.54	105	0.0053	0.55	0.01	2.44%	2.02%
	RTSR - Connection	104	0.0047	0.49	105	0.0048	0.51	0.02	3.62%	1.84%
	Sub-Total - Delivery			16.79			18.78	1.99	11.87%	68.44%
	Wholesale Market Rate	104	0.0065	0.68	105	0.0065	0.68	0.01	0.90%	2.48%
	DRC	100	0.0070	0.70	100	0.0070	0.70	0.00	0.00%	2.55%
	Cost of Power Commodity (kW h)	104	0.0570	5.92	105	0.0570	5.97	0.05	0.90%	21.77%
	Cost of Power Commodity (kW h)	0	0.0660	0.00	0	0.0660	0.00	0.00	0.00%	0.00%
	Sub-Total - Other Charges			24.08			26.14	2.05	8.52%	95.24%
	GST		5.00%	1.20		5.00%	1.31	0.10	8.52%	4.76%
	TOTAL BILL			25.29			27.44	2.15	8.52%	100.00%

RESIDENTIAL										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Consumption	Monthly Service Charge			12.53			14.84	2.31	18.44%	34.58%
250 kWh	Distribution (kWh)	250	0.0112	2.80	250	0.0133	3.33	0.53	18.75%	7.75%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	3.43%
	LRAM & SSM Rider (kWh)	250	0.0000	0.00	250	0.0004	0.10	0.10	100.00%	0.23%
	Regulatory Assets (kWh)	250	0.0000	0.00	250	0.0004	0.10	0.10	100.00%	0.24%
	Sub-Total - Distribution			17.44			19.84	2.40	13.76%	46.23%
	RTSR - Network	260	0.0052	1.35	262	0.0053	1.38	0.03	2.44%	3.22%
	RTSR - Connection	260	0.0047	1.22	262	0.0048	1.26	0.04	3.62%	2.95%
	Sub-Total - Delivery			20.01			22.49	2.48	12.38%	52.40%
	Wholesale Market Rate	260	0.0065	1.69	262	0.0065	1.70	0.02	0.90%	3.97%
	DRC	250	0.0070	1.75	250	0.0070	1.75	0.00	0.00%	4.08%
	Cost of Power Commodity (kW h)	260	0.0570	14.80	262	0.0570	14.93	0.13	0.90%	34.80%
	Cost of Power Commodity (kW h)	0	0.0660	0.00	0	0.0660	0.00	0.00	0.00%	0.00%
	Sub-Total - Other Charges			38.25			40.87	2.63	6.86%	95.24%
	GST		5.00%	1.91		5.00%	2.04	0.13	6.86%	4.76%
	TOTAL BILL			40.16			42.92	2.76	6.86%	100.00%

RESIDENTIAL										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Consumption	Monthly Service Charge			12.53			14.84	2.31	18.44%	21.60%
500 kWh	Distribution (kWh)	500	0.0112	5.60	500	0.0133	6.65	1.05	18.75%	9.68%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	2.14%
	LRAM & SSM Rider (kWh)	500	0.0000	0.00	500	0.0004	0.20	0.20	100.00%	0.29%
	Regulatory Assets (kWh)	500	0.0000	0.00	500	0.0004	0.21	0.21	100.00%	0.30%
	Sub-Total - Distribution			20.24			23.37	3.13	15.46%	34.01%
	RTSR - Network	519	0.0052	2.70	524	0.0053	2.77	0.07	2.44%	4.03%
	RTSR - Connection	519	0.0047	2.44	524	0.0048	2.53	0.09	3.62%	3.68%
	Sub-Total - Delivery			25.38			28.66	3.28	12.94%	41.72%
	Wholesale Market Rate	519	0.0065	3.38	524	0.0065	3.41	0.03	0.90%	4.96%
	DRC	500	0.0070	3.50	500	0.0070	3.50	0.00	0.00%	5.09%
	Cost of Power Commodity (kWh)	519	0.0570	29.60	524	0.0570	29.87	0.27	0.90%	43.47%
	Cost of Power Commodity (kWh)	0	0.0660	0.00	0	0.0660	0.00	0.00	0.00%	0.00%
	Sub-Total - Other Charges			61.86			65.44	3.58	5.79%	95.24%
	GST		5.00%	3.09		5.00%	3.27	0.18	5.79%	4.76%
	TOTAL BILL			64.95			68.71	3.76	5.79%	100.00%

RESIDENTIAL										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Consumption	Monthly Service Charge			12.53			14.84	2.31	18.44%	14.56%
800 kWh	Distribution (kWh)	800	0.0112	8.96	800	0.0133	10.64	1.68	18.75%	10.44%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	1.44%
	LRAM & SSM Rider (kWh)	800	0.0000	0.00	800	0.0004	0.32	0.32	100.00%	0.31%
	Regulatory Assets (kWh)	800	0.0000	0.00	800	0.0004	0.33	0.33	100.00%	0.33%
	Sub-Total - Distribution			23.60			27.60	4.00	16.97%	27.09%
	RTSR - Network	831	0.0052	4.32	838	0.0053	4.43	0.11	2.44%	4.34%
	RTSR - Connection	831	0.0047	3.91	838	0.0048	4.05	0.14	3.62%	3.97%
	Sub-Total - Delivery			31.83			36.08	4.25	13.36%	35.40%
	Wholesale Market Rate	831	0.0065	5.40	838	0.0065	5.45	0.05	0.90%	5.35%
	DRC	800	0.0070	5.60	800	0.0070	5.60	0.00	0.00%	5.49%
	Cost of Power Commodity (kWh)	600	0.0570	34.20	600	0.0570	34.20	0.00	0.00%	33.56%
	Cost of Power Commodity (kWh)	231	0.0660	15.24	238	0.0660	15.74	0.49	3.24%	15.44%
	Sub-Total - Other Charges			92.27			97.06	4.79	5.20%	95.24%
	GST		5.00%	4.61		5.00%	4.85	0.24	5.20%	4.76%
	TOTAL BILL			96.88			101.92	5.03	5.20%	100.00%

RESIDENTIAL										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Consumption	Monthly Service Charge			12.53			14.84	2.31	18.44%	11.92%
1,000 kWh	Distribution (kWh)	1,000	0.0112	11.20	1,000	0.0133	13.30	2.10	18.75%	10.68%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	1.18%
	LRAM & SSM Rider (kWh)	1,000	0.0000	0.00	1,000	0.0004	0.40	0.40	100.00%	0.32%
	Regulatory Assets (kWh)	1,000	0.0000	0.00	1,000	0.0004	0.42	0.42	100.00%	0.34%
	Sub-Total - Distribution			25.84			30.43	4.59	17.76%	24.43%
	RTSR - Network	1,039	0.0052	5.40	1,048	0.0053	5.53	0.13	2.44%	4.44%
	RTSR - Connection	1,039	0.0047	4.88	1,048	0.0048	5.06	0.18	3.62%	4.06%
	Sub-Total - Delivery			36.12			41.02	4.90	13.56%	32.94%
	Wholesale Market Rate	1,039	0.0065	6.75	1,048	0.0065	6.81	0.06	0.90%	5.47%
	DRC	1,000	0.0070	7.00	1,000	0.0070	7.00	0.00	0.00%	5.62%
	Cost of Power Commodity (kWh)	600	0.0570	34.20	600	0.0570	34.20	0.00	0.00%	27.46%
	Cost of Power Commodity (kWh)	439	0.0660	28.95	448	0.0660	29.57	0.62	2.13%	23.74%
	Sub-Total - Other Charges			113.03			118.60	5.58	4.93%	95.24%
	GST		5.00%	5.65		5.00%	5.93	0.28	4.93%	4.76%
	TOTAL BILL			118.68			124.53	5.85	4.93%	100.00%

RESIDENTIAL										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Consumption	Monthly Service Charge			12.53			14.84	2.31	18.44%	8.20%
1,500 kWh	Distribution (kWh)	1,500	0.0112	16.80	1,500	0.0133	19.95	3.15	18.75%	11.02%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	0.81%
	LRAM & SSM Rider (kWh)	1,500	0.0000	0.00	1,500	0.0004	0.60	0.60	100.00%	0.33%
	Regulatory Assets (kWh)	1,500	0.0000	0.00	1,500	0.0004	0.63	0.63	100.00%	0.35%
	Sub-Total - Distribution			31.44			37.49	6.05	19.24%	20.70%
	RTSR - Network	1,558	0.0052	8.10	1,572	0.0053	8.30	0.20	2.44%	4.58%
	RTSR - Connection	1,558	0.0047	7.32	1,572	0.0048	7.59	0.26	3.62%	4.19%
	Sub-Total - Delivery			46.86			53.37	6.51	13.89%	29.48%
	Wholesale Market Rate	1,558	0.0065	10.13	1,572	0.0065	10.22	0.09	0.90%	5.64%
	DRC	1,500	0.0070	10.50	1,500	0.0070	10.50	0.00	0.00%	5.80%
	Cost of Power Commodity (kWh)	600	0.0570	34.20	600	0.0570	34.20	0.00	0.00%	18.89%
	Cost of Power Commodity (kWh)	958	0.0660	63.23	972	0.0660	64.15	0.93	1.47%	35.43%
	Sub-Total - Other Charges			164.92			172.45	7.53	4.56%	95.24%
	GST		5.00%	8.25		5.00%	8.62	0.38	4.56%	4.76%
	TOTAL BILL			173.16			181.07	7.90	4.56%	100.00%

RESIDENTIAL									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	% of Total Bill
<b>Consumption</b>	Monthly Service Charge			12.53			14.84	2.31	18.44%
<b>2,000 kWh</b>	Distribution (kWh)	2,000	0.0112	22.40	2,000	0.0133	26.60	4.20	18.75%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kWh)	2,000	0.0000	0.00	2,000	0.0004	0.80	0.80	100.00%
	Regulatory Assets (kWh)	2,000	0.0000	0.00	2,000	0.0004	0.84	0.84	100.00%
	<b>Sub-Total - Distribution</b>			<b>37.04</b>			<b>44.55</b>	<b>7.51</b>	<b>20.27%</b>
	RTSR - Network	2,077	0.0052	10.80	2,096	0.0053	11.07	0.26	2.44%
	RTSR - Connection	2,077	0.0047	9.76	2,096	0.0048	10.12	0.35	3.62%
	<b>Sub-Total - Delivery</b>			<b>57.61</b>			<b>65.73</b>	<b>8.12</b>	<b>14.10%</b>
	Wholesale Market Rate	2,077	0.0065	13.50	2,096	0.0065	13.62	0.12	0.90%
	DRC	2,000	0.0070	14.00	2,000	0.0070	14.00	0.00	0.00%
	Cost of Power Commodity (kWh)	600	0.0570	34.20	600	0.0570	34.20	0.00	0.00%
	Cost of Power Commodity (kWh)	1,477	0.0660	97.50	1,496	0.0660	98.74	1.24	1.27%
	<b>Sub-Total - Other Charges</b>			<b>216.81</b>			<b>226.29</b>	<b>9.48</b>	<b>4.37%</b>
	GST		5.00%	10.84		5.00%	11.31	0.47	4.37%
	<b>TOTAL BILL</b>			<b>227.65</b>			<b>237.61</b>	<b>9.96</b>	<b>4.37%</b>

GENERAL SERVICE < 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	% of Total Bill
<b>Consumption</b>	Monthly Service Charge			21.70			25.70	4.00	18.43%
<b>1,000 kWh</b>	Distribution (kWh)	1,000	0.0139	13.90	1,000	0.0165	16.50	2.60	18.71%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kWh)	1,000	0.0000	0.00	1,000	0.0002	0.20	0.20	100.00%
	Regulatory Assets (kWh)	1,000	0.0000	0.00	1,000	0.0004	0.40	0.40	100.00%
	<b>Sub-Total - Distribution</b>			<b>37.71</b>			<b>44.27</b>	<b>6.56</b>	<b>17.38%</b>
	RTSR - Network	1,039	0.0048	4.99	1,048	0.0049	5.11	0.12	2.44%
	RTSR - Connection	1,039	0.0042	4.36	1,048	0.0043	4.52	0.16	3.62%
	<b>Sub-Total - Delivery</b>			<b>47.06</b>			<b>53.89</b>	<b>6.83</b>	<b>14.52%</b>
	Wholesale Market Rate	1,039	0.0065	6.75	1,048	0.0065	6.81	0.06	0.90%
	DRC	1,000	0.0070	7.00	1,000	0.0070	7.00	0.00	0.00%
	Cost of Power Commodity (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.00%
	Cost of Power Commodity (kWh)	289	0.0660	19.05	298	0.0660	19.67	0.62	3.24%
	<b>Sub-Total - Other Charges</b>			<b>122.61</b>			<b>130.12</b>	<b>7.51</b>	<b>6.13%</b>
	GST		5.00%	6.13		5.00%	6.51	0.38	6.13%
	<b>Total Bill</b>			<b>128.74</b>			<b>136.63</b>	<b>7.89</b>	<b>6.13%</b>

GENERAL SERVICE < 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
<b>Consumption</b>	Monthly Service Charge			21.70			25.70	4.00	18.43%
<b>2,000 kWh</b>	Distribution (kWh)	2,000	0.0139	27.80	2,000	0.0165	33.00	5.20	18.71%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kWh)	2,000	0.0000	0.00	2,000	0.0002	0.40	0.40	100.00%
	Regulatory Assets (kWh)	2,000	0.0000	0.00	2,000	0.0004	0.79	0.79	100.00%
	<b>Sub-Total - Distribution</b>			<b>51.61</b>			<b>61.36</b>	<b>9.75</b>	<b>18.89%</b>
	RTSR - Network	2,077	0.0048	9.97	2,096	0.0049	10.21	0.24	2.44%
	RTSR - Connection	2,077	0.0042	8.72	2,096	0.0043	9.04	0.32	3.62%
	<b>Sub-Total - Delivery</b>			<b>70.31</b>			<b>80.61</b>	<b>10.31</b>	<b>14.66%</b>
	Wholesale Market Rate	2,077	0.0065	13.50	2,096	0.0065	13.62	0.12	0.90%
	DRC	2,000	0.0070	14.00	2,000	0.0070	14.00	0.00	0.00%
	Cost of Power Commodity (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.00%
	Cost of Power Commodity (kWh)	1,327	0.0660	87.60	1,346	0.0660	88.84	1.24	1.41%
	<b>Sub-Total - Other Charges</b>			<b>228.16</b>			<b>239.83</b>	<b>11.67</b>	<b>5.11%</b>
	GST		5.00%	11.41		5.00%	11.99	0.58	5.11%
	<b>Total Bill</b>			<b>239.57</b>			<b>251.82</b>	<b>12.25</b>	<b>5.11%</b>

