EXHIBIT 3 – OPERATING REVENUE

CONTENTS

EXHIBIT 3 – OPERATING REVENUE

SUMMARY OF LOAD AND CUSTOMER/CONNECTION FORECAST

The purpose of this evidence is to present the process used by Grimsby Power to prepare the weather normalized load and customer/connection forecast used to design the proposed 2016 distribution rates.

In summary, as a starting point Grimsby Power used the same regression analysis methodology approved by the Ontario Energy Board (the "Board") in its 2012 Cost of Service ("COS") application (EB-2011-0273) and updated the analysis for actual power purchases to the end of the 2014. As described below, after some testing of other possible variables, the updated regression analysis used the same variables as those in the 2012 COS application but was based on actual data over a ten year period from 2005 to 2014.

With regards to the overall process of load forecasting, Grimsby Power believes that conducting a regression analysis on historical electricity purchases to produce an equation that will predict purchases is appropriate. Grimsby Power has the data for the amount of electricity (in kWh) purchased from the IESO for use by Grimsby Power's customers. With a regression analysis, these purchases can be related to other monthly explanatory variables such as heating degree days and cooling degree days which occur in the same month. The results of the regression analysis produce an equation that predicts the purchases based on the explanatory variables. This prediction model is then used as the basis to forecast the total level of weather normalized purchases for the Bridge Year and the Test Year which is converted to billed kWh by rate class. A detailed explanation of the process is provided later in this evidence.

During the review process of previous COS applications, for other applicants, Intervenors expressed concerns with the load forecasting weather normalization process being used in this application. Intervenors suggested the weather normalization should be conducted on an individual rate class basis and the regression analysis would be based on monthly consumed kWh by rate class. Grimsby Power reviewed the data required to conduct the regression analysis on an individual rate class basis and determined that it currently does not have a method to properly convert historical billing data to monthly consumed values by rate class without some level of estimation. With the installation of smart meters it is

possible to determine the amount consumed in a month but this would only provide historical data from 2012 onwards. Since Grimsby Power has monthly purchase data from 2005 onward, Grimsby Power believes conducting the regression analysis on purchases provides better results since a higher level of historical data increases the accuracy of the regression analysis. In addition, Board staff and Intervenors expressed concern that the regression analysis assigned coefficients to some variables that were counter intuitive. For example, the customer variable would have a negative coefficient assigned to it which meant as the number of customers increased the energy forecast would decrease. Further, the regression analysis indicated that some of the variables used in the load forecasting formula were not statistically significant and should not have been included in the equation. As mentioned above, Grimsby Power used the regression analysis to support the load forecast in the 2012 COS application as a starting point and addressed these concerns in the load forecast used in this Application. As a result, variables such as Ontario Monthly Real GDP and Number of Peak Hours were tested but not used. Ontario Monthly Real GDP and Number of Peak Hours had counter intuitive coefficients and were not statistically significant.

Based on the Board's approval of this methodology in a number of previous cost of service applications as well as the discussion that follows, Grimsby Power submits the load forecasting methodology is reasonable at this time for the purposes of this Application.

The following provides the material to support the weather normalized load forecast used by Grimsby Power in this Application. Table 3-2, Table 3-3 and Table 3-4 below provide a summary of the weather normalized load and customer/connection forecast used in this Application.

Table 3-2

Summary of Load and Customer/Connection Forecast

Year	Billed (GWh)	Growth (GWh)	Percent Change	Customer/ Connection Count	Growth	Percent Change (%)
Billed Energy (GWh) and Customer Count / Connections						
2012 Board Approved	185.1			13,114		
2005 Actual	171.0			11,921		
2006 Actual	169.0	(2.0)	(1.2%)	12,046	125.0	1.0%
2007 Actual	173.1	4.0	2.4%	12,161	115.0	1.0%
2008 Actual	172.1	(1.0)	(0.6%)	12,382	221.0	1.8%
2009 Actual	170.6	(1.5)	(0.8%)	12,477	95.0	0.8%
2010 Actual	180.1	9.4	5.5%	12,653	176.0	1.4%
2011 Actual	181.3	1.2	0.7%	12,839	186.0	1.5%
2012 Actual	184.2	2.9	1.6%	13,088	249.0	1.9%
2013 Actual	182.6	(1.6)	(0.8%)	13,208	120.0	0.9%
2014 Actual	179.9	(2.7)	(1.5%)	13,531	323.0	2.4%
2015 Bridge - Normalized	183.5	3.6	2.0%	13,725	194.0	1.4%
2016 Test - Normalized	182.5	(0.9)	(0.5%)	13,922	197.0	1.4%

In the above Table 3-2, 2005 to 2014 are reflecting actual weather conditions in the year. The years 2015 and 2016 are weather normalized. It is Grimsby Power's understanding that there is not a Board approved method to weather normalize actual data. Consequently, Grimsby Power does not have a process to adjust weather actual data to a weather normal basis. However, based on the process outlined in this Exhibit 3, a process to forecast energy on a weather normalized basis has been developed and used in this application.

Customer/Connection values are on a 12 month average basis. Street lights and unmetered scattered load values are measured as connections.

On a rate class basis, the actual and forecasted billed amounts as well as the actual and forecasted number of customers/connections are shown in Table 3-3 and customer/connection usage is shown in Table 3-4.

Grimsby Power will only be charging the Embedded Distributor rate class distribution charges, retail transmission rates and applicable deferral and variance account riders. As outlined in Exhibit 8, it is proposed the distribution rate will be a 100% fixed monthly rate. The retail transmission rates and applicable deferral and variance account rates are proposed to be charged on a kW basis which means there is no need to develop a kWh forecast for this customer.

Table 3-3

Billed Energy and Number of Customers/Connections by Rate Class

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load	Total
Billed Energy (GWh)						
2012 Board Approved	94.6	18.7	69.9	1.6	0.4	185.1
2005 Actual	89.5	18.1	61.4	1.6	0.4	171.0
2006 Actual	85.6	17.9	63.5	1.6	0.4	169.0
2007 Actual	86.8	18.5	65.8	1.6	0.4	173.1
2008 Actual	87.0	18.2	65.0	1.6	0.4	172.1
2009 Actual	86.8	18.3	63.5	1.6	0.4	170.6
2010 Actual	92.1	18.8	67.2	1.6	0.4	180.1
2011 Actual	92.5	17.9	68.9	1.6	0.4	181.3
2012 Actual	93.9	18.0	70.3	1.6	0.4	184.2
2013 Actual	92.2	18.4	70.1	1.5	0.4	182.6
2014 Actual	91.6	18.8	68.0	1.2	0.4	179.9
2015 Bridge - Normalized	93.4	19.1	69.4	1.2	0.4	183.5
2016 Test - Normalized	92.6	18.8	69.6	1.1	0.4	182.5
Number of Customers/Connections						
2012 Board Approved	9,703	683	100	2,548	80	13,114
2005 Actual	8,606	629	115	2,489	82	11,921
2006 Actual	8,715	639	114	2,493	85	12,046
2007 Actual	8,825	657	102	2,493	84	12,161
2008 Actual	9,007	656	105	2,529	85	12,382
2009 Actual	9,147	662	100	2,486	82	12,477
2010 Actual	9,290	669	102	2,512	80	12,653
2011 Actual	9,435	668	111	2,544	81	12,839
2012 Actual	9,636	687	108	2,579	78	13,088
2013 Actual	9,720	691	110	2,611	76	13,208
2014 Actual	9,977	727	109	2,644	74	13,531
2015 Bridge - Normalized	10,142	739	108	2,662	74	13,725
2016 Test - Normalized	10,310	751	107	2,680	74	13,922

