



December 11th, 2013

Ms. Kirsten Walli
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Dear Ms. Walli:

**Re: Veridian Connections Inc.
2014 Cost of Service Distribution Rate Application
Board File No. EB-2013-0174**

Veridian Connections Inc. ("Veridian") hereby informs the Ontario Energy Board ("the Board") that its 2014 cost of service rate application no longer requires confidential treatment as originally contemplated in its filing of October 31st, 2013.

The load forecast contained within Veridian's application includes consumption data on a single customer that may be identifiable. Since this data could be considered "confidential information" by the Board, Veridian filed a redacted load forecast on the public record, as well as an unredacted load forecast in accordance with Board's *Practice Direction on Confidential Filings*.

Subsequent to the October 31st filing, Veridian was able to receive the consent of its customer for the disclosure of this consumption data within Veridian's 2014 rate application. In order to place this information on the public record, Veridian will resubmit an unredacted Exhibit 3 of the application via RESS, and will provide an electronic copy to all intervenors of record in this proceeding.

Please do not hesitate to contact me if you have any questions.

Yours truly,

original signed by

George Armstrong
Vice President, Corporate Services

cc Andrew Taylor, Energy Boutique
Richard Battista, Ontario Energy Board

The power to make your community better.





File Number: EB-2013-0174

Date Filed: December 11, 2013

Exhibit 3

OPERATING REVENUE



File Number: EB-2013-0174

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Exhibit 3

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Overview



1 Overview of Operating Revenue

2

3 This exhibit provides historical information related to distribution revenues for the period of
4 2010 through 2012 and forecast information for 2013 and the forward test year of 2014.
5 Variance analysis of the components of distribution revenues is provided. Currently, Veridian
6 has two separate rate tariffs: Veridian_Main and Veridian_Graenhurst. Veridian is proposing
7 harmonization of these rate tariffs for 2014.

8

9 Schedules are provided related to Veridian’s forecasted components of revenue including load
10 and energy volumes, transformer ownership allowance volumes and forecasts of customer
11 counts. Veridian’s load forecast methodology is set out at Exhibit 3, Tab 2, Schedule 2.

12

13 Table 1 below shows year over year changes in distribution revenues. For 2013 and 2014,
14 current approved rates have been applied to the forecasted customer and sales forecast to derive
15 distribution revenue at current rates.

Table 1: Summary of Distribution Revenues

	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Forecast at Current Rates	2014 Forecast at Current Rates
Distribution Revenues	\$ 46,278,951	\$ 46,480,688	\$ 46,220,508	\$ 47,159,536	\$ 47,011,674	\$ 47,128,493
Smart Meter Revenues		\$ 1,657,426	\$ 1,755,576	\$ 1,901,495	\$ 1,927,606	\$ 1,952,059
	\$ 46,278,951	\$ 48,138,114	\$ 47,976,085	\$ 49,061,031	\$ 48,939,280	\$ 49,080,552

Note: Smart Meter revenue requirements by year as approved in Veridian's Smart Meter Final Disposition Application (EB-2012-0247)

16



1 In 2012 Veridian applied for final disposition of Account 1555 and 1556 Smart Meter Deferral
2 Accounts (EB-2012-0247). The Board approved revenue requirement associated with Veridian’s
3 smart metering activities through a smart meter disposition rate rider (SMDR) and a smart meter
4 incremental revenue rate rider (SMIRR). The approved annual revenue requirements have been
5 allocated to the prior years in the table to reflect smart meter revenues per year.

6
7 At current approved rates Veridian’s distribution revenue including smart meter incremental
8 revenue rate riders (“SMIRR”) is \$49,080,552. This is a \$141,272 or 0.29% increase over 2013.

9
10 The table below provides details by rate class for distribution revenues from 2010 Board
11 Approved to 2014 Forecast at Current Rates.

Table 2: Distribution Revenue by Harmonized Rate Class

	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Forecast at Current Rates*	2014 Forecast at Current Rates*
Residential	28,462,247	28,650,220	28,617,736	29,229,777	30,810,331	31,102,285
Residential - Seasonal	822,331	786,132	811,230	803,176	838,194	833,423
GS < 50 kW	6,636,187	6,653,625	6,589,568	6,544,347	6,842,840	6,823,873
GS > 50 kW*	8,702,612	8,664,091	8,483,475	8,886,318	8,754,924	8,644,319
Intermediate Use*	197,838	206,646	289,110	313,593	293,198	337,444
Large Use*	817,520	918,012	791,850	759,527	754,134	686,039
USL	178,585	198,557	199,374	173,260	166,038	167,532
Sentinel Lighting	47,070	17,197	20,051	17,686	39,406	36,942
Street Lighting	414,561	386,207	418,115	431,852	440,214	448,694
Total	46,278,951	46,480,688	46,220,508	47,159,536	48,939,280	49,080,552

* Includes Smart Meter Revenues

13
14



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Exhibit 3

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Load Forecast



1 Overview

2

3 Historically, Veridian has prepared individual load forecasts for each of its tariff zones:
4 Veridian_Main and Veridian_Gravenhurst. Although Veridian is proposing to harmonize the
5 two tariff zones in 2014, for cost allocation and other purposes, separate load, energy and
6 customer forecasts are still necessary. These separate forecasts are then aggregated into a
7 harmonized summary forecast by rate class. The harmonized forecast consists of the following
8 combined classes.

9 Table 1 – VCI Harmonized Class Table of Concordance

VCI Harmonized	VCI Main	Gravenhurst
Residential	Residential	Residential – Urban Residential - SubUrban
Residential - Seasonal		Residential - Seasonal
GS < 50 kW	GS < 50 kW	GS < 50 kW
GS > 50 kW	GS > 50 kW	GS > 50 kW
Intermediate	Intermediate	
Large Use	Large Use	
Sentinel Light	Sentinel Light	Sentinel Light
Street Light	Street Light	Street Light
USL	USL	

10

11 A weather normalized load forecast has been prepared for each of the Tariff zones. Veridian
12 retained Elenchus Research Associates (ERA) to prepare 2013 and 2014 weather normalized
13 load forecasts for each rate zone. Due to various data constraints and differences in customer
14 classes between the service areas, there are some differences in methodologies for the
15 development of the load forecast for each tariff zone.

16



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1 The weather normalization and resulting load forecasts are contained in a report prepared by
2 ERA. The report is filed at Exhibit 3, Tab 2, Schedule 2, Attachment 1.

3

4 As per the Filing Requirements, Veridian has included in the test year forecast, the impacts
5 arising from the persistence of historical conservation and demand management (CDM)
6 programs, as well as the forecast impacts arising from new programs deployed in the bridge and
7 test years. Veridian has identified this CDM component of the forecast by rate class and
8 understands that the amount approved by the Board will be the basis for the lost revenue
9 adjustment mechanism variance account (LRAMVA).

10

11 A description of and calculations for the CDM component of Veridian's load forecast is filed at
12 Exhibit 3, Tab 3, Schedule 1.



1 Methodology

2

3 The methodologies used for each of the Main and Gravenhurst tariff zones are similar to that
4 used and approved in Veridian's 2010 cost of service rate application. All forecasted volumes
5 are those prior to adjustments related to the CDM component of Veridian's load forecast.

6

7 The methodology for both Main and Gravenhurst uses monthly wholesale deliveries for the
8 period May 2002 to December 2012 as measured at the wholesale points of delivery. Monthly
9 total wholesale information is used, rather than monthly class specific consumption due to data
10 constraints. The majority of customers in the Main zone were billed on a quarterly basis from
11 2004 – 2008 and accurate estimations of monthly consumptions is not possible.

12

13 The historic monthly wholesale data is then modeled to determine a weather normalized forecast
14 for 2013 and 2014. A ten year average from 2003 to 2012 was adopted as the appropriate
15 definition of normal weather. Monthly HDD and CDD as reported by Environment Canada at
16 Pearson International Airport near Toronto was used as the relevant data source.

17

18 To measure changes in economic activity, monthly full-time employment statistics were used.
19 Monthly full-time employment levels for Ontario as reported by Statistics Canada were used for
20 the Main zone and full-time employment for the Muskoka-Kawartha Economic Region
21 (MKFTE) was used for the Gravenhurst zone. The number of peak days (non-holiday
22 weekdays) and a binary variable representing shoulder months' consumption were included as
23 explanatory variables.

24



1 A multiple regression analysis for each zone was used to develop an equation describing the
2 relationship between the monthly actual energy deliveries and these explanatory variables.

3
4 Table 1 below provides summary values of the model statistics. Full details of the statistics from
5 each regression model can be found in the ERA forecast report.

Table 1: Regression analysis values

	Main	Gravenhurst
Adjusted R squared	0.88	0.91
Mean absolute percentage error (Annual)	1.00%	2.10%

6
7
8 Allocation of forecasted 2013 and 2014 wholesale kWh to customer classes for weather sensitive
9 classes is based on their share of the 2012 wholesale kWh total exclusive of distribution losses
10 with the exception of the Residential – Seasonal class.

11
12 For the Residential – Seasonal class, a normalized average use per customer (NAC) calculated
13 from the actual annual average use per customer from 2005 to 2012, inclusive was used. In
14 Veridian’s 2010 cost of service rate application, the weather normalized class throughput for
15 2004 derived by Hydro One Networks for use in Gravenhurst Hydro’s Cost Allocation
16 Informational Filing was used to forecast the seasonal rate class. The historic information from
17 2004 was deemed too distant and an updated annual use per customer was calculated and used.
18 Full details are provided in the ERA forecast report.

19
20 For the GS > 50 kW class, the forecast kW is based on the average of the class kW to class kWh
21 ratio in 2012.



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1 Monthly interval data was analyzed to determine appropriate forecasts for 2013 and 2014 for all
2 customers within the Intermediate and Large Use rate classes. These classes have a small
3 number of customers and since 2006 a number of reclassification of customers between GS > 50
4 kW, Intermediate and Large Use has occurred. For the purpose of load forecasting, customer
5 classes have been defined as they exist currently and these customers and their consumption and
6 load have been allocated to their current rate class for the entire time series. Further details on
7 customer reclassifications are noted in the ERA forecast report.

8

9 As per the Minimum Filing Requirements, the data used in the load forecast has been provided
10 as Attachment 2 to this schedule and in the live MS Excel format.



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Attachment 1 of 2

Load Forecast Report

Weather Normalized Distribution System Load Forecast – 2014 Test Year

A Report Prepared by
Elenchus Research Associates Inc.

On Behalf of
Veridian Connections Inc.

April 17, 2013
Revised August 2013

1 INTRODUCTION

This document outlines the results and methodology used to derive the weather normal load forecast prepared for use in the COS application for 2014 rates for Veridian Connections Inc. (VCI). A weather normal load forecast is developed for the bridge year (2013) and test year (2014) and weather normalized historical consumption is also derived.

VCI currently has two separate rate schedules: the Veridian Main system (all of the Veridian service area except for Gravenhurst) and the Gravenhurst system. These two rate schedules are being harmonized for 2014. However, for cost allocation and certain other reasons, separate load forecasts are still necessary. Therefore, a weather normalized load forecast for each of these service areas is developed. These separate forecasts are then aggregated for a summary forecast for the entire LDC, by rate class.

There are several constraints with respect to data availability that had to be considered when developing the load forecast methodology and process for VCI. One issue is that most customers in the Veridian Main system were billed on a quarterly basis until 2009. Since 2009, customers have been billed on a bi-monthly basis. Smart meters have been deployed but only one year of complete data is available at this point. As a result, a time series of monthly class consumption for any length of time is not currently available. Therefore, the load forecast for VCI's main system is based on monthly wholesale deliveries to the Distribution System from January 2002 to December 2012 as measured at the wholesale point of delivery. While it may be desirable to isolate demand determinants related to individual rate classes, this is simply not possible with the data available for VCI at this time.

