

1 **EXHIBIT 3 – OPERATING REVENUE**

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33 ATTACHMENT 3-1 LOAD FORECAST MODEL

1 **LOAD AND REVENUE FORECAST**

2 This Exhibit provides the details of Milton Hydro Distribution Inc.'s ("Milton Hydro") operating
3 revenue for 2011 OEB Approved, 2011 Actual, 2012 Actual, 2013 Actual, 2014 Actual, the 2015
4 Bridge Year and the 2016 Test Year. This Exhibit also provides a detailed variance analysis by
5 rate classification of the operating revenue components. Distribution revenue excludes revenue
6 from commodity sales.

7 Milton Hydro is proposing a total Service Revenue Requirement of \$19,109,522 for the 2016
8 Test Year. This amount includes a Base Revenue Requirement of \$17,207,367 plus revenue
9 offsets of \$1,902,155 to be recovered through Other Revenue.

10 Other Revenue include Late Payment charges, Specific Service charges, Rent from Electric
11 Property, Miscellaneous Service revenues, Standard Supply Service ("SSS") Administrative
12 charges and Interest. A summary of these operating revenues together with a materiality
13 analysis of variances is presented in Table 3-15.

14 The following Table 3-1 summarizes Milton Hydro's total operating revenue. Revenue for each
15 of the actual years is from Milton Hydro's audited Financial Statements which reconcile to the
16 annual filings with the OEB. The 2016 Test Year distribution revenue is provided on the basis of
17 both existing and proposed distribution rates. Revenue for the General Service >50 kW, the
18 General Service 50 – 999 kW, General Service 1000 – 4999 and Large User customer classes
19 are net of transformer allowance credits to eligible customers within these customer classes.

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Table 3-1
Summary of Operating Revenue

Description	2011 OEB Approved	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Bridge Year	2016 Test Year at Existing Rates	2016 Test Year at Proposed Rates
<u>Distribution Revenues</u>								
Residential	8,408,648	8,333,241	8,771,436	9,471,141	9,892,531	10,462,721	10,791,873	11,780,108
GS < 50 kW	1,700,610	1,790,780	1,875,938	1,951,409	2,035,643	2,039,830	2,135,416	2,182,114
GS >50 to 999 kW	1,483,511	1,372,975	1,473,965	1,525,725	1,569,042	1,622,836	1,656,237	2,050,581
GS >1000 to 4999 kW	695,085	752,362	794,873	685,067	674,194	705,631	651,021	395,338
Large Use	543,950	467,000	515,443	611,690	684,767	708,590	708,569	469,596
Sentinel Lights	9,386	6,918	12,911	14,529	14,408	15,410	14,584	32,876
Street Lighting	119,370	90,126	193,697	228,415	263,662	251,500	219,504	253,593
Unmetered and Scattered	44,620	42,041	37,900	38,914	39,815	39,815	39,517	43,161
Total Distribution Revenue	13,005,180	12,855,444	13,676,163	14,526,890	15,174,062	15,846,333	16,216,720	17,207,367
<u>Other Revenue</u>								
Specific Service Charges	403,492	520,106	490,084	651,385	640,410	625,319	677,992	677,992
Late Payment Charges	156,670	161,220	170,412	197,390	174,673	182,084	191,188	191,188
Other Operating Revenues	172,082	181,462	176,956	174,630	172,011	178,087	292,287	292,287
Other Income	727,155	754,018	618,711	688,342	738,925	716,934	740,688	740,688
Total Other Revenue	1,459,399	1,616,806	1,456,163	1,711,747	1,726,019	1,702,424	1,902,155	1,902,155
Total Operating Revenue	14,464,579	14,472,250	15,132,326	16,238,637	16,900,081	17,548,757	18,118,875	19,109,522

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1 **Summary of Load and Customer/Connection Forecast**

2 The purpose of this evidence is to present the process used by Milton Hydro to prepare the
3 weather normalized load and customer/connection forecast used to design the proposed 2016
4 Test Year distribution rates.

5 In summary, as a starting point Milton Hydro has used the same regression analysis
6 methodology approved by the Ontario Energy Board (the "OEB") and accepted by intervenors in
7 Milton Hydro's 2011 Cost of Service ("COS") Application EB-2010-0137. Milton Hydro has
8 updated the analysis for actual power consumed by each customer class to May 2015. As
9 described below, the updated regression analysis includes all the variables used in the 2011
10 COS application.

11 The overall process of load forecasting by conducting a regression analysis on historical
12 electricity consumption for the individual customer classes to produce an equation that will
13 predict purchases is appropriate. As Milton Hydro bills 100% of its customers monthly, the
14 monthly consumption data for the amount of electricity kilowatts ("kWhs") consumed by
15 customers in the respective class is a known quantity. With a regression analysis, the customer
16 class consumption can be related to other monthly explanatory variables such as heating
17 degree days and cooling degree days which occur in the same month. The results of the
18 regression analysis produces an equation that predicts the class consumption based on the
19 explanatory variables. This prediction model is then used as the basis to forecast the total level
20 of weather normalized class consumption for the 2015 Bridge Year and the 2016 Test Year. A
21 detailed explanation of the process is provided later in this evidence.

22 Two significant advantages of using the individual customer class consumption for predicting
23 the 2015 Bridge Year and the 2016 Test Year monthly class consumption are:

- 24 • The estimation or conversion error of allocating a distributor's total utility wide kWh
25 purchases across customer classes for monthly predictions is removed as there is no
26 conversion when actual class consumption is used; and
- 27 • Using actual customer class consumption already accounts for historical conservation
28 and demand management ("CDM") as it is already part of the actual customer class
29 monthly usage.

1 Milton Hydro's smart meter program was fully deployed by the end of 2010 and Milton Hydro
2 believes that the data that may be derived from the actual time of day usage would provide even
3 more accurate forecasts. However, Milton Hydro determined that four (4) complete years, 2011
4 to 2014, of smart meter usage is not long enough to accurately make a prediction on. By the
5 next COS application for 2021 Milton Hydro will have nine (9) years of hourly customer usage
6 which may provide for accurate forecasts if it can be agreed that the nine (9) year time period is
7 appropriate.

8 Milton Hydro's load forecast methodology used in its 2011 COS application was tested by
9 intervenors with different variables and except for the addition of one (1) new customer in the
10 General Service 1000 to 4999 class and a kWh adjustment to the Large User class, it was
11 determined that the variables used by Milton Hydro resulted in the most accurate load forecast
12 and was agreed to by all intervenors as part of the Settlement Agreement..

13 Based on the acceptance of Milton Hydro's methodology in its 2011 COS application the same
14 variables are used in this regression analysis for determining the load forecast for the 2015
15 Bridge Year and the 2016 Test Year. Milton Hydro has used the actual heating and cooling
16 degree day in the load forecast up to May 2015. The variables used are: the ten (10) year
17 average for heating and cooling degree days for the period June 2016 to December 2016; the
18 number of days in the month; the spring/fall flag; the August 2003 blackout flag and the number
19 of Milton Hydro customers for calculating the forecast for the Residential and General Service
20 <50 kW customer classes and Milton Hydro added the number of peak hours for the General
21 Service 50 – 999 kW customer class.

22 Table 3-2 provides a summary of the actual and the weather normalized load and
23 customer/connection forecast results from the regression analysis.

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1 the General Service 1000 – 4999 kW, Large User, Street Lights, Sentinel Lights and Unmetered
2 Load customer classes. The consumption used for these customer classes is the total for each
3 year.

4 Milton Hydro's customer count forecast for the Residential class for 2015 Bridge Year and the
5 2016 Test Year is based on the expected growth determined through discussions with
6 developers and their subdivision plans submitted to Milton Hydro. Based on this information
7 Milton Hydro has increased the Residential customer count for the 2015 Bridge Year and the
8 2016 Test Year by 1,000 and 1,500 customers respectively. For the purposes of the monthly
9 forecast Milton Hydro includes one-twelve (1/12th) of the expected increase in each month
10 beginning in June 2015. Milton Hydro has used the actual monthly kWh and customer count for
11 the January to May 2015 Bridge Year.

12 The customer count forecast for the General Service <50 kW and General Service 50 – 999
13 customer class is calculated using the geomean calculated in the Rate Class Customer Model
14 tab in the load forecast model. Milton Hydro has used the actual monthly kWh consumption and
15 customer count for the January to May 2015 Bridge Year and incremented each month after by
16 one-twelve (1/12th) of the incremental change calculated through the regression model.

17 Milton Hydro does not expect any growth in the number of customers or connections for the
18 General Service 1000 – 4999 kW, Large Users and the Sentinel Light customer classes and
19 therefore Milton Hydro has held the number of customers/connections constant for the purposes
20 of this load forecast. In May 2015 Milton Hydro contacted all twenty (20) Unmetered Load
21 customers in writing to confirm the number of connections and the load being billed. Milton
22 Hydro received responses from six (6) customers and has adjusted the number of connections
23 and load accordingly and has held the number of connections constant as all new connections
24 are metered.

25 Milton Hydro had one customer move from the General Service 1000 – 4999 kW class to the
26 Large User customer class in May of 2013. For the purposes of this load forecast Milton Hydro
27 adjusted the January to April customer count and kWh consumption for both customer classes
28 as if this customer had been a Large User for the entire year of 2013. In early 2014 Milton

1 Hydro gained a customer in the General Service 1000 – 4999 which accounts for the customer
2 count for this customer going back to twelve (12).

3 The forecast for each individual customer class has been adjusted for the expected
4 Conservation and Demand Management (“CDM”) results for the 2015 Bridge Year and the 2016
5 Test Year. The CDM calculations are discussed further in this EXHIBIT.

6 For those rate classes that use kW for the distribution volumetric billing determinant, an
7 adjustment factor is applied to the class energy forecast based on the historical relationship
8 between kW and kWh.

9 **Load Forecast**

10 As discussed above, Milton Hydro used the following variables in the regression model: the ten
11 (10) year average for heating and cooling degree days for the period June 2015 to December
12 2016 as actual heating and cooling days use up to and including May 2015; the number of days
13 in the month; the spring/fall flag; the August 2003 blackout flag and the number of Milton Hydro
14 customers for calculating the forecast for the Residential and General Service <50 kW customer
15 classes and added the number of peak hours for the General Service 50 – 999 kW customer
16 class. An explanation of the variables is provided below.

17 Milton Hydro has monthly data back to 2001 for each customer class in this regression model
18 providing 168 monthly data points plus the first five months of 2015 for a total of 173 data points
19 for each weather sensitive customer class.

20 **Variables**

21 **The Heating and Cooling Degree Days** (“HDD” & “CDD”) are derived from the Government of
22 Canada’s Climate Daily Data Reports for each month as read at the Toronto International
23 Airport. The HDD for a given day are the number of degree Celsius that the mean temperature
24 is below 18°C. The CDD for a given day are the number of degree Celsius that the mean
25 temperature is above 18°C. Milton Hydro has not tested any different mean temperature
26 ranges. Milton Hydro updated two regression models; one for ten years average HDD & CDD
27 from May 2006 to May 2015 and June 2005 to June 2014; the second model was updated for
28 twenty years average HDD & CDD from May 1996 to May 2015 and June 1995 to June 2014 as

1 required in the Filing Guidelines. A comparison of the forecast results are set out in Table 3-10
2 below.

3 **The number of days in the month** are based on the calendar days including leap years and
4 the number of days in a month impacts the consumption for a particular month, the more days in
5 a month the potential for more actual kWh consumption and vice versa.

6 **The spring/fall flag** is used to separate the seasons with a "0" representing winter and summer
7 and a "1" representing spring and fall. The spring/fall flag is used to differentiate the actual
8 consumption over the season change.

9 **The August 2003 blackout flag** continues to be used as this was a significant event that left
10 most of Ontario without electricity including 100% of the electricity customers in the Town of
11 Milton

12 **The number of Milton Hydro customers** as the Town of Milton and therefore Milton Hydro is
13 one of the fastest growing communities in Ontario. Milton Hydro used this variable to reflect the
14 growth in customers. For the 2015 Bridge Year Milton Hydro used 1,000 new Residential
15 customers and 1,500 new Residential customers in the 2016 Test Year.

16 **The number of peak hours** of the day for the General Service >50 kW is used as this has been
17 shown to be statistically significant previously for this customer class. Peak hours are
18 determined from the calendar and exclude weekends and statutory holidays.

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20 **APPROACH TO KILOWATT DEMAND FORECAST**

21 Milton Hydro has five customer classes that are billed on kW demand for variable distribution
22 charges. These customer classes are the General Service 50 – 999 kW, General Service 1000
23 – 4999 kW, Large Users, Street Lights and Sentinel Lights. The kW forecast for these customer
24 classes is based on the conversion of the customer class forecast for kWh consumption to kW
25 demand. Milton Hydro has used the model and the historical ratio of kW demand to kWh
26 consumption and applied the average of the ratios to the forecasted customer class kWh

1 consumption data for the 2015 Bridge Year and the 2016 Test Year to forecast the respective
2 kW demand.

3 **CDM Adjustment**

4 A manual adjustment has been made to reflect the impact for 50% of 2014, 2015 Bridge Year
5 and 50 % of the 2016 Test Year CDM programs on the load forecast. Milton Hydro has made
6 this adjustment to reflect the “net” impact of the CDM programs on the load forecast.

7 Milton Hydro prepared its regression analysis based on actual monthly billed electricity
8 consumed by customers in each weather sensitive customer class up to and including 2014 and
9 the annual actual consumption for the non-weather sensitive customer classes. By using actual
10 customer consumption in the regression analysis the savings realized by customers for CDM is
11 reflected in their actual consumption and therefore Milton Hydro submits that by using any
12 persistence of CDM programs prior to the half year rule for 2014 CDM programs would be
13 double counting the CDM savings related to these previous years.

14 Therefore, for the 2016 Test Year forecast Milton Hydro has used one-half of the 2014 OPA
15 preliminary net kWh savings plus 2015 new program savings plus one-half of the 2016 new
16 program savings. The OPA preliminary savings for 2014 is provided in Table 3-3 below by
17 customer class. The CDM savings expected for 2015 and 2016 are presented in Table 3-4
18 which is derived from Milton Hydro's 2015 – 2020 CDM Plan submitted and accepted by the
19 IESO on June 8, 2015.

20 Milton Hydro proposed to update the 2014 CDM results once the OPA/IESO Final Report is
21 released for the 2014 program CDM savings.

