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Load and Revenue Forecast

Ex.3/Tab 1/Sch.1 – Introduction

The evidence presented in this exhibit provides information supporting the revenues derived from activities regulated by the Ontario Energy Board. Actual operating revenues from regulated operations are derived mainly from fixed and variable tariff charges and specific service charges. Rideau St. Lawrence Distribution Inc. (“RSL”) revenues are collected from six (6) customer classes:

1. Residential;
2. General Service less than 50 kW;
3. General Service 50 to 4,999 kW;
4. Unmetered Scattered Load (“USL”);
5. Sentinel Lighting; and
6. Street Lighting.

RSL does not anticipate any changes in its customer classes.

This exhibit also describes RSL’s load and customer count forecasts. The load forecast methodology and assumptions are described in detail within this Exhibit.

The evidence herein is organized according to the following topics:

1. Revenue and Load Forecast
2. Accuracy of Load Forecast and Variance Analysis, and
3. Other Revenues

Ex.3/Tab 1/Sch.2 - Overview of Revenue Forecast

RSL is proposing a total Service Revenue Requirement of \$3,006,812 for the 2016 Test Year. This amount includes a Base Revenue Requirement of \$2,739,240 plus revenue offsets of \$267,572 to be recovered through Other Distribution Revenue.

The following Table 3.1 summarizes RSL’s total Operating Revenue. The 2016 Test Year Base Revenues are projected by applying the proposed rates to weather normalized load forecasts based upon the methodology described within this rate application. For the 2012 Actual, 2013 Actual, 2014 Actual and 2015 Actual, the revenue is derived from the actual energy consumption by each class.

Table 3.1: Summary of Operating Revenue

	2012 Board Approved	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Test Year
Base Revenue						
Residential	1,415,689	1,471,752	1,440,179	1,394,352	1,418,451	1,617,328
GS < 50 kW	450,671	466,848	496,051	456,058	482,664	523,093
GS >50 to 4999 kW	423,173	367,848	449,444	436,506	448,662	474,033
Sentinel Lights	6,382	4,750	6,608	6,492	6,581	7,649
Street Lighting	117,106	94,393	121,371	115,977	107,656	102,074
Unmetered and Scattered	10,285	17,449	11,306	13,043	12,577	15,063
Subtotal	2,423,306	2,423,039	2,524,958	2,422,428	2,476,591	2,739,240
Other Distribution Revenue						
Specific Service Charges	88,900	113,461	98,803	116,016	105,242	113,951
Late Payment Charges	32,400	57,519	59,436	66,569	72,602	76,000
Other Operating Revenues	74,243	74,344	73,241	70,786	72,071	71,401
Other Income or Deductions	12,000	27,479	21,761	16,683	39,209	6,220
Subtotal	207,543	272,802	253,241	270,055	289,124	267,572
Service Revenue Total	2,630,849	2,695,842	2,778,199	2,692,483	2,765,714	3,006,812

Ex.3/Tab 1/Sch.3 - Proposed Load Forecast

The following section of the application covers the approach taken to determine the Load Forecast. This section also covers economic assumptions and data sources for customer and load forecasts. It explains wholesale purchases and subsequent adjustments to the wholesale purchases. It also provides the rationale behind each variable used in the regression analysis. Lastly, it presents the regression results and explains how they were used to determine the forecast for the 2016 Test Year.

Table 3.2 below presents the actual and forecast trends for customer/connection counts, kWh consumption and billed kW demand.

Table 3.2: Customer and Volume Trend Table

	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Weather Normal
Actual kWh Purchases	129,569,190	125,693,570	125,561,560	121,334,640	118,414,830	116,592,701	118,002,442	115,281,047	116,595,466	115,948,548	112,684,778	
Predicted kWh Purchases	127,895,969	123,655,943	124,256,672	122,993,570	120,843,116	119,197,603	118,496,807	116,698,167	115,471,991	113,484,155		113,261,985
% Difference	-1.3%	-1.6%	-1.0%	1.4%	2.1%	2.2%	0.4%	1.2%	-1.0%	-2.1%		
CDM Purchase Adjustment												(1,353,749)
Predicted kWh Purchases after CDM												111,908,235
Billed kWh	126,336,267	116,814,435	113,998,664	111,785,106	109,680,577	107,839,547	108,810,680	106,397,501	107,193,012	107,593,001	104,215,272	103,331,704
By Class												
Residential												
Customers	4,931	4,962	4,967	4,966	4,974	4,982	5,004	5,025	5,035	5,040	5,054	5,066
kWh	46,438,361	44,440,685	45,086,486	44,465,236	44,337,599	44,191,614	43,287,278	42,116,982	42,764,838	42,272,228	40,938,311	41,307,918
General Service < 50 kW												
Customers	770	771	784	778	774	770	769	770	759	754	742	739
kWh	23,490,754	22,220,025	22,360,087	21,119,955	20,399,815	20,418,777	20,434,679	19,669,183	20,094,189	20,739,791	20,653,133	20,781,605
General Service 50 to 4,999 kW												
Customers	67	65	65	66	66	66	66	67	65	64	64	64
kWh	54,683,320	48,405,425	44,734,117	44,381,852	43,092,665	41,354,016	43,031,208	42,549,997	42,246,503	42,584,416	40,918,077	39,831,073
kW	139,429	133,580	118,636	124,007	130,261	132,433	130,762	125,469	133,148	131,947	125,734	116,927
Street Lights												
Connections	1,633	1,641	1,644	1,637	1,640	1,701	1,703	1,703	1,707	1,707	1,711	1,711
kWh	1,359,556	1,341,413	1,392,325	1,394,217	1,393,923	1,429,699	1,453,874	1,453,808	1,447,303	1,321,505	1,052,678	730,852
kW	3,764	3,772	3,777	3,782	3,774	3,857	3,941	3,919	3,920	3,620	2,862	1,992
Sentinel Lights												
Connections	56	67	67	67	75	75	75	75	75	75	75	75
kWh	94,884	102,394	102,933	100,161	108,556	108,277	108,262	108,266	108,281	109,302	109,502	107,884
kW	261	284	286	278	301	301	300	300	300	302	302	299
Unmetered Loads												
Connections	49	50	48	49	49	48	59	60	61	61	59	59
kWh	269,392	304,493	322,716	323,685	348,019	337,164	495,379	499,265	531,898	565,759	543,571	572,371
Total												
Customer/Connections	7,506	7,556	7,575	7,563	7,578	7,642	7,676	7,700	7,702	7,701	7,705	7,714
kWh	126,336,267	116,814,435	113,998,664	111,785,106	109,680,577	107,839,547	108,810,680	106,397,501	107,193,012	107,593,001	104,215,272	103,331,704
kW from applicable classes	143,454	137,636	122,699	128,067	134,336	136,591	135,003	129,688	137,368	135,869	128,898	119,218

Ex.3/Tab 1/Sch.4 - Load Forecast Methodology

The purpose of weather normalization is to predict future customer consumption based on normal weather conditions. To achieve this goal, the relationship between weather change and customer consumption must be defined. RSL reviewed the various processes used by earlier Cost of Service applicants and is proposing to adopt a weather normalization methodology using Multifactor Regression (“MR”) for its load forecast. RSL is proposing to adopt a weather normalization forecasting method similar to RSL’s 2012 Cost of Service (EB-2011-0274).

In summary, RSL has used the regression analysis methodology to determine a prediction model. With regards to the overall process of load forecasting, it is RSL’s view that conducting a regression analysis on historical purchases to produce an equation that will predict energy purchases is appropriate. RSL knows by month the exact number of kWh purchased from the IESO for use by customers of RSL. With a regression analysis these purchases can be related to other monthly explanatory variables such as heating degree days and cooling degree days which occur in the same month. The result of the regression analysis produces an equation that predicts the purchases based on the explanatory variables. This prediction model is then used as the basis to forecast the total level of weather normalized purchases for RSL’s Test Year, which is converted to Billed kWh by rate class. A detailed explanation of the process is provided later in this Exhibit.

RSL chooses not to use a regression analysis on an individual rate class basis as RSL does not have reliable data available prior to 2012. RSL has decided, based on past cost of service applications and since the Board has accepted the wholesale purchase approach in the past, to prepare the regression analysis based on wholesale purchase volumes.

The following tables provide the material to support the weather normalized load forecast used by RSL in this application. Tables 3.3, 3.4, and 3.5 below provide a summary of the weather normalized load and customer/connection forecast used in this section for the 2016 Forecast period. RSL has provided 2005-2015 Actual Data, unless otherwise noted. The years 2005 to 2015 are weather actual while 2016 is weather normalized and adjusted by projected CDM savings.

RSL does not have a process to adjust weather actual data to a weather normal basis since the Applicant is not aware that a Board approved method has been established. However, based on the process outlined in this Exhibit, a process to forecast energy on a weather normalized basis has been developed and used in this application.

Ex.3/Tab 1/Sch.5 - Economic Overview

Economic conditions in RSL's service territory remain relatively unchanged from past years. Population has been consistent, based on Census data (2011, 2006 and 2001). Residential customers account for 86% of all RSL customers and 39% of kWh consumption since 2005.

The changes in RSL customer numbers have been small and inconsistent among customer classes over past years. While 2015 actual residential customer count is 2.5% higher than 2005 counts, GS <50 kW and GS 50 to 4,999 kW rate classes of 2015 saw a decline of 3.6% and 4.4% respectively compared to 2005.

GS < 50 kW customers decreased from 770 in the 2012 Board Approved amount to 739 in the 2016 Test Year. GS 50 to 4,999 kW customers decreased from 66 in the 2012 Board Approved amount to 64 in the 2016 Test Year. The changes in the customer numbers are reflective of the overall business climate in this region.

RSL is projecting a small increase in residential customer numbers and a continued small decrease in the GS<50 kW rate class. There is virtually no change in the other customer classes. Overall the trend table (Table 3.12 and 3.13) shows the customer numbers remains stable.

Ex.3/Tab 1/Sch.6 - Wholesale Purchases

RSL purchases its power from the Independent Electricity System Operator (“IESO”). Table 3.3 outlines the unadjusted monthly wholesale purchases:

Table 3.3: Unadjusted Wholesale Purchases 2004-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	14,043,460	12,900,470	12,568,180	12,288,190	12,715,660	12,078,338	12,132,585	11,698,538	11,999,817	12,521,267	12,178,875
February	12,095,730	11,727,560	12,210,720	11,701,800	10,806,911	10,494,800	10,866,454	10,394,346	10,701,983	10,693,642	11,445,612
March	12,289,830	11,784,150	11,873,120	11,663,590	10,822,297	10,154,062	11,067,608	9,868,346	10,574,475	11,270,883	10,922,675
April	10,028,980	9,406,440	9,854,780	9,464,610	9,188,119	8,300,785	9,072,415	8,701,738	9,116,700	9,026,483	8,724,747
May	9,635,640	9,293,920	9,000,430	8,709,540	8,646,669	8,510,046	8,656,277	8,473,818	8,204,917	8,278,885	8,214,246
June	10,690,860	9,564,320	9,265,780	9,032,720	8,694,745	8,680,146	8,776,092	9,028,518	8,279,408	8,570,154	8,082,238
July	11,192,530	10,639,870	9,662,330	9,681,910	8,965,453	9,983,854	9,998,192	9,776,500	9,591,758	9,070,654	8,969,560
August	11,098,410	10,096,480	9,982,760	9,241,240	9,534,995	9,543,754	9,450,654	9,430,200	9,610,958	8,980,123	8,928,793
September	9,976,880	8,938,560	9,063,690	8,800,520	8,543,544	8,579,877	8,631,923	8,456,345	8,187,217	8,455,877	8,487,586
October	10,338,960	9,952,100	9,402,850	8,997,790	9,341,679	8,994,685	8,921,515	8,663,345	8,725,825	8,663,323	8,442,808
November	11,286,470	10,436,420	10,423,660	9,775,270	9,542,500	9,833,800	9,478,715	9,765,918	9,926,917	9,594,308	8,788,398
December	12,985,440	11,345,280	12,253,260	11,977,460	11,612,258	11,438,554	10,916,892	10,958,364	11,614,675	10,753,031	9,419,775
Total	135,663,190	126,085,570	125,561,560	121,334,640	118,414,830	116,592,701	117,969,322	115,215,976	116,534,650	115,878,630	112,605,314
Change %		92.9%	99.6%	96.6%	97.6%	98.5%	101.2%	97.7%	101.1%	99.4%	97.2%

The RSL load has been declining over the past 11 years, with the exception of 2011 and 2013 during which lower temperature in winter contributed to a higher consumption. The wholesale purchases decreased by 17% from 2005 to 2015. This decline is mainly due to the loss of a GS 50 to 4,999 kW customer in 2006 and the effects of energy efficiencies as a result of the implementation of conservation measures.

In order to better represent the trend in wholesale purchases, RSL adjusted its base wholesale purchases prior to running the regression analysis. The purpose of the adjustment was to normalize the data as much as possible. The following adjustments were made to the wholesale purchases:

- RSL adjusted the wholesale purchases to remove the consumption associated with a larger GS 50 to 4,999 kW customer who eventually shut down its operations in early 2006. RSL removed approximately 6.5M kWh between January 2005 and January 2006.
- RSL adjusted the wholesale purchases to add back microFIT generation kWh data since 2011. This adjustment was made because the generated kWh volume is consumed within the utility’s service territory. If there was no generation activity, RSL’s wholesale purchases would have been higher in order to meet customer demand.

RSL’s “Adjusted Wholesale Purchases” are summarized below in Table 3.4. The “Adjusted kWh Wholesale Purchases” represented in this table were used in RSL’s regression analysis.