Table 3-4

Annual Usage per Customer/Connection by Rate Class

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load
Energy Usage per Customer/Connection (kWh per customer/connection)					
2012 Board Approved	9,748	27,392	697,360	619	4,441
2005 Actual	10,403	28,701	534,158	646	4,861
2006 Actual	9,821	27,992	557,173	643	5,029
2007 Actual	9,832	28,163	645,095	635	4,901
2008 Actual	9,657	27,685	618,783	637	4,145
2009 Actual	9,492	27,709	635,200	628	4,591
2010 Actual	9,919	28,098	658,477	627	4,778
2011 Actual	9,802	26,776	621,153	623	4,771
2012 Actual	9,746	26,140	651,190	613	4,870
2013 Actual	9,484	26,681	637,005	585	4,945
2014 Actual	9,178	25,814	623,515	461	5,011
2015 Bridge - Normalized	9,207	25,819	642,988	444	5,028
2016 Test - Normalized	8,978	25,050	650,921	428	5,045
Annual Growth Rate in Usage per Customer/Connection					
2012 Board Approved vs 2012 Actual	0.0%	4.8%	7.1%	1.0%	(8.8%)
2005 Actual					
2006 Actual	(5.6%)	(2.5%)	4.3%	(0.5%)	3.5%
2007 Actual	0.1%	0.6%	15.8%	(1.2%)	(2.5%)
2008 Actual	(1.8%)	(1.7%)	(4.1%)	0.3%	(15.4%)
2009 Actual	(1.7%)	0.1%	2.7%	(1.5%)	10.8%
2010 Actual	4.5%	1.4%	3.7%	(0.1%)	4.1%
2011 Actual	(1.2%)	(4.7%)	(5.7%)	(0.6%)	(0.1%)
2012 Actual	(0.6%)	(2.4%)	4.8%	(1.6%)	2.1%
2013 Actual	(2.7%)	2.1%	(2.2%)	(4.5%)	1.5%
2014 Actual	(3.2%)	(3.2%)	(2.1%)	(21.3%)	1.3%
2015 Bridge - Normalized	0.3%	0.0%	3.1%	(3.7%)	0.3%
2016 Test - Normalized	(2.5%)	(3.0%)	1.2%	(3.7%)	0.3%

FORECAST METHODOLOGY – MULTIVARIATE REGRESSION MODEL

Grimsby Power's weather normalized load forecast is developed in a three-step process. First, a total system weather normalized purchased energy forecast is developed based on a multivariate regression model that incorporates historical load, weather, and other variables that impact electricity usage. Second, the weather normalized purchased energy forecast is adjusted by a historical loss factor to produce a weather normalized billed energy forecast. Finally, the forecast of billed energy by rate class is developed based on a forecast of customer numbers and historical usage patterns per customer. For the rate classes that have weather sensitive load their forecasted billed energy is adjusted to ensure that the total billed energy forecast by rate class is equivalent to the total weather normalized billed energy forecast that has been determined from the regression model. The forecast of customers by rate class is determined using a geometric mean analysis. The forecast is also adjusted for expected Conservation and Demand Management ("CDM") results for 2015 and 2016 as well as an added Embedded Distributor customer resulting from the amalgamation of Grimsby Power and Niagara West Transformation Corporation. For those rate classes that use kW for the distribution volumetric billing determinant an adjustment factor is applied to the class energy forecast based on the historical relationship between kW and kWh. The following will explain the forecasting process in more detail.

Purchased KWh Load Forecast

An equation to predict total system purchased energy is developed using a multivariate regression model with the following independent variables: weather (heating and cooling degree days), calendar variables (days in month, seasonal) and the number of customers in the rates classes excluding street lighting connections. The regression model uses monthly kWh and monthly values of independent variables from January 2005 to December 2014 to determine the monthly regression coefficients.

With regards to weather normalization, Grimsby Power submits that it is appropriate to review the impact of weather over the past ten years January 2005 to December 2014 since it is consistent with a time period outlined in the filing requirements and it is reflective of more recent weather conditions. The average weather conditions over this period are applied in the prediction formula to determine a weather normalized forecast. In accordance with the filing requirement, Grimsby Power has also provided sensitivity analysis

showing the impact on the 2016 forecast of purchases. This analysis assumes weather normal conditions are based on a 20 year trend of weather data.

The multivariate regression model has determined drivers of year-over-year changes in Grimsby Power's load growth are weather, "calendar" factors and number of customers. These factors are captured within the multivariate regression model.

Weather impacts on load are apparent in both the winter heating season, and in the summer cooling season. For that reason, both Heating Degree Days (i.e. a measure of coldness in winter) and Cooling Degree Days (i.e. a measure of summer heat) are modeled.

The second main factor determining energy use in the monthly model can be classified as "calendar factors". For example, the number of days in a particular month will impact energy use. The modeling of purchased energy uses number of days in the month and a "flag" variable to capture the typically lower usage in the spring and fall months.

The third main factor is the total number of customers in the rate classes excluding street lighting connections.

The following outlines the predication model used by Grimsby Power to predict weather normal purchases for 2015 and 2016.

Grimsby Power Monthly Predicted kWh Purchases

= Heating Degree Days * 2,599
+ Cooling Degree Days * 30,756
+ Number of Days in the Month * 570,422
+ Spring Fall Flag * (1,156,488)
+ Number of Customers * 723
+ Constant of (10,342,338).

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

The sources of data for the various data points are:

a) Environment Canada website for monthly heating degree days and cooling degree days. Data for the Hamilton CS weather station was used. 18° C is the base numbers from which heating degree days and cooling degree days are measured.

b) The calendar provided information related to number of days in the month and the spring/fall flag.

c) Grimsby Power's billing system provided the number of customers.

The prediction formula has the following statistical results (Table 3-5) which generally indicate the formula has a good fit to the actual data set.

Table 3-5
Statistical Results

Statistic	Value
R Square	89.6%
Adjusted R Square	89.2%
F Test	197.3
MAPE (Monthly)	3.0%
T-stats by Coefficient	
Heating Degree Days	7.9
Cooling Degree Days	14.9
Number of Days in Month	8.1
Spring Fall Flag	(8.3)
Number of Customers	6.3
Constant	(4.3)

The annual results of the above prediction formula compared to the actual annual purchases from 2005 to 2014 are shown in Figure 3-1 below.

Figure 3-1
Actual vs. Predicted Purchases (Millions of kWhs)

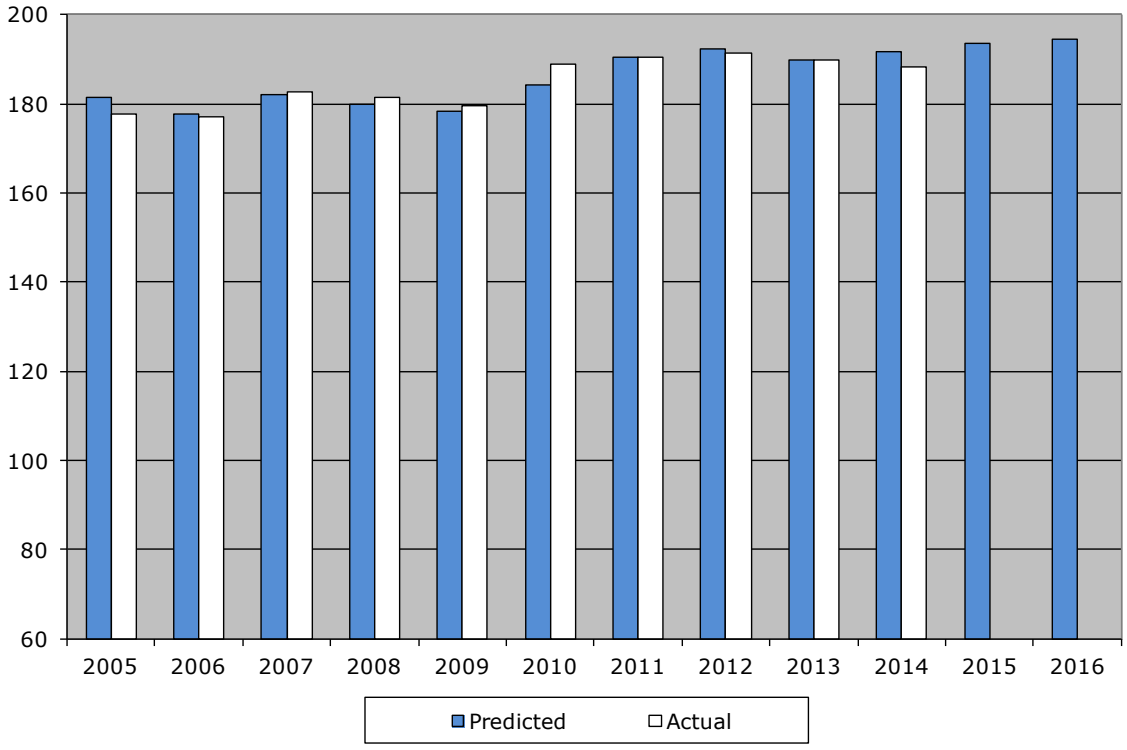

Table 3-6 below outlines the data that supports the above chart. In addition, the predicted total system purchases for Grimsby Power are provided for 2015 and 2016 on a weather normal basis. In addition, values for 2016 are provided on a 20 year trend assumption for weather normalization.