The Gravenhurst service area has an additional complication. Most Gravenhurst customers are billed on a bi-monthly basis and monthly class specific consumption is not available. Additional complications arise as Gravenhurst currently has three separate Residential rate classes: Residential – Urban, Residential – Sub-Urban, and Residential – Seasonal. While monthly wholesale deliveries are available for the Gravenhurst service area, it would be unrealistic to assign a similar weather corrected consumption pattern to a seasonal customer rate class and a non-seasonal customer class. In VCI's 2010 COS load forecast, a decision was made to use the weather normalized class throughput for 2004 derived for Gravenhurst by Hydro One Networks for the OEB's Cost Allocation Informational Filing to forecast the seasonal rate class. From the 2004 weather normalized class throughput, class specific normalized average use per customer (NAC) was derived and used to project weather normal consumption for the bridge year and test year. For the current application which involves a 2014 test year, it was thought that 2004 was too distant from the test year to be a valid representation of NAC. However, 8 years of annual use per customer for the Residential – Seasonal Class is available. This includes weather from 2005 to 2012 inclusive and is thought to represent a period in which a wide range of summer and winter weather has occurred.¹ For this reason, the average annual use per customer for

¹ Annual class kWh is available from 2003 and customer count by class is available from 2005. With 536 CDDs, 2005 is the warmest year in more than 10, and 2009 with 198 CDDs is the coolest summer in more than 10. Likewise, 2008 and 2009, with more than 3800 HDDs represents colder winters and 2012 with only 3215 HDDs represents a mild winter.

the Residential – Seasonal Class from 2005 to 2012 inclusive is used as the NAC for normalization and forecasting purposes.

LOSS OF LARGE USE CUSTOMER & RECLASSIFICATIONS

Shortly after the analysis for this load forecast was completed, one of VCI's Large Use customers shut down operations. The main operations of the plant stopped production at the end of March. The owners have advised that some residual manufacturing will continue and some staff will remain on site until the end of June. Equipment is now being removed and all equipment will be gone by October. The owners have advised that the property will be put up for sale.

For the purpose of the Large Use class, the customers' actual use for January and February 2013 is known and will be included in the forecast. March 2013 is estimated based on past use. Residual use of 15% is estimated until June 2013. The customer's consumption is then removed from the Large Use class.

This development occurred after the VCI load forecast had been completed. As a result, the wholesale forecast which is the basis for VCI's weather normal load forecast analysis includes this customer's consumption. Removal of the customer's consumption from the wholesale data would likely have a minimal effect on the class consumption forecasts due to the relatively flat load profile of this customer. The most likely change would be a change in the shares of the weather sensitive classes, as the Large Use Class would represent a smaller proportion of overall wholesale purchases. Therefore, the wholesale forecast analysis is being left as is. The wholesale forecast for 2013 and 2014 is overstated by the amount of consumption being removed by the shutdown of the Large Use customer, but this is compensated for by the lower class shares of the weather-sensitive classes, with no material effect on the forecast of classes based on regression analysis.

Subsequently, changes in the GS>50, Intermediate and Large Use classes were identified as a result of reclassifications taking place effective July 2013. One Large Use customer account (not the loss of load discussed above) is being reclassified to the Intermediate Class. Two GS>50 kW customer accounts are also being reclassified to Intermediate customers. One Intermediate class customer account is being reclassified to the GS>50 kW class. The reclassified consumption is based on actual customer account consumption in 2012 and results in a net increase of 2 customers in the Intermediate class and the loss of an additional customer in the Large Use class. The reclassifications have no effect on wholesale purchases or total retail sales. All of these reclassifications occurred within the Veridian Main service area. A description of the adjustments is outlined on page 9 below.

2 VERIDIAN MAIN

This section outlines the load forecast for the Veridian Main system.

2.1 ENERGY FORECAST USING WHOLESALE KWH DELIVERIES

The following table outlines annual wholesale kWh deliveries from January 2002 to December 2012 for the Veridian Main service area.

Table 1:
Annual Actual Energy (kWh),
Veridian Main

Year	Actual kWh	
2002	2,387,095,602	
2003	2,373,316,465	-0.6%
2004	2,393,015,080	0.8%
2005	2,538,717,128	6.1%
2006	2,558,350,419	0.8%
2007	2,562,505,950	0.2%
2008	2,526,783,479	-1.4%
2009	2,468,591,443	-2.3%
2010	2,555,698,870	3.5%
2011	2,564,736,252	0.4%
2012	2,607,412,555	1.7%

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. For VCI Main, monthly HDD and CDD as reported at Pearson International Airport near Toronto have been used.

In order to measure the change in economic activity, which also affects energy consumption, it is desirable to select a data series that is timely and reflects the actual monthly changes. For Veridian Main, the monthly full-time employment levels for Ontario, as reported in Statistics Canada's Monthly Labour Force Survey (CANSIM Table 282-0054), was selected. Ontario was chosen, as the VCI Main service territory spans several regional areas (Durham Region, within Toronto CMA, Oshawa CMA, and outside any CMA; Port Hope [Northumberland County]; Belleville [Hastings County]).

The number of peak days (non-holiday week days) is also included as an explanatory variable. The following holidays have been used to calculate peak days: New Year's Day, Good Friday, Easter Monday, Victoria Day, Canada Day, August Civic Holiday (Simcoe Day), Labour Day, Thanksgiving Day, Christmas and Boxing Day. From 2008, the Ontario Family Day holiday in February has been included.

A binary variable representing shoulder months' consumption has also been included. In recent cost-of-service filings in which Elenchus has participated, both Board Staff and intervenors have requested that this variable be included for testing. The shoulder variable designates the months of March, April, May,

September, October and November as shoulder months. Therefore, the variable takes a value of 1 in these months and a value of 0 in all other months.

Using these data, a multiple regression analysis was used to develop an equation describing the relationship between monthly actual energy deliveries and the explanatory variables.

The resulting equation, estimated using the 132 observations from 2002:01-2012:12, is displayed below:

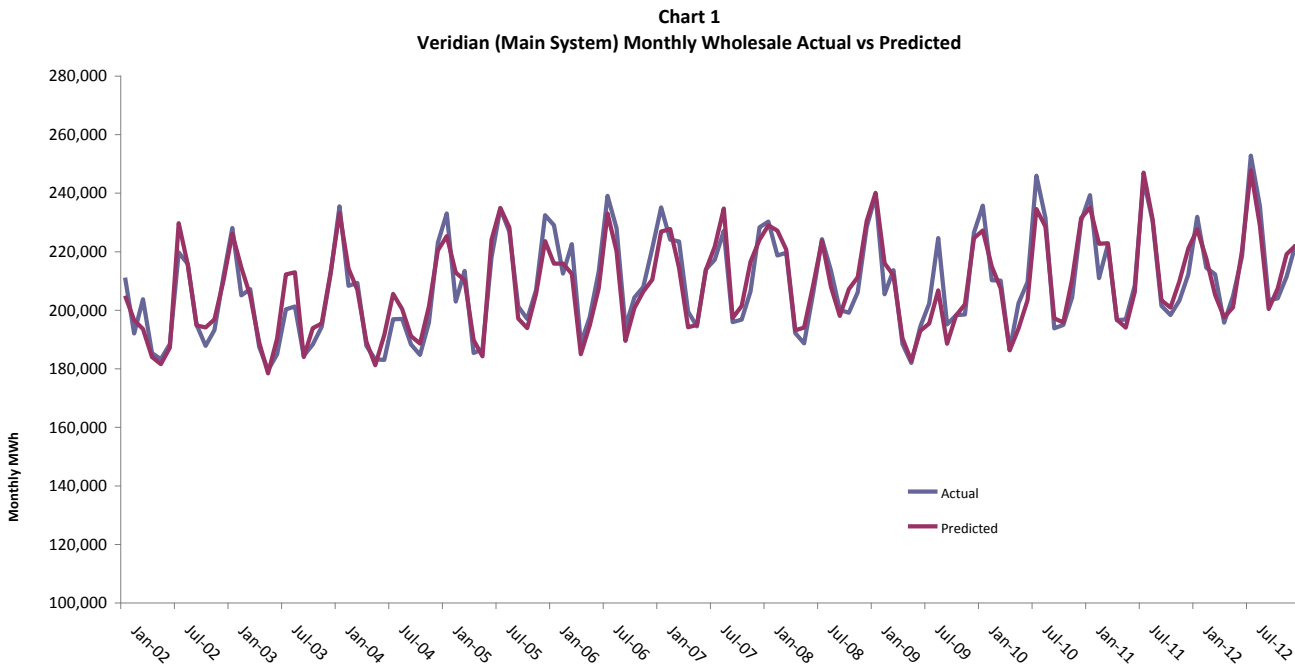
Table 2:

OLS, using observations 2002:01-2012:12 (T = 132)

Dependent variable: MainkWh

	coefficient	t-ratio	p-value
Const	-63,464,586.4	-3.53	0.000571
PearsonHDD	73,709.9	21.29	1.46E-43
PearsonCDD	297,273.3	16.24	1.11E-32
OntFTE	36,257.5	13.41	5.13E-26
Peakdays	2,432,045.5	4.96	2.23E-06
Shoulder	-3,264,250.9	-2.36	0.019984
R-squared	0.89	Adjusted R-squared	0.88
F(5, 126)	196.7	P-value(F)	9.75E-58
Theil's U	0.33	Durbin-Watson	1.56

Fitted vs. actual observations are plotted in the chart (Chart 1) below:



Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 1.0%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 2.1%.

Table 3 – Actual Deliveries vs. Estimates, VCI Main

<i>Year</i>	<i>Actual wholesale kWh</i>	<i>Predicted kWh</i>	<i>Absolute % Error</i>
2002	2,387,095,602	2,389,138,025	0.1%
2003	2,373,316,465	2,414,901,717	1.8%
2004	2,393,015,080	2,423,794,393	1.3%
2005	2,538,717,128	2,530,016,010	0.3%
2006	2,558,350,419	2,491,827,294	2.6%
2007	2,562,505,950	2,567,835,028	0.2%
2008	2,526,783,479	2,551,286,160	1.0%
2009	2,468,591,443	2,449,672,342	0.8%
2010	2,555,698,870	2,531,402,109	1.0%
2011	2,564,736,252	2,591,051,104	1.0%
2012	2,607,412,555	2,595,299,061	0.5%
	Mean Absolute Percentage Error (Annual)		1.0%
	Mean Absolute Percentage Error (Monthly)		2.1%

2.2 WEATHER NORMALIZATION AND FORECASTED kWh

It is not possible to accurately forecast weather for months or years in advance. Therefore, one can only base future weather expectations on what has happened in the past. Individual years may experience unusual spells of weather (unusually cold winter, unusually warm summer, etc.). However, over time, these unusual spells “average” out. While there may be trends over several years (e.g., warmer winters for example), using several years of data rather than one particular year filters out the extremes of any particular year. While there are several different approaches to determining an appropriate weather normal, VCI has adopted the most the most recent 10 year monthly degree day average as the definition of weather normal, which to our knowledge, is consistent with many LDCs load forecast filings for cost-of-service rebasing applications and is also consistent with VCI’s previous COS filing.

The table below displays the most recent 10 year average of heating degree days and cooling degree days as reported by Environment Canada for Pearson International Airport, which is used as the weather station for VCI.

Table 4: 10-yr HDD and CDD, Pearson International Airport

	2003-2012 10-yr normal	
	HDD	CDD
Jan	719.2	0.0
Feb	635.7	0.0
Mar	522.9	0.0
Apr	309.9	0.4
May	147.5	16.3
Jun	26.8	72.2
Jul	1.6	137.5
Aug	5.1	109.9
Sep	55.1	33.2
Oct	243.4	3.4
Nov	400.5	0.0
Dec	603.1	0.0
Annual	3,670.8	372.9

Forecasts for Ontario’s employment outlook for 2013 and 2014 are available from four Canadian Chartered Banks at time of writing. Their forecasts are summarized below.