Table 3.4: Adjusted Wholesale Purchases 2005 - 2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	13,599,460	12,508,470	12,568,180	12,288,190	12,715,660	12,078,338	12,132,585	11,700,330	12,001,052	12,522,131	12,180,927
February	11,597,730	11,727,560	12,210,720	11,701,800	10,806,911	10,494,800	10,868,253	10,395,841	10,703,797	10,695,468	11,448,305
March	11,805,830	11,784,150	11,873,120	11,663,590	10,822,297	10,154,062	11,068,641	9,872,024	10,577,021	11,273,530	10,924,977
April	9,698,980	9,406,440	9,854,780	9,464,610	9,188,119	8,300,785	9,074,817	8,707,449	9,121,662	9,031,993	8,731,936
May	9,203,640	9,293,920	9,000,430	8,709,540	8,646,669	8,510,046	8,658,879	8,480,484	8,211,243	8,286,920	8,223,123
June	10,190,860	9,564,320	9,265,780	9,032,720	8,694,745	8,680,146	8,778,920	9,037,032	8,287,581	8,579,731	8,092,658
July	10,516,530	10,639,870	9,662,330	9,681,910	8,965,453	9,983,854	10,001,581	9,784,872	9,598,701	9,080,121	8,978,804
August	10,498,410	10,096,480	9,982,760	9,241,240	9,534,995	9,543,754	9,454,436	9,438,341	9,619,248	8,989,250	8,939,422
September	9,504,880	8,938,560	9,063,690	8,800,520	8,543,544	8,579,877	8,634,961	8,463,793	8,194,773	8,464,550	8,496,701
October	9,922,960	9,952,100	9,402,850	8,997,790	9,341,679	8,994,685	8,927,131	8,669,407	8,732,069	8,670,762	8,450,502
November	10,652,470	10,436,420	10,423,660	9,775,270	9,542,500	9,833,800	9,482,575	9,769,730	9,931,378	9,598,673	8,794,018
December	12,377,440	11,345,280	12,253,260	11,977,460	11,612,258	11,438,554	10,919,663	10,961,744	11,616,941	10,755,419	9,423,404
Total	129,569,190	125,693,570	125,561,560	121,334,640	118,414,830	116,592,701	118,002,442	115,281,047	116,595,466	115,948,548	112,684,778
Change %		97.0%	99.9%	96.6%	97.6%	98.5%	101.2%	97.7%	101.1%	99.4%	97.2%

Ex.3/Tab 1/Sch.7 - Variables Used

In RSL's case, the variation in monthly electricity consumption is influenced by 6 main factors:

- Weather (e.g. heating and cooling), which is by far the most dominant effect for most systems;
- Number of days per month;
- Seasonality, in this case, spring/fall flag factor;
- Number of holidays in the month;
- CDM activity.

Heating and Cooling:

In order to determine the relationship between observed weather and energy consumption, monthly weather observations describing the extent of heating or cooling required within the month are necessary. Environment Canada publishes monthly observations on heating degree days (HDD) and cooling degree days (CDD) for selected weather stations across Canada. Heating degree-days for a given day are the number of Celsius degrees that the mean temperature is below 18°C. Cooling degree-days for a given day are the number of Celsius degrees that the mean temperature is above 18°C. Consistent with RSL's 2012 Cost of Service Rate Application, the monthly HDD and CDD as reported at the Ottawa International Airport Weather Station were used in this application.

RSL has adopted the 10 year average from 2006 to 2015 as the definition of weather normal. Our view is that a ten-year average based on the most recent ten calendar years available is a reasonable compromise that likely reflects the "average" weather experienced in recent years. Many other LDCs have also adopted this definition for the purposes of cost-of-service rebasing. The following table outlines the monthly weather data used in the regression analysis.

Table 3.5: HDD and CDD

Heating Degree Days (HDD)																							
Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	10 Year Avg	20 Year Trend
January	773.9	920.1	923.0	801.6	875.4	875.3	848.2	709.4	977.3	1,045.3	920.7	733.5	797.1	754.2	979.5	789.2	888.7	831.0	839.9	918.3	968.2	849.96	872.09
February	796.2	783.3	736.4	609.8	670.9	728.2	746.8	668.8	841.5	750.0	700.6	720.9	820.0	774.3	711.5	655.8	731.6	671.4	728.5	793.2	957.8	756.50	783.33
March	537.0	656.2	703.9	575.8	645.7	502.3	652.3	651.7	675.0	559.2	668.8	600.4	643.0	721.1	598.3	460.7	634.6	460.3	612.9	783.6	718.6	623.35	629.83
April	434.9	418.4	378.6	285.9	336.8	391.0	338.1	358.8	424.6	377.8	324.8	321.6	361.1	299.6	334.3	258.1	347.4	363.3	381.1	384.2	352.6	340.33	340.60
May	148.0	187.9	240.5	43.6	83.3	152.0	109.6	227.6	154.1	166.2	205.0	128.2	157.3	185.4	181.6	112.3	142.8	102.4	121.2	127.3	94.2	135.27	125.30
June	19.0	20.9	11.7	43.4	20.3	63.2	25.5	61.7	38.9	54.0	16.1	27.6	34.2	22.4	50.4	37.6	18.5	31.4	58.1	20.3	45.2	34.57	38.07
July	6.8	1.6	10.5	3.4	3.8	12.2	21.6	5.3	2.0	1.8	2.9	0.3	11.8	0.3	13.1	4.5	-	-	7.7	8.8	9.3	5.58	5.40
August	9.3	13.7	14.3	7.7	14.8	18.3	4.7	6.8	13.3	29.8	8.4	18.2	20.1	14.4	26.1	14.7	2.3	8.4	13.4	21.4	5.6	14.46	13.85
September	159.3	83.8	120.6	81.9	65.8	138.1	89.9	56.9	60.4	66.8	59.2	121.0	76.0	95.4	106.5	112.0	55.4	127.3	133.2	110.3	48.4	98.55	95.36
October	237.5	314.2	334.2	270.7	321.5	290.8	266.0	370.0	336.6	287.0	269.7	335.7	227.5	321.8	355.5	311.0	259.1	259.9	265.2	257.9	337.3	293.09	284.00
November	611.8	575.2	552.7	452.7	406.7	489.4	410.1	535.2	468.8	484.3	484.2	417.3	517.0	502.8	417.4	491.6	392.9	541.7	560.8	510.6	429.0	478.11	473.59
December	850.9	634.7	754.9	648.4	691.8	882.6	602.2	728.3	722.2	814.9	762.0	610.0	787.7	796.7	759.4	731.4	672.2	719.1	858.2	696.4	519.9	715.10	715.95
Cooling Degree Days (CDD)																							
Month	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	10 Year Avg	20 Year Trend
January	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00
February	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00
March	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00
April	-	-	-	-	-	-	-	10.30	-	1.90	-	-	-	-	2.50	1.60	-	3.20	-	-	-	0.73	0.94
May	5.70	8.00	-	28.60	31.30	2.80	13.70	6.50	0.10	4.00	1.90	16.90	17.30	-	3.20	38.20	16.70	21.00	15.30	8.80	25.30	16.27	17.32
June	86.30	51.90	78.70	77.90	99.60	30.70	75.90	39.50	54.80	27.10	111.60	48.20	66.90	60.50	44.90	33.40	59.10	70.40	39.40	54.90	20.30	49.80	42.21
July	125.90	67.70	95.80	89.20	141.70	58.60	78.40	121.00	90.10	86.50	128.60	130.60	65.10	78.90	42.90	150.80	137.50	142.20	114.90	62.80	100.00	102.57	109.42
August	78.90	78.70	41.30	86.10	57.60	60.10	127.50	106.50	106.20	47.50	115.40	68.10	79.30	49.50	82.10	93.00	82.30	97.60	57.20	55.80	67.40	73.23	75.16
September	5.10	33.80	4.40	12.20	49.60	13.70	25.90	51.40	23.70	11.10	33.10	5.30	25.70	25.00	5.00	26.20	32.90	20.60	10.10	21.60	46.50	21.89	24.18
October	1.30	-	-	-	-	-	-	4.10	-	-	6.40	-	1.90	-	-	-	1.40	-	0.70	3.10	-	0.71	1.27
November	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00
December	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00

Number of Days per Month:

RSL used a “Days per month” variable because it identifies less/more days in calendar months.

Spring and Fall Flag:

RSL used a spring and fall flag. This utility-specific flag was created following the analysis of the Wholesale purchases which showed lower purchases during the spring and fall seasons. The assumption is that with the same temperature in spring and fall as in winter or summer consumers are not using as much electricity to heat or cool their homes as in winter or summer, and as such would have an impact on the wholesale purchases. The variable applies to the months of March, April, May, September, October and November.

Number of Holidays in Month:

RSL used a variable of “Number of Holidays in Month” to identify low usage months due to holidays. The assumption is that residential customers consume more electricity on holidays whereas most of the industrial customers are closed and therefore consume less electricity. There is little or no change in the consumption for commercial customers as some of them are closed on holidays.

CDM Activity:

The CDM activity variable is an estimated level of monthly activity in CDM. For the years 2006 to 2014, the results are taken from RSL’s Net Energy Savings from the 2006-2010 and 2011-2014 Final CDM Results, as reported by the IESO (formerly OPA). A summary page extracted from the 2006-2011 Final Results Report is attached to this Exhibit as Appendix 3.3. For the 2011-2014 Final Results Report, please see Appendix 4.1 in Exhibit 4. For the year 2015 and 2016, the results used in the regression model are the combination of persistent savings from 2006-2010 initiatives and estimated persistence from 2011-2014 initiatives. RSL notes that the energy savings reported by the IESO are annualized values. However, the CDM initiatives are actually implemented at various times throughout the year. To account for this, first, RSL adjusted the annualized savings to include only 50% of the incremental change (half year rule) each year. Next, similar to the approach used in Cambridge and North Dumfries Hydro’s 2014 Cost of Service application, annual incremental savings net of persistent savings from prior year programs were calculated and based on this monthly savings to be used in the CDM Activity

Variable were derived. For each year the monthly CDM activity values grow at a constant value over the year.

Table 3.6 outlines the Net Energy Savings, on an annualized basis, for the years 2006 to 2016. A discussion on how the load forecast is adjusted for 2016 programs and how LRAM variance account values are determined by rate class is provided later in this schedule.

RSL has included Appendix 2-I Load forecast CDM Adjustment Work form in Ex.3/Tab 1/Sch.11.

Table 3.6: CDM Summary

		2006 through 2014 Final Results - kWh						2015-2016 Forecast - kWh		
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
415,553	749,106	1,039,689	1,802,170	1,879,509	2,628,630	3,322,946	3,594,186	4,476,156	4,132,901	3,898,050

With a combination of wholesale purchases and the variables listed above, a multiple regression analysis was used to develop an equation describing the relationship between monthly actual wholesale kWh and the explanatory variables.

To project the adjusted wholesale purchases for the test year, the model uses the simple average of the last 10 years of historical data for HDD, CDD. Actual was used for Spring/Fall Flag, Days in the Month, and Number of Holidays in the Month. Persistent savings from CDM programs of the year 2014 and prior years are used for CDM Activity.

Origin of Variables

- HDD: Environment Canada, weather station of OTTAWA MACDONALD-CARTIER INT'L A: 1995-2011
Weather station of OTTAWA INTL A (same location with a changed name): 2012-2015
- HDD: Environment Canada, weather station of OTTAWA MACDONALD-CARTIER INT'L A: 1995-2011,
Weather station of OTTAWA INTL A (same location with a changed name): 2012-2015
- Spring/Fall Flag: Computed by RSL
- Day per Month: Computed by RSL
- Number of Holidays in Month Computed by RSL

- CDM Activity Computed by RSL based on CDM Final Reports

In preparing its Load Forecast, RSL also considered but rejected the following variables:

- 1) Customer Count (residential + commercial + industrial) – this was excluded because the variable yielded a negative coefficient, which is unintuitive.
- 2) GDP - this was also excluded because the variable yielded a negative coefficient, which is unintuitive.

The four scenarios tested by RSL can be found in Appendix 3.2-“Regression Scenarios Performed.”

Ex.3/Tab 1/Sch.8 - Regression Results

Table 3.7 below presents the regression results used to determine the load forecast. Monthly data used in the regression analysis is from 2005 to 2014 as the actual CDM result for 2015 was unavailable when RSL was preparing the load forecast.

Table 3.7: Correlation/Regression Results

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R		0.97854345						
R Square		0.957547283						
Adjusted R Square		0.955293156						
Standard Error		269099.6808						
Observations		120						
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	6	1.84569E+14	3.07616E+13	424.7974767	4.62854E-75			
Residual	113	8.18285E+12	72414638180					
Total	119	1.92752E+14						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1162013.381	979598.3148	1.186214149	0.238025882	-778747.56	3102774.323	-778747.56	3102774.323
HDD	4671.321541	143.8020417	32.48438956	3.79831E-59	4386.42376	4956.219322	4386.42376	4956.219322
CDD	13903.49868	1325.563548	10.48874548	2.19926E-18	11277.31821	16529.67915	11277.31821	16529.67915
Number of Days in Month	249661.1618	33090.41747	7.544817529	1.24227E-11	184103.0766	315219.247	184103.0766	315219.247
Spring/Fall Flag	-369386.0768	74117.89303	-4.983763861	2.26675E-06	-516226.9907	-222545.1628	-516226.9907	-222545.1628
Holidays in Month	-113634.034	41185.91118	-2.759051112	0.00676408	-195230.7523	-32037.31572	-195230.7523	-32037.31572
CDM Activity	-3.131719874	0.221800126	-14.11955857	1.04853E-26	-3.571145928	-2.692293821	-3.571145928	-2.692293821

The resulting regression equation yields an adjusted R-squared of 95.5%. When actual annual wholesale values are compared to annual values predicted by the regression equation, the mean absolute percentage error (MAPE) is 1.43%.