GENERAL SERVICE < 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
<b>Consumption</b>	Monthly Service Charge			21.70			25.70	4.00	18.43%
<b>5,000 kWh</b>	Distribution (kWh)	5,000	0.0139	69.50	5,000	0.0165	82.50	13.00	18.71%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kWh)	5,000	0.0000	0.00	5,000	0.0002	1.00	1.00	100.00%
	Regulatory Assets (kWh)	5,000	0.0000	0.00	5,000	0.0004	1.98	1.98	100.00%
	<b>Sub-Total - Distribution</b>			<b>93.31</b>			<b>112.65</b>	<b>19.34</b>	<b>20.72%</b>
	RTSR - Network	5,193	0.0048	24.93	5,240	0.0049	25.53	0.61	2.44%
	RTSR - Connection	5,193	0.0042	21.81	5,240	0.0043	22.60	0.79	3.62%
	<b>Sub-Total - Delivery</b>			<b>140.05</b>			<b>160.78</b>	<b>20.73</b>	<b>14.80%</b>
	Wholesale Market Rate	5,193	0.0065	33.76	5,240	0.0065	34.06	0.30	0.90%
	DRC	5,000	0.0070	35.00	5,000	0.0070	35.00	0.00	0.00%
	Cost of Power Commodity (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.00%
	Cost of Power Commodity (kWh)	4,443	0.0660	293.26	4,490	0.0660	296.35	3.09	1.05%
	<b>Sub-Total - Other Charges</b>			<b>544.81</b>			<b>568.94</b>	<b>24.13</b>	<b>4.43%</b>
	GST		5.00%	27.24		5.00%	28.45	1.21	4.43%
	<b>Total Bill</b>			<b>572.05</b>			<b>597.38</b>	<b>25.33</b>	<b>4.43%</b>

GENERAL SERVICE < 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
Consumption	Monthly Service Charge			21.70			25.70	4.00	18.43%
	Distribution (kWh)	10,000	0.0139	139.00	10,000	0.0165	165.00	26.00	18.71%
10,000 kWh	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kWh)	10,000	0.0000	0.00	10,000	0.0002	2.00	2.00	100.00%
	Regulatory Assets (kWh)	10,000	0.0000	0.00	10,000	0.0004	3.95	3.95	100.00%
	<b>Sub-Total - Distribution</b>			<b>162.81</b>			<b>198.12</b>	<b>35.31</b>	<b>21.69%</b>
	RTSR - Network	10,387	0.0048	49.86	10,480	0.0049	51.07	1.21	2.44%
	RTSR - Connection	10,387	0.0042	43.62	10,480	0.0043	45.20	1.58	3.62%
	<b>Sub-Total - Delivery</b>			<b>256.29</b>			<b>294.39</b>	<b>38.10</b>	<b>14.87%</b>
	Wholesale Market Rate	10,387	0.0065	67.51	10,480	0.0065	68.12	0.61	0.90%
	DRC	10,000	0.0070	70.00	10,000	0.0070	70.00	0.00	0.00%
	Cost of Power Commodity (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.00%
	Cost of Power Commodity (kWh)	9,637	0.0660	636.01	9,730	0.0660	642.19	6.18	0.97%
	<b>Sub-Total - Other Charges</b>			<b>1,072.56</b>			<b>1,117.46</b>	<b>44.89</b>	<b>4.19%</b>
	GST		5.00%	53.63		5.00%	55.87	2.24	4.19%
	<b>Total Bill</b>			<b>1,126.19</b>			<b>1,173.33</b>	<b>47.14</b>	<b>4.19%</b>

GENERAL SERVICE < 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
Consumption	Monthly Service Charge			21.70			25.70	4.00	18.43%
	Distribution (kWh)	15,000	0.0139	208.50	15,000	0.0165	247.50	39.00	18.71%
15,000 kWh	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kWh)	15,000	0.0000	0.00	15,000	0.0002	3.00	3.00	100.00%
	Regulatory Assets (kWh)	15,000	0.0000	0.00	15,000	0.0004	5.93	5.93	100.00%
	<b>Sub-Total - Distribution</b>			<b>232.31</b>			<b>283.60</b>	<b>51.29</b>	<b>22.08%</b>
	RTSR - Network	15,580	0.0048	74.78	15,720	0.0049	76.60	1.82	2.44%
	RTSR - Connection	15,580	0.0042	65.44	15,720	0.0043	67.80	2.37	3.62%
	<b>Sub-Total - Delivery</b>			<b>372.53</b>			<b>428.00</b>	<b>55.48</b>	<b>14.89%</b>
	Wholesale Market Rate	15,580	0.0065	101.27	15,720	0.0065	102.18	0.91	0.90%
	DRC	15,000	0.0070	105.00	15,000	0.0070	105.00	0.00	0.00%
	Cost of Power Commodity (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.00%
	Cost of Power Commodity (kWh)	14,830	0.0660	978.77	14,970	0.0660	988.04	9.27	0.95%
	<b>Sub-Total - Other Charges</b>			<b>1,600.31</b>			<b>1,665.97</b>	<b>65.66</b>	<b>4.10%</b>
	GST		5.00%	80.02		5.00%	83.30	3.28	4.10%
	<b>Total Bill</b>			<b>1,680.33</b>			<b>1,749.27</b>	<b>68.94</b>	<b>4.10%</b>

GENERAL SERVICE > 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
<b>Consumption</b> <b>25,000 kWh</b> <b>60 kW</b>	Monthly Service Charge			311.40			329.78	18.38	5.90%
	Distribution (kWh)	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%
	Distribution (kW)	60	2.1783	130.70	60	2.3153	138.92	8.22	6.29%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kW)	60	0.0000	0.00	60	0.0679	4.07	4.07	100.00%
	Regulatory Assets (kW)	60	0.0000	0.00	60	0.4513	27.08	27.08	0.00%
	<b>Sub-Total - Distribution</b>			<b>444.21</b>			<b>501.32</b>	<b>57.11</b>	<b>12.86%</b>
	RTSR - Network	60	1.9313	115.88	60	1.9607	117.64	1.76	1.52%
	RTSR - Connection	60	1.6636	99.82	60	1.7084	102.50	2.69	2.69%
	<b>Sub-Total - Delivery</b>			<b>659.90</b>			<b>721.46</b>	<b>61.56</b>	<b>9.33%</b>
	Wholesale Market Rate	25,966	0.0065	168.78	25,966	0.0065	168.78	0.00	0.00%
	DRC	25,000	0.0070	175.00	25,000	0.0070	175.00	0.00	0.00%
	Cost of Power Commodity (kWh)	25,966	0.0604	1,567.83	26,200	0.0604	1,581.96	14.14	0.90%
	<b>Sub-Total - Other Charges</b>			<b>2,571.51</b>			<b>2,647.21</b>	<b>75.70</b>	<b>2.94%</b>
	GST		5.00%	128.58		5.00%	132.36	3.78	2.94%
	<b>TOTAL BILL</b>			<b>2,700.08</b>			<b>2,779.57</b>	<b>79.48</b>	<b>2.94%</b>

GENERAL SERVICE > 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
<b>Consumption</b> <b>40,000 kWh</b> <b>100 kW</b>	Monthly Service Charge			311.40			329.78	18.38	5.90%
	Distribution (kWh)	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%
	Distribution (kW)	100	2.1783	217.83	100	2.3153	231.53	13.70	6.29%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kW)	100	0.0000	0.00	100	0.0679	6.79	6.79	100.00%
	Regulatory Assets (kW)	100	0.0000	0.00	100	0.4513	45.13	45.13	0.00%
	<b>Sub-Total - Distribution</b>			<b>531.34</b>			<b>614.70</b>	<b>83.36</b>	<b>15.69%</b>
	RTSR - Network	100	1.9313	193.13	100	1.9607	196.07	2.94	1.52%
	RTSR - Connection	100	1.6636	166.36	100	1.7084	170.84	4.48	2.69%
	<b>Sub-Total - Delivery</b>			<b>890.83</b>			<b>981.60</b>	<b>90.77</b>	<b>10.19%</b>
	Wholesale Market Rate	41,546	0.0065	270.05	41,546	0.0065	270.05	0.00	0.00%
	DRC	40,000	0.0070	280.00	40,000	0.0070	280.00	0.00	0.00%
	Cost of Power Commodity (kWh)	41,546	0.0604	2,508.52	41,921	0.0604	2,531.14	22.62	0.90%
	<b>Sub-Total - Other Charges</b>			<b>3,949.40</b>			<b>4,062.79</b>	<b>113.39</b>	<b>2.87%</b>
	GST		5.00%	197.47		5.00%	203.14	5.67	2.87%
	<b>TOTAL BILL</b>			<b>4,146.87</b>			<b>4,265.93</b>	<b>119.06</b>	<b>2.87%</b>

GENERAL SERVICE > 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
Consumption	Monthly Service Charge			311.40			329.78	18.38	5.90%
	215,000 kWh	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%
	500 kW	500	2.1783	1,089.15	500	2.3153	1,157.65	68.50	6.29%
	Distribution (kWh)								
	Distribution (kW)								
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kW)	500	0.0000	0.00	500	0.0679	33.95	33.95	100.00%
	Regulatory Assets (kW)	500	0.0000	0.00	500	0.4513	225.66	225.66	0.00%
	Sub-Total - Distribution			1,402.66			1,748.51	345.85	24.66%
	RTSR - Network	500	1.9313	965.65	500	1.9607	980.33	14.68	1.52%
	RTSR - Connection	500	1.6636	831.80	500	1.7084	854.18	22.38	2.69%
	Sub-Total - Delivery			3,200.11			3,583.02	382.91	11.97%
	Wholesale Market Rate	223,310	0.0065	1,451.52	223,310	0.0065	1,451.52	0.00	0.00%
	DRC	215,000	0.0070	1,505.00	215,000	0.0070	1,505.00	0.00	0.00%
	Cost of Power Commodity (kWh)	223,310	0.0604	13,483.30	225,324	0.0604	13,604.87	121.57	0.90%
	Sub-Total - Other Charges			19,639.93			20,144.41	504.48	2.57%
	GST		5.00%	982.00		5.00%	1,007.22	25.22	2.57%
	TOTAL BILL			20,621.93			21,151.63	529.70	2.57%

GENERAL SERVICE > 50 kW									
		2009 BILL			2010 BILL			IMPACT	
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %
Consumption	Monthly Service Charge			311.40			329.78	18.38	5.90%
	430,000 kWh	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%
	1,000 kW	1,000	2.1783	2,178.30	1,000	2.3153	2,315.30	137.00	6.29%
	Distribution (kWh)								
	Distribution (kW)								
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)
	LRAM & SSM Rider (kW)	1,000	0.0000	0.00	1,000	0.0679	67.90	67.90	100.00%
	Regulatory Assets (kW)	1,000	0.0000	0.00	1,000	0.4513	451.32	451.32	0.00%
	Sub-Total - Distribution			2,491.81			3,165.77	673.96	27.05%
	RTSR - Network	1,000	1.9313	1,931.30	1,000	1.9607	1,960.65	29.35	1.52%
	RTSR - Connection	1,000	1.6636	1,663.60	1,000	1.7084	1,708.37	44.77	2.69%
	Sub-Total - Delivery			6,086.71			6,834.79	748.08	12.29%
	Wholesale Market Rate	446,621	0.0065	2,903.04	446,621	0.0065	2,903.04	0.00	0.00%
	DRC	430,000	0.0070	3,010.00	430,000	0.0070	3,010.00	0.00	0.00%
	Cost of Power Commodity (kWh)	446,621	0.0604	26,966.61	450,648	0.0604	27,209.75	243.14	0.90%
	Sub-Total - Other Charges			38,966.35			39,957.57	991.22	2.54%
	GST		5.00%	1,948.32		5.00%	1,997.88	49.56	2.54%
	TOTAL BILL			40,914.67			41,955.45	1,040.78	2.54%



General Service > 3000 to 4999 kW										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %	% of Total Bill
<b>Consumption</b>	Monthly Service Charge			2,399.29			4,721.33	2,322.04	96.78%	2.57%
<b>2,000,000 kWh</b>	Distribution (kWh)	0	0.0000	0.00	2,000,000	0.0000	0.00	0.00	0.00%	0.00%
<b>3,500 kW</b>	Distribution (kW)	3,500	0.7321	2,562.35	3,500	0.8599	3,009.65	447.30	17.46%	1.64%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	0.00%
	Transformer Credit	3,500	(0.6000)	(2,100.00)	3,500	(0.6000)	(2,100.00)	0.00	0.00%	(1.14%)
	LRAM & SSM Rider (kW)	3,500	0.0000	0.00	3,500	0.0163	57.05	57.05	100.00%	0.03%
	Regulatory Assets (kW)	3,500	0.0000	0.00	3,500	0.6821	2,387.33	2,387.33	0.00%	1.30%
	<b>Sub-Total - Distribution</b>			<b>2,863.75</b>			<b>8,076.83</b>	<b>5,213.08</b>	<b>182.04%</b>	<b>4.40%</b>
	RTSR - Network	3,500	2.0487	7,170.45	3,500	2.0798	7,279.42	108.97	1.52%	3.97%
	RTSR - Connection	3,500	1.8386	6,435.10	3,500	1.8881	6,608.27	173.17	2.69%	3.60%
	<b>Sub-Total - Delivery</b>			<b>16,469.30</b>			<b>21,964.53</b>	<b>5,495.23</b>	<b>33.37%</b>	<b>11.97%</b>
	Wholesale Market Rate	2,056,533	0.0065	13,367.46	2,075,075	0.0065	13,487.99	120.53	0.90%	7.35%
	DRC	2,000,000	0.0070	14,000.00	2,000,000	0.0070	14,000.00	0.00	0.00%	7.63%
	Cost of Power Commodity (kWh)	2,056,533	0.0604	124,171.81	2,075,075	0.0604	125,291.40	1,119.58	0.90%	68.29%
	<b>Sub-Total - Other Charges</b>			<b>168,008.58</b>			<b>174,743.91</b>	<b>6,735.33</b>	<b>4.01%</b>	<b>95.24%</b>
	GST		5.00%	8,400.43		5.00%	8,737.20	336.77	4.01%	4.76%
	<b>TOTAL BILL</b>			<b>176,409.01</b>			<b>183,481.11</b>	<b>7,072.10</b>	<b>4.01%</b>	<b>100.00%</b>