Table 5 - Employment Forecast – Ontario
(figures in annual percentage change)

	BMO <i>(Apr 5, 2013)</i>	RBC <i>(Mar, 2013)</i>	Scotia <i>(Mar 27, 2012)</i>	TD <i>(Apr 4, 2013)</i>	Avg
2012	1.2	1.3	1.0	1.3	1.2
2013	1.4	1.4	1.0	1.2	1.3

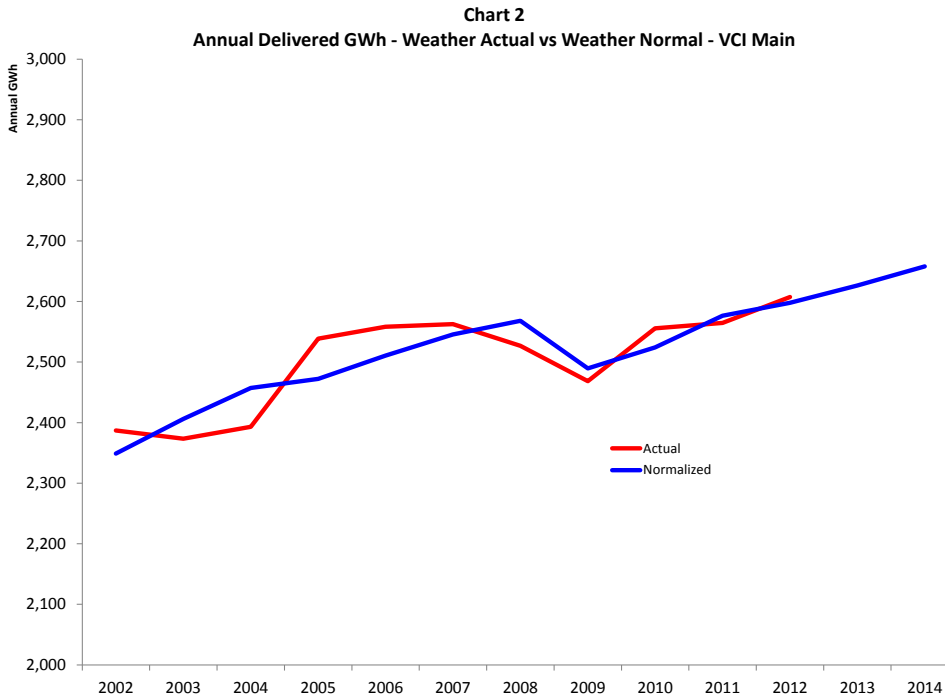
In order to give the annual forecast change in employment a monthly periodicity, monthly employment levels for 2011 and 2012 are compared to the annual average for each of these years. For each month, the average ratio of monthly employment level to annual average employment for 2011 and 2012, respectively, is used to project the monthly employment into 2013 and 2014. The annual average of each forecast year (2013 and 2014) will result in an annual increase over the previous year equal to the percentage averages in Table 5.

Incorporating the forecast economic variables, 10-yr weather normal heating and cooling degree days, and calendar variables, the following weather corrected consumption and forecast values are calculated:

Table 6 - Weather Corrected Wholesale kWh, VCI Main

Year	Actual wholesale kWh	%chg	10-yr (2003-2012)	
			Weather Normal	%chg
2002	2,387,095,602		2,348,787,957	
2003	2,373,316,465	-0.6%	2,406,061,089	2.4%
2004	2,393,015,080	0.8%	2,457,233,222	2.1%
2005	2,538,717,128	6.1%	2,472,183,839	0.6%
2006	2,558,350,419	0.8%	2,510,518,864	1.6%
2007	2,562,505,950	0.2%	2,545,494,785	1.4%
2008	2,526,783,479	-1.4%	2,568,004,254	0.9%
2009	2,468,591,443	-2.3%	2,489,533,039	-3.1%
2010	2,555,698,870	3.5%	2,524,097,287	1.4%
2011	2,564,736,252	0.4%	2,576,544,550	2.1%
2012	2,607,412,555	1.7%	2,597,801,474	0.8%
2013F			2,626,470,257	1.1%
2014F			2,657,912,736	1.2%

Chart 2 below displays actual wholesale deliveries (GWh) and weather normalized historic and forecast.



2.3 ALLOCATION TO SPECIFIC CLASSES

Weather normalized wholesale purchases are allocated to classes that have weather sensitive load based on those classes' historical share of wholesale kWh, exclusive of distribution losses. Forecast class

values are allocated based on the class share for 2012. The Residential, GS<50 and GS>50 classes are considered weather sensitive for the purposes of this load forecast. The Intermediate, Large User, lighting and unmetered classes are considered non-weather sensitive.

The below table (Table 7) shows actual annual class kWh, the class' annual share in wholesale, and annual class weather normal kWh in historic and forecast years for the Residential, GS<50 and GS>50 classes.

Table 7 - Weather Corrected Class Specific Consumption, VCI Main			
			10-yr (2003-2012)
Year	Actual residential kWh	Share ²	Weather Normal
2002	849,999,055	0.35608	836,358,436
2003	827,059,131	0.34848	838,470,058
2004	831,017,028	0.34727	853,317,920
2005	906,779,281	0.35718	883,014,914
2006	883,724,953	0.34543	867,202,612
2007	915,566,674	0.35729	909,488,695
2008	931,097,742	0.36849	946,287,239
2009	896,055,843	0.36298	903,657,279
2010	927,252,312	0.36282	915,786,705
2011	910,519,407	0.35501	914,711,528
2012	920,303,885	0.35296	916,911,589
2013F			927,030,430
2014F			938,128,265
Year	Actual GS<50 kWh	Share%	Weather Normal
2002	305,212,671	0.12786	300,314,677
2003	276,521,722	0.11651	280,336,889
2004	281,226,049	0.11752	288,772,936
2005	283,135,116	0.11153	275,714,868
2006	294,123,554	0.11497	288,624,547
2007	291,605,781	0.11380	289,669,960
2008	296,146,633	0.11720	300,977,832
2009	286,183,121	0.11593	288,610,875
2010	287,377,091	0.11245	283,823,632
2011	290,249,187	0.11317	291,585,523
2012	283,573,696	0.10876	282,528,426
2013F			285,646,349
2014F			289,065,931
Year	Actual GS>50 kWh	Share%	Weather Normal
2002	917,985,970	0.38456	903,254,310
2003	964,152,305	0.40625	977,454,705
2004	942,013,909	0.39365	967,293,475

² Share represents the share of actual metered (non-loss adjusted) annual class consumption in actual annual wholesale deliveries measured at the wholesale point of delivery.

2005	1,005,862,450	0.39621	979,501,366
2006	983,029,977	0.38424	964,651,004
2007	966,922,043	0.37733	960,503,142
2008	931,775,076	0.36876	946,975,623
2009	926,102,081	0.37515	933,958,406
2010	958,913,044	0.37521	947,055,947
2011	983,188,658	0.38335	987,715,355
2012	1,023,416,883	0.39250	1,019,644,506
2013F [†]			1,011,754,392
2014F			1,007,662,179

[†]2013 and 2014 GS>50 kWh have been adjusted for reclassification of two customers to the Intermediate class.

As discussed in the Introduction, two GS>50 kW class customers were reclassified to the Intermediate class in July 2013. The forecast kWh for the GS>50 kW class in 2013 and 2014 has been adjusted by removing these two customers' kWh consumption from the GS>50 class and moving it to the Intermediate class. For 2013, July to December consumption (based on 2012 actual) was moved to Intermediate. For 2014, annual consumption (January to December 2012) was moved to Intermediate.

Actual, normalized and forecast kW for the GS>50 class are summarized in Table 8 below. Historical normalized values are calculated based on the annual ratio of class kW to class kWh. Forecast kW is based on the average of the class kW to class kWh ratio in 2012, which is then further adjusted by actual monthly kW of the two customers reclassified to the Intermediate class in July 2013. The kW load associated with these two reclassified customers has been removed from the GS>50 kW class and reallocated to the Intermediate class using the same procedure used for kWh.

Table 8 – GS>50 Class kW (Actual, Normalized, and Forecast), VCI Main

Year	Actual kW	Class kW/kWh ratio	Normalized kW
2002	2,144,432	0.002336	2,110,019
2003	2,373,086	0.002461	2,405,827
2004	2,316,944	0.00246	2,379,121
2005	2,500,118	0.002486	2,434,596
2006	2,332,139	0.002372	2,288,537
2007	2,331,031	0.002411	2,315,557
2008	2,417,886	0.002595	2,457,331
2009	2,279,944	0.002462	2,299,286
2010	2,327,604	0.002427	2,298,823
2011	2,343,632	0.002384	2,354,423
2012	2,428,849	0.002373	2,419,896
2013F			2,419,362
2014F			2,426,856

2.3.1 NON-WEATHER SENSITIVE CLASSES AND CUSTOMER CONNECTION FORECAST

Table 11 below presents actual and forecast kWh and kW (where applicable) for the non-weather sensitive classes. These include Intermediate, Large Use, Street Lighting, Sentinel Lighting and Unmetered Scattered Load (USL).

As of 2012, the Intermediate Class consists of three customers and the Large Use Class consists of four customers. In 2006 two customers that were previously classified as GS>50 were reallocated; one to Intermediate and one to Large Use. In 2011, a Large Use customer was reallocated to the Intermediate class. For the purposes of load forecasting, customer classes have been defined as they existed at time of forecast (March/April 2013) and these customers and their consumption have been allocated to their current rate class for the entire time series. This allows easier identification of trends in the class going forward without distortions caused by the addition or subtraction of customers to classes that have a small number of customers to begin with.

Table 9 - Intermediate and Large Use Class Consumption

Year	Adjusted for Re-Class				Unadjusted - as billed			
	Intermediate		Large Use		Intermediate		Large Use	
	kWh	kW	kWh	kW	kWh	kW	kWh	kW
2003	34,078,609	94,444	233,123,423	409,790	34,078,609	94,444	233,123,423	409,790
2004	37,212,454	94,712	220,209,114	368,851	37,212,454	94,712	220,209,114	368,851
2005	37,025,068	97,817	237,241,914	412,936	37,025,068	97,817	237,241,914	412,936
2006	36,964,611	93,531	244,544,213	422,374	36,964,611	93,531	244,544,213	422,374
2007	46,512,034	117,701	206,326,221	357,781	37,056,537	93,248	215,781,718	382,076
2008	52,708,996	133,732	174,505,258	290,339	36,441,211	90,282	190,773,043	333,810
2009	42,338,962	132,246	187,618,724	317,012	30,813,726	91,030	199,143,960	364,842
2010	49,471,970	131,705	175,152,266	344,569	33,564,220	89,789	191,060,017	377,325
2011	53,329,057	144,190	195,574,881	337,123	48,421,633	132,360	200,482,305	359,232
2012	54,894,697	147,009	190,643,020	334,461	54,894,697	146,864	190,643,020	334,324

In order to forecast the Intermediate and Large Use Classes, an appropriate trend of consumption is necessary. Reclassified customers have been moved from one class to another due to large changes in their consumption relative to their historical pattern. Therefore, historical trends prior to the period of consumption change may not be reflective of future expectations. In classes with a larger customer base and more diversity of customers, this may not be as pressing an issue. However, in classes such as Intermediate and Large Use for VCI, which fluctuate between 2 to 5 customers, this is an issue. To forecast growth in 2013 and 2014, the average monthly consumption of these two classes is examined over the 20 months (May 2011 to Dec 2012) for which the reclassified customers have been in their respective classes. Using monthly interval meter data, the period has been divided into two 10-month periods and the consumption trend has been examined (Table 10 below). This growth rate has been used to project kWh and kW in each of these classes for 2013 and 2014.