RSL then uses the coefficient from the regression results to calculate predicted purchases and forecasted purchases. The resulting equation is:

RSL Monthly Predicted kWh Purchases

$$\begin{aligned}
 &= \text{Constant of } 1,162,013.38 \\
 &+ \text{Heating Degree} * 4,671.32 \\
 &+ \text{Cooling Degree Days} * 13,903.5 \\
 &+ \text{Number of Days in the Month} * 249,661.16 \\
 &+ \text{Spring Fall Flag} * (369,386.08) \\
 &+ \text{Holidays in Month} * (113,634.03)
 \end{aligned}$$

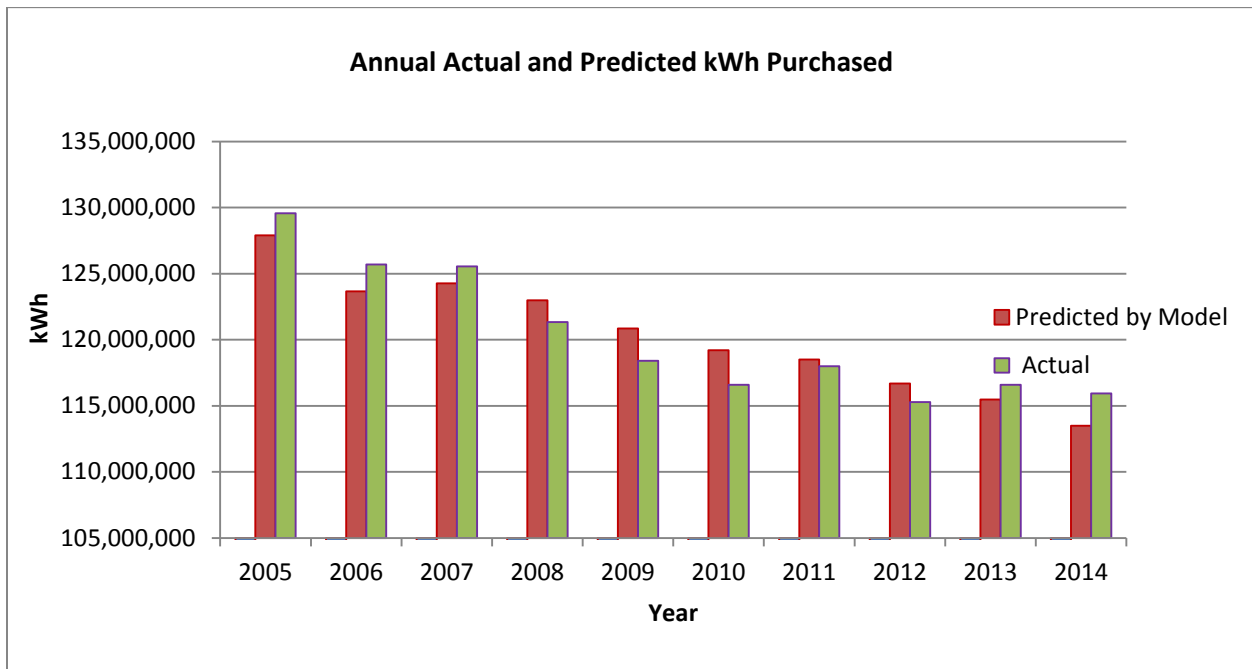
+ CDM Activity * (3.13)

Table 3.8 as seen below, demonstrates the actual and predicted wholesale purchases from January 1, 2005 – December 31, 2014. Table 3.9 provides a graph showing annual Actual Purchases versus Adjusted Purchases.

Table 3.8: Predicted Purchases vs Actual Purchased

Year	Predicted by Model	Actual	kWh Variance	% Variance	% Variance Abs
2005	127,895,969	129,569,190	(1,673,221)	-1.29%	1.29%
2006	123,655,943	125,693,570	(2,037,627)	-1.62%	1.62%
2007	124,256,672	125,561,560	(1,304,888)	-1.04%	1.04%
2008	122,993,570	121,334,640	1,658,930	1.37%	1.37%
2009	120,843,116	118,414,830	2,428,286	2.05%	2.05%
2010	119,197,603	116,592,701	2,604,902	2.23%	2.23%
2011	118,496,807	118,002,442	494,365	0.42%	0.42%
2012	116,698,167	115,281,047	1,417,120	1.23%	1.23%
2013	115,471,991	116,595,466	(1,123,475)	-0.96%	0.96%
2014	113,484,155	115,948,548	(2,464,393)	-2.13%	2.13%
2015 Actual Weather	112,687,590	112,684,778	2,812	0.00%	0.00%
2016 Normal	113,261,985				
2016 Normal -10 year average	113,261,985				
2016 Normal -20 year trend	113,487,484				

Table 3.9: Predicted VS Actual



In accordance with the Filing Requirements, RSL has also provided a 2016 forecast using 20-year normal weather conditions. The impact of using both a 10 year average as well as a 20 year trend on weather normalized wholesale purchases is presented in Table 3.10 and Table 3.11 respectively.

Table 3.10: Forecast Using a Ten Year Average Weather Normalization

	HDD	CDD	Number of Days in Month	Spring/Fall Flag	Holidays in Month	CDM Activity	Predicted Purchases (kWh)
Jan-16	850.0	0.0	31	0	1	347,137	11,671,175
Feb-16	756.5	0.0	29	0	1	344,862	10,742,397
Mar-16	623.4	0.0	31	1	2	342,587	10,143,838
Apr-16	340.3	0.7	30	1	0	340,311	8,816,643
May-16	135.3	16.3	31	1	1	338,036	8,217,955
Jun-16	34.6	49.8	30	0	0	335,761	8,454,222
Jul-16	5.6	102.6	31	0	1	333,485	9,195,641
Aug-16	14.5	73.2	31	0	1	331,210	8,836,319
Sep-16	98.6	21.9	30	1	1	328,935	7,903,403
Oct-16	293.1	0.7	31	1	1	326,659	8,774,454
Nov-16	478.1	0.0	30	1	0	324,384	9,499,988
Dec-16	715.1	0.0	31	0	2	322,109	11,005,949
Total							113,261,985

Table 3.11: Forecast Using a Twenty Year Average Weather Normalization

	HDD	CDD	Number of Days in Month	Spring/Fall Flag	Holidays in Month	CDM Activity	Predicted Purchases (kWh)
Jan-16	872.1	0.0	31	0	1	347,137	11,774,566
Feb-16	783.3	0.0	29	0	1	344,862	10,867,709
Mar-16	629.8	0.0	31	1	2	342,587	10,174,113
Apr-16	340.6	0.9	30	1	0	340,311	8,820,841
May-16	125.3	17.3	31	1	1	338,036	8,185,949
Jun-16	38.1	42.2	30	0	0	335,761	8,365,015
Jul-16	5.4	109.4	31	0	1	333,485	9,290,061
Aug-16	13.9	75.2	31	0	1	331,210	8,860,377
Sep-16	95.4	24.2	30	1	1	328,935	7,920,331
Oct-16	284.0	1.3	31	1	1	326,659	8,739,756
Nov-16	473.6	0.0	30	1	0	324,384	9,478,851
Dec-16	715.9	0.0	31	0	2	322,109	11,009,915
Total							113,487,484

Ex.3/Tab 1/Sch.9 – Forecast of Customer Count

RSL has used a geometric mean function to determine the forecasted customer number of the 2016 Test Year. The geometric mean results were analyzed by RSL and then further adjusted for known particulars. Historical customer counts and projected customer counts for the 2016 Test Year are presented in Table 3.12 below. The Customer Counts are presented in year-end format, which is consistent with RSL’s 2012 Cost of Service rate application. RSL is not proposing any changes in definition or composition of class.

Table 3.12: Number of Customers/Connections

	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2005	4,931	770	67	1,633	56	49	7,506
2006	4,962	771	65	1,641	67	50	7,556
2007	4,967	784	65	1,644	67	48	7,575
2008	4,966	778	66	1,637	67	49	7,563
2009	4,974	774	66	1,640	75	49	7,578
2010	4,982	770	66	1,701	75	48	7,642
2011	5,004	769	66	1,703	75	59	7,676
2012	5,025	770	67	1,703	75	60	7,700
2013	5,035	759	65	1,707	75	61	7,702
2014	5,040	754	64	1,707	75	61	7,701
2015	5,054	742	64	1,711	75	59	7,705
2016	5,066	739	64	1,711	75	59	7,714

Table 3.13: Growth Rate in Customer Numbers

	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads
2005						
2006	1.0063	1.0013	0.9701	1.0049	1.1964	1.0204
2007	1.0010	1.0169	1.0000	1.0018	1.0000	0.9600
2008	0.9998	0.9923	1.0154	0.9957	1.0000	1.0208
2009	1.0016	0.9949	1.0000	1.0018	1.1194	1.0000
2010	1.0016	0.9948	1.0000	1.0372	1.0000	0.9796
2011	1.0044	0.9987	1.0000	1.0012	1.0000	1.2292
2012	1.0042	1.0013	1.0152	1.0000	1.0000	1.0169
2013	1.0020	0.9857	0.9701	1.0023	1.0000	1.0167
2014	1.0010	0.9934	0.9846	1.0000	1.0000	1.0000
2015	1.0028	0.9841	1.0000	1.0023	1.0000	0.9672
Used-2016	1.0025	0.9963	0.9954	1.0000	1.0000	1.0035
Geomean	1.0025	0.9963	0.9954	1.0047	1.0296	1.0187

Residential

RSL has used the geometric mean of 1.0025 derived from the historical year actuals (2005 to 2015) and proposes no revision to the customer growth projection shown in Table 3.13 above for this customer class. The Residential customer count in 2016 is projected to be 5,066, 12 more than 2015.

General Service <50kW

RSL has used the geometric mean of 0.9963 derived from the historical year actuals (2005 to 2015) and proposes no revisions to the customer growth projections shown in Table 3.13 above for this customer class. The projection of GS<50kW for 2016 is 739, decreased by 3 from 2015.

General Service 50 to 4999kW

RSL has used the geometric mean of 0.9954 derived from the historical year actuals (2005 to 2015) and proposes no revisions to the customer growth projection shown in Table 3.13 above for this customer class. The 2016 customer number is calculated to be 64, unchanged from 2015.

Street Lights

RSL has adjusted the geometric mean of 1.0047 derived from the historical year actuals (2005 to 2015), as the big increase in 2010 contributing to the growth rate was one time event. 24 unbilled lights and 36 lights reclassified from 2 unmetered loads accounts were added in 2010. RSL has used the 2015 actual and 2016 May actual of 1,711 connections for its projection for 2016 Test Year for this rate class.

Sentinel Lights

RSL has adjusted the geometric mean of 1.0298 derived from the historical year actuals (2005 to 2015), as the only increase in the connections of Sentinel Lights during the past years was the addition of a customer, Hills Mobile Village, in 2009, which was a one time event. The 2015 actual of 75 was therefore used for the Sentinel Lighting forecast.

Unmetered Scattered Loads

RSL has adjusted the geometric mean of 1.0187 derived from the historical year actuals (2005 to 2015), as the relatively significant increase in the connections of Unmetered Scattered Load from a cable company in 2011 was a one time event. A growth rate of 1, and the 2015 actual count of 59 was therefore used for the Unmetered Scattered Loads.

Ex.3/Tab 1/Sch.10 - Determination of Weather Normalized Forecast

Total Weather Normalized Billed kWh

To determine the total weather normalized energy billed forecast, the total system weather normalized purchases forecast as determined by the regression analysis and presented in Ex. 3/Tab 1/Sch.8 is adjusted by the proposed loss factor of 8.3% as presented in Ex.8 /Tab 1/Sch. 12. Total predicted/forecasted wholesale purchases calculated for the 2016 Test Year is 113,261,985 kWh. With the proposed loss factor applied, the total weather normalized billed energy before the adjustment for CDM discussed in Ex.3/Tab 1/Sch.11 will be 104,581,704 kWh for 2016.

Average Consumption per Rate Class

The first step in the process is to review the historical customer/connection usage and to reflect this usage per customer in the forecast. Table 3.14 below provides the average annual usage per customer by rate class from 2005 to 2015.

RSL has applied a geometric growth rate of the average usage kWh per customer based on historical data from 2005-2015 for each rate class to determine the 2016 average forecasted consumption per customer prior to weather normalization. The 2016 average customer usage per class is equal to the growth rate x 2015 average customer usage per class.

Table 3.14: Annual kWh Usage per Customer/Connection

	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads
2005	9,418	30,507	816,169	833	1,694	5,498
2006	8,956	28,820	744,699	817	1,528	6,090
2007	9,077	28,521	688,217	847	1,536	6,723
2008	8,954	27,146	672,452	852	1,495	6,606
2009	8,914	26,356	652,919	850	1,447	7,102
2010	8,870	26,518	626,576	841	1,444	7,024
2011	8,651	26,573	651,988	854	1,443	8,396
2012	8,381	25,544	635,075	854	1,444	8,321
2013	8,494	26,475	649,946	848	1,444	8,720
2014	8,387	27,506	665,382	774	1,457	9,275
2015	8,100	27,834	639,345	615	1,460	9,213
2016	7,979	27,580	623,923	597	1,438	9,701
Growth Rate	0.9850	0.9909	0.9759	0.9702	0.9852	1.0530

From the historical usage per customer/connection data the growth rate in usage per customer/connection can be reviewed, and the geometric mean of growth rate is used to calculate the Test Year usage per customer/connection as shown in the Table 3.14.

Non-Weather Billed (Metered) kWh Consumption by Rate Class

From Table 3.14, RSL used the Average kWh per customer for the 2016 Test Year and multiplied that by the forecasted average customer/connection number in that rate class for the 2016 Test Year (Ex. 3/Tab 1/Sch. 9, Table 3.12). The total Non-Normalized Weather Billed Consumption for all rate classes is 102,436,244 kWh, as shown in Table 3.16.

Normalized Billed (Metered) Consumption by Rate Class

The difference between the non-normalized and normalized forecast is assumed to be the amount related to moving the forecast to a weather normal basis. This difference has been assigned to those rate classes that are weather sensitive. RSL used the weather normalization work completed by Hydro One for RSL for its 2007 Cost Allocation Study as a starting point and has shown its weather sensitivity by rate class below in Table 3.15.

Table 3.15: Weather Sensitivity

Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads
66%	66%	32%	0%	0%	0%

RSL has reviewed previous rate applications and has noted the concern of Intervenors that the Residential and GS <50kW classes are not 100% weather sensitive. RSL has, thus, applied a weather sensitivity factor of 66%, which is the mid-point between the 100% HONI reported for these two classes and the GS 50 to 4,999 kW sensitivity factor of 32%. None of the other rate classes were assumed to be weather sensitive.

The difference between the non-normalized and normalized forecast of 2,145,460 kWh in 2016 has been assigned on a pro rata basis to each rate class based on the above level of weather sensitivity. The Weather Normalized Billed Consumption is as shown in Table 3.16.

Table 3.16: Adjustment for Weather

Non-Normal Weather Billed Energy Forecast (kWh)							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
Annual Usage Per Customer/Connection	7,979	27,580	623,923	597	1,438	9,701	
Customer/Connection	5,066	739	64	1,711	75	59	7,714
2016 Non-Normal Weather Billed kWh	40,421,753	20,381,871	39,931,050	1,021,313	107,884	572,371	102,436,244
Adjustment for Weather (kWh)							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2016	1,081,821	545,487	518,152				2,145,460
Weather Normalized Billed Energy Forecast (kWh)							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2016	41,503,574	20,927,358	40,449,202	1,021,313	107,884	572,371	104,581,704

Ex.3/Tab 1/Sch.11 – CDM Adjustment

CDM Activity:

A manual adjustment has been made to reflect the impact of 2015 and 2016 CDM programs on the load forecast. RSL has made this adjustment to reflect the “net” impact of the CDM programs on the load forecast.

The following Table 3.17 outlines the actual savings from 2011-2014 CDM programs in order to achieve the licensed 4 year CDM target assigned to RSL.