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1 Table 3-3

2 2014 IESO (OPA) Preliminary Results

#	Initiative	Unit	Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period)			
			2011	2012	2013	2014
Consumer Program						
1	Appliance Retirement	Appliances				22,143
2	Appliance Exchange	Appliances				2,481
3	HVAC Incentives	Equipment				136,178
4	Conservation Instant Coupon Booklet	Measures				68,110
5	Bi-Annual Retailer Event	Measures				570,217
6	Retailer Co-op	Items				-
23	Home Assistance Program	Homes				32,339
7	Residential Demand Response (switch/pstat)†	Devices				-
8	Residential Demand Response (IHD)†	Devices				-
9	Residential New Construction	Homes				3,056,327
Residential Total						MWh 3,887.80
Business Program						
11	Direct Install Lighting	Projects				52,751
12	Building Commissioning	Buildings				-
13	New Construction	Buildings				-
14	Energy Audit	Audits				16,081
15	Small Commercial Demand Response (switch/pstat)†	Devices				-
16	Small Commercial Demand Response (IHD)†	Devices				-
17	Demand Response 3†	Facilities				-
10	Retrofit	Projects				298,671
General Service <50kW						MWh 367.50
10	Retrofit	Projects				1,122,853
General Service 50 - 999kW						MWh 1,122.85
Industrial Program						
18	Process & System Upgrades	Projects				-
19	Monitoring & Targeting	Projects				-
20	Energy Manager	Projects				-
22	Demand Response 3†	Facilities				-
10	Retrofit	Projects				133,399
General Service 1000 - 4999kW						MWh 133.40

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5 As discussed above, Milton Hydro has calculated the 2015 Bridge Year and 2016 Test Year
 6 CDM saving based on its 2015 – 2020 CDM Plan submitted and accepted by the IESO on June
 8, 2015. This plan is for new CDM programs and does not include persistence of previous CDM

1 programs. The following Table 3-4 sets out the programs, the planned years of implementation
 2 and CDM kWh saving expected.

3 **Table 3-4**
 4 Breakdown of 2015 – 2020 CDM by Program

CE Tool 2015-05-21 Milton_Tab_CDM_Plan_Summary	2015	2016	2017	2018	2019	2020	Total	Customer Class
Residential								
Heating & Cooling	137.0	165.0	-	-	-	-	302.0	
Coupon	277.3	277.3	277.3	277.3	277.3	277.3	1,663.8	
New Home Construction	323.7	378.9	378.9	378.9	378.9	378.9	2,218.2	
HAP	36.9	36.9	36.9	36.9	36.9	36.9	221.4	
New program	-	-		775.0	775.0	775.0	2,325.0	
	774.9	858.1	693.1	1,468.1	1,468.1	1,468.1	6,730.4	Residential
Business								
ERII	1,931.9	1,908.5	1,945.4	1,988.0	1,988.0	1,988.0	11,749.8	Table XX Below
DIL (GS<50)	10.8	7.0	14.0	29.0	43.0	43.0	146.8	<50 kW
HPNC	114.0	114.0	171.0	114.0	171.0	114.0	798.0	50 - 999 kW
Audit Funding	151.7	151.7	151.7	151.7	151.7	151.7	910.2	50 - 999 kW
PSUI	-	475.0	-	16,245.0	-	-	16,720.0	>1000 kW
New Commercial Benchmar	40.0	40.0	40.0	49.0	49.0	49.0	267.0	50 - 999 kW
Street Lighting	1,555.1	2,221.6	1,199.6				4,976.3	
Future new program-unassig	-			1,163.0	1,163.0	1,163.0	3,489.0	
	3,803.5	4,917.8	3,521.7	19,739.7	3,565.7	3,508.7	39,057.1	
	4,578.4	5,775.9	4,214.8	21,207.8	5,033.8	4,976.8	45,787.5	

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 7 The ERII program in Table 3-4 above is allocated to the different General Service customer
 8 classes. Milton Hydro has allocated the ERII program for the 2015 Bridge Year and the 2016
 9 Test Year by the percent of uptake over the last four year CDM period 2011 to 2014. The
 10 results are provided in the following Table 3-5.

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1 **Table 3-5**

2 **Allocation of 2015 Test Year & 2016 Bridge Year ERII kWh Savings**

ERII - 4 year average of uptake	Actual % Share	2015 Bridge Year kWh	2016 Test Year kWh
GS<50	19.53%	377.2	372.6
GS>50	61.00%	1178.4	1164.1
GS>1000	8.24%	159.2	157.2
GS>5000	11.24%	217.1	214.5
	100.00%	1931.9	1908.5

4 Once the CDM savings are determined for the above table based on the IESO (formerly OPA)
 5 preliminary savings for 2014 and the allocation to customer classes for the 2015 to 2020
 6 programs the savings by customer class are totaled in order to determine the CDM adjustments
 7 required by the Filing Guidelines. The following Table 3-6 provides the total by customer class
 8 for 2014, the 2015 Bridge Year and the 2016 Test Year to be used for the monthly CDM
 9 adjustments to the weather sensitive customer classes and the annual adjustment for the non-
 10 weather sensitive customer classes. The 2014 and the 2016 Bridge Year CDM savings are
 11 based on the half year rule.

12 **Table 3-6**

13 **Summary of CDM kWh Savings by Customer Class**

Class	2014 Persistence 50%	2015 Bridge Year	2016 Test Year 50%
Residential	1,943,898	774,900	858,100
General Service <50 kW	183,752	388,008	379,639
General Service 50 - 999 kW	561,426	1,484,091	1,469,818
General service 1000 - 4999 kW	66,700	159,162	632,234
Large Users	0	217,139	0
Street Lights		1,555,100	2,221,600

15 Milton Hydro has calculated the monthly and annual adjustments based on the methodology
 16 previously used in other LDC applications and a consistent approach as outlined in the filing
 17 guidelines. Milton Hydro has calculated the monthly increment for 2014 based on 50% of the
 18 2014 CDM savings. There is no persistence for the 2011 to 2014 CDM programs included in

1 the forecast except that the 2014 savings as programs are assumed to be implemented evenly
2 over the year, hence the half year approach for persistence in the 2016 Test Year.

3 The 2015 Bridge Year monthly increments are calculated based on 50% of the 2014 savings as
4 persistent into the 2015 Bridge Year and 50% of the 2015 Bridge Year CDM savings. The 2016
5 Test Year monthly increments are calculated on 50% of the 2014 savings as persistent into the
6 2015 Bridge Year, 100% of the 2015 Bridge Year savings and 50% of the 2016 Test Year
7 savings.

8 Milton Hydro calculated the monthly incremental CDM savings to apply to the monthly weather
9 normalized forecast determined by the model. The monthly incremental CDM savings are also
10 calculated for the non-weather sensitive customer classes but totaled for each year and
11 subtracted from the annual kWh determined in the load forecast. The Street Light customer
12 class is not weather sensitive but does have significant CDM savings through the conversion of
13 street lights to LED and therefore Milton Hydro has reflected this CDM savings in this forecast.

14 The following Table 3-7 sets out the data and results of the method used to calculate the
15 monthly increment used to calculate the monthly and annual CDM savings used in the Milton
16 Hydro's load forecast. The detailed calculations are provided in the Excel version of the load
17 forecast. Milton Hydro has provided the Excel version of the load forecast in this filing.

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1 **Table 3-7**

2 **Calculation of CDM kWh for Monthly Change by Customer Class**

Customer Weather Sensitive Class ("WS") / Non-Weather Sensitive ("NWS")	WS or NWS	OPA kWh Net Savings Persistence	OPA kWh Annual Net Savings	50% of Annual Net Savings	OPA kWh Net Savings With First Year 50%	Change Year Over Year	Monthly Increment (Year/78)
Residential	WS						
2014		0	3,887,795	1,943,898	1,943,898	1,943,898	24,922
2015		1,943,898	774,900	387,450	2,331,348	387,450	4,967
2016		2,718,798	858,100	429,050	3,147,848	488,658	6,265
General Service <50 kW	WS						
2014		0	367,503	183,752	183,752	183,752	2,356
2015		183,752	388,008	194,004	377,756	194,004	2,487
2016		571,760	379,639	189,819	761,579	219,666	2,816
General Service 50 - 999 kW	WS						
2014		0	1,122,853	561,426	561,426	561,426	7,198
2015		561,426	742,045	742,045	1,303,472	742,045	9,513
2016		2,045,517	734,909	734,909	2,780,426	849,070	10,886
General service 1000 - 4999 kW	NWS						
2014		-	133,399	66,700	66,700	66,700	855
2015		66,700	159,162	79,581	146,280	79,581	1,020
2016		225,861	632,234	316,117	541,978	328,360	4,210
Large Users	NWS						
2014		-	-	-	-	-	-
2015		-	217,139	108,570	108,570	108,570	1,392
2016		217,139	-	-	217,139	16,703	214
Street Lights	NWS						
2014		0	0	0	0	0	0
2015		0	1,555,100	777,550	777,550	777,550	9,969
2016		1,555,100	2,221,600	1,110,800	2,665,900	1,230,423	15,775

3 The following Table 3-8 summarizes the monthly CDM adjustments. The annual amount of CDM savings for the non-weather sensitive customer classes for the 2015 Bridge Year is 50% of the 2014 CDM savings plus the monthly calculated kWh savings for the 2015 Bridge Year based on 50% of the CDM savings. The CDM savings for the 2016 Test Year is the total of the monthly CDM savings calculated as 50% of the 2014 savings plus 2015 monthly savings plus the 2016 Test Year monthly savings at 50%. The Table 3-8 shows the monthly savings and the annual total for the 2015 Bridge Year and the 2016 Test Year. The total annual CDM savings is

1 subtracted from the load forecast quantities for the General Service 1000 – 4999 kW, the Large
 2 Users and the Street Light.

3 The monthly CDM savings for the weather sensitive customer classes are calculated in the
 4 same manner except the monthly load forecast is adjusted for the 2015 Bridge Year and the
 5 2016 Test Year as the load forecast is based on monthly actual load data to determine the
 6 weather adjusted and CDM adjusted load forecast for each class. These calculations are
 7 provided in the Excel version of the load forecast model. The next Table 3-9 provides the
 8 methodology for calculating the monthly CDM savings which is consistent with previous load
 9 forecast applications.

10 **Table 3-8**

11 **Monthly CDM kWh Adjustments by Class & Annual Adjustment for GS >1000 kW**

Residential		General Service <50 kW		General Service 50 - 999 kW		General service 1000 - 4999 kW			Large Users			Street Lights		
Month	CDM Reduction for 2015 - 2020 Programs	Month	CDM Reduction for 2015 - 2020 Programs	Month	CDM Reduction for 2015 - 2020 Programs	Month	CDM Reduction for 2015 - 2020 Programs	Annual	Month	CDM Reduction for 2015 - 2020 Programs	Annual	Month	CDM Reduction for 2015 - 2020 Programs	Annual
Dec-14	299,061	Dec-14	28,269	Dec-14	86,373	Dec-14	10,261		Dec-14	0		Dec-14	0	
Jan-15	166,959	Jan-15	17,800	Jan-15	56,299	Jan-15	6,579		Jan-15	1,392		Jan-15	9,969	
Feb-15	171,926	Feb-15	20,287	Feb-15	65,812	Feb-15	7,599		Feb-15	2,784		Feb-15	19,937	
Mar-15	176,893	Mar-15	22,774	Mar-15	75,326	Mar-15	8,619		Mar-15	4,176		Mar-15	29,906	
Apr-15	181,861	Apr-15	25,262	Apr-15	84,839	Apr-15	9,639		Apr-15	5,568		Apr-15	39,874	
May-15	186,828	May-15	27,749	May-15	94,353	May-15	10,660		May-15	6,960		May-15	49,843	
Jun-15	191,795	Jun-15	30,236	Jun-15	103,866	Jun-15	11,680		Jun-15	8,352		Jun-15	59,812	
Jul-15	196,763	Jul-15	32,723	Jul-15	113,379	Jul-15	12,700		Jul-15	9,743		Jul-15	69,780	
Aug-15	201,730	Aug-15	35,210	Aug-15	122,893	Aug-15	13,720		Aug-15	11,135		Aug-15	79,749	
Sep-15	206,697	Sep-15	37,698	Sep-15	132,406	Sep-15	14,741		Sep-15	12,527		Sep-15	89,717	
Oct-15	211,665	Oct-15	40,185	Oct-15	141,920	Oct-15	15,761		Oct-15	13,919		Oct-15	99,686	
Nov-15	216,632	Nov-15	42,672	Nov-15	151,433	Nov-15	16,781		Nov-15	15,311		Nov-15	109,654	
Dec-15	221,599	Dec-15	45,159	Dec-15	160,946	Dec-15	17,802	146,280	Dec-15	16,703	108,570	Dec-15	119,623	777,550
Jan-16	227,864	Jan-16	47,976	Jan-16	171,832	Jan-16	22,011		Jan-16	16,917		Jan-16	135,398	
Feb-16	234,129	Feb-16	50,792	Feb-16	182,717	Feb-16	26,221		Feb-16	17,131		Feb-16	151,172	
Mar-16	240,394	Mar-16	53,608	Mar-16	193,603	Mar-16	30,431		Mar-16	17,345		Mar-16	166,947	
Apr-16	246,659	Apr-16	56,424	Apr-16	204,488	Apr-16	34,640		Apr-16	17,560		Apr-16	182,722	
May-16	252,923	May-16	59,241	May-16	215,374	May-16	38,850		May-16	17,774		May-16	198,496	
Jun-16	259,188	Jun-16	62,057	Jun-16	226,259	Jun-16	43,060		Jun-16	17,988		Jun-16	214,271	
Jul-16	265,453	Jul-16	64,873	Jul-16	237,145	Jul-16	47,270		Jul-16	18,202		Jul-16	230,046	
Aug-16	271,718	Aug-16	67,689	Aug-16	248,030	Aug-16	51,479		Aug-16	18,416		Aug-16	245,820	
Sep-16	277,983	Sep-16	70,506	Sep-16	258,916	Sep-16	55,689		Sep-16	18,630		Sep-16	261,595	
Oct-16	284,248	Oct-16	73,322	Oct-16	269,801	Oct-16	59,899		Oct-16	18,844		Oct-16	277,370	
Nov-16	290,512	Nov-16	76,138	Nov-16	280,687	Nov-16	64,109		Nov-16	19,059		Nov-16	293,144	
Dec-16	296,777	Dec-16	78,954	Dec-16	291,572	Dec-16	68,318	541,978	Dec-16	19,273	217,139	Dec-16	308,919	2,665,900
	5,479,195		1,139,335		4,083,898									

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1 **Table 3-9**

2 **Methodology to Calculate the Monthly CDM Incremental Savings**

General Service 1000 - 4999 kW	OPA kWh Net Savings Persistence	OPA kWh Annual Net Savings	50% of Annual Net Savings	OPA kWh Net Savings With First Year 50%	Change Year Over Year	Monthly Increment (Year/78)
2014	0	133,399	66,700	66,700	66,700	855
2015	66,700	159,162	79,581	146,280	79,581	1,020
3 2016	225,861	632,234	316,117	541,978	328,360	4,210

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5 Milton Hydro has attached as Table 3-9a the Load Forecast CDM Adjustment Work Form
6 (2016) Appendix 2-IA

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Table 3-9a – Load Forecast CDM Adjustment Work Form (2016) – Appendix 2-I

Appendix 2-I **Load Forecast CDM Adjustment Work Form (2016)**

2014 is the last year of the current four year (2011-2014) CDM program, and 2015 is the first year of a new six year (2015-2020) CDM program, per the Ministerial directives of March 31, 2014. With 2016, there is a need to recognize the full year impact of the current 2011-2014 CDM program, as well as to estimate reasonable impacts for each year for the new 2015-2020 CDM program. These are combined to estimate the adjustment for CDM program impacts on the 2016 load forecast.