Table 10

Intermediate Class Consumption

Avg Monthly Consumption

	kWh		kW	
May'11 - Feb'12	4,516,610		12,201	
Mar'12 - Dec'12	4,559,384	0.95%	12,319	0.97%

Large Use Class Consumption

Avg Monthly May-Dec

	kWh		kW	
May'11 - Feb'12	16,009,542		28,791	
Mar'12 - Dec'12	15,847,160	-1.01%	27,651	-3.96%

As indicated in the Introduction, a Large Use customer shut down its operations at the end of March (2013) and is in the process of decommissioning the plant. In 2012, this customer consumed approximately 36.8 million kWh and 65,000 kW. Based on actual January and February 2013 billed consumption and March to June 2012 consumption, first quarter kWh and kW along with residual activity (estimated at 15% normal consumption) up to the end of June 2013 would result in approximately 10.5 million kWh consumption in 2013, a reduction of roughly 26.3 million kWh from 2012. The 2013 kW consumption is expected to be approximately 18,400 kW, a reduction of 46,600 kW from 2012. In 2014, the customer is no longer a Large Use customer.

Further, as discussed in the Introduction, as a result of reclassification effective June 2013 an additional Large Use customer was reclassified to Intermediate, two GS>50 kW class customers have been reclassified to Intermediate, and one Intermediate customer had been reclassified to GS>50 kW. The net effect is that the Large Use class will have 2 customers in 2014 and the Intermediate class will have 5 customers. The effect of the July 2013 reclassifications is that in 2014, about 34.8 million kWh and 59,000 kW has been removed from the Large Use class, 34.6 million kWh and 49,000 kW has been removed from the GS>50 class, and 70.4 million kWh and 108,000 kW has been added to the Intermediate class.

These adjustments to the forecast are reflected in Table 11 below.

Table 11

Non-Weather Sensitive Historic and Forecast Consumption – VCI Main								
Year	<i>Intermediate</i>			<i>Large user</i>				
	kWh	%	kW	%	kWh	%	kW	%
2005	37,025,068	-0.50%	97,817	3.28%	237,241,914	7.73%	412,936	11.95%
2006	36,964,611	-0.16%	93,531	-4.38%	244,544,213	3.08%	422,374	2.29%
2007	46,512,034	25.83%	117,701	25.84%	206,326,221	-15.63%	357,781	-15.29%
2008	52,708,996	13.32%	133,732	13.62%	174,505,258	-15.42%	290,339	-18.85%
2009	42,338,962	-19.67%	132,246	-1.11%	187,618,724	7.51%	317,012	9.19%
2010	49,471,970	16.85%	131,705	-0.41%	175,152,266	-6.64%	344,569	8.69%
2011	53,329,057	7.80%	144,190	9.48%	195,574,881	11.66%	337,123	-2.16%
2012	54,894,697	2.94%	147,009	1.95%	190,643,020	-2.52%	334,461	-0.79%
2013F	90,616,333	65.07%	202,890	38.01%	146,387,216	-23.21%	247,389	-26.03%
2014F	126,308,499	39.39%	257,941	27.13%	115,197,786	-21.31%	184,514	-25.42%
Year	<i>Street Lighting</i>			<i>Sentinel Lighting</i>				
	kWh	%	KW	%	kWh	%	kW	%
2005	19,530,434		46,500		972,712		2,702	
2006	18,461,322	-5.47%	51,125	9.94%	802,732	-17.47%	2,230	-17.47%
2007	18,376,945	-0.46%	51,647	1.02%	928,755	15.70%	2,530	13.45%
2008	18,811,565	2.37%	52,584	1.81%	846,470	-8.86%	2,353	-7.01%
2009	19,168,966	1.90%	53,466	1.68%	812,525	-4.01%	2,377	1.04%
2010	18,008,286	-6.05%	53,945	0.90%	598,833	-26.30%	2,167	-8.85%
2011	19,480,569	8.18%	56,154	4.09%	523,767	-12.54%	2,040	-5.86%
2012	20,144,931	3.41%	56,061	-0.17%	381,737	-27.12%	1,664	-18.42%
2013F	20,538,011	2.0%	57,154	1.95%	356,656	-6.6%	1,555	-6.57%
2014F	20,938,760	2.0%	58,270	1.95%	333,223	-6.6%	1,453	-6.57%
Year	<i>USL (Unmetered Scattered Load)</i>							
	kWh	%						
2005	6,814,866							
2006	6,557,788	-3.77%						
2007	5,907,835	-9.91%						
2008	5,738,246	-2.87%						
2009	6,318,275	10.11%						
2010	5,942,432	-5.95%						
2011	5,860,015	-1.39%						
2012	4,414,474	-24.67%						
2013F	4,455,481	0.9%						
2014F	4,496,870	0.9%						

Forecast energy throughput for Street Lighting, Sentinel Lighting and USL is based on the most recent actual use per customer (2012) and the forecast change in customers for these classes. The kW forecast for Streetlight and Sentinel Light Classes is based on the 2012 annual kW/kWh ratio and the forecast kWh based on annual use.

Customer connection forecasts are based on the average growth rate over the past 5 years (geometric mean) for all classes except Intermediate, Large Use and GS>50. This results in a growth rate for the Residential Class that is generally consistent with the moderating growth being forecast for the housing

market in the GTA by Canada Mortgage and Housing Corp.³ The expectations for residential development generally spills over to street light attachments. Sentinel light attachments have generally been declining for a number of years. For GS>50 customer count, the average growth for the most recent 5 years, excluding the recessionary effect for 2009, has been used. This results in an annual growth of about 0.7%.

Table 12 summarizes historical and forecast customer connections. The customer counts are annual average (Jan to Dec) except for Street Lighting and Sentinel Lights, which are the average of year-end values.

Table 12 – Average Annual Customer Connections – VCI Main

	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Residential	86,769	90,518	92,815	94,490	95,676	96,856	98,049	99,485	100,875	102,285
% chg		4.3%	2.5%	1.8%	1.3%	1.2%	1.2%	1.5%	1.4%	1.4%
GS<50 kW	7,450	7,565	7,604	7,655	7,706	7,809	7,892	7,961	8,034	8,109
% chg		1.5%	0.5%	0.7%	0.7%	1.3%	1.1%	0.9%	0.9%	0.9%
GS> 50 kW	996	1,012	1,020	1,038	1,019	1,006	1,005	1,021	1,028	1,036
% chg		1.6%	0.8%	1.8%	-1.9%	-1.2%	-0.1%	1.6%	0.7%	0.7%
Intermediate	2	2	2	2	2	2	3	3	4	5
Large Use	5	5	5	5	5	5	4	4	3	2
Street Light	23,912	24,769	25,669	26,070	26,468	27,108	27,885	28,273	28,825	29,387
% chg		3.6%	3.6%	1.6%	1.5%	2.4%	2.9%	1.4%	2.0%	2.0%
Sentinel Light	720	655	693	730	717	694	588	493	461	430
USL	756	759	868	875	887	914	917	909	918	926
% chg		0.3%	14.4%	0.7%	1.4%	3.0%	0.4%	-0.9%	0.9%	0.9%

2.4 AVERAGE USE

The following table displays the calculated average use per customer, by class, for actual and normalized and forecast (note: intermediate, LU, USL and lighting classes are not weather normalized).

³ Housing Market Outlook, Greater Toronto Area, CMHC, Fall 2012.

Table 13 - Average Annual Use Per Customer – VCI Main

Actual kWh

Year	Residential	GS<50	GS>50	Intermediate	Large Use	Street	Sentinel	USL
2005	10,451	38,005	1,009,902	18,512,534	47,448,383	817	1,352	9,011
2006	9,763	38,882	971,854	18,482,305	48,908,843	745	1,226	8,642
2007	9,864	38,349	947,885	23,256,017	41,265,244	716	1,341	6,804
2008	9,854	38,687	897,520	26,354,498	34,901,052	722	1,160	6,560
2009	9,366	37,136	909,280	21,169,481	37,523,745	724	1,133	7,124
2010	9,574	36,800	953,036	24,735,985	35,030,453	664	863	6,505
2011	9,286	36,778	978,297	19,998,396	45,132,665	699	891	6,389
2012	9,251	35,620	1,002,122	18,298,232	47,660,755	713	774	4,855

Weather Normal kWh

Year	Residential	GS<50	GS>50	Intermediate	Large Use	Street	Sentinel	USL
2005	10,177	37,009	983,435	18,512,534	47,448,383	817	1,352	9,011
2006	9,580	38,155	953,684	18,482,305	48,908,843	745	1,226	8,642
2007	9,799	38,094	941,593	23,256,017	41,265,244	716	1,341	6,804
2008	10,015	39,318	912,161	26,354,498	34,901,052	722	1,160	6,560
2009	9,445	37,452	916,994	21,169,481	37,523,745	724	1,133	7,124
2010	9,455	36,345	941,252	24,735,985	35,030,453	664	863	6,505
2011	9,329	36,947	982,801	19,998,396	45,132,665	699	891	6,389
2012	9,217	35,489	998,428	18,298,232	47,660,755	713	774	4,855
2013	9,190	35,553	983,858	22,654,083	58,554,886	713	774	4,855
2014	9,172	35,650	973,102	25,261,700	57,598,893	713	774	4,855

3 GRAVENHURST

This section outlines the load forecast for the Gravenhurst system.

As outlined in the Introduction, most customers are billed on a bi-monthly basis and monthly class-specific consumption is not readily available. Therefore, a similar approach to VCI Main (i.e., using monthly wholesale deliveries) is adopted. However, due to the existence of a seasonal residential rate class, a normalized average use per customer (NAC) approach using an average of annual actual use per customer from 2005 to 2012 inclusive, as outlined in the Introduction to this report, is used for that specific rate class.

3.1 ENERGY FORECAST USING WHOLESALE kWh DELIVERIES

The following table outlines annual wholesale kWh deliveries from January 2002 to December 2012 for the Veridian Gravenhurst service area.

Table 14:
Annual Actual Energy (kWh),
Veridian Gravenhurst

Year	Actual kWh	
2002	98,605,822	
2003	99,296,988	0.7%
2004	99,083,993	-0.2%
2005	99,742,558	0.7%
2006	96,127,653	-3.6%
2007	99,457,968	3.5%
2008	100,986,177	1.5%
2009	102,103,495	1.1%
2010	102,226,116	0.1%
2011	102,279,712	0.1%
2012	101,801,800	-0.5%

A regression equation similar to the equation derived for the Veridian Main system was derived for wholesale purchases for the Gravenhurst system, with the exception that full-time employment for the Muskoka-Kawartha Economic Region (MKFTE) was substituted for Ontario full-time employment.

