

## EXHIBIT 3 – OPERATING REVENUE

### Index

Exhibit	Tab	Schedule	Appendix	Contents
<b>3 – Operating Revenue</b>				
	1	1		Overview
	2	1		Summary of Operating Revenue
	3			Load and Revenue Forecasts
		1		Overview
		2		Load Forecast and Methodology
		3		Accuracy of Load Forecast and Variance Analysis
	4	1		Other Revenue
		3-1		Appendix 3-1 – Regression Model Inputs
		3-2		Appendix 3-2 – Load Forecast Model
		3-3		Appendix 3-3 – Appendix 2-H Other Operating Revenue
		3-4		Appendix 3-4 – Appendix 2-L Load Forecast CDM Adjustment Work Form (2014)

**OVERVIEW**

This Exhibit provides the details of CND's operating revenue for 2010 (Board Approved and Actual), 2011 Actual, 2012 Actual, 2013 Bridge Year and 2014 Test Year. This Exhibit also provides a variance analysis of the material changes in operating revenue components from 2008 to 2014.

Operating revenue is comprised of:

1. Throughput or base distribution revenue; and
2. Other revenue.

Operating revenue is calculated by applying CND's approved or proposed distribution rates to the appropriate billing determinants for fixed and variable components. CND's operating revenue has been calculated using the applicable Board approved Tariff of Rates and charges for the applicable years, including Board approved specific service charges. Other revenue includes such items as rent from electric property, late payment charges, interest and other miscellaneous revenues.

A summary of operating revenues is presented in Table 3-1, and the variance analysis follows with individual explanations of distribution revenue and other revenue.

**Throughput Revenue:**

Throughput revenue for the 2014 Test year is based on the proposed rates for 2014, the 2014 weather normalized load forecast, normalized load volumes, and customer counts. Information related to CND's weather normalized forecasting methodology, normalized volume, and customer counts are incorporated herein. Detailed variance analysis on the actual and forecast distribution revenue is provided in Tables 3-3 to Table 3-9.

1   **Other Revenue:**

2   Other revenue includes: late payment charges; specific service charges; rent from electric  
3   property; retail service revenues; miscellaneous service revenues; and interest. A  
4   summary of other revenue by year is presented in Table 3-26. Detailed variance analysis  
5   on the actual and forecast other revenue is provided in Exhibit 3, Tab 4.

6   **Revenue Sharing:**

7   CND has four affiliated corporations: The Corporation of the City of Cambridge, The  
8   Corporation of the Township of North Dumfries, Cambridge and North Dumfries Energy  
9   Plus Inc., and Cambridge and North Dumfries Energy Solutions Inc. CND does not engage  
10   in revenue sharing with any of its affiliates.

1    **SUMMARY OF OPERATING REVENUE**

2    Table 3-1 summarizes CND's total base distribution revenue requirement, other distribution  
3    revenue, and total service revenue requirement. The 2013 Bridge Year distribution revenue  
4    is based on CND's 2013 Board approved rates and CND's forecast for customer counts  
5    and usage. The proposed distribution revenue for 2014 has been calculated based on the  
6    2014 proposed distribution rates and 2014 forecast customer count and usage. Distribution  
7    revenue does not include commodity related revenue.

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**Table 3-1 – Summary of Operating Revenues**

Description	2008 Actual	2009 Actual	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
<b>Distribution Revenue as per Audited Financial Statements</b>	21,311,429	19,484,390	23,201,066	22,519,964	23,654,877	25,027,447	23,685,688	27,997,737
<b>Adjustments</b>								
MicroFIT as Miscellaneous Other Distribution Revenue	-	-	-	-	10,576	-	-	-
Smart Meter Revenue	-	-	-	-	-	(2,533,958)	-	-
Tax Changes	-	-	-	-	84,444	153,156	-	-
LRAM	-	-	-	-	-	(227,167)	-	-
Regulatory Accounting Changes under CGAAP	-	-	-	-	-	1,500,071	2,717,866	-
SSS Administration Charge Adjustment	-	-	-	(129,161)	-	-	-	-
<b>Total Distribution Revenue after Adjustments</b>	<b>21,311,429</b>	<b>19,484,390</b>	<b>23,201,066</b>	<b>22,390,803</b>	<b>23,749,897</b>	<b>23,919,549</b>	<b>26,403,554</b>	<b>27,997,737</b>
<b>Distribution Revenues</b>								
Residential	10,564,174	9,453,012	11,710,367	11,194,272	11,603,951	11,751,085	13,474,395	14,077,731
GS < 50 kW	2,972,689	2,654,337	2,953,358	2,802,537	2,687,358	2,592,820	3,367,157	3,037,564
GS > 50 to 999 kW	5,233,775	5,129,728	5,868,936	5,437,054	5,747,692	5,754,441	5,750,996	6,249,680
GS > 1000 to 4999 kW	1,663,131	1,440,567	1,475,184	1,710,893	1,884,827	1,668,010	1,640,171	1,965,104
Large Users	697,221	606,625	665,334	805,814	1,078,704	1,310,364	1,314,720	1,601,246
Unmetered Scattered Load	67,376	66,931	84,841	74,239	74,091	71,628	72,400	60,942
Street Light	86,278	85,549	349,159	275,444	559,007	655,427	655,936	881,774
Embedded Distribution	26,785	47,640	93,887	89,557	103,691	94,165	99,497	92,004
MicroFIT	-	-	-	993	10,576	21,609	28,282	31,691
<b>Base Distribution Revenue</b>	<b>21,311,429</b>	<b>19,484,390</b>	<b>23,201,066</b>	<b>22,390,803</b>	<b>23,749,897</b>	<b>23,919,549</b>	<b>26,403,554</b>	<b>27,997,737</b>
<b>Other Distribution Revenues</b>								
SSS Administration Charge	124,263	126,073	-	129,161	137,093	143,063	146,184	146,868
Late Payment Charges	352,397	348,049	349,055	341,691	170,595	125,188	125,500	137,500
Specific Service Charges	543,453	584,831	540,140	573,349	537,171	543,360	554,855	554,855
Other Distribution Revenues	221,009	415,048	278,480	254,770	245,485	235,066	208,934	211,684
Other Income & Deductions	123,373	195,381	322,735	216,336	219,051	171,236	210,480	195,760
Interest Revenue	883,856	316,904	-	399,141	412,032	493,844	293,990	52,712
Water & Sewer Billing Services	639,112	668,978	-	603,131	-	-	-	-
Miscellaneous Revenue	31,205	99,963	-	-	-	-	-	-
CDM Program Revenue	73,442	126,906	-	362,341	784,920	-	-	-
Loss on Disposals	-	-	-	(367,825)	(292)	(312)	-	-
Gain on Disposals	-	122,370	-	-	34,623	47,166	-	-
<b>Total Other Revenue</b>	<b>2,992,110</b>	<b>3,004,504</b>	<b>1,490,410</b>	<b>2,512,095</b>	<b>2,540,678</b>	<b>1,758,612</b>	<b>1,539,943</b>	<b>1,299,379</b>
<b>Total Revenue Net of Transformer Allowance</b>	<b>24,303,539</b>	<b>22,488,894</b>	<b>24,691,476</b>	<b>24,902,898</b>	<b>26,290,574</b>	<b>25,678,161</b>	<b>27,943,497</b>	<b>29,297,116</b>
<b>Variance from 2010 Board Approved</b>	<b>-2%</b>	<b>-9%</b>	<b>N/A</b>	<b>1%</b>	<b>6%</b>	<b>4%</b>	<b>13%</b>	<b>19%</b>
<b>Variance from Prior Year</b>		<b>-7%</b>	<b>10%</b>	<b>1%</b>	<b>6%</b>	<b>-2%</b>	<b>9%</b>	<b>5%</b>
<b>Note: This revenue analysis is net of transformer allowance credited to eligible customers.</b>								

2

**LOAD AND REVENUE FORECASTS**

**OVERVIEW**

The purpose of this evidence is to present the process used by CND to prepare the weather normalized load and customer/connection forecast used to design the proposed 2014 electricity distribution rates.

In summary, CND has used the same regression analysis methodology used by a number of distributors in previous cost of service rate applications to determine a prediction model. With regard to the overall process of load forecasting, CND submits that conducting a regression analysis on historical electricity purchases to produce an equation that will predict purchases is appropriate. CND has the data for the amount of electricity (in kWh) purchased from the IESO and supplied by embedded generation facilities for use by CND's customers. With a regression analysis, these purchases can be related to other monthly explanatory variables such as heating degree days and cooling degree days which occur in the same month. The results of the regression analysis produce an equation that predicts the purchases based on the explanatory variables. This prediction model is then used as the basis to forecast the total level of weather normalized purchases for the Bridge Year and the Test Year which is converted to bill kWh by rate class. A detailed explanation of the process is provided later in this evidence.

In previous cost of service proceeding, parties to the proceeding expressed concern that the regression analysis assigned coefficients to some variables that were counter intuitive. For example, the customer variable would have a negative coefficient assigned to it which meant as the number of customers increased as the energy forecast decreased. Further, the regression analysis indicated that some of the variables used in the load forecasting formula were not statistically significant and should not have been included in the equation. CND has attempted to address these concerns in the load forecast used in this Application. Based on the OEB's approval of this methodology in a number of previous cost of service applications and based on the discussion that follows, CND submits that its load forecasting methodology is reasonable for the purposes of this Application.

1 The following provides the material to support the weather normalized load forecast used  
2 by CND in this Application.

3 Table 3-2 below provides weather actual data from 2001 to 2012, while 2013 and 2014  
4 data are weather normalized. Based on the process outlined in this Exhibit, a process to  
5 forecast energy on a weather normalized basis has been developed and used in this  
6 Application. Total Customers and Connections are on a mid-year basis, and Streetlight and  
7 unmetered loads are measured as connections.

Table 3-2: Summary of Load and Customer/Connection Forecast						
Year	Billed (GWh)	Growth (GWh)	Percent Change	Customer/ Connection Count	Growth	Percent Change (%)
<b>Billed Energy (GWh) and Customer Count / Connections</b>						
2010 Board Approved	1,492.4			63,776		
2001 Actual	1,359.9			42,332		
2002 Actual	1,418.7	58.7	4.3%	42,924	592	1.4%
2003 Actual	1,486.3	67.6	4.8%	55,665	12,742	29.7%
2004 Actual	1,528.3	42.0	2.8%	57,119	1,454	2.6%
2005 Actual	1,599.4	71.1	4.7%	58,148	1,029	1.8%
2006 Actual	1,561.1	(38.3)	(2.4%)	59,640	1,492	2.6%
2007 Actual	1,566.6	5.5	0.4%	60,690	1,051	1.8%
2008 Actual	1,518.6	(48.0)	(3.1%)	61,413	723	1.2%
2009 Actual	1,455.1	(63.5)	(4.2%)	62,159	746	1.2%
2010 Actual	1,509.0	53.9	3.7%	63,360	1,201	1.9%
2011 Actual	1,511.6	2.6	0.2%	64,305	945	1.5%
2012 Actual	1,524.9	13.3	0.9%	64,926	621	1.0%
<b>2013 Bridge</b>	<b>1,516.3</b>	<b>(8.6)</b>	<b>(0.6%)</b>	<b>66,010</b>	<b>1,085</b>	<b>1.7%</b>
<b>2014 Test</b>	<b>1,511.0</b>	<b>(5.3)</b>	<b>(0.3%)</b>	<b>67,115</b>	<b>1,105</b>	<b>1.7%</b>

8  
9 Actual and forecasted billed amounts and numbers of customers are shown in Table 3-3  
10 and customer usage is shown in Table 3-4, on a rate class basis.

Table 3-3: Billed Energy and Number of Customers / Connections by Rate Class										
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
<b>Billed Energy (GWh)</b>										
2010 Board Approved	389.8	168.2	494.5	216.0	159.3	0.0	9.5	1.9	53.3	1,492.4
2001 Actual	351.4	157.1	412.6	236.4	202.4	0.0	0.0	0.0	0.0	1,359.9
2002 Actual	336.2	154.3	441.9	247.7	238.6	0.0	0.0	0.0	0.0	1,418.7
2003 Actual	365.8	163.2	449.8	263.3	234.7	0.0	9.4	0.0	0.0	1,486.3
2004 Actual	366.5	165.7	471.5	269.9	245.2	0.0	9.5	0.0	0.0	1,528.3
2005 Actual	394.0	172.9	477.3	288.9	256.3	0.0	9.5	0.4	0.0	1,599.4
2006 Actual	381.6	166.9	457.2	248.3	252.1	42.8	9.3	3.0	0.0	1,561.1
2007 Actual	392.6	169.6	471.1	226.8	252.1	42.8	9.4	2.2	0.0	1,566.6
2008 Actual	387.3	170.3	456.0	220.2	230.3	42.9	9.4	2.1	0.0	1,518.6
2009 Actual	379.6	160.3	432.5	193.0	180.7	43.2	9.5	2.1	54.3	1,455.1
2010 Actual	396.3	163.5	426.5	220.9	196.6	43.8	9.5	2.1	49.8	1,509.0
2011 Actual	396.6	158.3	437.2	240.8	169.2	46.8	9.5	2.1	51.3	1,511.6
2012 Actual	399.6	158.6	437.4	226.2	201.2	45.5	9.6	2.0	44.8	1,524.9
<b>2013 Bridge</b>	<b>396.7</b>	<b>155.8</b>	<b>434.0</b>	<b>223.6</b>	<b>204.7</b>	<b>45.8</b>	<b>9.6</b>	<b>1.9</b>	<b>44.1</b>	<b>1,516.3</b>
<b>2014 Test</b>	<b>395.3</b>	<b>153.5</b>	<b>431.7</b>	<b>221.3</b>	<b>208.3</b>	<b>46.2</b>	<b>9.6</b>	<b>1.8</b>	<b>43.4</b>	<b>1,511.0</b>
<b>Number of Customers/Connections</b>										
2010 Board Approved	45,217	4,582	724	25	2	0	12,717	507	2	63,776
2001 Actual	37,492	4,247	566	25	3	0	0	0	0	42,332
2002 Actual	38,234	4,065	598	25	3	0	0	0	0	42,924
2003 Actual	39,316	4,145	619	26	3	0	11,557	0	0	55,665
2004 Actual	40,535	4,193	630	27	3	0	11,732	0	0	57,119
2005 Actual	41,300	4,289	634	29	3	0	11,895	0	0	58,148
2006 Actual	42,040	4,352	647	30	3	1	12,052	516	0	59,640
2007 Actual	42,888	4,376	672	29	2	1	12,237	486	0	60,690
2008 Actual	43,431	4,449	680	28	2	1	12,366	457	0	61,413
2009 Actual	43,937	4,541	693	27	2	1	12,460	498	2	62,159
2010 Actual	44,921	4,604	708	26	2	1	12,559	538	2	63,360
2011 Actual	45,781	4,630	724	28	2	1	12,624	515	2	64,305
2012 Actual	46,284	4,661	737	27	2	1	12,722	491	2	64,926
<b>2013 Bridge</b>	<b>47,178</b>	<b>4,701</b>	<b>754</b>	<b>27</b>	<b>2</b>	<b>1</b>	<b>12,859</b>	<b>486</b>	<b>2</b>	<b>66,010</b>
<b>2014 Test</b>	<b>48,091</b>	<b>4,740</b>	<b>773</b>	<b>27</b>	<b>2</b>	<b>1</b>	<b>12,997</b>	<b>482</b>	<b>2</b>	<b>67,115</b>



Table 3-4: Annual Usage per Customer/Connection by Rate Class									
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Energy Usage per Customer/Connection (kWh per customer/connection)									
2010 Board Approved	8,621	36,714	683,007	8,638,618	79,652,551		745	3,661	26,634,600
2001 Actual	9,374	36,999	728,644	9,454,116	80,954,382				
2002 Actual	8,793	37,948	739,290	10,112,039	79,522,758				
2003 Actual	9,304	39,385	726,413	10,127,652	78,223,773		815		
2004 Actual	9,041	39,520	748,440	9,996,629	81,724,293		811		
2005 Actual	9,541	40,306	753,500	10,135,115	85,447,130		802		
2006 Actual	9,077	38,347	706,686	8,415,274	100,840,726	42,759,994	772	5,809	
2007 Actual	9,153	38,758	701,008	7,959,260	126,046,174	42,771,843	772	4,529	
2008 Actual	8,918	38,270	671,153	7,864,402	115,148,878	42,936,833	764	4,622	
2009 Actual	8,639	35,305	624,043	7,283,120	90,339,539	43,206,778	760	4,288	27,136,268
2010 Actual	8,822	35,508	602,421	8,496,833	98,278,640	43,796,746	758	3,963	24,905,414
2011 Actual	8,662	34,199	604,228	8,598,828	84,597,900	46,753,741	754	4,019	25,633,242
2012 Actual	8,633	34,026	593,892	8,378,887	100,594,753	45,452,655	758	4,109	22,395,380
<b>2013 Bridge</b>	<b>8,409</b>	<b>33,138</b>	<b>575,390</b>	<b>8,225,366</b>	<b>102,344,845</b>	<b>45,803,036</b>	<b>750</b>	<b>3,869</b>	<b>22,052,787</b>
<b>2014 Test</b>	<b>8,219</b>	<b>32,384</b>	<b>558,740</b>	<b>8,083,705</b>	<b>104,128,487</b>	<b>46,157,494</b>	<b>742</b>	<b>3,643</b>	<b>21,715,434</b>
Annual Growth Rate in Usage per Customer/Connection									
2009 Board App. Vs. 2009 Actual	(2.3%)	3.4%	13.4%	1.7%	(19.0%)		(1.8%)	(7.6%)	6.9%
2001 Actual									
2002 Actual	(6.2%)	2.6%	1.5%	7.0%	(1.8%)				
2003 Actual	5.8%	3.8%	(1.7%)	0.2%	(1.6%)				
2004 Actual	(2.8%)	0.3%	3.0%	(1.3%)	4.5%		(0.4%)		
2005 Actual	5.5%	2.0%	0.7%	1.4%	4.6%		(1.1%)		
2006 Actual	(4.9%)	(4.9%)	(6.2%)	(17.0%)	18.0%		(3.8%)		
2007 Actual	0.8%	1.1%	(0.8%)	(5.4%)	25.0%	0.0%	(0.0%)	(22.0%)	
2008 Actual	(2.6%)	(1.3%)	(4.3%)	(1.2%)	(8.6%)	0.4%	(1.0%)	2.1%	
2009 Actual	(3.1%)	(7.7%)	(7.0%)	(7.4%)	(21.5%)	0.6%	(0.5%)	(7.2%)	
2010 Actual	2.1%	0.6%	(3.5%)	16.7%	8.8%	1.4%	(0.3%)	(7.6%)	(8.2%)
2011 Actual	(1.8%)	(3.7%)	0.3%	1.2%	(13.9%)	6.8%	(0.5%)	1.4%	2.9%
2012 Actual	(0.3%)	(0.5%)	(1.7%)	(2.6%)	18.9%	(2.8%)	0.5%	2.2%	(12.6%)
<b>2013 Bridge</b>	<b>(2.6%)</b>	<b>(2.6%)</b>	<b>(3.1%)</b>	<b>(1.8%)</b>	<b>1.7%</b>	<b>0.8%</b>	<b>(1.0%)</b>	<b>(5.8%)</b>	<b>(1.5%)</b>
<b>2014 Test</b>	<b>(2.3%)</b>	<b>(2.3%)</b>	<b>(2.9%)</b>	<b>(1.7%)</b>	<b>1.7%</b>	<b>0.8%</b>	<b>(1.0%)</b>	<b>(5.8%)</b>	<b>(1.5%)</b>

## **LOAD FORECAST AND METHODOLOGY**

CND's weather normalized load forecast is developed in a three-step process. First, a total system weather normalized purchased energy forecast is developed based on a multifactor regression model that incorporates historical load, weather, days in the month, spring/fall flag (i.e. seasonality), number of peak hours, employment, unemployment and CDM activities. Second, the weather normalized purchased energy forecast is adjusted by a historical loss factor to produce a weather normalized billed energy forecast. Next, the forecast of billed energy by rate class is developed based on a forecast of customer numbers and historical usage patterns per customer. For the rate classes that have weather sensitive load, their forecasted billed energy is adjusted to ensure that the total billed energy forecast by rate class is equivalent to the total weather normalized billed energy forecast that has been determined from the regression model. The forecast of customers by rate class is determined using a geometric mean analysis. For those rate classes that use kW for the distribution volumetric billing determinant, an adjustment factor is applied to class energy forecast based on the historical relationship between kW and kWh.

A detailed explanation of the load forecasting process follows.

### **Purchased KWh Load Forecast:**

An equation to predict total system purchased energy is developed using a multifactor regression model with the following independent variables: weather (heating and cooling degree days); days in month, employment conditions, CDM activity and number of peak hours. The regression model uses monthly kWh and monthly values of independent variables from January 1996 to December 2012 to determine a prediction formula with coefficients for each independent variable. This provides 204 monthly data points which represent a reasonable data set for use in a regression analysis. Consistent with the approach used by many other distributors in their cost of service applications, CND submits that it is appropriate to review the impact of weather over the period January 1996 to December 2012 and then determine the average weather conditions over this period which would be applied in the prediction formula to determine a weather normalized forecast.

1 However, in accordance with the OEB's Filing Requirements, CND has also provided a  
2 sensitivity analysis showing the impact on the 2014 forecast of purchases assuming  
3 weather normal conditions are based on a 10-year average and a 20-year trend of weather  
4 data.

5 The following outlines the prediction model used by CND to predict weather normal  
6 purchases for 2013 and 2014:

7 CND's Monthly Predicted kWh Purchases

8 = Heating Degree Days \* 21,728  
9 + Cooling Degree Days \* 194,644  
10 + Number of Days in the Month \* 1,519,288  
11 + Spring Fall Flag \* (1,411,240)  
12 + Number of Peak Hours \* 105,292  
13 + Employment Kitchener-Waterloo-Barrie \* 214,864  
14 + CDM Activity \* (4.6)  
15 + Unemployment Kitchener-Waterloo-Barrie \* (265,758)  
16 + Intercept of (85,787,247)

17 The monthly data used in the regression model and the resulting monthly prediction for the  
18 actual and forecasted years are provided in Appendix 3-1.

19 The sources of data for the various data points are:

- 20 a) Environment Canada website for monthly heating degree day and cooling degree  
21 information. Weather data was obtained from the Region of Waterloo International  
22 Airport.
- 23 b) The calendar provided information related to number of days in the month, number of  
24 peak hours and the spring fall flag.
- 25 c) Employment and unemployment data was provided from Statistic Canada.  
26 Table 282-0062 provides employment data and Table 282-0055 provides  
27 unemployment information for the Kitchener-Waterloo-Barrie area.

1 d) The CDM activity variable is an estimated level of monthly activity in CDM. For each  
2 year the monthly values grow at constant value over the year. For the years 2006 to  
3 2014, the addition of the monthly CDM activity values shown in Appendix 3-1 will equal  
4 the Net Energy Savings from the OPA 2006-2010 Final CDM Results for CND. These  
5 values reflect the net energy savings from 2006 to 2010 programs and how these  
6 programs have persistent savings from 2007 to 2014. However, for the years 2011 to  
7 2014, the Net Energy Savings from the OPA 2006-2010 Final CDM Results are  
8 adjusted to include final results from 2011 programs and estimated results from 2012  
9 programs that contribute to the four year licensed CDM kWh targets of 73,660,000  
10 assigned to CND. The 2011 final results are based on the final 2011 CDM Report  
11 provided to CND by the OPA. CND has estimated the results for 2012. The 2011 and  
12 2012 actual results have been included in the CDM activity variable since these results  
13 have impacted the actual 2012 power purchases.

14 Table 3-5 outlines the adjustments made to the Net Energy Savings from the OPA  
15 2006-2011 Final CDM Results to include the impact of the 2011 and 2012 CDM  
16 programs and the persistent impact of the 2011 and 2012 programs into 2013 and  
17 2014. In addition, the table provides the Net Energy Savings from the OPA 2006-2010  
18 Final CDM Results for the years 2006 to 2014. For 2014, the monthly values for the  
19 CDM activity variable will total 35,515,691 kWh which includes 19,030,184 kWh from  
20 the OPA 2010 final results plus 12,764,930 kWh reflecting the persistence of 2011  
21 programs into 2014 plus 3,720,577 kWh reflecting the persistence of 2012 programs into  
22 2014.

<b>Table 3-5: 2011 Final Results, 2012 Estimated Results plus OPA 2010 Final Results with Persistent Impact</b>				
CNDHI 4 Year 2011 to 2014 target				
73,660,000				
2011	2012	2013	2014	Total
kWh savings from 2011 programs with persistent impact				
12,883,912	12,844,986	12,842,708	12,764,930	51,336,535
kWh savings from 2012 programs with persistent impact				
0	3,720,577	3,720,577	3,720,577	11,161,732
OPA 2010 Final Results - kWh				
2006	2007	2008	2009	
3,653,792	6,210,683	8,702,392	14,593,270	
2010	2011	2012	2013	2014
21,799,853	19,795,633	19,505,272	19,444,650	19,030,184

1

2 The impact of additional new CDM programs for 2013 and 2014 has not been included in  
3 the CDM activity variable since they do not impact the actual purchases used in the  
4 regression analysis. A discussion on how the load forecast is adjusted for additional new  
5 CDM programs in 2013 and 2014 and how the LRAM variance account values are  
6 determined by rate class is provided later on in this schedule.

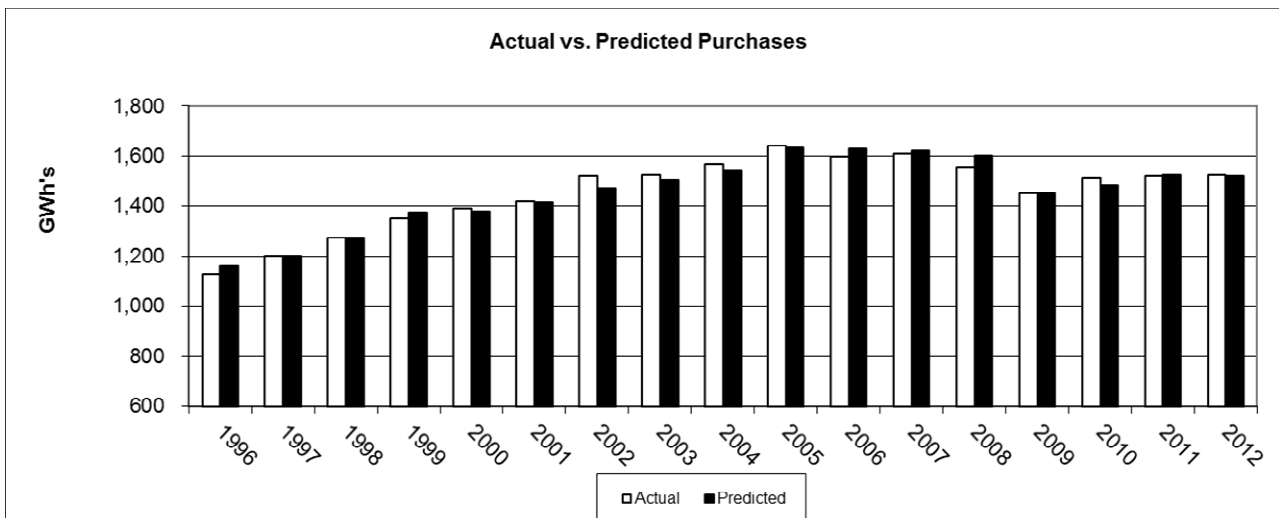
7 Table 3-6 summarizes the statistical results of the prediction formula:

<b>Table 3-6: Statistical Results</b>	
<b>Statistic</b>	<b>Value</b>
R Square	93.0%
Adjusted R Square	92.7%
F Test	321.6
MAPE - Annual	1.3%
MAPE - Monthly	2.3%
T-stats by Coefficient	
Heating Degree Days	13.8
Cooling Degree Days	12.5
Number of Days in Month	4.4
Spring Fall Flag	(2.1)
Number of Peak Hours	6.4
Employment Kitchener-Waterloo-Barrie	41.8
CDM Activity	(9.7)
Unemployment Kitchener-Waterloo-Barrie	(6.7)
Intercept	(7.9)

8

1 The annual results of the above prediction formula compared to the actual annual  
2 purchases from 1996 to 2012 are shown in the Chart 3-1. Based upon these results, the  
3 prediction equation appears to be reasonable.