General Service > 3000 to 4999 kW										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %	% of Total Bill
<b>Consumption</b>	Monthly Service Charge			2,399.29			4,721.33	2,322.04	96.78%	3.58%
<b>1,400,000 kWh</b>	Distribution (kWh)	0	0.0000	0.00	1,400,000	0.0000	0.00	0.00	0.00%	0.00%
<b>2,800 kW</b>	Distribution (kW)	2,800	0.7321	2,049.88	2,800	0.8599	2,407.72	357.84	17.46%	1.83%
	Smart Meter / Storm Rider (per month)			2.11			1.47	(0.64)	(30.33%)	0.00%
	Transformer Credit	2,800	(0.6000)	(1,680.00)	2,800	(0.6000)	(1,680.00)	0.00	0.00%	(1.28%)
	LRAM & SSM Rider (kW)	2,800	0.0000	0.00	2,800	0.0163	45.64	45.64	100.00%	0.03%
	Regulatory Assets (kW)	2,800	0.0000	0.00	2,800	0.6821	1,909.87	1,909.87	0.00%	1.45%
	<b>Sub-Total - Distribution</b>			<b>2,771.28</b>			<b>7,406.03</b>	<b>4,634.75</b>	<b>167.24%</b>	<b>5.62%</b>
	RTSR - Network	2,800	2.0487	5,736.36	2,800	2.0798	5,823.54	87.18	1.52%	4.42%
	RTSR - Connection	2,800	1.8386	5,148.08	2,800	1.8881	5,286.62	138.54	2.69%	4.01%
	<b>Sub-Total - Delivery</b>			<b>13,655.72</b>			<b>18,516.18</b>	<b>4,860.46</b>	<b>35.59%</b>	<b>14.06%</b>
	Wholesale Market Rate	1,439,573	0.0065	9,357.22	1,452,553	0.0065	9,441.59	84.37	0.90%	7.17%
	DRC	1,400,000	0.0070	9,800.00	1,400,000	0.0070	9,800.00	0.00	0.00%	7.44%
	Cost of Power Commodity (kWh)	1,439,573	0.0604	86,920.27	1,452,553	0.0604	87,703.98	783.71	0.90%	66.58%
	<b>Sub-Total - Other Charges</b>			<b>119,733.21</b>			<b>125,461.75</b>	<b>5,728.54</b>	<b>4.78%</b>	<b>95.24%</b>
	GST		5.00%	5,986.66		5.00%	6,273.09	286.43	4.78%	4.76%
	<b>TOTAL BILL</b>			<b>125,719.88</b>			<b>131,734.84</b>	<b>6,014.96</b>	<b>4.78%</b>	<b>100.00%</b>

Street Lighting										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %	% of Total Bill
<b>Billing Determinants</b>	Monthly Service Charge	5,682	0.4400	2,499.92	5,682	2.6927	15,298.96	12,799.04	511.98%	29.38%
<b>5,682 Connections</b>	Distribution (kWh)	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%	0.00%
<b>275,000 kWh</b>	Distribution (kW)	800	2.3570	1,885.60	800	14.4352	11,548.16	9,662.56	512.44%	22.18%
	LRAM & SSM Rider (kW)	800	0.0000	0.00	800	0.0000	0.00	0.00	0.00%	0.00%
<b>800 kW</b>	Regulatory Assets (kW)	800	0.0000	0.00	800	(0.8624)	(689.90)	(689.90)	0.00%	(1.32%)
	<b>Sub-Total - Distribution</b>			<b>4,385.52</b>			<b>26,157.22</b>	<b>21,771.70</b>	<b>496.44%</b>	<b>0.50</b>
	RTSR - Network	800	1.4565	1,165.20	800	1.4786	1,182.91	17.71	1.52%	2.27%
	RTSR - Connection	800	1.2860	1,028.80	800	1.3206	1,056.49	27.69	2.69%	2.03%
	<b>Sub-Total - Delivery</b>			<b>6,579.52</b>			<b>28,396.62</b>	<b>21,817.09</b>	<b>331.59%</b>	<b>54.53%</b>
	Wholesale Market Rate	285,630	0.0065	1,856.59	288,205	0.0065	1,873.33	16.74	0.90%	3.60%
	DRC	275,000	0.0070	1,925.00	275,000	0.0070	1,925.00	0.00	0.00%	3.70%
	Cost of Power Commodity (kWh)	285,630	0.0604	17,246.09	288,205	0.0604	17,401.58	155.50	0.90%	33.42%
	<b>Sub-Total - Other Charges</b>			<b>27,607.20</b>			<b>49,596.53</b>	<b>21,989.33</b>	<b>79.65%</b>	<b>95.24%</b>
	GST		5.00%	1,380.36		5.00%	2,479.83	1,099.47	79.65%	4.76%
	<b>TOTAL BILL</b>			<b>28,987.56</b>			<b>52,076.36</b>	<b>23,088.80</b>	<b>79.65%</b>	<b>100.00%</b>

Street Lighting										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %	% of Total Bill
<b>Billing Determinants</b>	Monthly Service Charge	5,682	0.4400	2,499.92	5,682	2.6927	15,298.96	12,799.04	511.98%	26.83%
<b>5,682 Connections</b>	Distribution (kWh)	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%	0.00%
<b>336,000 kWh</b>	Distribution (kW)	800	2.3570	1,885.60	800	14.4352	11,548.16	9,662.56	512.44%	20.25%
	LRAM & SSM Rider (kW)	800	0.0000	0.00	800	0.0000	0.00	0.00	0.00%	0.00%
<b>800 kW</b>	Regulatory Assets (kW)	800	0.0000	0.00	800	(0.8624)	(689.90)	(689.90)	0.00%	(1.21%)
	<b>Sub-Total - Distribution</b>			<b>4,385.52</b>			<b>26,157.22</b>	<b>21,771.70</b>	<b>496.44%</b>	<b>0.46</b>
	RTSR - Network	800	1.4565	1,165.20	800	1.4786	1,182.91	17.71	1.52%	2.07%
	RTSR - Connection	800	1.2860	1,028.80	800	1.3206	1,056.49	27.69	2.69%	1.85%
	<b>Sub-Total - Delivery</b>			<b>6,579.52</b>			<b>28,396.62</b>	<b>21,817.09</b>	<b>331.59%</b>	<b>49.81%</b>
	Wholesale Market Rate	348,987	0.0065	2,268.42	352,134	0.0065	2,288.87	20.45	0.90%	4.01%
	DRC	336,000	0.0070	2,352.00	336,000	0.0070	2,352.00	0.00	0.00%	4.13%
	Cost of Power Commodity (kWh)	348,987	0.0604	21,071.58	352,134	0.0604	21,261.57	189.99	0.90%	37.29%
	<b>Sub-Total - Other Charges</b>			<b>32,271.52</b>			<b>54,299.06</b>	<b>22,027.53</b>	<b>68.26%</b>	<b>95.24%</b>
	GST		5.00%	1,613.58		5.00%	2,714.95	1,101.38	68.26%	4.76%
	<b>TOTAL BILL</b>			<b>33,885.10</b>			<b>57,014.01</b>	<b>23,128.91</b>	<b>68.26%</b>	<b>100.00%</b>

Street Lighting										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %	% of Total Bill
<b>Billing Determinants</b>	Monthly Service Charge	5,682	0.4400	2,499.92	5,682	2.6927	15,298.96	12,799.04	511.98%	32.34%
<b>5,682 Connections</b>	Distribution (kWh)	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%	0.00%
<b>216,000 kWh</b>	Distribution (kW)	800	2.3570	1,885.60	800	14.4352	11,548.16	9,662.56	512.44%	24.41%
	LRAM & SSM Rider (kW)	800	0.0000	0.00	800	0.0000	0.00	0.00	0.00%	0.00%
<b>800 kW</b>	Regulatory Assets (kW)	800	0.0000	0.00	800	(0.8624)	(689.90)	(689.90)	0.00%	(1.46%)
	<b>Sub-Total - Distribution</b>			<b>4,385.52</b>			<b>26,157.22</b>	<b>21,771.70</b>	<b>496.44%</b>	<b>0.55</b>
	RTSR - Network	800	1.4565	1,165.20	800	1.4786	1,182.91	17.71	1.52%	2.50%
	RTSR - Connection	800	1.2860	1,028.80	800	1.3206	1,056.49	27.69	2.69%	2.23%
	<b>Sub-Total - Delivery</b>			<b>6,579.52</b>			<b>28,396.62</b>	<b>21,817.09</b>	<b>331.59%</b>	<b>60.03%</b>
	Wholesale Market Rate	224,349	0.0065	1,458.27	226,372	0.0065	1,471.42	13.15	0.90%	3.11%
	DRC	216,000	0.0070	1,512.00	216,000	0.0070	1,512.00	0.00	0.00%	3.20%
	Cost of Power Commodity (kWh)	224,349	0.0604	13,546.02	226,372	0.0604	13,668.15	122.14	0.90%	28.90%
	<b>Sub-Total - Other Charges</b>			<b>23,095.81</b>			<b>45,048.18</b>	<b>21,952.38</b>	<b>95.05%</b>	<b>95.24%</b>
	GST		5.00%	1,154.79		5.00%	2,252.41	1,097.62	95.05%	4.76%
	<b>TOTAL BILL</b>			<b>24,250.60</b>			<b>47,300.59</b>	<b>23,050.00</b>	<b>95.05%</b>	<b>100.00%</b>

Sentinel Lighting										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	Change \$	Change %	% of Total Bill
<b>Billing Determinants</b>	Monthly Service Charge	1	1.9800	1.98	1	3.3721	3.37	1.39	70.31%	10.20%
<b>1 Connection</b>	Distribution (kWh)	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%	0.00%
<b>180 kWh</b>	Distribution (kW)	1	6.9018	6.90	1	11.7654	11.77	4.86	70.47%	35.60%
	LRAM & SSM Rider (kW)	1	0.0000	0.00	1	0.000000	0.00	0.00	0.00%	0.00%
<b>1 kW</b>	Regulatory Assets (kW)	1	0.0000	0.00	1	(0.3749)	(0.37)	(0.37)	0.00%	(1.13%)
	<b>Sub-Total - Distribution</b>			<b>8.88</b>			<b>14.76</b>	<b>5.88</b>	<b>66.21%</b>	<b>0.45</b>
	RTSR - Network	1	1.4639	1.46	1	1.4861	1.49	0.02	1.52%	4.50%
	RTSR - Connection	1	1.3130	1.31	1	1.3483	1.35	0.04	2.69%	4.08%
	<b>Sub-Total - Delivery</b>			<b>11.66</b>			<b>17.60</b>	<b>5.94</b>	<b>50.94%</b>	<b>53.25%</b>
	Wholesale Market Rate	187	0.0065	1.22	189	0.0065	1.23	0.01	0.90%	3.71%
	RRRP	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%	0.00%
	DRC	180	0.0070	1.26	180	0.0070	1.26	0.00	0.00%	3.81%
	Cost of Power Commodity (kWh)	187	0.0604	11.29	189	0.0604	11.39	0.10	0.90%	34.47%
	<b>Sub-Total - Other Charges</b>			<b>25.42</b>			<b>31.47</b>	<b>6.05</b>	<b>23.80%</b>	<b>95.24%</b>
	GST		5.00%	1.27		5.00%	1.57	0.30	23.80%	4.76%
	<b>TOTAL BILL</b>			<b>26.69</b>			<b>33.05</b>	<b>6.35</b>	<b>23.80%</b>	<b>100.00%</b>

Unmetered Scattered										
		2009 BILL			2010 BILL			IMPACT		
		Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Consumption	Monthly Service Charge			21.75			25.70	3.95	100.00%	17.95%
1,000 kWh	Distribution (kWh)	1,000	0.0139	13.90	1,000	0.0221	22.10	8.20	58.99%	15.44%
	LRAM & SSM Rider (kWh)	1,000	0.0000	0.00	1,000	0.0024	2.40	2.40	100.00%	1.68%
	Regulatory Assets (kW)	1,000	0.0000	0.00	1,000	0.0003	0.26	0.26	0.00%	0.18%
	Sub-Total - Distribution			35.65			50.46	14.81	41.54%	0.35
	RTSR - Network	1,039	0.0048	4.99	1,048	0.0049	5.11	0.12	2.44%	3.57%
	RTSR - Connection	1,039	0.0042	4.36	1,048	0.0043	4.52	0.16	3.62%	3.16%
	Sub-Total - Delivery			45.00			60.09	15.09	33.53%	41.98%
	Wholesale Market Rate	1,039	0.0065	6.75	1,048	0.0065	6.81	0.06	0.90%	4.76%
	RRRP	0	0.0000	0.00	0	0.0000	0.00	0.00	0.00%	0.00%
	DRC	1,000	0.0070	7.00	1,000	0.0070	7.00	0.00	0.00%	4.89%
	Cost of Power Commodity (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.00%	29.87%
	Cost of Power Commodity (kWh)	289	0.0660	19.05	298	0.0660	19.67	0.62	3.24%	13.74%
	Sub-Total - Other Charges			120.55			136.32	15.77	13.08%	95.24%
	GST		5.00%	6.03		5.00%	6.82	0.79	13.08%	4.76%
	TOTAL BILL			126.58			143.13	16.56	13.08%	100.00%

## **APPENDIX 'E'**

November 15, 2009

Mr. Todd Wilcox  
Chief Operating Officer  
North Bay Hydro  
74 Commerce Crescent  
North Bay ON P1B 8Y5

**Re: Independent Third Party Review  
Proposed LRAM/SSM Recovery for  
North Bay Hydro Distribution Limited (NBHDL)**

Dear Mr. Wilcox:

As per our discussion I am preparing my report on the above subject. Over the past several months we have had several discussions on the content of the application for LRAM and SSM recovery. These discussions led to various changes to the filing of October 26, 2009.