Table 3-6

Total System Purchase

Year	Actual	Predicted	% Difference
Purchased Energy (GWh)			
2005	177.7	181.6	2.2%
2006	177.0	177.6	0.3%
2007	182.7	181.9	(0.4%)
2008	181.6	179.9	(0.9%)
2009	179.6	178.4	(0.7%)
2010	188.9	184.3	(2.5%)
2011	190.5	190.5	0.0%
2012	191.5	192.2	0.4%
2013	190.0	189.7	(0.1%)
2014	188.3	191.7	1.8%
2015 Bridge - Normalized		193.5	
2016 Test - Normalized		194.4	
2016 Test - Normalized - 20 Year Trend		194.9	

The weather normalized amount for 2016 is determined by using 2016 dependent variables in the prediction formula on a monthly basis along with the average monthly heating degree days and cooling degree days which have occurred from January 2005 to December 2014 (i.e. 10 years). The 2016 weather normal 20 year trend value reflects the trend in monthly heating degree days and cooling degree days which have occurred from January 1995 to December 2014.

Billed KWh Load Forecast

To determine the total weather normalized energy billed forecast, the total system weather normalized purchases forecast is adjusted by a historical loss factor. The historical loss factor used is 4.77% which represents the average loss factor for 2005 and 2014. With this average loss factor the total weather normalized billed energy before adjustment discussed below will be 184.7 (GWh) for 2015 (i.e. 193.5/1.0477) and 185.6 (GWh) for 2016 (i.e. 194.4/1.0477).

Billed KWh Load Forecast and Customer/Connection Forecast by Rate Class

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

The next step in the forecasting process is to determine a customer/connection forecast. The customer/connection forecast is based on reviewing historical customer/connection data that is available as shown in the following Table 3-7.

Table 3-7
Historical Customer/Connection Data

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load	Total
Number of Customers/Connections						
2005	8,606	629	115	2,489	82	11,921
2006	8,715	639	114	2,493	85	12,046
2007	8,825	657	102	2,493	84	12,161
2008	9,007	656	105	2,529	85	12,382
2009	9,147	662	100	2,486	82	12,477
2010	9,290	669	102	2,512	80	12,653
2011	9,435	668	111	2,544	81	12,839
2012	9,636	687	108	2,579	78	13,088
2013	9,720	691	110	2,611	76	13,208
2014	9,977	727	109	2,644	74	13,531

From the historical customer/connection data the growth rate in customer/connection can be evaluated which is provided on the following Table 3-8.

Table 3-8

Growth Rate in Customer/Connections

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load
Growth Rate in Customers/Connections					
2005					
2006	1.3%	1.6%	(0.9%)	0.2%	3.7%
2007	1.3%	2.8%	(10.5%)	0.0%	(1.2%)
2008	2.1%	(0.2%)	2.9%	1.4%	1.2%
2009	1.6%	0.9%	(4.8%)	(1.7%)	(3.5%)
2010	1.6%	1.1%	2.0%	1.0%	(2.4%)
2011	1.6%	(0.1%)	8.8%	1.3%	1.3%
2012	2.1%	2.8%	(2.7%)	1.4%	(3.7%)
2013	0.9%	0.6%	1.9%	1.2%	(2.6%)
2014	2.6%	5.2%	(0.9%)	1.3%	(2.6%)
Geo Mean - 2005 to 2014	1.7%	1.6%	(0.6%)	0.7%	(1.1%)

For all classes, except the Unmetered Scattered Load class, the factor resulting from the geometric mean analysis from 2005 to 2014 is applied to the 2014 customer/connection numbers to determine the forecast of customer/connections in 2015. The geometric mean factor is applied once again to the 2015 value to determine the 2016 forecast. For the Unmetered Scattered Load class the number of connections for 2015 and 2016 has been held constant at the 2014 level since the historical decline that has occurred is not expected to continue for 2015 and 2016. Table 3-9 outlines the forecast of customers by rate class for 2015 and 2016. An Embedded Distributor customer resulting from the amalgamation of Grimsby Power and Niagara West Transformation Corporation will be discussed and included in the total customer count later on in this evidence.

Table 3-9

Customer/Connection Forecast

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load	Total
Forecast number of Customers/Connections						
2015	10,142	739	108	2,662	74	13,725
2016	10,310	751	107	2,680	74	13,922

The next step in the process is to review the historical customer/connection usage and to reflect this usage per customer in the forecast. Table 3-10 below provides the average annual usage per customer by rate class from 2005 to 2014.

Table 3-10

Historical Annual Usage per Customer

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load
Annual kWh Usage Per Customer/Connection					
2005	10,403	28,701	534,158	646	4,861
2006	9,821	27,992	557,173	643	5,029
2007	9,832	28,163	645,095	635	4,901
2008	9,657	27,685	618,783	637	4,145
2009	9,492	27,709	635,200	628	4,591
2010	9,919	28,098	658,477	627	4,778
2011	9,802	26,776	621,153	623	4,771
2012	9,746	26,140	651,190	613	4,870
2013	9,484	26,681	637,005	585	4,945
2014	9,178	25,814	623,515	461	5,011

As can been seen from the above table, usage per customer/connection generally declines in the Residential, General Service < 50 kW and Street Lighting classes. It is Grimsby Power's view that this decline is partially due to the CDM programs initiated in 2005 and onwards. The General Service 50 to 4,999 kW class has remained relatively flat.

Since 2005 Grimsby Power has seen only eight new customers to the GS>50 rate class and no real growth in usage per customer. The introduction of CDM programs has also impacted the consumption of the rate class. The usage per connection for the Unmetered Scattered Load has generally remained flat which is expected since this is typically a flat load class.

From the historical usage per customer/connection data the growth rate in usage per customer/connection can be reviewed which is provided on the following table. The geometric mean growth rate from 2005 and 2014 has also been shown.

Table 3-11

Growth Rate in Usage per Customer/Connection

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load
Growth Rate in Usage Per Customer/Connection					
2005					
2006	(5.6%)	(2.5%)	4.3%	(0.5%)	3.5%
2007	0.1%	0.6%	15.8%	(1.2%)	(2.5%)
2008	(1.8%)	(1.7%)	(4.1%)	0.3%	(15.4%)
2009	(1.7%)	0.1%	2.7%	(1.5%)	10.8%
2010	4.5%	1.4%	3.7%	(0.1%)	4.1%
2011	(1.2%)	(4.7%)	(5.7%)	(0.6%)	(0.1%)
2012	(0.6%)	(2.4%)	4.8%	(1.6%)	2.1%
2013	(2.7%)	2.1%	(2.2%)	(4.5%)	1.5%
2014	(3.2%)	(3.2%)	(2.1%)	(21.3%)	1.3%
Geo Mean - 2005 to 2014	(1.4%)	(1.2%)	1.7%	(3.7%)	0.3%

The 2015 forecast of usage per customer/connection was determined by applying the historical geometric mean value from 2005 to 2014 to the actual 2014 usage per customer/connection. Once again the historical geometric mean value from 2005 to 2014 is applied to the 2015 forecast to determine the 2016 forecast.

Table 3-12

Forecast Annual kWh Usage per Customer/Connection

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load
Forecast Annual kWh Usage per Customers/Connection					
2015	9,051	25,512	634,324	444	5,028
2016	8,926	25,213	645,320	428	5,045

The preceding information is used to determine the non-normalized weather billed energy forecast by applying the forecast number of customer/connection from Table 3-9 by the forecast of annual usage per customer/connection from Table 3-12. The resulting non-normalized weather billed energy forecast is shown in the following Table 3-13.

Table 3-13
Non-normalized Weather Billed Energy Forecast

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load	TOTAL
NON-normalized Weather Billed Energy Forecast (GWh)						
2015 (Not Normalized)	91.8	18.9	68.5	1.2	0.4	180.7
2016 (Not Normalized)	92.0	18.9	69.0	1.1	0.4	181.5

The non-normalized weather billed energy forecast has been determined but this needs to be adjusted in order to be aligned with the total weather normalized billed energy forecast. As previously determined, the total weather normalized billed energy forecast is 184.7 (GWh) for 2015 and 185.6 (GWh) for 2016.

The difference between the non-normalized and normalized forecast adjustments is 4.0 GWh in 2015 (i.e. 184.7 – 180.7) and 4.1 GWh in 2016 (i.e. 185.6 – 181.5). The difference is assumed to be the adjustment needed to move the forecast to a weather normal basis and this amount will be assigned to those rate classes that are weather sensitive. Based on the weather normalization work completed by Hydro One for Grimsby Power for the cost allocation study, which has been used to support this Application, it was determined that the weather sensitivity by rate classes is as follows in Table 3-14.