4 Chart 3-1



5 Table 3-7 summarizes the actual system purchases, as well as the predicted total system  
6 purchases for CND for the 2013 Bridge Year and 2014 Test Year. For 2013 and 2014 the  
7 system purchases reflect a weather normalized forecast for the full year. In addition, values  
8 for 2014 are provided with a 10 year average and a 20 year trend assumption for weather  
9 normalization.

Table 3-7: Total System Purchases			
Year	Actual	Predicted	% Difference
<b>Purchased Energy (GWh)</b>			
1996	1,126.8	1,161.7	3.1%
1997	1,202.8	1,200.5	(0.2%)
1998	1,272.6	1,274.0	0.1%
1999	1,350.8	1,376.2	1.9%
2000	1,392.2	1,379.4	(0.9%)
2001	1,421.0	1,415.4	(0.4%)
2002	1,519.1	1,472.2	(3.1%)
2003	1,523.7	1,503.5	(1.3%)
2004	1,570.4	1,541.0	(1.9%)
2005	1,641.0	1,632.9	(0.5%)
2006	1,599.4	1,630.6	2.0%
2007	1,609.2	1,623.4	0.9%
2008	1,557.5	1,602.1	2.9%
2009	1,450.4	1,453.1	0.2%
2010	1,513.2	1,485.8	(1.8%)
2011	1,519.4	1,523.6	0.3%
2012	1,526.6	1,520.8	(0.4%)
<b>2013 Weather Normal</b>		<b>1,535.6</b>	
<b>2014 Weather Normal</b>		<b>1,534.5</b>	
<b>2014 Weather Normal - 10 year average</b>		<b>1,533.2</b>	
<b>2014 Weather Normal - 20 year trend</b>		<b>1,531.5</b>	

1

2 The weather normalized amount for 2014 is determined by using 2014 dependent variables  
3 in the prediction formula on a monthly basis together with the average monthly heating  
4 degree days and cooling degree days that occurred from January 1996 to December 2012  
5 (i.e. 17 years). The 2014 weather normalized 10 year average value represents the  
6 average heating degree days and cooling degree days that occurred from January 2003 to  
7 December 2012. The 2014 weather normalized 20 year trend value reflects the trend in  
8 monthly heating degree days and cooling degree days that occurred from January 1993 to  
9 December 2012.

10 The weather normal 17 year average has been used as the purchased forecast in this  
11 Application for the purposes of determining a billed kWh load forecast which is used to

1 design rates. The 17 year average has been used as this is consistent with the period of  
2 time over which the regression analysis was conducted

3 **Billed KWh Load Forecast:**

4 To determine the total weather normalized energy billed forecast, the total system weather  
5 normalized purchases forecast is adjusted by a historical loss factor. This adjustment has  
6 been made by CND using the average loss factor from 2001 to 2012 of 1.0315. With this  
7 average loss factor the total weather normalized billed energy will be 1,488.7 GWh for 2013  
8 (i.e.  $1,535.6/1.0315$ ) and 1,487.6 GWh for 2014 (i.e.  $1,534.5/1.0315$ ) before adjustments for  
9 new CDM programs in 2013 and 2014.

10 **Billed KWh Load Forecast and Customer/Connection Forecast by Rate Class:**

11 Since the total weather normalized billed energy amount is known, this amount needs to be  
12 distributed by rate class for rate design purposes taking into consideration the  
13 customer/connection forecast and expected usage per customer by rate class.

14 The next step in the forecasting process is to determine a customer/connection forecast.  
15 The customer/connection forecast is based on reviewing historical customer/connection  
16 data, as summarized in Table 3-8.

17 From the historical customer/connection data the growth rates in customers/ connections  
18 can be evaluated. The growth rates are provided in Table 3-9. The geometric mean  
19 growth rate in number of customers is also provided. The geometric mean approach  
20 provides the average compounding growth rate from 2001 to 2012.



Table 3-8: Historical Customer/Connection Data										
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
<b>Number of Customers/Connections</b>										
2001	37,492	4,247	566	25	3	0	0	0	0	42,332
2002	38,234	4,065	598	25	3	0	0	0	0	42,924
2003	39,316	4,145	619	26	3	0	11,557	0	0	55,665
2004	40,535	4,193	630	27	3	0	11,732	0	0	57,119
2005	41,300	4,289	634	29	3	0	11,895	0	0	58,148
2006	42,040	4,352	647	30	3	1	12,052	516	0	59,640
2007	42,888	4,376	672	29	2	1	12,237	486	0	60,690
2008	43,431	4,449	680	28	2	1	12,366	457	0	61,413
2009	43,937	4,541	693	27	2	1	12,460	498	2	62,159
2010	44,921	4,604	708	26	2	1	12,559	538	2	63,360
2011	45,781	4,630	724	28	2	1	12,624	515	2	64,305
2012	46,284	4,661	737	27	2	1	12,722	491	2	64,926

Table 3-9: Growth Rate in Customer/Connections									
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Growth Rate in Customers/Connections									
2001									
2002	2.0%	(4.3%)	5.6%	(2.0%)	20.0%				
2003	2.8%	2.0%	3.6%	6.1%	0.0%				
2004	3.1%	1.2%	1.7%	3.8%	0.0%		1.5%		
2005	1.9%	2.3%	0.6%	5.6%	0.0%		1.4%		
2006	1.8%	1.5%	2.1%	3.5%	(16.7%)		1.3%		
2007	2.0%	0.6%	3.9%	(3.4%)	(20.0%)	0.0%	1.5%	(5.8%)	
2008	1.3%	1.7%	1.1%	(1.8%)	0.0%	0.0%	1.0%	(6.0%)	
2009	1.2%	2.1%	2.0%	(5.4%)	0.0%	0.0%	0.8%	9.0%	
2010	2.2%	1.4%	2.2%	(1.9%)	0.0%	0.0%	0.8%	7.9%	0.0%
2011	1.9%	0.6%	2.2%	7.7%	0.0%	0.0%	0.5%	(4.3%)	0.0%
2012	1.1%	0.7%	1.8%	(3.6%)	0.0%	0.0%	0.8%	(4.7%)	0.0%
<b>Geometric Mean</b>	<b>1.9%</b>	<b>0.8%</b>	<b>2.4%</b>	<b>0.7%</b>	<b>(2.0%)</b>	<b>0.0%</b>	<b>1.1%</b>	<b>(0.8%)</b>	<b>0.0%</b>

1 Except for the Large User class, the resulting geometric mean was applied to the 2012  
2 customer/connection numbers to determine the forecast of customer/connections in 2013.  
3 The geometric mean was again applied to the 2013 customer/connection forecast to  
4 determine the forecast of customer/connections in 2014. For the Large User class the  
5 number of customers for 2013 and 2014 was held constant at the 2012 level. Table 3-10  
6 summarizes the customer/connections forecast for the 2013 Bridge Year and 2014 Test  
7 Year.

8 The next step in the process is to review the historical customer/connection usage and to  
9 reflect this usage per customer in the forecast. Table 3-11 provides the average annual  
10 usage per customer by rate class from 2001 to 2012.

11 From the historical usage per customer/connection data, the growth rate in usage per  
12 customer/connection can be computed, as well as the geometric mean growth rate, as  
13 provided in Table 3-12.

Table 3-10: Customer/Connection Forecast										
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
Forecast Number of Customers/Connections										
2013	47,178	4,701	754	27	2	1	12,859	486	2	66,010
2014	48,091	4,740	773	27	2	1	12,997	482	2	67,115

1

Table 3-11: Historical Annual Usage per Customer									
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Annual kWh Usage Per Customer/Connection									
2001	9,374	36,999	728,644	9,454,116	80,954,382	0	0	0	0
2002	8,793	37,948	739,290	10,112,039	79,522,758	0	0	0	0
2003	9,304	39,385	726,413	10,127,652	78,223,773	0	815	0	0
2004	9,041	39,520	748,440	9,996,629	81,724,293	0	811	0	0
2005	9,541	40,306	753,500	10,135,115	85,447,130	0	802	0	0
2006	9,077	38,347	706,686	8,415,274	100,840,726	42,759,994	772	5,809	0
2007	9,153	38,758	701,008	7,959,260	126,046,174	42,771,843	772	4,529	0
2008	8,918	38,270	671,153	7,864,402	115,148,878	42,936,833	764	4,622	0
2009	8,639	35,305	624,043	7,283,120	90,339,539	43,206,778	760	4,288	27,136,268
2010	8,822	35,508	602,421	8,496,833	98,278,640	43,796,746	758	3,963	24,905,414
2011	8,662	34,199	604,228	8,598,828	84,597,900	46,753,741	754	4,019	25,633,242
2012	8,633	34,026	593,892	8,378,887	100,594,753	45,452,655	758	4,109	22,395,380

2

3

Table 3-12: Growth Rate in Usage Per Customer/Connection									
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Growth Rate in Customer/Connection									
2001									
2002	(6.2%)	2.6%	1.5%	7.0%	(1.8%)				
2003	5.8%	3.8%	(1.7%)	0.2%	(1.6%)				
2004	(2.8%)	0.3%	3.0%	(1.3%)	4.5%		(0.4%)		
2005	5.5%	2.0%	0.7%	1.4%	4.6%		(1.1%)		
2006	(4.9%)	(4.9%)	(6.2%)	(17.0%)	18.0%		(3.8%)		
2007	0.8%	1.1%	(0.8%)	(5.4%)	25.0%	0.0%	(0.0%)	(22.0%)	
2008	(2.6%)	(1.3%)	(4.3%)	(1.2%)	(8.6%)	0.4%	(1.0%)	2.1%	
2009	(3.1%)	(7.7%)	(7.0%)	(7.4%)	(21.5%)	0.6%	(0.5%)	(7.2%)	
2010	2.1%	0.6%	(3.5%)	16.7%	8.8%	1.4%	(0.3%)	(7.6%)	(8.2%)
2011	(1.8%)	(3.7%)	0.3%	1.2%	(13.9%)	6.8%	(0.5%)	1.4%	2.9%
2012	(0.3%)	(0.5%)	(1.7%)	(2.6%)	18.9%	(2.8%)	0.5%	2.2%	(12.6%)
<b>Geometric Mean</b>	<b>(0.7%)</b>	<b>(0.8%)</b>	<b>(1.8%)</b>	<b>(1.1%)</b>	<b>2.0%</b>	<b>1.0%</b>	<b>(0.8%)</b>	<b>(5.6%)</b>	<b>(6.2%)</b>

1 Except for the Embedded Distributor class, the 2013 forecast of usage per  
2 customer/connection was based on applying the historical geometric mean to the 2012  
3 usage per customer/connection. The 2014 forecast of usage per customer/connection is the  
4 historical geometric mean applied to the 2013 forecast. For the Embedded Distributor a  
5 growth rate of (1.5%) was used instead of (6.2%) since this represented the growth rate of  
6 the Hydro One component of the Embedded Distributor class. CND submits that (1.5%) is  
7 more reasonable growth rate for this class. The resulting forecast of usage per  
8 customer/connection is summarized in Table 3-13.

9 With the preceding information the non-normalized weather billed energy forecast can be  
10 determined by applying the forecast numbers of customers/connections from Table 3-10 by  
11 the forecast of annual usage per customer/connection from Table 3-13. The resulting  
12 non-normalized weather billed energy forecast is summarized in Table 3-14.

13 The non-normalized weather billed energy forecast has been determined but this needs to  
14 be adjusted in order to be aligned with the total weather normalized billed energy forecast.  
15 As previously determined, the total weather normalized billed energy forecast is 1,488.7  
16 GWh for 2013 and 1,487.6 GWh for 2014 before adjustments for new CDM programs in  
17 2013 and 2014. However, these forecasted amounts do not include the forecasted kWh for  
18 the Waterloo North component of the Embedded Distributor class since Waterloo North is a  
19 market participant and purchases energy from the IESO directly. This means the power  
20 purchased kWh associated with Waterloo North are not included in the power purchases for  
21 CND. As a result, the weather normalized power purchased forecast does not include kWh  
22 for Waterloo North and the weather normalized billed energy forecast outlined above does  
23 not include amounts for Waterloo North. The non-normalized weather forecasted kWh  
24 included in Table 3-14 is 31,296,043 kWh in 2013 and 30,817,292 kWh in 2014. It is  
25 assumed the Waterloo North kWh are not weather sensitive which means the  
26 non-normalized and normalized forecast is the same.

Table 3-13: Forecast Annual kWh Usage per Customer/Connection									
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Forecast Annual kWh Usage per Customers/Connection									
2013	8,569	33,768	582,953	8,287,423	102,600,915	45,917,637	752	3,878	22,052,787
2014	8,505	33,512	572,216	8,196,959	104,647,086	46,387,375	746	3,661	21,715,434

1

Table 3-14: Non-normalized Weather Billed Energy Forecast										
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
NON-normalized Weather Billed Energy Forecast (GWh)										
2013 (Not Normalized)	404.3	158.7	439.7	225.3	205.2	45.9	9.7	1.9	44.1	1,534.9
2014 (Not Normalized)	409.0	158.9	442.1	224.4	209.3	46.4	9.7	1.8	43.4	1,545.0

2

Based on the above information, the difference between the non-normalized and normalized forecast adjustments is 14.8 GWh in 2013 (i.e. 1,534.9 – 1,488.7 – 31.3) and 26.5 GWh in 2014 (i.e. 1,545.0 – 1,487.6 – 30.8). The difference is assumed to be associated with moving the forecast from a non-normalized to a weather normal basis and this amount will be assigned to those rate classes that are weather sensitive. Based on the weather normalization work completed by Hydro One for CND's cost allocation study, which has been used to support this Application, it was determined that the weather sensitivity by rate classes are as provided for in Table 3-15:

Table 3-15: Weather Sensitivity by Rate Class								
Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Weather Sensitivity								
74%	74%	48%	23%	0%	0%	0%	0%	0%

For the GS > 50 to 999 kW and the GS > 1000 to 4999 kW classes the weather sensitivity percentages were provided in the weather normalization work completed by Hydro One. For the Residential and General Service < 50 kW classes, it is has been assumed in previous cost of service applications that these two classes are 100% weather sensitive. Intervenors expressed concern with this assumption and have suggested that 100% weather sensitivity is not appropriate. CND agrees with this position but also submits that the weather sensitivity for the Residential and GS < 50 kW classes should be higher than the GS > 50 to 999 kW class. As a result, CND has assumed the weather sensitivity for the Residential and General Service < 50 kW classes to be mid-way between 100% and 48%, or 74%.

The difference between the non-normalized and normalized forecast of 14.8 GWh in 2013 and 26.5 GWh in 2014 has been assigned on a *pro rata* basis to each rate class based on the above level of weather sensitivity.

In addition, a manual adjustment has been made to the load forecast to reflect the impact of additional new CDM programs in 2013 and 2014. Based on the CDM adjustment methodology that has been incorporated into 2013 cost of service settlement agreements



that have been approved by the Board, the following calculation is used: The manual CDM adjustment for 2013 is one half of the persistence of 2012 programs in 2013 plus one half of the 2013 programs. The manual CDM adjustment for 2014 is one half of the persistence of 2012 programs in 2014 plus a full year of the persistence of 2013 programs in 2014 plus one half of the 2014 programs. These adjustments reflect the net impact of CDM programs on the load forecast. The adjustment required is summarized in Table 3-16.

As previously discussed, the 2011 final results and the 2012 estimated results have been used in the CDM activity variable included in the regression analysis supporting the prediction formula. However, the 2011 and 2012 results, impacts on what saving will be needed from 2013 to 2014 programs in order to achieve the licensed 4 year CDM target. Based on the 2011 actual and estimated 2012 savings, CND will have achieved 84.8% of its four year target. Assuming the same level of persistence, the 2013 to 2014 CDM programs will need to achieve 5.1% of the four year target each year in order to achieve the target.

Table 3-16: Schedule to Achieve 4 Year kWh CDM Target					
4 Year 2011 to 2014 kWh target					
73,660,000					
	2011	2012	2013	2014	Total
2011 Programs	17.5%	17.4%	17.4%	17.3%	69.7%
2012 Programs		5.1%	5.1%	5.1%	15.2%
2013 Programs			5.1%	5.1%	10.1%
2014 Programs				5.1%	5.1%
	17.5%	22.5%	27.5%	32.5%	100.0%
kWh					
2011 Programs	12,883,912	12,844,986	12,842,708	12,764,930	51,336,535
2012 Programs		3,720,577	3,720,577	3,720,577	11,161,732
2013 Programs			3,720,577	3,720,577	7,441,155
2014 Programs				3,720,577	3,720,577
	12,883,912	16,565,563	20,283,863	23,926,662	73,660,000

Based on the formula outlined above, the 2013 CDM manual adjustment will be 3,720,577 kWh, which is one half of 3,720,577 kWh (i.e. 2012 programs persisting into 2013) plus one half of 3,720,577 kWh (i.e. 2013 programs). For 2014, the CDM manual adjustment will be

1 7,441,155 kWh, which is one half of 3,720,577 kWh (i.e. 2012 programs persisting into  
2 2014) plus 3,720,577 (2013 programs persisting into 2014) plus one half of 3,720,577 kWh  
3 (i.e. 2014 programs).

4 In accordance with the Guidelines for Electricity Distributor Conservation and Demand  
5 Management [EB-2012-0003], issued by the Board on April 26, 2012, it is CND's  
6 understanding that, as part of this application, expected CDM savings in 2014 from 2011,  
7 2012, 2013 and 2014 programs will need to be established for LRAM variance accounts  
8 purposes. CND's also understands that the OPA will measure CDM results attributable to  
9 the four year targets on a full year net basis. Consistent with past practices, it is expected  
10 the full year net level of savings will be used for LRAM calculations. As a result, it is CND's  
11 view the units used for the 2014 LRAM variance account should also be on a net basis.  
12 Based on the net information provided in Table 3-16 above, CND expects to achieve  
13 23,926,662 net kWh savings in 2014 from 2011 to 2014 CDM programs. For LRAM  
14 variance account purposes, Table 3-17 outlines how this expected savings has been  
15 allocated to rate class using the 2014 information from Table 3-13. The expected kW saving  
16 has also been provided for those classes billed distribution charges on a kW basis using the  
17 average kW/KWh factors from Table 3-20. No amount has been assigned to the Embedded  
18 Distributor class since no CDM savings from this class can be attributable to CND.

19 Table 3-18 outlines how the classes have been adjusted to align the non-normalized  
20 forecast with the normalized forecast and reflect the adjustments discussed above.

**Table 3-17: 2014 Expected Savings for LRAM Variance Account**

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
kWh	6,517,723	2,531,426	7,044,276	3,576,347	3,335,057	739,173	154,526	28,135	0	23,926,662
kW where applicable			20,018	8,507	6,910	1,276	415		0	37,126

1

**Table 3-18: Alignment of Non-normal to Weather Normal Forecast**

Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
<b>Non-normalized Weather Billed Energy Forecast (GWh)</b>										
2013 Non-Normalized Bridge	404.3	158.7	439.7	225.3	205.2	45.9	9.7	1.9	44.1	1,534.9
2014 Non-Normalized Test	409.0	158.9	442.1	224.4	209.3	46.4	9.7	1.8	43.4	1,545.0
<b>Weather Adjustment (GWh)</b>										
2013	(6.5)	(2.6)	(4.6)	(1.1)	0.0	0.0	0.0	0.0	0.0	(14.8)
2014	(11.7)	(4.6)	(8.2)	(2.0)	0.0	0.0	0.0	0.0	0.0	(26.5)
<b>CDM Adjustment (GWh)</b>										
2013	(1.0)	(0.4)	(1.1)	(0.6)	(0.5)	(0.1)	(0.0)	(0.0)	0.0	(3.7)
2014	(2.0)	(0.8)	(2.2)	(1.1)	(1.0)	(0.2)	(0.0)	(0.0)	0.0	(7.4)
<b>Weather Normalized Billed Energy Forecast (GWh)</b>										
2013 Normalized Bridge	396.7	155.8	434.0	223.6	204.7	45.8	9.6	1.9	44.1	1,516.3
2014 Normalized Test	395.3	153.5	431.7	221.3	208.3	46.2	9.6	1.8	43.4	1,511.0

2

1 **Billed KW Load Forecast**

2 There are a number of classes that charge volumetric distribution on a per kW basis. As a  
3 result, the energy forecast for these classes needs to be converted to a kW basis for rate  
4 setting purposes. The forecast of kW for these classes is based on a review of the  
5 historical ratio of kW to kWh and applying the average ratio to the forecasted kWh to  
6 produce the required kW.

7 Table 3-19 summarizes the annual demand units by applicable rate class.

Table 3-19: Historical Annual kW per Applicable Rate Class							
Year	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Embedded Distributor	Total
<b>Billed Annual kW</b>							
2003	1,177,153	533,526	429,237	0	26,537	0	2,166,453
2004	1,242,905	543,249	468,620	0	24,497	0	2,279,271
2005	1,274,085	619,353	480,781	0	24,664	0	2,398,883
2006	1,279,604	618,222	472,853	73,441	24,008	0	2,468,128
2007	1,274,858	571,091	481,509	72,913	24,182	0	2,424,553
2008	1,244,174	554,036	446,448	72,485	24,090	0	2,341,233
2009	1,337,289	530,195	411,896	73,038	26,451	107,591	2,486,460
2010	1,294,863	570,060	421,436	75,928	26,614	101,371	2,490,272
2011	1,331,831	582,383	431,699	81,848	26,604	107,151	2,561,516
2012	1,350,651	527,947	483,777	81,651	26,876	100,035	2,570,938

1 Table 3-20 illustrates the historical ratio of kW/kWh as well as the average ratio for 2003 to  
2 2012.

<b>Table 3-20: Historical kW/KWh Ratio per Applicable Rate Class</b>						
<b>Year</b>	<b>General Service &gt; 50 to 999 kW</b>	<b>General Service &gt; 1000 to 4999 kW</b>	<b>Large User</b>	<b>Direct Market Participant</b>	<b>Street Lights</b>	<b>Embedded Distributor</b>
<b>Ratio of kW to kWh</b>						
2003	0.2617%	0.2026%	0.1829%		0.2819%	
2004	0.2636%	0.2013%	0.1911%		0.2574%	
2005	0.2669%	0.2144%	0.1876%		0.2585%	
2006	0.2799%	0.2490%	0.1876%	0.1718%	0.2581%	
2007	0.2706%	0.2518%	0.1910%	0.1705%	0.2561%	
2008	0.2728%	0.2516%	0.1939%	0.1688%	0.2550%	
2009	0.3092%	0.2747%	0.2280%	0.1690%	0.2793%	0.1982%
2010	0.3036%	0.2580%	0.2144%	0.1734%	0.2796%	0.2035%
2011	0.3047%	0.2419%	0.2551%	0.1751%	0.2795%	0.2090%
2012	0.3088%	0.2334%	0.2405%	0.1796%	0.2786%	0.2233%
<b>Average 2003 to 2012</b>	<b>0.2842%</b>	<b>0.2379%</b>	<b>0.2072%</b>	<b>0.1726%</b>	<b>0.2684%</b>	<b>0.2085%</b>

3  
4 The average ratio was applied to the weather normalized billed energy forecast in  
5 Table 3-17 to provide the forecast of kW by rate class as summarized in Table 3-21.

<b>Table 3-21: kW Forecast by Applicable Rate Class</b>							
<b>Year</b>	<b>General Service &gt; 50 to 999 kW</b>	<b>General Service &gt; 1000 to 4999 kW</b>	<b>Large User</b>	<b>Direct Market Participant</b>	<b>Street Lights</b>	<b>Embedded Distributor</b>	<b>Total</b>
<b>Predicted Billed kW</b>							
<b>2013 Normalized Bridge</b>	<b>1,233,396</b>	<b>531,983</b>	<b>424,120</b>	<b>79,053</b>	<b>25,892</b>	<b>91,971</b>	<b>2,386,415</b>
<b>2014 Normalized Test</b>	<b>1,226,670</b>	<b>526,492</b>	<b>431,512</b>	<b>79,664</b>	<b>25,898</b>	<b>90,564</b>	<b>2,380,801</b>

6  
7 Table 3-22 provides a summary of the billing determinants by rate class, which have been  
8 used to develop the proposed rates.

Table 3-22: Summary of Forecast						
	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Weather Normalized Bridge	2014 Weather Normalized Test
<b>ACTUAL AND PREDICTED KWH PURCHASES</b>						
Actual kWh Purchases		1,513,165,630	1,519,439,268	1,526,591,336		
Predicted kWh Purchases		1,485,767,546	1,523,559,655	1,520,774,378	1,535,615,461	1,534,509,482
% Difference of actual and predicted purchases		(1.8%)	0.3%	(0.4%)		
CDM Purchase Adjustment					(3,837,773)	(7,675,545)
Predicted kWh Purchases after CDM					1,531,777,691	1,526,833,937
<b>BILLING DETERMINANTS BY CLASS</b>						
<b>Residential</b>						
Customers	45,217	44,921	45,781	46,284	47,178	48,091
kWh	389,793,819	396,266,835	396,556,720	399,587,578	396,735,305	395,264,057
<b>General Service &lt; 50 kW</b>						
Customers	4,582	4,604	4,630	4,661	4,701	4,740
kWh	168,223,630	163,479,893	158,322,069	158,595,034	155,766,602	153,517,084
<b>General Service &gt; 50 to 999 kW</b>						
Customers	724	708	724	737	754	773
kWh	494,496,789	426,513,756	437,159,036	437,401,279	434,024,250	431,657,534
kW	1,312,686	1,294,863	1,331,831	1,350,651	1,233,396	1,226,670
<b>General Service &gt; 1000 to 4999 kW</b>						
Customers	25	26	28	27	27	27
kWh	215,965,446	220,917,668	240,767,175	226,229,939	223,644,135	221,335,611
kW	478,860	570,060	582,383	527,947	531,983	526,492
<b>Large User</b>						
Customers	2	2	2	2	2	2
kWh	159,305,102	196,557,281	169,195,800	201,189,505	204,689,690	208,256,974
kW	308,824	421,436	431,699	483,777	424,120	431,512
<b>Direct Market Participant</b>						
Customers		1	1	1	1	1
kWh		43,796,746	46,753,741	45,452,655	45,803,036	46,157,494
kW		75,928	81,848	81,651	79,053	79,664
<b>Street Lights</b>						
Connections	12,717	12,559	12,624	12,722	12,859	12,997
kWh	9,470,257	9,519,206	9,519,486	9,645,171	9,647,105	9,649,328
kW	24,144	26,614	26,604	26,876	25,892	25,898
<b>Unmetered Loads</b>						
Connections	507	538	515	491	486	482
kWh	1,855,931	2,130,242	2,067,611	2,015,390	1,881,677	1,756,889
<b>Embedded Distributor</b>						
Customers	2	2	2	2	2	2
kWh	53,269,200	49,810,828	51,266,485	44,790,760	44,105,574	43,430,869
kW	103,266	101,371	107,151	100,035	91,971	90,564
<b>Total</b>						
Customer/Connections	63,776	63,360	64,305	64,926	66,010	67,115
kWh	1,492,380,174	1,508,992,456	1,511,608,123	1,524,907,313	1,516,297,375	1,511,025,839
kW from applicable classes	2,227,780	2,490,272	2,561,516	2,570,938	2,386,415	2,380,801

1     **ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSIS**

2     CND's distribution revenue and variance for 2008, 2009, 2010, 2011, 2012 and 2013 have  
3     been calculated using the board approved distribution rates for those periods and the actual  
4     and projected billing quantities for those periods. The 2014 distribution revenue has been  
5     calculated using the rates proposed in this Application as discussed further in Exhibit 8. As  
6     noted above, distribution revenue does not include commodity-related revenue. Distribution  
7     revenue does not include commodity-related revenue.