Table 3.17: 2011-2014 Net Saving (kWh) Target

	2011	2012	2013	2014	Total
2011 Programs	19.9%	19.9%	19.9%	18.2%	77.8%
2012 Programs	-2.9%	9.3%	9.3%	9.3%	25.1%
2013 Programs		0.1%	5.5%	5.5%	11.1%
2014 Programs		1.9%	2.5%	23.7%	28.2%
Total	17.0%	31.3%	37.2%	56.7%	142.2%
2011 Programs	1,014,000	1,014,000	1,014,000	928,000	3,970,000
2012 Programs	(147,000)	475,000	475,000	475,000	1,278,000
2013 Programs	-	7,000	280,000	280,000	567,000
2014 Programs	-	99,000	126,000	1,211,000	1,436,000
Total	867,000	1,595,000	1,895,000	2,894,000	7,251,000
Target					5,100,000

RSL’s assigned CDM target for 2015-2020 is 5,000,000 kWh according to RSL’s CDM Plan submitted to the IESO. To achieve this target, RSL has allocated 1/6 of the target or 833,333 kWh for each of the years. Table 3.18 illustrates RSL’s 2015-2020 CDM Target which is consistent with Appendix 2-I.

Table 3.18: 2015-2020 CDM Targets (Appendix 2-I)

6 Year (2015-2020) kWh Target:							
5,000,000							
	2015	2016	2017	2018	2019	2020	Total
	%						
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%	16.67%
Total in Year	16.67%	16.67%	16.67%	16.67%	16.67%	16.67%	100.00%
kWh							
2015 CDM Programs	833,333.33						833,333.33
2016 CDM Programs		833,333.33					833,333.33
2017 CDM Programs			833,333.33				833,333.33
2018 CDM Programs				833,333.33			833,333.33
2019 CDM Programs					833,333.33		833,333.33
2020 CDM Programs						833,333.33	833,333.33
Total in Year	833,333.33	833,333.33	833,333.33	833,333.33	833,333.33	833,333.33	5,000,000.00

As the regression analysis is based on actual power purchased data up to and including 2014 actual data, it is assumed that any savings from programs initiated up to and including 2014 are reflected in the prediction equation resulted from the regression analysis.

The 2016 manual adjustment for CDM savings will be a full year of 2015 programs that persist into 2016 (833,333) plus one half of 2016 programs (416,667) for a total of 1,250,000 kWh on a net basis. The Weight Factors presented in Table 3.19 reflect the methodology used by RSL to recognize persistence savings, which is consistent with Appendix 2-I.

**Table 3.19: Weight Factor for Inclusion in CDM Adjustment to 2016 Load Forecast
 (Appendix 2-1)**

	2011	2012	2013	2014	2015	2016	
Weight Factor for each year's CDM program impact on 2014 load forecast	0	0	0	0	1	0.5	Distributor can select "0", "0.5", or "1" from drop-down list
Default Value selection rationale.	<i>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.</i>	<i>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.</i>	<i>Default is 0, but one option is for full year impact of 2013 CDM programs on 2015 load forecast, but 50% impact in base forecast (first year) impact of 2013 CDM programs on 2013 load forecast, which is part of the data for the load forecast.</i>	<i>Default is 0, but one option is for full year impact of 2014 CDM programs on 2014 load forecast, but 50% impact in base forecast (first year) impact of 2014 CDM programs on 2014 actuals, which is part of the data for the load forecast.</i>	<i>Full year impact of 2015 CDM programs on 2015 load forecast. 2015 CDM program impacts are not in the base forecast.</i>	<i>Only 50% of 2016 CDM programs are assumed to impact the 2016 load forecast based on the "half-year" rule.</i>	

Allocation of CDM Results

Street Lights:

There have been three street light replacement programs implemented in RSL service areas since 2014. South Dundas completed their installation in September 2014. As the savings realized in 2014 and persisting in 2015 were already reflected in the usage per customer/connection which is used to predict the billed kWh for street lighting, this project is excluded in the CDM manual adjustment for street lights for 2016. For the same reason, only the incremental savings achieved in 2016 over 2015 from the street light conversion projects completed in Cardinal and Prescott in 2015 contributed to CDM adjustment for street lighting.

RSL has allocated the rest of 2016 CDM target savings to the Residential, GS < 50 kW and GS 50 to 4,999 kW rate classes based on predicted class savings in its 2015-2020 CDM Plan. The allocation of the CDM Adjustment is show in Table 3.20.

Table 3.20: Allocation of CDM Adjustment

Year	Total	Street Lights	Residential	General Service < 50 kW	General Service 50 to 4,999 kW
2016 CDM kWh Target	1,250,000				
Manual allocation for Street Lights	290,461	290,461			
% for other classes from CDM Plan			20.39%	15.19%	64.42%
Allocation of other classes	959,539		195,656	145,753	618,130
KWh Allocation	1,250,000	290,461	195,656	145,753	618,130

Table 3.21 illustrates the CDM adjustments made for the load forecast and the proposed LRAMVA threshold which is consistent with Appendix 2-I.

Table 3.21: CDM Impact and LRAMVA Threshold (Appendix 2-I)

	2011	2012	2013	2014	2015	2016	Total for 2016
	kWh						
Amount used for CDM threshold for LRAMVA (2014) forecast (per Board Decision in distributor's most recent Cost of Service Application) (enter as negative)		1,595,000.00	1,895,000.00	2,894,000.00			6,384,000.00
	-	944,691.00	- 944,691.00	- 944,691.00			- 2,834,073.00
Amount used for CDM threshold for LRAMVA (2016)					833,333.33	833,333.33	1,666,666.67
Manual Adjustment for 2016 Load Forecast (billed basis)	-	-	-	-	833,333.33	416,666.67	1,250,000.00
Proposed Loss Factor (TLF)	8.30%						
Manual Adjustment for 2016 Load Forecast (system purchased basis)	-	-	-	-	902,500.00	451,250.00	1,353,750.00

The following Table 3.22 outlines how the rate classes have been adjusted to align the non-normalized forecast with the normalized forecast and reflect the adjustments for CDM discussed above.

Table 3.22: Alignment of Non-Normal to Weather Normal Forecast

Non-Normal Weather Billed Energy Forecast (kWh)							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2016	40,421,753	20,381,871	39,931,050	1,021,313	107,884	572,371	102,436,244
Adjustment for Weather (kWh)							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2016	1,081,821	545,487	518,152	-	-	-	2,145,460
Weather Normalized kWh before CDM Adjustment							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2016	41,503,574	20,927,358	40,449,202	1,021,313	107,884	572,371	104,581,704
Adjustment for CDM (kWh)							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2016	195,656	145,753	618,130	290,461			1,250,000
Weather Normalized Billed Energy Forecast after CDM Adjustment (kWh)							
Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Unmetered Loads	Total
2016	41,307,918	20,781,605	39,831,072	730,852	107,884	572,371	103,331,704

Ex.3/Tab 1/Sch.12 - Billed kW Load Forecast by Class

There are three rate classes that charge volumetric distribution on a per kW basis. These include GS 50 - 4,999 kW, Street Lighting, and Sentinel Lighting. As a result, the energy forecast for these classes needs to be converted to a kW basis for rate setting purposes. The forecast of kW for these classes is based on a review of the historical ratio of kW to kWh and applying the average ratio to the forecasted kWh to produce the required kW.

Table 3.24 outlines the annual demand units by applicable rate class.

Table 3.24: Historical Annual kW

Year	General Service 50 to 4,999 kW	Street Lights	Sentinel Lights	Total
2005	139,429	3,764	261	143,454
2006	133,580	3,772	284	137,636
2007	118,636	3,777	286	122,699
2008	124,007	3,782	278	128,067
2009	130,261	3,774	301	134,336
2010	132,433	3,857	301	136,591
2011	130,762	3,941	300	135,003
2012	125,469	3,919	300	129,688
2013	133,148	3,920	300	137,368
2014	131,947	3,620	302	135,869
2015	125,734	2,862	302	128,898
2016 Forecast	116,927	1,992	299	119,218

The following Table 3.25 shows the historical ratio of kW/kWh as well as the average ratio used in calculating the forecasted 2016 Test Year.

Table 3.25: kW/kWh Ratio

Year	General Service 50 to 4,999 kW	Street lights	Sentinel Lights
2005	0.2550%	0.2769%	0.2751%
2006	0.2760%	0.2812%	0.2774%
2007	0.2652%	0.2713%	0.2779%
2008	0.2794%	0.2713%	0.2776%
2009	0.3023%	0.2707%	0.2773%
2010	0.3202%	0.2698%	0.2780%
2011	0.3039%	0.2711%	0.2771%
2012	0.2949%	0.2696%	0.2771%
2013	0.3152%	0.2708%	0.2771%
2014	0.3098%	0.2739%	0.2763%
2015	0.3073%	0.2718%	0.2758%
2016 Test Year - 11 Year Average	0.2936%	0.2726%	0.2770%

RSL notes that as the CDM Adjustment was applied to kWh, and kWh is being converted to kW, the kW, thus, already reflects the CDM Adjustment, and RSL has not applied any additional CDM adjustments to its forecasted kW.

The forecast of kW for the applicable rate classes for the 2016 Test Year is shown in the above table 3.25.

Ex.3/Tab 1/Sch.13 - Final Normalized Load Forecast

A summary of the billing determinants by rate class that has been used to develop the proposed rate is provided in Table 3.26.

Table 3.26: RSL Weather Normalized Load Forecast for 2016 Rate Application

	2005 Actual	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Weather Normal
Actual kWh Purchases	129,569,190	125,693,570	125,561,560	121,334,640	118,414,830	116,592,701	118,002,442	115,281,047	116,595,466	115,948,548	112,684,778	
Predicted kWh Purchases	127,895,969	123,655,943	124,256,672	122,993,570	120,843,116	119,197,603	118,496,807	116,698,167	115,471,991	113,484,155		113,261,985
% Difference	-1.3%	-1.6%	-1.0%	1.4%	2.1%	2.2%	0.4%	1.2%	-1.0%	-2.1%		
CDM Purchase Adjustment												(1,353,749)
Predicted kWh Purchases after CDM												111,908,235
Billed kWh	126,336,267	116,814,435	113,998,664	111,785,106	109,680,577	107,839,547	108,810,680	106,397,501	107,193,012	107,593,001	104,215,272	103,331,704
By Class												
Residential												
Customers	4,931	4,962	4,967	4,966	4,974	4,982	5,004	5,025	5,035	5,040	5,054	5,066
kWh	46,438,361	44,440,685	45,086,486	44,465,236	44,337,599	44,191,614	43,287,278	42,116,982	42,764,838	42,272,228	40,938,311	41,307,918
General Service < 50 kW												
Customers	770	771	784	778	774	770	769	770	759	754	742	739
kWh	23,490,754	22,220,025	22,360,087	21,119,955	20,399,815	20,418,777	20,434,679	19,669,183	20,094,189	20,739,791	20,653,133	20,781,605
General Service 50 to 4,999 kW												
Customers	67	65	65	66	66	66	66	67	65	64	64	64
kWh	54,683,320	48,405,425	44,734,117	44,381,852	43,092,665	41,354,016	43,031,208	42,549,997	42,246,503	42,584,416	40,918,077	39,831,073
kW	139,429	133,580	118,636	124,007	130,261	132,433	130,762	125,469	133,148	131,947	125,734	116,927
Street Lights												
Connections	1,633	1,641	1,644	1,637	1,640	1,701	1,703	1,703	1,707	1,707	1,711	1,711
kWh	1,359,556	1,341,413	1,392,325	1,394,217	1,393,923	1,429,699	1,453,874	1,453,808	1,447,303	1,321,505	1,052,678	730,852
kW	3,764	3,772	3,777	3,782	3,774	3,857	3,941	3,919	3,920	3,620	2,862	1,992
Sentinel Lights												
Connections	56	67	67	67	75	75	75	75	75	75	75	75
kWh	94,884	102,394	102,933	100,161	108,556	108,277	108,262	108,266	108,281	109,302	109,502	107,884
kW	261	284	286	278	301	301	300	300	300	302	302	299
Unmetered Loads												
Connections	49	50	48	49	49	48	59	60	61	61	59	59
kWh	269,392	304,493	322,716	323,685	348,019	337,164	495,379	499,265	531,898	565,759	543,571	572,371
Total												
Customer/Connections	7,506	7,556	7,575	7,563	7,578	7,642	7,676	7,700	7,702	7,701	7,705	7,714
kWh	126,336,267	116,814,435	113,998,664	111,785,106	109,680,577	107,839,547	108,810,680	106,397,501	107,193,012	107,593,001	104,215,272	103,331,704
kWh from applicable classes	143,454	137,636	122,699	128,067	134,336	136,591	135,003	129,688	137,368	135,869	128,898	119,218

Accuracy of Load Forecast and Variance Analysis

Ex.3/Tab 2/Sch.1 – Overview

As per section 2.3.2 of the OEB filing requirements Applicants must demonstrate the historical accuracy of the load forecast approach. RSL has provided revenue, customer/connection count average consumption by rate class and total system load in kWh and variances. Determination of customer count and billed kW for 2016 is included in Ex.3/Tab 1/Sch. 9 and Ex.3/Tab 1/Sch. 12 respectively.

Ex.3/Tab 2/Sch.2 – Distribution Revenues

The table below shows the 2016 Test Year Revenues at current rates.

Table 3.27: 2016 Test Year Revenue at Current Rates

Class	Unit	Test Year Volume	Annualized Customers/C onnections	Monthly Service Charge	Volumetric Charge	Fixed Distribution Revenue	Variable Distribution Revenue	Transformer Allowance	Net Dist. Rev.
Residential	kWh	41,307,918	60,792	13.19	0.0150	801,846	619,619		1,421,465
GS < 50 kW	kWh	20,781,605	8,868	30.52	0.0092	270,651	191,191		461,842
GS >50 to 4999 kW	kW	116,927	768	290.85	1.9538	223,373	228,452	-33,297	418,527
Street Lighting	kW	1,992	20,532	3.44	13.1338	70,630	26,164		96,795
Sentinel Lighting	kW	299	900	2.13	15.5572	1,917	4,648		6,565
Unmetered Scattered Load	kWh	572,371	708	3.99	0.0183	2,825	10,474		13,299
Total		62,781,112	92,568			\$1,371,243	\$1,080,548	(\$33,297)	\$2,418,494

The table below shows the 2016 Test Year Revenue at proposed rates.