Table 3-14
Weather Sensitivity by Rate Class

Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load
Weather Sensitivity				
76%	76%	52%	0%	0%

For the General Service 50 to 4,999 kW class the weather sensitivity amount of 52% was provided in the weather normalization work completed by Hydro One. For the Residential and General Service < 50 kW classes, the weather sensitivity assumptions is consistent with that assumed in Grimsby Power 2012 COS application.

The difference between the non-normalized and normalized forecast of 4.0 GWh in 2015 and 4.1 GWh in 2016 has been assigned on a pro rata basis to each rate class based on the above level of weather sensitivity.

CDM Adjustment and LRAMVA

A manual adjustment has been made to reflect the impact of 2014, 2015 and 2016 CDM programs on the load forecast. Grimsby Power has made this adjustment to reflect the "net" impact of the CDM programs on the load forecast.

The following Table 3-15, which is consistent with part of App.2-I LF_CDM_WF, outlines the actual savings from 2011, 2012, 2013 and 2014 CDM programs compared to the total savings over the licensed 4 year CDM Plan assigned to Grimsby Power

Table 3-15
Expected kWh Target Results
4 Year (2012-2015)

4 Year (2011-2014) kWh Target:					
7,760,000					
	2011	2012	2013	2014	Total
2011 CDM Programs	9.93%	9.79%	9.79%	9.60%	39.11%
2012 CDM Programs	-0.14%	9.34%	9.25%	9.25%	27.70%
2013 CDM Programs		0.03%	11.52%	11.44%	22.99%
2014 CDM Programs		0.02%	0.28%	9.90%	10.20%
Total in Year	9.79%	19.17%	30.84%	40.20%	100.00%
kWh					
2011 CDM Programs	1,056,280	1,041,000	1,041,000	1,021,000	4,159,280
2012 CDM Programs	-15,000	993,000	984,000	984,000	2,946,000
2013 CDM Programs		3,000	1,225,000	1,217,000	2,445,000
2014 CDM Programs		2,000	30,000	1,053,000	1,085,000
Total in Year	1,041,280	2,039,000	3,280,000	4,275,000	10,635,280

For 2016, it is assumed the savings achieved from 2014 and 2015 programs will persist into 2016. In addition, the savings from 2016 programs are assumed to be 1,808,330 (kWh) reflecting the activity associated with the 2015-2020 CDM Program. The following Table 3-16 summarizes the expected savings in 2016.

Table 3-16
Expected Savings
2016

kWh	2014	2015	2016
2014 CDM Programs	1,053,000	712,767	656,713
2015 CDM Programs		1,808,330	1,808,330
2016 CDM Programs			1,808,330
Total in Year	1,053,000	2,521,097	4,273,373

Since 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 resulting from the regression analysis. However, for 2014 it is assumed that for those programs that were initiated in 2014 only one half of the full year results provided by the IESO/OPA actually occur since they were initiated throughout the year. This has been classified as the half year rule for CDM purposes. It also suggests that for 2014 only one half of the reported full year results from programs initiated in 2014 are reflected in the actual 2014 power purchases. As a result, consistent with approach used in previous COS applications and using the information in Table 3-16, the 2016 manual adjustment for CDM savings will be one half of 2014 programs that persist into 2016 (i.e. ½ of 656,713) plus a full year of 2015 programs that persist into 2016 (i.e. 1,808,330) plus one half of 2016 programs (i.e. ½ of 1,808,330) for a total of 3,040,851 kWh on a net basis.

For 2015, the manual adjustment for CDM savings will be one half of 2014 programs that persist into 2015 (i.e. ½ of 712,767) plus one half of 2015 programs (i.e. 1,808,330) for a total of 1,260,549 kWh on a net basis.

In accordance with the Guidelines for Electricity Distributor Conservation and Demand Management (EB-2013-0003), issued April 26, 2013 ("CDM Guidelines"), it is Grimsby Power's understanding that as part of this application expected CDM savings in 2016 from 2014, 2015 and 2016 programs will need to be established for the lost revenue adjustment mechanism ("LRAM") variance accounts purposes. Grimsby Power also understands that the IESO/OPA will measure CDM results on a full year net basis. Consistent with past practices, it is expected the full year net level of savings will be used for LRAM variance calculations. As a result, it is Grimsby Power's view that the units used for the 2016 LRAM variance account should also be on a full year net basis. Based on the information in Table 3-16 above, Grimsby Power expects to achieve 4,273,373 net kWh savings in 2016 from 2014 to 2016 CDM programs. For LRAM variance account purposes, the following Table 3-17 outlines how this expected savings has been allocated to rate class. The expected kW saving has also been provided for those classes billed distribution charges on a kW basis using the average kW/KWh ratios from Table 3-20.

Table 3-17
Expected CDM Savings by Rate Class for LRAM Variance Account
2016

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load	TOTAL
2016 LRAMVA kWh	2,564,024	854,675	854,675	0	0	4,273,373
2016 LRAMVA kW	0	0	2,557	0	0	2,557

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

Table 3-18

Alignment of Non-normal to Weather Normal Forecast

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Street Lighting	Unmetered Scattered Load	TOTAL
Non-normalized Weather Billed Energy Forecast (GWh)						
2015 (Not Normalized)	91.8	18.9	68.5	1.2	0.4	180.7
2016 (Not Normalized)	92.0	18.9	69.0	1.1	0.4	181.5
Adjustment for Weather (GWh)						
2015	2.3	0.5	1.2	0.0	0.0	4.0
2016	2.4	0.5	1.2	0.0	0.0	4.1
Adjustment for CDM (GWh)						
2015	(0.8)	(0.3)	(0.3)	0.0	0.0	(1.3)
2016	(1.8)	(0.6)	(0.6)	0.0	0.0	(3.0)
Weather Normalized Billed Energy Forecast (GWh)						
2015 Bridge - Normalized	93.4	19.1	69.4	1.2	0.4	183.5
2016 Test - Normalized	92.6	18.8	69.6	1.1	0.4	182.5

Billed KW Load Forecast

Historically, there were two rate classes that charge volumetric distribution on per kW basis. These include General Service 50 to 4,999 kW and Street 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.

The following Table 3-19 outlines the annual demand units by applicable rate class.

Table 3-19

Historical Annual kW per Applicable Rate Class

Year	General Service 50 to 4,999 kW	Street Lighting	TOTAL
Billed Annual kW			
2005	174,384	4,445	178,829
2006	175,422	4,425	179,846
2007	176,460	4,378	180,838
2008	172,781	4,443	177,224
2009	172,057	4,322	176,379
2010	174,346	4,359	178,705
2011	180,394	4,411	184,805
2012	183,322	4,368	187,690
2013	186,328	4,230	190,557
2014	180,748	3,646	184,395

The following Table 3-20 shows the historical ratio of kW/kWh and the average ratio for 2005 to 2014.

Table 3-20

Historical kW/KWh Ratio per Applicable Rate Class

Year	General Service 50 to 4,999 kW	Street Lighting
Ratio of kW to kWh		
2005	0.2839%	0.2764%
2006	0.2762%	0.2761%
2007	0.2682%	0.2764%
2008	0.2659%	0.2757%
2009	0.2709%	0.2770%
2010	0.2596%	0.2767%
2011	0.2616%	0.2783%
2012	0.2607%	0.2762%
2013	0.2659%	0.2767%
2014	0.2660%	0.2992%
Average 2005 & 2014	0.2679%	0.2789%

For the General Service > 50 to 4,999 kW and the Street Lighting classes, the average ratio was applied to the weather normalized billed energy forecast in Table 3-18 to provide the forecast of kW by rate class. For the Street Lighting class the 2014 ratio was applied to the weather normalized billed energy forecast in Table 3-21 since in 2014 the majority of a street light fixtures were changed to LED fixtures. This project was initiated by the Town of Grimsby and was completed as a bulk replacement of all fixtures from high pressure sodium to LED. . As a result, Grimsby Power's believes it would be appropriate to the use the 2014 kW/kWh ratio to determine the kW forecast for the Street Lighting class.

The following Table 3-21 outlines the forecast of kW for the applicable rate classes.