8     **VARIANCE ANALYSIS**

9     Tables 3-23 through to Table 3-29 provide the variance analysis of the distribution revenues  
10    for the 2008 Actual, 2009 Actual, 2010 Board Approved, 2010 Actual, 2011 Actual, 2012  
11    Actual, 2013 Bridge Year and 2014 Test Years.

12

**Comparison of 2008 Actual to 2009 Actual**

**Table 3-23 – 2008 Distribution Revenues**

Description	2008 Actual	2009 Actual	Variance
<b>Distribution Revenue as per Audited Financial Statements</b>	21,311,429	19,484,390	
<b>Adjustments</b>			
MicroFIT as Miscellaneous Other Distribution Revenue	-	-	
Smart Meter Revenue	-	-	
Tax Changes	-	-	
LRAM	-	-	
Regulatory Accounting Changes under CGAAP	-	-	
SSS Administration Charge Adjustment	-	-	
<b>Total Distribution Revenue after Adjustments</b>	<b>21,311,429</b>	<b>19,484,390</b>	
<b>Distribution Revenues</b>			
Residential	10,564,174	9,453,012	(1,111,162)
GS < 50 kW	2,972,689	2,654,337	(318,352)
GS > 50 to 999 kW	5,233,775	5,129,728	(104,047)
GS > 1000 to 4999 kW	1,663,131	1,440,567	(222,564)
Large Users	697,221	606,625	(90,596)
Unmetered Scattered Load	67,376	66,931	(445)
Street Light	86,278	85,549	(729)
Embedded Distribution	26,785	47,640	20,855
MicroFIT	-	-	-
<b>Base Distribution Revenue</b>	<b>21,311,429</b>	<b>19,484,390</b>	<b>(1,827,039)</b>
<b>Variance from 2010 Board Approved</b>	<b>-8%</b>	<b>-16%</b>	
<b>Variance from Prior Year</b>		<b>-7%</b>	

The 2009 Actual revenues were \$1,827,039 or 7% lower than 2008 Actual revenues. Signs of deterioration in the economy were being seen in 2008 and continued into 2009. Unemployment in the Cambridge-Kitchener-Waterloo region rose in 2009. CND customers reacted by dramatically reducing their loads from 1,518,625,683 kWh in 2008 to 1,414,463,968 kWh in 2009. CND suffered a decline in distribution revenue as a result of the decline in load growth. As summarized in Table 3-11, the average annual kWh



1 consumption for a residential customer declined from 8,918 kWh (743 kWh per month) to  
2 8,639 (720 kWh per month). Similar decreases in the 5% to 8% range occurred in every  
3 customer class.

4 **Comparison of 2009 Actual to 2010 Actual**

5 **Table 3-24 – 2009 Distribution Revenues**

Description	2009 Actual	2010 Actual	Variance
<b>Distribution Revenue as per Audited Financial Statements</b>	19,484,390	22,519,964	
<b>Adjustments</b>			
MicroFIT as Miscellaneous Other Distribution Revenue	-	-	
Smart Meter Revenue	-	-	
Tax Changes	-	-	
LRAM	-	-	
Regulatory Accounting Changes under CGAAP	-	-	
SSS Administration Charge Adjustment	-	(129,161)	
<b>Total Distribution Revenue after Adjustments</b>	<b>19,484,390</b>	<b>22,390,803</b>	
<b>Distribution Revenues</b>			
Residential	9,453,012	11,194,272	1,741,260
GS < 50 kW	2,654,337	2,802,537	148,200
GS > 50 to 999 kW	5,129,728	5,437,054	307,326
GS > 1000 to 4999 kW	1,440,567	1,710,893	270,326
Large Users	606,625	805,814	199,189
Unmetered Scattered Load	66,931	74,239	7,308
Street Light	85,549	275,444	189,895
Embedded Distribution	47,640	89,557	41,917
MicroFIT	-	993	993
<b>Base Distribution Revenue</b>	<b>19,484,390</b>	<b>22,390,803</b>	<b>2,906,413</b>
<b>Variance from 2010 Board Approved</b>	<b>-16%</b>	<b>-3%</b>	
<b>Variance from Prior Year</b>		<b>15%</b>	

6  
7 The 2010 Actual distribution revenues were \$2,906,413 or 15% higher than 2009 Actual  
8 distribution revenues of \$19,484,390. The increase in distribution revenue was principally  
9 explained by: (i) increased customer growth of 1,201 customers/connections in 2010 from

1 62,159 in 2009 to 63,360 in 2010; (ii) load growth from 1,414,463,968 kWh in 2009 to  
2 1,472,796,612 kWh in 2010, with Residential, General Service 1,000-4,999 kW and Large  
3 User classes showing the greatest increases. As summarized in Table 3-12, the average  
4 annual kWh consumption per customer/connection rose in 2010; and (iii) rate increases  
5 from the Board's approval of CND's 2010 Cost of Service rate application, effective May 1,  
6 2010.

7

1 **Comparison of 2010 Actual to 2010 Board Approved**

2 **Table 3-25 – 2010 Distribution Revenues**

Description	2010 Board Approved	2010 Actual	Variance
<b>Distribution Revenue as per Audited Financial Statements</b>	23,201,066	22,519,964	
<b>Adjustments</b>			
MicroFIT as Miscellaneous Other Distribution Revenue	-	-	
Smart Meter Revenue	-	-	
Tax Changes	-	-	
LRAM	-	-	
Regulatory Accounting Changes under CGAAP	-	-	
SSS Administration Charge Adjustment	-	(129,161)	
<b>Total Distribution Revenue after Adjustments</b>	<b>23,201,066</b>	<b>22,390,803</b>	
<b>Distribution Revenues</b>			
Residential	11,710,367	11,194,272	(516,095)
GS < 50 kW	2,953,358	2,802,537	(150,821)
GS > 50 to 999 kW	5,868,936	5,437,054	(431,882)
GS > 1000 to 4999 kW	1,475,184	1,710,893	235,709
Large Users	665,334	805,814	140,480
Unmetered Scattered Load	84,841	74,239	(10,602)
Street Light	349,159	275,444	(73,715)
Embedded Distribution	93,887	89,557	(4,330)
MicroFIT	-	993	993
<b>Base Distribution Revenue</b>	<b>23,201,066</b>	<b>22,390,803</b>	<b>(810,263)</b>
<b>Variance from 2010 Board Approved</b>	<b>N/A</b>	<b>-3%</b>	
<b>Variance from Prior Year</b>		<b>15%</b>	

3

4 2010 Actual revenues were \$810,263 or 3% lower than the 2010 Board Approved  
5 revenues. The 2010 Actual results were negatively impacted by: (i) lower than expected  
6 customer growth (63,360 customers/connections compared to the 2010 Board Approved  
7 customers/connections of 63,774), with Residential and Street Light classes bearing the

1 greatest impact; and (ii) reduced consumption from 1,492,380,174 kWh Board Approved to  
2 1,472,796,612 kWh 2010 Actual, with General Service classes accountable for the decline.

3 **Comparison of 2011 Actual to 2010 Actual and 2010 Board Approved**

4 **Table 3-26 – 2011 Distribution Revenues**

Description	2010 Actual	2011 Actual	Variance
<b>Distribution Revenue as per Audited Financial Statements</b>	22,519,964	23,654,877	
<b>Adjustments</b>			
MicroFIT as Miscellaneous Other Distribution Revenue	-	10,576	
Smart Meter Revenue	-	-	
Tax Changes	-	84,444	
LRAM	-	-	
Regulatory Accounting Changes under CGAAP	-	-	
SSS Administration Charge Adjustment	(129,161)	-	
<b>Total Distribution Revenue after Adjustments</b>	<b>22,390,803</b>	<b>23,749,897</b>	
<b>Distribution Revenues</b>			
Residential	11,194,272	11,603,951	409,679
GS < 50 kW	2,802,537	2,687,358	(115,179)
GS > 50 to 999 kW	5,437,054	5,747,692	310,638
GS > 1000 to 4999 kW	1,710,893	1,884,827	173,934
Large Users	805,814	1,078,704	272,890
Unmetered Scattered Load	74,239	74,091	(148)
Street Light	275,444	559,007	283,563
Embedded Distribution	89,557	103,691	14,134
MicroFIT	993	10,576	9,583
<b>Base Distribution Revenue</b>	<b>22,390,803</b>	<b>23,749,897</b>	<b>1,359,094</b>
<b>Variance from 2010 Board Approved</b>	<b>-3%</b>	<b>2%</b>	
<b>Variance from Prior Year</b>		<b>6%</b>	

5

6 2011 Actual revenues were \$1,359,094 or 6% higher than 2010 Actual and 2% higher than  
7 2010 Board Approved revenues. The 2011 Actual results were positively impacted by the  
8 average change in rates effective May 1, 2011, and customer growth of 945 customers/

1 connections, including an increase of 860 Residential customers. As summarized in  
2 Table 3-12, the average annual kWh consumption per Residential customer declined  
3 slightly in 2011.

4

**Comparison of 2012 Actual to 2011 Actual**

**Table 3-27 – 2012 Distribution Revenues**

Description	2011 Actual	2012 Actual	Variance
<b>Distribution Revenue as per Audited Financial Statements</b>	23,654,877	25,027,447	
<b>Adjustments</b>			
MicroFIT as Miscellaneous Other Distribution Revenue	10,576	-	
Smart Meter Revenue	-	(2,533,958)	
Tax Changes	84,444	153,156	
LRAM	-	(227,167)	
Regulatory Accounting Changes under CGAAP	-	1,500,071	
SSS Administration Charge Adjustment	-	-	
<b>Total Distribution Revenue after Adjustments</b>	<b>23,749,897</b>	<b>23,919,549</b>	
<b>Distribution Revenues</b>			
Residential	11,603,951	11,751,085	147,134
GS < 50 kW	2,687,358	2,592,820	(94,538)
GS > 50 to 999 kW	5,747,692	5,754,441	6,749
GS > 1000 to 4999 kW	1,884,827	1,668,010	(216,817)
Large Users	1,078,704	1,310,364	231,661
Unmetered Scattered Load	74,091	71,628	(2,463)
Street Light	559,007	655,427	96,420
Embedded Distribution	103,691	94,165	(9,526)
MicroFIT	10,576	21,609	11,033
<b>Base Distribution Revenue</b>	<b>23,749,897</b>	<b>23,919,549</b>	<b>169,652</b>
<b>Variance from 2010 Board Approved</b>	<b>2%</b>	<b>3%</b>	
<b>Variance from Prior Year</b>		<b>1%</b>	

2012 Actual revenues were \$169,652 or less than 1% higher than 2011 Actual revenues. The 2012 Actual results were positively impacted by: (i) customer growth of 621 customers/connections, principally due to an increase of 503 Residential customers in the year; and (ii) a small load growth of 1,473,820,232 kWh in 2011 to 1,493,125,081 kWh in 2012, principally in the Residential and Large User classes.

1 **Comparison of 2013 Bridge to 2012 Actual**

2 **Table 3-28 – 2013 Bridge Year Normalized Distribution Revenues**

Description	2012 Actual	2013 Bridge	Variance
<b>Distribution Revenue as per Audited Financial Statements</b>	25,027,447	23,685,688	
<b>Adjustments</b>			
MicroFIT as Miscellaneous Other Distribution Revenue	-	-	
Smart Meter Revenue	(2,533,958)	-	
Tax Changes	153,156	-	
LRAM	(227,167)	-	
Regulatory Accounting Changes under CGAAP	1,500,071	2,717,866	
SSS Administration Charge Adjustment	-	-	
<b>Total Distribution Revenue after Adjustments</b>	<b>23,919,549</b>	<b>26,403,554</b>	
<b>Distribution Revenues</b>			
Residential	11,751,085	13,474,395	1,723,310
GS < 50 kW	2,592,820	3,367,157	774,337
GS > 50 to 999 kW	5,754,441	5,750,996	(3,445)
GS > 1000 to 4999 kW	1,668,010	1,640,171	(27,839)
Large Users	1,310,364	1,314,720	4,356
Unmetered Scattered Load	71,628	72,400	772
Street Light	655,427	655,936	509
Embedded Distribution	94,165	99,497	5,332
MicroFIT	21,609	28,282	6,673
<b>Base Distribution Revenue</b>	<b>23,919,549</b>	<b>26,403,554</b>	<b>2,484,005</b>
<b>Variance from 2010 Board Approved</b>	<b>3%</b>	<b>14%</b>	
<b>Variance from Prior Year</b>		<b>10%</b>	

3

4 2013 Bridge Year revenue is projected to be \$2,484,005 or 10% higher than 2012 Actual  
5 revenue. The increase in 2013 revenue is explained by the average change in rates,  
6 effective May 1, 2013, as well as CND's forecast customer growth of 1,085  
7 customers/connections. As summarized in Table 3-12, the average annual kWh

1 consumption per customer/connection is expected to decline at the same time that forecast  
2 customer growth rises.

3 **Comparison of 2014 Test Year to 2013 Bridge Year and 2010 Board Approved**

4 **Table 3-29 – 2014 Test Year Normalized Distribution Revenues**

Description	2013 Bridge	2014 Test	Variance
<b>Distribution Revenue as per Projected</b>	23,685,688	27,997,737	
<b>Adjustments</b>			
Regulatory Accounting Changes under CGAAP	2,717,866	-	
<b>Total Distribution Revenue after Adjustments</b>	<b>26,403,554</b>	<b>27,997,737</b>	
<b>Distribution Revenues</b>			
Residential	13,474,395	14,077,731	603,336
GS < 50 kW	3,367,157	3,037,564	(329,593)
GS > 50 to 999 kW	5,750,996	6,249,680	498,684
GS > 1000 to 4999 kW	1,640,171	1,965,104	324,933
Large Users	1,314,720	1,601,246	286,526
Unmetered Scattered Load	72,400	60,942	(11,458)
Street Light	655,936	881,774	225,838
Embedded Distribution	99,497	92,004	(7,493)
MicroFIT	28,282	31,691	3,409
<b>Base Distribution Revenue</b>	<b>26,403,554</b>	<b>27,997,737</b>	<b>1,594,183</b>
<b>Variance from 2010 Board Approved</b>	<b>14%</b>	<b>21%</b>	
<b>Variance from Prior Year</b>		<b>6%</b>	

5  
6 The 2014 Test Year revenues are forecast to be \$1,594,183 or 6% higher than 2013 Bridge  
7 Year revenue.

8 The increase in 2014 revenues reflects the rebasing increase, the load and customer  
9 growth developed in the forecasting model and the cost allocation adjustments to move  
10 revenue in line with Board recommended ranges.



- 1 The increase of 21% from 2010 Board Approved amounts reflects the cumulative rate
- 2 increases in 2011, 2012 and 2013 and modest customer growth during the period.

1    **OTHER REVENUE**

2    Other Revenue includes Retail Services Revenue, Service Transaction Revenues, Rent  
3    from Electrical Property, Late Payment Charges, Specific Service Charges, Gains/Losses  
4    on Disposition of Property, Miscellaneous Revenues, and Interest Income. Please see  
5    Appendix 3-3 for the OEB Filing Requirement Appendix 2-H Other Operating Revenue.  
6    Table 3-30 summarizes CND's Other Revenue included in CND's total Revenue  
7    Requirement.

8

1

**Table 3-30 – Other Distribution Revenues**

Other Distribution Revenues							
USoA Account	Account Description	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
4080	SSS Administration Charge	\$ -	\$ 129,161	\$ 137,093	\$ 143,062	\$ 146,184	\$ 146,868
4082	Retail Services Revenue	\$ 76,400	\$ 72,083	\$ 59,378	\$ 45,022	\$ 36,000	\$ 36,000
4084	Service Transaction Request (STR) Revenue	\$ -	\$ 2,729	\$ 1,589	\$ 1,325	\$ 960	\$ 960
4210	Rent from Electric Property	\$ 202,080	\$ 216,336	\$ 219,051	\$ 235,066	\$ 208,934	\$ 211,684
4225	Late Payment Charges	\$ 349,055	\$ 341,691	\$ 170,595	\$ 125,188	\$ 125,500	\$ 137,500
4235	Specific Services Charges	\$ 540,140	\$ 573,349	\$ 537,171	\$ 543,360	\$ 554,855	\$ 554,855
4325	Revenues from Merchandise, Jobbing, etc.	\$ -	\$ 140,158	\$ 132,975	\$ 137,381	\$ 143,800	\$ 145,798
4355	Gain on Disposition of Utility and Other Property	\$ -	\$ -	\$ 34,623	\$ 47,166	\$ -	\$ -
4360	Loss on Disposition of Utility and Other Property	\$ -	\$ (367,825)	\$ (292)	\$ (312)	\$ -	\$ -
4375	Revenues from Non-Utility Operations	\$ 322,735	\$ 1,342,217	\$ 1,167,880	\$ 518,753	\$ 540,301	\$ 564,581
4390	Miscellaneous Non-Operating Income	\$ -	\$ 146,700	\$ 130,196	\$ 88,971	\$ 128,400	\$ 108,400
4405	Interest and Dividend Income	\$ -	\$ 399,141	\$ 412,032	\$ 493,844	\$ 293,990	\$ 52,712
	<b>Total</b>	\$ 1,490,410	\$ 2,995,740	\$ 3,002,290	\$ 2,378,826	\$ 2,178,924	\$ 1,959,358
	Less:						
4330	Costs & Expenses re: 4325	\$ -	\$ (106,697)	\$ (110,092)	\$ (113,241)	\$ (119,800)	\$ (121,798)
4380	Expense re: 4375	\$ -	\$ (376,745)	\$ (351,520)	\$ (506,973)	\$ (519,181)	\$ (538,181)
	<b>Total Revenue as per Audited Financial</b>	\$ 1,490,410	\$ 2,512,298	\$ 2,540,678	\$ 1,758,612	\$ 1,539,943	\$ 1,299,379

2

3 **Overall Variance Analysis of Other Revenue:**

4 **2010 Board Approved Comparison to 2010 Actual Other Revenue:**

5 CND's 2010 Actual Other Revenue was \$2,512,298 or \$1,021,888 higher than the 2010  
6 Board Approved Other Revenue. The increase in Other Revenue was principally

1 attributable to: (i) higher revenue from Non-Utility Operations of \$1,342,217; (ii) higher  
2 Interest Income of \$399,141; (iii) lower operating costs offsets associated with the Other  
3 Revenue of \$483,442; and (iv) Loss on Disposition of Utility Property. Further explanations  
4 of the variances by account are provided herein.

5  
6 **2011 Actual Comparison to 2010 Actual Other Revenue:**

7  
8 CND's 2011 Actual Other Revenue was \$2,540,678 or \$28,380 higher than 2010 Actual  
9 Other Revenue. The increase in Other Revenue in 2011 is principally explained by the  
10 Gain on Disposition of Utility and Other Property. While no further explanation is required  
11 to explain the overall difference from 2013 compared to 2012 because the difference is less  
12 than CND's materiality threshold of \$125,000, further explanations of the variances by  
13 account are provided herein.

14  
15 **2012 Actual Comparison to 2011 Actual Other Revenue:**

16  
17 CND's 2012 Actual Other Revenue was \$1,758,612 or \$782,066 lower than 2011 Actual  
18 Other Revenue. The decline in Other Revenue in 2012 is principally explained by lower  
19 Late Payment Charges and lower revenues from Non-Utility Operations. CND discontinued  
20 recording incentive revenues from CDM programs, with the introduction of CDM targets.  
21 There was also a rise in costs associated to street lighting services of \$506,973. Further  
22 explanations of variances by account are provided herein.

23  
24  
25 **2013 Bridge Year Comparison to 2012 Actual Other Revenue:**

26  
27 CND's 2013 Bridge Year Other Revenue is \$1,539,943 or \$218,669 lower than 2012 Actual  
28 Other Revenue. The decline in Other Revenue in 2013 Bridge Year is principally explained  
29 by lower Interest Income of \$293,990. Further explanations of variances by account are  
30 provided herein.

31 **2014 Test Year Comparison to 2013 Bridge Year Other Revenue:**

32  
33 CND's 2014 Test Year Other Revenue is \$1,299,379 or \$240,564 lower than 2013 Bridge  
34 Year other Revenue. The decline in Other Revenue in 2014 Test Year is principally

explained by lower Interest Income of \$52,712. Further explanations of variances by account are provided herein.

**Variance Analysis by Account Number:**

**Table 3-31 – 4080 SSS Administration Charge**

4080 SSS Administration Charges	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	\$ -	\$ 129,161	\$ 137,093	\$ 143,062	\$ 146,184	\$ 146,868

Revenues for SSS Administration Charge have historically increased gradually as shown in Table 3-31. The year-over-year variances can be explained by the rise in CND's customer growth.

**Table 3-32 – 4082 Retail Services Revenue**

4082 Retail Services Revenue	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	\$ 76,400	\$ 72,083	\$ 59,378	\$ 45,022	\$ 36,000	\$ 36,000

The revenue for retail services is posted to Account 4082 as shown in Table 3-32. The variance between this revenue and the direct Retail Service Expenses which are posted to various expense accounts, is recorded in variance account 1518, which is detailed in Exhibit 9. When the variance in 1518 is cleared, customers will either receive a benefit or a charge by way of a rate rider.

The Retail Service Revenue has declined by approximately one half, from 2010 to 2014 Test Year due to a decline in the number of customers expected to be enrolled with Retailers. Since 2010, CND has experienced a reduction in the number of customers enrolled with retailers from approximately 6,400 at the end of 2010 to approximately 3,500 at the end of 2012.

**Table 3-33 – 4084 Service Transaction Request (STR) Revenue**

4084 Service Transaction Request (STR) Revenue	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	\$ -	\$ 2,729	\$ 1,589	\$ 1,325	\$ 960	\$ 960

The revenue for Service Transaction Requests (STR) is posted to Account 4084 as shown in Table 3-33. The variance between this revenue, and the direct STR expenses which are posted to various expense accounts, is recorded in variance account 1548, which is detailed in Exhibit 9. When the variance in 1548 is cleared, the customer will receive a benefit or a charge by way of a rate rider.

The Service Transaction Request Revenue is decreasing over time as the number of customers enrolling with Retailers is decreasing as indicated above in Retail Services Revenue.

The 2010 Board Approved amount for this account (\$4,000) was not included in Other Revenue, as it was assumed that revenue and costs would be equal. Prior to 2010 CND posted the STR revenue directly to the variance account. Beginning in 2010 CND records the revenue in the appropriate variance account.

**Table 3-34 – 4210 Rent From Electric Property**

4210 Rent From Electric Property	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	\$ 202,080	\$216,336	\$219,051	\$235,066	\$208,934	\$211,684

Rent from electric property is comprised of access to power poles by telecommunication companies and the rental of facilities to an affiliate company. Revenue fluctuates slightly from year to year based on the number of pole attachments as shown in Table 3-34.

Rent from electric property for the 2013 Bridge Year and the 2014 Test Year is expected to decline from the 2012 Actuals by approximately \$26,132 and \$23,382 respectively. The decline in rental income is due to a reduction in the number of pole attachments expected

as a result of the acquisition of Atria Networks by Rogers Communication and the consolidation of the pole attachment agreements.

**Table 3-35 – 4225 Late Payment Charges**

4225 Late Payment Charges	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	\$ 349,055	\$ 341,691	\$ 170,595	\$ 125,188	\$ 125,500	\$ 137,500

Late payment charges for the 2013 Bridge Year and the 2014 Test Year are not expected to be materially different from the 2012 Actuals. Table 3-35 represents the Late Payment Charges account.

Late payment charges for the 2014 Test Year are expected to be \$211,555 lower than the 2010 Board Approved amount and \$204,191 lower than the 2010 Actuals. The decline in late payment charges is principally due to the termination of the Water and Waste Water billing services agreement with the City of Cambridge and The Township of North Dumfries effective November 1, 2010. Additionally, in 2011 a new CIS was implemented and as a result, certain late payment charges were not calculated and billed to customers during a period of time in 2011.

**Table 3-36 – 4235 Specific Service Charges**

4235 Specific Service Charges	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
Collection Notices/Documents	-	-	-	\$ 2,160	\$ 1,920	\$ 1,920
Change of Occupancy/Account Set Up Fee	\$ 234,330	\$ 267,975	\$ 218,400	\$ 248,070	\$ 242,700	\$ 242,700
Reconnection	\$ 30,168	\$ 27,415	\$ 19,750	\$ 33,790	\$ 28,085	\$ 28,085
NSF Cheque Fee	\$ 9,936	\$ 9,210	\$ 7,000	\$ 6,165	\$ 8,400	\$ 8,400
Miscellaneous	\$ 265,706	\$ 268,749	\$ 292,021	\$ 253,175	\$ 273,750	\$ 273,750
Total	\$ 540,140	\$ 573,349	\$ 537,171	\$ 543,360	\$ 554,855	\$ 554,855

The 2014 Test Year Specific Service Charges, as seen in Table 3-36, are not materially different from year to year and require no further explanation.

**Table 3-37 – 4325 Revenues from Merchandise, Jobbing, Etc. and 4330 Expenses from Merchandise, Jobbing, Etc.**

4325 Revenues from Merchandise, Jobbing, etc.							
4330 Cost and Expenses re: 4325							
USoA Account	Account Description	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
4325	Revenues from Merchandise, Jobbing,	\$ -	\$ 140,158	\$ 132,975	\$ 137,381	\$ 143,800	\$ 145,798
4330	Cost and Expenses re: 4325	\$ -	\$ (106,697)	\$ (110,092)	\$ (113,241)	\$ (119,800)	\$ (121,798)
	Net	\$ -	\$ 33,461	\$ 22,883	\$ 24,140	\$ 24,000	\$ 24,000

Account 4325 includes the revenue from providing administrative and accounting services to affiliates as shown in Table 3-37. Please refer to [Exhibit 4, Tab 5, Schedule 1] for a description of Shared Services and Corporate Cost Allocations.

**Table 3-38A – 4355 Gain on Disposition of Utility and Other Property**

4355 Gain on Disposition of Utility and Other Property	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
Gain on Disposition of Utility and Other Property	\$ -	\$ -	\$ 34,623	\$ 47,166	\$ -	\$ -

Account 4355 includes gains on the sale or disposition of capital assets as can be seen in Table 3-38A. Generally speaking, assets are only disposed of once they are fully depreciated and are beyond their useful life. The revenue in Account 4355 is not material and fluctuates from year to year.

The gain on disposition in 2011 relates to the disposals of vehicles and substation locations (equipment and land).



The gain on disposition in 2012 includes the sale of used computer equipment, the disposals of end of life vehicles, and the sale of metering equipment to a customer that became a direct market participant.

CND does not have any specific plans to dispose of any property or equipment in 2013 or 2014. CND may dispose of a fully depreciated vehicle in 2014 as part of its vehicle replacement program, however, any proceeds from the disposition are not expected to be material.

**Table 3-38B – 4360 Loss on Disposition of Utility and Other Property**

4360 Loss on Disposition of Utility and Other Property	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	\$ -	\$ 367,825	\$ 292	\$ 312	\$ -	\$ -

CND does not have any specific plans to dispose of any property or equipment in 2013 or 2014.

The Loss on Disposition recognized in 2010 includes the following:

1. Disposition of SAP Software. CND wrote off \$247,772 in software costs related to its planned implementation of SAP software for its CIS solution.

As part of the OEB's Decision on CND's 2010 Rate Application (EB-2009-0260 page 35 of the Decision dated April 20, 2010), CND received approval for capital to implement a new CIS constructed on the SAP software platform. The project was a partnership between CND, London Hydro, and Greater Sudbury Hydro. London Hydro was the lead partner and would host the application. Further, London Hydro was to share their Business Process Design Documents as the basis for CND and Greater Sudbury Hydro to use for their desired solution.