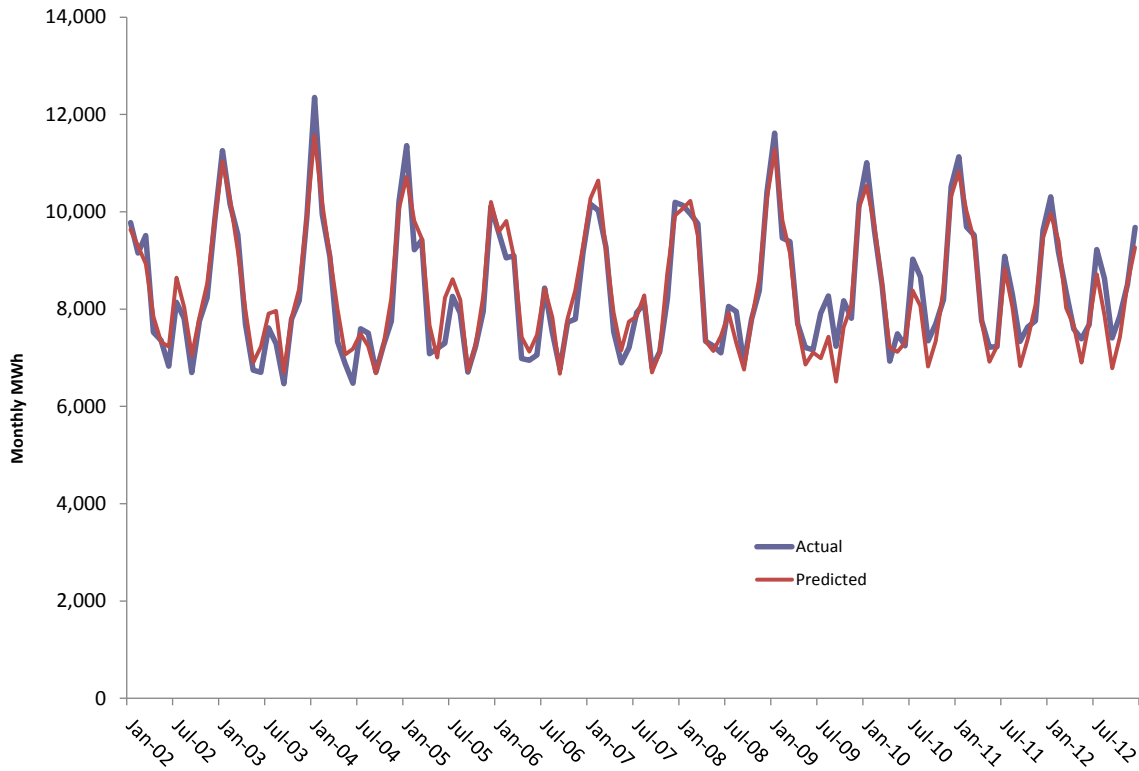
The resulting equation, estimated using the 132 observations from 2002:01-2012:12, is displayed below:

Table 15:
OLS, using observations 2002:01-2012:12 (T = 132)
Dependent variable: GravkWh

	coefficient	t-ratio	p-value
const	3,658,208.1	4.27	3.8E-05
PearsonHDD	5,917.9	25.73	5.46E-52
PearsonCDD	12,092.9	10.04	8.83E-18
MKFTE	-405,920.9	-4.44	1.98E-05
Peakdays	9,615.5	2.51	0.013341
Shoulder	66,464.1	2.06	0.041489
R-squared	0.92	Adjusted R-squared	0.91
F(5, 126)	279.5	P-value(F)	2.19E-66
Theil's U	0.34	Durbin-Watson	1.54

Fitted vs. actual observations are plotted in the chart (Chart 3) below:

Chart 3
Gravenhurst Monthly Wholesale Actual vs Predicted



Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 2.1%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 3.5%.

Table 16 – Actual Deliveries vs. Estimates, Gravenhurst

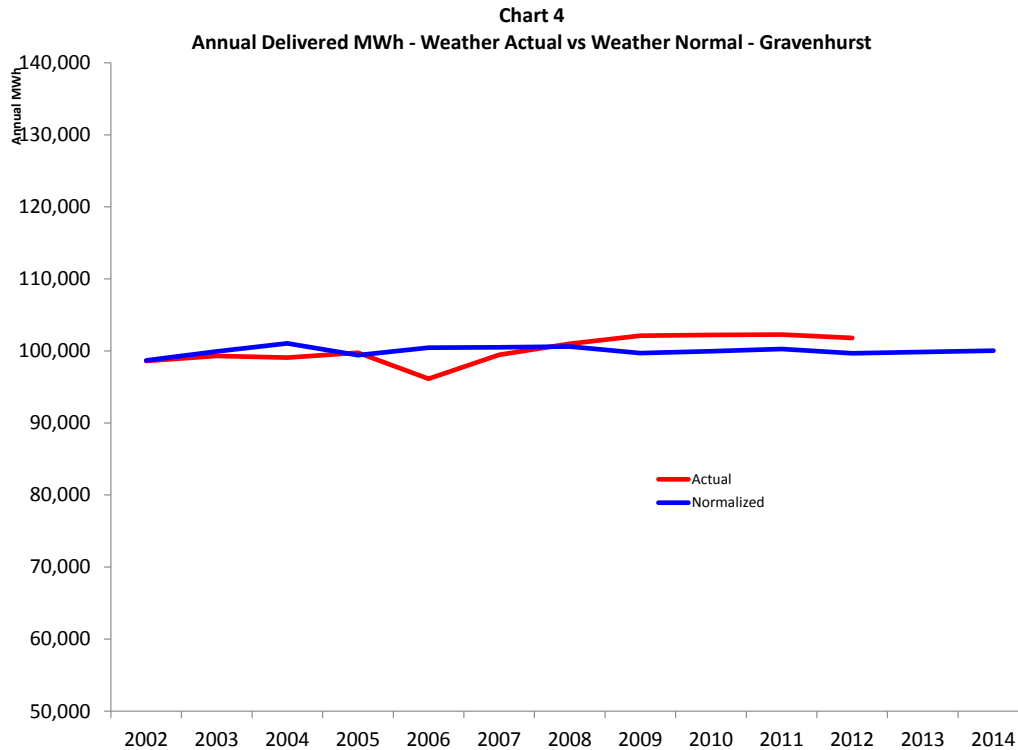
Year	Actual wholesale kWh	Predicted kWh	Absolute % Error
2002	98,605,822	100,202,097	1.6%
2003	99,296,988	101,188,310	1.9%
2004	99,083,993	100,050,917	1.0%
2005	99,742,558	102,142,038	2.4%
2006	96,127,653	98,836,762	2.8%
2007	99,457,968	101,552,338	2.1%
2008	100,986,177	100,403,753	0.6%
2009	102,103,495	98,559,690	3.5%
2010	102,226,116	99,763,150	2.4%
2011	102,279,712	100,783,486	1.5%
2012	101,801,800	98,229,740	3.5%
	Mean Absolute Percentage Error (Annual)		2.1%
	Mean Absolute Percentage Error (Monthly)		3.5%

3.2 WEATHER NORMALIZATION AND FORECASTED kWh

Using the weather normal degree days, employment forecast, and calendar variables as outlined in section 2.2, the following weather corrected consumption and forecast values are calculated for Gravenhurst:

Table 17 - Weather Corrected Wholesale kWh, Gravenhurst				
Year	Actual wholesale kWh	%chg	10-yr (2003-2012)	
			Weather Normal	%chg
2002	98,605,822		98,680,374	
2003	99,296,988	0.7%	99,921,617	1.3%
2004	99,083,993	-0.2%	101,040,133	1.1%
2005	99,742,558	0.7%	99,421,611	-1.6%
2006	96,127,653	-3.6%	100,450,469	1.0%
2007	99,457,968	3.5%	100,501,665	0.1%
2008	100,986,177	1.5%	100,601,549	0.1%
2009	102,103,495	1.1%	99,699,499	-0.9%
2010	102,226,116	0.1%	99,962,002	0.3%
2011	102,279,712	0.1%	100,262,850	0.3%
2012	101,801,800	-0.5%	99,661,037	-0.6%
2013F			99,846,616	0.2%
2014F			100,046,618	0.2%

Chart 4 below displays actual wholesale deliveries (MWh) and weather normalized historic and forecast.



3.3 ALLOCATION TO SPECIFIC CLASSES

Table 18 presents class specific weather normal historic and forecast values for those classes that have weather sensitive load. Other than Residential – Seasonal, historic class specific kWh consumption is allocated based on each class’ share in wholesale kWh, exclusive of distribution losses. Forecast class values are allocated based on the class share for 2012.

For residential seasonal, a normalized average use per customer (NAC) calculated from the actual annual average use per customer from 2005 to 2012, inclusive, has been used as outlined in the Introduction to this report. In VCI’s 2010 COS load forecast, a decision was made to use the weather normalized class throughput for 2004 derived for Gravenhurst by Hydro One Networks for the OEB’s Cost Allocation Informational Filing to forecast the seasonal rate class. However, given the current application involves a 2014 test year, it was thought that 2004 was too distant from the test year to be a valid representation of NAC. Since 8 years of actual annual use per customer is available and includes a variety of weather possibilities (as described in the Introduction), it was decided to adopt this approach to have a NAC determined with experience more recent than 2004. The historical annual average use per customer for the Residential – Seasonal Class is displayed in Table 19.

Table 18 - Weather Corrected Class Specific Consumption, Gravenhurst

Year	Actual Res-Urban kWh	Share ⁴	10-yr (2003-2012) Weather Normal
2003	29,006,946	0.292123	29,189,415
2004	28,756,656	0.290225	29,324,377
2005	27,802,515	0.278743	27,713,053
2006	27,755,227	0.288733	29,003,366
2007	27,805,722	0.279573	28,097,511
2008	27,908,978	0.276364	27,802,681
2009	27,112,704	0.265541	26,474,344
2010	26,991,764	0.264040	26,393,948
2011	27,119,271	0.265148	26,584,504
2012	26,769,303	0.262955	26,206,378
2013F			26,255,177
2014F			26,307,769
Year	Actual Res-SubUrban kWh	Share%	Weather Normal
2003	9,528,483	0.095959	9,588,422
2004	9,429,687	0.095169	9,615,850
2005	9,347,873	0.093720	9,317,793
2006	9,209,258	0.095802	9,623,394
2007	8,691,488	0.087389	8,782,696
2008	9,634,733	0.095406	9,598,037
2009	10,688,377	0.104682	10,436,722

⁴ Share represents the share of actual metered (non-loss adjusted) annual class consumption in actual annual wholesale deliveries measured at the wholesale point of delivery.

2010	9,195,150	0.089949	8,991,495
2011	8,875,257	0.086774	8,700,245
2012	8,891,773	0.087344	8,704,790
2013F			8,720,999
2014F			8,738,468
Year	Actual Res-Seasonal kWh	Share%	Weather Normal
2003	10,256,598	N/A	
2004	9,746,152	N/A	
2005	9,388,779	N/A	9,342,957
2006	8,778,367	N/A	9,350,201
2007	9,147,921	N/A	9,314,460
2008	9,610,542	N/A	9,287,413
2009	9,732,618	N/A	9,317,358
2010	9,102,888	N/A	9,282,100
2011	9,381,400	N/A	9,252,637
2012	9,220,330	N/A	9,218,828
2013F			9,201,231
2014F			9,183,667
Year	Actual GS<50 kWh	Share%	Weather Normal
2003	14,513,844	0.146166	14,605,143
2004	14,005,270	0.141347	14,281,765
2005	15,040,125	0.150789	14,991,729
2006	14,147,239	0.147171	14,783,434
2007	15,156,079	0.152387	15,315,125
2008	15,044,960	0.148980	14,987,658
2009	14,175,725	0.138837	13,841,962
2010	15,324,559	0.149908	14,985,149
2011	16,265,662	0.159031	15,944,918
2012	15,669,225	0.153919	15,339,721
2013F			15,368,285
2014F			15,399,069
Year	Actual GS>50 kWh	Share%	Weather Normal
2003	29,139,113	0.293454	29,322,413
2004	29,303,869	0.295748	29,882,393
2005	31,290,254	0.313710	31,189,569
2006	27,537,777	0.286471	28,776,138
2007	28,197,792	0.283515	28,493,696
2008	29,204,094	0.289189	29,092,864
2009	30,726,955	0.300939	30,003,498
2010	32,842,146	0.321270	32,114,755
2011	32,427,134	0.317044	31,787,700
2012	32,632,166	0.320546	31,945,953
2013F			32,005,439
2014F			32,069,549

Table 19 - Annual Use Per Customer

Residential Seasonal Class, Gravenhurst	
	kWh/Cust
2005	5,824
2006	5,441
2007	5,692
2008	5,998
2009	6,054
2010	5,684
2011	5,877
2012	5,797
NAC	5,796

Actual, normalized and forecast kW for the weather sensitive GS>50 class are summarized in Table 20 below. Historical normalized values are calculated based on the annual ratio of class kW to class kWh. Forecast kW is based on the average of the class kW to class kWh ratio in 2012.