Table 3-21
kW Forecast by Applicable Rate Class

Year	General Service 50 to 4,999 kW	Street Lighting	TOTAL
Predicted Billed kW			
2015 Bridge - Normalized	186,022	3,536	189,558
2016 Test - Normalized	186,573	3,429	190,002

Embedded Distributor Class

On October 1, 2015 the amalgamation of Grimsby Power and Niagara West Transformation Corporation was completed. Previously, Niagara Peninsula Energy Inc. was a customer of Niagara West Transformation Corporation. With the amalgamation, the transformer station assets previously owned by Niagara West Transformation Corporation became part of Grimsby Power which in turn meant Niagara Peninsula Energy Inc. became a customer of Grimsby Power As part of this application, Grimsby Power proposes to establish an Embedded Distributor class which would include Niagara Peninsula Energy Inc. as the only customer in the this class.

Since Niagara Peninsula Energy Inc. is a wholesale market participant, Grimsby Power will only be charging Niagara Peninsula Energy Inc. distribution charges, retail transmission rates and applicable deferral and variance account riders. As outlined in Exhibit 8, it is

proposed the distribution rate will be a 100% monthly fixed rate. The retail transmission rates and applicable deferral and variance account rates are proposed to be charged on a kW basis which means there is no need to develop a kWh forecast for this customer. The following outlines the kW forecast for the Embedded Distributor.

Table 3-22
Embedded Distributor kW Forecast

Year	Forecast Before Adjustment	Adjustment for Wind Generation	Forecast After Adjustment
Embedded Distributor kW Forecast			
2010 Actual	200,494		200,494
2011 Actual	188,871		188,871
2012 Actual	178,016		178,016
2013 Actual	178,045		178,045
2014 - 6 Month Adjustment for Wind Generation	178,045	(23,607)	154,438
2015 - 12 Month Adjustment for Wind Generation	178,045	(47,214)	130,831
2016 - Based on Trend Analysis of Adjusted Values from 2010 to 2015			126,624

The 2014 and 2015 forecast for the Embedded Distributor was determined by assuming the actual 2013 kW transformed for Niagara Peninsula Energy Inc. at the Niagara West Transformation Corporation station would continue at the same level into 2014 and 2015. However, this amount was adjusted for a Wind generator that commenced service in the Niagara Peninsula Energy Inc. service area mid-year in 2014. The load from the Wind generator lowered the amount that needed to be transformed for Niagara Peninsula Energy Inc. at the Niagara West Transformation Corporation station. It was assumed the load would be reduced by 3,934 kW per month based on a comparison between 12 months of data without the wind generation (July 2013 – June 2014) and twelve months of data with wind generation (July 2014 – June 2015). The difference between the two data sets was then divided by twelve to achieve an average monthly reduction of kW's. As a result, the 2014 amount was reduced by 23,607 kW (i.e. 3,934 x 6) and the 2015 amount was lowered by 47,214 kW (i.e. 3,934 x 12). The 2016 forecast was determined by conducting

a trend analysis on the actual values from 2010 to 2013 along with the adjusted amounts for 2014 and 2015. The trend analysis indicated the 2016 forecast should be 126,634 kW.

Table 3-23 provides a summary of the total load forecast on a power purchased and billed level.

Table 3-23
Summary of Total Load Forecast

	2012 Actual	2013 Actual	2014 Actual	2015 Bridge - Normalized	2016 Test - Normalized
Actual kWh Purchases	191,452,811	189,981,587	188,316,013		
Predicted kWh Purchases before CDM adjustment	192,243,248	189,718,340	191,662,018	193,523,134	194,436,974
% Difference between actual and predicted purchases	0.4%	(0.1%)	1.8%		
Loss Factor				1.0477	1.0477
Total Billed Before Adjustments				184,712,669	185,584,906
CDM Adjustment				1,260,549	3,040,851
Total Billed After Adjustments				183,452,120	182,544,054

Table 3-24 provides a summary of the load forecast on a billing determinant basis by rate class. This table is also consistent with Appendix 2-IA which provides a variance analysis between each year and the last Board approved values.

Table 3-24
Appendix 2-IA
Summary and Variances of Actual and Forecast Data

	2012 Board Approved	2012	2013	2014	2015 Bridge	2016 Test
Residential Rate Class						
# of Customers	9,703	9,636	9,720	9,977	10,142	10,310
kWh	94,590,900	93,908,436	92,183,860	91,571,086	93,375,125	92,563,942
kW						
Variance Analysis						
# of Customers		-0.69%	0.18%	2.82%	4.52%	6.26%
kWh		-0.72%	-2.54%	-3.19%	-1.29%	-2.14%
kW		0.00%	0.00%	0.00%	0.00%	0.00%
GS<50 Rate Class						
# of Customers	683	687	691	727	739	751
kWh	18,707,282	17,958,297	18,436,579	18,767,140	19,080,374	18,812,265
kW						
Variance Analysis						
# of Customers		0.59%	1.17%	6.44%	8.20%	9.96%
kWh		-4.00%	-1.45%	0.32%	1.99%	0.56%
kW		0.00%	0.00%	0.00%	0.00%	0.00%
GS>50 Rate Class						
# of Customers	100	108	110	109	108	107
kWh	69,874,994	70,328,520	70,070,546	67,963,114	69,442,721	69,648,507
kW	191,455	183,322	186,328	180,748	186,022	186,573
Variance Analysis						
# of Customers		8.00%	10.00%	9.00%	8.00%	7.00%
kWh		0.65%	0.28%	-2.74%	-0.62%	-0.32%
kW		-4.25%	-2.68%	-5.59%	-2.84%	-2.55%
Street Lighting Rate Class						
# of Connections	2,548	2,579	2,611	2,644	2,662	2,680
kWh	1,578,145	1,581,519	1,528,363	1,218,697	1,181,812	1,145,992
kW	4,403	4,368	4,230	3,646	3,536	3,429
Variance Analysis						
# of Connections		1.22%	2.47%	3.77%	4.47%	5.18%
kWh		0.21%	-3.15%	-22.78%	-25.11%	-27.38%
kW		-0.79%	-3.94%	-17.19%	-19.69%	-22.13%
USL Rate Class						
# of Customers	80	78	76	74	74	74
kWh	355,293	379,842	375,824	370,830	372,087	373,349
kW						
Variance Analysis						
# of Customers		-2.50%	-5.00%	-7.50%	-7.50%	-7.50%
kWh		6.91%	5.78%	4.37%	4.73%	5.08%
kW		0.00%	0.00%	0.00%	0.00%	0.00%
Embedded Distributor						
# of Customers						1
kWh						
kW						126,624
Variance Analysis						
# of Customers		0.00%	0.00%	0.00%	0.00%	0.00%
kWh		0.00%	0.00%	0.00%	0.00%	0.00%
kW		0.00%	0.00%	0.00%	0.00%	0.00%

Totals

Customers / Connections	13,114	13,088	13,208	13,531	13,725	13,923
kWh	185,106,615	184,156,613	182,595,172	179,890,867	183,452,120	182,544,054
kW from applicable classes	195,858	187,690	190,557	184,395	189,558	316,626

Totals - Variance

Customers / Connections		-0.20%	0.72%	3.18%	4.66%	6.17%
kWh		-0.51%	-1.36%	-2.82%	-0.89%	-1.38%
kW from applicable classes		-4.17%	-2.71%	-5.85%	-3.22%	61.66%

ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSIS

Variance Analysis of Distribution Revenue and Billing Determinants

The following discussion provides a year over year variance analysis on Grimsby Power'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 Bridge Year to 2014 Actual and 2016 Test Year to 2015 Bridge Year. The billing determinant variance analysis is based on data outlined in Table 3-24. The overall variance analysis has been provided based on Grimsby Power's materiality of $50,000; the materiality calculation being noted earlier in Exhibit 1 of this Application.

2012 Actual vs. 2012 Board Approved

Table 3-25
Distribution Revenue
2012 Actual vs. 2012 Board Approved

Distribution Revenues	2012 Board Approved	2012 Actual	2012 Actual vs. 2012 Board Approved
Residential	2,859,149	2,843,076	-16,073
GS < 50 kW	442,945	435,663	-7,281
GS >50 to 4, 999	522,739	482,891	-39,848
Street Lighting	72,523	69,353	-3,170
USL	20,840	22,290	1,451
TOTAL	$ 3,918,195	$ 3,853,274	-$ 64,921

The variance between 2012 Board Approved distribution revenue and 2012 Actual is relatively small. The largest difference in the GS >50 to 4,999 rate category ($39,848).

For the Residential class, variable revenue was down ($10,678) compared to Board Approved as a result of kWh consumption being down by approximately 1%. Residential fixed revenue was down ($5,394) as a result of an almost (1%) variance of the annual average customer count vs. the 2012 Board Approved count.