Appendix 2-I was developed to help determine what would be the amount of CDM savings needed in each year to cumulatively achieve the four year 2011-2014 CDM target. This then determined the amount of kWh (and with translation, kW of demand) savings that were converted in dollars balances for the LRAMVA, and also to determine the related adjustment to the load forecast to account for OPA-reported savings. Beginning for the 2015 year, it has been adjusted because of the persistence of 2011-2014 CDM programs will be an adjustment to the load forecast in addition to the estimated savings for the first year (2015) for the new 2015-2020 CDM plan.

It is assumed that the new six year (2015-2020) CDM program will work similar to the existing 2011-2014 CDM program, meaning that distributors will offer programs each year that, cumulatively over the six years (from January 1, 2015 to December 31, 2020) will cumulatively achieve the new six year CDM target. This is the approach contemplated in the Ministerial directive letters of March 31, 2014 to the Board and to the OPA. Thus, distributors will be able to offer programs on a basis so that cumulatively over the period, the impacts, including persistence, of the CDM programs will accumulate towards achieving each distributor's 2015-2020 CDM target.

With this approach, it is necessary to account for estimated savings for the last year of the current program, particularly the estimated savings for new CDM programs offered in 2014, as well as the estimated savings for new CDM programs that the distributor will offer in 2015 towards achievement of the new six year (2015-2020) CDM program. This necessitates expansion of this Appendix 2-I to deal with both the 2011-2014 and 2015-2020 CDM plans. It is expected that this approach will be updated each year.

2011-2014 CDM Program - 2014, last year of the current CDM plan

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 B31 to E31. 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 C32 to E32. These results are taken from the final 2012 CDM Report issued by the OPA for that distributor in the fall of 2013.

Measured results for 2013 CDM programs for each of the years 2013 and persistence into 2014 are input into cells C33 to E33. These results are taken from the final 2013 CDM Report issued by the OPA for that distributor in the fall of 2014. Until that report is issued, the distributor should use the results from the preliminary 2013 CDM Report issued in the spring of 2014.

Measured results for 2014 CDM programs for each of the years 2013 and persistence into 2014 are input into cells C33 to E33. These results are taken from the final 2013 CDM Report issued by the OPA for that distributor in the fall of 2014. Until that report is issued, the distributor should use the results from the preliminary 2013 CDM Report issued in the spring of 2014. The distributor also needs to input the persistence of 2014 CDM programs into 2015 and 2016 in cells G45 and G46.

4 Year (2011-2014) kWh Target:					Persistence of 2014 CDM Program into 2015 and 2016	
	2011	2012	2013	2014	Total	
2011 CDM Programs	12.28%	12.24%	12.24%	12.24%	48.99%	
2012 CDM Programs		6.26%	6.25%	6.25%	18.76%	
2013 CDM Programs			10.10%	10.08%	20.18%	
2014 CDM Programs				12.07%	12.07%	
Total in Year	12.28%	18.50%	28.59%	40.64%	100.00%	
kWh						
2011 CDM Programs	3,748,324.00	3,735,006.00	3,735,006.00	3,735,006.00	14,953,342.00	
2012 CDM Programs		1,912,190.00	1,907,334.00	1,907,334.00	5,726,858.00	
2013 CDM Programs			3,083,912.00	3,076,172.00	6,160,084.00	
2014 CDM Programs				3,685,901.00	3,685,901.00	
Total in Year	3,748,324.00	5,647,196.00	8,726,252.00	12,404,413.00	30,526,185.00	

2015-2020 CDM Program - 2016, second year of the current CDM plan

For the first year of the new 2015-2020 CDM plan, it is assumed that each year's program will achieve an equal amount of new CDM savings. The new targets for 2015-2020 do not take into account persistence beyond the first year, but the IESO will encourage distributors to promote and implement CDM plans that will have longer term persistence of savings. This results in each year's program being about 1/6 (18.67%) of the cumulative 2015-2020 CDM target for kWh savings. A distributor may propose an alternative approach but would be expected to document in its application why it believes that its proposal is more reasonable. In its proposal, the distributor should ensure that the sum of the results for each year's CDM program from 2015 to 2020 add up to its 2015-2020 CDM target as established by the IESO.

6 Year (2015-2020) kWh Target:						
45,360,000						
%						
	2015	2016	2017	2018	2019	2020
2015 CDM Programs	16.67%					16.67%
2016 CDM Programs		16.67%				16.67%
2017 CDM Programs			16.67%			16.67%
2018 CDM Programs				16.67%		16.67%
2019 CDM Programs					16.67%	16.67%
2020 CDM Programs						16.67%
Total in Year	16.67%	16.67%	16.67%	16.67%	16.67%	16.67%
	kWh					
2015 CDM Programs	7,560,000.00					7,560,000.00
2016 CDM Programs		7,560,000.00				7,560,000.00
2017 CDM Programs			7,560,000.00			7,560,000.00
2018 CDM Programs				7,560,000.00		7,560,000.00
2019 CDM Programs					7,560,000.00	7,560,000.00
2020 CDM Programs						7,560,000.00
Total in Year	7,560,000.00	7,560,000.00	7,560,000.00	7,560,000.00	7,560,000.00	45,360,000.00

Determination of 2016 Load Forecast Adjustment

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 and 2-14 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. Sheet 2-I defaults to the adjustment being done on a "net" basis consistent with Board policy and practice.

From each of the 2006-2010 CDM Final Report, and the 2011, 2012, 2013 and 2014 CDM Final Reports, issued by the OPA (now IESO) for the distributor, the distributor should input the "gross" and "net" results of the cumulative CDM savings for 2014 into cells D84 to E88. The model will calculate the cumulative savings for all programs from 2006 to 2012 and determine the "net" to "gross" factor "g".

Net-to-Gross Conversion				
Is CDM adjustment being done on a "net" or "gross" basis?				net
				Conversion Factor ('g')
	"Gross" kWh	"Net" kWh	Difference kWh	
Persistence of Historical CDM programs to 2014				
2006-2010 CDM programs	11,802,651	8,146,041	3,656,610	
2011 CDM program	9,695,248	3,735,006	5,960,242	
2012 CDM program	2,215,506	1,907,334	308,172	
2013 CDM program	4,740,310	3,076,723	1,663,587	
2014 CDM program				
2006 to 2014 OPA CDM programs: Persistence to 2016	28,453,715	16,865,104	11,588,611	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 the assumption that impacts of previous year CDM programs are already implicitly reflected in the actual data for the historical years that are the basis for the load forecast prior to any manual CDM adjustment for the 2016 test year.

Weight Factor for Inclusion in CDM Adjustment to 2014 Load Forecast						
	2011	2012	2013	2014	2015	2016
Weight Factor for each year's CDM program impact on 2014 load forecast	0	0	1	1	1	1
Default Value selection rationale.	Full year persistence of 2011 CDM programs on 2015 load forecast. Full impact assumed because of 50% impact in 2011 (first year) but full year persistence impact on 2012 and 2013, and thus reflected in base forecast before the CDM adjustment.	Full year persistence of 2012 CDM programs on 2015 load forecast. Full impact assumed because of 50% impact in 2012 (first year) but full year persistence impact on 2013, and thus reflected in base forecast before the CDM adjustment.	Default is 0, but one option is for full year impact of persistence of 2013 CDM programs on 2015 load forecast, but 50% impact in base forecast (first year) but full year impact of 2013 CDM programs on 2013 load forecast, which is part of the data for the load forecast.	Default is 0, but one option is for full year impact of persistence of 2014 CDM programs on 2014 load forecast, but 50% impact in base forecast (first year) but full year impact of 2014 CDM programs on 2014 actuals, which is part of the data for the load forecast.	Full year impact of persistence of 2015 programs on 2015 load forecast. 2015 CDM program impacts are not in the base forecast.	Only 50% of 2016 CDM programs are assumed to impact the 2016 load forecast based on the "half-year" rule.

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

2011-2014 and 2015-2020 LRAMVA and 2015 CDM adjustment to Load Forecast

One manual adjustment for CDM impacts to the 2015 load forecast is made. However, the distributor will have two associated annualized CDM impacts, one for the 2011-2014 CDM program and the second for the 2015-2020 CDM plan. In addition, the distributor needs to reflect the CDM adjustment that was explicitly factored into its 2011 load forecast in its 2011 cost of service application (assuming that it rebased in that year). This amount, and equal persistence for 2012, 2013 and 2014 is used as an offset to determine what the net balance of the 2011-2014 LRAMVA balance should be for disposition.

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 2016 Load Forecast is the amount manually subtracted from the load forecast derived from the base forecast from historical data.

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 (e.g. taking into account what programs and what OPA-measured impacts were directed at specific customer classes), for both the LRAMVA and for the load forecast adjustment.

	2011 kWh	2012	2013	2014	2015	2016	Total for 2016
Amount used for CDM threshold for LRAMVA (2014)	3,735,006.00	1,907,334.00	3,076,172.00	3,685,901.00			12,404,413.00
forecast (per Board Decision in distributor's most recent Cost of Service Application) (enter as negative)	3,350,000.00	3,350,000.00	3,350,000.00	3,350,000.00			13,400,000.00
Amount used for CDM threshold for LRAMVA (2016)				-	7,560,000.00	7,560,000.00	15,120,000.00
Manual Adjustment for 2016 Load Forecast (billed basis)	-	-	3,076,172.00	3,685,901.00	7,560,000.00	7,560,000.00	21,882,073.00
Proposed Loss Factor (TLF)	3.25%	Format: XXX%					
Manual Adjustment for 2016 Load Forecast (system purchased basis)	-	-	3,176,147.59	3,805,692.78	7,805,700.00	7,805,700.00	22,593,240.37

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 2016 load forecast.

1 **Analysis Results**

2 As noted in Table 3-10 there is very little difference between the 2015 Bridge Year and 2016
3 Test Year forecasts using a ten year HDD and CDD average and a twenty year HDD and CDD
4 average. Remaining consistent with its 2011 forecast, Milton Hydro has performed the
5 regression analysis for its 2015 Bridge Year and 2016 Test Year based on the average of ten
6 years of HDD and CDD.

7 **Table 3-10**
8 **HDD & CDD – 10 Year and 20 Year Forecasts**

Customer Class	kWh	2015 Bridge Year		2016 Test Year	
		10 Year HDD & CDD	20 Year HDD & CDD	10 Year HDD & CDD	20 Year HDD & CDD
Residential	kWh	303,419,115	302,791,665	309,752,959	309,022,929
General Service <50 kW	kWh	90,435,059	90,365,929	92,617,956	92,554,581
General Service >50 kW	kWh	203,458,769	203,316,095	205,048,876	204,889,270

9 The following Table 3-11 provides the HDD and CDD used to determine the ten year average
10 used in the regression analysis for determining the 2015 Bridge Year and the 2016 Test Year.
11 The HDD and CDD are derived from the Government of Canada's Climate Daily Data Reports
12 for each month as read at the Toronto International Airport. This average was developed by
13 Milton Hydro from the climate data.

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Table 3-11
HDD & CDD Ten Year Average

HDD	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015 - 10 Year Avge.
Jan	770.0	551.8	647.1	623.5	830.2	720.0	775.3	611.1	624.4	825.9	792.4	700.17
Feb	616.4	604.3	740.1	674.7	606.4	598.3	654.2	531.7	631.5	737.1	856.8	663.51
Mar	608.6	516.6	546.7	610.2	533.8	422.8	572.8	349.4	554.8	690.6	615.5	541.32
Apr	306.8	293.3	356.4	253.9	305.8	225.1	332.3	321.7	358.6	356.9	313.7	311.77
May	189.4	136.9	136.4	193.5	158.8	107.9	134.1	80.7	109.1	132.1	89.3	127.88
Jun	8.9	19.5	16.5	22.7	49.3	21.7	19.0	23.2	33.0	14.1		22.79
Jul	0.0	0.0	3.2	1.0	6.2	1.8	0.0	0	1.3	4.0		1.75
Aug	0.2	4.2	5.2	12.7	9.8	2.1	0.0	2	4.4	8.8		4.94
Sep	22.6	80.9	36.9	59.0	55.2	78.2	48.2	85	83.0	69.7		61.87
Oct	220.2	288.3	137.7	278.6	287.8	241.6	235.5	242.5	208.5	224.3		236.5
Nov	388.4	382.2	462.5	451.6	361.2	405.3	341.9	434.0	478.2	482.1		418.74
Dec	665.3	500.5	630.7	654.6	631.3	676.2	534.0	533.5	687.9	557.3		607.13
CDD	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015 - 10 Year Avge.
Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.02
Apr	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0	0.0	0.0	0.0	0.12
May	0.8	26.0	22.4	2.5	6.9	45.7	13.0	36.7	23.1	11.9	34.1	22.23
Jun	146.3	73.6	99.2	71.5	34.2	58.7	52.2	101.6	50.8	68.1		75.62
Jul	188.7	167.3	106.1	111.0	43.7	164.9	198.5	195.4	120.8	71.0		136.74
Aug	140.7	101.6	141.0	64.0	91.0	138.8	122.2	112.1	93.8	81.8		108.7
Sep	52.1	12.9	47.5	26.7	20.9	31.5	39.7	35.6	28.1	30.1		32.51
Oct	7.6	1.1	19.8	0.0	0.0	0.0	2.4	1.1	0.4	1.3		3.37
Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0
Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0

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5 Milton Hydro updated the regression model with the variables identified above for each of the
 6 weather sensitive customer classes beginning with June 2015. The results by customer class
 7 are provided below.

8 Residential Customer Class

9 Milton Hydro has provided the results from the Residential customer class regression analysis in
 10 the following Table 3-12. The regression statistics for the Multiple R, R-Square and Adjusted R-
 11 Square are 0.96, 0.93 and 0.928 respectively indicating a strong relationship between the actual
 12 monthly load and the chosen variables. The Adjusted R-Squared is less than but very close to

the R-Square which indicates that the number of variables (six in this model) used as predictors provides sound results as there is little variance for the Adjusted R-Squared to increase in value as it will always be lower than the R-Square. This indicates that over specifying the model by making it too complex will probably reduce the precision of the predicted values. The statistics for the variables used provides a strong correlation for all variables as each variable has a *t*-Stat greater than the absolute value of 2 which means that they are all statistically significant to the load forecast. In particular, weather and the seasons are dependent variables in forecasting Residential load.