Table 20 – GS>50 Class kW (Actual, Normalized, and Forecast), Gravenhurst

Year	Actual kW	Class kW/kWh ratio	Normalized kW
2003	83,097	0.002851746	83,620
2004	82,326	0.002809407	83,952
2005	73,065	0.002335065	72,830
2006	74,129	0.002691889	77,462
2007	67,173	0.002382224	67,878
2008	69,971	0.002395919	69,704
2009	80,296	0.002613223	78,406
2010	79,964	0.002434787	78,193
2011	84,007	0.002590651	82,351
2012	79,013	0.002421312	77,351
2013F			77,495
2014F			77,650

NON-WEATHER SENSITIVE STREET AND SENTINEL LIGHTS

Table 21 presents actual and forecast kWh and kW Street Lighting and Sentinel Lighting. No change in either lighting class’ attachments is expected and use is expected to remain at 2008 levels.

Table 21: Gravenhurst Street Lights and Sentinel Lights Consumption

Year	Street Lighting				Sentinel Lighting			
	kWh	%	kW	%	kWh	%	kW	%
2004	562,253		1,572		50,909		141	
2005	558,781	-0.6%	1,493	-5.0%	46,937	-7.8%	120	-15.4%
2006	562,239	0.6%	1,567	5.0%	51,463	9.6%	152	26.9%
2007	573,742	2.0%	1,612	2.8%	46,220	-10.2%	122	-19.6%
2008	598,709	4.4%	1,664	3.2%	43,727	-5.4%	127	3.6%
2009	596,853	-0.3%	1,665	0.1%	42,440	-2.9%	127	0.0%
2010	593,179	-0.6%	1,665	0.0%	41,718	-1.7%	127	0.0%
2011	594,327	0.2%	1,675	0.6%	41,718	0.0%	127	0.0%
2012	594,785	0.1%	1,675	0.0%	41,718	0.0%	127	0.3%
2013F	594,785	0.0%	1,675	0.0%	41,718	0.0%	127	0.0%
2014F	594,785	0.0%	1,675	0.0%	41,718	0.0%	127	0.0%

3.4 CUSTOMER CONNECTIONS

Table 22 displays historical customer connection counts for Gravenhurst. The figure for 2005 reflects December year-end counts. All figures from 2006 onwards represent annual average monthly counts (January to December), except for Street and Sentinel lighting, which are year-end counts. Historically, customer growth in the Gravenhurst service area has been very modest. The table shows annual percentage changes. For the residential classes, forecast growth in 2013 and 2014 is based on the geometric mean of annual growth in customers from 2005 to 2012 inclusive. The geometric mean growth is 0.7%, 1.7% and -0.2% per annum, respectively. No change in customer counts is expected in any of the other classes: GS<50, GS>50⁵, Streetlight or Sentinel.

Table 22 – Annual Customer Connections – Gravenhurst

	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Res - Urban	2,900	2,906	2,930	2,945	2,993	3,010	3,017	3,038	3,059	3,079
% chg		0.2%	0.8%	0.5%	1.6%	0.6%	0.2%	0.7%	0.7%	0.7%
Res - SubUrban	689	700	719	728	749	762	765	776	790	803
% chg		1.6%	2.7%	1.2%	3.0%	1.7%	0.4%	1.5%	1.7%	1.7%
Res - Seasonal	1,612	1,613	1,607	1,602	1,608	1,602	1,596	1,591	1,588	1,585
% chg		0.1%	-0.4%	-0.3%	0.3%	-0.4%	-0.3%	-0.4%	-0.2%	-0.2%
GS < 50 kW	657	677	694	702	717	718	718	718	718	718
% chg		3.0%	2.5%	1.1%	2.1%	0.2%	0.1%	0.0%	0.0%	0.0%

⁵ The geometric growth rate in customer connections for the GS<50 and GS>50 from 2005 to 2012 is 1.3% and -6.5% per annum, respectively.

	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
GS > 50 kW	58	54	50	50	48	42	37	36	36	36
% chg		-6.8%	-7.2%	0.0%	-4.8%	-11.7%	-12.1%	-2.5%	-0.5%	0.0%
Street Light	906	906	947	947	947	952	953	953	953	953
% chg		0.0%	0.0%	0.0%	0.0%	-15.1%	0.0%	0.0%	0.0%	0.0%
Sentinel Light	53	53	53	53	53	45	45	45	45	45

3.5 AVERAGE USE

The following table displays the calculated average use per customer, by class, for actual and normalized and forecast (note: lighting classes are not weather normalized).

Table 23 - Average Annual Use Per Customer - Gravenhurst

Actual kWh

Year	Res - Urban	Res - Suburban	Res - Seasonal	GS < 50	GS > 50	Sentinel Lighting	Street Lighting
2005	9,587	13,567	5,824	22,892	539,487	886	617
2006	9,550	13,158	5,441	20,907	509,173	971	621
2007	9,491	12,087	5,692	21,841	562,082	872	606
2008	9,475	13,241	5,998	21,444	582,141	825	632
2009	9,058	14,264	6,054	19,782	643,496	801	630
2010	8,969	12,070	5,684	21,353	778,865	927	623
2011	8,989	11,604	5,877	22,644	874,440	927	624
2012	8,811	11,455	5,797	21,813	902,272	389	624

Weather Normal kWh

Year	Res - Urban	Res - Suburban	Res - Seasonal	GS < 50	GS > 50	Sentinel Lighting	Street Lighting
2005	9,556	13,524	5,796	22,818	537,751	886	617
2006	9,980	13,749	5,796	21,847	532,070	971	621
2007	9,591	12,214	5,796	22,071	567,981	872	606
2008	9,439	13,190	5,796	21,363	579,924	825	632
2009	8,845	13,928	5,796	19,317	628,346	801	630
2010	8,770	11,802	5,796	20,880	761,615	927	623
2011	8,812	11,375	5,796	22,197	857,196	927	624
2012	8,625	11,214	5,796	21,355	883,298	927	624
2013	8,584	11,045	5,796	21,404	889,040	927	624
2014	8,544	10,880	5,796	21,447	890,821	927	624

4 HARMONIZED VCI LOAD FORECAST

In order to develop harmonized rates, a harmonized load forecast needs to be developed. The harmonized load forecast is simply the sum of throughput volumes and customer counts for the harmonized classes for both VCI Main and Gravenhurst. The harmonized forecast consists of the following combined classes

Table 24 – VCI Harmonized Class Table of Concordance

VCI Harmonized	VCI Main	Gravenhurst
Residential	Residential	Residential – Urban Residential - SubUrban
Residential - Seasonal		Residential - Seasonal
GS < 50 kW	GS < 50 kW	GS < 50 kW
GS > 50 kW	GS > 50 kW	GS > 50 kW
Intermediate	Intermediate	
Large Use	Large Use	
Sentinel Light	Sentinel Light	Sentinel Light
Street Light	Street Light	Street Light
USL	USL	

The harmonized load forecast is summarized in Table 25 and the customer forecast is summarized in Table 26. Table 27 displays the annual average use per customer for classes that have been harmonized.

Table 25 – VCI Harmonized Load Forecast (Historical, Bridge and Test Years).

	2012 Actual	2012 Normalized	2013f Normalized	2014f Normalized
Residential (kWh)	955,964,961	951,822,758	962,006,606	973,174,502
Residential - Seasonal (kWh)	9,220,330	9,218,828	9,201,231	9,183,667
GS<50 (kWh)	299,242,920	297,868,147	301,014,634	304,465,000
GS>50 (kWh)	1,056,049,049	1,051,590,459	1,043,759,831	1,039,731,728
(kW)	2,507,861	2,497,247	2,496,857	2,504,507
Intermediate (kWh)	54,894,697	54,894,697	90,616,333	126,308,499
(kW)	147,009	147,009	202,890	257,941
Large Use (kWh)	190,643,020	190,643,020	146,387,216	115,197,786
(kW)	334,461	334,461	247,389	184,514
Street Lights (kWh)	20,739,716	20,739,716	21,132,796	21,533,545
(kW)	57,735	57,735	58,829	59,945
Sentinel Lights (kWh)	423,455	423,455	398,374	374,941
(kW)	1,791	1,791	1,682	1,580
USL (kWh)	4,414,474	4,414,474	4,455,481	4,496,870
Total Retail kWh	2,591,592,621	2,581,615,553	2,578,972,503	2,594,466,537
Total Delivered (Wholesale) kWh*	2,709,214,355	2,697,462,511	2,726,316,873	2,757,959,354
Total Delivered (Wholesale) kWh**	2,709,214,355	2,697,462,511	2,699,672,996	2,720,621,147

* Unadjusted for LU Loss of Load

** Adjusted for LU Loss of Load

* Loss Factor	1.045	1.045	1.057	1.063
** Loss Factor	1.045	1.045	1.047	1.049

Table 26 – VCI Harmonized Customer Connection

	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Residential	94,124	96,463	98,163	99,418	100,627	101,831	103,299	104,723	106,167
% chg		2.5%	1.8%	1.3%	1.2%	1.2%	1.4%	1.4%	1.4%
Res - Seasonal	1,613	1,607	1,602	1,608	1,602	1,596	1,591	1,588	1,585
% chg		-0.4%	-0.3%	0.3%	-0.4%	-0.3%	-0.4%	-0.2%	-0.2%
GS<50	8,241	8,298	8,357	8,423	8,527	8,610	8,679	8,752	8,827
% chg		0.7%	0.7%	0.8%	1.2%	1.0%	0.8%	0.8%	0.8%
GS>50	1,066	1,070	1,088	1,066	1,048	1,042	1,057	1,065	1,073
% chg		0.4%	1.7%	-2.0%	-1.7%	-0.6%	1.5%	0.7%	0.7%
Intermediate	2	2	2	2	2	3	3	4	5
Large Use	5	5	5	5	5	4	4	3	2
Street Light	25,675	26,616	27,017	27,415	28,060	28,838	29,226	29,778	30,340
% chg		3.7%	1.5%	1.5%	2.4%	2.8%	1.3%	1.9%	1.9%
Sentinel Light	708	746	783	770	739	633	538	506	475
% chg		5.3%	5.0%	-1.7%	-4.1%	-14.3%	-15.0%	-6.0%	-6.0%
USL	759	868	875	887	914	917	909	918	926
%chg		14.4%	0.7%	1.4%	3.0%	0.4%	-0.9%	0.9%	0.9%
Total	132,193	135,675	137,892	139,593	141,523	143,475	145,307	147,336	149,400

Table 27 - VCI Average Use per Customer - Harmonized Classes

Actual

Year	Residential	GS<50	GS>50	Streetlight	Sentinel
2006	9,782	37,406	948,370	741	1,206
2007	9,870	36,968	929,801	712	1,308
2008	9,868	37,239	882,982	718	1,137
2009	9,393	35,660	897,378	721	1,110
2010	9,574	35,500	946,030	663	867
2011	9,295	35,598	974,601	696	893
2012	9,254	34,477	998,707	710	787

Normalized

Year	Residential	GS<50	GS>50	Streetlight	Sentinel
2006	9,624	36,816	932,285	741	1,206
2007	9,811	36,754	924,080	712	1,308
2008	10,021	37,811	896,847	718	1,137
2009	9,461	35,909	904,067	721	1,110
2010	9,452	35,043	934,026	663	867
2011	9,329	35,716	978,332	696	893
2012	9,214	34,319	994,490	710	787
2013	9,186	34,392	980,190	710	788
2014	9,166	34,494	969,433	710	789