The GS < 50 kW class variance was due to a slight increase in customer count combined with a 4% reduction in volumetric consumption. As such the fixed revenue was above the board approved amount by $2,016 and the volumetric revenue was down by ($9297)

As stated above the largest difference in revenue was in the GS> 50 to 4,999 rate class. Variable revenue for the GS > 50 to 2,999 kW class was down ($52,923) primarily as a result of kW demand being down 4.25% compared to the 2012 Board Approved kW. There was an increase in customer count which lead to an increase over 2012 board approved revenue of $13,074.

The Street Lighting variance is mainly due to a decrease in kW demand.

Table 3-26
Billing Determinants
2012 Actual vs. 2012 Board Approved

	Customer/Connections			kWh		kW		
Billing Determinants	**2012 Board Approved**	**2012 Actual**	**Difference**	**2012 Board Approved**	**2012 Actual**	**2012 Board Approved**	**2012 Actual**	**Volumeteric Difference**
Residential	9,703	9,636	(67)	94,590,900	93,908,436			(682,464)
General Service < 50 kW	683	687	4	18,707,282	17,958,297			(748,985)
General Service 50 to 4,999 kW	100	108	8			191,455	183,322	(8,133)
Street Lighting	2,548	2,579	31			4,403	4,368	(35)
Unmetered Scattered Load	80	78	(2)	355,293	379,842			24,548
Total	**13,114**	**13,088**	**(26)**	**113,653,475**	**112,246,575**	**195,858**	**187,690**	

Overall for 2012 customer consumption did not meet the board approved amounts. The largest discrepancy was in the kW for the GS> 50 to 4,999 rate category. Furthermore, kWh consumption was down by .51%. These variances from board approved amounts did not produce any material differences.

2013 Actual vs. 2012 Actual

Table 3-27
Distribution Revenue
2013 Actual vs. 2012 Actual

Distribution Revenues	2012 Actual	2013 Actual	2013 Actual vs. 2012 Actual
Residential	2,843,076	2,857,537	14,461
GS < 50 kW	435,663	451,020	15,357
GS >50 to 4, 999	482,891	503,209	20,318
Street Lighting	69,353	80,738	11,384
USL	22,290	20,420	-1,870
TOTAL	$ 3,853,274	$ 3,912,923	$ 59,649

In 2013 Grimsby Power saw an increase of $59,648 over 2012. With this increase Grimsby Power was still below the 2012 Board approved distribution revenue of $3,918,195 by $5,636. None of the Grimsby Power rate classes showed a material increase.

Table 3-28
Billing Determinants
2013 Actual vs. 2012 Actual

	Customer/Connections			kWh		kW		
Billing Determinants	2012 Actual	2013 Actual	Difference	2012 Actual	2013 Actual	2012 Actual	2013 Actual	Volumeteric Difference
Residential	9,636	9,720	84	93,908,436	92,183,860			(1,724,576)
General Service < 50 kW	687	691	4	17,958,297	18,436,579			478,282
General Service 50 to 4,999 kW	108	110	2			183,322	186,328	3,006
Street Lighting	2,579	2,611	32			4,368	4,230	(138)
Unmetered Scattered Load	78	76	(2)	379,842	375,824			(4,018)
Total	13,088	13,208	120	112,246,575	110,996,263	187,690	190,557	

Fluctuations in customer counts are a result of many factors including the averaging of counts over a 12 month period, account reclassifications, the timing of customers opening and closing accounts, moves, etc. The count variance year over year is immaterial. The reduction in the volumetric use is also immaterial although cooler summer weather can be attributed to the reduction.

2014 Actual vs 2013 Actual

Table 3-29
Distribution Revenue
2014 Actual vs. 2013 Actual

Distribution Revenues	2013 Actual	2014 Actual	2014 Actual vs. 2013 Actual
Residential	2,857,537	2,940,844	83,307
GS < 50 kW	451,020	472,331	21,311
GS >50 to 4, 999	503,209	504,064	855
Street Lighting	80,738	84,701	3,963
USL	20,420	20,321	-99
TOTAL	$ 3,912,923	$ 4,022,260	$ 109,337

The 2014 IRM application resulted in an increase to the volumetric and fixed rates in all rate classes. The residential rate class was the only rate class with a material variance over the 2013 Actual. The fixed revenue increased by $71,866 in 2014. The increase relates to a large increase in the number of customers as Grimsby experienced large growth in residential subdivision development. The variable revenue increased by $11,441.

Table 3-30
Billing Determinants
2014 Actual vs. 2013 Actual

	Customer/Connections			kWh		kW		
Billing Determinants	2013 Actual	2014 Actual	Difference	2013 Actual	2014 Actual	2013 Actual	2014 Actual	Volumeteric Difference
Residential	9,720	9,977	257	92,183,860	91,571,086			(612,774)
General Service < 50 kW	691	727	36	18,436,579	18,767,140			330,561
General Service 50 to 4,999 kW	110	109	(1)			186,328	180,748	(5,579)
Street Lighting	2,611	2,644	33			4,230	3,646	(583)
Unmetered Scattered Load	76	74	(2)	375,824	370,830			(4,993)
Total	13,208	13,531	323	110,996,263	110,709,056	190,557	184,395	

Overall in 2014 there was some growth in customer count and a reduction in consumption. None of the rate classes experienced a material change. The largest change was the number of residential customers with a 2.4% increase.

2015 Bridge Year vs. 2014 Actual

Table 3-31
Distribution Revenue
2015 Bridge Year vs 2014 Actual

Distribution Revenues	2014 Actual	2015 Bridge Year	2015 Bridge Year vs. 2014 Actual
Residential	2,940,844	3,061,190	120,347
GS < 50 kW	472,331	486,791	14,460
GS >50 to 4, 999	504,064	521,870	17,806
Street Lighting	84,701	86,669	1,968
USL	20,321	20,661	340
TOTAL	**$ 4,022,260**	**$ 4,177,181**	**$ 154,920**

In the 2015 Bridge Year the residential rate class is again the only rate class that will see a material increase in distribution revenue. The increase is due the impact of the weather normalized load forecast being approximately 2% higher than the 2014 Actual and further growth in the residential customer counts.

Table 3-32
Billing Determinants
2015 Bridge Year vs. 2014 Actual

	Customer/Connections			kWh		kW		
Billing Determinants	2014 Actual	2015 Bridge	Difference	2014 Actual	2015 Bridge	2014 Actual	2015 Bridge	Volumeteric Difference
Residential	9,977	10,142	165	91,571,086	93,375,125			1,804,040
General Service < 50 kW	727	739	12	18,767,140	19,080,374			313,234
General Service 50 to 4,999 kW	109	108	(1)			180,748	186,022	5,274
Street Lighting	2,644	2,662	18			3,646	3,536	(110)
Unmetered Scattered Load	74	74	0	370,830	372,087			0
Embedded Distributor		1					130,831	
Total	**13,531**	**13,726**	**194**	**110,709,056**	**112,827,587**	**184,395**	**320,389**	

With the exception of the residential rate class the year over year differences among the rate classes for customers/connections continue to be immaterial. Due to the continued residential subdivision development in the Town of Grimsby the residential customer count and consumption continues to see moderate growth.

2016 Test Year vs. 2015 Bridge Year

Table 3-33
Distribution Revenue
2016 Test Year vs. 2015 Bridge Year

Distribution Revenues	2015 Bridge Year	2016 Test Year	2015 Bridge Year vs. 2014 Actual
Residential	3,061,190	3,969,342	908,151
GS < 50 kW	486,791	693,752	206,961
GS >50 to 4, 999	521,870	910,255	388,385
Street Lighting	86,669	116,640	29,971
USL	20,661	53,452	32,790
Embeded Distributor		529,917	529,917
TOTAL	**$ 4,177,181**	**$ 6,273,356**	**$ 2,096,176**

The proposed Test Year distribution revenue is a reflection of the 2016 COS application and the proposed base revenue requirement of Grimsby Power. The variance in distribution revenue over the Bridge Year is a result of the proposed increases to fixed and variable distribution revenue in the Test Year.