Table 3-12
Regression Analysis Results – Residential Customer Class

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.964584019							
R Square	0.93042233							
Adjusted R Square	0.927907474							
Standard Error	1378010.43							
Observations	173							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	6	4.21525E+15	7.02542E+14	369.9704846	2.60497E-93			
Residual	166	3.1522E+14	1.89891E+12					
Total	172	4.53047E+15						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-11780275.52	3969670.745	-2.967569926	0.003445507	-19617825.78	-3942725.265	-19617825.78	-3942725.265
Heating Degree Days	6434.336853	685.8162692	9.382012562	4.80013E-17	5080.290177	7788.383529	5080.290177	7788.383529
Cooling Degree Days	44140.57664	4083.514087	10.80945864	5.89013E-21	36078.2589	52202.89439	36078.2589	52202.89439
Number of Days in Month	492345.7627	131430.5873	3.746051606	0.000247505	232854.7623	751836.7631	232854.7623	751836.7631
Spring Fall Flag	-2069250.289	293813.6731	-7.042729727	4.76618E-11	-2649343.596	-1489156.983	-2649343.596	-1489156.983
Blackout Flag	-3390129.701	1402860.031	-2.416584425	0.016750846	-6159877.294	-620382.1078	-6159877.294	-620382.1078
Number of Customers	601.3740619	14.57309456	41.2660509	3.45747E-89	572.6015595	630.1465643	572.6015595	630.1465643

General Service <50 kW Customer Class

Milton Hydro has provided the results from the General Service <50 kW customer class regression analysis in the following Table 3-13. The regression statistics for the Multiple R, R-Square and Adjusted R-Square are 0.94, 0.886 and 0.882 respectively indicating a strong relationship between the actual monthly load and the chosen variables. The Adjusted R-Squared is less than but very close to the R-Square which indicates that the number of variables (six in this model) used as predictors provides sound results as there is little variance for the Adjusted R-Squared to increase in value as it will always be lower than the R-Square.

1 This indicates that over specifying the model by making it too complex will probably reduce the
 2 precision of the predicted values. The statistics for the variables used provides a strong
 3 correlation for each variable as the *t-Stat* greater than the absolute value of 2 except for the
 4 number of days in the month and the blackout flag. These two variables are unintuitive and not
 5 statistically significant to the load forecast. The remaining variables have a strong correlation to
 6 the regression analysis and load forecast.

7 **Table 3-13**

8 **Regression Analysis Results – General Service <50 kW Customer Class**

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.94154624							
R Square	0.886509322							
Adjusted R Square	0.88240725							
Standard Error	360347.6027							
Observations	173							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	6	1.68374E+14	2.80623E+13	216.1125337	1.02578E-75			
Residual	166	2.15552E+13	1.2985E+11					
Total	172	1.89929E+14						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-3161976.562	1053595.767	-3.001128763	0.003105097	-5242151.545	-1081801.579	-5242151.545	-1081801.579
Heating Degree Days	2080.303541	179.3277139	11.60056913	3.64497E-23	1726.246477	2434.360606	1726.246477	2434.360606
Cooling Degree Days	6427.709103	1067.478694	6.021393345	1.07721E-08	4320.124256	8535.29395	4320.124256	8535.29395
Number of Days in Month	67464.07444	34365.83779	1.963114499	0.051303775	-386.3842022	135314.5331	-386.3842022	135314.5331
Spring Fall Flag	-232253.1844	76826.79629	-3.023075223	0.002899513	-383936.7661	-80569.60264	-383936.7661	-80569.60264
Blackout Flag	-176247.5771	367148.4569	-0.480044445	0.631827729	-901129.9835	548634.8293	-901129.9835	548634.8293
Number of Customers	3078.677631	97.32013702	31.6345386	3.4208E-72	2886.532863	3270.822399	2886.532863	3270.822399

9 **General Service 50 – 999 kW Customer Class**

10 Milton Hydro has provided the results from the General Service 50 – 999 kW customer class
 11 regression analysis in the following Table 3-14. The regression statistics for the Multiple R, R-
 12 Square and Adjusted R-Square are 0.91, 0.834 and 0.828 respectively indicating a strong
 13 relationship between the actual monthly load and the chosen variables. The Adjusted R-
 14 Squared is less than but very close to the R-Square which indicates that the number of
 15 variables (seven in this model) used as predictors provides sound results as there is little
 16 variance for the Adjusted R-Squared to increase in value as it will always be lower than the R-
 17 Square. This indicates that over specifying the model by making it too complex will probably
 18 reduce the precision of the predicted values. The statistics for the variables used provides a
 19

1 strong correlation for each variable as the *t-Stat* greater than the absolute value of 2 except for
 2 the spring fall flag and the blackout flag. These two variables are unintuitive and not statistically
 3 significant to the load forecast. The remaining variables have a strong correlation to the
 4 regression analysis and load forecast.

5 **Table 3-14**
 6 **Regression Analysis Results – General Service >50 kW Customer Class**

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.913552201							
R Square	0.834577624							
Adjusted R Square	0.827559705							
Standard Error	758395.3644							
Observations	173							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	7	4.78793E+14	6.8399E+13	118.9209546	4.29128E-61			
Residual	165	9.4902E+13	5.75164E+11					
Total	172	5.73695E+14						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-8009831	2265361.715	-3.535784571	0.000527867	-12482664.54	-3536997.46	-12482664.54	-3536997.46
Heating Degree Days	1973.647413	377.8488548	5.223378045	5.23859E-07	1227.605392	2719.689433	1227.605392	2719.689433
Cooling Degree Days	10614.70338	2249.23301	4.719254666	5.02262E-06	6173.715089	15055.69166	6173.715089	15055.69166
Number of Days in Month	161865.0816	78257.43731	2.068366755	0.040165796	7350.02651	316380.1367	7350.02651	316380.1367
Spring Fall Flag	-151262.272	162026.651	-0.933564146	0.351892908	-471175.085	168650.541	-471175.085	168650.541
Number of Peak Hours	9837.80505	3859.349367	2.549083826	0.011712186	2217.729557	17457.88054	2217.729557	17457.88054
Blackout Flag	-1346978.171	776941.8839	-1.733692312	0.084840635	-2881007.678	187051.3364	-2881007.678	187051.3364
Number of Customers	54623.58992	1986.988122	27.49064744	1.72245E-63	50700.38991	58546.78994	50700.38991	58546.78994

9 **Non-Weather Sensitive Customer Classes**

10 Milton Hydro determined in its 2011 COS application that the General Service 1000 – 4999 kW,
 11 Large Users, Street Lights, Sentinel Lights and the Unmetered/Scattered Load customer
 12 classes are not weather sensitive. In calculating the load forecast for each customer class for
 13 the 2015 Bridge Year and the 2016 Test Year Milton Hydro has not provided for an increase in
 14 the number of customers or connections for the General Service 1000 – 4999 kW, Large Users,
 15 Sentinel Lights and the Unmetered/Scattered Load customer classes as Milton Hydro no
 16 indication of prospective new growth in these two classes. Milton Hydro's Sentinel Light class is
 17 in fact declining in the number of connections however Milton Hydro does not anticipate a
 18 significant change in the number of connections. New Unmetered Load customers have been
 19 metered for a number of years now therefore there is no growth provided for this class.

1 The Street Light customer class will experience growth as the Town of Milton grows with the
2 new subdivisions. Milton Hydro has used the geomean average for to account for the growth in
3 this class.

4 As mentioned above, the calculation of the kW demand is based on a ratio of historic kW to
5 historic kWh and averaged to forecast the kW demand for the 2015 Bridge Year and the 2016
6 Test Year except for the Large User customer class. Milton Hydro had one customer move
7 from the General Service 1000 – 4999 kW class into the Large User customer class in 2013
8 adding additional demand to this class. Therefore Milton Hydro based the kW calculation on the
9 average of the 2013 and 2014 actual kW.

10 In each applicable customer class, Milton Hydro has adjusted the forecasted kWh for the impact
11 of CDM as discussed above by making a manual adjustment to the annual kWhs for those
12 classes.

13 Table 3-14a provides a summary of the load forecast on a billing determinant basis by rate
14 class. This table is also consistent with Appendix 2-IA which provides a variance analysis
15 between each year and the last Board approved values.

16 Milton Hydro has attached a copy of its load forecast regression model at Attachment 3-1.

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Table 3-14a

2
Summary & Variances of Actual & Forecast Data – Appendix 2-IA

	2011 Board Approved	2012	2013	2014	2015 Bridge	2016 Test
Residential						
# of Customers	27,832	29,614	31,309	32,268	33,268	34,768
kWh	260,408,065	281,220,955	287,291,134	290,591,983	303,419,115	309,752,959
kW						
Variance Analysis						
# of Customers		6.40%	12.49%	15.94%	19.53%	24.92%
kWh		7.99%	10.32%	11.59%	16.52%	18.95%
kW		0.00%	0.00%	0.00%	0.00%	0.00%
GS <50 kW						
# of Customers	2,315	2,425	2,477	2,544	2,611	2,680
kWh	75,603,703	84,168,273	87,021,883	88,384,427	90,435,059	92,617,956
kW						
Variance Analysis						
# of Customers		4.76%	7.01%	9.90%	12.81%	15.79%
kWh		11.33%	15.10%	16.90%	19.62%	22.50%
kW		0.00%	0.00%	0.00%	0.00%	0.00%
General Service > 50 to 999 kW						
# of Customers	299	271	273	284	293	302
kWh	188,689,653	194,206,573	203,179,611	204,067,396	203,733,680	205,340,394
kW	511,697	520,812	541,770	537,016	547,100	551,414
Variance Analysis						
# of Customers		-9.36%	-8.69%	-5.02%	-2.12%	0.86%
kWh		2.92%	7.68%	8.15%	7.97%	8.82%
kW		1.78%	5.88%	4.95%	6.92%	7.76%
General Service > 1000 to 4999 kW						
# of Customers	13	12	11	12	12	12
kWh	112,523,353	128,979,851	100,652,663	110,411,189	110,264,909	109,869,211
kW	230,486	287,183	232,734	242,504	232,512	231,678
Variance Analysis						
# of Customers		-7.69%	-15.38%	-7.69%	-7.69%	-7.69%
kWh		14.62%	-10.55%	-1.88%	-2.01%	-2.36%
kW		24.60%	0.98%	5.21%	0.88%	0.52%
Large User > 4999 kW						
# of Customers	2	2	3	3	3	3
kWh	85,702,235	86,554,626	127,931,415	133,427,900	133,319,331	133,210,761
kW	188,668	179,954	246,682	253,601	255,233	255,025
Variance Analysis						
# of Customers		0.00%	50.00%	50.00%	50.00%	50.00%
kWh		0.99%	49.27%	55.69%	55.56%	55.43%
kW		-4.62%	30.75%	34.42%	35.28%	35.17%

Streetlights						
# of Connections	2,895	2,991	3,046	3,097	3,165	3,234
kWh	6,320,787	6,834,941	7,077,825	7,239,934	6,973,701	5,632,779
kW	17,810	19,000	19,748	20,173	19,572	15,809
Variance Analysis						
# of Connections		3.31%	5.21%	6.97%	9.31%	11.69%
kWh		8.13%	11.98%	14.54%	10.33%	-10.88%
kW		6.68%	10.88%	13.27%	9.90%	-11.23%
Sentinel Lights						
# of Connections	270	265	256	251	247	242
kWh	167,188	155,804	153,124	151,003	148,333	145,711
kW	465	413	425	419	411	404
Variance Analysis						
# of Connections		-1.89%	-5.23%	-7.08%	-8.72%	-10.33%
kWh		-6.81%	-8.41%	-9.68%	-11.28%	-12.85%
kW		-11.29%	-8.57%	-9.84%	-11.63%	-13.19%
Unmetered Loads						
# of Connections	208	192	192	189	204	226
kWh	1,519,815	1,328,091	1,336,647	1,339,771	1,238,376	1,096,423
kW						
Variance Analysis						
# of Connections		-7.62%	-7.62%	-9.06%	-1.84%	8.74%
kWh		-12.61%	-12.05%	-11.85%	-18.52%	-27.86%
kW		0.00%	0.00%	0.00%	0.00%	0.00%

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

5 **Variance Analysis of Distribution Revenue and Billing Determinants**

6 The following discussion provides a year over year variance analysis on Milton Hydro's
 7 distribution revenue and billing determinants. The variance analysis will compare 2011 Actual to
 8 2011 Board Approved; 2012 Actual to 2011 Actual; 2013 Actual to 2012 Actual; 2014 Actual to
 9 2013 Actual; 2015 Bridge Year to 2014 Actual and 2016 Test Year to 2015 Bridge Year. The
 10 distribution revenue variance analysis is based on information provided in Table 3-15. The
 11 billing determinant variance analysis is based on data outlined in Table 3-2. The overall
 12 variance analysis has been provided based on Milton Hydro's materiality of \$90,000 noted
 13 earlier in EXHIBIT 1 of this Application.

14 This Exhibit provides the details of Milton Hydro's total operating revenue for 2011 Board-
 15 Approved, 2012 Actual, 2013 Actual, 2014 Actual, the 2015 Bridge Year, and the 2016 Test
 16 Year. This Exhibit also provides a detailed variance analysis by rate class of the operating
 17 revenue components. Each variance that is above the materiality threshold is highlighted and a
 18 summary for this variance is provided below in Table 3-15.

1 **Operating Revenue:**

2 **Table 3-15**

3 **Summary of Operating Revenue & Variances**

Description	2011 OEB Approved	2011 Actual	Variance 2011 Actual over 2011 Approved	2012 Actual	Variance 2012 Actual over 2011 Actual	2013 Actual	Variance 2013 Actual over 2012 Actual	2014 Actual	Variance 2014 Actual over 2013 Actual	2015 Bridge Year	Variance 2015 Bridge over 2014 Actual	2016 Test Year	Variance 2016 Test over 2015 Bridge
Distribution Revenues													
Residential	8,408,648	8,333,241	(75,407)	8,771,436	438,194	9,471,141	699,705	9,892,531	421,391	10,462,721	570,190	11,780,108	1,317,387
GS < 50 kW	1,700,610	1,790,780	90,170	1,875,938	85,158	1,951,409	75,470	2,035,643	84,234	2,039,830	4,187	2,182,114	142,284
GS >50 to 999 kW	1,483,511	1,372,975	(110,536)	1,473,965	100,990	1,525,725	51,760	1,569,042	43,317	1,622,836	53,794	2,050,581	427,745
GS >1000 to 4999 kW	695,085	752,362	57,277	794,873	42,511	685,067	(109,807)	674,194	(10,873)	705,631	31,437	395,338	(310,293)
Large Use	543,950	467,000	(76,950)	515,443	48,444	611,690	96,247	684,767	73,076	708,590	23,823	469,596	(238,994)
Sentinel Lights	9,386	6,918	(2,468)	12,911	5,993	14,529	1,618	14,408	(121)	15,410	1,002	32,876	17,466
Street Lighting	119,370	90,126	(29,244)	193,697	103,570	228,415	34,719	263,662	35,246	251,500	(12,162)	253,593	2,093
Unmetered and Scattered	44,620	42,041	(2,579)	37,900	(4,141)	38,914	1,015	39,815	901	39,815	(0)	43,161	3,346
Total Distribution Revenue	13,005,180	12,855,444	(149,736)	13,676,163	820,719	14,526,890	850,727	15,174,062	647,172	15,846,333	672,271	17,207,367	1,361,034
Other Revenue													
Specific Service Charges	403,492	520,106	116,614	490,084	(30,022)	651,385	161,301	640,410	(10,975)	625,319	(15,091)	677,992	52,673
Late Payment Charges	156,670	161,220	4,550	170,412	9,192	197,390	26,978	174,673	(22,717)	182,084	7,411	191,188	9,104
Other Operating Revenues	172,082	181,462	9,380	176,956	(4,506)	174,630	(2,326)	172,011	(2,619)	178,087	6,076	292,287	114,200
Other Income	727,155	754,018	26,863	618,711	(135,307)	688,342	69,631	738,925	50,583	716,934	(21,991)	740,688	23,754
Total Other Revenue	1,459,399	1,616,806	157,407	1,456,163	(160,643)	1,711,747	255,584	1,726,019	14,272	1,702,424	(23,595)	1,902,155	199,731
Total Operating Revenue	14,464,579	14,472,250	7,671	15,132,326	660,076	16,238,637	1,106,311	16,900,081	661,444	17,548,757	648,676	19,109,522	1,560,765
% Distribution Revenue	89.9%	88.8%		90.4%		89.5%		89.8%		90.3%		90.0%	
% Other Revenue	10.1%	11.2%		9.6%		10.5%		10.2%		9.7%		10.0%	