Section 7.5 of the Guidelines for Electricity Distributor Conservation and Demand management EB-2008-0037 (Guidelines) dated March 28, 2008 outlines the responsibilities of the Independent Third Party Review (Review). Section 7.3 of the Guidelines states a distributor should engage an independent third party to make a claim for LRAM and SSM. This statement appears not to mandate the requirement with the word “should” and the fact it is contained in a “Guideline”. More recent Ontario Energy Board (OEB) decisions confirm the Review is a necessary requirement. Thus I am now submitting the Review.

One requirement is for the Review to cover programs funded in 2007 and beyond. The focus of this Review is mostly on the years 2007 and 2008, but one cannot ignore the two previous years in protecting the interests of ratepayers while at the same time ensuring that NBHDL is recovering adequate funding through LRAM and SSM.

**OPA Funded Programs**

We determined in advance of filing that the OPA programs delivered by NBHDL for 2008 would not be submitted for claim in this filing, but would be in a later rate filing. Thus there is no review required for the OPA programs as they were not submitted.

The 2006-2008 OPA conservation results were submitted to NBHDL in July 2009. The measures for both 2006 and 2007 were shown as “final” while 2008 was labelled as “preliminary”. As a result we determined that NBHDL would file only 2006 and 2007 and wait to file 2008 when the results were shown as “final”. These programs were filed October 26, 2009 using the exact data provided by the OPA assuming they had verified program results as they were shown as “final”. Although the input assumptions used for 2006 and 2007 differ substantially, we doubt it is necessary to alter the submission because the OPA states they are

“final” and therefore must meet the verification requirements. We assume they have done their own verification and are satisfied they meet the regulators requirement. We assume that when the 2008 results are

determined “final” you will be able to file for LRAM recovery based on the data provided by the OPA later this year. Year 2006 appears to use the OEB Assumptions and Measures List (OEB Tables) and year 2007 uses a version of the OPA Measures and Assumptions List.

One should look forward and plan for the filing for LRAM recovery for the years 2008 and 2009 for the OPA programs delivered by NBHDL. A Third Party Review will be required for those programs by either the OPA or a third party designated by the OPA. Data will need to be recorded properly for the Third Party Review and LRAM recovery calculations.

### **CDM Programs Funded Through Distribution Rates**

The only programs funded through Distribution Rates are those related to Third Tranche. As a result we have the benefit of Annual Reports for the years 2005, 2006, 2007 and 2008 to conduct the review. Most of the emphasis will be on 2007 and 2008.

### **Cost Effectiveness**

Program design and implementation was based on the Total Resource Cost Guide issued September 8, 2005. Third Tranche programs were launched during 2005 and early 2006. Any subsequent revisions were based on that revision or the later version issued October 2, 2006. This is broken into parts: residential and demand reduction as the approach is considerably different. The residential portion only affects the LRAM and SSM recovery for residential whereas the demand reduction affects the LRAM and SSM for general service < 50 kW, general service > 50 kW, unmetered scattered load and residential. The Third Tranche annual reports demand reduction was submitted by segment: commercial, institutional and industrial. In addition to residential and demand reduction one optional program (traffic lights) is included in the LRAM and SSM recovery. The process for the traffic lights is the same as demand reduction, thus is included with that group.

### **Residential**

As you know the residential programs include water heater tune-up, refrigerator buy-back, energuide for houses and information based. Each of the residential programs was evaluated using the technology screening analysis, program screening analysis and portfolio screening analysis except for information based.

For the benefit of other readers I'll include the example of the water heater tune-up program to explain the approach for all factors affecting the TRC calculation. Initially it was determined the program would involve tank wrap, pipe wrap, faucet aerator, efficient showerhead, and one compact fluorescent bulb. All five components were included in the OEB Assumptions and Measures List issued September 8, 2005. For screening purposes avoided costs, demand and energy savings, equipment life, equipment costs, free ridership, distributor program costs and portfolio costs were all considered. All but the distributor program costs and portfolio costs were available from the OEB Assumptions and Measures List. The water heater tune-up program resulted in a positive NPV for the two screenings using the total budget amount for water heater tune-up in the TRC calculation. To ensure no surprises, costs were investigated for the tank wrap, pipe wrap, faucet aerator, efficient showerhead, and a compact fluorescent bulb. In addition prices were obtained for delivery of the program including the installation of the equipment with all contract overheads. For this program all materials were purchased by NBHDL and the contractor picked up the materials from stores. Reports were

provided by the contractor outlining the numbers of each installed. These were compared to the material taken from stores.

The same approach was used for the refrigerator buy-back program, energuide for houses program and like-for-like changes as part of the demand reduction program. The latter program is not residential but utilized the

same process. For the latter program it was used to determine which measures would be included and which wouldn't be acceptable to a fixed incentive rate for certain measures to simplify and speed up the process. This proved to be a useful program representing energy savings of 708,113 kWh or about 10% of the total savings of the demand reduction program to April 30, 2008 for all classes of customers. At each year end actual costs were determined at the program level and included in the TRC calculation. The only negative TRC occurred in the energuide for houses program in 2006. Natural Resources Canada withdrew from the NBHDL program resulting in a loss of support after considerable expenses causing a negative TRC. NBHDL cancelled to energuide for houses program during 2006.

The only remaining residential program is the information based program. This program did not include a TRC screening as it was originally intended mostly to educate the public on energy conservation, safety and the environment through various means such as advertising, radio interviews, newspaper articles, promotional material, panel discussions, school campaigns, cheque presentations and community programs. To gain momentum and encourage participation other sessions were organized along with other interested parties to encourage greater participation. Incandescent bulb exchanges for LED Christmas lights and compact fluorescents began in late 2006 and carried on through to the end of Third Tranche. These proved very beneficial by involving many more customers. They were very interested in the new technologies and were encouraged to install the CFL's in high use areas to maximize energy savings and save the most money. In addition to these initiatives project porchlight began with volunteers and field staff delivering 20,000 CFL's door to door. The CFL's were well received and welcomed the recommendation to install them in high use areas as well as the means of disposal of the CFL's. The distribution was broad geographically and involved a diverse cross section of residents of the City of North Bay.

The TRC based on actual costs for the program as per the OEB Assumptions and Measures List contained in the TRC Guide issued October 2, 2006 which remained unchanged to the one issued in March 28, 2008 within a month of the completion of Third Tranche. The TRC had been negative to the end of 2006 for this program but was positive by \$313,611 as of April 30, 2008.

The net TRC at the portfolio level for the four residential programs: water heater tune-up, refrigerator buy-back, energuide for houses and information based program was positive by \$816,911 through the life of the program.

## **Demand Reduction**

For the duration of Third Tranche there were 100 projects completed from 2005 through April 30, 2008. Some of the 100 projects were unique requiring the use of engineering calculations and/or proxies as the technologies were not included in the OEB Assumptions and Measures List.

The process up to the approval of the project is well documented in the annual reports, thus will not repeat much in this section except what is related to cost effectiveness. Once the data is collected from the customer,

customer representative or NBHDL representative a TRC screening analysis is conducted at the program level. There is a great deal of dialogue documented among the consultants, suppliers, contractors and customers regarding the project at this stage to ensure the best accuracy possible.

For lighting the following is required to conduct a TRC screening: detailed cost estimates, material lists, equipment life used for project in hours, base case wattage by fixture together with annual operating hours, efficient case wattage by fixture together with annual operating hours, indicate replacement, new or removal and number of units for each group where there is any difference in foregoing information. Normally none of the measures submitted agree exactly with the OEB Assumptions and Measures List. The kWh saved are



calculated from the provided information (kW/unit\*number of units\*annual operating hours for base case) - (kW/unit\*number of units\*annual operating hours for efficient case). Equipment life for TRC is calculated by dividing the life of lamp by the annual operating time, seasonal energy usage is calculating by prorating the kWh saved from the calculation to the proxy kWh saved. The peak kW saved for summer and winter is calculated based on a formula developed in the annual reports for different types of lights. In most part it is a proration similar to seasonal energy usage. After the TRC calculation is completed and if positive for the project an agreement may be executed including an incentive calculated from the peak summer kW and peak winter kW.

After the lighting project is completed the installation is verified with a walk through counting each type of fixture and numbers of lamps. Copies of invoices for labour and material are obtained along with any available technical data. Where the invoices do not include the technical data for the lamps including such information as wattage and life of lamp they must be obtained later. The material invoices and counts are compared with the original plan to determine any differences. Common changes is the increase or decrease in T8 lamp wattage, numbers of lamps, rewiring to eliminate fixtures or ballasts, life of lamp, operating hours and costs. These are all included in the new TRC calculation and recalculated as final until year end when the full utility actual costs replaces the estimated utility costs.

Measures other than lighting are dealt with in the same manner as the example above but may require quite different information from qualified experts to conduct the TRC analysis. NBHDL documented many examples in their annual reports in addition to lighting. In most part the differences were related to calculating the energy saved, peak kW saved and the load profile. The process is the same as the lighting example above.

All the measures require the above information. Below are a few examples of measures that require information in place or in addition to the lighting example. As a minimum the same type information is required for all measures.

- For occupancy sensors they required a schedule of controlled lights which included numbers, wattages and expected reduction of hours use. A proxy to make the necessary TRC calculation;
- For adding lights to a photocell or installing a photocell, the Street Light Profile is used for seasonal energy. Since this was not on the OEB Assumptions and Measures List the free rider used was 30% as it was defined as a custom project; and
- For the installation of an energy efficient 5000 KVA transformer technical data including calculated differences between what would have been purchased if not energy efficient which would be the base case. The difference in kWh losses and peak kW losses was calculated from the data obtained from the engineer. Also the difference in cost for the two transformers was obtained and treated as incremental costs. A replacement chiller was treated in the same way.

The above and many more are described in sections 3.1, 3.6, 3.7, 3.8 and 3.11 of the annual reports. The total TRC is positive for demand reduction by \$1,951,467.

The following is in more general terms rather than the specifics above which address the TRC calculation, electrical energy and demand savings, TRC Costs including equipment costs and program costs related to cost effectiveness as per the Guidelines.

Program costs referenced in the above examples and all projects included development and start-up costs, promotion, equipment and installation, monitoring and evaluation and administration. NBHDL determined

early in Third Tranche not to utilize indirect costs as a way of allocating costs to programs. Instead all costs were charged to the program. This did require some proration of time by staff and consultants.

Promotion costs were charged to specific programs, some needed to be allocated based on activities. Incentive payments were only for demand reduction and refrigerator buy-back and were not included in the TRC calculation. Incentives represented a sizeable portion of the budget.

There was very little in the way of distribution equipment and installation costs for Third Tranche. When there was it was charged to the appropriate program.

Monitoring and Evaluation occurred on a regular basis. Those items that drive the TRC test occur every time there is a new, revised or completed application. In addition when any reports are required, follow-up on progress or any other items related to the ongoing operation of the programs such as ensuring that contractors and consultants have what they need.

During Third Tranche programs were improved for efficiency and delivery channels changed for efficiency and faster results. There is plenty of documentation on all the projects. At some point in time they should be combined in one place.

All administrative costs are charged directly to programs. We didn't request access to any of that information, but assume all was reported.

Free riders are primarily derived from the inputs and assumptions where they exist. Nearly in all cases free riders were 10% except water heater tank wraps which is at 5%. The exception is for those defined as "Custom Projects" as per section 7.2.3 of the Guidelines where 30% is required. In most cases the project does not involve customized design and engineering, but is not included in the OEB Assumptions and Measures List thus it should be considered a Custom Project and use 30% (as per "Inputs and Assumptions for Calculating Total Resource Cost" dated March 28, 2008) for free ridership. There is more on this in the input assumptions section.

For all measures undertaken for Third Tranche attribution is 100% as there has been no involvement on any projects with a non-regulated third party as per section 3.4.2 of the Guidelines.

NBHDL assumes that a CDM measures remain in place for the equipment life as per the inputs and assumptions. There is no evidence to vary from the "Inputs and Assumptions for Calculating Total Resource Cost" dated March 28, 2008 which states that "... distributors should assume 100% persistence in assessing CDM cost effectiveness ..." which references section 3.4.3 of the Guidelines.

Section 3.4.4 of the Guidelines states it is appropriate for distributors to include distribution and transmission system losses to adjust energy savings for benefit-cost analysis for the 2008 annual report and should not be included in the calculation of LRAM and SSM recovery. NBHDL has ignored using losses to improve benefit-cost analysis for Third Tranche and has not included losses for the calculation of LRAM and SSM.

In our opinion Third Tranche has been very cost effective using actual costs, calculated kWh saved based on input of third parties and customers, the use of high efficient and long life equipment. The process is sound and has many checks and balances resulting accurate TRC calculations.