Table 3-34
Billing Determinants
2016 Test Year vs. 2015 Bridge Year

	Customer/Connections			kWh		kW		
Billing Determinants	**2015 Bridge**	**2016 Test**	**Difference**	**2015 Bridge**	**2016 Test**	**2015 Bridge**	**2016 Test**	**Volumeteric Difference**
Residential	10,142	10,310	168	93,375,125	92,563,942			(811,184)
General Service < 50 kW	739	751	12	19,080,374	18,812,265			(268,110)
General Service 50 to 4,999 kW	108	107	(1)			186,022	186,573	551
Street Lighting	2,662	2,680	18			3,536	3,429	(107)
Unmetered Scattered Load	74	74	0	372,087	373,349			0
Embedded Distributor	1	1	0			130,831	126,624	(4,207)
Total	**13,726**	**13,923**	**197**	**112,827,587**	**111,749,555**	**320,389**	**316,626**	

Year over year changes are a result of the inputs of the load forecast model which is explained in detail above. Flat growth rates, minimal decreases to kWh, and reduced kW are appropriate on a go forward basis for rate setting purposes.

OTHER REVENUE

To allow for a practical, yet detailed, review of Other Distribution Revenue, Grimsby Power will use a materiality threshold of $50,000 in its analysis. Grimsby Power has provided explanations for variances of other revenue that exceed this materiality threshold.

New Specific Service Charges

Grimsby Power is not applying for any new specific service charges.

Revenues or Costs (including interest) Associated with Deferral and Variance Accounts

Grimsby Power has not included any revenues or costs (including interest) associated with deferral and variance accounts in Other Revenue.

Analysis of Other Distribution Revenues

Other Distribution revenue consists of OEB-Approved Charges based on standardized rates as well as interest, revenue from work requested by customers, exchange gains and losses and gains and losses due to disposals.

A summary of Other Distribution Revenue is presented in Table 3-41 below:

Year over Year Variance Analysis of Other Distribution Revenue

The following analysis is for account variances that either exceeds the materiality threshold of $50,000, or where the total amounts in the USofA account is significant when compared to overall Other Revenues (Table 3-30):

Table 3-41

Other Distribution Revenue Comparison

Summary of Other Distribution Revenue	2012 Board Approved	2012 Actual	Variance from 2012 Board Approved	2013 Actual	Variance from 2012 Actual	2014 Actual	Variance from 2013 Actual	2015 Bridge Year	Variance from 2014 Actual	2016 Test Year	Variance from 2015 Bridge Year
Specific Service Charges	$ 55,000	$ 59,735	$ 4,735	$ 50,325	$ (9,410)	$ 73,488	$ 23,163	$ 70,700	$ (2,788)	$ 72,450	$ 1,750
Late Payment Charges	$ 55,000	$ 44,401	$ (10,599)	$ 52,278	$ 7,877	$ 61,327	$ 9,049	$ 60,000	$ (1,327)	$ 60,000	$ -
Other Operating Revenues	$ 218,141	$ 131,558	$ (86,583)	$ 286,024	$ 154,467	$ 90,936	$ (195,088)	$ 113,161	$ 22,225	$ 113,538	$ 377
Other Income or Deductions	$ 18,700	$ 68,211	$ 49,511	$ 65,443	$ (2,768)	$ 96,170	$ 30,727	$ 52,600	$ (43,570)	$ 55,600	$ 3,000
Total Other Distribution Revenue	**$ 346,841**	**$ 303,904**	**$ (42,937)**	**$ 454,070**	**$ 150,166**	**$ 321,921**	**$ (132,149)**	**$ 296,461**	**$ (25,460)**	**$ 301,588**	**$ 5,127**

Other Distribution Revenues 2012 Board Approved vs. 2012 Actual

The 2012 actual Other Distribution Revenue was ($42,937) less than the 2012 actual. The main driver of the decrease was Other Operating Revenue.

Account 4220 Other Electric Revenue accounts for a majority of the ($42,937) reduction. In 2012 there was very little income from the sale of transformers and work requested by customer.

Revenue from affiliate transactions totaled $27,061 in 2012.

Other Distribution Revenues 2013 Actual vs. 2012 Actual

In 2013 Other Distribution Revenue was $150,166 higher than the 2012 actual. The main driver of the increase was Other Operating Revenue.

Account 4220 Other Electric Revenue accounts for $137,637 of the $150,166. In 2013 there was an increase in transformer sales by $62,400 and an increase in income from work requested by customers in the amount of $75,237.

Account 4210 Rent from Electric Property increased in by approximately $16,000 due to an audit on the number of poles.

Revenue from affiliate transactions was down by $8,129 in 2013. This was due to a reduction in consulting and administration services.

Other Distribution Revenues 2014 Actual vs. 2013 Actual

In 2014 Other Distribution Revenue decreased by ($132,149).

Account 4220 Other Electric Revenue accounts for ($190,526) of the ($132,149) decrease. In 2014 Grimsby Power revised the process of estimating and invoicing for services performed by customer request. This resulted in the reduction of income from customer work orders.

Account 4325 showed an increase of $23,163 due to an influx of new customers and occupancy fees.

Account 4325 increased by $10,394 due to an increase in vendor discounts.

Account 4375 increased by $18,751 due to increased profit from CDM activities.

Revenue from affiliate transactions remained relatively the same in 2014 when compared to 2013.

Other Distribution Revenues 2015 Bridge Year vs. 2014 Actual

In the 2015 Bridge Year the Other Distribution Revenue is not materially different than the 2014 Actual. The 2015 Bridge Year is ($25,460) less than the 2014 Actual.

Revenue from affiliate transactions remains flat for the 2015 Bridge Year when compared to 2014 actual.

Other Distribution Revenues 2016 Test Year vs. 2015 Bridge Year

In the 2016 Test Year the Other Distribution Revenue is not materially different than the 2015 Bridge Year. The 2015 Bridge Year is only $5,127 more than the 2015 Bridge Year.

Revenue from affiliate transactions remains flat for the 2016 Test Year when compared to 2015 Bridge Year.

APPENDIX 3-A - MONTHLY DATA USED FOR REGRESSION ANALYSIS

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases
Jan-05	15,904,400	765.8	-	31	0	9,373	16,104,601
Feb-05	13,355,854	641.7	-	28	0	9,380	14,075,883
Mar-05	14,106,535	646.9	-	31	1	9,395	14,655,016
Apr-05	12,415,909	339.0	-	30	1	9,415	13,298,881
May-05	12,186,547	212.7	-	31	1	9,423	13,546,858
Jun-05	16,687,966	13.1	119.6	30	0	9,437	17,302,764
Jul-05	18,388,988	1.1	144.7	31	0	9,449	18,622,654
Aug-05	17,645,309	3.8	102.5	31	0	9,452	17,333,928
Sep-05	14,535,597	32.8	25.6	30	1	9,460	13,323,012
Oct-05	13,359,593	234.2	7.6	31	1	9,467	13,868,277
Nov-05	13,515,784	396.3	-	30	1	9,467	13,485,371
Dec-05	15,642,297	688.8	-	31	0	9,469	15,973,872
Jan-06	14,831,647	554.7	-	31	0	9,489	15,639,828
Feb-06	13,693,984	602.8	-	28	0	9,523	14,078,134
Mar-06	14,234,656	530.4	-	31	1	9,525	14,446,206
Apr-06	12,480,967	314.6	-	30	1	9,530	13,318,579
May-06	13,391,623	155.5	22.4	31	1	9,543	14,173,868
Jun-06	15,047,749	26.7	43.2	30	0	9,544	15,065,662
Jul-06	19,026,240	1.9	136.1	31	0	9,551	18,433,943
Aug-06	17,271,942	8.1	70.1	31	0	9,560	16,426,651
Sep-06	13,597,770	105.3	4.1	30	1	9,575	12,933,274
Oct-06	13,918,242	304.1	-	31	1	9,589	13,904,353
Nov-06	14,040,974	393.1	-	30	1	9,598	13,571,726
Dec-06	15,474,866	508.1	-	31	0	9,599	15,598,220
Jan-07	15,702,988	665.6	-	31	0	9,605	16,011,865
Feb-07	14,969,307	761.8	-	29	0	9,603	15,119,578
Mar-07	14,984,498	565.2	-	31	1	9,605	14,594,459
Apr-07	13,573,714	374.2	-	30	1	9,606	13,528,391
May-07	13,586,565	138.4	23.3	31	1	9,623	14,214,924
Jun-07	16,499,886	19.2	74.2	30	0	9,640	16,068,990
Jul-07	16,698,025	9.2	82.0	31	0	9,657	16,865,609
Aug-07	17,984,840	8.4	106.0	31	0	9,667	17,608,905
Sep-07	14,762,955	55.2	37.2	30	1	9,721	13,926,617
Oct-07	14,023,826	157.8	13.0	31	1	9,742	14,034,551
Nov-07	14,013,283	467.5	-	30	1	9,763	13,884,318
Dec-07	15,868,249	643.6	-	31	0	9,789	16,087,665
Jan-08	15,764,852	632.7	-	31	0	9,806	16,071,624
Feb-08	14,902,959	678.8	-	29	0	9,810	15,053,473
Mar-08	15,024,634	620.8	-	31	1	9,810	14,887,101
Apr-08	12,928,634	287.6	-	30	1	9,826	13,462,326
May-08	13,093,339	213.1	0.3	31	1	9,840	13,858,483
Jun-08	15,634,588	34.2	55.0	30	0	9,855	15,672,830
Jul-08	17,769,759	3.7	87.7	31	0	9,858	17,171,885
Aug-08	16,451,327	20.2	45.2	31	0	9,860	15,909,072
Sep-08	14,772,756	70.4	20.3	30	1	9,869	13,553,295
Oct-08	14,010,438	297.5	-	31	1	9,875	14,093,887
Nov-08	14,578,065	460.6	-	30	1	9,883	13,953,108
Dec-08	16,663,518	655.3	-	31	0	9,937	16,225,027