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6 **Variance Analysis**

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Distribution Revenue - 2011 Actual vs 2011 Board Approved

Distribution Revenues	2011 Approved	2011 Actual	2011 Actual over 2011 Approved
Residential	8,408,648	8,333,241	(75,407)
GS < 50 kW	1,700,610	1,790,780	90,170
GS >50 to 999 kW	1,483,511	1,372,975	(110,536)
GS >1000 to 4999 kW	695,085	752,362	57,277
Large Use	543,950	467,000	(76,950)
Sentinel Lights	9,386	6,918	(2,468)
Street Lighting	119,370	90,126	(29,244)
Unmetered and Scattered	44,620	42,041	(2,579)
Total Distribution Revenue	13,005,180	12,855,444	(149,736)

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Billing Determinants - 2011 Actual vs 2011 Board Approved

Billing Determinants	Customer/Connections			kWh		kW		Volumetric Difference	Volumetric % Difference
	2011 Approved	2011 Actual	Difference	2011 Approved	2011 Actual	2011 Approved	2011 Actual		
Residential	27,832	27,826	- 6	260,408,065	268,725,505			8,317,440	3.2%
GS < 50 kW	2,315	2,374	59	75,603,703	83,338,834			7,735,131	10.2%
GS >50 to 999 kW	299	271	- 28			511,697	503,231	- 8,466	-1.7%
GS >1000 to 4999 kW	13	12	- 1			230,486	260,972	30,486	13.2%
Large Use	2	2	-			188,668	175,385	- 13,283	-7.0%
Sentinel Lights	270	265	- 5			465	439	- 26	-5.6%
Street Lighting	2,895	2,900	5			17,810	17,894	84	0.5%
Unmetered and Scattered	195	187	- 8	1,519,815	1,298,941			- 220,874	-14.5%
Total	33,821	33,837	16	337,531,583	353,363,280	949,126	957,921	15,840,492	

There are two significant drivers of the variance between 2011 OEB Approved distribution revenue and 2011 Actual; volumetric and customer/connection count variances and the assumption of a full year of revenue at the OEB Approved rates set in the 2011 COS.

The GS < 50 kW class variance increase of \$90,170 was primarily a result of volumetric rate differences from four months of revenue at 2010 variable rates offset by a higher customer count (59) and increased volumetric usage, up 10.2%.

Distribution revenue for the GS > 50 to 999 kW class was down by (\$110,536) primarily as a result of kW demand being down 1.7% compared to the 2011 OEB Approved kW, customer count down from the 2011 OEB-Approved by 28 and the impact of 2010 variable rates for four months.

All remaining Distribution Revenue variances are below materiality.

1 **2012 Actual vs 2011 Actual**

2 **Distribution Revenue - 2012 Actual vs 2011 Actual**

Distribution Revenues	2011 Actual	2012 Actual	2012 Actual over 2011 Actual
Residential	8,333,241	8,771,436	438,194
GS < 50 kW	1,790,780	1,875,938	85,158
GS >50 to 999 kW	1,372,975	1,473,965	100,990
GS >1000 to 4999 kW	752,362	794,873	42,511
Large Use	467,000	515,443	48,444
Sentinel Lights	6,918	12,911	5,993
Street Lighting	90,126	193,697	103,570
Unmetered and Scattered	42,041	37,900	(4,141)
Total Distribution Revenue	12,855,444	13,676,163	820,719

3

4 **Billing Determinants - 2012 Actual vs 2011 Actual**

Billing Determinants	Customer/Connections			kWh		kW		Volumetric Difference	Volumetric % Difference
	2011 Actual	2012 Actual	Difference	2011 Actual	2012 Actual	2011 Actual	2012 Actual		
Residential	27,826	29,614	1,788	268,725,505	281,220,955			12,495,450	4.6%
GS < 50 kW	2,374	2,425	51	83,338,834	84,168,273			829,439	1.0%
GS >50 to 999 kW	271	271	-			503,231	512,720	9,489	1.9%
GS >1000 to 4999 kW	12	12	-			260,972	287,183	26,211	10.0%
Large Use	2	2	-			175,385	179,954	4,569	2.6%
Sentinel Lights	265	265	-			439	413	-26	-5.9%
Street Lighting	2,900	2,991	91			17,894	19,000	1,106	6.2%
Unmetered and Scattered	187	192	5	1,298,941	1,328,091			29,150	2.2%
Total	33,837	35,772	1,935	353,363,280	366,717,319	957,921	999,270	13,395,388	

5

6 The Residential class 2012 distribution revenue was higher than 2011 due to the increased
 7 volumetric kWh's up 4.6% and the increase in customer count year over year. This was then
 8 offset by both the PILS rate rider, to dispose of USoA 1562, and the LRAM rate rider added in
 9 May 2012 which reduced Distribution Revenue for this class by a net amount of (\$240,481).

10 GS 50 - 999 kW distribution revenue increased as a result of increased variable rates compared
 11 to those in effect in the 2011 Actuals, a slight increase in demand of 1.9% and an increase in
 12 customer count.

13 The Street Light class Distribution revenue increased due to the adjustment to the Cost
 14 Allocation Revenue for the Revenue to Cost Ratio in the 2011 Approved COS Application.

1 All remaining Distribution Revenue variances are below materiality.

2 **2013 Actual vs 2012 Actual**

3 **Distribution Revenue - 2013 Actual vs 2012 Actual**

Distribution Revenues	2012 Actual	2013 Actual	2013 Actual over 2012 Actual
Residential	8,771,436	9,471,141	699,705
GS < 50 kW	1,875,938	1,951,409	75,470
GS >50 to 999 kW	1,473,965	1,525,725	51,760
GS >1000 to 4999 kW	794,873	685,067	(109,807)
Large Use	515,443	611,690	96,247
Sentinel Lights	12,911	14,529	1,618
Street Lighting	193,697	228,415	34,719
Unmetered and Scattered	37,900	38,914	1,015
Total Distribution Revenue	13,676,163	14,526,890	850,727

4

5 **Billing Determinants - 2013 Actual vs 2012 Actual**

Billing Determinants	Customer/Connections			kWh		kW		Volumetric Difference	Volumetric % Difference
	2012 Actual	2013 Actual	Difference	2012 Actual	2013 Actual	2012 Actual	2013 Actual		
Residential	29,614	31,309	1,695	281,220,955	287,291,134			6,070,179	2.2%
GS < 50 kW	2,425	2,477	52	84,168,273	87,021,883			2,853,610	3.4%
GS >50 to 999 kW	271	273	2			512,720	541,770	29,050	5.7%
GS >1000 to 4999 kW	12	11	-1			287,183	254,467	-32,716	-11.4%
Large Use	2	3	1			179,954	224,949	44,995	25.0%
Sentinel Lights	265	256	-9			413	425	12	2.9%
Street Lighting	2,991	3,046	55			19,000	18,201	-799	-4.2%
Unmetered and Scattered	192	192	-	1,328,091	1,336,647			8,556	0.6%
Total	35,772	37,567	1,795	366,717,319	375,649,664	999,270	1,039,812	8,972,887	

6

7 The Residential class 2013 distribution revenue was higher than 2012 by \$699,705 due to the
 8 increased volumetric kWh's up 2.26% and the increase in customer count year over year. This
 9 was then offset by the PILS/LRAM rate riders added in May 2012 and ended in April 30, 2013
 10 which reduced Distribution Revenue for this class by (\$164,140).

11 GS>1000 to 4999 kW distribution revenue decreased by (\$109,807) as a result of one customer
 12 moving to Large Use Class in 2013 resulting in demand decreasing by 11.4%.

13 Large Use customer count went up by the one customer that was moved into this class
 14 increasing demand by 25% and distribution revenue for this class by 96,247

1 All remaining Distribution Revenue variances are below materiality.

2 **2014 Actual vs 2013 Actual**

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 4 **Distribution Revenue - 2014 Actual vs 2013 Actual**

Distribution Revenues	2013 Actual	2014 Actual	2014 Actual over 2013 Actual
Residential	9,471,141	9,892,531	421,391
GS < 50 kW	1,951,409	2,035,643	84,234
GS >50 to 999 kW	1,525,725	1,569,042	43,317
GS >1000 to 4999 kW	685,067	674,194	(10,873)
Large Use	611,690	684,767	73,076
Sentinel Lights	14,529	14,408	(121)
Street Lighting	228,415	263,662	35,246
Unmetered and Scattered	38,914	39,815	901
Total Distribution Revenue	14,526,890	15,174,062	647,172

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 6 **Billing Determinants - 2014 Actual vs 2013 Actual**

Billing Determinants	Customer/Connections			kWh		kW		Volumetric Difference	Volumetric % Difference
	2013 Actual	2014 Actual	Difference	2013 Actual	2014 Actual	2013 Actual	2014 Actual		
Residential	31,309	32,268	959	287,291,134	290,591,983			3,300,849	1.1%
GS < 50 kW	2,477	2,544	67	87,021,883	88,384,427			1,362,544	1.6%
GS >50 to 999 kW	273	284	11			541,770	523,668	-18,102	-3.3%
GS >1000 to 4999 kW	11	12	1			254,467	242,504	-11,964	-4.7%
Large Use	3	3	-			224,949	253,601	28,652	12.7%
Sentinel Lights	256	251	-5			425	419	6	-1.4%
Street Lighting	3,046	3,097	51			18,201	20,173	1,972	10.8%
Unmetered and Scattered	192	189	-3	1,336,647	1,339,771			3,124	0.2%
Total	37,567	38,648	1,081	375,649,664	380,316,180	1,039,812	1,040,365	4,667,069	

7
 8 The Residential class 2014 distribution revenue was higher than 2013 by \$421,391 due to the
 9 increased volumetric kWh's up 1.1% and the increase in customer count year over year.

10 All remaining Distribution Revenue variances are below materiality.

1 **2015 Bridge Year vs 2014 Actual**

2 **Distribution Revenue - 2015 Bridge Year vs 2014 Actual**

Distribution Revenues	2014 Actual	2015 Bridge Year	2015 Bridge Year over 2014 Actual
Residential	9,892,531	10,462,721	570,190
GS < 50 kW	2,035,643	2,039,830	4,187
GS >50 to 999 kW	1,569,042	1,622,836	53,794
GS >1000 to 4999 kW	674,194	705,631	31,437
Large Use	684,767	708,590	23,823
Sentinel Lights	14,408	15,410	1,002
Street Lighting	263,662	251,500	(12,162)
Unmetered and Scattered	39,815	39,815	(0)
Total Distribution Revenue	15,174,062	15,846,333	672,271

3

4 **Billing Determinants - 2015 Bridge Year vs 2014 Actual**

Billing Determinants	Customer/Connections			kWh		kW		Volumetric Difference	Volumetric % Difference
	2014 Actual	2015 Bridge Year	Difference	2014 Actual	2015 Bridge Year	2014 Actual	2015 Bridge Year		
Residential	32,268	33,268	1,000	290,591,983	303,102,545			12,510,562	4.3%
GS < 50 kW	2,544	2,611	67	88,384,427	90,339,292			1,954,865	2.2%
GS >50 to 999 kW	284	293	9			523,668	545,983	22,315	4.3%
GS >1000 to 4999 kW	12	12	-			242,504	232,444	-10,059	-4.1%
Large Use	3	3	-			253,601	252,394	-1,207	-0.5%
Sentinel Lights	251	247	-4			419	411	8	-1.9%
Street Lighting	3,097	3,165	68			20,173	21,754	1,581	7.8%
Unmetered and Scattered	189	204	15	1,339,771	1,238,376			-101,395	-7.6%
Total	38,648	39,803	1,155	380,316,180	394,680,212	1,040,365	1,052,987	14,376,654	

5

6 The Residential class 2015 distribution revenue was higher than 2014 by \$570,190 due to the
 7 increased volumetric kWh's up 4.31% and the increase in customer count year over year.

8 All remaining Distribution Revenue variances are below materiality.

9

1 **2016 Test Year vs 2015 Bridge Year**

2 **Distribution Revenue - 2016 Test Year vs 2015 Bridge Year**

Distribution Revenues	2015 Bridge Year	2016 Test Year	2015 Bridge Year over 2016 Test Year
Residential	10,462,721	11,780,108	1,317,387
GS < 50 kW	2,039,830	2,182,114	142,284
GS >50 to 999 kW	1,622,836	2,050,581	427,745
GS >1000 to 4999 kW	705,631	395,338	(310,293)
Large Use	708,590	469,596	(238,994)
Sentinel Lights	15,410	32,876	17,466
Street Lighting	251,500	253,593	2,093
Unmetered and Scattered	39,815	43,161	3,346
Total Distribution Revenue	15,846,333	17,207,367	1,361,034

3

4 **Billing Determinants - 2016 Test Year vs 2015 Bridge Year**

Billing Determinants	Customer/Connections			kWh		kW		Volumetric Difference	Volumetric % Difference
	2015 Bridge Year	2016 Test Year	Difference	2015 Bridge Year	2016 Test Year	2015 Bridge Year	2016 Test Year		
Residential	33,268	34,768	1,500	303,419,115	309,752,959			6,333,844	2.1%
GS < 50 kW	2,611	2,680	69	90,435,059	92,617,956			2,182,897	2.4%
GS >50 to 999 kW	293	302	9			547,100	551,414	4,315	0.8%
GS >1000 to 4999 kW	12	12	-			232,512	231,678	-834	-0.4%
Large Use	3	3	-			255,233	255,025	-208	-0.1%
Sentinel Lights	247	242	-5			411	404	-7	-1.8%
Street Lighting	3,165	3,234	69			19,572	15,809	-3,763	-19.2%
Unmetered and Scattered	204	226	22	1,238,376	1,096,423			-141,953	-11.5%
Total	39,803	41,467	1,664	395,092,550	403,467,338	1,054,829	1,054,330	8,374,289	

5

6 The proposed Test Year distribution revenue is a reflection of the 2016 COS application and the
 7 proposed base revenue requirement of \$17,207,367. The variance in distribution revenue over
 8 the 2015 Bridge Year in the amount of \$1,361,034, is a result of the proposed increases to fixed
 9 and variable distribution revenue and customer growth in the 2016 Test Year..