Table 3.28: 2016 Test Year Distribution Revenue at Proposed Rates

Class	Unit	Test Year Volume	Annualized Customers/C onnections	Monthly Service Charge	Volumetric Charge	Fixed Distribution Revenue	Variable Distribution Revenue	Transformer Allowance	Net Dist. Rev.
Residential	kWh	41,307,918	60,792	17.91	0.0128	1,088,785	528,543		1,617,328
GS < 50 kW	kWh	20,781,605	8,868	30.52	0.0121	270,651	252,441		523,093
GS >50 to 4999 kW	kW	116,927	768	290.85	2.4285	223,373	283,958	-33,297	474,033
Street Lighting	kW	1,992	20,532	3.63	13.8502	74,483	27,592		102,074
Sentinel Lighting	kW	299	900	2.48	18.1258	2,234	5,416		7,649
Unmetered Scattered Load	kWh	572,371	708	4.52	0.0207	3,200	11,864		15,063
Total		62,781,112	92,568			\$1,662,725	\$1,109,813	(\$33,297)	\$2,739,240

Ex.3/Tab 2/Sch.3 – Variance of Distribution Revenues and Billing Determinants

Table 3.29 below compares distribution revenue and billing determinants by rate class from 2012 Board Approved through to the 2016 Test Year.

Table 3.29: Analysis of Distribution Revenue and Billing Determinants

	2012 Board Approved	2012 Actual	Variance		2013 Actual	Variance		2014 Actual	Variance		2015 Actual	Variance		2016 Test Year	Variance	
				%			%			%			%			%
Residential																
Customers	5,016	5,025	9	0.2%	5,035	10	0.2%	5,040	5	0.1%	5,054	14	0.3%	5,066	12	0.2%
kWh	44,584,446	42,116,982	-2,467,464	-5.5%	42,764,838	647,856	1.5%	42,272,228	-492,610	-1.2%	40,938,311	-1,333,917	-3.2%	41,307,918	369,607	0.9%
Revenue	1,415,689	1,471,752	56,063	4.0%	1,440,179	-31,574	-2.1%	1,394,352	-45,826	-3.2%	1,418,451	24,098	1.7%	1,617,328	198,877	14.0%
Average Usage per Customer per Month	741	698	-42	-5.7%	708	9	1.3%	699	-9	-1.2%	675	-24	-3.4%	679	4	0.7%
General Service < 50 kW																
Customers	770	770	0	0.0%	759	-11	-1.4%	754	-5	-0.7%	742	-12	-1.6%	739	-3	-0.4%
kWh	19,806,496	19,669,183	-137,313	-0.7%	20,094,189	425,006	2.2%	20,739,791	645,602	3.2%	20,653,133	-86,658	-0.4%	20,781,605	128,472	0.6%
Revenue	450,671	466,848	16,177	3.6%	496,051	29,202	6.3%	456,058	-39,993	-8.1%	482,664	26,606	5.8%	523,093	40,429	8.4%
Average Usage per Customer per Month	2,144	2,129	-15	-0.7%	2,206	78	3.6%	2,292	86	3.9%	2,320	27	1.2%	2,343	24	1.0%
General Service 50 to 4,999 kW																
Customers	66	67	1	1.5%	65	-2	-3.0%	64	-1	-1.5%	64	0	0.0%	64	0	0.0%
kWh	38,166,401	42,549,997	4,383,596	11.5%	42,246,503	-303,494	-0.7%	42,584,416	337,913	0.8%	40,918,077	-1,666,339	-3.9%	39,831,072	-1,087,005	-2.7%
kW	126,652	125,469	-1,183	-0.9%	133,148	7,679	6.1%	131,947	-1,201	-0.9%	125,734	-6,213	-4.7%	116,927	-8,808	-7.0%
Revenue	423,173	367,848	-55,325	-13.1%	449,444	81,596	22.2%	436,506	-12,938	-2.9%	448,662	12,156	2.8%	474,033	25,371	5.7%
Average kW per Customer	1,919	1,873	-46	-2.4%	2,048	176	9.4%	2,062	13	0.6%	1,965	-97	-4.7%	1,827	-138	-7.0%
Street Lights																
Connections	1,709	1,703	-6	-0.4%	1,707	4	0.2%	1,707	0	0.0%	1,711	4	0.2%	1,711	0	0.0%
kWh	1,441,722	1,453,808	12,086	0.8%	1,447,303	-6,505	-0.4%	1,321,505	-125,798	-8.7%	1,052,678	-268,827	-20.3%	730,852	-321,826	-30.6%
kW	3,843	3,919	76	2.0%	3,920	1	0.0%	3,620	-300	-7.7%	2,862	-758	-21.0%	1,992	-869	-30.4%
Revenue	117,106	94,393	-22,713	-19.4%	121,371	26,978	28.6%	115,977	-5,394	-4.4%	107,656	-8,320	-7.2%	102,074	-5,582	-5.2%
Average kW per Connection	2.2	2.3	0.1	2.3%	2.3	(0.0)	-0.2%	2.1	(0.2)	-7.7%	1.7	(0.4)	-21.1%	1.2	(0.5)	-30.4%
Sentinel Lights																
Connections	75	75	0	0.0%	75	0	0.0%	75	0	0.0%	75	0	0.0%	75	0	0.0%
kWh	108,277	108,266	-11	0.0%	108,281	15	0.0%	109,302	1,021	0.9%	109,502	200	0.2%	107,884	-1,618	-1.5%
kW	301	300	-1	-0.3%	300	0	0.0%	302	2	0.7%	302	0	0.0%	299	-3	-1.1%
Revenue	6,382	4,750	-1,632	-25.6%	6,608	1,859	39.1%	6,492	-116	-1.8%	6,581	89	1.4%	7,649	1,068	16.2%
Average kW per Connection	4.0	4.0	(0.0)	-0.3%	4.0	0.0	0.0%	4.0	0.0	0.7%	4.0	0.0	0.0%	4.0	(0.0)	-1.1%
Unmetered Loads																
Connections	58	60	2	3.4%	61	1	1.7%	61	0	0.0%	59	-2	-3.3%	59	0	0.0%
kWh	429,961	499,265	69,304	16.1%	531,898	32,633	6.5%	565,759	33,861	6.4%	543,571	-22,188	-3.9%	572,371	28,800	5.3%
Revenue	10,285	17,449	7,164	69.7%	11,306	-6,143	-35.2%	13,043	1,737	15.4%	12,577	-467	-3.6%	15,063	2,486	19.8%
Average Usage per Connection	618	693	76	12.2%	727	33	4.8%	773	46	6.4%	768	-5	-0.7%	808	41	5.3%
Total																
Customer/Connections	7,694	7,700	6	0.1%	7,702	2	0.0%	7,701	-1	0.0%	7,705	4	0.1%	7,714	9	0.1%
kWh	104,537,303	106,397,501	1,860,198	1.8%	107,193,012	795,511	0.7%	107,593,001	399,989	0.4%	104,215,272	-3,377,729	-3.1%	103,331,704	-883,568	-0.8%
kW from applicable classes	130,796	129,688	-1,108	-0.8%	137,368	7,680	5.9%	135,869	-1,499	-1.1%	128,898	-6,971	-5.1%	119,218	-9,680	-7.5%
Revenue	2,423,306	2,423,039	-267	0.0%	2,524,958	101,919	4.2%	2,422,428	-102,530	-4.1%	2,476,591	54,162	2.2%	2,739,240	262,649	10.6%

Note:

- 1) 2012 Board approved forecast (kWh/kW) reflects values that include a CDM adjustment and are weather normalized.
- 2) 2012, 2013 and 2014 kWh/kW volumes are weather actual.
- 3) Chapter 2 Filing Requirements requires a schedule of revenue for “at least the past 5 years”. Because RSL’s last Cost of Service rate application was approved in 2012, the Applicant has provided information back to this particular year (i.e. 4 years of actual data).

The following discussion provides a year over year variance analysis on RSL's Distribution Revenue and Billing Determinants. The variance analysis will compare 2012 Actual to 2012 Board Approved; 2013 Actual to 2012 Actual; 2014 Actual to 2013 Actual; 2015 Actual to 2014 Actual and 2016 Test Year to 2015 Actual. The overall variance analysis has been provided based on RSL's materiality threshold of \$50,000 as stated in Exhibit 1.

2012 Actual vs 2012 Board Approved

The Distribution Revenue and billing determinants for 2012 Actual and 2012 Board Approved are provided in Table 3.30

Table 3.30: 2012 Actual vs 2012 Board Approved

	2012 Board Approved	2012 Actual	Variance	
				%
Residential				
Customers	5,016	5,025	9	0.2%
kWh	44,584,446	42,116,982	(2,467,464)	-5.5%
Revenue	1,415,689	1,471,752	56,063	4.0%
Average Usage per Customer per Month	741	698	(42)	-5.7%
General Service < 50 kW				
Customers	770	770	0	0.0%
kWh	19,806,496	19,669,183	(137,313)	-0.7%
Revenue	450,671	466,848	16,177	3.6%
Average Usage per Customer per Month	2,144	2,129	(15)	-0.7%
General Service 50 to 4,999 kW				
Customers	66	67	1	1.5%
kWh	38,166,401	42,549,997	4,383,596	11.5%
kW	126,652	125,469	(1,183)	-0.9%
Revenue	423,173	367,848	(55,325)	-13.1%
Average kW per Customer	1,919	1,873	(46)	-2.4%
Street Lights				
Connections	1,709	1,703	(6)	-0.4%
kWh	1,441,722	1,453,808	12,086	0.8%
kW	3,843	3,919	76	2.0%
Revenue	117,106	94,393	(22,713)	-19.4%
Average kW per Connection	2.2	2.3	0	2.3%
Sentinel Lights				
Connections	75	75	0	0.0%
kWh	108,277	108,266	(11)	0.0%
kW	301	300	(1)	-0.3%
Revenue	6,382	4,750	(1,632)	-25.6%
Average kW per Connection	4.0	4.0	(0)	-0.3%
Unmetered Loads				
Connections	58	60	2	3.4%
kWh	429,961	499,265	69,304	16.1%
Revenue	10,285	17,449	7,164	69.7%
Average Usage per Connection	618	693	76	12.2%
Total				
Customer/Connections	7,694	7,700	6	0.1%
kWh	104,537,303	106,397,501	1,860,198	1.8%
kW from applicable classes	130,796	129,688	(1,108)	-0.8%
Revenue	2,423,306	2,423,039	(267)	0.0%

Distribution revenue for 2012 is very close to the amount approved by the Board in RSL's 2012 Cost of Service application.

For the Residential class the revenue increased by \$56,063 over the 2012 Board Approved amount. The primary driver of the increase is the inclusion of the smart meter disposition, and the disposition of PILS, both from the 2012 rate application. The increase from these dispositions is offset by having 7 months of kWh billed at 2011 rate.

For the GS 50 to 4,999 kW class the revenue decreased by (\$55,325) over the 2012 Board Approved amount. The driver of the variance was that 7 months of actual revenue was at the 2011 rate, while the revenue in the application was at the 2012 rate.

The variances in the revenue of other classes are minimal.

The variances in customer/connections are very small.

The 2012 Actual kWh consumed by all customer classes is 1.8% higher compared to the weather normal value assumed in the 2012 Board Approved kWh. The consumption of Residential class dropped by 5.5%, partially offset the increase in the consumption of the GS 50 to 4,999 class. Demand for 2012 actual was slightly lower than the 2012 Board Approved by 0.8%.

2013 Actual vs 2012 Actual

The Distribution Revenue and billing determinants for 2013 Actual vs. 2012 Actual are provided in Table 3.31

Table 3.31: 2013 Actual vs 2012 Actual

	2012 Actual	2013 Actual	Variance	
				%
Residential				
Customers	5,025	5,035	10	0.2%
kWh	42,116,982	42,764,838	647,856	1.5%
Revenue	1,471,752	1,440,179	(31,574)	-2.1%
Average Usage per Customer per Month	698	708	9	1.3%
General Service < 50 kW				
Customers	770	759	(11)	-1.4%
kWh	19,669,183	20,094,189	425,006	2.2%
Revenue	466,848	496,051	29,202	6.3%
Average Usage per Customer per Month	2,129	2,206	78	3.6%
General Service 50 to 4,999 kW				
Customers	67	65	(2)	-3.0%
kWh	42,549,997	42,246,503	(303,494)	-0.7%
kW	125,469	133,148	7,679	6.1%
Revenue	367,848	449,444	81,596	22.2%
Average kW per Customer	1,873	2,048	176	9.4%
Street Lights				
Connections	1,703	1,707	4	0.2%
kWh	1,453,808	1,447,303	(6,505)	-0.4%
kW	3,919	3,920	1	0.0%
Revenue	94,393	121,371	26,978	28.6%
Average kW per Connection	2.3	2.3	(0)	-0.2%
Sentinel Lights				
Connections	75	75	0	0.0%
kWh	108,266	108,281	15	0.0%
kW	300	300	0	0.0%
Revenue	4,750	6,608	1,859	39.1%
Average kW per Connection	4.0	4.0	0	0.0%
Unmetered Loads				
Connections	60	61	1	1.7%
kWh	499,265	531,898	32,633	6.5%
Revenue	17,449	11,306	(6,143)	-35.2%
Average Usage per Connection	693	727	33	4.8%
Total				
Customer/Connections	7,700	7,702	2	0.0%
kWh	106,397,501	107,193,012	795,511	0.7%
kW from applicable classes	129,688	137,368	7,680	5.9%
Revenue	2,423,039	2,524,958	101,919	4.2%

2013 Actual revenue was \$101,919 or 4.2% higher than 2012 Actual Revenue. In general, there were 2 rate pieces that contributed to the variance: Foregone revenue from the 2012 Cost

of Service application continued until April 30, 2013. Also, the rate rider for the Smart Meter Disposition continued until August 31, 2013.

The GS 50 to 4,999 kW rate class contributed most to the increase of revenue. The increase is due to an increase in the rate over 2012 plus an increase in kW billed, despite a reduction of 2 customers.

The total 2013 kWh consumption is at the same level as 2012 with a slight increase. The kWh from Residential and GS < 50 kW is higher in 2013 as a result of a colder and longer winter periods. The higher kW billed for the GS 50 to 4,999 kW rate class contributed to the 5.9% increase in the overall kW.

2014 Actual vs 2013 Actual

The Distribution Revenue and billing determinants for 2014 Actual and 2013 Actual are provided in Table 3.32.