We have three concerns as per the following:

- One concern is that additional or less OM&A is not considered as part of the incremental costs of very many measures. It is difficult to know if this would result in higher or lower SSM recovery and is not likely material to LRAM or SSM.
- The second concern is related to the residential information program where it is assumed that the LRAM and SSM recovery is 100% residential. There doesn't appear to be any way to determine what should be allocated to other classes if any. It is unlikely that more than 5% of the savings and costs belong to other classes. It would not be material to the other classes but may be somewhat to residential if the benefit and cost was transferred to other classes. In any case it would be most difficult to come up with a number. To help or completely offset this potential issue it was discovered during the Third Party Review that one project with 750 CFL's was allocated to general service <50 kW rather than residential.
- The third concern is the peak load calculation for winter and summer for the demand reduction programs using the developed formula from previous annual reports. We looked at Commercial T8 lighting only and found the OPA Measures and Assumptions List worked best from 5400 hours to 500 hours. Over 6000 hours it generated larger peak kW savings than the difference in wattage between the base case and efficiency case. From 5400 hours to 6000 hours the OPA had a higher value than NBHDL and had a power factor of more than 90%. For the values less than 5400 hours the OPA always had a lesser value than NBHDL. This came about because the load profile is lower for both summer and winter peaks than the OEB Assumptions and Measures List. Proration of the kWh of the sample using the peak kW values for winter and summer along with the kWh saved from the OEB Assumptions and Measures List didn't work much better than OPA. Proration didn't work for over 4000 hours for the same reason OPA didn't work for over 5400 hours. For less than 4000 hours the peak kW was less than NBHDL approach and more than OPA. For Third Tranche NBHDL used the OEB Assumptions and Measures List and came up with reasonable peak kW, the formula wasn't perfect but likely adequate. The only values provided in the List was 4000 hours for three examples with different kWh savings for winter and summer peak kW. The NBHDL formula worked correctly
- for those three cases and didn't provide any data out of range. The formula was designed to produce the same kW as on the OEB Assumptions and Measures List at 4000 hours and maintain the same peak kW for anything over 3250 hours. It was assumed that when lights are on 3250 hours they will be on for the winter and summer peak periods. The 3250 hours was calculated based on the peak occurring between 7:00am and 8:00pm or a 13 hours period. The peak would only occur on weekdays less statutory holidays. Assuming 10 stat holidays the 3250 is arrived at by multiplying  $13 \times 50$ . Many businesses operate less than 3250 thus will likely always operate during the peak period as well, but the peak may occur when they are closed. A common business operating time is from 8:00 am to 6:00 pm which would result in 2500 hours. The formula reduces the peaks by 23% at 2500 hours. This deduction appears reasonable. The deduction would be far greater using either the OPA or proration method. This requires further investigation for various types of lights for both residential and commercial. Bob Mason & Associates will investigate this further.

## Participation Levels

For demand reduction, participants are defined by NBHDL as numbers of units installed such as number of fixtures (installed, retrofitted, replaced or removed) for lighting, number of controls as opposed to number of

fixtures controlled or load controlled, number of units with thermal envelope improvements, number of roof tops installed, and number of efficient appliances installed.

These quantities all appear on the TRC calculations which explained under cost effectiveness are derived from the customer, NBH staff and third parties such as contractors and consultants. The details can be found on the TRC for each project by measure. These measures are separated for new, removals and retrofit, controls associated with lights, different operating hours or actual incremental costs per unit. This data is linked to a file (the file) that totals all participants together for such things as lighting, controls and appliances. Then these quantities are linked to the section on measures in Appendix B for each program or sub program which is submitted in the annual reports.

There is a wide variety of energy usage per unit using this approach, but it is consistent each year. For example one control system resulted in annual energy savings of 369,690 where in another case 82 controls controlled 773 fixtures with a load 44,834 watts and annual energy savings of 42,026 kWh. The total of all the measures on this file that summarizes the numbers of participants is balanced to the total kWh saved by segment as a cross check of data. We followed the flow of the numbers of participants from what was provided by consultants and others from screening to actual constructed data including invoices, to TRC calculations, to "the file", to the measures in Appendix B.

Participants for demand reduction programs were only available by segment not by class. When the energy data and TRC's were reformatted to classes from segments the participants were not. This could be done but with a lot of work. The annual kWh saved and TRC's were transferred from segment to class and all quantities reconciled successfully thus there is no reason to suspect the numbers of participant would not also reconcile.

For residential programs (water heater tune-up, refrigerator buy-back and energuide for houses) we were able to follow the numbers of participants from the reports prepared by the contractor delivering these programs to

the TRC to Appendix B of the annual report. We did not attempt to match these with issues from NBHDL stores. These programs were much easier to follow as there were far fewer measures and the contractor reports summarized the participants quarterly with life to date numbers. In this case participants for the water heater tune-up were defined as number of installed tank wraps, faucet aerators, CFL's, pipe wrap and shower heads. For refrigerator buy-back it was number of second fridges removed and for energuide for houses it was number of homes upgraded, number of fans using less energy and the number of thermal envelope improvements by measure.

For the remaining residential program (information based) the same process was followed. The lighting was the same as demand reduction above except it was assumed all installations were residential. The source of numbers of CFL's came from various initiatives prepared by NBHDL staff following activities such as light exchanges, promotional give-aways, and project porchlight. The number of participants related to CFL's is the numbers that were personally given to customers together with energy efficient information.

For the activities such as presentations, panel discussions, radio interviews and the like, the numbers of participants were derived from reports submitted by the contractor and NBH staff. Some numbers were difficult to verify unless there were give-aways involved such as promotional material. In most part they were best estimates by numbers of attendees. It doesn't appear that any data from newspapers, radio stations or TV stations was obtained for readership or audience size. Estimates were reported which often matched the number of residential customers at NBHDL. The reporting of these numbers only occurred a few times and then stopped because of lack of confidence in the numbers. These quantities have no bearing on the LRAM or SSM recovery.

There is no reason to believe the number of participants recorded and used in all calculations is not close to 100% accuracy as a lot of effort was put into ensuring the best possible information was included in the TRC calculation.

### **Input Assumptions**

Most of the Third Party Assessment took place much earlier than this final report dated November 15, 2009. It began at the time the 2009 annual report was written during the first quarter of 2009. At that time it was determined for the 2008 annual report that any projects that were not included in the OEB Assumptions and Measures List and had no justifiable proxy would be treated as a Custom Projects and free riders would be 30% rather than 10% as previously reported. NBHDL and Bob Mason & Associates did not consider many of these projects as Custom as they were normal energy efficient initiatives. Many did not require customized design and engineering or specialized equipment. For LRAM and SSM recovery free riders for projects previously reported in 2005, 2006 and 2007 were changed to 30% when not included in the OEB Assumptions and Measures List and had no justifiable proxy to satisfy the definition for Custom Projects in section 3.3 of the TRC Guide dated September 8, 2005 or section 7.2.3 of the Guideline. Approximately 25 of these projects were documented and included with LRAM and SSM filing in Exhibit 10, Appendix 10-C. At least half of these projects did not require customized design and engineering or specialized equipment and should not have been subject to the free riders of 30%. An example would be the use of photocells to control lights where the street light profile is adequate.

According to section 7.3 of the Guidelines under LRAM it states that the input assumptions used for

calculation of LRAM should be the best available at the time of the Third Party Assessment. The timing of the Third Party Assessment is November 2009. It provides an example that if any input assumptions change in 2007, those changes should apply for LRAM purposes from the beginning of 2007 onwards until changed again. Under SSM of the same section it states that if any input assumptions change in 2007, those changes would apply for SSM purposes from the beginning of 2008 onwards until changed again. Thus based on the input assumptions changing March 28, 2008, LRAM recovery would be based on the new input assumptions issued March 28, 2008 and SSM recovery would be based on the revision of October 2, 2006.

On January 27, 2009 the Board issued a letter endorsing the OPA List for use by distributors containing new input assumptions. The relevant section 7.3 is included in the letter confirming the criteria of the above paragraph. Thus based on the Third Party Assessment of 2009 and ignoring the quote “best available” the LRAM recovery would be based on the new input assumptions issued January 27, 2009 and SSM recovery would be based on the revision of March 28, 2008.

The question is what is the “best available”. It appears to us that the OPA input assumptions are more forward looking than backwards. In our view the best available input assumptions are the ones issued March 28, 2008. A few examples follow with reasons:

- The reference in the January 27<sup>th</sup> letter is to “new distribution rate-funded CDM programs”. In the same sentence it refers to LRAM and SSM that we would interpret as applying to new programs;
- The reference in the OPA inputs and assumptions is to “mass markets”. For NBHDL all residential programs are customer focused with considerable customer interaction;
- There is a factor of 0.97 included in the calculations to reduce the kWh saved for CFL’s because of a 3% replacement rate. This indicates the future not the past for Third Tranche when few if any of these lights were installed;

- Many of the CFL's distributed during Third Tranche to residential customers were the first installed in their homes. The promotion encouraged the installation to be in high use areas to reduce the most energy and therefore cost. For these first installations in a residence for a customer focussed program the 2.7 hours or 985 annual hours is too low. The average of 2320 hours used in the OEB Assumptions and Measures List is far more practical;
  - The water heater tune-up program doesn't include the tank wrap. The only reference is under Low Income Programs where it recommends against them because the tanks installed after 1995 were efficient enough. This may be a good statement now but not at the time most tank wraps were installed in 2005. The SSM was based on six years which is up next year and LRAM recovery only carries on until the end of 2009. NBHDL did not target low income homes. Using the OEB Assumptions and Measures List the new tanks could be offset by a change of free rider rate from 5% to 30%;
  - Nearly all data is calculated for kWh savings as described under Cost Effectiveness using most of the same formulas as the OPA Measures and Assumptions List;
  - The emphasis on the NBHDL demand reduction changes was to maximize efficiency by making wiring changes and using long life lamps to reduce long term costs. Thus many changes were not like for like but using less fixtures, less lamps and less ballasts;
- 
- We find a large discrepancy in the MURB apartment at 2100 hours and a mass market residence at 985 hours in the OPA measures. NBHDL used 1095 hours for some specific MURBS and 2320 hours depending on the environment and use of the lights; and
  - Most of the hours use shown in the OPA measures is higher than what was used for Third Tranche programs for Commercial and Institutional by NBHDL. In some cases they are much higher.

We believe the actual quantities included in Third Tranche modified for LRAM recovery and SSM recovery are the best fit for NBHDL.

The input assumptions that varied from those posted March 28, 2008 were all reviewed at the time of LRAM and SSM filing and found acceptable. We emphasize that NBHDL is in Northern Ontario where lifestyles are different than the referenced areas where much of the data was received to develop the OPA Measures and Assumptions. For example the hours use for certain buildings for demand reduction program appears high compared to the input NBHDL received from the customers and their representatives.

## **Recommendations**

1. Repackage the numbers of participants by rate class for the demand reduction programs;
2. Since this is the end of Third Tranche there is no need to make any recommendations on these programs. However it would be beneficial for NBHDL to learn from this experience when preparing for future LRAM recovery for the years 2008 and 2009.

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Prepared by:  
James Robert Mason, P. Eng.  
Bob Mason & Associates

## **APPENDIX "F"**



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd. (1)  
 File Number: EB-2009-0270  
 Rate Year: 2010 Version: 1.0

### Table of Content

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

#### Notes:

- (1) Pale green cells represent inputs  
 (2) **Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.**

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## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.  
File Number: EB-2009-0270  
Rate Year: 2010

Data Input					(1)
	Application		Adjustments		Per Board Decision
<b>1 Rate Base</b>					
Gross Fixed Assets (average)	\$86,569,185	(4)			\$86,569,185
Accumulated Depreciation (average)	(\$47,921,628)	(5)			(\$47,921,628)
<b>Allowance for Working Capital:</b>					
Controllable Expenses	\$5,843,346				\$5,843,346
Cost of Power	\$45,023,899				\$45,023,899
Working Capital Rate (%)	15.00%				15.00%
<b>2 Utility Income</b>					
Operating Revenues:					
Distribution Revenue at Current Rates	\$9,978,566				
Distribution Revenue at Proposed Rates	\$12,244,787				
<b>Other Revenue:</b>					
Specific Service Charges	\$320,753				
Late Payment Charges	\$137,700				
Other Distribution Revenue	\$256,940				
Other Income and Deductions	\$109,723				
<b>Operating Expenses:</b>					
OM+A Expenses	\$5,779,054				\$5,779,054
Depreciation/Amortization	\$2,901,108				\$2,901,108
Property taxes	\$64,292				\$64,292
Capital taxes	\$23,458				
Other expenses	\$ -				\$0
<b>3 Taxes/PILs</b>					
Taxable Income:					
Adjustments required to arrive at taxable income	(\$183,938)	(3)			
<b>Utility Income Taxes and Rates:</b>					
Income taxes (not grossed up)	\$475,807				
Income taxes (grossed up)	\$673,516				
Capital Taxes	\$23,458				
Federal tax (%)	18.00%				
Provincial tax (%)	11.35%	(6)			
Income Tax Credits	\$ -	(7)			
<b>4 Capitalization/Cost of Capital</b>					
<b>Capital Structure:</b>					
Long-term debt Capitalization Ratio (%)	56.0%				
Short-term debt Capitalization Ratio (%)	4.0%	(2)			(2)
Common Equity Capitalization Ratio (%)	40.0%				
Preferred Shares Capitalization Ratio (%)	0.0%				
					Capital Structure must total 100%
<b>Cost of Capital</b>					
Long-term debt Cost Rate (%)	6.94%				
Short-term debt Cost Rate (%)	1.33%				
Common Equity Cost Rate (%)	9.75%				
Preferred Shares Cost Rate (%)	0.00%				

### Notes:

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

- (1) All inputs are in dollars (\$) except where inputs are individually identified as percentages (%)
- (2) 4.0% unless an Applicant has proposed or been approved for another amount.
- (3) Net of addbacks and deductions to arrive at taxable income.
- (4) Average of Gross Fixed Assets at beginning and end of the Test Year
- (5) Average of Accumulated Depreciation at the beginning and end of the Test Year. Enter as a negative amount.
- (6) The revised provincial tax rate of 11.35% represents NBHDL's effective tax rate of 29.35% less the Federal rate of 18%
- (7) The tax rate referenced in (6) reflects the inclusion of tax credits



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.