10 All remaining Distribution Revenue variances are below materiality.

11

OTHER REVENUE

Variance Analysis of Other Revenue:

Table 3-16 below provides details on the other revenue included in Milton Hydro's operating revenue which is consistent with the other revenue data provided in Table 3-1 above. The revenues or costs (including interest) associated with deferral accounts, variance accounts and regulatory assets are included in account USoA 4405. Proposed other revenue for the 2015 Bridge Year and the 2016 Test Year has been calculated based on historical experience taking into consideration the 2015 Bridge Year and 2016 Test Year forecasts. Milton Hydro has provided its Other Operating Revenue and Account Summary breakdown (Appendix 2-H) in the following Table 3-16.

Table 3-16
Other Operating Revenue – Appendix 2-H

USoA #	USoA Description	Last Rebasing Year	2011 Actual	2012 Actual	2013 Actual ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
			2011 Approved	2011	2012	2013	2013	2014	2015
<i>Reporting Basis</i>		CGAAP	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS
4235	Specific Service Charges	\$ 403,492	\$ 520,106	\$ 490,084	\$ 651,385	\$ 651,385	\$ 640,410	\$ 625,319	\$ 677,992
4225	Late Payment Charges	\$ 156,670	\$ 161,220	\$ 170,412	\$ 197,390	\$ 197,390	\$ 174,673	\$ 182,084	\$ 191,188
4082/4084	Retail Services Revenues	\$ 36,869	\$ 31,276	\$ 26,548	\$ 23,215	\$ 23,215	\$ 21,892	\$ 23,121	\$ 24,277
4210	Rent from Electric Property	\$ 135,213	\$ 150,186	\$ 150,408	\$ 151,415	\$ 151,415	\$ 150,119	\$ 154,966	\$ 156,515
4215	Other Operating Income	\$ 75,804							\$ 111,495
4355	Disposal of Fixed Assets	\$ 6,250	\$ 1,593	\$ 2,012	\$ 25,000	\$ 25,000	\$ 1,200	\$ -	
4390	Misc. Non-Operating Income	\$ 600,101	\$ 598,637	\$ 539,016	\$ 554,153	\$ 554,153	\$ 613,864	\$ 613,901	\$ 652,655
4375	Revenues from Non Utility Operations	\$ -	\$ 527,378	\$ 443,399	\$ 320,525	\$ 320,525	\$ 920,721	\$ -	\$ -
4380	Expenses from Non Utility Operations	\$ -	\$ 412,129	\$ 429,875	\$ 300,681	\$ 300,681	\$ 920,721	\$ -	\$ -
4405	Interest and Dividend Income	\$ 45,000	\$ 38,539	\$ 64,159	\$ 89,345	\$ 89,345	\$ 123,861	\$ 103,033	\$ 88,033
Specific Service Charges		\$ 403,492	\$ 520,106	\$ 490,084	\$ 651,385	\$ 651,385	\$ 640,410	\$ 625,319	\$ 677,992
Late Payment Charges		\$ 156,670	\$ 161,220	\$ 170,412	\$ 197,390	\$ 197,390	\$ 174,673	\$ 182,084	\$ 191,188
Other Operating Revenues		\$ 247,886	\$ 181,462	\$ 176,956	\$ 174,630	\$ 174,630	\$ 172,011	\$ 178,087	\$ 292,287
Other Income or Deductions		\$ 651,351	\$ 754,018	\$ 618,711	\$ 688,342	\$ 688,342	\$ 738,925	\$ 716,934	\$ 740,688
Total		\$ 1,459,399	\$ 1,616,806	\$ 1,456,163	\$ 1,711,747	\$ 1,711,747	\$ 1,726,019	\$ 1,702,424	\$ 1,902,155

Account 4082/4084 - Revenue from Services - Distribution

		2011 Actual	2012 Actual	2013 Actual ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
		2011	2012	2013	2013	2014	2015	2016
<i>Reporting Basis</i>		CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS
Retailer - LDC Consolidated Billing		\$ 10,299	\$ 8,477	\$ 7,228	\$ 7,228	\$ 6,715	\$ 7,098	\$ 7,453
Retailer - Monthly Fixed Charge		\$ 3,120	\$ 3,300	\$ 3,300	\$ 3,300	\$ 3,400	\$ 3,556	\$ 3,734
Retailer - Monthly Variable Charge		\$ 17,178	\$ 14,165	\$ 12,098	\$ 12,098	\$ 11,255	\$ 11,895	\$ 12,490
Retailer - STR Request Fee		\$ 244	\$ 219	\$ 220	\$ 220	\$ 188	\$ 204	\$ 214
Retailer - STR Processing Fee		\$ 435	\$ 387	\$ 369	\$ 369	\$ 335	\$ 368	\$ 386
Total		\$ 31,276	\$ 26,548	\$ 23,215	\$ 23,215	\$ 21,893	\$ 23,121	\$ 24,277

Account 4210 - Rent from Electric Property

		2011 Actual	2012 Actual	2013 Actual ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
		2011	2012	2013	2013	2014	2015	2016
<i>Reporting Basis</i>		CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS
Pole Rental - Bell/Rogers/Cogeco/Blink		\$ 150,186	\$ 150,408	\$ 151,415	\$ 151,415	\$ 150,119	\$ 154,966	\$ 156,515
Total		\$ 150,186	\$ 150,408	\$ 151,415	\$ 151,415	\$ 150,119	\$ 154,966	\$ 156,515

1 Milton Hydro has provided a variance analysis in Table 3-17 below. An explanation for each
 2 variance above materiality is provided following the table.

Table 3-17
Other Revenue with Variances

		2011 Approved	2011 Actual	2011 Actual vs 2011 Approved	2012 Actual	2012 Actual vs 2011 Actual	2013 Actual	2013 Actual vs 2012 Actual	2014 Actual	2014 Actual vs 2013 Actual	2015 Bridge Year	2015 Bridge Year vs 2014 Actual	2016 Test Year	2016 Test Year vs 2015 Bridge Year
USoA	Other Revenue													
4082/4084	Retail Services Revenue	36,869	31,276	- 5,593	26,548	- 4,728	23,215	- 3,333	21,892	- 1,323	23,121	- 1,229	24,277	1,156
4210	Rent from Electric Property	135,213	150,186	+ 14,973	150,408	+ 222	151,415	+ 1,007	150,119	- 1,296	154,966	+ 4,847	156,515	1,550
4215	SSS Administrations	75,804	-	- 75,804									111,495	111,495
4225	Late Payment Charges	156,670	161,220	+ 4,550	170,412	+ 9,192	197,390	+ 26,978	174,673	- 22,717	182,084	- 7,411	191,188	9,104
4235	Specific Service Charges	403,492	520,106	+ 116,614	490,084	+ 30,022	651,385	+ 161,301	640,410	- 10,975	625,319	- 15,091	677,992	52,673
4355	Gain on Disposal of Property	6,250	1,593	- 4,657	2,012	+ 419	25,000	+ 22,988	1,200	- 23,800	-	- 1,200	-	-
4375	Revenues from Non-Utility Operations		527,378	- 527,378	443,399	- 83,979	320,525	- 122,874	920,721	+ 600,196	-	- 920,721	-	-
4380	Expenses of Non-Utility Operations		- 412,129	- 412,129	- 429,875	- 17,746	- 300,681	- 129,194	- 920,721	- 620,040	-	- 920,721	-	-
4385	Non-Utility Rental Income												-	-
4390	Miscellaneous Non-Operating Income	600,101	598,637	- 1,464	539,016	- 59,621	554,153	+ 15,137	613,864	+ 59,711	613,901	- 37	652,655	38,754
4405	Interest & Dividend Income	45,000	38,539	- 6,461	64,159	+ 25,620	89,345	+ 25,186	123,861	+ 34,516	103,033	- 20,828	88,033	- 15,000
	Total	1,459,399	1,616,806	157,407	1,456,163	- 160,643	1,711,747	255,584	1,726,019	14,272	1,702,423	- 23,596	1,902,155	199,732

2011 Actual vs 2011 Board Approved

Other Revenues and Variances				
		2011 Approved	2011 Actual	2011 Actual vs 2011 Approved
USoA	Other Revenue			
4082/4084	Retail Services Revenue	36,869	31,276	- 5,593
4210	Rent from Electric Property - Poles	135,213	150,186	+ 14,973
4215	SSS Administrations	75,804	-	- 75,804
4225	Late Payment Charges	156,670	161,220	+ 4,550
4235	Specific Service Charges	403,492	520,106	+ 116,614
4355	Gain on Disposal of Property	6,250	1,593	- 4,657
4375	Revenues from Non-Utility Operations		527,378	+ 527,378
4380	Expenses of Non-Utility Operations		- 412,129	- 412,129
4390	Miscellaneous Non-Operating Income	600,101	598,637	- 1,464
4405	Interest & Dividend Income	45,000	38,539	- 6,461
	Total	1,459,399	1,616,806	157,407

9 Specific Service Charges increased by \$116,614 between the 2011 OEB Approved and 2011
 10 Actual including Collection Charges which increased by \$70,992 (30%) due to Milton Hydro's
 11 focus on delinquent accounts. Implementing consistent collection activities compliant with OEB

1 approved policies has also reduced the overall bad debt expense as outlined in EXHIBIT 4.
2 Disconnect/Reconnect fees have decreased by \$5,806 and Occupancy Charges increased by
3 \$32,776 (20%) due to growth in the Town of Milton. All other miscellaneous Specific Service
4 Charges are immaterial amounts.

5 Revenue from Non-Utility Operations of \$527,378 and the offsetting Expenses for Non-Utility
6 Operations of \$412,129 for a net increase of \$115,249 in Other Revenue. This represents
7 Revenues from the OPA performance funding in place related to 2010 ERIP Programs.

8 All remaining Revenue variances are below materiality.

9

10 **2012 Actual vs 2011 Actual**

Other Revenues and Variances				
		2011 Actual	2012 Actual	2012 Actual vs 2011 Actual
USoA	Other Revenue			
4082/4084	Retail Services Revenue	31,276	26,548	- 4,728
4210	Rent from Electric Property - Poles	150,186	150,408	222
4215	SSS Administrations			-
4225	Late Payment Charges	161,220	170,412	9,192
4235	Specific Service Charges	520,106	490,084	- 30,022
4355	Gain on Disposal of Property	1,593	2,012	419
4375	Revenues from Non-Utility Operations	527,378	443,399	- 83,979
4380	Expenses of Non-Utility Operations	- 412,129	- 429,875	- 17,746
4390	Miscellaneous Non-Operating Income	598,637	539,016	- 59,621
4405	Interest & Dividend Income	38,539	64,159	25,620
	Total	1,616,806	1,456,163	- 160,643

11 Other Revenues overall decreased year over year by (\$160,643).

12 All Revenue variances are below materiality.

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2013 Actual vs 2012 Actual

Other Revenues and Variances				
		2012 Actual	2013 Actual	2013 Actual vs 2012 Actual
USoA	Other Revenue			
4082/4084	Retail Services Revenue	26,548	23,215	- 3,333
4210	Rent from Electric Property - Poles	150,408	151,415	1,007
4215	SSS Administrations			-
4225	Late Payment Charges	170,412	197,390	26,978
4235	Specific Service Charges	490,084	651,385	161,301
4355	Gain on Disposal of Property	2,012	25,000	22,988
4375	Revenues from Non-Utility Operations	443,399	320,525	- 122,874
4380	Expenses of Non-Utility Operations	- 429,875	- 300,681	129,194
4390	Miscellaneous Non-Operating Income	539,016	554,153	15,137
4405	Interest & Dividend Income	64,159	89,345	25,186
	Total	1,456,163	1,711,747	255,584

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3 Specific Service Charges have increased by \$161,301 between the 2013 Actual and 2012
 4 Actual. Collection charges have increased by \$93,179; Occupancy Charges increased by
 5 \$24,360; Interval Meter Reads increased by \$ 37,080 and Disconnect/Reconnect fees
 6 increased \$5,913.

7 The revenue from Non-Utility Operations has decreased by \$122,874 and the offsetting
 8 Expenses for Non-Utility Operations has decreased by \$129,194 for a net increase of \$6,320 in
 9 Other Revenue. Revenues and expenses from Non-Utility Operations are from OPA sanctioned
 10 programs.

11 All remaining Revenue variances are below materiality.

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2014 Actual vs 2013 Actual

Other Revenues and Variances				
		2013 Actual	2014 Actual	2014 Actual vs 2013 Actual
USoA	Other Revenue			
4082/4084	Retail Services Revenue	23,215	21,892	- 1,323
4210	Rent from Electric Property - Poles	151,415	150,119	- 1,296
4215	SSS Administrations			-
4225	Late Payment Charges	197,390	174,673	- 22,717
4235	Specific Service Charges	651,385	640,410	- 10,975
4355	Gain on Disposal of Property	25,000	1,200	- 23,800
4375	Revenues from Non-Utility Operations	320,525	920,721	600,196
4380	Expenses of Non-Utility Operations	- 300,681	- 920,721	- 620,040
4390	Miscellaneous Non-Operating Income	554,153	613,864	59,711
4405	Interest & Dividend Income	89,345	123,861	34,516
	Total	1,711,747	1,726,019	14,272

2

3 The revenue from Non-Utility Operations has increased by \$600,196 and the offsetting
 4 Expenses for Non-Utility Operations has increased by \$620,040 for a net decrease of \$19,844.
 5 Revenues and expenses from Non-Utility Operations are from OPA sanctioned programs.

6 All remaining Revenue variances are below materiality.

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2015 Bridge Year vs 2014 Actual

Other Revenues and Variances				
		2014 Actual	2015 Bridge Year	2015 Bridge Year vs 2014 Actual
USoA	Other Revenue			
4082/4084	Retail Services Revenue	21,892	23,121	1,229
4210	Rent from Electric Property - Poles	150,119	154,966	4,847
4215	SSS Administrations			-
4225	Late Payment Charges	174,673	182,084	7,411
4235	Specific Service Charges	640,410	625,319	- 15,091
4355	Gain on Disposal of Property	1,200	-	- 1,200
4375	Revenues from Non-Utility Operations	920,721	-	- 920,721
4380	Expenses of Non-Utility Operations	- 920,721		920,721
4390	Miscellaneous Non-Operating Income	613,864	613,901	37
4405	Interest & Dividend Income	123,861	103,033	- 20,828
	Total	1,726,019	1,702,423	- 23,596

2

3 The revenue and expenses from Non-Utility Operations are offsetting for a net
 4 increase/decrease of \$0. Revenues and expenses from Non-Utility Operations are from OPA
 5 sanctioned programs.

6 All remaining Revenue variances are below materiality.

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2016 Test Year vs 2015 Bridge Year

Other Revenues and Variances				
		2015 Bridge Year	2016 Test Year	2016 Test Year vs 2015 Bridge Year
USoA	Other Revenue			
4082/4084	Retail Services Revenue	23,121	24,277	1,156
4210	Rent from Electric Property - Poles	154,966	156,515	1,550
4215	SSS Administrations		111,495	111,495
4225	Late Payment Charges	182,084	191,188	9,104
4235	Specific Service Charges	625,319	677,992	52,673
4390	Miscellaneous Non-Operating Income	613,901	652,655	38,754
4405	Interest & Dividend Income	103,033	88,033	- 15,000
	Total	1,702,423	1,902,155	199,732

3

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5 SSS Administration Charges have been included in the 2016 Test Year as a revenue offset in
6 the amount of \$111,495 which represents an average number of customers at a rate of \$.25.
7 SSS Administration Charges for the 2011 to 2015 Bridge Year are included in USoA 4080
8 Distribution Revenue.