Table 3.32: 2014 Actual vs 2013 Actual

	2013 Actual	2014 Actual	Variance	%
				%
Residential				
Customers	5,035	5,040	5	0.1%
kWh	42,764,838	42,272,228	(492,610)	-1.2%
Revenue	1,440,179	1,394,352	(45,826)	-3.2%
Average Usage per Customer per Month	708	699	(9)	-1.2%
General Service < 50 kW				
Customers	759	754	(5)	-0.7%
kWh	20,094,189	20,739,791	645,602	3.2%
Revenue	496,051	456,058	(39,993)	-8.1%
Average Usage per Customer per Month	2,206	2,292	86	3.9%
General Service 50 to 4,999 kW				
Customers	65	64	(1)	-1.5%
kWh	42,246,503	42,584,416	337,913	0.8%
kW	133,148	131,947	(1,201)	-0.9%
Revenue	449,444	436,506	(12,938)	-2.9%
Average kW per Customer	2,048	2,062	13	0.6%
Street Lights				
Connections	1,707	1,707	0	0.0%
kWh	1,447,303	1,321,505	(125,798)	-8.7%
kW	3,920	3,620	(300)	-7.7%
Revenue	121,371	115,977	(5,394)	-4.4%
Average kW per Connection	2.3	2.1	(0)	-7.7%
Sentinel Lights				
Connections	75	75	0	0.0%
kWh	108,281	109,302	1,021	0.9%
kW	300	302	2	0.7%
Revenue	6,608	6,492	(116)	-1.8%
Average kW per Connection	4.0	4.0	0	0.7%
Unmetered Loads				
Connections	61	61	0	0.0%
kWh	531,898	565,759	33,861	6.4%
Revenue	11,306	13,043	1,737	15.4%
Average Usage per Connection	727	773	46	6.4%
Total				
Customer/Connections	7,702	7,701	(1)	0.0%
kWh	107,193,012	107,593,001	399,989	0.4%
kW from applicable classes	137,368	135,869	(1,499)	-1.1%
Revenue	2,524,958	2,422,428	(102,530)	-4.1%

2014 Actual revenue was \$(102,530), or 4.1% lower than 2013 revenue. The primary reason is the cease of smart meter disposition rate rider in August 2013 and the foregone revenue rate rider in April 2013.

The billing determinants remained stable with a 0.4% increase in kWh and a 1.1% decrease in kW consumption.

2015 Actual vs 2014 Actual

The Distribution Revenue and billing determinants for 2015 Actual and 2014 Actual are provided in Table 3.33.

Table 3.33: 2015 Actual vs 2014 Actual

	2014 Actual	2015 Actual	Variance	%
				%
Residential				
Customers	5,040	5,054	14	0.3%
kWh	42,272,228	40,938,311	(1,333,917)	-3.2%
Revenue	1,394,352	1,418,451	24,098	1.7%
Average Usage per Customer per Month	699	675	(24)	-3.4%
General Service < 50 kW				
Customers	754	742	(12)	-1.6%
kWh	20,739,791	20,653,133	(86,658)	-0.4%
Revenue	456,058	482,664	26,606	5.8%
Average Usage per Customer per Month	2,292	2,320	27	1.2%
General Service 50 to 4,999 kW				
Customers	64	64	0	0.0%
kWh	42,584,416	40,918,077	(1,666,339)	-3.9%
kW	131,947	125,734	(6,213)	-4.7%
Revenue	436,506	448,662	12,156	2.8%
Average kW per Customer	2,062	1,965	(97)	-4.7%
Street Lights				
Connections	1,707	1,711	4	0.2%
kWh	1,321,505	1,052,678	(268,827)	-20.3%
kW	3,620	2,862	(758)	-21.0%
Revenue	115,977	107,656	(8,320)	-7.2%
Average kW per Connection	2.1	1.7	(0)	-21.1%
Sentinel Lights				
Connections	75	75	0	0.0%
kWh	109,302	109,502	200	0.2%
kW	302	302	0	0.0%
Revenue	6,492	6,581	89	1.4%
Average kW per Connection	4.0	4.0	0	0.0%
Unmetered Loads				
Connections	61	59	(2)	-3.3%
kWh	565,759	543,571	(22,188)	-3.9%
Revenue	13,043	12,577	(467)	-3.6%
Average Usage per Connection	773	768	(5)	-0.7%
Total				
Customer/Connections	7,701	7,705	4	0.1%
kWh	107,593,001	104,215,272	(3,377,729)	-3.1%
kW from applicable classes	135,869	128,898	(6,971)	-5.1%
Revenue	2,422,428	2,476,591	54,162	2.2%

2015 Actual revenue increased \$54,162 over 2014, primarily due to that in 2015 RSL adjusted its estimated LRAMVA amounts for 2012 to 2014. The amounts originally recorded did not include persistence, as RSL at that time was uncertain that the persistence should be included

in the calculation. An adjustment of \$31,804 was made to Distribution Revenue for Residential, GS <50KW and GS 50 to 4,999.

Both kWh and kW consumption saw a decline in 2015, by 3.1% (3,377,729 kWh) and 5.1% (6,971 kW) respectively, primarily because of the mild fourth quarter weather. CDM programs and energy savings initiatives contributed too.

2016 Test Year vs 2015 Actual

The Distribution Revenue and billing determinants for 2016 Test Year and 2015 Actual are provided in Table 3.34.

Table 3.34: 2016 Test Year vs 2015 Actual

	2015 Actual	2016 Test Year	Variance	%
Residential				
Customers	5,054	5,066	12	0.2%
kWh	40,938,311	41,307,918	369,607	0.9%
Revenue	1,418,451	1,617,328	198,877	14.0%
Average Usage per Customer per Month	675	679	4	0.7%
General Service < 50 kW				
Customers	742	739	-3	-0.4%
kWh	20,653,133	20,781,605	128,472	0.6%
Revenue	482,664	523,093	40,429	8.4%
Average Usage per Customer per Month	2,320	2,343	24	1.0%
General Service 50 to 4,999 kW				
Customers	64	64	0	0.0%
kWh	40,918,077	39,831,072	-1,087,005	-2.7%
kW	125,734	116,927	-8,808	-7.0%
Revenue	448,662	474,033	25,371	5.7%
Average kW per Customer	1,965	1,827	-138	-7.0%
Street Lights				
Connections	1,711	1,711	0	0.0%
kWh	1,052,678	730,852	-321,826	-30.6%
kW	2,862	1,992	-869	-30.4%
Revenue	107,656	102,074	-5,582	-5.2%
Average kW per Connection	1.7	1.2	-1	-30.4%
Sentinel Lights				
Connections	75	75	0	0.0%
kWh	109,502	107,884	-1,618	-1.5%
kW	302	299	-3	-1.1%
Revenue	6,581	7,649	1,068	16.2%
Average kW per Connection	4.0	4.0	-0	-1.1%
Unmetered Loads				
Connections	59	59	0	0.0%
kWh	543,571	572,371	28,800	5.3%
Revenue	12,577	15,063	2,486	19.8%
Average Usage per Connection	768	808	41	5.3%
Total				
Customer/Connections	7,705	7,714	9	0.1%
kWh	104,215,272	103,331,704	-883,568	-0.8%
kW from applicable classes	128,898	119,218	-9,680	-7.5%
Revenue	2,476,591	2,739,240	262,649	10.6%

The Proposed Test Year Distribution Revenue is a reflection of this 2016 Cost of Service Application. The variance in Distribution Revenue over the 2015 Actual, shown in Table 3.34, is a result of the proposed increases to Fixed and Variable Distribution Revenue in the Test Year.

Customer/connection counts are predicted to be the same as 2015 except for 12 new residential customers and a reduction of 3 General Service < 50 kW customers. RSL believes the projection based on historical trends and the projected customer count is appropriate. The variances in kWh consumption and kW demand are a result of load forecast methodology.

Year over year changes are a result of the inputs of the load forecast model which is explained in earlier sections of this Exhibit. Flat growth rates, minimal changes to kWh, and a declined level of kW are appropriate on a go forward basis for rate setting purposes, as shown in Table 3.34.

Table 3.36 below is an extract from the Board's Chapter 2 Filing Requirements - Appendix 2-IA and highlights the variances between Actual and Forecast data.

Table 3.35: OEB Appendix 2-IA Summary and Variances of Actual and Forecast Data

**Appendix 2-IA
 Summary and Variances of Actual and Forecast Data**

	2012 Board Approved	2012	2013	2014	2015 Bridge	2016 Test
Residential						
# of Customers	5,018	5,025	5,035	5,040	5,054	5,088
kWh	44,584,448	42,116,982	42,784,838	42,272,228	40,938,311	41,307,918
kV						
Variance Analysis						
# of Customers		0.18%	0.38%	0.43%	0.76%	1.00%
kWh		-5.53%	-4.08%	-5.19%	-8.18%	-7.35%
kV		0.00%	0.00%	0.00%	0.00%	0.00%
GS < 50 kW						
# of Customers	770	770	759	754	742	739
kWh	19,808,495	19,669,183	20,094,189	20,739,791	20,653,133	20,781,605
kV						
Variance Analysis						
# of Customers		0.00%	-1.43%	-2.08%	-3.64%	-4.03%
kWh		-0.69%	1.45%	4.71%	4.27%	4.92%
kV		0.00%	0.00%	0.00%	0.00%	0.00%
GS 50 to 4,999 kW						
# of Customers	66	67	65	64	64	64
kWh	38,166,401	42,549,997	42,246,503	42,584,416	40,918,077	39,831,072
kV	128,652	125,469	133,148	131,947	125,734	116,927
Variance Analysis						
# of Customers		1.52%	-1.52%	-3.03%	-3.03%	-3.03%
kWh		11.49%	10.69%	11.58%	7.21%	4.36%
kV		-0.93%	5.13%	4.18%	-0.72%	-7.68%
Street Lighting						
# of Connections	1,709	1,703	1,707	1,707	1,711	1,711
kWh	1,441,722	1,453,808	1,447,303	1,321,505	1,052,678	730,852
kV	3,843	3,919	3,920	3,620	2,862	1,992
Variance Analysis						
# of Connections		-0.35%	-0.12%	-0.12%	0.12%	0.12%
kWh		0.84%	0.39%	-8.34%	-28.98%	-49.31%
kV		1.98%	2.00%	-5.80%	-25.54%	-48.16%
Sentinel Lighting						
# of Connections	75	75	75	75	75	75
kWh	109,277	108,268	108,281	109,302	109,502	107,884
kV	301	300	300	302	302	299
Variance Analysis						
# of Connections		0.00%	0.00%	0.00%	0.00%	0.00%
kWh		-0.01%	0.00%	0.95%	1.13%	-0.36%
kV		-0.33%	-0.33%	0.33%	0.33%	-0.74%
Unmetered Scattered Load						
# of Customers	58	60	61	61	59	59
kWh	429,961	499,265	531,898	585,759	543,571	572,371
kV						
Variance Analysis						
# of Customers		3.45%	5.17%	5.17%	1.72%	1.72%
kWh		16.12%	23.71%	31.55%	26.42%	33.12%
kV		0.00%	0.00%	0.00%	0.00%	0.00%
Totals						
Customers / Connections	7,694	7,700	7,702	7,701	7,705	7,714
kWh	104,537,302	108,397,501	107,193,012	107,593,001	104,215,272	103,331,704
kV from applicable classes	130,796	129,688	137,358	135,869	128,899	119,218
Totals - Variance						
Customers / Connections		0.08%	0.10%	0.09%	0.14%	0.26%
kWh		1.78%	2.54%	2.92%	-0.31%	-1.15%
kV from applicable classes		-0.85%	5.02%	3.88%	-1.45%	-8.85%

Ex.3/Tab 3/Sch. 4 - Average Consumption per Customer

Table 3.35 below presents the actual average use per customer, by customer class, and the estimated average use per customer based on the load forecast. Following the table is the analysis of changes in the average consumption by class. As can be seen from the table, the predicted use per customer follows the trend created from its historical usage per customer.

RSL does not have a process to adjust weather actual data to a weather normal basis since the Applicant is not aware that a Board approved method has been established.

Table 3.36: Average per Customer Use

	2012 Board Approved	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Test Year
Residential						
Per Customer per Month kWh	741	698	708	699	675	679
Per Customer kW						
General Service < 50 kW						
Per Customer per Month kWh	2,144	2,129	2,206	2,292	2,320	2,343
Per Customer kW						
General Service 50 to 4,999 kW						
Per Customer per Month kWh	48,190	52,923	54,162	55,448	53,279	51,863
Per Customer kW	1,919	1,873	2,048	2,062	1,965	1,827
Street Lights						
Per Connection per month kWh	70	71	71	65	51	36
Per Connection kW	2.25	2.30	2	2.12	1.67	1.16
Sentinel Lights						
Per Connection per month kWh	120	120	120	121	122	120
Per Connection kW	4.01	4.00	4.00	4.03	4.03	3.98
Unmetered Loads						
Per Connection per month kWh	618	693	727	773	768	808
Per Connection kW						

Residential

The average kWh consumption per customer per month has reduced by 9% (66 kWh) between 2015 Actual and 2012 Board Approved. Energy conservation programs promoted by the utility as well as time-of-use pricing have been a major contributing factor to the average usage reduction. The average kWh per customer per month increased in 2013 compared to 2012 as a result of a colder and longer winter period.

GS < 50 kW

The average kWh consumption per customer per month has increased by 8% (176 kWh) between 2015 Actual and 2012 Board Approved. The major contributing factor to the increase is the addition of three larger commercial customers during the period.

GS 50 to 4,999 kW

The average kWh consumption per customer per month for 2015 is 11% (5,069 kWh) higher than 2012 Board Approve, but annual kW per customer increases by 2% (46 kW) only. Besides weather condition CDM programs has been a major factor affecting the average kWh and kW of this customer class.

Street Lighting

The average kWh consumption per connection per month and annual kW per connection declined significantly in 2014 and 2015 because high efficiency streetlights were replacing old streetlights in some of the RSL's service areas. The 2015 average kWh and kW is 27% and 26% lower than 2012 Board Approved. The replacement continued to 2015, which will further reduce the average kWh and kW in 2016.

Sentinel Lighting

The average kWh consumption per connection per month and annual kW per connection remain almost constant since 2012.

Unmetered Scattered Load

The average kWh consumption per connection per month increased by 24% between 2015 Actual and 2012 Board Approved. Although the quantity of customers has consistent, the average was affected by the addition of two larger USL customers in 2014.