1 By sharing and combining resources, the three utilities, CND, London Hydro and  
2 Sudbury Hydro believed certain synergies and economic efficiencies would be  
3 gained.  
4

5 At the time the three utilities agreed to join together to partner and share costs  
6 and best practices, London Hydro was already very far advanced in designing  
7 and building their SAP CIS solution. The intent was for London Hydro to go live,  
8 and CND and Sudbury Hydro would follow the implementation path, with go live  
9 dates set some six months after London Hydro's go live date. The intent was for  
10 London Hydro to host the solution and all three parties would share the benefits  
11 of shared maintenance and support fees going forward.  
12

13 In August 2009, serious concerns with respect to the implementation project  
14 were beginning to appear. In December 2009, London Hydro engaged additional  
15 system integrators to assist them with ongoing software issues encountered  
16 subsequent to their go live date in July 2009. Based on the software design and  
17 customizations, CND and Sudbury Hydro were stalled with progressing on their  
18 projects until London Hydro's issues were resolved. The project partners could  
19 not get a commitment on costs or timelines to complete. The implementation  
20 vendors revisited the SAP design and configuration and resubmitted revised  
21 costs for annual software maintenance and support.  
22

23 In early 2010, CND decided to abandon the SAP CIS solution, based on  
24 unresolved software issues, timeline uncertainty, escalating changes in the  
25 costing model, and the impending mandate to implement Smart Meters and the  
26 requirement for a working CIS solution. As a result, CND wrote off the costs  
27 related to the SAP Software implementation.  
28

29 In January 2010 CND issued a new RFP for a CIS solution and selected Harris  
30 NorthStar, which went live in May 2011.  
31

2. Disposition of Substation. CND disposed of the Wauchope Substation in 2010 as part of its plan to decommission all of its substations. The loss of \$128,677 was principally attributable to decommissioning costs, including environmental site remediation.

**Table 3-39 – 4375 Revenue from Non-Utility Operations and 4380 Expenses from Non-Utility Operations**

4375 Revenue from Non-Utility Operations 4380 Expenses Relating to Non-Utility Operations							
USoA Account	Account Description	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
4375	Streetlight Service	\$ -	\$ 376,745	\$ 351,520	\$ 506,973	\$ 519,181	\$ 538,181
	OPA Revenue	\$ -	\$ 362,341	\$ 784,920			
	Water & Sewer Billings	\$ -	\$ 603,131				
	Third Party Charges	\$ -	\$ -	\$ 31,440	\$ 11,780	\$ 21,120	\$ 26,400
			\$ 1,342,217	\$ 1,167,880	\$ 518,753	\$ 540,301	\$ 564,581
4380	Streetlight Service	\$ -	\$ (376,745)	\$ (351,520)	\$ (506,973)	\$ (519,181)	\$ (538,181)
	Net	\$ -	\$ 965,472	\$ 816,360	\$ 11,780	\$ 21,120	\$ 26,400

With the exception of 2010 and 2011 Actuals, the net revenue from non-utility operations has historically been low. 2010 Actual revenue included \$362,341 in incentive revenue earned with respect to the delivery of conservation and demand programs ("CDM") on behalf of the Ontario Power Authority ("OPA"). Commencing in 2011, with the introduction of CDM targets, the funding model, including the incentive program, was revised by the OPA. CND has not included any incentive revenue associated with the delivery of CDM programs for the period 2012 through 2014 as it is difficult to determine what if any, incentive may be earned at the completion of the CDM program at the end of 2014.

In the latter part of 2010, the water billing services contract between CND and the City of Cambridge and Regional Municipality of Waterloo was terminated. Please refer to Exhibit 4, Tab 2, Schedule 1 for additional information.

Net revenue from non-utility operations for the 2014 Test Year is estimated at \$26,400, compared to 2010 Board Approved \$Nil, 2010 Actuals of \$965,472, 2011 Actuals of \$816,360 and 2012 Actuals of \$11,780.

Costs for streetlight maintenance services are charged to CND's affiliate company, Cambridge and North Dumfries Energy Solutions Inc. Please refer to Exhibit 4, Tab 5, Schedule 1 for a description of Shared Services and Corporate Cost Allocations.

Third party charges represent miscellaneous amounts billed for such things as damages to our facilities, motor vehicle accidents, and Connection Impact Assessments.

**Table 3-40 – 4390 Miscellaneous Non-Operating Income**

4390 Miscellaneous Non-Operating Income	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
Scrap Sales	\$ 75,000	\$ 126,863	\$ 83,462	\$ 48,021	\$ 85,000	\$ 65,000
Discounts Earned	\$ 13,500	\$ 15,482	\$ 14,077	\$ 11,526	\$ 13,000	\$ 13,000
Miscellaneous	\$ -	\$ 4,355	\$ 32,657	\$ 29,423	\$ 30,400	\$ 30,400
	\$ 88,500	\$ 146,700	\$ 130,196	\$ 88,971	\$ 128,400	\$ 108,400

Miscellaneous non-operating revenue has fluctuated year over year, principally due to the volume of scrap materials and commodity prices. This can be seen in Table 3-40 above. CND has estimated miscellaneous revenue of \$108,400 in the 2014 Test Year, which is 22% higher than the 2012 Actuals of \$88,971.

**Table 3-41 – 4405 Interest and Dividend Income**

4405 Interest and Dividend Income	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Bridge	2014 Test
	\$0	\$399,141	\$412,032	\$493,844	\$293,990	\$52,712

Table 3-41 represents the Interest and Dividend Income account 4405. CND does not earn any dividend income, as it does not own any dividend generating investments.

- 1 Interest income includes interest earned on surplus cash balances.
- 2 Interest income up to 2012 was affected by the large capital expenditure for smart meters
- 3 over a number of years, and the decreasing surplus funds.
- 4 CND's cash flow projections indicate that with the capital plan proposed for 2013 and 2014,
- 5 they will no longer be in a cash surplus position.
- 6 Short term interest rates have reduced considerably since CND's last Cost of Service
- 7 application. This decrease in interest rates, combined with CND's capital investment
- 8 program which uses any surplus cash that might otherwise have been available, results in
- 9 reduced interest income, for 2013 and 2014.

## APPENDIX 3-1 REGRESSION MODEL INPUTS

## APPENDIX 3-1

### Regression Model Inputs

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Peak Hours	Employment Kitchener- Waterloo-Barrie (000's)	CDM Activity	Unemployment Kitchener- Waterloo-Barrie (000's)	Predicted Purchases
Jan-96	105,408,735	789.4	0	31	0	352	463	0	41	104,181,873
Feb-96	97,941,163	712.6	0	29	0	336	467	0	41	98,440,796
Mar-96	98,345,544	670.4	0	31	1	336	469	0	41	99,648,951
Apr-96	88,677,350	421.9	0	30	1	336	472	0	42	93,361,975
May-96	86,110,774	216.1	10	31	1	352	479	0	42	95,304,238
Jun-96	87,353,968	29.4	38.6	30	0	320	484	0	43	94,236,784
Jul-96	89,453,162	18.9	41.9	31	0	352	488	0	43	100,343,657
Aug-96	95,522,933	6.2	55.2	31	0	336	485	0	43	100,435,765
Sep-96	88,605,608	102.2	12.6	30	1	320	479	0	42	88,504,268
Oct-96	91,849,048	301.4	0	31	1	352	474	0	42	94,311,436
Nov-96	97,824,062	548.1	0	30	1	320	471	0	42	94,227,948
Dec-96	99,686,246	596.5	0	31	0	320	474	0	42	98,688,719
Jan-97	108,687,484	777.9	0	31	0	352	475	0	39	106,953,439
Feb-97	96,889,088	615	0	29	0	320	478	0	39	97,565,711
Mar-97	101,948,722	619.1	0	31	1	304	477	0	39	97,500,953
Apr-97	95,686,072	391.9	0	30	1	352	480	0	40	96,678,080
May-97	93,811,439	289	0	31	1	336	484	0	40	94,952,384
Jun-97	99,097,140	30.4	50.4	30	0	336	492	0	40	100,637,447
Jul-97	102,898,353	22.1	59.8	31	0	352	497	0	41	106,436,449
Aug-97	97,826,498	49.4	21.9	31	0	320	501	0	41	97,016,683
Sep-97	95,349,179	115.2	5.4	30	1	336	502	0	41	94,259,123
Oct-97	100,614,082	288.9	1.6	31	1	352	507	0	42	101,385,442
Nov-97	103,052,415	471.4	0	30	1	304	508	0	42	98,755,585
Dec-97	106,961,772	630.7	0	31	0	336	508	0	42	108,343,055
Jan-98	110,966,443	652.8	0	31	0	336	501	0	35	109,372,841
Feb-98	100,001,015	547.1	0	28	0	320	499	0	35	100,220,306
Mar-98	109,738,133	505.1	0	31	1	352	496	0	34	105,297,663
Apr-98	96,753,486	312	0	30	1	336	499	0	35	98,580,615
May-98	101,025,669	77.1	16.8	31	1	320	503	0	35	97,293,893
Jun-98	107,622,236	66.7	63.7	30	0	352	511	0	36	111,104,910
Jul-98	111,259,024	6.9	64.8	31	0	352	518	0	36	112,876,360
Aug-98	110,638,583	12.1	83.1	31	0	320	524	0	36	114,321,878
Sep-98	103,118,005	63	26	30	1	336	523	0	36	102,826,560
Oct-98	102,878,594	257.6	0	31	1	336	522	0	36	103,322,062
Nov-98	107,345,949	440.1	0	30	1	336	522	0	36	105,900,577
Dec-98	111,204,020	572.1	0	31	0	336	528	0	37	112,921,886
Jan-99	120,632,213	789.6	0	31	0	320	528	0	31	117,513,631
Feb-99	107,060,675	578.4	0	28	0	320	528	0	31	108,301,912
Mar-99	116,079,399	592.5	0	31	1	368	526	0	31	116,333,461
Apr-99	102,563,425	332.6	0	30	1	336	529	0	31	106,451,475
May-99	104,198,219	126.7	10.5	31	1	320	533	0	31	104,560,100
Jun-99	116,697,001	44.4	76.5	30	0	352	540	0	31	120,411,954
Jul-99	119,845,846	3.2	138.9	31	0	336	548	0	32	133,114,233
Aug-99	114,278,129	28.8	30.9	31	0	336	553	0	32	113,665,835
Sep-99	109,787,767	88.9	27.7	30	1	336	555	0	32	111,752,227
Oct-99	108,457,636	319	0	31	1	320	553	0	32	110,702,535
Nov-99	113,412,856	405.1	0	30	1	352	550	0	32	113,842,049
Dec-99	117,802,224	623.7	0	31	0	336	548	0	32	119,560,476

**Cambridge and North Dumfries Hydro Inc.**  
**EB-2013-0116**  
**Exhibit 3**  
**Appendix 3-1**  
**Page 2 of 5**  
**Filed: October 1, 2013**

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Peak Hours	Employment Kitchener- Waterloo-Barrie (000's)	CDM Activity	Unemployment Kitchener- Waterloo-Barrie (000's)	Predicted Purchases
Jan-00	124,909,564	773	0	31	0	320	543	0	31	120,185,622
Feb-00	116,693,943	643.8	0	28	0	336	537	0	31	113,412,985
Mar-00	116,756,801	446.9	0	31	1	368	535	0	31	115,163,251
Apr-00	106,597,677	358.3	0	30	1	304	539	0	31	105,712,620
May-00	111,500,528	152.4	18.7	31	1	352	548	0	31	113,396,575
Jun-00	115,580,544	41.1	35.4	30	0	352	554	0	32	115,296,657
Jul-00	113,052,205	18.6	44.8	31	0	320	557	0	32	115,429,506
Aug-00	120,498,144	29.7	46.3	31	0	352	557	0	32	119,171,411
Sep-00	111,937,721	134	23.8	30	1	320	554	0	32	110,134,771
Oct-00	112,766,680	251.6	0	31	1	336	553	0	32	111,185,667
Nov-00	117,889,023	470.9	0	30	1	352	557	0	32	116,892,912
Dec-00	123,990,762	826.5	0	31	0	304	561	0	32	123,397,331
Jan-01	127,737,949	715	0	31	0	352	561	0	33	125,701,742
Feb-01	114,030,713	620.2	0	29	0	320	556	0	32	116,212,849
Mar-01	122,670,396	618.7	0	31	1	352	552	0	32	120,503,210
Apr-01	108,161,574	324.6	0	30	1	320	556	0	32	109,997,483
May-01	110,929,304	140.3	7.7	31	1	352	562	0	33	113,561,318
Jun-01	120,266,540	47	62.4	30	0	336	566	0	33	121,280,332
Jul-01	119,101,349	22.3	65.7	31	0	336	566	0	33	122,810,617
Aug-01	132,583,402	2.3	94.2	31	0	352	563	0	33	128,910,488
Sep-01	113,406,955	118.8	19.2	30	1	304	560	0	33	108,293,058
Oct-01	118,039,640	276.7	0	31	1	352	560	0	33	114,627,483
Nov-01	117,162,207	370.8	0	30	1	352	561	0	33	115,389,838
Dec-01	116,887,701	563.3	0	31	0	304	564	0	33	118,109,814
Jan-02	128,380,096	625.7	0	31	0	352	565	0	34	124,261,953
Feb-02	117,791,339	592	0	28	0	320	567	0	34	116,055,525
Mar-02	125,657,099	581.2	0	31	1	320	569	0	34	119,310,501
Apr-02	119,793,772	356.2	6.6	30	1	352	573	0	35	118,308,795
May-02	120,443,400	266.8	5.3	31	1	352	577	0	35	118,429,943
Jun-02	125,484,770	53.1	54.5	30	0	320	582	0	35	120,875,182
Jul-02	140,900,710	4.7	129	31	0	352	585	0	35	139,814,116
Aug-02	136,973,540	11	72.3	31	0	336	587	0	35	127,647,317
Sep-02	126,481,700	50.2	47	30	1	320	583	0	35	118,219,420
Oct-02	124,987,330	345.6	6.3	31	1	352	583	0	35	121,569,327
Nov-02	124,898,770	486.4	0	30	1	336	584	0	35	120,352,242
Dec-02	127,352,230	675.6	0	31	0	320	592	0	36	127,325,406
Jan-03	136,012,740	868.4	0	31	0	352	591	0	34	135,136,382
Feb-03	124,189,300	755.9	0	28	0	320	588	0	34	124,182,286
Mar-03	130,304,230	638.7	0	31	1	336	585	0	34	125,733,204
Apr-03	119,866,540	397.4	0.7	30	1	336	588	0	34	119,760,123
May-03	118,911,520	217	0	31	1	336	596	0	35	118,943,271
Jun-03	123,452,030	65.3	25.5	30	0	336	602	0	35	121,554,239
Jul-03	133,250,360	12.5	50.1	31	0	352	606	0	35	129,162,254
Aug-03	130,044,510	18.9	72.4	31	0	320	608	0	35	130,652,220
Sep-03	123,893,240	104.1	6	30	1	336	608	0	35	118,366,932
Oct-03	127,104,740	331.9	0	31	1	352	610	0	35	125,697,020
Nov-03	126,597,630	434.4	0	30	1	320	609	0	35	122,911,385
Dec-03	130,090,690	610	0	31	0	336	609	0	35	131,445,948



Cambridge and North Dumfries Hydro Inc.  
EB-2013-0116  
Exhibit 3  
Appendix 3-1  
Page 3 of 5  
Filed: October 1, 2013

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Peak Hours	Employment Kitchener- Waterloo-Barrie (000's)	CDM Activity	Unemployment Kitchener- Waterloo-Barrie (000's)	Predicted Purchases
Jan-04	140,542,520	879.2	0	31	0	336	605	0	32	137,353,177
Feb-04	129,380,670	699.2	0	28	0	320	599	0	32	126,061,183
Mar-04	134,629,040	540.9	0	31	1	368	595	0	31	130,031,402
Apr-04	121,654,150	354.1	0	30	1	336	598	0	31	121,541,749
May-04	123,911,560	196.2	6.7	31	1	320	606	0	32	120,802,838
Jun-04	128,521,510	92.5	16.3	30	0	352	615	0	32	125,664,960
Jul-04	130,502,320	21.3	49.3	31	0	336	624	0	33	132,085,051
Aug-04	134,736,160	55	30.6	31	0	336	626	0	33	129,559,111
Sep-04	131,178,500	71.3	13.7	30	1	336	627	0	33	123,889,089
Oct-04	127,280,000	287.5	0	31	1	320	625	0	33	125,399,602
Nov-04	131,398,790	432.9	0	30	1	352	625	0	33	130,445,874
Dec-04	136,670,710	700.1	0	31	0	336	628	0	33	138,162,190
Jan-05	145,626,785	814.7	0	31	0	320	630	0	35	138,591,908
Feb-05	130,295,706	683.5	0	29	0	320	631	0	35	132,977,533
Mar-05	139,429,744	680.5	0	31	1	352	628	0	35	137,353,277
Apr-05	125,505,720	354.6	0	30	1	336	631	0	35	127,742,618
May-05	126,060,714	244.9	0	31	1	336	639	0	36	128,343,317
Jun-05	148,205,860	27.3	104.8	30	0	352	648	0	36	147,468,616
Jul-05	144,470,140	6.8	105.4	31	0	320	653	0	37	146,273,017
Aug-05	149,364,543	11.9	67.9	31	0	352	656	0	37	142,953,165
Sep-05	131,923,136	63.4	13.7	30	1	336	652	0	37	128,261,817
Oct-05	129,428,087	259.9	2.6	31	1	320	650	0	36	129,691,786
Nov-05	133,425,806	433.1	0	30	1	352	644	0	36	133,615,992
Dec-05	137,252,421	721.6	0	31	0	320	645	0	36	139,588,879
Jan-06	139,483,995	590.6	0	31	0	336	644	46,843	34	138,620,899
Feb-06	129,290,507	651.2	0	28	0	320	643	93,687	34	133,295,278
Mar-06	138,164,067	562.4	0	31	1	368	641	140,530	34	139,012,378
Apr-06	120,999,808	322.5	0	30	1	304	644	187,374	34	125,802,364
May-06	130,145,724	177.8	17.7	31	1	352	652	234,217	34	134,216,643
Jun-06	136,402,808	44.1	32.2	30	0	352	660	281,061	35	135,374,934
Jul-06	144,866,595	6.5	117.2	31	0	320	665	327,904	35	150,044,875
Aug-06	143,235,418	27.5	45.5	31	0	352	667	374,748	35	140,140,235
Sep-06	124,350,425	130.3	2.3	30	1	320	665	421,591	35	126,943,458
Oct-06	129,860,299	335.1	0	31	1	336	667	468,435	35	134,420,134
Nov-06	131,299,426	415.9	0	30	1	352	666	515,278	35	135,943,164
Dec-06	131,260,972	545.2	0	31	0	304	668	562,122	35	136,737,778
Jan-07	141,950,997	698.3	0	31	0	352	662	555,266	38	143,221,368
Feb-07	134,079,334	785.1	0	28	0	320	657	548,410	37	136,129,117
Mar-07	137,122,151	582	0	31	1	352	652	541,553	37	137,349,255
Apr-07	124,757,179	403	0	30	1	320	647	534,697	37	127,619,842
May-07	128,722,398	166.4	11.2	31	1	352	647	527,841	37	129,503,726
Jun-07	139,397,997	35.5	51.2	30	0	336	652	520,985	37	133,796,961
Jul-07	134,351,987	28	53.8	31	0	336	660	514,129	38	137,213,617
Aug-07	145,489,294	19.7	65.1	31	0	352	662	507,273	38	141,348,691
Sep-07	128,127,734	74.7	28	30	1	304	661	500,417	38	127,082,256
Oct-07	130,195,410	184.7	10.9	31	1	352	663	493,560	38	133,115,811
Nov-07	132,285,360	511.8	0	30	1	352	667	486,704	38	137,470,105
Dec-07	132,714,082	686.6	0	31	0	304	669	479,848	38	139,558,398

Cambridge and North Dumfries Hydro Inc.  
EB-2013-0116  
Exhibit 3  
Appendix 3-1  
Page 4 of 5  
Filed: October 1, 2013

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Peak Hours	Employment Kitchener- Waterloo-Barrie (000's)	CDM Activity	Unemployment Kitchener- Waterloo-Barrie (000's)	Predicted Purchases
Jan-08	140,041,421	676.8	0	31	0	352	661	517,595	40	142,185,827
Feb-08	132,651,127	651.2	0	28	0	320	656	555,341	40	132,514,926
Mar-08	133,457,374	686.1	0	31	1	304	647	593,087	39	132,712,781
Apr-08	122,596,206	297.9	0	30	1	352	647	630,834	39	127,678,861
May-08	121,120,167	243.1	0.7	31	1	336	649	668,580	39	126,603,542
Jun-08	130,438,115	40.6	53	30	0	336	657	706,326	40	133,692,275
Jul-08	139,693,948	7.6	75.8	31	0	352	664	744,072	40	141,795,379
Aug-08	131,943,162	36.2	29.5	31	0	320	667	781,819	40	130,458,269
Sep-08	126,425,825	93.2	12	30	1	336	670	819,565	40	127,487,371
Oct-08	125,628,543	325.7	0	31	1	352	673	857,311	41	133,889,879
Nov-08	125,038,661	499.7	0	30	1	304	677	895,058	41	131,699,017
Dec-08	128,488,680	694	0	31	0	336	674	932,804	41	141,391,074
Jan-09	132,884,999	891.8	0	31	0	336	662	976,389	66	136,473,394
Feb-09	117,645,114	649.6	0	29	0	304	649	1,019,974	64	122,150,956
Mar-09	124,919,264	562.6	0	31	1	352	636	1,063,559	63	124,290,023
Apr-09	113,413,654	341.5	3.2	30	1	320	632	1,107,144	63	114,246,565
May-09	110,681,364	192.8	2.3	31	1	320	632	1,150,729	62	112,065,003
Jun-09	118,125,725	75.7	26.2	30	0	352	643	1,194,313	64	119,307,917
Jul-09	117,925,787	37.6	14.5	31	0	352	650	1,237,898	64	118,898,258
Aug-09	129,756,657	34.4	57.3	31	0	320	655	1,281,483	65	124,589,211
Sep-09	117,720,372	88.8	5.5	30	1	336	655	1,325,068	65	114,166,968
Oct-09	119,665,804	329.1	0	31	1	336	657	1,368,653	65	119,957,165
Nov-09	119,039,063	396.5	0	30	1	320	655	1,412,238	65	117,677,824
Dec-09	128,577,043	669.5	0	31	0	352	652	1,455,823	65	129,237,630
Jan-10	134,104,887	727.1	0	31	0	320	646	1,511,335	58	127,320,597
Feb-10	119,717,521	644.7	0	28	0	304	642	1,566,848	57	118,325,242
Mar-10	125,455,107	470.9	0	31	1	368	640	1,622,360	57	123,643,822
Apr-10	112,822,227	255.7	0	30	1	320	644	1,677,873	58	112,961,197
May-10	122,392,253	144.7	21	31	1	320	653	1,733,386	58	117,735,742
Jun-10	127,582,818	37.7	26.8	30	0	352	669	1,788,898	60	122,431,817
Jul-10	140,727,870	6.7	100.6	31	0	336	680	1,844,411	61	137,919,395
Aug-10	139,365,541	9.7	79.2	31	0	336	683	1,899,923	61	134,137,321
Sep-10	119,162,847	122.7	16.7	30	1	336	677	1,955,436	60	120,094,813
Oct-10	117,558,713	279.6	0	31	1	320	670	2,010,948	60	118,513,995
Nov-10	122,844,772	337.9	0	30	1	336	668	2,066,461	60	119,289,520
Dec-10	131,431,074	719.4	0	31	0	368	667	2,121,974	60	133,394,084
Jan-11	136,150,617	770	0	31	0	336	664	2,214,485	52	132,196,514
Feb-11	122,763,331	640.8	0	28	0	304	666	2,306,996	52	121,463,987
Mar-11	131,243,785	605.3	0	31	1	368	671	2,399,507	52	131,143,248
Apr-11	114,767,691	298.7	0	30	1	320	680	2,492,018	53	119,172,642
May-11	114,321,529	148.7	13.2	31	1	336	686	2,584,529	53	122,407,362
Jun-11	124,731,712	48.5	21.6	30	0	352	697	2,677,040	54	125,211,439
Jul-11	144,387,088	0.8	128.2	31	0	320	708	2,769,551	55	144,668,777
Aug-11	137,940,609	6.9	54.3	31	0	352	708	2,862,062	55	133,516,498
Sep-11	121,929,648	88.9	17.2	30	1	336	701	2,954,573	54	121,579,493
Oct-11	120,057,900	279.9	0	31	1	320	694	3,047,084	54	120,392,363
Nov-11	123,311,494	382.4	0	30	1	352	690	3,139,595	54	123,383,757
Dec-11	127,833,866	574.8	0	31	0	336	690	3,232,106	54	128,423,577
Jan-12	134,599,030	657.3	0	31	0	336	684	3,197,306	48	130,430,556
Feb-12	124,673,922	573	0	29	0	320	683	3,162,505	48	123,761,117
Mar-12	124,843,815	370.1	0	31	1	352	681	3,127,705	48	124,117,014
Apr-12	118,034,723	365.3	0	30	1	320	683	3,092,904	48	119,695,870
May-12	123,884,608	103.8	18.2	31	1	352	687	3,058,104	49	123,350,265
Jun-12	130,856,826	42.1	61.2	30	0	336	692	3,023,303	49	129,687,832
Jul-12	145,238,063	0	116.4	31	0	336	694	2,988,503	49	141,765,381
Aug-12	136,328,817	19.4	58.1	31	0	352	690	2,953,702	49	131,762,250
Sep-12	118,489,635	125.4	16.4	30	1	304	682	2,918,902	48	116,594,768
Oct-12	120,430,908	279.2	0	31	1	352	682	2,884,101	48	123,458,118
Nov-12	124,178,017	483.6	0	30	1	352	687	2,849,301	49	127,461,675
Dec-12	125,032,972	565.5	0	31	0	304	694	2,814,500	49	128,689,532

Cambridge and North Dumfries Hydro Inc.  
EB-2013-0116  
Exhibit 3  
Appendix 3-1  
Page 5 of 5  
Filed: October 1, 2013

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Peak Hours	Employment Kitchener- Waterloo-Barrie (000's)	CDM Activity	Unemployment Kitchener- Waterloo-Barrie (000's)	Predicted Purchases
Jan-13		746.9	0.0	31	0	352	694	2,843,140	49	137,553,740
Feb-13		649.6	0.0	28	0	304	694	2,871,781	49	125,695,752
Mar-13		572.6	0.0	31	1	320	694	2,900,421	49	128,721,147
Apr-13		346.4	0.6	30	1	352	694	2,929,061	49	125,645,096
May-13		182.6	9.4	31	1	352	694	2,957,701	49	125,185,605
Jun-13		48.3	47.1	30	0	320	694	2,986,341	49	125,990,532
Jul-13		13.2	79.8	31	0	352	694	3,014,981	49	136,349,433
Aug-13		22.3	56.7	31	0	336	694	3,043,621	49	130,237,821
Sep-13		96.2	17.2	30	1	320	694	3,072,262	49	119,418,116
Oct-13		290.2	1.3	31	1	352	694	3,100,902	49	125,278,694
Nov-13		442.4	0.0	30	1	336	694	3,129,542	49	125,005,295
Dec-13		645.6	0.0	31	0	320	694	3,158,182	49	130,534,230
Jan-14		746.9	0.0	31	0	352	694	3,127,637	49	136,245,603
Feb-14		649.6	0.0	28	0	304	694	3,097,092	49	124,659,752
Mar-14		572.6	0.0	31	1	336	694	3,066,548	49	129,641,960
Apr-14		346.4	0.6	30	1	320	694	3,036,003	49	121,784,015
May-14		182.6	9.4	31	1	336	694	3,005,458	49	123,281,337
Jun-14		48.3	47.1	30	0	336	694	2,974,913	49	127,727,755
Jul-14		13.2	79.8	31	0	352	694	2,944,369	49	136,674,116
Aug-14		22.3	56.7	31	0	320	694	2,913,824	49	129,149,964
Sep-14		96.2	17.2	30	1	336	694	2,883,279	49	121,971,749
Oct-14		290.2	1.3	31	1	352	694	2,852,734	49	126,419,787
Nov-14		442.4	0.0	30	1	304	694	2,822,189	49	123,049,171
Dec-14		645.6	0.0	31	0	336	694	2,791,645	49	133,904,273