File Number: EB-2009-0270

Rate Year: 2010

			Rate Base		
Line No.	Particulars		Application	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(3)	\$86,569,185	\$ -	\$86,569,185
2	Accumulated Depreciation (average)	(3)	(\$47,921,628)	\$ -	(\$47,921,628)
3	Net Fixed Assets (average)	(3)	\$38,647,557	\$ -	\$38,647,557
4	Allowance for Working Capital	(1)	\$7,630,087	\$ -	\$7,630,087
5	Total Rate Base		\$46,277,644	\$ -	\$46,277,644

(1) Allowance for Working Capital - Derivation						
6	Controllable Expenses		\$5,843,346		\$ -	\$5,843,346
7	Cost of Power		\$45,023,899		\$ -	\$45,023,899
8	Working Capital Base		\$50,867,245		\$ -	\$50,867,245
9	Working Capital Rate %	(2)	15.00%			15.00%
10	Working Capital Allowance		\$7,630,087		\$ -	\$7,630,087

### Notes

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



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.  
File Number: EB-2009-0270  
Rate Year: 2010

Utility income				
Line No.	Particulars	Application	Adjustments	Per Board Decision
<b>Operating Revenues:</b>				
1	Distribution Revenue (at Proposed Rates)	\$12,244,787	\$ -	\$12,244,787
2	Other Revenue (1)	\$825,116	\$ -	\$825,116
3	Total Operating Revenues	\$13,069,903	\$ -	\$13,069,903
<b>Operating Expenses:</b>				
4	OM+A Expenses	\$5,779,054	\$ -	\$5,779,054
5	Depreciation/Amortization	\$2,901,108	\$ -	\$2,901,108
6	Property taxes	\$64,292	\$ -	\$64,292
7	Capital taxes	\$23,458	\$ -	\$23,458
8	Other expense	\$ -	\$ -	\$ -
9	Subtotal	\$8,767,912	\$ -	\$8,767,912
10	Deemed Interest Expense	\$1,823,647	\$ -	\$1,823,647
11	Total Expenses (lines 4 to 10)	\$10,591,560	\$ -	\$10,591,560
12	Utility income before income taxes	\$2,478,344	\$ -	\$2,478,344
13	Income taxes (grossed-up)	\$673,516	\$ -	\$673,516
14	Utility net income	\$1,804,828	\$ -	\$1,804,828

### Notes

(1)	<b>Other Revenues / Revenue Offsets</b>		
	Specific Service Charges	\$320,753	\$320,753
	Late Payment Charges	\$137,700	\$137,700
	Other Distribution Revenue	\$256,940	\$256,940
	Other Income and Deductions	\$109,723	\$109,723
	Total Revenue Offsets	\$825,116	\$825,116



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.  
File Number: EB-2009-0270  
Rate Year: 2010

### Taxes/PILs

Line No.	Particulars	Application	Per Board Decision
<u>Determination of Taxable Income</u>			
1	Utility net income	\$1,804,828	\$1,804,828
2	Adjustments required to arrive at taxable utility income	(\$183,938)	(\$183,938)
3	Taxable income	\$1,620,890	\$1,620,890
<u>Calculation of Utility income Taxes</u>			
4	Income taxes	\$475,807	\$475,807
5	Capital taxes	\$23,458	\$23,458
6	Total taxes	\$499,266	\$499,266
7	Gross-up of Income Taxes	\$197,708	\$197,708
8	Grossed-up Income Taxes	\$673,516	\$673,516
9	PILs / tax Allowance (Grossed-up Income taxes + Capital taxes)	\$696,974	\$696,974
10	Other tax Credits	\$ -	\$ -
<u>Tax Rates</u>			
11	Federal tax (%)	18.00%	18.00%
12	Provincial tax (%)	11.35%	11.35%
13	Total tax rate (%)	29.35%	29.35%

### Notes



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.  
File Number: EB-2009-0270  
Rate Year: 2010

### Capitalization/Cost of Capital

Line No.	Particulars	Capitalization Ratio		Cost Rate	Return
		(%)	(\$)	(%)	(\$)
<b>Application</b>					
<b>Debt</b>					
1	Long-term Debt	56.00%	\$25,915,481	6.94%	\$1,799,028
2	Short-term Debt	4.00%	\$1,851,106	1.33%	\$24,620
3	<b>Total Debt</b>	<b>60.00%</b>	<b>\$27,766,587</b>	<b>6.57%</b>	<b>\$1,823,647</b>
<b>Equity</b>					
4	Common Equity	40.00%	\$18,511,058	9.75%	\$1,804,828
5	Preferred Shares	0.00%	\$ -	0.00%	\$ -
6	<b>Total Equity</b>	<b>40.00%</b>	<b>\$18,511,058</b>	<b>9.75%</b>	<b>\$1,804,828</b>
7	<b>Total</b>	<b>100%</b>	<b>\$46,277,644</b>	<b>7.84%</b>	<b>\$3,628,476</b>
<b>Per Board Decision</b>					
<b>Debt</b>					
8	Long-term Debt	56.00%	\$25,915,481	6.94%	\$1,799,028
9	Short-term Debt	4.00%	\$1,851,106	1.33%	\$24,620
10	<b>Total Debt</b>	<b>60.00%</b>	<b>\$27,766,587</b>	<b>6.57%</b>	<b>\$1,823,647</b>
<b>Equity</b>					
11	Common Equity	40.0%	\$18,511,058	9.75%	\$1,804,828
12	Preferred Shares	0.0%	\$ -	0.00%	\$ -
13	<b>Total Equity</b>	<b>40.0%</b>	<b>\$18,511,058</b>	<b>9.75%</b>	<b>\$1,804,828</b>
14	<b>Total</b>	<b>100%</b>	<b>\$46,277,644</b>	<b>7.84%</b>	<b>\$3,628,476</b>

#### Notes

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



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.  
File Number: EB-2009-0270  
Rate Year: 2010

### Revenue Sufficiency/Deficiency

Line No.	Particulars	Per Application		Per Board Decision	
		At Current Approved Rates	At Proposed Rates	At Current Approved Rates	At Proposed Rates
1	Revenue Deficiency from Below		\$2,266,221		\$2,266,221
2	Distribution Revenue	\$9,978,566	\$9,978,566	\$9,978,566	\$9,978,566
3	Other Operating Revenue Offsets - net	\$825,116	\$825,116	\$825,116	\$825,116
4	<b>Total Revenue</b>	<b>\$10,803,683</b>	<b>\$13,069,903</b>	<b>\$10,803,683</b>	<b>\$13,069,903</b>
5	Operating Expenses	\$8,767,912	\$8,767,912	\$8,767,912	\$8,767,912
6	Deemed Interest Expense	\$1,823,647	\$1,823,647	\$1,823,647	\$1,823,647
	<b>Total Cost and Expenses</b>	<b>\$10,591,560</b>	<b>\$10,591,560</b>	<b>\$10,591,560</b>	<b>\$10,591,560</b>
7	<b>Utility Income Before Income Taxes</b>	<b>\$212,123</b>	<b>\$2,478,344</b>	<b>\$212,123</b>	<b>\$2,478,344</b>
	Tax Adjustments to Accounting				
8	Income per 2009 PILs	(\$183,938)	(\$183,938)	(\$183,938)	(\$183,938)
9	<b>Taxable Income</b>	<b>\$28,185</b>	<b>\$2,294,406</b>	<b>\$28,185</b>	<b>\$2,294,406</b>
10	Income Tax Rate	29.35%	29.35%	29.35%	29.35%
11	<b>Income Tax on Taxable Income</b>	<b>\$8,274</b>	<b>\$673,516</b>	<b>\$8,274</b>	<b>\$673,516</b>
12	<b>Income Tax Credits</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
13	<b>Utility Net Income</b>	<b>\$203,849</b>	<b>\$1,804,828</b>	<b>\$203,849</b>	<b>\$1,804,828</b>
14	<b>Utility Rate Base</b>	<b>\$46,277,644</b>	<b>\$46,277,644</b>	<b>\$46,277,644</b>	<b>\$46,277,644</b>
	Deemed Equity Portion of Rate Base	\$18,511,058	\$18,511,058	\$18,511,058	\$18,511,058
15	Income/Equity Rate Base (%)	1.10%	9.75%	1.10%	9.75%
16	Target Return - Equity on Rate Base	9.75%	9.75%	9.75%	9.75%
	Sufficiency/Deficiency in Return on Equity	-8.65%	0.00%	-8.65%	0.00%
17	Indicated Rate of Return	4.38%	7.84%	4.38%	7.84%
18	Requested Rate of Return on Rate Base	7.84%	7.84%	7.84%	7.84%
19	Sufficiency/Deficiency in Rate of Return	-3.46%	0.00%	-3.46%	0.00%
20	Target Return on Equity	\$1,804,828	\$1,804,828	\$1,804,828	\$1,804,828
21	Revenue Sufficiency/Deficiency	\$1,600,979	(\$0)	\$1,600,979	(\$0)
22	<b>Gross Revenue Sufficiency/Deficiency</b>	<b>\$2,266,221 (1)</b>		<b>\$2,266,221 (1)</b>	

**Notes:**

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



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.  
File Number: EB-2009-0270  
Rate Year: 2010

Line No.	Particulars	Revenue Requirement	
		Application	Per Board Decision
1	OM&A Expenses	\$5,779,054	\$5,779,054
2	Amortization/Depreciation	\$2,901,108	\$2,901,108
3	Property Taxes	\$64,292	\$64,292
4	Capital Taxes	\$23,458	\$23,458
5	Income Taxes (Grossed up)	\$673,516	\$673,516
6	Other Expenses	\$ -	\$ -
7	Return		
	Deemed Interest Expense	\$1,823,647	\$1,823,647
	Return on Deemed Equity	\$1,804,828	\$1,804,828
8	Distribution Revenue Requirement before Revenues	\$13,069,904	\$13,069,904
9	Distribution revenue	\$12,244,787	\$12,244,787
10	Other revenue	\$825,116	\$825,116
11	<b>Total revenue</b>	\$13,069,903	\$13,069,903
12	<b>Difference (Total Revenue Less Distribution Revenue Requirement before Revenues)</b>	<b>(\$0) (1)</b>	<b>(\$0) (1)</b>

### Notes

(1) Line 11 - Line 8



## REVENUE REQUIREMENT WORK FORM

Name of LDC: North Bay Hydro Distribution Ltd.  
 File Number: EB-2009-0270  
 Rate Year: 2010

		Selected Delivery Charge and Bill Impacts Per Draft Rate Order								
		Monthly Delivery Charge					Total Bill			
		Current	Per Draft Rate Order	Change			Current	Per Draft Rate Order	Change	
				\$	%				\$	%
Residential	800 kWh/month	\$ 31.83	\$ 36.86	\$ 5.03	15.8%		\$ 92.27	\$ 97.84	\$ 5.57	6.0%
GS < 50kW	2000 kWh/month	\$ 70.31	\$ 82.74	\$ 12.44	17.7%		\$ 228.16	\$ 241.96	\$ 13.80	6.0%

Notes:



## **APPENDIX “G”**

Table 9A -- As Filed OPA Conservation Results for 2006 and 2007

Initiative	Measure	Units	Annual Energy Savings per Unit (kWh) Filed	Annual Energy Savings per Unit (Summer Peak kW) Filed	Annual Energy Savings per Unit (Winter Peak kW) Filed	Total Summer Peak kW Savings per Annum Filed	Total Winter Peak kW Savings per Annum Filed	Total Energy Savings per Annum (kWh) Filed	Filed Free Riders Filed	Total Energy Savings per Annum (kWh) Filed
						Gross	Gross	Gross		Net
2006										
2006 Every Kilowatt Counts (spring)	Energy Star® Compact Fluorescent Light Bulb	6,887	104	0.000		0.000	0.000	719,006	90.00%	647,105
2006 Every Kilowatt Counts (spring)	Electric Timers	193	183	0.000		0.000	0.000	35,333	90.00%	31,799
2006 Every Kilowatt Counts (spring)	Programmable Thermostats	84	216	0.050		4.199	0.000	18,141	90.00%	16,327
2006 Every Kilowatt Counts (spring)	Energy Star® Ceiling Fans	64	141	0.014		0.894	0.000	9,008	90.00%	8,108
2006 Cool Savings Rebate Program	Energy Star® Air Conditioner	74	351	0.359		26.591	0.000	25,998	90.00%	23,398
2006 Cool Savings Rebate Program	Programmable Thermostats	56	159	0.163		9.198	0.000	8,972	90.00%	8,075
2006 Cool Savings Rebate Program	Air Conditioner Tune-Up	67	369	0.038		2.519	0.000	24,594	90.00%	22,134
2006 Secondary Fridge Retirement Pilot	Refrigerator Retirement	26	1,200	0.272		7.024	0.000	30,988	90.00%	27,890
2006 Secondary Fridge Retirement Pilot	Freezer Retirement	1	900	0.204		0.228	0.000	1,005	90.00%	905
2006 Every Kilowatt Counts (fall)	Energy Star® Compact Fluorescent Light Bulb	10,211	104	0.000		0.000	0.000	1,066,073	90.00%	959,466
2006 Every Kilowatt Counts (fall)	Seasonal Light Emitting Diode Light String	2,458	31	0.000		0.000	0.000	75,580	90.00%	68,022
2006 Every Kilowatt Counts (fall)	Programmable Thermostats	162	522	0.118		19.076	0.000	84,591	90.00%	76,132
2006 Every Kilowatt Counts (fall)	Dimmers	128	139	0.000		0.000	0.000	17,808	90.00%	16,027
2006 Every Kilowatt Counts (fall)	Indoor Motion Sensors	46	209	0.000		0.000	0.000	9,608	90.00%	8,647
2006 Every Kilowatt Counts (fall)	Programmable Basebaord Thermostats	10	1,466	0.000		0.000	0.000	14,150	90.00%	12,735
Total 2006						69.73	0.00	2,140,857		1,926,771
								First Year	50.00%	963,385