Rideau St. Lawrence Distribution Inc.
 EB-2015-0100
 Exhibit 3 – Operating Revenue
 Filed: October 21, 2016

Account 4235 - Specific Service Charges	Actual Year ²	Actual Year ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
	2012	2013	2014	2014	2015	2016
Reporting Basis	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS
Collection Charges	\$ 81,596	\$ 66,600	\$ 83,273	\$ 83,273	\$ 70,713	\$ 80,000
Account History Charges	\$ 423	\$ 389	\$ 375	\$ 375	\$ 60	\$ 60
Occupancy Charges	\$ 25,410	\$ 26,636	\$ 26,970	\$ 26,970	\$ 27,855	\$ 27,000
Returned Cheque Charges (NSF)	\$ 888	\$ 1,068	\$ 1,170	\$ 1,170	\$ 900	\$ 900
Disconnect/Reconnect Charges	\$ 4,830	\$ 3,805	\$ 3,795	\$ 3,795	\$ 4,930	\$ 4,500
Micro-Fit Service Charges	\$ 315	\$ 321	\$ 434	\$ 434	\$ 454	\$ 1,490
Miscellaneous Charges	\$ -	\$ 15	\$ -	\$ -	\$ 330	\$ -
Total	\$ 113,461	\$ 98,803	\$ 116,016	\$ 116,016	\$ 105,242	\$ 113,950

Account 4082 - Retail Services Revenues	Actual Year ²	Actual Year ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
	2012	2013	2014	2014	2015	2016
Reporting Basis	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS
Misc Bill Ready Charges (BRC)	\$ 1,067	\$ 961	\$ 1,051	\$ 1,051	\$ 963	\$ 1,000
Fixed Charges	\$ 2,795	\$ 3,498	\$ 3,232	\$ 3,232	\$ 3,571	\$ 3,500
Variable charges	\$ 2,200	\$ 1,887	\$ 2,281	\$ 2,281	\$ 2,130	\$ 2,100
Total	\$ 6,062	\$ 6,345	\$ 6,564	\$ 6,564	\$ 6,664	\$ 6,600

Account 4084 - Service Transaction Requests (STR)	Actual Year ²	Actual Year ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
	2012	2013	2014	2014	2015	2016
Reporting Basis	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS
STR Processed	\$ 26	\$ 26	\$ 27	\$ 27	\$ 22	\$ 22
STR Request	\$ 53	\$ 54	\$ 55	\$ 55	\$ 40	\$ 40
Total	\$ 78	\$ 80	\$ 81	\$ 81	\$ 62	\$ 62

Account 4210 - Rent from Electric Property	Actual Year ²	Actual Year ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
	2012	2013	2014	2014	2015	2016
Reporting Basis	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS
Joint Use - Bell Canada	\$ 17,746	\$ 17,768	\$ 17,768	\$ 17,768	\$ 17,768	\$ 17,768
Joint Use - WTC Communications	\$ 3,643	\$ 3,643	\$ 3,643	\$ 3,643	\$ 3,643	\$ 3,643
Joint Use - Cable Companies	\$ 23,065	\$ 23,065	\$ 23,065	\$ 23,065	\$ 22,328	\$ 22,328
Total	\$ 44,454	\$ 44,476	\$ 44,476	\$ 44,476	\$ 43,739	\$ 43,739

Account 4405 - Interest and Dividend Income	Actual Year ²	Actual Year ²	Actual Year ²	Actual Year ²	Bridge Year ²	Test Year
	2012	2013	2014	2014	2015	2016
Reporting Basis	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS
Short-term Investment Interest						
Bank Deposit Interest	\$ 13,302	\$ 1,674	\$ 6,248	\$ 6,248	\$ 6,625	\$ 6,500
Regulatory Interest Income	\$ 11,191	\$ 13,207	\$ 11,466	\$ 11,466	\$ 8,681	\$ 7,500
Total	\$ 2,110	\$ 14,881	\$ 17,714	\$ 17,714	\$ 15,306	\$ 14,000

Table 3.40: 2014 Actual vs 2013 Actual

USoA #	USoA Description	2013 Actual	2014 Actual	Variance	Variance
	<i>Reporting Basis</i>			\$	%
4235	Specific Service Charges	98,803	116,016	17,213	17%
4225	Late Payment Charges	59,436	66,569	7,134	12%
4082	Retail Services Revenues	6,345	6,564	219	3%
4084	Service Transaction Requests	80	81	2	2%
4086	SSS Administration Revenue	22,340	19,665	(2,675)	-12%
4210	Rent from Electric Property	44,476	44,476	-	0%
		-	-	-	
4355	Gain on Disposition	-	-	-	
4360	Loss on Disposition	(8,678)	(5,665)	3,013	-35%
4375	Revenues from Non-Utility Operations	14,920	3,322	(11,598)	-78%
4380	Expenses of Non-Utility Operations	(2,302)	642	2,944	-128%
4390	Miscellaneous Non-Operating Income	2,940	671	(2,269)	-77%
4405	Interest and Dividend Income	14,881	17,714	2,832	19%
				-	
				-	
				-	
	Specific Service Charges	98,803	116,016	17,213	17%
	Late Payment Charges	59,436	66,569	7,134	12%
	Other Income or Deductions	73,241	70,786	(2,455)	-3%
	Other Operating Revenues	21,761	16,683	(5,077)	-23%
	Total	253,241	270,055	16,814	7%

Variations between 2014 and 2013 show very small changes except for account 4235 which is higher by 17%, primarily due to increased collection charges. The 2014 revenue for collection charges appears to be high, but is comparable to the actual 2012 amount. The collection revenue in 2013 was abnormally low.

Ex.3/Tab 3/Sch. 3 – Proposed Specific Service Charges

RSL is proposing no changes to the current specific services charges with the exception of the microFIT service charge.

As per the Cost Allocation Model, the monthly unit cost for microFIT is calculated to be \$17.76, including a \$10 fee per microFIT meter point from the RSL's settlement provider, UtiliSmart. Please see Ex.7/Tab 1/Sch.1 for the calculation. RSL is proposing to increase the microFIT monthly service charge from the current level of \$5.40 to \$17.76. This increase in the customer charge and the calculation included in the Cost Allocation Model were also approved in Wellington North Power Inc.'s 2016 Cost of Service Application (EB-2015- 0110).

RSL has provided for this increase in revenue in RSL's 2016 revenue offsets.

Ex.3/Tab 3/Sch. 4 – Revenue from Affiliate Companies

RSL does not have any revenue from affiliate transactions, shared services, and corporate cost allocation.

Appendix

List of Appendices:

Appendix 3.1	Monthly Data Used for Regression Analysis
Appendix 3.2	Regression Scenarios Performed
Appendix 3.3	Summary Page of 2006-2010 OPA Final Results Report

Appendix 3.1- Monthly Data Used for Regression Analysis

	Unadjusted Purchases kWh	Adjustment for loss of St Lawrence Corp	Adjustment for Microfit	Revised Purchases kWh	HDD	CDD	Number of Days in Month	Spring/Fall Flag	Holidays in Month	CDM Activity
Jan-05	14,043,460	- 444,000		13,599,460	920.7	0	31	0	1	0
Feb-05	12,095,730	- 498,000		11,597,730	700.6	0	28	0	0	0
Mar-05	12,289,830	- 484,000		11,805,830	668.8	0	31	1	2	0
Apr-05	10,028,980	- 330,000		9,698,980	324.8	0	30	1	0	0
May-05	9,635,640	- 432,000		9,203,640	205	1.9	31	1	1	0
Jun-05	10,690,860	- 500,000		10,190,860	16.1	111.6	30	0	0	0
Jul-05	11,192,530	- 676,000		10,516,530	2.9	128.6	31	0	1	0
Aug-05	11,098,410	- 600,000		10,498,410	8.4	115.4	31	0	1	0
Sep-05	9,976,880	- 472,000		9,504,880	59.2	33.1	30	1	1	0
Oct-05	10,338,960	- 416,000		9,922,960	269.7	6.4	31	1	1	0
Nov-05	11,286,470	- 634,000		10,652,470	484.2	0	30	1	0	0
Dec-05	12,985,440	- 608,000		12,377,440	762	0	31	0	2	0
Jan-06	12,900,470	- 392,000		12,508,470	733.5	0	31	0	1	2,664
Feb-06	11,727,560			11,727,560	720.9	0	28	0	0	5,328
Mar-06	11,784,150			11,784,150	600.4	0	31	1	0	7,991
Apr-06	9,406,440			9,406,440	321.6	0	30	1	2	10,655
May-06	9,293,920			9,293,920	128.2	16.9	31	1	1	13,319
Jun-06	9,564,320			9,564,320	27.6	48.2	30	0	0	15,983
Jul-06	10,639,870			10,639,870	0.3	130.6	31	0	1	18,647
Aug-06	10,096,480			10,096,480	18.2	68.1	31	0	1	21,310
Sep-06	8,938,560			8,938,560	121	5.3	30	1	1	23,974
Oct-06	9,952,100			9,952,100	335.7	0	31	1	1	26,638
Nov-06	10,436,420			10,436,420	417.3	0	30	1	0	29,302
Dec-06	11,345,280			11,345,280	610	0	31	0	2	31,966
Jan-07	12,568,180			12,568,180	797.1	0	31	0	1	34,514
Feb-07	12,210,720			12,210,720	820	0	28	0	0	37,062
Mar-07	11,873,120			11,873,120	643	0	31	1	0	39,610
Apr-07	9,854,780			9,854,780	361.1	0	30	1	2	42,158
May-07	9,000,430			9,000,430	157.3	17.3	31	1	1	44,705
Jun-07	9,265,780			9,265,780	34.2	66.9	30	0	0	47,253
Jul-07	9,662,330			9,662,330	11.8	65.1	31	0	1	49,801
Aug-07	9,982,760			9,982,760	20.1	79.3	31	0	1	52,349
Sep-07	9,063,690			9,063,690	76	25.7	30	1	1	54,897
Oct-07	9,402,850			9,402,850	227.5	1.9	31	1	1	57,445
Nov-07	10,423,660			10,423,660	517	0	30	1	0	59,993
Dec-07	12,253,260			12,253,260	787.7	0	31	0	2	62,541
Jan-08	12,288,190			12,288,190	754.2	0	31	0	1	64,386
Feb-08	11,701,800			11,701,800	774.3	0	29	0	1	66,231
Mar-08	11,663,590			11,663,590	721.1	0	31	1	2	68,076
Apr-08	9,464,610			9,464,610	299.6	0	30	1	0	69,921
May-08	8,709,540			8,709,540	185.4	0	31	1	1	71,766
Jun-08	9,032,720			9,032,720	22.4	60.5	30	0	0	73,611
Jul-08	9,681,910			9,681,910	0.3	78.9	31	0	1	75,456
Aug-08	9,241,240			9,241,240	14.4	49.5	31	0	1	77,300
Sep-08	8,800,520			8,800,520	95.4	25	30	1	1	79,145
Oct-08	8,997,790			8,997,790	321.8	0	31	1	1	80,990
Nov-08	9,775,270			9,775,270	502.8	0	30	1	0	82,835
Dec-08	11,977,460			11,977,460	796.7	0	31	0	2	84,680
Jan-09	12,715,660			12,715,660	979.5	0	31	0	1	89,869
Feb-09	10,806,911			10,806,911	711.5	0	28	0	1	95,059
Mar-09	10,822,297			10,822,297	598.3	0	31	1	0	100,248
Apr-09	9,188,119			9,188,119	334.3	2.5	30	1	2	105,437
May-09	8,646,669			8,646,669	181.6	3.2	31	1	1	110,627
Jun-09	8,694,745			8,694,745	50.4	44.9	30	0	0	115,816
Jul-09	8,965,453			8,965,453	13.1	42.9	31	0	1	121,005
Aug-09	9,534,995			9,534,995	26.1	82.1	31	0	1	126,195
Sep-09	8,543,544			8,543,544	106.5	5	30	1	1	131,384
Oct-09	9,341,679			9,341,679	355.5	0	31	1	1	136,573
Nov-09	9,542,500			9,542,500	417.4	0	30	1	0	141,763
Dec-09	11,612,258			11,612,258	759.4	0	31	0	2	146,962
Jan-10	12,078,338			12,078,338	789.2	0	31	0	1	147,945
Feb-10	10,494,800			10,494,800	665.8	0	28	0	1	148,937
Mar-10	10,154,062			10,154,062	460.7	0	31	1	0	149,930
Apr-10	8,300,785			8,300,785	258.1	1.6	30	1	2	150,922
May-10	8,510,046			8,510,046	112.3	38.2	31	1	1	151,915

Rideau St. Lawrence Distribution Inc.
 EB-2015-0100
 Exhibit 3 – Operating Revenue
 Filed: October 21, 2016