1

## **APPENDIX 3-2**

2

### **Load Forecast Model**

**Cambridge and North Dumfries Hydro Inc.**

**File Number:** ..

**Exhibit:**

**Appendix:**

**Sheet:**

**Filed:**

EB-2013-0116

3

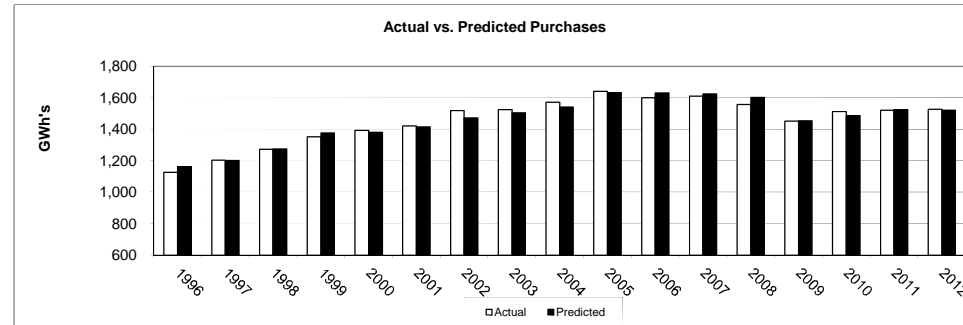
3-2

Sheet 1 - Graph

October 1, 2013

**Cambridge and North Dumfries Hydro Inc. Total Sytem Purchases**

	Actual	Predicted
1996	1,127	1,162
1997	1,203	1,200
1998	1,273	1,274
1999	1,351	1,376
2000	1,392	1,379
2001	1,421	1,415
2002	1,519	1,472
2003	1,524	1,504
2004	1,570	1,541
2005	1,641	1,633
2006	1,599	1,631
2007	1,609	1,623
2008	1,558	1,602
2009	1,450	1,453
2010	1,513	1,486
2011	1,519	1,524
2012	1,527	1,521



MWh	Actual Purchases	Predicted	% Difference
1996	1,127	1,162	3.10%
1997	1,203	1,200	-0.19%
1998	1,273	1,274	0.12%
1999	1,351	1,376	1.88%
2000	1,392	1,379	-0.92%
2001	1,421	1,415	-0.39%
2002	1,519	1,472	-3.09%
2003	1,524	1,504	-1.32%
2004	1,570	1,541	-1.87%
2005	1,641	1,633	-0.50%
2006	1,599	1,631	1.95%
2007	1,609	1,623	0.88%
2008	1,558	1,602	2.86%
2009 (W N)	1,450	1,453	
2010 (W N)	1,513	1,486	

Cambridge and North Dumfries Hydro Inc. Total System Purchases

Table 3-1: Summary of Load and Customer/Connection Forecast						
Year	Billed (GWh)	Growth (GWh)	Percent Change	Customer/Connection	Growth	Percent Change (%)
<b>Billed Energy (GWh) and Customer Count / Connections</b>						
2010 Board Approved	1,492.4			63,776		
2001 Actual	1,359.9			42,332		
2002 Actual	1,416.7	56.7	4.3%	42,924	592	1.4%
2003 Actual	1,486.3	67.6	4.8%	55,665	12,742	29.7%
2004 Actual	1,528.3	42.0	2.8%	57,119	1,454	2.6%
2005 Actual	1,599.4	71.1	4.7%	58,148	1,029	1.8%
2006 Actual	1,561.1	(38.3)	(2.4%)	59,640	1,492	2.6%
2007 Actual	1,566.0	5.5	0.4%	60,090	1,051	1.8%
2008 Actual	1,518.6	(48.0)	(3.1%)	61,413	723	1.2%
2009 Actual	1,455.1	(63.5)	(4.2%)	62,159	746	1.2%
2010 Actual	1,509.0	53.9	3.7%	63,360	1,201	1.9%
2011 Actual	1,511.6	2.6	0.2%	64,305	945	1.5%
2012 Actual	1,524.9	13.3	0.9%	64,926	621	1.0%
2013 Bridge	1,516.3	(8.6)	(0.6%)	66,010	1,085	1.7%
2014 Test	1,511.0	(5.3)	(0.3%)	67,115	1,105	1.7%

Table 3-2: Billed Energy and Number of Customers / Connections by Rate Class										
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
Billed Energy (GWh)										
2010 Board Approved	389.8	168.2	494.5	216.0	159.3	0.0	9.5	1.9	53.3	1,492.4
2001 Actual	351.4	157.1	412.6	236.4	202.4	0.0	0.0	0.0	0.0	1,359.9
2002 Actual	336.2	154.3	441.9	247.7	238.6	0.0	0.0	0.0	0.0	1,418.7
2003 Actual	365.8	163.2	448.8	263.3	234.7	0.0	9.4	0.0	0.0	1,486.3
2004 Actual	366.5	165.7	471.5	289.9	245.2	0.0	9.5	0.0	0.0	1,528.3
2005 Actual	394.0	172.9	477.3	288.9	256.3	0.0	9.5	0.4	0.0	1,599.4
2006 Actual	381.6	166.9	457.2	248.3	252.1	42.8	9.3	3.0	0.0	1,561.1
2007 Actual	392.6	169.6	471.1	226.8	252.1	42.8	9.4	2.2	0.0	1,566.6
2008 Actual	387.3	170.3	456.0	220.2	230.3	42.9	8.4	2.1	0.0	1,518.6
2009 Actual	379.6	160.3	435.9	193.0	180.7	43.2	9.5	2.1	54.3	1,455.1
2010 Actual	386.3	163.5	426.5	220.9	196.6	43.8	9.5	2.1	49.8	1,509.0
2011 Actual	386.6	158.3	437.2	240.8	169.2	46.8	9.5	2.1	51.3	1,511.6
2012 Actual	399.6	158.6	437.4	226.2	201.2	45.5	9.6	2.0	44.8	1,524.9
2013 Bridge	396.7	155.8	434.9	223.6	204.7	45.8	9.6	1.9	44.1	1,516.3
2014 Test	395.3	153.5	431.7	221.3	208.3	46.2	9.6	1.8	43.4	1,511.0
Number of Customers/Connections										
2010 Board Approved	45,217	4,582	724	25	2	0	12,717	507	2	63,776
2001 Actual	37,492	4,247	598	25	3	0	0	0	0	42,332
2002 Actual	38,234	4,065	598	25	3	0	0	0	0	42,924
2003 Actual	39,316	4,145	619	26	3	0	11,557	0	0	55,665
2004 Actual	40,535	4,193	630	27	3	0	11,732	0	0	57,119
2005 Actual	41,300	4,289	634	29	3	0	11,895	0	0	58,148
2006 Actual	42,040	4,352	647	30	3	1	12,052	516	0	59,640
2007 Actual	42,888	4,376	672	29	2	1	12,237	486	0	60,090
2008 Actual	43,431	4,449	680	28	2	1	12,366	457	0	61,413
2009 Actual	43,937	4,541	693	27	2	1	12,460	498	2	62,159
2010 Actual	44,921	4,604	708	26	2	1	12,559	538	2	63,360
2011 Actual	45,781	4,630	724	28	2	1	12,624	515	2	64,305
2012 Actual	46,284	4,661	737	27	2	1	12,722	491	2	64,926
2013 Bridge	47,178	4,701	754	27	2	1	12,859	486	2	66,010
2014 Test	48,091	4,740	773	27	2	1	12,997	482	2	67,115

Table 3-3: Annual Usage per Customer/Connection by Rate Class									
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Energy Usage per Customer/Connection (kWh per customer/connection)									
2010 Board Approved	8,621	36,714	683,007	8,638,618	79,652,551		745	3,661	#####
2001 Actual	9,374	36,999	728,644	9,454,116	80,954,382				
2002 Actual	8,793	37,948	739,290	10,112,039	79,522,758				
2003 Actual	9,304	36,385	726,413	10,127,652	78,223,773		815		
2004 Actual	9,041	39,520	748,440	9,998,629	81,724,293		811		
2005 Actual	9,541	40,306	753,500	10,135,115	85,447,130		802		
2006 Actual	9,077	38,347	706,686	8,415,274	100,840,726	42,789,994	772	5,809	
2007 Actual	9,153	38,758	701,008	7,959,260	126,048,174	42,771,843	772	4,529	
2008 Actual	8,918	38,270	671,153	7,864,402	115,148,878	42,936,833	764	4,622	
2009 Actual	8,638	35,305	624,043	7,283,120	90,335,539	43,206,778	760	4,288	#####
2010 Actual	8,822	35,508	602,421	8,496,833	98,278,640	43,796,746	758	3,963	#####
2011 Actual	8,662	34,199	604,228	8,598,828	84,597,900	46,753,741	754	4,019	#####
2012 Actual	8,633	34,026	593,892	8,378,867	100,594,753	45,452,655	758	4,109	#####
2013 Bridge	8,409	33,138	575,390	8,225,366	102,344,845	45,803,036	750	3,869	#####
2014 Test	8,219	32,384	558,740	8,083,705	104,128,487	46,157,494	742	3,643	#####
Annual Growth Rate in Usage per Customer/Connection									
2009 Board App. Vs. 2009	(2.3%)	3.4%	13.4%	1.7%	(19.0%)		(1.8%)	(7.6%)	6.9%
2001 Actual									
2002 Actual	(6.2%)	2.6%	1.5%	7.0%	(1.8%)				
2003 Actual	5.8%	3.8%	(1.7%)	0.2%	(1.6%)				
2004 Actual	(2.8%)	0.3%	3.0%	(1.3%)	4.5%		(0.4%)		
2005 Actual	5.5%	2.0%	0.7%	1.4%	4.6%		(1.1%)		
2006 Actual	(4.9%)	(4.9%)	(6.2%)	(17.0%)	18.0%		(3.8%)		
2007 Actual	0.8%	1.1%	(0.8%)	(5.4%)	25.0%	0.0%	(0.0%)	(22.0%)	
2008 Actual	(2.6%)	(1.3%)	(4.3%)	(1.2%)	(8.6%)	0.4%	(1.0%)	2.1%	
2009 Actual	(3.1%)	(7.7%)	(7.0%)	(7.4%)	(21.5%)	0.6%	(0.5%)	(7.2%)	
2010 Actual	2.1%	0.6%	(3.5%)	16.7%	8.8%	1.4%	(0.3%)	(7.6%)	(8.2%)
2011 Actual	(1.8%)	(3.7%)	0.3%	1.2%	(13.9%)	6.8%	(0.5%)	1.4%	2.9%
2012 Actual	(0.3%)	(0.5%)	(1.7%)	(2.6%)	16.9%	(2.8%)	0.5%	2.2%	(12.6%)
2013 Bridge	(2.6%)	(2.6%)	(3.1%)	(1.8%)	1.7%	0.8%	(1.0%)	(5.8%)	(1.5%)
2014 Test	(2.3%)	(2.3%)	(2.9%)	(1.7%)	1.7%	0.8%	(1.0%)	(5.8%)	(1.5%)

Table 3-4: 2011 Final Results, 2012 Estimated Results				
CHDHI 4 Year 2011 to 2014 target				
2011	2012	2013	2014	Total
0.0%	5.1%	5.1%	5.1%	15.2%
MWh savings from 2011 programs with persistent impact				
12,883,912	12,844,886	12,842,798	12,784,850	51,356,446
MWh savings from 2012 programs with persistent impact				
0	3,720,677	3,720,677	3,720,677	11,161,738
2006	2007	2008	2009	
3,653,792	6,210,683	8,702,392	14,593,270	
2010	2011	2012	2013	2014
21,799,853	19,795,633	19,505,272	19,444,650	19,030,184

Table 3-5: Statistical Results	
Statistic	Value
R Square	93.1%
Adjusted R Square	92.7%
F Test	321.6
MAPE - Annual	1.3%
MAPE - Monthly	2.3%
t-stats by Coefficient	
Heating Degree Days	13.8
Cooling Degree Days	12.5
Number of Days in Month	4.4
Spring Fall Flag	(2.1)
Number of Peak Hours	6.4
Employment Kitchener-	41.8
CDM Activity	(6.7)
Unemployment Kitchener-	(6.7)
Intercept	(7.9)

3,653,792	3,653,792	3,653,792	0
6,210,683	6,210,683	6,210,683	0
8,702,392	8,702,392	8,702,392	0
14,593,270	14,593,270	14,593,270	0
21,799,853	21,799,853	21,799,853	0
19,795,633	12,883,912	32,679,545	32,679,545
19,505,272	12,844,886	3,720,577	36,070,836
19,444,650	12,842,708	3,720,577	36,007,935
19,030,184	12,764,930	3,720,577	35,515,691
			195,233,997

Table 3-6: Total System Purchases			
Year	Actual	Predicted	% Difference
<b>Purchased Energy (GWh)</b>			
1996	1,126.6	1,161.7	3.1%
1997	1,202.6	1,200.5	(0.2%)
1998	1,272.6	1,274.0	0.1%
1999	1,350.8	1,376.2	1.9%
2000	1,392.2	1,379.4	(0.9%)
2001	1,421.0	1,415.4	(0.4%)
2002	1,519.1	1,472.2	(3.1%)
2003	1,523.7	1,503.5	(1.3%)
2004	1,570.4	1,541.0	(1.9%)
2005	1,641.0	1,632.9	(0.5%)
2006	1,599.4	1,630.6	2.0%
2007	1,609.2	1,623.4	0.9%
2008	1,557.5	1,602.1	2.9%
2009	1,450.4	1,453.1	0.2%
2010	1,513.2	1,485.6	(1.6%)
2011	1,519.4	1,523.6	0.3%
2012	1,526.6	1,520.8	(0.4%)
<b>2013 Weather Normal</b>		<b>1,535.6</b>	
<b>2014 Weather Normal</b>		<b>1,534.5</b>	
<b>2014 Weather Normal - 10 year average</b>		<b>1,533.2</b>	
<b>2014 Weather Normal - 20 year trend</b>		<b>1,531.5</b>	

3.1%
(0.2%)
0.1%
1.9%
(0.9%)
(0.4%)
(3.1%)
(1.3%)
(1.9%)
(0.5%)
2.0%
0.9%
2.9%
0.2%
(1.6%)
0.3%
(0.4%)

Table 3-7: Historical Customer/Connection Data										
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
<b>Number of Customers/Connections</b>										
2001	37,432	4,247	566	25	3	0	0	0	0	42,332
2002	38,234	4,065	598	25	3	0	0	0	0	42,924
2003	39,316	4,145	619	26	3	0	11,557	0	0	55,665
2004	40,535	4,193	630	27	3	0	11,732	0	0	57,119
2005	41,300	4,289	634	29	3	0	11,895	0	0	58,148
2006	42,040	4,352	647	30	3	1	12,052	516	0	59,640
2007	42,888	4,376	672	29	2	1	12,237	486	0	60,690
2008	43,431	4,449	680	28	2	1	12,366	457	0	61,413
2009	43,937	4,541	693	27	2	1	12,460	498	2	62,159
2010	44,921	4,604	708	26	2	1	12,559	536	2	63,360
2011	45,781	4,630	724	28	2	1	12,624	515	2	64,305
2012	46,284	4,661	737	27	2	1	12,722	491	2	64,926

Table 3-8: Growth Rate in Customer/Connections									
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
<b>Growth Rate in Customers/Connections</b>									
2001									
2002	2.0%	(4.3%)	5.6%	(2.0%)	20.0%				
2003	2.8%	2.0%	3.6%	6.1%	0.0%				
2004	3.1%	1.2%	1.7%	3.8%	0.0%		1.5%		
2005	1.9%	2.3%	0.6%	5.6%	0.0%		1.4%		
2006	1.8%	1.5%	2.1%	3.5%	(16.7%)		1.3%		
2007	2.0%	0.6%	3.5%	(3.4%)	(20.0%)	0.0%	1.5%	(5.6%)	
2008	1.3%	1.7%	1.1%	(1.8%)	0.0%	0.0%	1.0%	(6.0%)	
2009	1.2%	2.1%	2.0%	(5.4%)	0.0%	0.0%	0.8%	9.0%	
2010	2.2%	1.4%	2.2%	(1.9%)	0.0%	0.0%	0.8%	7.9%	0.0%
2011	1.9%	0.6%	2.2%	7.7%	0.0%	0.0%	0.5%	(4.3%)	0.0%
2012	1.1%	0.7%	1.8%	(3.6%)	0.0%	0.0%	0.8%	(4.7%)	0.0%
<b>Geometric Mean</b>	<b>1.6%</b>	<b>0.8%</b>	<b>2.4%</b>	<b>0.7%</b>	<b>(2.0%)</b>	<b>0.0%</b>	<b>1.1%</b>	<b>(0.8%)</b>	<b>0.0%</b>

(4.3%)	5.6%	(2.0%)	20.0%				
2.0%	3.6%	6.1%	0.0%				
1.2%	1.7%	3.8%	0.0%		1.5%		
2.3%	0.6%	5.6%	0.0%		1.4%		
1.5%	2.1%	3.5%	(16.7%)		1.3%		
0.6%	3.9%	(3.4%)	(20.0%)	0.0%	1.5%	(5.6%)	
1.7%	1.1%	(1.8%)	0.0%	0.0%	1.0%	(6.0%)	
2.0%	2.1%	2.0%	(5.4%)	0.0%	0.0%	0.8%	9.0%
2.8%	1.4%	2.2%	(1.9%)	0.0%	0.0%	0.8%	7.9%
3.1%	0.6%	2.2%	7.7%	0.0%	0.0%	0.5%	(4.3%)
1.9%	0.7%	1.8%	(3.6%)	0.0%	0.0%	0.8%	(4.7%)
1.8%							
2.0%							
1.3%							
1.2%							
2.2%							
1.9%							
1.1%							



Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
Forecast Number of Customers/Connections										
2013	47,178	4,701	754	27	2	1	12,859	486	2	66,010
2014	48,091	4,740	773	27	2	1	12,997	482	2	67,115

66,010  
67,115

Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Annual kWh Usage Per Customer/Connection									
2001	9,374	36,999	726,644	9,454,116	80,954,382	0	0	0	0
2002	8,793	37,948	739,290	10,112,039	79,522,756	0	0	0	0
2003	9,304	39,385	726,413	10,127,652	78,223,773	0	815	0	0
2004	9,041	39,520	748,440	9,996,629	81,724,293	0	811	0	0
2005	9,541	40,306	753,500	10,135,115	85,447,130	0	802	0	0
2006	9,077	38,347	766,086	8,415,274	100,840,728	42,759,994	772	8,809	0
2007	9,153	38,758	701,008	7,959,260	126,046,174	42,771,843	772	4,529	0
2008	8,918	38,270	671,153	7,864,402	115,148,878	42,936,833	764	4,622	0
2009	8,639	35,305	624,043	7,283,120	90,339,539	43,206,778	760	4,288	#####
2010	8,822	35,508	602,421	8,496,833	98,278,640	43,796,746	768	3,863	#####
2011	8,662	34,199	604,228	8,598,828	84,597,900	46,753,741	754	4,019	#####
2012	8,633	34,026	593,892	8,378,887	100,594,753	45,452,655	758	4,109	#####

Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Growth Rate in Customer/Connection									
2001									
2002	(6.2%)	2.6%	1.5%	7.0%	(1.8%)				
2003	5.8%	3.9%	(1.7%)	0.2%	(1.6%)				
2004	(2.8%)	0.3%	3.0%	(1.3%)	4.5%		(0.4%)		
2005	5.5%	2.0%	0.7%	1.4%	4.6%		(1.1%)		
2006	(4.9%)	(4.9%)	(6.2%)	(17.0%)	18.0%		(3.8%)		
2007	0.8%	1.1%	(0.9%)	(5.4%)	25.0%	0.0%	(0.0%)	(22.0%)	
2008	(2.6%)	(1.3%)	(4.3%)	(1.2%)	(8.6%)	0.4%	(1.0%)	2.1%	
2009	(3.1%)	(7.7%)	(7.0%)	(7.4%)	(21.5%)	0.6%	(0.5%)	(7.2%)	
2010	2.1%	0.6%	(3.5%)	16.7%	8.8%	1.4%	(0.3%)	(7.6%)	(8.2%)
2011	(1.8%)	(0.7%)	0.3%	1.2%	(13.9%)	6.8%	(0.5%)	1.4%	2.9%
2012	(0.3%)	(0.5%)	(1.7%)	(2.6%)	18.9%	(2.8%)	0.5%	2.2%	(12.6%)
Geometric Mean	(0.7%)	(0.8%)	(1.8%)	(1.1%)	2.0%	1.0%	(0.8%)	(5.6%)	(6.2%)

1.5%	7.0%	(1.8%)				
(1.7%)	0.2%	(1.6%)				
3.0%	(1.3%)	4.5%		(0.4%)		
0.7%	1.4%	4.6%		(1.1%)		
(6.2%)	(17.0%)	18.0%		(3.8%)		
(0.8%)	(5.4%)	25.0%	0.0%	(0.0%)	(22.0%)	
(4.3%)	(1.2%)	(8.6%)	0.4%	(1.0%)	2.1%	
(6.2%)	2.6%	(7.0%)	(7.4%)	21.5%	0.6%	(0.5%)
5.8%	3.9%	(3.5%)	16.7%	8.8%	1.4%	(0.3%)
(2.8%)	0.3%	3.0%	(1.3%)	4.5%	0.6%	(0.5%)
5.5%	2.0%	(1.7%)	(2.6%)	18.9%	(2.8%)	0.5%
(4.9%)	(4.9%)					
0.8%	1.1%					
(2.6%)	(1.3%)					
(3.1%)	(7.7%)					
2.1%	0.6%					
(1.8%)	(0.7%)					
(0.3%)	(0.5%)					

Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor
Forecast Annual kWh Usage per Customer/Connection									
2013	8,569	33,768	582,953	8,287,423	102,600,915	45,917,637	752	3,878	#####
2014	8,505	33,512	572,216	8,196,959	104,647,086	46,387,375	746	3,661	#####

Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
NON-normalized Weather Billed Energy Forecast (GWh)										
2013 (Not Normalized)	404.3	158.7	439.7	225.3	205.2	45.9	9.7	1.9	44.1	1,534.9
2014 (Not Normalized)	409.0	158.9	442.1	224.4	209.3	46.4	9.7	1.8	43.4	1,545.0

Table 3-14: Weather Sensitivity by Rate Class									
Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	
Weather Sensitivity	74%	74%	48%	23%	0%	0%	0%	0%	0%

Table 3-15: Schedule to Achieve 4 Year kWh CDM Target					
4 Year 2011 to 2014 kWh target					
	2011	2012	2013	2014	Total
2011 Programs	17.0%	17.4%	17.4%	17.3%	89.7%
2012 Programs		5.1%	5.1%	5.1%	15.2%
2013 Programs			5.1%	5.1%	10.1%
2014 Programs				5.1%	5.1%
	17.0%	22.5%	27.5%	32.5%	100.0%
2011 Programs	12,883,912	12,844,986	12,842,708	12,764,890	51,336,536
2012 Programs		3,720,577	3,720,577	3,720,577	11,161,732
2013 Programs			3,720,577	3,720,577	7,441,155
2014 Programs				3,720,577	3,720,577
	12,883,912	16,565,563	20,283,863	23,906,062	73,660,000

12,883,912 12,844,986 ##### 12,764,890  
0 3,720,577 3,720,577 3,720,577  
0 0 3,720,577 3,720,577  
0 0 0  
12,883,912 16,565,563 ##### 23,926,662

Table 3-16: 2014 Expected Savings for LRAM Variance Account									
Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
kWh	6,517,723	2,531,426	7,044,276	3,576,347	3,335,857	739,173	154,526	28,135	23,926,662
kWh where applicable			20,018	8,507	6,910	1,276	415	0	37,126

Table 3-17: Alignment of Non-normal to Weather Normal Forecast										
Year	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributor	Total
2013 Non-Normalized Bridge	404.3	158.7	439.7	225.3	205.2	45.9	9.7	1.9	44.1	1,534.9
2014 Non-Normalized Test	409.0	158.9	442.1	224.4	209.3	46.4	9.7	1.8	43.4	1,545.0
Weather Adjustment (GWh)										
2013	(6.5)	(2.6)	(4.6)	(1.1)	0.0	0.0	0.0	0.0	0.0	(14.8)
2014	(11.7)	(4.6)	(8.2)	(2.0)	0.0	0.0	0.0	0.0	0.0	(26.5)
CDM Adjustment (GWh)										
2013	(1.0)	(0.4)	(1.1)	(0.6)	(0.5)	(0.1)	(0.0)	(0.0)	0.0	(3.7)
2014	(2.0)	(0.8)	(2.2)	(1.1)	(1.0)	(0.2)	(0.0)	(0.0)	0.0	(7.4)
Weather Normalized Billed Energy Forecast (GWh)										
2013 Normalized Bridge	396.7	155.8	434.0	223.6	204.7	45.8	9.6	1.9	44.1	1,516.3
2014 Normalized Test	395.3	153.5	431.7	221.3	208.3	46.2	9.6	1.8	43.4	1,511.0

Table 3-18: Historical Annual kWh per Applicable Rate Class							
Year	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Embedded Distributor	Total
Billed Annual kWh							
2003	1,177,153	533,526	429,237	0	26,537	0	2,166,453
2004	1,242,905	543,249	468,620	0	24,497	0	2,279,271
2005	1,274,085	619,353	480,781	0	24,664	0	2,398,883
2006	1,275,604	618,222	472,853	73,441	24,008	0	2,469,128
2007	1,274,858	571,091	481,509	72,913	24,182	0	2,424,553
2008	1,244,174	554,036	446,448	72,485	24,090	0	2,341,233
2009	1,337,289	530,195	411,896	73,038	26,451	107,591	2,486,460
2010	1,294,863	570,060	421,436	75,929	26,614	101,371	2,490,272
2011	1,331,831	582,383	431,699	81,848	26,604	107,151	2,561,516
2012	1,360,651	527,847	483,777	81,651	26,876	100,035	2,570,938

2,166,453

2,279,271

2,398,883

2,469,128

2,424,553

2,341,233

2,486,460

2,490,272

2,561,516

2,570,938

Year	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Embedded Distributor
Ratio of kW to kWh						
2003	0.2617%	0.2026%	0.1829%		0.2819%	
2004	0.2636%	0.2013%	0.1811%		0.2574%	
2005	0.2669%	0.2144%	0.1876%		0.2559%	
2006	0.2799%	0.2490%	0.1876%	0.1718%	0.2581%	
2007	0.2706%	0.2518%	0.1910%	0.1705%	0.2561%	
2008	0.2728%	0.2515%	0.1930%	0.1688%	0.2550%	
2009	0.3062%	0.2747%	0.2280%	0.1690%	0.2753%	0.1982%
2010	0.3036%	0.2580%	0.2144%	0.1734%	0.2796%	0.2035%
2011	0.3047%	0.2419%	0.2551%	0.1751%	0.2795%	0.2090%
2012	0.3089%	0.2334%	0.2405%	0.1795%	0.2786%	0.2233%
Average 2003 to 2012	0.2842%	0.2379%	0.2072%	0.1726%	0.2684%	0.2085%

Year	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Embedded Distributor	Total
Predicted Billed kW							
2013 Normalized Bridge	1,233,396	531,983	424,120	79,053	25,892	91,971	2,386,415
2014 Normalized Test	1,226,670	526,492	431,512	79,664	25,898	90,564	2,380,801