Table 9A -- As Filed OPA Conservation Results for 2006 and 2007

Initiative	Measure	Units	Annual Energy Savings per Unit (kWh) Filed	Annual Energy Savings per Unit (Summer Peak kW) Filed	Annual Energy Savings per Unit (Winter Peak kW) Filed	Total Summer Peak kW Savings per Annum Filed	Total Winter Peak kW Savings per Annum Filed	Total Energy Savings per Annum (kWh) Filed	Filed Free Riders Filed	Total Energy Savings per Annum (kWh) Filed
						Gross	Gross	Gross		Net
2007										
2007 Great Refrigerator Roundup	Refrigerator	327	745	0.096	0.117	31,392	38,259	243,517	39%	95,427
2007 Great Refrigerator Roundup	Freezer	61	515	0.096	0.117	5,856	7,137	31,439	46%	14,362
2007 Great Refrigerator Roundup	Small Refrigerator	5	490	0.096	0.117	0.480	0.585	2,450	30%	736
2007 Great Refrigerator Roundup	Small Freezer	2	339	0.096	0.117	0.192	0.234	677	30%	204
2007 Great Refrigerator Roundup	Window Air Conditioner	1	240	0.098	0.000	0.098	0.000	240	43%	104
2007 Cool Savings Rebate	ENERGY STAR® Central Air Conditioner	172	152	0.018	0.000	3,149	0.000	26,186	57%	14,978
2007 Cool Savings Rebate	Programmable Thermostat	244	55	0.151	0.000	36,795	0.000	13,310	27%	3,655
2007 Cool Savings Rebate	Furnace with Electronically Commutated Motor	270	832	0.440	0.126	118,629	33,971	224,277	59%	132,548
2007 Cool Savings Rebate	Central Air Conditioning Tune Up	145	235	0.278	0.000	40,436	0.000	34,251	16%	5,382
2007 Every Kilowatt Counts	15 W CFL	12,322	43	0.001	0.012	12,322	147,862	529,838	78%	413,273
2007 Every Kilowatt Counts	20 W+ CFLs	2,006	62	0.002	0.015	4,012	30,088	124,565	78%	97,161
2007 Every Kilowatt Counts	Project Porchlight CFLs	2,593	43	0.001	0.012	2,593	31,115	111,495	76%	84,736
2007 Every Kilowatt Counts	Energy Star Ceiling Fan	99	90	0.003	0.025	0.298	2,485	8,925	55%	4,909
2007 Every Kilowatt Counts	Furnace Filter	400	38	0.021	0.006	8,410	2,403	15,098	55%	8,304
2007 Every Kilowatt Counts	Solar Lights	1,582	33	0.000	0.000	0.000	0.000	51,887	13%	6,745
2007 Every Kilowatt Counts	Outdoor Motion Sensor	158	160	0.000	0.000	0.000	0.000	25,288	55%	13,909
2007 Every Kilowatt Counts	Dimmer Switch	101	24	0.001	0.007	0.070	0.704	2,383	55%	1,311
2007 Every Kilowatt Counts	Energy Star Light Fixtures	48	123	0.004	0.035	0.191	1,675	5,882	55%	3,235
2007 Every Kilowatt Counts	SLEDs	3,264	14	0.000	0.006	0.000	19,587	44,723	49%	21,914
2007 Every Kilowatt Counts	T8	94	37	0.001	0.010	0.094	0.938	3,489	77%	2,687
2007 Every Kilowatt Counts	Programmable Thermostat	97	75	0.000	0.022	0.000	2,126	7,257	55%	3,991
2007 Every Kilowatt Counts	Power Bar with Timer	44	72	0.006	0.009	0.263	0.394	3,170	77%	2,441
2007 Every Kilowatt Counts	Lighting Control Devices	507	72	0.001	0.013	0.507	6,589	36,596	55%	20,128
2007 Affordable Housing – Pilot	Energy Star Clotheswasher	8	287	0.018	0.031	0.144	0.248	2,296	100%	2,296
2007 Affordable Housing – Pilot	Energy Star Refrigerator	35	69	0.007	0.009	0.245	0.315	2,415	100%	2,415
2007 Affordable Housing – Pilot	High Pressure Sodium	10	749			0.000	0.000	7,490	100%	7,490
2007 Affordable Housing – Pilot	Photo Sensors	2	292	0.000		0.000	0.000	584	100%	584
2007 Social Housing – Pilot	Custom Retrofit Projects	10				0.000	0.000	61,711	100%	61,711
Total 2007						266.18	326.71	1,621,442		1,026,637
								First Year	50.00%	513,318

Table 9B -- Revised in Response to Question 26(b) Filed OPA Conservation Results for 2006 and 2007

Initiative	Measure	Units	Annual Energy Savings per Unit (kWh) OPA Measures	Annual Energy Savings per Unit (Summer Peak kW) OPA Measures	Annual Energy Savings per Unit (Winter Peak kW) OPA Measures	Total Energy Savings per Annum (kWh) OPA Revised	Total Summer Peak kW Savings per Annum OPA Revised	Total Winter Peak kW Savings per Annum OPA Revised	Revised Free Riders	Total Energy Savings per Annum (kWh) OPA Revised
						Gross	Gross	Gross		Net
2006										
2006 Every Kilowatt Counts (spring)	Energy Star® Compact Fluorescent Light Bulb	6,887	43	0.001	0.012	296,142	6.887	82.644	70.00%	207,300
2006 Every Kilowatt Counts (spring)	Electric Timers	193	219	0.007	0.062	42,283	1.352	11.971	70.00%	29,598
2006 Every Kilowatt Counts (spring)	Programmable Thermostats	84	138	0.151	0.000	11,590	12.682	0.000	70.00%	8,113
2006 Every Kilowatt Counts (spring)	Energy Star® Ceiling Fans	64	90	0.003	0.025	5,737	0.192	1.597	70.00%	4,016
2006 Cool Savings Rebate Program	Energy Star® Air Conditioner	74	167	0.183	0.000	12,370	13.555	0.000	70.00%	8,659
2006 Cool Savings Rebate Program	Programmable Thermostats	56	138	0.151	0.000	7,787	8.521	0.000	70.00%	5,451
2006 Cool Savings Rebate Program	Air Conditioner Tune-Up	67	254	0.278	0.000	16,929	18.529	0.000	70.00%	11,850
2006 Secondary Fridge Retirement Pilot	Refrigerator Retirement	26	940	0.096	0.117	24,282	2.479	3.021	70.00%	16,997
2006 Secondary Fridge Retirement Pilot	Freezer Retirement	1	755	0.086	0.088	843	0.096	0.098	70.00%	590
2006 Every Kilowatt Counts (fall)	Energy Star® Compact Fluorescent Light Bulb	10,211	43	0.001	0.012	439,092	10.211	122.537	70.00%	307,364
2006 Every Kilowatt Counts (fall)	Seasonal Light Emitting Diode Light String	2,458	14	0.000	0.006	33,673	0.000	14.747	70.00%	23,571
2006 Every Kilowatt Counts (fall)	Programmable Thermostats	162	138	0.151	0.000	22,359	24.465	0.000	70.00%	15,651
2006 Every Kilowatt Counts (fall)	Dimmers	128	24	0.007	0.007	3,036	0.897	0.897	70.00%	2,125
2006 Every Kilowatt Counts (fall)	Indoor Motion Sensors	46	64	0.002	0.018	2,942	0.092	0.827	70.00%	2,060
2006 Every Kilowatt Counts (fall)	Programmable Basebaord Thermostats	10	75	0.000	0.022	725	0.000	0.212	70.00%	507
Total 2006						919,791	99.96	238.55		643,854
							First Year		50.00%	321,927

Table 9B -- Revised in Response to Question 26(b) Filed OPA Conservation Results for 2006 and 2007

Initiative	Measure	Units	Annual Energy Savings per Unit (kWh) OPA Measures	Annual Energy Savings per Unit (Summer Peak kW) OPA Measures	Annual Energy Savings per Unit (Winter Peak kW) OPA Measures	Total Energy Savings per Annum (kWh) OPA Revised	Total Summer Peak kW Savings per Annum OPA Revised	Total Winter Peak kW Savings per Annum OPA Revised	Revised Free Riders	Total Energy Savings per Annum (kWh) OPA Revised
						Gross	Gross	Gross		Net
2007										
2007 Great Refrigerator Roundup	Refrigerator	327	940	0.096	0.117	307,478	31.392	38.259	70%	215,235
2007 Great Refrigerator Roundup	Freezer	61	755	0.086	0.088	46,073	5.246	5.368	70%	32,251
2007 Great Refrigerator Roundup	Small Refrigerator	5	940	0.096	0.117	4,702	0.480	0.585	70%	3,291
2007 Great Refrigerator Roundup	Small Freezer	2	755	0.086	0.088	1,511	0.172	0.176	70%	1,057
2007 Great Refrigerator Roundup	Window Air Conditioner	1	96	0.098	0.000	96	0.098	0.000	70%	67
2007 Cool Savings Rebate	ENERGY STAR® Central Air Conditioner	172	167	0.183	0.000	28,733	31.486	0.000	70%	20,113
2007 Cool Savings Rebate	Programmable Thermostat	244	138	0.151	0.000	33,627	36.795	0.000	70%	23,539
2007 Cool Savings Rebate	Furnace with Electronically Commutated Motor	270	807	0.440	0.126	217,576	118.629	33.971	70%	152,303
2007 Cool Savings Rebate	Central Air Conditioning Tune Up	145	254	0.278	0.000	36,945	40.436	0.000	70%	25,861
2007 Every Kilowatt Counts	15 W CFL	12,322	43	0.001	0.012	529,838	12.322	147.862	70%	370,886
2007 Every Kilowatt Counts	20 W+ CFLs	2,006	53	0.002	0.015	105,509	4.012	30.088	70%	73,856
2007 Every Kilowatt Counts	Project Porchlight CFLs	2,593	43	0.001	0.012	111,495	2.593	31.115	70%	78,047
2007 Every Kilowatt Counts	Energy Star Ceiling Fan	99	90	0.003	0.025	8,925	0.298	2.485	70%	6,248
2007 Every Kilowatt Counts	Furnace Filter	400	38	0.021	0.006	15,098	8.410	2.403	70%	10,569
2007 Every Kilowatt Counts	Solar Lights	1,582	5	0.000	0.000	7,593	0.000	0.000	70%	5,315
2007 Every Kilowatt Counts	Outdoor Motion Sensor	158	160	0.000	0.000	25,288	0.000	0.000	70%	17,702
2007 Every Kilowatt Counts	Dimmer Switch	101	24	0.007	0.007	2,383	0.704	0.704	70%	1,668
2007 Every Kilowatt Counts	Energy Star Light Fixtures	48	123	0.004	0.035	5,882	0.191	1.675	70%	4,117
2007 Every Kilowatt Counts	SLEDs	3,264	14	0.000	0.006	44,723	0.000	19.587	70%	31,306
2007 Every Kilowatt Counts	T8	94	37	0.001	0.010	3,489	0.094	0.938	70%	2,443
2007 Every Kilowatt Counts	Programmable Thermostat	97	75	0.000	0.022	7,257	0.000	2.126	70%	5,080
2007 Every Kilowatt Counts	Power Bar with Timer	44	72	0.006	0.009	3,170	0.263	0.394	70%	2,219
2007 Every Kilowatt Counts	Lighting Control Devices	507	72	0.001	0.013	36,596	0.507	6.589	70%	25,617
2007 Affordable Housing -- Pilot	Energy Star Clotheswasher	8	159	0.018	0.031	1,272	0.144	0.248	100%	1,272
2007 Affordable Housing -- Pilot	Energy Star Refrigerator	35	69	0.007	0.009	2,408	0.245	0.315	100%	2,408
2007 Affordable Housing -- Pilot	High Pressure Sodium	10	749	0.090		7,490	0.900	0.000	100%	7,490
2007 Affordable Housing -- Pilot	Photo Sensors	2	292	0.000		584	0.000	0.000	100%	584
2007 Social Housing -- Pilot	Custom Retrofit Projects	10				0	0.000	0.000	100%	0
Total 2007						1,595,743	295.42	324.89		1,120,547
								First Year	50.00%	560,273

<b>Table 3A</b>											
<b>Response to Board Interrogatory Question 26 (b), OPA Amounts Adjusted</b>											
<b>ANNUAL CDM LOAD IMPACTS BY PROGRAM AND CLASS</b>											
	2005		2006		2007		2008		Total		
Rate Class and Program	Gross kWh or kW	Net kWh or kW	Gross kWh or kW	Net kWh or kW	Gross kWh or kW	Net kWh or kW	Gross kWh or kW	Net kWh or kW	Gross kWh or kW	Net kWh or kW	Weighted Average Free Riders
<b>Residential (MWH Where 1 MWH = 1000 kWh)</b>											
Water Heater Tune-up	306.2	278.2	181.8	166.6	103.8	94.9			591.9	538.7	9.0%
Fridge Buy-back	394.8	355.3	136.8	123.1	58.8	52.9			590.4	531.4	10.0%
EnerGuide for Houses	71.8	64.6	36.3	32.7					108.1	97.3	10.0%
Information Based			19.4	17.5	560.5	507.5	772.1	694.9	1,352.0	1,219.9	9.8%
Demand Reduction					330.4	253.0	192.3	173.1	522.7	426.1	18.5%
OPA Residential (06 & 07)			919.8	643.9	1,595.7	1,120.5	0.0	0.0	2,515.5	1,764.4	29.9%
<b>Sub-Total (MWH)</b>	<b>772.8</b>	<b>698.2</b>	<b>1,294.2</b>	<b>982.7</b>	<b>2,649.3</b>	<b>2,028.9</b>	<b>964.4</b>	<b>867.9</b>	<b>5,680.6</b>	<b>4,577.8</b>	<b>19.4%</b>
<b>General Service &lt; 50 kW (MWH Where 1 MWH = 1000 kWh)</b>											
Demand Reduction			154.7	139.2	306.3	274.3	415.6	373.1	876.6	786.6	10.3%
LED Traffic Lights	18.5	16.7			338.2	304.4	42.3	38.0	399.0	359.1	10.0%
<b>Sub-Total (MWH)</b>	<b>18.5</b>	<b>16.7</b>	<b>154.7</b>	<b>139.2</b>	<b>644.5</b>	<b>578.7</b>	<b>457.9</b>	<b>411.1</b>	<b>1,275.6</b>	<b>1,145.7</b>	<b>10.2%</b>
<b>Unmetered Scattered Load (MWH Where 1 MWH = 1000 kWh)</b>											
LED Traffic Lights					52.8	47.6			52.8	47.6	10.0%
<b>Total mWh Reduction</b>	<b>791.3</b>	<b>714.8</b>	<b>1,448.9</b>	<b>1,122.0</b>	<b>3,346.6</b>	<b>2,655.2</b>	<b>1,422.2</b>	<b>1,279.1</b>	<b>7,009.1</b>	<b>5,771.0</b>	<b>17.7%</b>
<b>General Service &gt; 50 kW (kW)</b>											
Demand Reduction	171	122	2,470	2,137	2,681	2,378	7,496	6,542	12,817	11,180	12.8%
DR Transformer Allowance	116	82			1,806	1,403	1,866	1,452	3,789	2,936	22.5%
Renewable Energy							35	25	35	25	30.0%
<b>Sub-Total (kW)</b>	<b>287</b>	<b>204</b>	<b>2,470</b>	<b>2,137</b>	<b>4,487</b>	<b>3,781</b>	<b>9,397</b>	<b>8,019</b>	<b>16,641</b>	<b>14,141</b>	<b>15.0%</b>
<b>Intermediate (kW)</b>											
Demand Reduction					422	380			422	380	10.0%
<b>Sub-Total (kW)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>422</b>	<b>380</b>	<b>0</b>	<b>0</b>	<b>422</b>	<b>380</b>	<b>10.0%</b>
<b>Total kW Reduction</b>	<b>287</b>	<b>204</b>	<b>2,470</b>	<b>2,137</b>	<b>4,909</b>	<b>4,162</b>	<b>9,397</b>	<b>8,019</b>	<b>17,063</b>	<b>14,521</b>	<b>14.9%</b>