File Number:EB-2013-0174

Exhibit: 3

Tab: 2

Schedule: 2

Date Filed:December 11, 2013

Attachment 2 of 2

VCI Load Forecast Data

Data Used in VCI 2014 Load Forecast

Date	MainkWh	GravkWh	OntFTE	MKFTE	Peakdays	Shoulder	PearsonHDD	PearsonCDD
Jan-02	211,121,392	9,777,782	4764.3	117.2	22	0	572.2	0
Feb-02	192,060,277	9,151,731	4733.3	114.9	20	0	540.2	0
Mar-02	203,775,193	9,512,802	4728.9	116.3	20	1	545.6	0
Apr-02	185,314,513	7,523,737	4768	118.6	21	1	329.5	8.3
May-02	183,254,394	7,358,898	4845.6	120.9	22	1	227.5	7.8
Jun-02	188,410,816	6,826,855	4924.1	122.7	20	0	36.2	70
Jul-02	219,729,916	8,137,971	5033.8	124.6	22	0	0	192.4
Aug-02	215,808,113	7,809,094	5118.4	130.3	21	0	0.2	142.7
Sep-02	195,012,178	6,696,496	5107.9	132.9	20	1	21.8	87.6
Oct-02	187,794,758	7,752,413	5043.3	132.8	22	1	292.2	10
Nov-02	193,230,765	8,234,050	4956.9	129.7	21	1	445	0
Dec-02	211,583,287	9,823,993	4944.8	126.5	20	0	619.4	0
Jan-03	228,072,459	11,257,844	4921.7	120.4	21	0	814.5	0
Feb-03	205,071,925	10,148,070	4905.5	115	20	0	699	0
Mar-03	207,225,786	9,527,745	4905.3	114.4	21	1	581.1	0
Apr-03	187,449,570	7,685,674	4933.7	118.4	20	1	372.5	2.4
May-03	179,550,481	6,744,262	4990.8	125.4	21	1	177.9	0
Jun-03	184,906,238	6,699,584	5066.7	133	21	0	43.4	52.9
Jul-03	200,272,254	7,614,529	5158.5	140.8	22	0	0.2	118.3
Aug-03	201,291,286	7,286,578	5228.4	147	20	0	2	128
Sep-03	184,407,204	6,464,375	5198.5	149	21	1	54.9	24
Oct-03	188,281,237	7,793,177	5150.4	151.6	22	1	276	0
Nov-03	194,302,491	8,177,397	5079.3	152.9	20	1	398.5	0
Dec-03	212,485,534	9,897,753	5077.2	155.5	21	0	561.5	0
Jan-04	235,490,156	12,348,584	5047.9	154.3	21	0	849.1	0
Feb-04	208,369,155	9,948,240	5032.3	151.6	20	0	631.7	0
Mar-04	209,294,667	9,072,155	5015.7	150.6	23	1	487.3	0
Apr-04	187,804,230	7,329,988	5043.9	151.7	20	1	331.5	0
May-04	183,209,950	6,872,231	5103.7	149.8	20	1	158.9	8.6
Jun-04	183,040,381	6,477,351	5208.5	147.1	22	0	44.2	31.6
Jul-04	196,881,824	7,597,375	5296.2	142.7	21	0	3.6	86.4
Aug-04	197,035,444	7,507,039	5353.6	144.3	21	0	12.8	59.6
Sep-04	188,313,943	6,706,564	5304.4	140.9	21	1	30	41.2
Oct-04	184,707,661	7,265,439	5229.2	138.2	20	1	226.3	1.5
Nov-04	195,753,579	7,746,269	5143.7	130.3	22	1	379.1	0
Dec-04	223,114,091	10,212,758	5114.1	124.4	21	0	643.4	0
Jan-05	233,068,202	11,358,285	5057.8	122	20	0	770	0
Feb-05	202,953,097	9,218,958	5025.9	122.7	20	0	616.4	0
Mar-05	213,421,625	9,421,380	4993.7	124	21	1	608.6	0
Apr-05	185,422,180	7,080,256	5043	124.7	21	1	306.8	0
May-05	186,613,649	7,187,520	5122.1	127.2	21	1	189.4	0.8
Jun-05	218,021,442	7,298,328	5236.3	134.3	22	0	8.9	146.3
Jul-05	234,687,559	8,258,785	5342	139.6	20	0	0	188.7
Aug-05	226,837,472	7,920,991	5416.4	141.6	22	0	0.2	140.7
Sep-05	201,266,331	6,706,528	5396	137.1	21	1	22.6	52.1
Oct-05	197,040,911	7,232,967	5335.3	133.9	20	1	220.2	7.6
Nov-05	206,898,914	7,948,692	5247.1	131.6	22	1	388.4	0
Dec-05	232,485,746	10,109,868	5224.1	132.7	20	0	665.3	0
Jan-06	229,069,544	9,584,722	5175.3	131.8	21	0	551.8	0
Feb-06	212,537,640	9,052,892	5136.2	129.5	20	0	604.3	0

Data Used in VCI 2014 Load Forecast

Date	MainkWh	GravkWh	OntFTE	MKFTE	Peakdays	Shoulder	PearsonHDD	PearsonCDD
Mar-06	222,589,060	9,095,693	5107.1	127.4	23	1	516.6	0
Apr-06	188,638,340	6,984,473	5137.7	128.6	18	1	293.3	0
May-06	197,584,849	6,945,761	5243.8	133.9	22	1	136.9	26
Jun-06	213,143,790	7,054,581	5352.8	140	22	0	19.5	73.6
Jul-06	239,085,239	8,432,462	5464.8	146.2	20	0	0	167.3
Aug-06	228,000,091	7,527,204	5505.8	151.1	22	0	4.2	101.6
Sep-06	194,232,463	6,773,819	5456.2	151.2	20	1	80.9	12.9
Oct-06	204,360,356	7,729,186	5374.9	149	21	1	288.3	1.1
Nov-06	207,947,135	7,792,725	5278.7	145.6	22	1	382.2	0
Dec-06	221,161,912	9,154,135	5263.7	144.1	19	0	500.5	0
Jan-07	235,099,724	10,152,392	5216.5	138	22	0	647.1	0
Feb-07	224,098,670	10,027,994	5184.9	132.5	20	0	740.1	0
Mar-07	223,513,915	9,266,494	5167.7	131.7	22	1	546.7	0
Apr-07	199,529,738	7,534,660	5197.5	136	19	1	356.4	0
May-07	194,458,410	6,894,173	5280.6	141.4	22	1	136.4	22.4
Jun-07	214,003,885	7,206,369	5391.3	144.8	21	0	16.5	99.2
Jul-07	217,236,567	7,928,780	5513.8	148.5	22	0	3.2	106.1
Aug-07	227,134,590	8,119,385	5582.2	148.4	22	0	5.2	141
Sep-07	195,954,927	6,793,394	5544.2	144.6	19	1	36.9	47.5
Oct-07	196,760,257	7,124,909	5479.1	138.7	22	1	137.7	19.8
Nov-07	206,385,785	8,212,919	5395.6	133.5	22	1	462.5	0
Dec-07	228,329,482	10,196,499	5374.1	131.8	19	0	630.7	0
Jan-08	230,260,337	10,132,680	5323.9	130.4	22	0	623.5	0
Feb-08	218,733,112	9,954,857	5303.7	129.4	20	0	674.7	0
Mar-08	219,617,553	9,754,864	5278.9	128.9	21	1	610.2	0
Apr-08	192,173,797	7,339,615	5310.6	130.3	20	1	253.9	0
May-08	188,679,252	7,245,582	5370.3	137	21	1	193.5	2.5
Jun-08	205,832,488	7,100,596	5458.4	145.2	21	0	22.7	71.5
Jul-08	224,258,704	8,054,716	5533.6	150.7	22	0	1	111
Aug-08	213,496,237	7,949,031	5592.4	151.7	20	0	12.7	64
Sep-08	200,053,204	6,875,941	5556.1	149.3	21	1	59	26.7
Oct-08	199,159,166	7,796,074	5512.3	148.1	22	1	278.6	0
Nov-08	206,086,069	8,376,163	5407.2	144.8	20	1	451.6	0
Dec-08	228,433,560	10,406,058	5368	141.4	21	0	654.6	0
Jan-09	239,192,657	11,616,589	5275.1	137.3	21	0	830.2	0
Feb-09	205,436,628	9,461,810	5201	136.2	19	0	606.4	0
Mar-09	213,655,267	9,383,799	5125	131.8	22	1	533.8	0
Apr-09	188,499,921	7,705,140	5119.4	129.7	20	1	305.8	1.2
May-09	182,018,867	7,207,129	5157.3	130.4	20	1	158.8	6.9
Jun-09	194,412,675	7,162,588	5215.6	133.2	22	0	49.3	34.2
Jul-09	202,258,610	7,913,369	5294	135.6	22	0	6.2	43.7
Aug-09	224,659,289	8,269,020	5345.8	133.8	20	0	9.8	91
Sep-09	195,147,202	7,236,917	5347.8	133.2	21	1	55.2	20.9
Oct-09	198,268,585	8,171,771	5314.9	132.4	21	1	287.8	0
Nov-09	198,510,031	7,810,175	5267.8	132.3	21	1	361.2	0
Dec-09	226,531,710	10,165,188	5254.5	134.4	21	0	631.3	0
Jan-10	235,732,628	11,008,712	5212.8	133.6	20	0	720	0
Feb-10	210,227,031	9,616,074	5186	132	19	0	598.3	0
Mar-10	210,103,621	8,486,682	5159.6	130.6	23	1	422.8	0
Apr-10	186,351,588	6,930,652	5180.2	134.7	20	1	225.1	0