9 All remaining Revenue variances are below materiality

10

11 Proposed Specific Services Charges

12 Milton Hydro is not requesting approval of any new proposed specific service charges or
13 changes to rates or new rules for applying existing specific services charges.

14 .

ATTACHMENT 3-1

LOAD FORECAST MODEL

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.964584019							
R Square	0.93042233							
Adjusted R Square	0.927907474							
Standard Error	1378010.43							
Observations	173							
ANOVA								
	<i>df</i>	<i>SQ</i>	<i>MS</i>	<i>F</i>	Significance F			
Regression	6	4.21525E+15	7.02542E+14	369.9704846	2.60497E-93			
Residual	166	3.1522E+14	1.88891E+12					
Total	172	4.53047E+15						
	Coefficients	Standard Error	<i>t Stat</i>	<i>P-value</i>	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-11780275.5	3969670.745	-2.967569926	0.003445507	-19617825.78	-3942725.26	-19617825.8	-3942725.26
Heating Degree Days	6434.336853	685.81626892	9.382012562	4.80013E-17	5080.290177	7788.383529	5080.290177	7788.383529
Cooling Degree Days	44140.57664	4083.514087	10.80945864	5.89013E-21	36078.2589	52202.89439	36078.2589	52202.89439
Number of Days in Month	492345.7627	131430.5873	3.746051606	0.000247505	232854.7623	751836.7631	232854.7623	751836.7631
Spring Fall Flag	-2069250.29	293813.6731	-7.042729727	4.76618E-11	-2649343.596	-1489156.98	-2649343.6	-1489156.98
Blackout Flag	-3390129.7	1402860.031	-2.416584425	0.016750846	-6159877.294	-620382.108	-6159877.29	-620382.108
Number of Customers	601.3740619	14.57309456	41.2660509	3.45747E-89	572.6015595	630.1465643	572.6015595	630.1465643

Predicted Consumption	CDM
Adjusted for 2015 - 2020 CDM Plans	Reduction for 2015 - 2020
27,866,098	166,059
26,850,785	171,926
24,756,607	176,893
22,370,536	181,861
22,938,602	186,828
25,968,831	191,795
29,072,225	196,763
27,000,000	201,730
22,393,799	206,697
22,772,072	211,665
23,352,121	216,632
27,173,835	221,599
27,841,393	227,864
26,689,725	234,129
24,888,745	240,394
22,696,718	246,269
23,346,029	252,923
26,673,001	259,188
28,796,747	265,453
28,648,478	271,718
23,159,025	277,983
23,557,650	284,248
24,158,050	290,512
28,000,718	296,777
	<u>5,479,195</u>

Adjusted for CDM

303,419,115
309,752,959

CDM Related Savings	OPA kWh Net Savings Persistence	OPA kWh Annual Net Savings	50% of Annual Net Savings	OPA kWh Net Savings With First Year	Change Year Over Year	Monthly Increment (Year/78)	Check		
Residential									
	2005	0	0	0	-	0	0	Jan 1	
	2006	0	0	0	-	0	0	Feb 2	
	2007	0	0	0	-	0	0	Mar 3	
	2008	0	0	0	-	0	0	Apr 4	
	2009	0	0	0	-	0	0	May 5	
2005 to 2016 CDM Savings with Persistence	2010	0	0	0	-	0	0	Jun 6	
	2011	0	0	0	-	0	0	Jul 7	
	2012	0	0	0	-	0	0	Aug 8	
	2013	0	0	0	-	0	0	Sep 9	
	2014	0	3,887,795	1,943,898	1,943,898	24,922	1,943,898	Okt 10	
	2015	1,943,898	774,900	387,450	2,331,348	387,450	4,967	2,331,348	Nov 11
	2016	2,718,798	858,100	429,050	3,147,848	488,658	6,265	3,147,848	Dec 12
		4,662,695	5,520,795	7,423,093		7,423,093	0	Total 78	

III-1/2 of 2016 - assistance

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.94154624
R Square	0.886509322
Adjusted R Square	0.88240725
Standard Error	360347.6027
Observations	173

ANOVA

	df	SS	MS	F	Significance F
Regression	6	1.68374E+14	2.80623E+13	216.1125337	1.02578E-75
Residual	167	2.15526E+13	1.2985E+11		
Total	173	1.89929E+14			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	3161976.562	1053695.767	-3.00128763	0.003105097	-5242151.545	-1081801.579	-5242151.545	-1081801.579
Heating Degree Days	2080.303541	179.3277139	11.60056913	3.64497E-23	1726.246477	2434.360806	1726.246477	2434.360806
Cooling Degree Days	6427.709103	1067.478694	6.021393345	1.07721E-08	4320.124256	8535.29395	4320.124256	8535.29395
Number of Days in Month	67464.07444	34365.83779	1.963114499	0.051303775	-386.3842022	135314.5331	-386.3842022	135314.5331
Spring Fall Flag	-232253.1844	76826.79629	-3.023075223	0.002899513	-383936.7661	-80569.60264	-383936.7661	-80569.60264
Blackout Flag	-176247.5771	367148.4569	-0.480044445	0.631827729	-901129.9835	548634.8293	-901129.9835	548634.8293
Number of Customers	3078.677631	97.32013702	31.6345386	3.4208E-72	2886.532863	3270.822399	2886.532863	3270.822399

Predicted Consumption	CDM
Adjusted for 2015 - 2020	Reduction for
CDM Plans	2015 - 2020
8,404,513	17,800
8,355,156	20,287
7,814,802	22,774
7,105,343	25,262
6,912,677	27,749
7,216,010	30,868
7,648,352	32,723
7,487,661	35,210
6,829,555	37,698
7,085,905	40,185
7,385,722	42,672
8,186,485	45,159
8,395,692	47,976
8,200,156	50,792
7,864,423	53,608
7,335,724	56,424
7,178,413	59,111
7,480,415	62,057
7,915,626	64,973
7,757,685	67,689
7,102,329	70,506
7,358,350	73,322
7,660,916	76,138
8,365,228	78,954
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	1,139,335

Dec. count from Rate Class Customer Model tab - back up count to Jan

Dec. count from Rate Class Customer Model tab - back up count to Jan

Adjusted for CDM

90,435,059
92,617,956

CDM Related Savings	OPA kWh Net	OPA kWh	OPA kWh Net	OPA kWh Net	Change Year	Monthly	Check		
	Savings Persistence	Annual Net Savings	50% of Annual Net Savings	Savings With First Year 50%	Over Year	Increment (Year/78)		Jan	1
General Service < 50 kW								Feb	2
2005	0	0	0	-	-	0	0	Mar	3
2006	0	0	0	-	-	0	0	Apr	4
2007	0	0	0	-	-	0	0	May	5
2008	0	0	0	-	-	0	0	Jun	6
2009	0	0	0	-	-	0	0	Jul	7
2010	0	0	0	-	-	0	0	Aug	8
with Persistence								Sep	9
2011	0	0	0	-	-	0	0	Oct	10
2012	0	0	0	-	-	0	0	Nov	11
2013	0	0	0	-	-	0	0	Dec	12
								Total	76
2014	0	367,503	183,752	183,752	2,356	183,752	0		
2015	183,752	388,008	194,004	377,756	194,004	2,487	377,756	0	
2016	571,760	379,639	189,819	761,579	219,666	2,816	761,579	0	
	755,511	1,135,150		1,323,086			1,323,086	0	

SUMMARY OUTPUT

Regression Statistics						
Multiple R	0.912925371					
R Square	0.833432733					
Adjusted R Square	0.826366243					
Standard Error	765807.3901					
Observations	173					

ANOVA

	df	SS	MS	F	Significance F
Regression	7	4.8417E+14	6.91681E+13	117.941541	7.55507E-61
Residual	165	9.67661E+13	5.86461E+11		
Total	172	5.80943E+14			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-8080185.296	2287501.776	-3.532318699	0.000534337	-12586733.18	-3563637.411	-12586733.18	-3563637.411
Heating Degree Days	1989.386495	381.5416852	5.214073776	5.46929E-07	1236.053182	2742.719808	1236.053182	2742.719808
Cooling Degree Days	10651.35627	2271.215439	4.689716389	5.70618E-06	6166.96487	15135.74767	6166.96487	15135.74767
Number of Days in Month	161550.7999	79022.27075	2.044370509	0.042506207	5525.622742	317575.9771	5525.622742	317575.9771
Spring Fall Flag	-146147.9453	163610.1861	-0.893269232	0.373014006	-469187.3624	176891.4717	-469187.3624	176891.4717
Number of Peak Hours	9826.999603	3897.067947	2.521639278	0.012628781	2132.450827	17521.54838	2132.450827	17521.54838
Blackout Flag	-1339641.622	78453.1703	-1.707560952	0.089598687	-2888663.661	209380.4164	-2888663.661	209380.4164
Number of Customers	54957.70449	2006.407553	27.39109729	2.8162E-63	50996.16186	58919.24711	50996.16186	58919.24711

Predicted Consumption	CDM
Adjusted for 2015 - 2020	Reduction for
CDM Plans	2015 - 2020
17,467,756	56,299
16,842,200	65,812
17,218,019	75,326
16,400,309	84,839
16,365,584	94,353
17,020,000	103,866
17,274,169	113,379
17,274,832	122,893
16,471,538	132,406
16,660,602	141,920
16,816,188	151,433
17,360,465	160,946
17,377,440	171,832
16,970,522	182,717
17,263,142	193,603
16,532,833	204,488
16,639,399	215,374
17,153,641	226,259
17,653,955	237,145
17,720,173	248,030
16,601,043	258,916
16,686,460	269,801
17,210,096	280,687
17,562,960	291,572
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	4,083,898

Dec. count from Rate Class Customer Model tab - back up count to Jan

Dec. count from Rate Class Customer Model tab - back up count to Jan

Adjusted for CDM

203,733,680
205,340,394

CDM Related Savings	OPA kWh Net Savings Persistence	OPA kWh Annual Net Savings	50% of Annual Net Savings	OPA kWh Net Savings With First Year	Change Year Over Year	Monthly Increment (Year/78)	Check		
General Service 50 - 999 kW									
2005 to 2016									
CDM Savings with Persistence	2005	0	0	0	-	-	0	0	1
	2006	0	0	0	-	-	0	0	2
	2007	0	0	0	-	-	0	0	3
	2008	0	0	0	-	-	0	0	4
	2009	0	0	0	-	-	0	0	5
	2010	0	0	0	-	-	0	0	6
	2011	0	0	0	-	-	0	0	7
	2012	0	0	0	-	-	0	0	8
	2013	0	0	0	-	-	0	0	9
	2014	0	1,122,853	561,426	561,426	7,198	561,426	0	10
	2015	561,426	1,484,091	742,045	1,303,472	742,045	9,513	1,303,472	11
	2016	2,045,517	1,469,818	734,909	2,780,426	849,070	10,886	2,780,426	12
		2,606,944	4,076,762		4,645,325			4,645,325	Total 78
		6,683,705							

Billed	Modeled Billed	Difference	% Difference	Loss Factor	Actual and Modeled Used							
					Residential	General Service ≤ 50 kW	General Service 50 to 999 kW	General Service 1000 to 4999 kW	Large User	Streetlights	Sentinel Lights	Unmetered Loads
2001	525,513,862	134,047,710	-3.1%	0.833	145,198,639	134,334,027	46,895,462	2,910,562	19,421	594,451	17,808	594,451
2002	564,479,149	60,711,253	-10.4%	1.069	141,220,954	140,297,489	59,872,285	3,060,173	183,398	714,434	1,130	714,434
2003	585,095,585	118,175,327	-6.1%	0.640	61,255,640	148,063,380	140,546,077	73,457,084	3,488,004	192,008	818,065	818,065
2004	589,630,611	169,087,403	-23.5%	0.612	61,650,512	155,978,135	114,675,485	83,457,779	3,650,549	191,280	939,449	939,449
2005	636,787,690	192,883,717	-23.1%	0.492	217	164,259,880	119,953,703	89,641,173	3,961,622	184,461	1,010,917	1,010,917
2006	639,536,840	140,670,890	-23.5%	0.498	168,781,662	164,853,775	99,801,857	90,719,402	4,335,614	1,312,025	1,024,741	1,024,741
2007	672,730,918	211,416,658	-22.2%	0.462	63,631	172,334,963	123,900,958	91,791,513	4,566,123	178,317	1,077,755	1,077,755
2008	685,172,482	218,391,393	-21.4%	0.393	71,310,393	180,947,735	124,996,584	83,253,315	4,960,000	176,578	1,176,774	1,176,774
2009	673,060,306	230,401,041	-21.9%	0.477	73,618,223	184,558,255	117,357,757	60,254,116	5,438,382	172,687	1,259,845	1,259,845
2010	725,606,710	258,410,753	-21.7%	0.453	72,579,753	192,607,268	116,353,029	76,503,231	6,650,919	158,811	1,281,024	1,281,024
2011	764,400,949	185,728,507	-22.9%	0.481	33,488,524	193,795,570	124,407,491	80,326,634	6,419,518	1,023,284	1,281,341	1,281,341
2012	783,449,114	281,220,955	-22.3%	0.473	84,168,273	194,206,573	128,979,851	86,554,626	6,834,941	155,804	1,328,091	1,328,091
2013	814,644,302	287,291,134	-22.4%	0.483	87,021,883	203,179,611	100,652,563	127,931,415	7,077,825	153,124	1,336,647	1,336,647
2014	836,470,876	290,591,983	-22.4%	0.477	88,384,427	204,924,670	110,411,189	133,427,900	7,239,934	151,003	1,339,771	1,339,771

adjusted for re-class to Large User for one full year.