Table 4A -- Response to Board Interrogatory Question 26 (b), OPA Amounts Adjusted										
FOREGONE REVENUE BY PROGRAM AND CLASS (With Free Riders)										
	2005	2006		2007		2008		2009		
Rate Class, Program and Measure	First Year kWh Saved	Carried Forward Total kWh Saved For 2005	First Year kWh Saved Plus Carried Forward kWh For 2005	Carried Forward Total kWh Saved For 2005 and 2006	First Year kWh Saved Plus Carried Forward kWh For 05 and 06	Carried Forward Total kWh Saved For 2005, 2006 and 2007	First Year kWh Saved Plus Carried Forward kWh For 05, 06 and 07	Carried Forward Total kWh Saved For 2005, 2006, 2007 and 2008	First Year kWh Saved Plus Carried Forward kWh For 05, 06, 07 and 08	LRAM Lost Revenue for 2005 to 2009 Period \$
Rates Effective	1-Mar-05		1-May-06		1-May-07		1-May-08		1-May-09	
<b>Residential</b>										
Rates (\$ per kWh)	\$0.01150		\$0.01120		\$0.01130		\$0.01120		\$0.01120	
Water Heater Tune-up										
Tank Wrap	12,504	50,018	68,357	86,697	100,805	114,912	114,912	114,912	114,912	4,630
Faucet Aerator	1,733	6,932	9,142	11,352	11,973	12,593	12,593	12,593	12,593	541
Showerhead	16,077	64,309	90,327	116,345	136,491	154,636	154,636	154,636	154,636	6,201
Pipe Wrap	3,335	13,338	23,051	32,764	36,457	40,151	40,151	40,151	40,151	1,610
CFL25	21,493	85,973	112,470	138,967	148,692	158,417	158,417	158,417	158,417	6,747
Weatherstripping	14,419	57,676	57,676	57,676	57,676	57,676	57,676	57,676	57,676	2,761
Outlet Insulation					179	358	358	358	358	10
Total Water Heater Tune-up	69,562	278,247	361,024	443,801	491,273	538,744	538,744	538,744	538,744	22,500
Fridge Buy-back	88,830	355,320	416,880	478,440	504,900	531,360	531,360	531,360	531,360	23,341
<b>EnerGuide for Houses</b>										
Caulking Products	81	326	326	326	326	326	326	326	326	16
Weatherstripping	122	489	489	489	489	489	489	489	489	23
Attic Insulation (R-11 to R-38)	951	3,802	3,802	3,802	3,802	3,802	3,802	3,802	3,802	182
Fuel Substitution	14,873	59,494	59,494	59,494	59,494	59,494	59,494	59,494	59,494	2,848
Basement Insulation	122	489	489	489	489	489	489	489	489	23
B-audits			11,090	22,180	22,180	22,180	22,180	22,180	22,180	873
Furnace Fans			5,265	10,530	10,530	10,530	10,530	10,530	10,530	414
<b>Total EnerGuide for Houses</b>	16,150	64,599	80,954	97,309	97,309	97,309	97,309	97,309	97,309	4,380
<b>Information Based</b>										
Inc. 60W to 15W CFL Project PorchLight			0	0	140,940	281,880	1,612,975	1,879,200	1,879,200	40,754
Inc. 60W to 15W CFL Promotions			21,141	42,282	126,846	211,410	279,687	293,343	293,343	8,095
Inc (125W) to LED (3.5W) (New)			0	0	27,366	54,732	54,732	54,732	54,732	1,536
<b>Total Information Based</b>			21,141	42,282	296,152	548,022	1,947,394	2,227,275	2,227,275	50,385
Demand Reduction					126,504	253,008	397,242	426,089	426,089	10,660
<b>Third Tranche Total (kWh)</b>	174,541	698,166	879,999	1,061,832	1,515,137	1,968,443	3,512,049	3,820,777	3,820,777	111,266
<b>3rd Tranche Lost Revenue (\$)</b>	<b>2,007</b>		<b>9,944</b>		<b>17,071</b>		<b>39,452</b>		<b>42,793</b>	<b>111,266</b>
OPA Residential (2006 & 2007)			321,927	643,854	1,204,127	1,764,400	1,764,400	1,764,400	1,764,400	56,786
<b>OPA Lost Revenue (\$)</b>	<b>0</b>		<b>3,638</b>		<b>13,566</b>		<b>19,820</b>		<b>19,761</b>	<b>56,786</b>
Total Residential	174,541	698,166	1,201,926	1,705,686	2,719,264	3,732,843	5,276,449	5,585,177	5,585,177	168,052
<b>Class Lost Revenue (\$)</b>	<b>2,007</b>		<b>13,582</b>		<b>30,637</b>		<b>59,272</b>		<b>62,554</b>	<b>168,052</b>
<b>General Service &lt; 50 kW (GS&lt;50kW)</b>										
Rates (\$ per kWh)	\$0.0142		\$0.01390		\$0.01400		\$0.01390		\$0.01390	
Demand Reduction			69,618	139,237	276,401	413,565	724,456	786,634	786,634	25,863
LED Traffic Lights	4,166	16,664	16,664	16,664	168,846	321,029	352,733	359,074	359,074	12,557
<b>GS &lt; 50 kW Total (kWh)</b>	4,166	16,664	86,283	155,901	445,248	734,594	1,077,189	1,145,708	1,145,708	38,420
<b>Class Lost Revenue (\$)</b>	<b>59</b>		<b>1,208</b>		<b>6,219</b>		<b>15,009</b>		<b>15,925</b>	<b>38,420</b>
<b>Unmetered Scattered Load</b>										
Rates (\$ per kWh)	\$0.0142		\$0.01390		\$0.01400		\$0.01390		\$0.01390	
LED Traffic Lights	0	0	0	0	23,778	47,557	47,557	47,557	47,557	1,656
<b>Class Lost Revenue (\$)</b>	<b>0</b>		<b>0</b>		<b>332</b>		<b>663</b>		<b>661</b>	<b>1,656</b>
<b>General Service &gt; 50 kW (GS&gt;50kW)</b>										
Rates (\$ per kW)	\$2.1189		\$2.17850		\$2.19810		\$2.17830		\$2.17830	
Rates with Transformer Allowance (\$ per kW)	\$1.5189		\$1.5785		\$1.5981		\$1.5783		\$1.5783	
Demand Reduction	31	122	1,191	2,260	3,449	4,638	9,875	10,923	10,923	55,564
DR Transformer Allowance	20	82	82	82	783	1,484	2,531	2,740	2,740	9,741
Renewable Energy							20	25	25	98
GS>50 kW No Allowance (\$)	65		2,571		7,559		21,621		23,846	55,662
GS>50 kW With Allowance (\$)	31		127		1,246		4,011		4,325	9,741
<b>Class Lost Revenue (\$)</b>	<b>96</b>		<b>2,698</b>		<b>8,805</b>		<b>25,632</b>		<b>28,171</b>	<b>65,402</b>
<b>Intermediate with Transformer Allowance</b>										
Rates (\$ per kW)	\$0.3711		\$0.13210		\$0.13870		\$0.13210		\$0.13210	
Demand Reduction					190	380	380	380	380	127
<b>Class Lost Revenue (\$)</b>	<b>0</b>		<b>0</b>		<b>26</b>		<b>51</b>		<b>50</b>	<b>127</b>
<b>Total Lost Revenue (\$)</b>	<b>2,162</b>		<b>17,488</b>		<b>46,019</b>		<b>100,627</b>		<b>107,362</b>	<b>273,657</b>

Carrying Charges -- LRAM									
	Q4 2005	Third 2006	Sixth 2006	Q3 2006	Q4 2006	Q1 2007	Q2 2007	Q3 2007	Total
	7.25%	7.25%	4.14%	4.59%	4.59%	4.59%	4.59%	4.59%	
3rd Tranche Residential	\$36.38	\$289.70	\$82.71	\$137.56	\$137.56	\$340.87	\$340.87	\$340.87	\$1,706.53
OPA Residential (06 & 07)	\$0.00	\$87.91	\$25.10	\$41.74	\$41.74	\$199.67	\$199.67	\$199.67	\$795.52
General Service < 50 kW	\$1.07	\$30.65	\$8.75	\$14.55	\$14.55	\$86.70	\$86.70	\$86.70	\$329.67
Total All Classes	\$39.19	\$475.83	\$135.86	\$225.94	\$225.94	\$766.20	\$766.20	\$766.20	\$3,401.35
	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009	Q2 2009	Q3 2009	
	5.14%	5.14%	4.08%	3.35%	3.35%	2.45%	1.00%	0.55%	
3rd Tranche Residential	\$381.72	\$906.72	\$719.73	\$590.96	\$590.96	\$711.50	\$290.41	\$159.72	\$4,351.72
OPA Residential (06 & 07)	\$223.60	\$488.86	\$388.04	\$318.61	\$318.61	\$363.33	\$148.30	\$81.56	\$2,330.92
General Service < 50 kW	\$97.09	\$294.54	\$233.80	\$191.97	\$191.97	\$243.52	\$99.40	\$54.67	\$1,406.95
Total All Classes	\$858.01	\$2,191.63	\$1,739.66	\$1,428.40	\$1,428.40	\$1,743.82	\$711.76	\$391.47	\$10,493.16
	Total Residential Third Tranche Carrying Charges								\$6,058.25
	Total Residential OPA Carrying Charges								\$3,126.44
	Total Residential Carrying Charges								\$9,184.69
	Total General Service < 50 kW Carrying Charges								\$1,736.61
	Total General Service > 50 kW , Unmetered Scattered Load and Intermediate Carrying Charges								\$2,973.21
	Total Carrying Charges								\$13,894.51



Table 7A -- Response to Board Interrogatory Question 26 (b), OPA Amounts Adjusted												
LRAM and SSM Total Amounts and Rate Riders by Class												
One Year and Three Year Rate Rider Recovery												
Rate Class	Third Tranche Amounts (2005 to 2008); OPA amounts (2006 and 2007)				2010		One Year Rate Rider	Three Year Rate Rider	One Year Rate Rider	Three Year Rate Rider	One Year Rate Rider	Three Year Rate Rider
	LRAM	LRAM	LRAM	SSM			LRAM	LRAM	SSM	SSM	Total	Total
	Foregone Revenue 2005 to 2009 \$	Carrying Charges \$ to Sept. 30, 2009	Total LRAM \$	\$	Weather Normalized Load forecast	kWh or kW	\$/unit (kWh or kW)	\$/unit (kWh or kW)	\$/unit (kWh or kW)	\$/unit (kWh or kW)	\$/unit (kWh or kW)	\$/unit (kWh or kW)
Third Tranche Residential	111,266	6,058	117,325	N/A	214,191,103	kWh	0.000548	0.000183	N/A	N/A	N/A	N/A
OPA Residential (06 & 07)	56,786	3,126	59,912	N/A	214,191,103	kWh	0.000280	0.000093	N/A	N/A	N/A	N/A
Total Residential	168,052	9,185	177,237	44,289	214,191,103		0.000827	0.000276	0.000207	0.000069	0.001034	0.000345
General Service < 50 kW	38,420	1,737	40,157	14,394	84,727,250	kWh	0.000474	0.000158	0.000170	0.000057	0.000644	0.000215
Unmetered Scattered Load (USL)	1,656	73	1,729	745	337,792	kWh	0.005118	0.001706	0.002206	0.000735	0.007324	0.002441
General Service > 50 kW	65,402	2,895	68,297	61,382	636,802	kW	0.107250	0.035750	0.096391	0.032130	0.203641	0.067880
Intermediate	127	6	133	3,636	77,038	kW	0.001725	0.000575	0.047203	0.015734	0.048928	0.016309
Total	273,657	13,895	287,552	124,447								

<b>Table 8A</b>				
<b>Response to Board Interrogatory Question 26 (b), OPA Amounts Adjusted</b>				
<b>LRAM and SSM Rate Impacts (Compared to 2009 Rates)</b>				
<b>Three Year Rate Rider</b>				
<b>Standard Consumption per Month</b>	<b>% Change Variable Rate</b>	<b>% Change Distribution Cost</b>	<b>% Change Total Bill</b>	<b>Average Monthly Increase in Total Bill \$</b>
<b>Total Residential</b>				
<b>1000 kWh</b>	3.08%	1.35%	0.30%	\$0.36
<b>General Service &lt; 50 kW</b>				
<b>2000 kWh</b>	1.54%	0.84%	0.19%	\$0.45
<b>Unmetered Scattered Load</b>				
<b>1000 kWh</b>	17.56%	6.80%	2.01%	\$2.56
<b>General Service &gt; 50 kW</b>				
<b>100,000 kWh and 275 kW</b>	3.12%	2.05%	0.18%	\$19.60
<b>Intermediate</b>				
<b>1,600,000 kWh and 3100 kW</b>	2.23%	1.78%	0.04%	\$52.56