	Unadjusted Purchases kWh	Adjustment for loss of St Lawrence Corp	Adjustment for Microfit	Revised Purchases kWh	HDD	CDD	Number of Days in Month	Spring/Fall Flag	Holidays in Month	CDM Activity
Jun-10	8,680,146			8,680,146	37.6	33.4	30	0	0	152,907
Jul-10	9,983,854			9,983,854	4.5	150.8	31	0	1	153,900
Aug-10	9,543,754			9,543,754	14.7	93	31	0	1	154,892
Sep-10	8,579,877			8,579,877	112	26.2	30	1	1	155,884
Oct-10	8,994,685			8,994,685	311	0	31	1	1	156,877
Nov-10	9,833,800			9,833,800	491.6	0	30	1	0	157,869
Dec-10	11,438,554			11,438,554	731.4	0	31	0	2	158,862
Jan-11	12,132,585		-	12,132,585	888.7	0	31	0	1	163,320
Feb-11	10,866,454		1,799	10,868,253	731.6	0	28	0	1	167,778
Mar-11	11,067,608		1,033	11,068,641	634.6	0	31	1	0	172,236
Apr-11	9,072,415		2,402	9,074,817	347.4	0	30	1	2	176,694
May-11	8,666,277		2,602	8,668,879	142.8	16.7	31	1	1	181,152
Jun-11	8,776,092		2,828	8,778,920	18.5	59.1	30	0	0	185,610
Jul-11	9,998,192		3,389	10,001,581	0	137.5	31	0	1	190,068
Aug-11	9,450,654		3,782	9,454,436	2.3	82.3	31	0	1	194,526
Sep-11	8,631,923		3,038	8,634,961	55.4	32.9	30	1	1	198,984
Oct-11	8,921,515		5,616	8,927,131	259.1	1.4	31	1	1	203,442
Nov-11	9,478,715		3,860	9,482,575	392.9	0	30	1	0	207,900
Dec-11	10,916,892		2,771	10,919,663	672.2	0	31	0	2	212,368
Jan-12	11,698,538		1,792	11,700,330	831	0	31	0	1	217,839
Feb-12	10,394,346		1,495	10,395,841	671.4	0	29	0	1	223,320
Mar-12	9,868,346		3,678	9,872,024	460.3	0	31	1	0	228,800
Apr-12	8,701,738		5,711	8,707,449	363.3	3.2	30	1	2	234,281
May-12	8,473,818		6,666	8,480,484	102.4	21	31	1	1	239,761
Jun-12	9,028,518		8,514	9,037,032	31.4	70.4	30	0	0	245,242
Jul-12	9,776,500		8,372	9,784,872	0	142.2	31	0	1	250,723
Aug-12	9,430,200		8,141	9,438,341	8.4	97.6	31	0	1	256,203
Sep-12	8,456,345		7,448	8,463,793	127.3	20.6	30	1	1	261,684
Oct-12	8,663,345		6,062	8,669,407	259.9	0	31	1	1	267,165
Nov-12	9,765,918		3,812	9,769,730	541.7	0	30	1	0	272,645
Dec-12	10,958,364		3,380	10,961,744	719.1	0	31	0	2	278,126
Jan-13	11,999,817		1,235	12,001,052	839.9	0	31	0	1	279,678
Feb-13	10,701,983		1,814	10,703,797	728.5	0	28	0	1	281,230
Mar-13	10,574,475		2,546	10,577,021	612.9	0	31	1	1	282,782
Apr-13	9,116,700		4,962	9,121,662	381.1	0	30	1	1	284,334
May-13	8,204,917		6,326	8,211,243	121.2	15.3	31	1	1	285,886
Jun-13	8,279,408		8,173	8,287,581	58.1	39.4	30	0	0	287,438
Jul-13	9,591,758		6,943	9,598,701	7.7	114.9	31	0	1	288,990
Aug-13	9,610,958		8,290	9,619,248	13.4	57.2	31	0	1	290,542
Sep-13	8,187,217		7,556	8,194,773	133.2	10.1	30	1	1	292,094
Oct-13	8,725,825		6,244	8,732,069	265.2	0.7	31	1	1	293,646
Nov-13	9,926,917		4,461	9,931,378	560.8	0	30	1	0	295,198
Dec-13	11,614,675		2,266	11,616,941	858.2	0	31	0	2	296,750
Jan-14	12,521,267		864	12,522,131	918.3	0	31	0	1	302,829
Feb-14	10,693,642		1,826	10,695,468	793.2	0	28	0	1	308,908
Mar-14	11,270,883		2,647	11,273,530	783.6	0	31	1	0	314,987
Apr-14	9,026,483		5,510	9,031,993	384.2	0	30	1	2	321,066
May-14	8,278,885		8,035	8,286,920	127.3	8.8	31	1	1	327,146
Jun-14	8,570,154		9,577	8,579,731	20.3	54.9	30	0	0	333,225
Jul-14	9,070,654		9,467	9,080,121	8.8	62.8	31	0	1	339,304
Aug-14	8,980,123		9,127	8,989,250	21.4	55.8	31	0	1	345,383
Sep-14	8,455,877		8,673	8,464,550	110.3	21.6	30	1	1	351,462
Oct-14	8,663,323		7,439	8,670,762	257.9	3.1	31	1	1	357,541
Nov-14	9,594,308		4,365	9,598,673	510.6	0	30	1	0	363,620
Dec-14	10,753,031		2,388	10,755,419	696.4	0	31	0	2	369,699
Jan-15	12,178,875		2,052	12,180,927	968.2	0.0	31	0	1	368,009
Feb-15	11,445,612		2,693	11,448,305	957.8	0.0	28	0	1	366,318
Mar-15	10,922,675		2,302	10,924,977	718.6	0.0	31	1	0	364,628
Apr-15	8,724,747		7,189	8,731,936	352.6	0.0	30	1	2	362,937
May-15	8,214,246		8,877	8,223,123	94.2	25.3	31	1	1	361,247
Jun-15	8,082,238		10,420	8,092,658	45.2	20.3	30	0	0	359,556
Jul-15	8,969,560		9,244	8,978,804	9.3	100.0	31	0	1	357,865
Aug-15	8,928,793		10,629	8,939,422	5.6	67.4	31	0	1	356,175
Sep-15	8,487,586		9,115	8,496,701	48.4	46.5	30	1	1	354,484
Oct-15	8,442,808		7,694	8,450,502	337.3	0.0	31	1	1	352,794
Nov-15	8,788,398		5,620	8,794,018	429.0	0.0	30	1	0	351,103
Dec-15	9,419,775		3,629	9,423,404	519.9	0.0	31	0	2	349,413
Jan-16					850.0	0.0	31	0	1	347,137
Feb-16		Note: 2005 - 2014 monthly data was used in regression analysis.			756.5	0.0	29	0	1	344,862
Mar-16					623.4	0.0	31	1	2	342,587
Apr-16					340.3	0.7	30	1	0	340,311
May-16					135.3	16.3	31	1	1	338,036
Jun-16					34.6	49.8	30	0	0	335,761
Jul-16					5.6	102.6	31	0	1	333,485
Aug-16					14.5	73.2	31	0	1	331,210
Sep-16					98.6	21.9	30	1	1	328,935
Oct-16					293.1	0.7	31	1	1	326,659
Nov-16					478.1	0.0	30	1	0	324,384
Dec-16					715.10	0.00	31	0	2	322,109

Appendix 3.2 - Regression Scenarios Performed

Scenario	SUMMARY OUTPUT								
Scenario 1	<i>Regression Statistics</i>								
	Multiple R	0.975023736							
	R Square	0.950671285							
	Adjusted R Square	0.948052061							
	Standard Error	290075.0235							
	Observations	120							
	<i>ANOVA</i>								
		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
	Regression	6	1.83244E+14	3.05407E+13	362.9591667	2.2018E-71			
	Residual	113	9.50822E+12	84143519285					
	Total	119	1.92752E+14						
		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	Intercept	54003814.39	4382340.829	12.3205211	1.23364E-22	45321606.81	62686021.97	45321606.81	62686021.97
	HDD	4570.035882	155.695829	29.3523334	1.07639E-54	4261.574364	4878.497401	4261.574364	4878.497401
	CDD	12896.80458	1435.55608	8.983838923	6.8287E-15	10052.70907	15740.90009	10052.70907	15740.90009
Number of Days in Month	260155.6215	35696.32356	7.288022843	4.57222E-11	189434.7664	330876.4767	189434.7664	330876.4767	
Spring/Fall Flag	-409437.7531	80050.47255	-5.114744966	1.296E-06	-568032.1771	-250843.3291	-568032.1771	-250843.3291	
Holidays in Month	-112967.424	44403.87355	-2.54453981	0.012291586	-200959.5061	-25015.34179	-200959.5061	-25015.34179	
Customer Count (R+C+)	-9204.613811	737.3611942	-12.46264318	5.30137E-23	-10665.49895	-7743.728672	-10665.49895	-7743.728672	
Scenario 2	<i>Regression Statistics</i>								
	Multiple R	0.967132691							
	R Square	0.935345643							
	Adjusted R Square	0.931912688							
	Standard Error	332092.7046							
	Observations	120							
	<i>ANOVA</i>								
		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
	Regression	6	1.8029E+14	3.00483E+13	272.4592284	9.28021E-65			
	Residual	113	1.24623E+13	1.10266E+11					
	Total	119	1.92752E+14						
		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	Intercept	9126795.708	1481172.692	6.161871438	1.13605E-08	6192325.461	12061265.96	6192325.461	12061265.96
	HDD	4649.193759	177.7304612	26.15867718	9.22648E-50	4297.07766	5001.309858	4297.07766	5001.309858
	CDD	13506.87789	1639.702611	8.237394879	3.47566E-13	10258.33128	16755.4245	10258.33128	16755.4245
Number of Days in Month	257516.7437	40895.39921	6.301583948	5.85044E-09	176555.0174	335478.47	176555.0174	335478.47	
Spring/Fall Flag	-396334.5189	91553.49404	-4.219768168	4.96015E-05	-567718.5031	-204960.5347	-567718.5031	-204960.5347	
Holidays in Month	-122889.5206	50805.73219	-2.418812117	0.017167715	-223544.8394	-22234.20187	-223544.8394	-22234.20187	
Ontario Real GDP	-80344.19521	8371.909715	-9.596877886	2.60999E-16	-96930.45831	-63757.93211	-96930.45831	-63757.93211	
Scenario 3	<i>Regression Statistics</i>								
	Multiple R	0.939494249							
	R Square	0.882649444							
	Adjusted R Square	0.877502489							
	Standard Error	445440.6103							
	Observations	120							
	<i>ANOVA</i>								
		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
	Regression	5	1.70133E+14	3.40265E+13	171.4896625	2.54171E-51			
	Residual	114	2.26196E+13	1.98417E+11					
	Total	119	1.92752E+14						
		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	Intercept	911010.5012	1621261.735	0.561914515	0.575277389	-2300696.509	4122717.511	-2300696.509	4122717.511
	HDD	4779.114324	237.6997912	20.10667322	2.75954E-39	4308.232869	5249.99578	4308.232869	5249.99578
	CDD	14838.83694	2191.463238	6.771200486	5.8472E-10	10497.56515	19180.10874	10497.56515	19180.10874
Number of Days in Month	241119.3585	54765.40227	4.402767962	2.42201E-05	132629.5185	349609.1986	132629.5185	349609.1986	
Spring/Fall Flag	-341937.809	122645.1161	-2.788026298	0.006215215	-584896.8393	-98978.77865	-584896.8393	-98978.77865	
Holidays in Month	-141247.7796	68098.12038	-2.074180298	0.040314345	-276149.6316	-6345.927625	-276149.6316	-6345.927625	
Scenario 4	<i>Regression Statistics</i>								
	Multiple R	0.97854345							
	R Square	0.957547283							
	Adjusted R Square	0.955293156							
	Standard Error	269099.6808							
	Observations	120							
	<i>ANOVA</i>								
		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
	Regression	6	1.84569E+14	3.07616E+13	424.7974767	4.62654E-75			
	Residual	113	8.18285E+12	72414638180					
	Total	119	1.92752E+14						
		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
	Intercept	1162013.381	979598.3148	1.186214149	0.238025882	-778747.56	3102774.323	-778747.56	3102774.323
	HDD	4671.321541	143.8020417	32.48438956	3.79831E-59	4386.42376	4956.219322	4386.42376	4956.219322
	CDD	13903.49668	1325.563548	10.48874548	2.19926E-18	11277.31821	16529.67915	11277.31821	16529.67915
Number of Days in Month	249661.1618	33090.41747	7.544817529	1.24227E-11	184103.0766	315219.247	184103.0766	315219.247	
Spring/Fall Flag	-369386.0768	74117.89303	-4.983763861	2.26675E-06	-516226.9907	-222545.1628	-516226.9907	-222545.1628	
Holidays in Month	-113634.034	41185.91118	-2.759051112	0.00676408	-195230.7523	-32037.31572	-195230.7523	-32037.31572	
CDM Activity	-3.131719874	0.221800126	-14.11955857	1.04853E-26	-3.571145928	-2.692293821	-3.571145928	-2.692293821	

Appendix 3.3 - Summary Page of 2006-2010 OPA Final Results Report

OPA Conservation & Demand Management Programs													
Annual Results at the End-User Level													
For: Rideau St. Lawrence Distribution Inc.													
Net Summer Peak Demand Savings (MW)													
#	Program Year	Results Status	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	2006 Programs	Final	0.1006	0.0201	0.0201	0.0201	0.0201	0.0201	0.0187	0.0187	0.0146	0.0146	0.0146
2	2007 Programs	Final	0.0000	0.3721	0.0466	0.0369	0.0369	0.0361	0.0349	0.0349	0.0349	0.0301	0.0265
3	2008 Programs	Final	0.0000	0.0000	0.5174	0.0584	0.0584	0.0584	0.0570	0.0570	0.0555	0.0551	0.0514
4	2009 Programs	Final	0.0000	0.0000	0.0000	0.5644	0.1597	0.1597	0.1589	0.1548	0.1452	0.1448	0.1448
5	2010 Programs	Final	0.0000	0.0000	0.0000	0.0000	0.4422	0.1223	0.1222	0.1220	0.1171	0.1094	0.1093
Total			0.1006	0.3922	0.5842	0.6798	0.7174	0.3967	0.3917	0.3874	0.3674	0.3540	0.3467
Net Energy Savings (MWh)													
#	Program Year	Results Status	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	2006 Programs	Final	416	416	416	416	72	72	66	66	62	62	59
2	2007 Programs	Final	0	334	238	226	226	226	220	220	220	85	52
3	2008 Programs	Final	0	0	386	337	337	337	317	316	296	281	218
4	2009 Programs	Final	0	0	0	824	754	754	753	725	654	643	643
5	2010 Programs	Final	0	0	0	0	491	373	372	372	350	287	284
Total			416	749	1,040	1,802	1,880	1,762	1,728	1,699	1,582	1,358	1,256
Gross Summer Peak Demand Savings (MW)													
#	Program Year	Results Status	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	2006 Programs	Final	0.1043	0.0238	0.0238	0.0238	0.0238	0.0238	0.0223	0.0223	0.0178	0.0178	0.0178
2	2007 Programs	Final	0.0000	0.8630	0.2120	0.1306	0.1306	0.1289	0.1210	0.1210	0.1210	0.1135	0.1043
3	2008 Programs	Final	0.0000	0.0000	0.5642	0.1023	0.1023	0.1023	0.0983	0.0983	0.0952	0.0939	0.0872
4	2009 Programs	Final	0.0000	0.0000	0.0000	0.6444	0.2392	0.2392	0.2371	0.2290	0.2114	0.2105	0.2105
5	2010 Programs	Final	0.0000	0.0000	0.0000	0.0000	0.5099	0.1900	0.1900	0.1892	0.1780	0.1636	0.1635
Total			0.1043	0.8869	0.8001	0.9011	1.0058	0.6842	0.6686	0.6598	0.6233	0.5992	0.5832
Gross Energy Savings (MWh)													
#	Program Year	Results Status	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	2006 Programs	Final	464	464	464	464	83	83	76	76	71	71	67
2	2007 Programs	Final	0	1,296	511	412	412	412	393	393	393	196	111
3	2008 Programs	Final	0	0	741	676	676	676	624	623	577	537	425
4	2009 Programs	Final	0.0000	0.0000	0.0000	1,229.5594	1,147.0606	1,147.0606	1,144.9402	1,090.6125	958.7464	938.8276	938.3091
5	2010 Programs	Final	0	0	0	0	677	561	561	560	517	389	386
Total			464	1,760	1,716	2,782	2,994	2,879	2,799	2,743	2,517	2,132	1,928