2,386,415  
2,380,801

	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Weather Normalized Bridge	2014 Weather Normalized Test
<b>ACTUAL AND PREDICTED KWH PURCHASES</b>						
Actual kWh Purchases		#####	#####	#####		
Predicted kWh Purchases		#####	#####	#####		#####
% Difference of actual and predicted purchases		(1.8%)	0.3%	(0.4%)		
CDM Purchase Adjustment					(3,837,773)	(7,675,545)
Predicted kWh Purchases after CDM					#####	#####
<b>BILLING DETERMINANTS BY CLASS</b>						
Residential						
Customers	45,217	44,921	45,781	46,284	47,178	48,091
kWh	389,793,819	396,266,836	#####	399,567,578	396,735,306	395,264,067
General Service < 50 kW						
Customers	4,562	4,604	4,630	4,661	4,701	4,740
kWh	168,223,630	163,479,893	#####	158,696,034	155,766,602	153,517,084
General Service > 50 to 999 kW						
Customers	724	708	724	737	754	773
kWh	494,498,789	426,513,756	#####	437,401,279	434,024,250	431,657,534
kW	1,312,686	1,294,863	1,331,831	1,350,651	1,233,396	1,226,670
General Service > 1000 to 4999						
Customers	25	26	28	27	27	27
kWh	215,965,446	220,917,668	#####	226,229,939	223,644,138	221,335,611
kW	478,860	570,060	582,383	527,947	531,983	526,492
Large User						
Customers	2	2	2	2	2	2
kWh	159,305,102	196,597,281	#####	201,189,506	204,689,690	208,256,074
kW	308,824	421,436	431,699	483,777	424,120	431,512
Direct Market Participant						
Customers	1		1	1	1	1
kWh		43,796,746	46,753,741	45,452,655	45,803,036	46,157,484
kW		75,928	81,848	81,651	79,053	79,664
Street Lights						
Connections	12,717	12,559	12,624	12,722	12,869	12,997
kWh	9,470,257	9,519,206	9,519,486	9,645,171	9,647,105	9,649,328
kW	24,144	26,614	26,604	26,876	25,892	25,898
Unmetered Loads						
Connections	507	538	515	491	486	482
kWh	1,895,931	2,130,242	2,067,611	2,015,390	1,881,677	1,756,869
Embedded Distributor						
Customers	2	2	2	2	2	2
kWh	53,269,200	49,810,828	51,266,485	44,790,760	44,105,574	43,430,869
kW	103,266	101,371	107,151	100,035	91,971	90,564
Total						
Customer/Connections	63,776	63,360	64,305	64,926	66,010	67,115
kWh	#####	#####	#####	#####	#####	#####
kW from applicable classes	2,227,780	2,490,272	2,561,516	2,570,938	2,386,415	2,380,801
	63,776	63,360	64,305	64,926	66,010	67,115
	#####	#####	#####	#####	#####	#####
	2,227,780	2,490,272	2,561,516	2,570,938	2,386,415	2,380,801
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

4581.5

	2001 Actual	2002 Actual	2003 Actual	2004 Actual	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Weather Normal	2014 Weather Normal
Actual kWh Purchases	1,420,977,730	1,519,144,756	1,523,717,530	1,570,405,930	1,640,988,662	1,599,360,044	1,609,193,923	1,557,523,229	1,450,354,846	1,513,165,630	1,519,439,268	1,526,591,336		
Predicted kWh Purchases	1,415,398,232	1,472,169,728	1,503,545,264	1,540,996,225	1,632,861,924	1,630,552,138	1,623,409,148	1,602,109,201	1,453,060,913	1,485,767,545	1,523,559,655	1,520,774,378	1,535,615,464	1,534,509,482
% Difference	-0.4%	-3.1%	-1.3%	-1.9%	-0.5%	2.0%	0.9%	2.9%	0.2%	-1.8%	0.3%	-0.4%		
CDM Purchase Adjustment													(3,837,773)	(7,675,545)
Predicted kWh Purchases after CDM													1,531,777,691	1,526,833,937
Billed kWh	1,359,912,172	1,418,653,288	1,486,259,773	1,528,292,270	1,599,364,167	1,561,102,860	1,566,589,592	1,518,625,683	1,414,463,968	1,472,796,612	1,473,820,232	1,493,125,081	1,485,001,333	1,480,208,547
Est for Waterloo	0	0	0	0	0	0	0	0	40,648,271	36,195,843	37,787,891	31,782,231	30,817,292	30,817,292
Billed kWh incl Est for Waterloo	1,359,912,172	1,418,653,288	1,486,259,773	1,528,292,270	1,599,364,167	1,561,102,860	1,566,589,592	1,518,625,683	1,455,112,239	1,508,992,456	1,511,608,123	1,524,907,313	1,516,297,375	1,511,025,839
By Class														
Residential														
Customers	37,492	38,234	39,316	40,535	41,300	42,040	42,888	43,431	43,937	44,921	45,781	46,284	47,178	48,091
kWh	351,442,095	336,178,776	365,784,244	366,465,998	394,023,308	381,579,969	392,558,966	387,314,732	379,582,714	396,266,835	396,556,720	399,587,578	396,735,305	395,264,057
General Service < 50 kW														
Customers	4,247	4,065	4,145	4,193	4,289	4,352	4,376	4,449	4,541	4,604	4,630	4,661	4,701	4,740
kWh	157,136,324	154,250,738	163,240,287	165,708,926	172,872,183	166,886,950	169,606,274	170,263,597	160,300,294	163,479,893	158,322,069	158,595,034	155,766,602	153,517,084
General Service > 50 to 999 kW														
Customers	566	598	619	630	634	647	672	680	693	708	724	737	754	773
kWh	412,594,902	441,910,546	449,831,308	471,517,479	477,342,540	457,225,683	471,077,396	456,048,382	432,461,967	426,513,756	437,159,036	437,401,279	434,024,250	431,657,534
kW	0	0	1,177,153	1,242,905	1,274,085	1,279,604	1,274,858	1,244,174	1,337,289	1,294,863	1,331,831	1,350,651	1,233,396	1,226,670
General Service > 1000 to 4999 kW														
Customers	25	25	26	27	29	30	29	28	27	26	28	27	27	27
kWh	236,352,897	247,744,953	263,318,947	269,908,983	288,850,782	248,250,591	226,838,923	220,203,261	193,002,685	220,917,668	240,767,175	226,229,939	223,644,135	221,335,611
kW	0	0	533,526	543,249	619,353	618,222	571,091	554,036	530,195	570,060	582,383	527,947	531,983	526,492
Large User														
Customers	3	3	3	3	3	3	2	2	2	2	2	2	2	2
kWh	202,385,954	238,568,275	234,671,319	245,172,880	256,341,390	2								

									Cambridge and North Dumfries Hydro Inc.					
									File Number:	EB-2013-0116				
									Exhibit:	3				
									Appendix:	3-2				
									Sheet:	Sheet 4.1 - Purchased Power Model				
									Filed:	October 1, 2013				

		Heating	Cooling Degree	Number of	Spring Fall	Number of	Employment		Unemployment	Predicted		%	%	
	Purchased kWh	Degree Days	Days	Days in	Flag	Peak Hours	Kitchener- Waterloo-Barrie (000's)	CDM Activity	Kitchener- Waterloo-Barrie (000's)	Purchases	Variances (kWh)	Variance	Variance	
				Month									(Abs)	
Dec-99	117,802,224	623.7	0	31	0	336	548	0	32	119,560,476	1,758,252	1.5%	1.5%	
Jan-00	124,909,564	773	0	31	0	320	543	0	31	120,185,622	-4,723,942	-3.8%	3.8%	
Feb-00	116,693,943	643.8	0	28	0	336	537	0	31	113,412,985	-3,280,958	-2.8%	2.8%	
Mar-00	116,756,801	446.9	0	31	1	368	535	0	31	115,163,251	-1,593,550	-1.4%	1.4%	
Apr-00	106,597,677	358.3	0	30	1	304	539	0	31	105,712,620	-885,057	-0.8%	0.8%	
May-00	111,500,528	152.4	18.7	31	1	352	548	0	31	113,396,575	1,896,047	1.7%	1.7%	
Jun-00	115,580,544	41.1	35.4	30	0	352	554	0	32	115,296,657	-283,887	-0.2%	0.2%	
Jul-00	113,052,205	18.6	44.8	31	0	320	557	0	32	115,429,506	2,377,301	2.1%	2.1%	
Aug-00	120,498,144	29.7	46.3	31	0	352	557	0	32	119,171,411	-1,326,733	-1.1%	1.1%	
Sep-00	111,937,721	134	23.8	30	1	320	554	0	32	110,134,771	-1,802,950	-1.6%	1.6%	
Oct-00	112,766,680	251.6	0	31	1	336	553	0	32	111,185,667	-1,581,013	-1.4%	1.4%	
Nov-00	117,889,023	470.9	0	30	1	352	557	0	32	116,892,912	-996,111	-0.8%	0.8%	
Dec-00	123,990,762	826.5	0	31	0	304	561	0	32	123,397,331	-593,431	-0.5%	0.5%	
Jan-01	127,737,949	715	0	31	0	352	561	0	33	125,701,742	-2,036,207	-1.6%	1.6%	
Feb-01	114,030,713	620.2	0	29	0	320	556	0	32	116,212,849	2,182,136	1.9%	1.9%	
Mar-01	122,670,396	618.7	0	31	1	352	552	0	32	120,503,210	-2,167,186	-1.8%	1.8%	
Apr-01	108,161,574	324.6	0	30	1	320	556	0	32	109,997,483	1,835,909	1.7%	1.7%	
May-01	110,929,304	140.3	7.7	31	1	352	562	0	33	113,561,318	2,632,014	2.4%	2.4%	
Jun-01	120,266,540	47	62.4	30	0	336	566	0	33	121,280,332	1,013,792	0.8%	0.8%	
Jul-01	119,101,349	22.3	65.7	31	0	336	566	0	33	122,810,617	3,709,268	3.1%	3.1%	
Aug-01	132,583,402	2.3	94.2	31	0	352	563	0	33	128,910,488	-3,672,914	-2.8%	2.8%	
Sep-01	113,406,955	118.8	19.2	30	1	304	560	0	33	108,293,058	-5,113,897	-4.5%	4.5%	
Oct-01	118,039,640	276.7	0	31	1	352	560	0	33	114,627,483	-3,412,157	-2.9%	2.9%	
Nov-01	117,162,207	370.8	0	30	1	352	561	0	33	115,389,838	-1,772,369	-1.5%	1.5%	
Dec-01	116,887,701	563.3	0	31	0	304	564	0	33	118,109,814	1,222,113	1.0%	1.0%	
Jan-02	128,380,096	625.7	0	31	0	352	565	0	34	124,261,953	-4,118,143	-3.2%	3.2%	
Feb-02	117,791,339	592	0	28	0	320	567	0	34	116,055,525	-1,735,814	-1.5%	1.5%	
Mar-02	125,657,099	581.2	0	31	1	320	569	0	34	119,310,501	-6,346,598	-5.1%	5.1%	
Apr-02	119,793,772	356.2	6.6	30	1	352	573	0	35	118,308,795	-1,484,977	-1.2%	1.2%	
May-02	120,443,400	266.8	5.3	31	1	352	577	0	35	118,429,943	-2,013,457	-1.7%	1.7%	
Jun-02	125,484,770	53.1	54.5	30	0	320	582	0	35	120,875,182	-4,609,588	-3.7%	3.7%	
Jul-02	140,900,710	4.7	129	31	0	352	585	0	35	139,814,116	-1,086,594	-0.8%	0.8%	
Aug-02	136,973,540	11	72.3	31	0	336	587	0	35	127,647,317	-9,326,223	-6.8%	6.8%	
Sep-02	126,481,700	50.2	47	30	1	320	583	0	35	118,219,420	-8,262,280	-6.5%	6.5%	
Oct-02	124,987,330	345.6	6.3	31	1	352	583	0	35	121,569,327	-3,418,003	-2.7%	2.7%	
Nov-02	124,898,770	486.4	0	30	1	336	584	0	35	120,352,242	-4,546,528	-3.6%	3.6%	
Dec-02	127,352,230	675.6	0	31	0	320	592	0	36	127,325,406	-26,824	0.0%	0.0%	
Jan-03	136,012,740	868.4	0	31	0	352	591	0	34	135,136,382	-876,358	-0.6%	0.6%	
Feb-03	124,189,300	755.9	0	28	0	320	588	0	34	124,182,286	-7,014	0.0%	0.0%	
Mar-03	130,304,230	638.7	0	31	1	336	585	0	34	125,733,204	-4,571,026	-3.5%	3.5%	
Apr-03	119,866,540	397.4	0.7	30	1	336	588	0	34	119,760,123	-106,417	-0.1%	0.1%	
May-03	118,911,520	217	0	31	1	336	596	0	35	118,943,271	31,751	0.0%	0.0%	
Jun-03	123,452,030	65.3	25.5	30	0	336	602	0	35	121,554,239	-1,897,791	-1.5%	1.5%	
Jul-03	133,250,360	12.5	50.1	31	0	352	606	0	35	129,162,254	-4,088,106	-3.1%	3.1%	
Aug-03	130,044,510	18.9	72.4	31	0	320	608	0	35	130,652,220	607,710	0.5%	0.5%	
Sep-03	123,893,240	104.1	6	30	1	336	608	0	35	118,366,932	-5,526,308	-4.5%	4.5%	
Oct-03	127,104,740	331.9	0	31	1	352	610	0	35	125,697,020	-1,407,720	-1.1%	1.1%	
Nov-03	126,597,630	434.4	0	30	1	320	609	0	35	122,911,385	-3,686,245	-2.9%	2.9%	
Dec-03	130,090,690	610	0	31	0	336	609	0	35	131,445,948	1,355,258	1.0%	1.0%	
Jan-04	140,542,520	879.2	0	31	0	336	605	0	32	137,353,177	-3,189,343	-2.3%	2.3%	
Feb-04	129,380,670	699.2	0	28	0	320	599	0	32	126,061,183	-3,319,487	-2.6%	2.6%	
Mar-04	134,629,040	540.9	0	31	1	368	595	0	31	130,031,402	-4,597,638	-3.4%	3.4%	
Apr-04	121,654,150	354.1	0	30	1	336	598	0	31	121,541,749	-112,401	-0.1%	0.1%	
May-04	123,911,560	196.2	6.7	31	1	320	606	0	32	120,802,838	-3,108,722	-2.5%	2.5%	

		<u>Heating</u>	<u>Cooling Degree</u>	<u>Number of</u>	<u>Spring Fall</u>	<u>Number of</u>	<u>Employment</u>		<u>Unemployment</u>	<u>Predicted</u>		<u>%</u>	<u>%</u>	
	<u>Purchased kWh</u>	<u>Degree Days</u>	<u>Days</u>	<u>Days in</u>	<u>Flag</u>	<u>Peak Hours</u>	<u>Kitchener-</u>	<u>CDM Activity</u>	<u>Waterloo-Barrie</u>	<u>Purchases</u>	<u>Variances (kWh)</u>	<u>Variance</u>	<u>Variance</u>	
				<u>Month</u>			<u>(000's)</u>		<u>(000's)</u>				<u>(Abs)</u>	
Jun-04	128,521,510	92.5	16.3	30	0	352	615	0	32	125,664,960	-2,856,550	-2.2%	2.2%	
Jul-04	130,502,320	21.3	49.3	31	0	336	624	0	33	132,085,051	1,582,731	1.2%	1.2%	
Aug-04	134,736,160	55	30.6	31	0	336	626	0	33	129,559,111	-5,177,049	-3.8%	3.8%	
Sep-04	131,178,500	71.3	13.7	30	1	336	627	0	33	123,889,089	-7,289,411	-5.6%	5.6%	
Oct-04	127,280,000	287.5	0	31	1	320	625	0	33	125,399,602	-1,880,398	-1.5%	1.5%	
Nov-04	131,398,790	432.9	0	30	1	352	625	0	33	130,445,874	-952,916	-0.7%	0.7%	
Dec-04	136,670,710	700.1	0	31	0	336	628	0	33	138,162,190	1,491,480	1.1%	1.1%	
Jan-05	145,626,785	814.7	0	31	0	320	630	0	35	138,591,908	-7,034,877	-4.8%	4.8%	
Feb-05	130,295,706	683.5	0	29	0	320	631	0	35	132,977,533	2,681,827	2.1%	2.1%	
Mar-05	139,429,744	680.5	0	31	1	352	628	0	35	137,353,277	-2,076,467	-1.5%	1.5%	
Apr-05	125,505,720	354.6	0	30	1	336	631	0	35	127,742,618	2,236,898	1.8%	1.8%	
May-05	126,060,714	244.9	0	31	1	336	639	0	36	128,343,317	2,282,603	1.8%	1.8%	
Jun-05	148,205,860	27.3	104.8	30	0	352	648	0	36	147,468,616	-737,244	-0.5%	0.5%	
Jul-05	144,470,140	6.8	105.4	31	0	320	653	0	37	146,273,017	1,802,877	1.2%	1.2%	
Aug-05	149,364,543	11.9	67.9	31	0	352	656	0	37	142,953,165	-6,411,378	-4.3%	4.3%	
Sep-05	131,923,136	63.4	13.7	30	1	336	652	0	37	128,261,817	-3,661,319	-2.8%	2.8%	
Oct-05	129,428,087	259.9	2.6	31	1	320	650	0	36	129,691,786	263,699	0.2%	0.2%	
Nov-05	133,425,806	433.1	0	30	1	352	644	0	36	133,615,992	190,186	0.1%	0.1%	
Dec-05	137,252,421	721.6	0	31	0	320	645	0	36	139,588,879	2,336,458	1.7%	1.7%	
Jan-06	139,483,995	590.6	0	31	0	336	644	46,843	34	138,620,899	-863,096	-0.6%	0.6%	
Feb-06	129,290,507	651.2	0	28	0	320	643	93,687	34	133,295,278	4,004,771	3.1%	3.1%	
Mar-06	138,164,067	562.4	0	31	1	368	641	140,530	34	139,012,378	848,311	0.6%	0.6%	
Apr-06	120,999,808	322.5	0	30	1	304	644	187,374	34	125,802,364	4,802,556	4.0%	4.0%	
May-06	130,145,724	177.8	17.7	31	1	352	652	234,217	34	134,216,643	4,070,919	3.1%	3.1%	
Jun-06	136,402,808	44.1	32.2	30	0	352	660	281,061	35	135,374,934	-1,027,874	-0.8%	0.8%	
Jul-06	144,866,595	6.5	117.2	31	0	320	665	327,904	35	150,044,875	5,178,280	3.6%	3.6%	
Aug-06	143,235,418	27.5	45.5	31	0	352	667	374,748	35	140,140,235	-3,095,183	-2.2%	2.2%	
Sep-06	124,350,425	130.3	2.3	30	1	320	665	421,591	35	126,943,458	2,593,033	2.1%	2.1%	
Oct-06	129,860,299	335.1	0	31	1	336	667	468,435	35	134,420,134	4,559,835	3.5%	3.5%	
Nov-06	131,299,426	415.9	0	30	1	352	666	515,278	35	135,943,164	4,643,738	3.5%	3.5%	
Dec-06	131,260,972	545.2	0	31	0	304	668	562,122	35	136,737,778	5,476,806	4.2%	4.2%	
Jan-07	141,950,997	698.3	0	31	0	352	662	555,266	38	143,221,368	1,270,371	0.9%	0.9%	
Feb-07	134,079,334	785.1	0	28	0	320	657	548,410	37	136,129,117	2,049,783	1.5%	1.5%	
Mar-07	137,122,151	582	0	31	1	352	652	541,553	37	137,349,255	227,104	0.2%	0.2%	
Apr-07	124,757,179	403	0	30	1	320	647	534,697	37	127,619,842	2,862,663	2.3%	2.3%	
May-07	128,722,398	166.4	11.2	31	1	352	647	527,841	37	129,503,726	781,328	0.6%	0.6%	
Jun-07	139,397,997	35.5	51.2	30	0	336	652	520,985	37	133,796,961	-5,601,036	-4.0%	4.0%	
Jul-07	134,351,987	28	53.8	31	0	336	660	514,129	38	137,213,617	2,861,630	2.1%	2.1%	
Aug-07	145,489,294	19.7	65.1	31	0	352	662	507,273	38	141,348,691	-4,140,603	-2.8%	2.8%	
Sep-07	128,127,734	74.7	28	30	1	304	661	500,417	38	127,082,256	-1,045,478	-0.8%	0.8%	
Oct-07	130,195,410	184.7	10.9	31	1	352	663	493,560	38	133,115,811	2,920,401	2.2%	2.2%	
Nov-07	132,285,360	511.8	0	30	1	352	667	486,704	38	137,470,105	5,184,745	3.9%	3.9%	
Dec-07	132,714,082	686.6	0	31	0	304	669	479,848	38	139,558,398	6,844,316	5.2%	5.2%	
Jan-08	140,041,421	676.8	0	31	0	352	661	517,595	40	142,185,827	2,144,406	1.5%	1.5%	
Feb-08	132,651,127	651.2	0	28	0	320	656	555,341	40	132,514,926	-136,201	-0.1%	0.1%	
Mar-08	133,457,374	686.1	0	31	1	304	647	593,087	39	132,712,781	-744,593	-0.6%	0.6%	
Apr-08	122,596,206	297.9	0	30	1	352	647	630,834	39	127,678,861	5,082,655	4.1%	4.1%	
May-08	121,120,167	243.1	0.7	31	1	336	649	668,580	39	126,603,542	5,483,375	4.5%	4.5%	
Jun-08	130,438,115	40.6	53	30	0	336	657	706,326	40	133,692,275	3,254,160	2.5%	2.5%	
Jul-08	139,693,948	7.6	75.8	31	0	352	664	744,072	40	141,795,379	2,101,431	1.5%	1.5%	
Aug-08	131,943,162	36.2	29.5	31	0	320	667	781,819	40	130,458,269	-1,484,893	-1.1%	1.1%	
Sep-08	126,425,825	93.2	12	30	1	336	670	819,565	40	127,487,371	1,061,546	0.8%	0.8%	
Oct-08	125,628,543	325.7	0	31	1	352	673	857,311	41	133,889,879	8,261,336	6.6%	6.6%	
Nov-08	125,038,661	499.7	0	30	1	304	677	895,058	41	131,699,017	6,660,356	5.3%	5.3%	







	<u>Purchased kWh</u>	<u>Heating Degree Days</u>	<u>Cooling Degree Days</u>	<u>Number of Days in Month</u>	<u>Spring Fall Flag</u>	<u>Number of Peak Hours</u>	<u>Employment Kitchener-Waterloo-Barrie (000's)</u>	<u>CDM Activity</u>	<u>Unemployment Kitchener-Waterloo-Barrie (000's)</u>	<u>Predicted Purchases</u>	<u>Variances (kWh)</u>	<u>% Variance</u>	<u>% Variance (Abs)</u>	
		183.5	9.1	31	1	336	694	3,005,458	49	123,241,590				
		50.9	41.9	30	0	336	694	2,974,913	49	126,773,054				
		12.8	81.1	31	0	352	694	2,944,369	49	136,928,319				
		24.0	56.0	31	0	320	694	2,913,824	49	129,048,980				
		96.3	13.2	30	1	336	694	2,883,279	49	121,176,402				
		289.3	1.4	31	1	352	694	2,852,734	49	126,417,110				
		432.8	0.0	30	1	304	694	2,822,189	49	122,840,759				
		648.7	0.0	31	0	336	694	2,791,645	49	133,971,107	1,533,214,916			
	20 Year Trend													
		726.2	0.0	31	0	352	694	3,127,637	49	135,795,913				
		630.5	0.0	28	0	304	694	3,097,092	49	124,245,345				
		530.4	0.0	31	1	336	694	3,066,548	49	128,726,606				
		313.7	0.8	30	1	320	694	3,036,003	49	121,117,082				
		165.1	13.0	31	1	336	694	3,005,458	49	123,599,179				
		53.2	38.9	30	0	336	694	2,974,913	49	126,235,505				
		12.0	89.5	31	0	352	694	2,944,369	49	138,547,282				
		22.5	54.2	31	0	320	694	2,913,824	49	128,674,099				
		87.8	17.5	30	1	336	694	2,883,279	49	121,842,112				
		288.8	1.7	31	1	352	694	2,852,734	49	126,478,210				
		411.7	0.0	30	1	304	694	2,822,189	49	122,381,619				
		645.6	0.0	31	0	336	694	2,791,645	49	133,905,133	1,531,548,084			

						Cambridge and North Dumfries Hydro Inc.		
						File Number:	EB-2013-0116	
SUMMARY OUTPUT						Exhibit:	3	
						Appendix:	3-2	
Regression Statistics						Sheet:	Sheet 4.2 - Purchased Power Model	
Multiple R	96%					Filed:	October 1, 2013	
R Square	93%							
Adjusted R Square	93%							
Standard Error	3,666,540							
Observations	204							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	8	3.4583E+16	4.32288E+15	321.5586605	6.2572E-108			
Residual	195	2.62149E+15	1.34435E+13					
Total	203	3.72045E+16						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	(85,787,247)	10908133.88	-7.86	2.47367E-13	-107300312.6	-64274180.99	-107300312.6	-64274180.99
Heating Degree Days	21,728	1575.2372	13.79	1.18697E-30	18621.44643	24834.8248	18621.44643	24834.8248
Cooling Degree Days	194,644	15531.49595	12.53	8.17746E-27	164012.8141	225275.3726	164012.8141	225275.3726
Number of Days in Month	1,519,288	348950.0625	4.35	2.15787E-05	831087.366	2207488.82	831087.366	2207488.82
Spring Fall Flag	(1,411,240)	684028.2881	-2.06	0.040425048	-2760283.321	-62196.59933	-2760283.321	-62196.59933
Number of Peak Hours	105,292	16547.69581	6.36	1.38103E-09	72656.87977	137927.7452	72656.87977	137927.7452
Employment Kitchener-Waterloo-Barrie	214,864	5144.580738	41.77	3.247E-99	204718.0967	225010.4227	204718.0967	225010.4227
CDM Activity	- 4.60	0.475017682	-9.68	2.40597E-18	-5.5349058	-3.661242205	-5.5349058	-3.661242205
Unemployment Kitchener-Waterloo-Barrie	(265,758)	39900.36345	-6.66	2.7134E-10	-344449.9008	-187066.5839	-344449.9008	-187066.5839

						<b>Cambridge and North Dumfries Hydro Inc.</b>			
						<b>File Numb</b>	EB-2013-0116		
						<b>Exhibit:</b>	3		
						<b>Appendix:</b>	3-2		
						<b>Sheet:</b>	Sheet 4.3 - Purchased Power Model		
						<b>Filed:</b>	October 1, 2013		
	<i>Heating Degree Days</i>	<i>Cooling Degree Days</i>	<i>Ontario Real GDP Monthly %</i>	<i>Number of Days in Month</i>	<i>Spring Fall Flag</i>	<i>Number of Peak Hours</i>	<i>Employment Kitchener- Waterloo-Barrie (000's)</i>	<i>Unemployment Kitchener- Waterloo-Barrie (000's)</i>	<i>CDM Activity - Negative Trend Variable</i>
Heating Degree Days	1								
Cooling Degree Days	-66%	100%							
Ontario Real GDP Monthly %	-3%	2%	100%						
Number of Days in Month	-16%	18%	0%	100%					
Spring Fall Flag	-6%	-42%	1%	7%	100%				
Number of Peak Hours	-12%	8%	-1%	31%	8%	100%			
Employment Kitchener- Waterloo- Barrie (000's)	-8%	7%	98%	3%	-2%	-1%	100%		
Unemployment Kitchener- Waterloo- Barrie (000's)	-4%	1%	39%	3%	-1%	-3%	45%	100%	
CDM Activity - Negative Trend Variable	-6%	4%	61%	2%	1%	-1%	67%	74%	100%

## Cambridge and North Dumfries Hydro Inc.

File Number:

EB-2013-0116

Exhibit:

3

Appendix:

3-2

Sheet:

Sheet 5 - Rate Class Energy Model

Filed:

October 1, 2013

	Purchases	Modeled Purchases	Difference	% Difference	Loss Factor	Total Billed	General Service				Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributors - Hydro One	Embedded Distributors - Waterloo
							Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW						
Weather Normal Projection																
1996	1,126,778,593	1,161,686,409	34,907,816	3.1%												
1997	1,202,822,244	1,200,484,352	(2,337,892)	-0.2%												
1998	1,272,551,157	1,274,039,552	1,488,395	0.1%												
1999	1,350,815,390	1,376,209,888	25,394,498	1.9%												
2000	1,392,173,592	1,379,379,308	(12,794,284)	-0.9%												
2001	1,420,977,730	1,415,398,232	(5,579,498)	-0.4%	1.0449	1,359,912,172	351,442,095	157,136,324	412,594,902	236,352,897	202,385,954		0	0		
2002	1,519,144,756	1,472,169,728	(46,975,028)	-3.1%	1.0708	1,418,653,288	336,178,776	154,250,738	441,910,546	247,744,953	238,568,275		0	0		
2003	1,523,717,530	1,503,545,264	(20,172,266)	-1.3%	1.0252	1,486,259,773	365,784,244	163,240,287	449,831,308	263,318,947	234,671,319		9,413,667	0		
2004	1,570,405,930	1,540,996,225	(29,409,705)	-1.9%	1.0276	1,528,292,270	366,465,998	165,708,926	471,517,479	269,908,983	245,172,880		9,518,004	0		
2005	1,640,988,662	1,632,861,924	(8,126,738)	-0.5%	1.0260	1,599,364,167	394,023,308	172,872,183	477,342,540	288,850,782	256,341,390		9,541,777	392,188		
2006	1,599,360,044	1,630,552,138	31,192,094	2.0%	1.0245	1,561,102,860	381,579,969	166,886,950	457,225,683	248,250,591	252,101,814	42,759,994	9,300,558	2,997,302		
2007	1,609,193,923	1,623,409,148	14,215,225	0.9%	1.0272	1,566,589,592	392,558,966	169,606,274	471,077,396	226,838,923	252,092,348	42,771,843	9,442,832	2,201,009		
2008	1,557,523,229	1,602,109,201	44,585,972	2.9%	1.0256	1,518,625,683	387,314,732	170,263,597	456,048,382	220,203,261	230,297,755	42,936,833	9,448,890	2,112,232		
2009	1,450,354,846	1,453,060,913	2,706,067	0.2%	1.0254	1,414,463,968	379,582,714	160,300,294	432,461,967	193,002,685	180,679,079	43,206,778	9,470,530	2,135,657	13,624,264	40,648,271
2010	1,513,165,630	1,485,767,545	(27,398,085)	-1.8%	1.0274	1,472,796,612	396,266,835	163,479,893	426,513,756	220,917,668	196,557,281	43,796,746	9,519,206	2,130,242	13,614,985	36,195,843
2011	1,519,439,268	1,523,559,655	4,120,388	0.3%	1.0310	1,473,820,232	396,556,720	158,322,069	437,159,036	240,767,175	169,195,800	46,753,741	9,519,486	2,067,611	13,478,594	37,787,891
2012	1,526,591,336	1,520,774,378	(5,816,959)	-0.4%	1.0224	1,493,125,081	399,587,578	158,595,034	437,401,279	226,229,939	201,189,505	45,452,655	9,645,171	2,015,390	13,008,529	31,782,231
2013	0	1,535,615,464				1,488,721,910										
2014	0	1,534,509,482				1,487,649,702										
Average						1.0315										
Usage Per Customer																
2000							#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!					
2001							9,374	36,999	728,644	9,454,116	80,954,382					
2002							8,793	37,948	739,290	10,112,039	79,522,758			#DIV/0!		
2003							9,304	39,385	726,413	10,127,652	78,223,773			815		
2004							9,041	39,520	748,440	9,996,629	81,724,293			811		
2005							9,541	40,306	753,500	10,135,115	85,447,130	#DIV/0!	800			
2006							9,077	38,347	706,686	8,415,274	100,840,726	42,759,994	772		5,809	
2007							9,153	38,758	701,008	7,959,260	126,046,174	42,771,843	772		4,529	
2008							8,918	38,270	671,153	7,864,402	115,148,878	42,936,833	764		4,622	
2009							8,639	35,305	624,043	7,283,120	90,339,539	43,206,778	760		4,288	13,624,264
2010							8,822	35,508	602,421	8,496,833	98,278,640	43,796,746	758		3,963	13,614,985
2011							8,662	34,199	604,228	8,598,828	84,597,900	46,753,741	754		4,019	13,478,594
2012							8,633	34,026	593,892	8,378,887	100,594,753	45,452,655	758		4,109	13,008,529
2013							8,569	33,768	582,953	8,287,423	102,600,916	45,917,697	752		3,876	12,598,531
2014							8,505	33,512	572,216	8,196,959	104,647,086	46,387,375	746		3,861	12,613,577

EB-2013-0116

**File Number:**

EB-2013-0116

**Exhibit:**

3

## Appendix:

3-2

Sheet:

Sheet 5 - Rate Class Energy Model

**Filed:**

October 1, 2013

	Purchases	Modeled Purchases	Difference	% Difference	Loss Factor	Total Billed	Residential	General Service ≤ 50 kW	General Service ≥ 50 to 999 kW	General Service ≥ 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributors - Hydro One	Embedded Distributors - Waterloo
1999																
2000																
2001																
2002							0.9380	1.0256	1.0146	1.0696	0.9823					
2003							1.0581	1.0379	0.9826	1.0015	0.9837					
2004							0.9717	1.0034	1.0303	0.9871	1.0448		0.9960			
2005							1.0553	1.0199	1.0068	1.0139	1.0456		0.9868			
2006							0.9514	0.9514	0.9379	0.8303	1.1802		0.9620			
2007							1.0084	1.0107	0.9920	0.9458	1.2500	1.0003	0.9999	0.7797		
2008							0.9743	0.9874	0.9574	0.9881	0.9135	1.0039	0.9903	1.0206		
2009							0.9688	0.9225	0.9298	0.9261	0.7845	1.0063	0.9947	0.9278		
2010							1.0211	1.0058	0.9654	1.1666	1.0879	1.0137	0.9972	0.9242	0.9993	
2011							0.9819	0.9831	1.0030	0.8608	1.0649	1.0675	1.0140	0.9909		
2012							0.9967	0.9950	0.9829	0.9744	1.1891	0.9722	1.0054	1.0224	0.9651	
Used							0.9925	0.9924	0.9816	0.9891	1.0199	1.0102	0.9921	0.9439	0.9847	
Geomean							0.9925	0.9924	0.9816	0.9891	1.0199	1.0102	0.9921	0.9439	0.9847	
Non Weather Corrected Forecast																
2013						1,503,554,186	404,278,743	158,728,314	439,729,050	225,331,454	205,201,830	45,917,637	9,671,243	1,886,385	12,809,531	
2014						1,514,150,580	409,024,981	158,861,706	442,069,208	224,436,538	209,294,172	46,387,375	9,697,385	1,765,639	12,613,577	
Weather Corrected Forecast																Total
2013						1,486,721,910	396,735,305	155,766,602	434,024,250	223,644,135	204,689,690	45,803,036	9,647,105	1,881,677	44,105,574	1,516,297,375
2014						1,487,649,702	395,264,057	153,517,084	431,657,534	221,335,611	208,256,974	46,157,494	9,649,328	1,756,889	43,430,869	-27,575,465
% Weather Sensitive							74%	74%	48%	23%	0%	0%	0%	0%	0%	Total
2013						-14,832,276	299,076,057	117,423,533	210,873,698	51,487,571	0	0	0	0	0	678,860,859
2014						-26,500,878	302,587,215	117,522,213	211,995,930	51,283,085	0	0	0	0	0	683,388,443
Allocation of Weather Sensitive Amount																
2013						-6,534,445	-2,565,560	-4,607,331	-1,124,940	0	0	0	0	0	0	-14,832,276
2014						-11,733,922	-4,557,352	-8,220,915	-1,988,689	0	0	0	0	0	0	-26,500,878
CDM																
2013						3,720,577	1,008,993	396,152	1,097,469	562,379	512,140	114,601	24,137	4,708		3,720,577

Cambridge and North Dumfries Hydro Inc.

File Number: EB-2013-0116

Exhibit: 3

Appendix: 3-2

Sheet: Sheet 6 - Rate Class Customer Model

Filed: October 1, 2013

	Residential	General Service < 50 kW	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Unmetered Loads	Embedded Distributors - Hydro One	Embedded Distributors - Waterloo	Total	
2000											0	
2001	37,492	4,247	566	25	3	0	0	0	0	0	42,332	42,332
2002	38,234	4,065	598	25	3	0	0	0	0	0	42,924	42,924
2003	39,316	4,145	619	26	3	0	11,557	0	0	0	55,665	44,109
2004	40,535	4,193	630	27	3	0	11,732	0	0	0	57,119	45,388
2005	41,300	4,289	634	29	3	0	11,895	0	0	0	58,148	46,254
2006	42,040	4,352	647	30	3	1	12,052	516	0	0	59,640	47,071
2007	42,888	4,376	672	29	2	1	12,237	486	0	0	60,690	47,966
2008	43,431	4,449	680	28	2	1	12,366	457	0	0	61,413	48,590
2009	43,937	4,541	693	27	2	1	12,460	498	1	1	62,159	49,200
2010	44,921	4,604	708	26	2	1	12,559	538	1	1	63,360	50,262
2011	45,781	4,630	724	28	2	1	12,624	515	1	1	64,305	51,165
2012	46,284	4,661	737	27	2	1	12,722	491	1	1	64,926	51,711
2013	47,178	4,701	754	27	2	1	12,859	486	1	1	66,010	
2014	48,091	4,740	773	27	2	1	12,997	482	1	1	67,115	

Growth Rate in Customer Numbers

2000										
2001										
2002	1.0198	0.9571	1.0556	0.9800	1.2000					
2003	1.0283	1.0197	1.0360	1.0612	1.0000					
2004	1.0310	1.0116	1.0174	1.0385	1.0000		1.0151			
2005	1.0189	1.0229	1.0056	1.0556	1.0000		1.0139			
2006	1.0179	1.0147	1.0213	1.0351	0.8333		1.0133			
2007	1.0202	1.0055	1.0386	0.9661	0.8000	1.0000	1.0153	0.9419		
2008	1.0127	1.0167	1.0112	0.9825	1.0000	1.0000	1.0105	0.9403		
2009	1.0116	1.0206	1.0199	0.9464	1.0000	1.0000	1.0076	1.0897		
2010	1.0224	1.0140	1.0216	0.9811	1.0000	1.0000	1.0079	1.0793	1.0000	
2011	1.0191	1.0055	1.0219	1.0769	1.0000	1.0000	1.0052	0.9572	1.0000	
2012	1.0110	1.0068	1.0180	0.9643	1.0000	1.0000	1.0078	0.9534	1.0000	
Used	1.0193	1.0085	1.0242	1.0070	1.0000	1.0000	1.0107	0.9916	1.0000	
Geomean	1.0193	1.0085	1.0242	1.0070	0.9799	1.0000	1.0107	0.9916	1.0000	
	0.0193	0.0085	0.0242	0.0070	-0.0201	0.0000	0.0107	-0.0084	0.0000	

1995								
1996								
1997								
1998								
1999								
2000	37,069	4,496	551	26	2		0	0
2001	37,914	3,998	582	24	3		0	0
2002	38,554	4,132	614	25	3		11,471	0
2003	40,078	4,158	625	27	3		11,642	0
2004	40,991	4,228	635	27	3		11,821	0
2005	41,608	4,350	632	30	3		11,968	0
2006	42,471	4,354	662	29	2	1	12,137	516
2007	43,304	4,398	682	28	2	1	12,338	456
2008	43,558	4,500	677	28	2	1	12,393	458
2009	44,315	4,581	709	25	2	1	12,526	538
2010	45,526	4,627	707	27	2	1	12,591	537
2011	46,035	4,632	740	29	2	1	12,656	492
2012	46,532	4,690	733	25	2	1	12,788	489

	2008	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
	2009	#REF!	#REF!		#REF!	#REF!		#REF!	#REF!	#REF!	#REF!
Weather Sensitive Adjustment %											
	2008	100%	100%	65%	0%	0%		0%	0%		
	2009	100%	100%		0%	0%		0%	0%		
Weather Sensitive Energy											
	2008	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	
	2009	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	
Weather Sensitvie Adjustment											
	2008	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!			
	2009	#REF!	#REF!		#REF!	#REF!	#REF!	#REF!			
Weather Normal Forecast											
	2008	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	Check
	2009	#REF!	#REF!		#REF!	#REF!		#REF!	#REF!	#REF!	#REF!
Weather Sensitvie Adjustment%											
	2008	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!			
	2009	#REF!	#REF!		#REF!	#REF!		#REF!	#REF!		



**Cambridge and North Dumfries Hydro Inc.**

**File Number:** EB-2013-0116  
**Exhibit:** 3  
**Appendix:** 3-2  
**Sheet:** Sheet 7 - Rate Class Load Model  
**Filed:** October 1, 2013

	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User	Direct Market Participant	Street Lights	Embedded Distributors	Total
1999							
2000							0
2001							0
2002							0
2003	1,177,153	533,526	429,237		26,537		2,166,453
2004	1,242,905	543,249	468,620		24,497		2,279,271
2005	1,274,085	619,353	480,781		24,664		2,398,883
2006	1,279,604	618,222	472,853	73,441	24,008		2,468,128
2007	1,274,858	571,091	481,509	72,913	24,182		2,424,553
2008	1,244,174	554,036	446,448	72,485	24,090		2,341,233
2009	1,337,289	530,195	411,896	73,038	26,451	107,591	2,486,460
2010	1,294,863	570,060	421,436	75,928	26,614	101,371	2,490,272
2011	1,331,831	582,383	431,699	81,848	26,604	107,151	2,561,516
2012	1,350,651	527,947	483,777	81,651	26,876	100,035	2,570,938
2013	1,233,396	531,983	424,120	79,053	25,892	91,971	2,386,415
2014	1,226,670	526,492	431,512	79,664	25,898	90,564	2,380,801

**kW/kWh**

1999						
2000						
2001	0.0000%	0.0000%	0.0000%			
2002	0.0000%	0.0000%	0.0000%			
2003	0.2617%	0.2026%	0.1829%		0.2819%	
2004	0.2636%	0.2013%	0.1911%		0.2574%	
2005	0.2669%	0.2144%	0.1876%		0.2585%	
2006	0.2799%	0.2490%	0.1876%	0.1718%	0.2581%	
2007	0.2706%	0.2518%	0.1910%	0.1705%	0.2561%	
2008	0.2728%	0.2516%	0.1939%	0.1688%	0.2550%	
2009	0.3092%	0.2747%	0.2280%	0.1690%	0.2793%	0.1982%
2010	0.3036%	0.2580%	0.2144%	0.1734%	0.2796%	0.2035%
2011	0.3047%	0.2419%	0.2551%	0.1751%	0.2795%	0.2090%
2012	0.3088%	0.2334%	0.2405%	0.1796%	0.2786%	0.2233%
Average	0.2842%	0.2379%	0.2072%	0.1726%	0.2684%	0.2085%

**Cambridge and North Dumfries Hydro Inc.**

**File Number:** EB-2013-0116  
**Exhibit:** 3  
**Appendix:** 3-2  
**Sheet:** Sheet 8 - CDM Activity  
**Filed:** October 1, 2013

	Total OPA Annual CDM Results (Gross)	Total OPA Annual CDM Results (Net)	# Difference	% Difference of Net	Total Annual CDM Results	Increase over previous year			
2005						-	-	Check	
2006	4,080,568	3,653,792	426,776	11.7%	3,653,792	3,653,792	46,843	3,653,792	-
2007	11,853,498	6,210,683	5,642,814	90.9%	6,210,683	- 534,778	6,856	6,210,683	-
2008	13,371,884	8,702,392	4,669,492	53.7%	8,702,392	2,944,213	37,746	8,702,392	-
2009	21,204,272	14,593,270	6,611,002	45.3%	14,593,270	3,399,621	43,585	14,593,270	-
2010	35,333,846	21,799,853	13,533,993	62.1%	21,799,853	4,329,981	55,513	21,799,853	-
2011	33,350,487	19,795,633	13,554,854	68.5%	32,679,545	7,215,862	92,511	32,679,545	-
2012	32,678,657	19,505,272	13,173,384	67.5%	36,070,836	- 2,714,438	34,800	36,070,836	-
2013	32,560,861	19,444,650	13,116,211	67.5%	36,007,935	2,233,931	28,640	36,007,935	-
2014	31,738,111	19,030,184	12,707,927	66.8%	35,515,691	- 2,382,493	30,545	35,515,691	-
Total	216,172,183	132,735,730	83,436,454	62.9%	195,233,997			195,233,997	-

CDM Activity Variable

Jan-06	46,843		
Feb-06	93,687		
Mar-06	140,530		
Apr-06	187,374		
May-06	234,217		
Jun-06	281,061		
Jul-06	327,904		
Aug-06	374,748		
Sep-06	421,591		
Oct-06	468,435		
Nov-06	515,278		
Dec-06	562,122	Check	
Jan-07	555,266	3,653,792	6,745,462
Feb-07	548,410		
Mar-07	541,553		
Apr-07	534,697		
May-07	527,841		
Jun-07	520,985		
Jul-07	514,129		
Aug-07	507,273		

**Cambridge and North Dumfries Hydro Inc.**

**File Number:** EB-2013-0116  
**Exhibit:** 3  
**Appendix:** 3-2  
**Sheet:** Sheet 8 - CDM Activity  
**Filed:** October 1, 2013

Sep-07	500,417		
Oct-07	493,560		
Nov-07	486,704	Check	
Dec-07	479,848	6,210,683	5,758,179
Jan-08	517,595		
Feb-08	555,341		
Mar-08	593,087		
Apr-08	630,834		
May-08	668,580		
Jun-08	706,326		
Jul-08	744,072		
Aug-08	781,819		
Sep-08	819,565		
Oct-08	857,311		
Nov-08	895,058		
Dec-08	932,804	8,702,392	11,193,649
Jan-09	976,389		
Feb-09	1,019,974		
Mar-09	1,063,559		
Apr-09	1,107,144		
May-09	1,150,729		
Jun-09	1,194,313		
Jul-09	1,237,898		
Aug-09	1,281,483		
Sep-09	1,325,068		
Oct-09	1,368,653		
Nov-09	1,412,238		
Dec-09	1,455,823	14,593,270	17,469,872
Jan-10	1,511,335		
Feb-10	1,566,848		
Mar-10	1,622,360		
Apr-10	1,677,873		
May-10	1,733,386		
Jun-10	1,788,898		
Jul-10	1,844,411		
Aug-10	1,899,923		
Sep-10	1,955,436		
Oct-10	2,010,948		
Nov-10	2,066,461		
Dec-10	2,121,974	21,799,853	25,463,683
Jan-11	2,214,485		
Feb-11	2,306,996		

**Cambridge and North Dumfries Hydro Inc.**

<b>File Number:</b>	EB-2013-0116
<b>Exhibit:</b>	3
<b>Appendix:</b>	3-2
<b>Sheet:</b>	Sheet 8 - CDM Activity
<b>Filed:</b>	October 1, 2013

Mar-11	2,399,507		
Apr-11	2,492,018		
May-11	2,584,529		
Jun-11	2,677,040		
Jul-11	2,769,551		
Aug-11	2,862,062		
Sep-11	2,954,573		
Oct-11	3,047,084		
Nov-11	3,139,595		
Dec-11	3,232,106	32,679,545	38,785,274
Jan-12	3,197,306		
Feb-12	3,162,505		
Mar-12	3,127,705		
Apr-12	3,092,904		
May-12	3,058,104		
Jun-12	3,023,303		
Jul-12	2,988,503		
Aug-12	2,953,702		
Sep-12	2,918,902		
Oct-12	2,884,101		
Nov-12	2,849,301		
Dec-12	2,814,500	36,070,836	33,774,003
Jan-13	2,843,140		
Feb-13	2,871,781		
Mar-13	2,900,421		
Apr-13	2,929,061		
May-13	2,957,701		
Jun-13	2,986,341		
Jul-13	3,014,981		
Aug-13	3,043,621		
Sep-13	3,072,262		
Oct-13	3,100,902		
Nov-13	3,129,542		
Dec-13	3,158,182	36,007,935	37,898,185
Jan-14	3,127,637		
Feb-14	3,097,092		
Mar-14	3,066,548		
Apr-14	3,036,003		
May-14	3,005,458		
Jun-14	2,974,913		
Jul-14	2,944,369		
Aug-14	2,913,824		
Sep-14	2,883,279		
Oct-14	2,852,734		
Nov-14	2,822,189		
Dec-14	2,791,645	35,515,691	33,499,736

**Cambridge and North Dumfries Hydro Inc.**

**File Number:** EB-2013-0116

**Exhibit:** 3

**Appendix:** 3-2

**Sheet:** Sheet 8 - CDM Activity

**Filed:** October 1, 2013

4 Year 2011 to 2014 target	
73,660,000	

Jan	1
Feb	2
Mar	3
Apr	4
May	5
Jun	6
Jul	7
Aug	8
Sep	9
Oct	10
Nov	11
Dec	12
Total	78

Proposed Cost of Service Method				
2011	2012	2013	2014	Total
17.5%	17.4%	17.4%	17.3%	69.7%
	5.1%	5.1%	5.1%	15.2%
		5.1%	5.1%	10.1%
			5.1%	5.1%
17.5%	22.5%	27.5%	32.5%	100.0%
12,883,912	12,844,986	12,842,708	12,764,930	51,336,535
	3,720,577	3,720,577	3,720,577	11,161,732
		3,720,577	3,720,577	7,441,155
			3,720,577	3,720,577
12,883,912	16,565,563	20,283,863	23,926,662	73,660,000

Actual 2011 Results and Persistence

Estimated 2012 Results and Persistence

Cambridge and North Dumfries Hydro Inc.

File Number:

Exhibit:

Appendix:

Sheet:

Filed:

EB-2013-0116

3

3-2

Sheet 9 - HDD and CDD

October 1, 2013

	Heating Degree Days	Cooling Degree Days		
Jan-91	750.4	0		
Feb-91	589.1	0		
Mar-91	532.2	0		
Apr-91	297.6	0.5		
May-91	0	0		
Jun-91	21.4	61.8		
Jul-91	5.4	95.7		
Aug-91	2.7	85.5		
Sep-91	130.3	21.3		
Oct-91	241.8	0		
Nov-91	467.6	0		
Dec-91	600.1	0		
Jan-92	688.8	0		
Feb-92	625.4	0		
Mar-92	578.7	0		
Apr-92	379.4	0		
May-92	160.9	4		
Jun-92	69.1	15.8		
Jul-92	25.9	23.4		
Aug-92	40.1	20.5		
Sep-92	113.3	13		
Oct-92	339.1	0		
Nov-92	455.2	0		
Dec-92	627.7	0		
Jan-93	687.2	0		
Feb-93	738.1	0		
Mar-93	632	0		
Apr-93	343.4	0		
May-93	176.6	1.5		
Jun-93	47.3	26.2		
Jul-93	2.9	97.1		
Aug-93	7.5	93.8		
Sep-93	156.4	4		
Oct-93	335.9	1		
Nov-93	463.5	0		
Dec-93	649.6	0	4240.4	223.6
Jan-94	968.6	0		
Feb-94	774.2	0		
Mar-94	619.9	0		
Apr-94	343.8	0		
May-94	226.7	6.9		
Jun-94	38.4	61.6		
Jul-94	6.3	77.7		
Aug-94	39.2	27.3		
Sep-94	105.4	7.5		
Oct-94	263.7	0		
Nov-94	405.3	0		
Dec-94	591.1	0	4382.6	181
Jan-95	667.5	0		
Feb-95	735.3	0		
Mar-95	523.7	0		
Apr-95	434.4	0		
May-95	171.9	1.7		
Jun-95	25.9	70.8		
Jul-95	17.3	105.9		
Aug-95	4.3	101.9		
Sep-95	143.6	10.8		
Oct-95	245.5	0		
Nov-95	539.2	0		
Dec-95	741.3	0	4249.9	291.1
Jan-96	789.4	0		
Feb-96	712.6	0		
Mar-96	670.4	0		
Apr-96	421.9	0		
May-96	216.1	10		
Jun-96	29.4	38.6		
Jul-96	18.9	41.9		
Aug-96	6.2	55.2		
Sep-96	102.2	12.6		
Oct-96	301.4	0		
Nov-96	548.1	0		
Dec-96	596.5	0	4413.1	158.3
Jan-97	777.9	0		
Feb-97	615	0		
Mar-97	619.1	0		

Cambridge and North Dumfries Hydro Inc.

File Number:

Exhibit:

Appendix:

Sheet:

Filed:

EB-2013-0116

3

3-2

Sheet 9 - HDD and CDD

October 1, 2013

Apr-97	391.9	0		
May-97	289	0		
Jun-97	30.4	50.4		
Jul-97	22.1	59.8		
Aug-97	49.4	21.9		
Sep-97	115.2	5.4		
Oct-97	288.9	1.6		
Nov-97	471.4	0		
Dec-97	630.7	0	4301	139.1
Jan-98	652.8	0		
Feb-98	547.1	0		
Mar-98	505.1	0		
Apr-98	312	0		
May-98	77.1	16.8		
Jun-98	66.7	63.7		
Jul-98	6.9	64.8		
Aug-98	12.1	83.1		
Sep-98	63	26		
Oct-98	257.6	0		
Nov-98	440.1	0		
Dec-98	572.1	0	3512.6	254.4
Jan-99	789.6	0		
Feb-99	578.4	0		
Mar-99	592.5	0		
Apr-99	332.6	0		
May-99	126.7	10.5		
Jun-99	44.4	76.5		
Jul-99	3.2	138.9		
Aug-99	28.8	30.9		
Sep-99	88.9	27.7		
Oct-99	319	0		
Nov-99	405.1	0		
Dec-99	623.7	0	3932.9	284.5
Jan-00	773	0		
Feb-00	643.8	0		
Mar-00	446.9	0		
Apr-00	358.3	0		
May-00	152.4	18.7		
Jun-00	41.1	35.4		
Jul-00	18.6	44.8		
Aug-00	29.7	46.3		
Sep-00	134	23.8		
Oct-00	251.6	0		
Nov-00	470.9	0		
Dec-00	826.5	0	4146.8	169
Jan-01	715	0		
Feb-01	620.2	0		
Mar-01	618.7	0		
Apr-01	324.6	0		
May-01	140.3	7.7		
Jun-01	47	62.4		
Jul-01	22.3	65.7		
Aug-01	2.3	94.2		
Sep-01	118.8	19.2		
Oct-01	276.7	0		
Nov-01	370.8	0		
Dec-01	563.3	0	3820	249.2
Jan-02	625.7	0		
Feb-02	592	0		
Mar-02	581.2	0		
Apr-02	356.2	6.6		
May-02	266.8	5.3		
Jun-02	53.1	54.5		
Jul-02	4.7	129		
Aug-02	11	72.3		
Sep-02	50.2	47		
Oct-02	345.6	6.3		
Nov-02	486.4	0		
Dec-02	675.6	0	4048.5	321
Jan-03	868.4	0		
Feb-03	755.9	0		
Mar-03	638.7	0		
Apr-03	397.4	0.7		
May-03	217	0		
Jun-03	65.3	25.5		
Jul-03	12.5	50.1		
Aug-03	18.9	72.4		
Sep-03	104.1	6		
Oct-03	331.9	0		
Nov-03	434.4	0		
Dec-03	610	0	4454.5	154.7
Jan-04	879.2	0		
Feb-04	699.2	0		
Mar-04	540.9	0		
Apr-04	354.1	0		
May-04	196.2	6.7		
Jun-04	92.5	16.3		
Jul-04	21.3	49.3		
Aug-04	55	30.6		
Sep-04	71.3	13.7		

Cambridge and North Dumfries Hydro Inc.