Average	9,485,122,548		69,905,266	2,440,836	15,211,325
			0.74%	0.03%	0.16%

Usage Per Customer

2001	13,829	34,882	755,930	13,643,403	46,895,462	1,275	589	5,408
2002	12,199	35,442	678,726	14,202,810	29,936,453	1,308	644	6,267
2003	11,445	34,805	698,412	14,054,606	36,725,542	1,449	617	6,705
2004	12,289	34,881	631,383	11,981,008	41,769,649	1,469	619	6,937
2005	10,941	32,911	673,196	10,865,518	44,820,587	1,566	619	7,273
2006	10,432	32,210	674,734	8,924,836	45,199,304	1,641	613	7,287
2007	10,412	33,422	631,264	8,776,640	45,895,757	1,734	615	6,394
2008	11,027	33,855	669,859	8,856,513	41,935,331	1,813	613	6,040
2009	9,278	33,417	671,121	9,514,979	36,127,058	1,980	619	6,884
2010	9,729	34,983	749,445	8,510,827	38,168,010	2,167	597	6,962
2011	9,657	35,105	711,376	10,117,291	40,168,267	2,213	597	6,946
2012	9,496	34,709	716,629	10,748,321	43,277,313	2,285	588	6,917
2013	9,176	35,132	744,248	9,735,483	42,530,639	2,334	598	6,952
2014	9,006	34,742	721,566	9,200,932	44,475,967	2,338	602	7,089
2015				9,200,932	44,475,967	2,449	602	6,070
2016				9,200,932	44,475,967	2,566	602	4,851

Used

Geomean	1,0364	0.9675	0.9964	1,0000	1,0000	1,0000	1,0000	Total
Non Weather Corrected Forecast			Only Used thru Decembe	2015	2016	2017	2018	2019

See individual models for each class 2015
See individual models for each class 2016

2015	Not Used	0	6,845,936	160,027	1,116,866
2016	Not Used	0	7,442,291	159,425	907,217

Weather Corrected Forecast
Individual weather normalized regression
model has been run for each individual

Total

849,532,503

857,666,193

See individual models for each class 2016
See individual models for each class 2016

857,666,193

	<u>General Service < 50 kW</u>	<u>General Service 50 to 999 kW</u>	<u>General Service 1000 to 4999 kW</u>	<u>Large User</u>	<u>Streetlights</u>	<u>Sentinel Lights</u>	<u>Unmetered Loads</u>	<u>Total</u>	Total Metered
Residential									
1999	9299	1720	181	12	1	2240	328	13,781	11,213
2000	9,409	1710	185	12	1	2244	328	13,889	11,317
2001	9,693	1,700	192	10	1	2283	329	110	14,318
2002	12,314	1,713	218	10	2	2348	301	114	14,257
2003	13,821	1,760	212	10	2	2408	311	122	18,646
2004	15,760	1,803	229	10	2	2466	309	137	20,716
2005	17,611	1,990	244	11	2	2529	298	139	22,824
2006	18,720	1,998	245	13	2	2579	295	142	23,994
2007	20,305	2,048	273	14	2	2634	290	169	25,735
2008	22,755	2,136	274	14	2	2709	288	176	28,354
2009	24,832	2,203	275	12	2	2774	279	183	30,560
2010	26,587	2,283	257	13	2	2,795	266	184	32,387
2011	27,826	2,374	271	12	2	2,900	265	187	33,837
2012	29,614	2,425	271	12	2	2,991	265	192	35,772
2013	31,309	2,477	273	11	3	3,046	256	192	37,567
2014	32,268	2,544	284	12	3	3,097	251	189	38,648
2015	33,268	2,611	293	12	3	3,165	247	204	39,802
2016	34,768	2,680	302	12	3	3,234	242	226	41,467

Growth Rate in Customer Numbers

1999									
2000	1.0118	0.9942	1.0221	1.0000	1.0000	1.0018	1.0000		
2001	1.0302	0.9942	1.0279	0.8333	1.0000	1.0174	1.0030		1.333
2002	1.2704	1.0076	1.1354	1.0000	2.0000	1.0285	0.9149	1.0364	
2003	1.1224	1.0274	0.9725	1.0000	1.0000	1.0256	1.0332	1.0702	
2004	1.1403	1.0244	1.0802	1.0000	1.0000	1.0241	0.9936	1.1230	
2005	1.1174	1.1037	1.0655	1.1000	1.0000	1.0255	0.9644	1.0146	
2006	1.0630	1.0040	1.0041	1.1818	1.0000	1.0198	0.9899	1.0216	
2007	1.0847	1.0252	1.1143	1.0769	1.0000	1.0213	0.9831	1.1871	
2008	1.1207	1.0425	1.0037	1.0000	1.0000	1.0285	0.9931	1.0467	
2009	1.0913	1.0316	1.0036	0.8810	1.0000	1.0240	0.9688	1.0372	
2010	1.0707	1.0363	0.9345	1.0540	1.0000	1.0076	0.9534	1.0055	
2011	1.0466	1.0399	1.0545	0.9231	1.0000	1.0376	0.9962	1.0163	
2012	1.0643	1.0215	1.0000	1.0000	1.0000	1.0314	1.0000	1.0267	
2013	1.0572	1.0214	1.0074	0.9167	1.5000	1.0184	0.9660	1.0000	
2014	1.0306	1.0270	1.0403	1.0909	1.0000	1.0167	0.9805	0.9844	

Used Milton Hydro's Customer #'s for 2015 & 2016	1.0264	1.0305	1.0000	1.0000	1.0218	0.9823	1.0000		
Geomean	1.0906	1.0264	1.0305	1.0000	1.0760	1.0218	0.9823	1.0000	

used 1.0000 for each - no growth

	General Service > 50 to 999 kW	General Service > 1000 to 4999 kW	Large User > 4999 kW	Streetlights	Sentinel Lights	Total
1999						
2000						
2001	413,565	255,515	105,657	8,091	535	783,363
2002	415,618	286,432	125,800	9,249	539	837,638
2003	409,870	271,068	164,458	9,813	533	855,742
2004	420,450	230,160	186,557	10,170	531	847,868
2005	441,283	247,851	184,313	11,151	512	885,111
2006	436,353	241,018	187,387	11,810	507	877,076
2007	456,775	258,605	187,646	12,738	498	916,261
2008	475,950	266,355	187,387	13,799	495	943,985
2009	494,157	260,952	154,282	15,174	479	925,045
2010	502,595	243,580	174,023	16,892	441	937,531
2011	503,231	260,972	175,385	17,894	439	957,921
2012	520,812	287,183	179,954	19,000	413	1,007,362
2013	541,770	232,734	246,682	19,748	425	1,041,359
2014	537,016	242,504	253,601	20,173	419	1,053,713
2015	547,100	232,512	255,233	19,572	411	1,054,829
2016	551,414	231,678	255,025	15,809	404	1,054,330

adjusted for re-class to Large User for one full year.

kW/kWh

1999					
2000					
2001	0.2849%	0.1873%	0.2253%	0.2780%	0.2759%
2002	0.2809%	0.2017%	0.2101%	0.3013%	0.2779%
2003	0.2768%	0.1929%	0.2239%	0.2813%	0.2776%
2004	0.2696%	0.2007%	0.2235%	0.2786%	0.2776%
2005	0.2686%	0.2073%	0.2056%	0.2815%	0.2776%
2006	0.2640%	0.2077%	0.2073%	0.2790%	0.2804%
2007	0.2651%	0.2104%	0.2044%	0.2790%	0.2795%
2008	0.2630%	0.2132%	0.2251%	0.2782%	0.2803%
2009	0.2678%	0.2224%	0.2561%	0.2790%	0.2776%
2010	0.2609%	0.2202%	0.2280%	0.2789%	0.2778%
2011	0.2610%	0.2150%	0.2183%	0.2788%	0.2778%
2012	0.2682%	0.2227%	0.2079%	0.2780%	0.2649%
2013	0.2666%	0.2312%	0.1928%	0.2790%	0.2778%
2014	0.2621%	0.2196%	0.1901%	0.2786%	0.2778%
Average	0.2685%	0.2109%	0.1914%	0.2807%	0.2772%

average for 2013 &
2014 only

Jan-05	0		Jan-08	0		Jan-11	0		Jan-14	855		
Feb-05	0		Feb-08	0		Feb-11	0		Feb-14	1,710		
Mar-05	0		Mar-08	0		Mar-11	0		Mar-14	2,565		
Apr-05	0		Apr-08	0		Apr-11	0		Apr-14	3,420		
May-05	0		May-08	0		May-11	0		May-14	4,276		
Jun-05	0		Jun-08	0		Jun-11	0		Jun-14	5,131		
Jul-05	0		Jul-08	0		Jul-11	0		Jul-14	5,986		
Aug-05	0		Aug-08	0		Aug-11	0		Aug-14	6,841		
Sep-05	0		Sep-08	0		Sep-11	0		Sep-14	7,696		
Oct-05	0		Oct-08	0		Oct-11	0		Oct-14	8,551		
Nov-05	0		Nov-08	0		Nov-11	0		Nov-14	9,406		
Dec-05	0	0	Dec-08	0	0	Dec-11	0	0	Dec-14	10,261	66,700	66,700
Jan-06	0		Jan-09	0		Jan-12	0		Jan-15	6,579		
Feb-06	0		Feb-09	0		Feb-12	0		Feb-15	7,599		
Mar-06	0		Mar-09	0		Mar-12	0		Mar-15	8,619		
Apr-06	0		Apr-09	0		Apr-12	0		Apr-15	9,639		
May-06	0		May-09	0		May-12	0		May-15	10,660		
Jun-06	0		Jun-09	0		Jun-12	0		Jun-15	11,680		
Jul-06	0		Jul-09	0		Jul-12	0		Jul-15	12,700		
Aug-06	0		Aug-09	0		Aug-12	0		Aug-15	13,720		
Sep-06	0		Sep-09	0		Sep-12	0		Sep-15	14,741		
Oct-06	0		Oct-09	0		Oct-12	0		Oct-15	15,761		
Nov-06	0		Nov-09	0		Nov-12	0		Nov-15	16,781		
Dec-06	0	0	Dec-09	0	0	Dec-12	0	0	Dec-15	17,802	146,280	213,618
Jan-07	0		Jan-10	0		Jan-13	0		Jan-16	22,011		
Feb-07	0		Feb-10	0		Feb-13	0		Feb-16	26,221		
Mar-07	0		Mar-10	0		Mar-13	0		Mar-16	30,431		
Apr-07	0		Apr-10	0		Apr-13	0		Apr-16	34,640		
May-07	0		May-10	0		May-13	0		May-16	38,850		
Jun-07	0		Jun-10	0		Jun-13	0		Jun-16	43,060		
Jul-07	0		Jul-10	0		Jul-13	0		Jul-16	47,270		
Aug-07	0		Aug-10	0		Aug-13	0		Aug-16	51,479		
Sep-07	0		Sep-10	0		Sep-13	0		Sep-16	55,689		
Oct-07	0		Oct-10	0		Oct-13	0		Oct-16	59,899		
Nov-07	0		Nov-10	0		Nov-13	0		Nov-16	64,109		
Dec-07	0	0	Dec-10	0	0	Dec-13	0	0	Dec-16	68,318	541,978	819,821
										688,259		

CDM Related Savings		OPA kWh Net Savings Persistence	OPA kWh Annual Net Savings	50% of Annual Net Savings	OPA kWh Net Savings With First Year 50%	Change Year Over Year	Monthly Increment (Year/78)	Check		
Large Users										
2005	0	0	0	-	-	0	0	0	Jan	1
2006	0	0	0	-	-	0	0	0	Feb	2
2007	0	0	0	-	-	0	0	0	Mar	3
2008	0	0	0	-	-	0	0	0	Apr	4
2009	0	0	0	-	-	0	0	0	May	5
2010	0	0	0	-	-	0	0	0	Jun	6
2011	0	0	0	-	-	0	0	0	Jul	7
2012	0	0	0	-	-	0	0	0	Aug	8
2013	0	0	0	-	-	0	0	0	Sep	9
2014 to 2016									Oct	10
CDM Savings with Persistence	2014	0	0	0	-	-	0	0	Nov	11
	2015	0	217,139	108,570	108,570	1,392	108,570	0	Dec	12
	2016	217,139	0	0	217,139	16,703	214	217,139	Total	78
		217,139	217,139		325,709			325,709		
				434,279						

CDM Related Savings		OPA kWh Net Savings Persistence	OPA kWh Annual Net Savings	50% of Annual Net Savings	OPA kWh Net Savings With First Year 50%	Change Year Over Year	Monthly Increment (Year/78)	Check	
Street Lights		2005	0	0	-	-	0	0	Jan
		2006	0	0	-	-	0	0	Feb
		2007	0	0	-	-	0	0	Mar
		2008	0	0	0	-	0	0	Apr
		2009	0	0	0	-	0	0	May
		2010	0	0	0	-	0	0	Jun
		2011	0	0	0	-	0	0	Jul
		2012	0	0	0	-	0	0	Aug
		2013	0	0	0	-	0	0	Sep
2014 to 2016 CDM Savings with Persistence	2014	0	0	0	-	0	0	0	Oct
	2015	0	1,555,100	777,550	777,550	9,969	777,550	0	Nov
	2016	1,555,100	2,221,600	1,110,800	2,665,900	1,230,423	15,775	2,665,900	0
		1,555,100	3,776,700		3,443,450			3,443,450	0
		5,331,800							Total
									78

Jan-05	0		Jan-08	0		Jan-11	0		Jan-14	0
Feb-05	0		Feb-08	0		Feb-11	0		Feb-14	0
Mar-05	0		Mar-08	0		Mar-11	0		Mar-14	0
Apr-05	0		Apr-08	0		Apr-11	0		Apr-14	0
May-05	0		May-08	0		May-11	0		May-14	0
Jun-05	0		Jun-08	0		Jun-11	0		Jun-14	0
Jul-05	0		Jul-08	0		Jul-11	0		Jul-14	0
Aug-05	0		Aug-08	0		Aug-11	0		Aug-14	0
Sep-05	0		Sep-08	0		Sep-11	0		Sep-14	0
Oct-05	0		Oct-08	0		Oct-11	0		Oct-14	0
Nov-05	0		Nov-08	0		Nov-11	0		Nov-14	0
Dec-05	0	0	Dec-08	0	0	Dec-11	0	0	Dec-14	0
Jan-06	0		Jan-09	0		Jan-12	0		Jan-15	9,969
Feb-06	0		Feb-09	0		Feb-12	0		Feb-15	19,937
Mar-06	0		Mar-09	0		Mar-12	0		Mar-15	29,906
Apr-06	0		Apr-09	0		Apr-12	0		Apr-15	39,874
May-06	0		May-09	0		May-12	0		May-15	49,843
Jun-06	0		Jun-09	0		Jun-12	0		Jun-15	59,812
Jul-06	0		Jul-09	0		Jul-12	0		Jul-15	69,780
Aug-06	0		Aug-09	0		Aug-12	0		Aug-15	79,749
Sep-06	0		Sep-09	0		Sep-12	0		Sep-15	89,717
Oct-06	0		Oct-09	0		Oct-12	0		Oct-15	99,686
Nov-06	0		Nov-09	0		Nov-12	0		Nov-15	109,654
Dec-06	0	0	Dec-09	0	0	Dec-12	0	0	Dec-15	119,623
Jan-07	0		Jan-10	0		Jan-13	0		Jan-16	135,398
Feb-07	0		Feb-10	0		Feb-13	0		Feb-16	151,172
Mar-07	0		Mar-10	0		Mar-13	0		Mar-16	166,947
Apr-07	0		Apr-10	0		Apr-13	0		Apr-16	182,722
May-07	0		May-10	0		May-13	0		May-16	198,496
Jun-07	0		Jun-10	0		Jun-13	0		Jun-16	214,271
Jul-07	0		Jul-10	0		Jul-13	0		Jul-16	230,046
Aug-07	0		Aug-10	0		Aug-13	0		Aug-16	245,820
Sep-07	0		Sep-10	0		Sep-13	0		Sep-16	261,595
Oct-07	0		Oct-10	0		Oct-13	0		Oct-16	277,370
Nov-07	0		Nov-10	0		Nov-13	0		Nov-16	293,144
Dec-07	0	0	Dec-10	0	0	Dec-13	0	0	Dec-16	308,919