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases
Jan-09	17,050,345	852.3	-	31	0	9,943	16,741,324
Feb-09	14,445,284	616.6	-	28	0	9,947	14,420,414
Mar-09	14,873,166	540.9	-	31	1	9,956	14,784,969
Apr-09	13,253,480	334.7	-	30	1	9,955	13,677,954
May-09	13,056,803	178.1	-	31	1	9,966	13,849,356
Jun-09	14,334,094	58.5	30.2	30	0	9,967	15,054,167
Jul-09	15,527,173	18.9	21.7	31	0	9,989	15,276,149
Aug-09	17,690,606	18.1	69.7	31	0	9,995	16,754,703
Sep-09	14,455,746	67.8	12.4	30	1	10,008	13,404,017
Oct-09	14,130,993	259.9	2.6	31	1	10,041	14,195,651
Nov-09	14,175,811	424.6	-	30	1	10,055	13,983,893
Dec-09	16,626,564	614.4	-	31	0	10,073	16,216,902
Jan-10	16,710,571	728.7	-	31	0	10,076	16,516,231
Feb-10	14,688,782	618.4	-	28	0	10,094	14,531,326
Mar-10	14,685,369	456.8	-	31	1	10,107	14,675,536
Apr-10	13,053,838	235.8	0.8	30	1	10,110	13,557,555
May-10	14,445,331	128.4	28.8	31	1	10,117	14,715,100
Jun-10	16,128,917	27.2	44.8	30	0	10,131	15,540,385
Jul-10	19,784,906	5.7	121.3	31	0	10,134	18,409,950
Aug-10	19,044,590	6.9	95.6	31	0	10,148	17,632,752
Sep-10	14,895,980	97.2	21.7	30	1	10,166	13,880,638
Oct-10	13,951,925	260.8	-	31	1	10,176	14,216,039
Nov-10	14,495,200	416.5	-	30	1	10,215	14,078,432
Dec-10	17,057,264	696.2	-	31	0	10,231	16,543,786
Jan-11	16,972,495	743.0	-	31	0	10,242	16,673,359
Feb-11	15,034,235	610.7	-	29	0	10,254	15,197,367
Mar-11	15,600,132	548.6	-	31	1	10,249	15,016,725
Apr-11	13,905,161	334.6	0.7	30	1	10,246	13,910,549
May-11	13,964,089	159.2	12.0	31	1	10,267	14,386,841
Jun-11	15,635,950	15.2	67.5	30	0	10,288	16,320,826
Jul-11	20,776,403	-	209.2	31	0	10,283	21,206,286
Aug-11	18,292,833	-	126.3	31	0	10,312	18,677,555
Sep-11	15,179,292	44.3	47.9	30	1	10,322	14,661,713
Oct-11	14,464,910	210.8	6.0	31	1	10,333	14,384,098
Nov-11	14,415,496	306.6	-	30	1	10,345	13,886,774
Dec-11	16,232,068	505.7	-	31	0	10,388	16,162,178
Jan-12	16,429,520	582.6	-	31	0	10,426	16,389,487
Feb-12	14,922,710	510.9	-	29	0	10,454	15,082,544
Mar-12	14,512,775	341.7	0.5	31	1	10,470	14,654,127
Apr-12	13,420,401	303.6	2.8	30	1	10,478	14,061,212
May-12	14,603,681	77.5	36.5	31	1	10,495	15,092,818
Jun-12	17,157,940	20.7	112.0	30	0	10,511	17,864,928
Jul-12	20,944,844	-	205.1	31	0	10,518	21,250,016
Aug-12	18,739,592	0.8	132.5	31	0	10,537	19,032,926
Sep-12	15,430,254	62.9	39.3	30	1	10,546	14,607,427
Oct-12	14,418,669	221.0	1.4	31	1	10,548	14,424,504
Nov-12	14,689,598	409.4	-	30	1	10,553	14,304,247
Dec-12	16,182,826	193.6	-	31	0	10,565	15,479,012

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Number of Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases
Jan-13	16,622,084	612.3	-	31	0	10,571	16,571,460
Feb-13	15,003,412	590.5	-	28	0	10,575	14,806,429
Mar-13	15,405,740	525.2	-	31	1	10,578	15,193,676
Apr-13	13,953,064	340.0	-	30	1	10,579	14,142,681
May-13	14,135,961	114.6	25.4	31	1	10,584	14,912,158
Jun-13	15,880,216	34.1	68.1	30	0	10,592	16,608,092
Jul-13	19,373,764	0.4	141.4	31	0	10,592	19,345,364
Aug-13	17,518,528	2.8	95.1	31	0	10,589	17,925,422
Sep-13	15,118,316	75.6	35.8	30	1	10,599	14,571,087
Oct-13	14,697,970	193.4	4.4	31	1	10,610	14,489,852
Nov-13	15,084,391	442.2	-	30	1	10,622	14,439,352
Dec-13	17,188,140	639.7	-	31	0	10,668	16,712,766
Jan-14	17,832,922	779.5	-	31	0	10,677	17,082,581
Feb-14	15,630,734	683.1	-	29	0	10,731	15,730,238
Mar-14	16,233,179	647.9	-	31	1	10,749	15,636,126
Apr-14	13,779,375	331.7	-	30	1	10,788	14,272,152
May-14	13,816,260	129.6	11.9	31	1	10,816	14,703,593
Jun-14	15,763,795	13.5	72.8	30	0	10,838	16,876,891
Jul-14	17,256,405	1.7	89.6	31	0	10,879	17,962,981
Aug-14	17,022,828	4.1	88.8	31	0	10,916	17,971,353
Sep-14	15,128,455	57.2	42.6	30	1	11,008	15,027,988
Oct-14	14,319,577	199.6	5.1	31	1	11,061	14,853,423
Nov-14	15,066,567	451.9	-	30	1	11,065	14,784,708
Dec-14	16,465,916	534.4	-	31	0	11,112	16,759,985
Jan-15		691.7	-	31	0	11,115	17,171,211
Feb-15		631.5	-	28	0	11,119	15,305,907
Mar-15		542.4	0.1	31	1	11,122	15,633,083
Apr-15		319.6	0.4	30	1	11,125	14,497,670
May-15		150.7	16.1	31	1	11,129	15,112,237
Jun-15		26.2	68.7	30	0	11,132	16,997,453
Jul-15		4.3	123.9	31	0	11,135	19,209,035
Aug-15		7.3	93.2	31	0	11,138	18,275,157
Sep-15		66.9	28.7	30	1	11,142	14,721,923
Oct-15		233.9	4.0	31	1	11,145	14,969,723
Nov-15		416.9	-	30	1	11,148	14,753,876
Dec-15		568.0	-	31	0	11,152	16,875,858
Jan-16		691.7	-	31	0	11,155	17,199,829
Feb-16		631.5	-	29	0	11,158	15,904,948
Mar-16		542.4	0.1	31	1	11,162	15,661,701
Apr-16		319.6	0.4	30	1	11,165	14,526,288
May-16		150.7	16.1	31	1	11,168	15,140,855
Jun-16		26.2	68.7	30	0	11,171	17,026,071
Jul-16		4.3	123.9	31	0	11,175	19,237,653
Aug-16		7.3	93.2	31	0	11,178	18,303,776
Sep-16		66.9	28.7	30	1	11,181	14,750,541
Oct-16		233.9	4.0	31	1	11,185	14,998,341
Nov-16		416.9	-	30	1	11,188	14,782,494
Dec-16		568.0	-	31	0	11,191	16,904,476