File Number:

Exhibit:

Appendix:

Sheet:

Filed:

EB-2013-0116

3

3-2

Sheet 9 - HDD and CDD

October 1, 2013

Oct-04	287.5	0		
Nov-04	432.9	0		
Dec-04	700.1	0	4330.2	116.6
Jan-05	814.7	0		
Feb-05	683.5	0		
Mar-05	680.5	0		
Apr-05	354.6	0		
May-05	244.9	0		
Jun-05	27.3	104.8		
Jul-05	6.8	105.4		
Aug-05	11.9	67.9		
Sep-05	63.4	13.7		
Oct-05	259.9	2.6		
Nov-05	433.1	0		
Dec-05	721.6	0	4302.2	294.4
Jan-06	590.6	0		
Feb-06	651.2	0		
Mar-06	562.4	0		
Apr-06	322.5	0		
May-06	177.8	17.7		
Jun-06	44.1	32.2		
Jul-06	6.5	117.2		
Aug-06	27.5	45.5		
Sep-06	130.3	2.3		
Oct-06	335.1	0		
Nov-06	415.9	0		
Dec-06	545.2	0	3809.1	214.9
Jan-07	698.3	0		
Feb-07	785.1	0		
Mar-07	582	0		
Apr-07	403	0		
May-07	166.4	11.2		
Jun-07	35.5	51.2		
Jul-07	28	53.8		
Aug-07	19.7	65.1		
Sep-07	74.7	28		
Oct-07	184.7	10.9		
Nov-07	511.8	0		
Dec-07	686.6	0	4175.8	220.2
Jan-08	676.8	0		
Feb-08	651.2	0		
Mar-08	686.1	0		
Apr-08	297.9	0		
May-08	243.1	0.7		
Jun-08	40.6	53		
Jul-08	7.6	75.8		
Aug-08	36.2	29.5		
Sep-08	93.2	12		
Oct-08	325.7	0		
Nov-08	499.7	0		
Dec-08	694	0	4252.1	171
Jan-09	891.8	0		
Feb-09	649.6	0		
Mar-09	562.6	0		
Apr-09	341.5	3.2		
May-09	192.8	2.3		
Jun-09	75.7	26.2		
Jul-09	37.6	14.5		
Aug-09	34.4	57.3		
Sep-09	88.8	5.5		
Oct-09	329.1	0		



Cambridge and North Dumfries Hydro Inc.

File Number:

Exhibit:

Appendix:

Sheet:

Filed:

EB-2013-0116

3

3-2

Sheet 9 - HDD and CDD

October 1, 2013

Nov-09	396.5	0		
Dec-09	669.5	0	4269.9	109
Jan-10	727.1	0		
Feb-10	644.7	0		
Mar-10	470.9	0		
Apr-10	255.7	0		
May-10	144.7	21		
Jun-10	37.7	26.8		
Jul-10	6.7	100.6		
Aug-10	9.7	79.2		
Sep-10	122.7	16.7		
Oct-10	279.6	0		
Nov-10	337.9	0		
Dec-10	719.4	0	3756.8	244.3
Jan-11	770	0		
Feb-11	640.8	0		
Mar-11	605.3	0		
Apr-11	298.7	0		
May-11	148.7	13.2		
Jun-11	48.5	21.6		
Jul-11	0.8	128.2		
Aug-11	6.9	54.3		
Sep-11	88.9	17.2		
Oct-11	279.9	0		
Nov-11	382.4	0		
Dec-11	574.8	0	3845.7	234.5
Jan-12	657.3	0		
Feb-12	573	0		
Mar-12	370.1	0		
Apr-12	365.3	0		
May-12	103.8	18.2		
Jun-12	42.1	61.2		
Jul-12	0	116.4		
Aug-12	19.4	58.1		
Sep-12	125.4	16.4		
Oct-12	279.2	0		
Nov-12	483.6	0	3584.7	270.3
Dec-12	565.5	0	81828.8	4301.1
			81828.8	4301.1

Summary of Degree Day Information

Summary of All Heating Degree Days

Month	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	10 Year Avg	20 Year Trend	20 Year Avg	17 Year Avg
January	687.20	968.60	667.50	789.40	777.90	652.80	789.60	773.00	715.00	625.70	868.40	879.20	814.70	590.60	698.30	676.80	891.80	727.10	770.00	657.30	757.42	726.22	751.05	746.92
February	738.10	774.20	735.30	712.60	615.00	547.10	578.40	643.80	620.20	592.00	755.90	699.20	683.50	651.20	785.10	651.20	649.60	644.70	640.80	573.00	673.42	630.53	664.55	649.61
March	632.00	619.90	523.70	670.40	619.10	505.10	592.50	446.90	618.70	581.20	638.70	540.90	680.50	562.40	582.00	686.10	562.60	470.90	605.30	370.10	569.95	530.43	575.45	572.55
April	343.40	343.80	434.40	421.90	391.90	312.00	332.60	358.30	324.60	356.20	397.40	354.10	354.60	322.50	403.00	297.90	341.50	255.70	298.70	365.30	339.07	313.73	350.49	346.36
May	176.60	226.70	171.90	216.10	289.00	77.10	126.70	152.40	140.30	266.80	217.00	196.20	244.90	177.80	166.40	243.10	192.80	144.70	148.70	103.80	183.54	165.07	183.95	182.58
June	47.30	38.40	25.90	29.40	30.40	66.70	44.40	41.10	47.00	53.10	65.30	92.50	27.30	44.10	35.50	40.60	75.70	37.70	48.50	42.10	50.93	53.23	46.65	48.32
July	2.90	6.30	17.30	18.90	22.10	6.90	3.20	18.60	22.30	4.70	12.50	21.30	6.80	6.50	28.00	7.60	37.60	6.70	0.80	-	12.78	11.99	12.55	13.21
August	7.50	39.20	4.30	6.20	49.40	12.10	28.80	29.70	2.30	11.00	18.90	55.00	11.90	27.50	19.70	36.20	34.40	9.70	6.90	19.40	23.96	22.51	21.51	22.30
September	156.40	105.40	143.60	102.20	115.20	63.00	88.90	134.00	118.80	50.20	104.10	71.30	63.40	130.30	74.70	93.20	88.80	122.70	88.90	125.40	96.28	87.80	102.03	96.18
October	335.90	263.70	245.50	301.40	288.90	257.60	319.00	251.60	276.70	345.60	331.90	287.50	259.90	335.10	184.70	325.70	329.10	279.60	279.90	279.20	289.26	288.85	288.93	290.20
November	463.50	405.30	539.20	548.10	471.40	440.10	405.10	470.90	370.80	486.40	434.40	432.90	433.10	415.90	511.80	499.70	396.50	337.90	382.40	483.60	432.82	411.69	446.45	442.41
December	649.60	591.10	741.30	596.50	630.70	572.10	623.70	826.50	563.30	675.60	610.00	700.10	721.60	545.20	686.60	694.00	669.50	719.40	574.80	565.50	648.67	645.63	647.86	645.59
Total	4,240.40	4,382.60	4,249.90	4,413.10	4,301.00	3,512.60	3,932.90	4,146.80	3,820.00	4,048.50	4,454.50	4,330.20	4,302.20	3,809.10	4,175.80	4,252.10	4,269.90	3,756.80	3,845.70	3,584.70	81,828.80			

Summary of All Cooling Degree Days

Month	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	10 Year Avg	20 Year Trend	20 Year Avg	17 Year Avg
January	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
February	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
March	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
April	-	-	-	-	-	-	-	-	-	6.60	0.70	-	-	-	-	-	3.20	-	-	-	0.39	0.83	0.53	0.62
May	1.50	6.90	1.70	10.00	-	16.80	10.50	18.70	7.70	5.30	-	6.70	-	17.70	11.20	0.70	2.30	21.00	13.20	18.20	9.10	13.00	8.51	9.41
June	26.20	61.60	70.80	38.60	50.40	63.70	76.50	35.40	62.40	54.50	25.50	16.30	104.80	32.20	51.20	53.00	26.20	26.80	21.60	61.20	41.88	38.86	47.95	47.08
July	97.10	77.70	105.90	41.90	59.80	64.80	138.90	44.80	65.70	129.00	50.10	49.30	105.40	117.20	53.80	75.80	14.50	100.60	128.20	116.40	81.13	89.54	81.85	79.78
August	93.80	27.30	101.90	55.20	21.90	83.10	30.90	46.30	94.20	72.30	72.40	30.60	67.90	45.50	65.10	29.50	57.30	79.20	54.30	58.10	55.99	54.23	59.34	56.69
September	4.00	7.50	10.80	12.60	5.40	26.00	27.70	23.80	19.20	47.00	6.00	13.70	13.70	2.30	28.00	12.00	5.50	16.70	17.20	16.40	13.15	17.52	15.78	17.25
October	1.00	-	-	-	1.60	-	-	-	-	6.30	-	-	2.60	-	10.90	-	-	-	-	-	1.35	1.71	1.12	1.26
November	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
December	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
Total	223.60	181.00	291.10	158.30	139.10	254.40	284.50	169.00	249.20	321.00	154.70	116.60	294.40	214.90	220.20	171.00	109.00	244.30	234.50	270.30	4,301.10			

Cambridge and North Dumfries Hydro Inc.

File Number: EB-2013-0116  
Exhibit: 3  
Appendix: 3-2  
Sheet: Sheet 11 - 2013 COP Forecast  
Filed: October 1, 2013

Cost of Power 2013			
2013 Load Forecast	kWh	kW	2012 %RPP
Residential	396,735,305		92.24%
General Service < 50 kW	155,766,602		85.56%
General Service > 50 to 999 kW	434,024,250	1,233,396	32.79%
General Service > 1000 to 4999 kW	223,644,135	531,983	0.00%
Large User	204,689,690	424,120	0.00%
Street Lights	9,647,105	25,892	0.00%
Unmetered Loads	1,881,677	-	99.80%
Embedded Distributors - Hydro One	12,809,531	91,971	0.00%
<b>TOTAL</b>	<b>1,439,198,296</b>	<b>2,307,363</b>	

Electricity - Commodity RPP	2013 Forecasted	2013 Loss Factor	2013	
Class per Load Forecast RPP	Metered kWhs			
Residential	365,948,646	1.0286	376,414,777	\$0.08395
General Service < 50 kW	133,273,905	1.0286	137,085,539	\$0.08395
General Service > 50 to 999 kW	142,316,551	1.0286	146,386,805	\$0.08395
General Service > 1000 to 4999 kW	0	1.0286	0	\$0.08395
Large User	0	1.0003	0	\$0.08395
Street Lights	0	1.0286	0	\$0.08395
Unmetered Loads	1,877,914	1.0286	1,931,622	\$0.08395
Embedded Distributors - Hydro One	0	1.0286	0	\$0.08395
<b>TOTAL</b>	<b>643,417,016</b>		<b>661,818,743</b>	<b>\$55,559,683</b>

Electricity - Commodity Non-RPP	2013 Forecasted	2013 Loss Factor	2013	
Class per Load Forecast	Metered kWhs			
Residential	30,786,660	1.0286	31,667,158	\$0.08817
General Service < 50 kW	22,492,697	1.0286	23,135,989	\$0.08817
General Service > 50 to 999 kW	291,707,698	1.0286	300,050,538	\$0.08817
General Service > 1000 to 4999 kW	223,644,135	1.0286	230,040,358	\$0.08817
Large User	204,689,690	1.0003	204,751,097	\$0.08817
Street Lights	9,647,105	1.0286	9,923,013	\$0.08817
Unmetered Loads	3,763	1.0286	3,871	\$0.08817
Embedded Distributors - Hydro One	12,809,531	1.0286	13,175,883	\$0.08817
<b>TOTAL</b>	<b>795,781,280</b>		<b>812,747,907</b>	<b>\$71,659,983</b>

Transmission - Network	Volume	2013	
Class per Load Forecast	Metric		
Residential	kWh	408,081,935	\$0.0062
General Service < 50 kW	kWh	160,221,527	\$0.0054
General Service > 50 to 999 kW	kW	1,233,396	\$3.5124
General Service > 1000 to 4999 kW	kW	531,983	\$2.6676
Large User	kW	424,120	\$2.5279
Street Lights	kW	25,892	\$1.7651
Unmetered Loads	kWh	3,871	\$0.0054
Embedded Distributors - Hydro One	kW	91,971	\$2.5279
<b>TOTAL</b>			<b>\$10,496,953</b>

Transmission - Connection	Volume	2013	
Class per Load Forecast	Metric		
Residential	kWh	408,081,935	\$0.0036
General Service < 50 kW	kWh	160,221,527	\$0.0034
General Service > 50 to 999 kW	kW	1,233,396	\$2.0763
General Service > 1000 to 4999 kW	kW	531,983	\$1.6295
Large User	kW	424,120	\$1.6586
Street Lights	kW	25,892	\$1.0434
Unmetered Loads	kWh	3,871	\$0.0034
Embedded Distributors - Hydro One	kW	91,971	\$1.6586
<b>TOTAL</b>			<b>\$6,324,633</b>

Wholesale Market Service	2013	
Class per Load Forecast		
Residential	kWh	408,081,935
General Service < 50 kW	kWh	160,221,527
General Service > 50 to 999 kW	kWh	446,437,343
General Service > 1000 to 4999 kW	kWh	230,040,358
Large User	kWh	204,751,097
Street Lights	kWh	9,923,013
Unmetered Loads	kWh	1,935,493
Embedded Distributors - Hydro One	kWh	13,175,883
<b>TOTAL</b>		<b>1,474,566,650</b>

Rural Rate Assistance	2013	
Class per Load Forecast		
Residential	kWh	408,081,935
General Service < 50 kW	kWh	160,221,527
General Service > 50 to 999 kW	kWh	446,437,343
General Service > 1000 to 4999 kW	kWh	230,040,358
Large User	kWh	204,751,097
Street Lights	kWh	9,923,013
Unmetered Loads	kWh	1,935,493
Embedded Distributors - Hydro One	kWh	13,175,883
<b>TOTAL</b>		<b>1,474,566,650</b>

2013	
4705-Power Purchased	\$127,219,666
4708-Charges-WMS	\$6,430,119
4714-Charges-NW	\$10,496,953
4716-Charges-CN	\$6,324,633
4730-Rural Rate Assistance	\$1,753,669
4750-Low Voltage	\$101,361
4751-Smart Meter Entity Charge	\$360,365
<b>TOTAL</b>	<b>152,686,767</b>

1

## **APPENDIX 3-3**

2

### **Appendix 2-H Other Operating Revenue**

Appendix 2-H  
Other Operating Revenue

USoA #	USoA Description	2010 Actual	2011 Actual	2012 Actual¹	2012 Actual¹	Bridge Year³ 2013	Bridge Year³ 2013	Test Year 2014
	Reporting Basis	CGAAP	CGAAP	CGAAP		CGAAP		CGAAP
4235	Specific Service Charges	\$ 573,349	\$ 537,171	\$ 543,360		\$ 554,885		\$ 554,855
4225	Late Payment Charges	\$ 341,691	\$ 170,595	\$ 125,188		\$ 125,500		\$ 137,500
4082	Retail Services Revenues	\$ 72,083	\$ 59,378	\$ 45,022		\$ 36,000		\$ 36,000
4080	SSS Administration Charge	\$ 129,161	\$ 137,093	\$ 143,062		\$ 146,184		\$ 146,868
4084	Service Transaction Request	\$ 2,729	\$ 1,589	\$ 1,325		\$ 960		\$ 960
4210	Rent from Electric Property	\$ 216,336	\$ 219,051	\$ 235,066		\$ 208,934		\$ 211,684
4325	Revenues from Merchandise	\$ 140,158	\$ 132,975	\$ 137,381		\$ 143,800		\$ 145,798
4355	Gain on Disposition of Property		\$ 34,623	\$ 47,166				
4360	Loss on Disposition of Property	-\$ 367,825	-\$ 292	-\$ 312				
4375	Revenues from Non-Utility Operations	\$ 1,342,217	\$ 1,167,880	\$ 518,753		\$ 540,301		\$ 564,581
4390	Misc. Non-Operating Income	\$ 146,700	\$ 130,196	\$ 88,971		\$ 128,400		\$ 108,400
4405	Interest and Dividend Income	\$ 399,141	\$ 412,032	\$ 493,844		\$ 293,990		\$ 52,712
4380	Costs and Expenses re 4325	-\$ 106,697	-\$ 110,092	-\$ 113,241		-\$ 119,800		-\$ 121,798
4380	Expenses re 4375	-\$ 376,745	-\$ 351,520	-\$ 506,973		-\$ 519,181		-\$ 538,181
Specific Service Charges		\$ 573,349	\$ 537,171	\$ 543,360	\$ -	\$ 554,885	\$ -	\$ 554,855
Late Payment Charges		\$ 341,691	\$ 170,595	\$ 125,188	\$ -	\$ 125,500	\$ -	\$ 137,500
Other Operating Revenues		\$ 420,309	\$ 417,111	\$ 424,475	\$ -	\$ 392,078	\$ -	\$ 395,512
Other Income or Deductions		\$ 1,176,949	\$ 1,415,802	\$ 665,589	\$ -	\$ 467,510	\$ -	\$ 211,512
Total		\$ 2,512,298	\$ 2,540,679	\$ 1,758,612	\$ -	\$ 1,539,973	\$ -	\$ 1,299,379

Description	Account(s)
Specific Service Charges:	4235
Late Payment Charges:	4225
Other Distribution Revenues:	4080, 4082, 4084, 4090, 4205, 4210, 4215, 4220, 4240, 4245
Other Income and Expenses:	4305, 4310, 4315, 4320, 4325, 4330, 4335, 4340, 4345, 4350, 4355, 4360, 4365, 4370, 4375, 4380, 4385, 4390, 4395, 4398, 4405, 4415

Note: Add all applicable accounts listed above to the table and include all relevant information.

Account Breakdown Details

For each "Other Operating Revenue" and "Other Income or Deductions" Account, a detailed breakdown of the account components is required. See the example below for Account 4405, Interest and Dividend Income.

Account 4405 - Interest and Dividend Income

	2010 Actual	2011 Actual	2012 Actual²	2012 Actual²	Bridge Year	Bridge Year	Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP		CGAAP		CGAAP
Short-term Investment Interest	\$ 399,141	\$ 412,032	\$ 493,844		\$ 293,990		\$ 81,680
Bank Deposit Interest							
Miscellaneous Interest Revenue							
etc.¹							
Total	\$ 399,141	\$ 412,032	\$ 493,844	\$ -	\$ 293,990	\$ -	\$ 81,680

Account 4235 - Specific Service Charges

	2010 Actual	2011 Actual	2012 Actual²	2012 Actual²	Bridge Year	Bridge Year	Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP		CGAAP		CGAAP
Collection Notices/Documents	-	-	\$ 2,160		\$ 1,920		\$ 1,920
Change of Occupancy/Account Set Up Fee	\$ 267,975	\$ 218,400	\$ 248,070		\$ 242,700		\$ 242,700
Reconnection	\$ 27,415	\$ 19,750	\$ 33,790		\$ 28,085		\$ 28,085
NSF Cheque Fee	\$ 9,210	\$ 7,000	\$ 6,165		\$ 8,400		\$ 8,400
Miscellaneous	\$ 268,749	\$ 292,021	\$ 253,175		\$ 273,750		\$ 273,750
Total	\$ 573,349	\$ 537,171	\$ 543,360	\$ -	\$ 554,855	\$ -	\$ 554,855

Account 4375 - Revenues from Non-Utility Operations

	2010 Actual	2011 Actual	2012 Actual²	2012 Actual²	Bridge Year	Bridge Year	Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP		CGAAP		CGAAP
Streetlight Service Billings	\$ 376,745	\$ 351,520	\$ 506,973		\$ 519,181		\$ 538,181
OPA Revenue	\$ 362,341	\$ 784,920					
Water & Sewer Billings	\$ 603,131						
Third Party Charges	\$ -	\$ 31,440	\$ 11,780		\$ 21,120		\$ 26,400
Total	\$ 1,342,217	\$ 1,167,880	\$ 518,753	\$ -	\$ 540,301	\$ -	\$ 564,581

Account 4390 - Miscellaneous Non-Operating Income

	2010 Actual	2011 Actual	2012 Actual²	2012 Actual²	Bridge Year	Bridge Year	Test Year
Reporting Basis	CGAAP	CGAAP	CGAAP		CGAAP		CGAAP
Scrap Sales	\$ 126,863	\$ 83,462	\$ 48,021		\$ 85,000		\$ 65,000
Discounts Earned	\$ 15,482	\$ 14,077	\$ 11,526		\$ 13,000		\$ 13,000
Miscellaneous	\$ 4,355	\$ 32,657	\$ 29,423		\$ 30,400		\$ 30,400
Total	\$ 146,700	\$ 130,196	\$ 88,971	\$ -	\$ 128,400	\$ -	\$ 108,400

- Notes:
- 1

List and specify any other interest revenue.
- 2

If the applicant is adopting IFRS or an alternate accounting standard as of January 1, 2012 for financial reporting purposes, 2011 must be presented on both a CGAAP and MIFRS (or alternate accounting standard) basis.
- 3

If the applicant is adopting IFRS or an alternate accounting standard as of January 1, 2013 for financial reporting purposes, 2012 must be presented on both a CGAAP and MIFRS (or alternate accounting standard) basis.
- 4

If the applicant is adopting IFRS or an alternate accounting standard as of January 1, 2014 for financial reporting purposes, 2013 must be presented on both a CGAAP and MIFRS (or alternate accounting standard) basis.

1

## **APPENDIX 3-4**

2

### **Appendix 2-I Load Forecast CDM Adjustment Work Form (2014)**

## Appendix 2-I Load Forecast CDM Adjustment Work Form (2014)

Input the 2011-2014 CDM target in Cell B21.

Input the measured results for 2011 CDM programs for each of the years 2011 and persistence into 2012, 2013 and 2014 into cells B29 to E29. These results are taken from the final 2011 CDM Report issued by the OPA for that distributor in the fall of 2012.

Measured results for 2012 CDM programs for each of the years 2012 and persistence into 2013 and 2014 are input into cells C30 to E30. These results are taken from the final 2012 CDM Report issued by the OPA for that distributor in the fall of 2013. Until that report is issued, the distributor should use the results from the preliminary 2012 CDM Report issued in the spring of 2013.

Based on these inputs, the residual kWh to achieve the 4 year CDM target is allocated so that there is an equal incremental increase in each of the years 2012, 2013 and 2014.

4 Year (2011-2014) kWh Target:					
	73,660,000				
	2011	2012	2013	2014	Total
2011 CDM Programs	17.49%	17.44%	17.44%	17.33%	69.69%
2012 CDM Programs		5.05%	5.05%	5.05%	15.15%
2013 CDM Programs			5.05%	5.05%	10.10%
2014 CDM Programs				5.05%	5.05%
<b>Total in Year</b>	<b>17.49%</b>	<b>22.49%</b>	<b>27.54%</b>	<b>32.48%</b>	<b>100.00%</b>
kWh					
2011 CDM Programs	12,883,912.00	12,844,986.00	12,842,708.00	12,764,930.00	51,336,536.00
2012 CDM Programs		3,720,577.00	3,720,577.00	3,720,577.00	11,161,731.00
2013 CDM Programs			3,720,577.67	3,720,577.67	7,441,155.33
2014 CDM Programs				3,720,577.67	3,720,577.67
<b>Total in Year</b>	<b>12,883,912.00</b>	<b>16,565,563.00</b>	<b>20,283,862.67</b>	<b>23,926,662.33</b>	<b>73,660,000.00</b>

From each of the 2006-2010 CDM Final Report, 2011 CDM Final Report, and the 2012 CDM Final Report, issued by the OPA for the distributor, the distributor should input the "gross" and "net" results of the cumulative CDM savings for 2014 into cells D31 to E33. The model will calculate the cumulative savings for all programs from 2006 to 2012 and determine the "net" to "gross" factor "g".

The Board has determined that the "net" number should be used in its Decision and Order with respect to Centre Wellington Hydro Ltd.'s 2013 Cost of Service rates (EB-2012-0113). This approach has also been used in Settlement Agreements accepted by the Board in other 2013 applications. The distributor should select whether the adjustment is done on a "net" or "gross" basis, but must support a proposal for the adjustment being done on a "gross" basis.

Net-to-Gross Conversion				
Is CDM adjustment being done on a "net" or "gross" basis?	net			
	"Gross" kWh	"Net" kWh	Difference kWh	"Net-to-Gross" Conversion Factor ("g")
Persistence of Historical CDM programs to 2014				
2006-2010 CDM programs				
2011 CDM program				
2012 CDM program				
<b>2006 to 2011 OPA CDM programs: Persistence to 2013</b>	0	0	0	0.00%

The default values represent the factor that each year's CDM program is factored into the manual CDM adjustment. Distributors can choose alternative weights of "0", "0.5" or "1" from the drop-down menu for each cell, but must support its alternatives.

These factors do not mean that CDM programs are excluded, but also reflect the assumption that impacts of 2011 and 2012 programs are already implicitly reflected in the actual data for those years that are the basis for the load forecast prior to any manual CDM adjustment.

**Cambridge and North Dumfries Hydro Inc.**

File Number: EB-2013-0116  
 Exhibit: 3  
 Appendix: 3-4  
 Page: 1 of 2

Filed: October 1, 2013

**Cambridge and North Dumfries Hydro Inc.**

File Number: EB-2013-0116  
 Exhibit: 3  
 Appendix: 3-4  
 Page: 2 of 2

Filed: October 1, 2013

Weight Factor for Inclusion in CDM Adjustment to 2014 Load Forecast				
	2011	2012	2013	2014
<b>Weight Factor for each year's CDM program impact on 2014 load forecast</b>	<b>0</b>	<b>0.5</b>	<b>1</b>	<b>0.5</b>
<b>Default Value selection rationale.</b>	Persistence of 2011 CDM programs for the full year of 2012 means that all of 2011 CDM impact is assumed to be in the base forecast before the CDM Adjustment			
	50% of 2012 CDM impact is assumed reflected in base forecast based on 1/2 year rule.	Full year impact of 2013 CDM programs on adjustment for 2014 load forecast	Only 50% of 2014 CDM impact is used based on a half year rule	

Utility can select "0", "0.5", or "1" from drop-down list

The Amount used for the CDM threshold of the LRAMVA is the kWh that will be used to determine the base amount for the LRAMVA balance for 2014, for assessing performance against the four-year target. The base amount for 2011-2013 is 0 (zero) for 2014 Cost of Service applications, as the utility rebased prior to the 2011-2014 CDM programs, and there was no adjustment to reflect the impacts of the 2011-2014 programs on the load forecast used to determine their last cost of service-based rates.

The proposed loss factor should correspond with the loss factor calculated in Appendix 2-R

The Manual Adjustment for the 2014 Load Forecast is the amount manually subtracted from the load forecast derived from the base forecast from historical data, and is intended to reflect the further CDM savings that the distributor needs to achieve assuming that they meet 100% of the 2011-2014 CDM target that is a condition of their target.

If the distributor has developed their load forecast on a system purchased basis, then the manual adjustment should be on system purchased basis, including the adjustment for losses. If the load forecast has been developed on a billed basis, either on a system basis or on a class-specific basis, the manual adjustment should be on a billed basis, excluding losses.

The distributor should determine the allocation of the savings to all customer classes in a reasonable manner, for both the LRAMVA and for the load forecast adjustment.

	2011	2012	2013 kWh	2014	Total for 2014
Amount used for CDM threshold for LRAMVA (2014)	12,764,930.00	3,720,577.00	3,720,577.67	3,720,577.67	23,926,662.33
Manual Adjustment for 2014 Load Forecast (billed basis)	-	1,860,288.50	3,720,577.67	1,860,288.83	7,441,155.00
Proposed Loss Factor (TLF)	4.79%	Format: X.XX%			
Manual Adjustment for 2014 Load Forecast (system purchased basis)	-	1,949,396.32	3,898,793.34	1,949,396.67	7,797,586.32
Manual adjustment uses "gross" versus "net" (i.e. numbers multiplied by (1 + g). The Weight factor is also used calculate the impact of each year's program on the CDM adjustment to the 2014 load forecast.					