Data Used in VCI 2014 Load Forecast

Date	MainkWh	GravkWh	OntFTE	MKFTE	Peakdays	Shoulder	PearsonHDD	PearsonCDD
May-10	202,392,048	7,491,716	5249.5	140.3	20	1	107.9	45.7
Jun-10	209,651,887	7,242,759	5359.8	140.5	22	0	21.7	58.7
Jul-10	245,967,442	9,026,422	5456	137.4	21	0	1.8	164.9
Aug-10	231,530,006	8,662,365	5503.9	137.4	21	0	2.1	138.8
Sep-10	193,803,963	7,346,380	5453.3	138.3	21	1	78.1	31.5
Oct-10	194,945,414	7,700,641	5408.6	138.2	20	1	241.6	0
Nov-10	204,438,931	8,193,215	5349.4	133.8	22	1	405.3	0
Dec-10	230,554,310	10,520,498	5352.4	130.8	21	0	676.2	0
Jan-11	239,308,920	11,128,405	5316.6	129.1	20	0	775.3	0
Feb-11	210,945,108	9,684,887	5289.1	127.7	19	0	654.2	0
Mar-11	222,332,200	9,518,710	5280.1	129.3	23	1	572.8	0
Apr-11	196,576,216	7,761,057	5317.8	131.2	19	1	332.3	0
May-11	196,850,932	7,219,648	5405.5	137.4	21	1	134.1	13
Jun-11	208,396,994	7,225,827	5496	142.7	22	0	19	52.2
Jul-11	244,509,775	9,086,133	5593.1	149.7	20	0	0	198.5
Aug-11	230,432,191	8,307,385	5646.1	149.8	22	0	0	122.2
Sep-11	201,515,380	7,333,376	5620.8	147.6	21	1	48	39.3
Oct-11	198,333,367	7,631,234	5541.4	143.6	20	1	235.4	2.4
Nov-11	203,268,030	7,757,777	5456.6	139.7	22	1	341.9	0
Dec-11	212,267,141	9,625,273	5422	138	20	0	534	0
Jan-12	231,923,773	10,306,700	5377.2	134.2	21	0	610.8	0
Feb-12	214,505,326	9,176,827	5332.1	131.7	20	0	532	0
Mar-12	212,295,871	8,361,768	5313.9	128.6	22	1	349.4	0.2
Apr-12	195,779,874	7,590,042	5361.4	128.6	19	1	321.7	0
May-12	204,722,054	7,387,925	5441	131	22	1	81.3	36.7
Jun-12	218,320,444	7,678,067	5536.5	136.7	21	0	23.2	101.6
Jul-12	252,819,959	9,225,527	5616.3	141.6	21	0	0	190.1
Aug-12	235,673,240	8,628,018	5667.7	142.8	22	0	2	112.1
Sep-12	203,392,226	7,407,749	5629.7	138.7	19	1	85	35.6
Oct-12	204,051,488	7,855,323	5584.2	131.1	22	1	242.5	1.1
Nov-12	211,462,970	8,505,307	5527	127.6	22	1	434	0
Dec-12	222,465,329	9,678,547	5517.3	123.7	19	0	533.5	0
Jan-13			5427.1	130.4	22	0		
Feb-13			5390.2	128.4	19	0		
Mar-13			5376.5	127.6	20	1		
Apr-13			5419.7	128.6	21	1		
May-13			5504.6	132.8	22	1		
Jun-13			5599	138.2	20	0		
Jul-13			5688.8	144.1	22	0		
Aug-13			5741.8	144.7	21	0		
Sep-13			5709.7	141.6	20	1		
Oct-13			5646.2	135.8	22	1		
Nov-13			5574.1	132.2	21	1		
Dec-13			5551.6	129.4	20	0		
Jan-14			5497.6	132.1	22	0		
Feb-14			5460.3	130.1	19	0		
Mar-14			5446.4	129.3	21	1		
Apr-14			5490.1	130.2	21	1		
May-14			5576.2	134.5	21	1		
Jun-14			5671.8	140	21	0		

Data Used in VCI 2014 Load Forecast

Date	MainkWh	GravkWh	OntFTE	MKFTE	Peakdays	Shoulder	PearsonHDD	PearsonCDD
Jul-14			5762.8	146	22	0		
Aug-14			5816.4	146.6	20	0		
Sep-14			5783.9	143.5	21	1		
Oct-14			5719.6	137.6	22	1		
Nov-14			5646.6	133.9	20	1		
Dec-14			5623.8	131.1	20	0		



1 Explanation of Causes and Assumptions 2 for the Forecast

3

4 **Total forecast wholesale deliveries and allocations to weather sensitive classes (Residential, 5 GS < 50 kW and GS > 50 kW)**

6

7 The total harmonized wholesale deliveries for 2013 are forecast at 2,699,672,996 kWh, an
 8 increase of 0.08% over 2012 weather normalized deliveries. Total harmonized wholesale
 9 deliveries for 2014 are forecast at 2,720,621,147 kWh an increase of 0.78% from the weather
 10 normal forecast for 2013. These harmonized wholesale delivery volumes are those adjusted for
 11 the loss of a Large Use customer part way through 2013 and reflected for the full period of 2014.
 12 Further details on forecast for the Large Use class and impacts due to the loss of load in this class
 13 are provided later in this section.

14

15 Total forecasted harmonized wholesale deliveries prior to the adjustment for the loss of the Large
 16 Use customer show an increase of 1.1% and 1.3% in 2013 and 2014 respectively.

	2012 Actual	2012 Normalized	2013 Normalized	2014 Normalized
Total Retail kWh	2,591,592,621	2,581,615,553	2,578,972,503	2,594,466,537
Total Delivered (Wholesale) kWh*	2,709,214,355	2,697,462,511	2,726,316,873	2,757,959,354
<i>Increase over prior year</i>			28,854,362	31,642,481
<i>%age increase over prior year</i>			1.1%	1.2%
Total Delivered (Wholesale) kWh**	2,709,214,355	2,697,462,511	2,699,672,996	2,720,621,147
<i>Increase over prior year</i>			2,210,485	20,948,151
<i>%age increase over prior year</i>			0.08%	0.78%

* Unadjusted for LU Loss of Load

17

** Adjusted for LU Loss of Load



1 This increase is in line with the average value of the economic variable used within the
 2 regression model. On average an increase of 1.3% in Ontario’s full-time employment figures is
 3 forecast by four Canadian chartered banks.

4

5 Table 1 below provides a summary table of volume forecasts (kWh and kW).

6 **Table 1– VCI Harmonized Load Forecast (Historical, Bridge and Test Years)**

	2012 Actual	2012 Normalized	2013f Normalized	2014f Normalized
Residential (kWh)	955,964,961	951,822,758	962,006,606	973,174,502
Residential - Seasonal (kWh)	9,220,330	9,218,828	9,201,231	9,183,667
GS<50 (kWh)	299,242,920	297,868,147	301,014,634	304,465,000
GS>50 (kWh)	1,056,049,049	1,051,590,459	1,043,759,831	1,039,731,728
(kW)	2,507,861	2,497,247	2,496,857	2,504,507
Intermediate (kWh)	54,894,697	54,894,697	90,616,333	126,308,499
(kW)	147,009	147,009	202,890	257,941
Large Use (kWh)	190,643,020	190,643,020	146,387,216	115,197,786
(kW)	334,461	334,461	247,389	184,514
Street Lights (kWh)	20,739,716	20,739,716	21,132,796	21,533,545
(kW)	57,735	57,735	58,829	59,945
Sentinel Lights (kWh)	423,455	423,455	398,374	374,941
(kW)	1,791	1,791	1,682	1,580
USL (kWh)	4,414,474	4,414,474	4,455,481	4,496,870
Total Retail kWh	2,591,592,621	2,581,615,553	2,578,972,503	2,594,466,537

7

8

9 As noted earlier, allocation of forecasted 2013 and 2014 wholesale kWh to weather sensitive
 10 customer classes, with the exception of Residential – Seasonal, is based on their share of the
 11 2012 wholesale kWh total exclusive of distribution losses. Using this methodology, the
 12 percentage change in forecast kWh for each class for 2013 and 2014 are the same as the total
 13 wholesale deliveries.

14

15 Based on the NAC methodology employed for the Residential – Seasonal class, volumes are
 16 forecasted to decrease 0.19% in each of 2013 and 2014.

17

18



1 **Intermediate and Large Use Rate Classes**

2

3 As of 2012, Veridian had three Intermediate (GS 3,000 to 4,999 kW) class customers and four
4 Large Use class customers.

5

6 To forecast growth in 2013 and 2014 for such high volume, low customer count classes, the
7 average monthly consumption of these two classes was examined over 20 months (May 2011 to
8 Dec 2012).

9

10 In March 2013 a Large Use customer had shut down its main operations with some residual
11 manufacturing continuing until June 2013 and plans for all equipment and activities ceasing by
12 October 2013. In 2012 this customer consumed approximately 36.8 million kWh and 65,000
13 kW. The 2013 consumption is expected to be reduced by approximately 26.3 million kWh and
14 kW demand is expected to be reduced by approximately 46,600 kW. In 2014, the customer is
15 not forecasted to be in operations.

16

17 Full details of the impacts of the loss of this Large Use customer are included in the ERA
18 forecast report.

19

20 In July 2013, reclassification of customers between the GS > 50, Intermediate and Large Use
21 classes took effect. One Large Use customer account (not the loss of load discussed above) is
22 being reclassified to the Intermediate Class. Two GS>50 kW customer accounts are also being
23 reclassified to Intermediate customers. One Intermediate class customer account is being
24 reclassified to the GS>50 kW class. The reclassified consumption is based on actual customer
25 account consumption in 2012 and results in a net increase of 2 customers in the Intermediate
26 class and the loss of an additional customer in the Large Use class. The reclassifications have no
27 effect on wholesale purchases or total retail sales.

28



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1 The effect of the July 2013 reclassifications is that in 2014, about 34.8 million kWh and 59,000
2 kW has been removed from the Large Use class, 34.6 million kWh and 49,000 kW has been
3 removed from the GS>50 class, and 70.4 million kWh and 108,000 kW has been added to the
4 Intermediate class.

5

6 **Sentinel Lighting, Street Lighting and Unmetered Scattered Load (USL)**

7

8 A decrease in both consumption (5.9%) and demand (6.1%) in 2013 and 2014 are expected for
9 the Sentinel Lighting class. In recent years, Veridian has seen a steady decline in the number of
10 Sentinel Light customers, particularly in the Main tariff zone where customer counts dropped
11 from 694 in 2010 to 493 in 2012.

12

13 A slight increase in both consumption and demand (1.9% for each) in 2013 and 2014 are forecast
14 for the Street Lighting class. Similarly, a small increase (0.9%) is forecast for the USL rate
15 class.



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Exhibit 3

Tab 3 of 8

CDM Forecast Calculation



1 Approach to Conservation and Demand 2 Management

3

4 Consistent with the Board’s *Guidelines for Electricity Distributor Conservation and Demand*
5 *Management* (EB-2012-0003), Veridian has integrated a manual adjustment into its 2014 load
6 forecast that takes into account the measured CDM savings from 2011 and 2012 CDM programs
7 as reported to Veridian by the Ontario Power Authority (“OPA”). The adjustment also reflects
8 the further CDM savings projected to be achieved in 2013 and 2014, on the assumption that
9 Veridian achieves 100% of its 2011 to 2014 energy and demand savings targets that have been
10 established as a condition of its electricity distribution licence.

11

12 In preparing the CDM adjustment to its load forecast, Veridian has adhered to the Board’s Filing
13 Requirements for Electricity Distribution Rate Applications and has adopted the methodology
14 outlined in the 2013 EDR application and decision of Centre Wellington Hydro (EB-2012-0113);
15 a methodology that was approved by the Board in its May 28th, 2013 Decision and Order. In
16 accordance with this decision, Veridian has used net savings in calculating the CDM adjustment
17 for its 2014 load forecast.

18

19 This methodology assumes that annual historic actual consumption data used to develop a
20 distributor’s load forecast includes the impacts of CDM program activity of prior years. In
21 Veridian’s case the historic consumption dataset used for the load forecast model included data
22 for years up to and including 2012.

23

24

25 A summary of the savings from the 2011 and 2012 CDM programs is presented in table 1 below.

26



1 **Table 1 – 2011 & 2012 CDM Program Savings**

Source: 2012 OPA Final Report	2011	2012	2013	2014
2011 Final kWh - Net	8,554,399	8,530,297	8,514,761	8,420,412
2011 Final kW - Net	3,033	2,046	2,040	2,002
	2011	2012	2013	2014
2012 Final kWh - Net	-	8,458,740	8,425,457	8,408,098
2012 Final kW - Net	-	4,463	1,955	1,950

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For the purpose of the manual adjustment to the load forecast, CDM savings for 2013 and 2014 have been calculated based on the assumption that Veridian will achieve its 2014 CDM targets of 115.74 GWh of energy savings and 29.05 MW of demand savings. The following two tables show Veridian’s verified CDM savings to date (2011 & 2012) and its energy and demand savings projections for 2013 and 2014:



1

2 **Table 2 – Schedule to Achieve 4 Year kWh and kW Targets**

Schedule to achieve 4 Year kWh CDM Target

4 Year 2011 - 2014 kWh CDM Target					
115,740,000					
%	2011	2012	2013	2014	Total
2011 Programs	7.4%	7.4%	7.4%	7.3%	29.4%
2012 Programs		7.3%	7.3%	7.3%	21.9%
2013 Programs			16.3%	16.3%	32.5%
2014 Programs				16.3%	16.3%
	7.4%	14.7%	30.9%	47.0%	100.0%

kWh	2011	2012	2013	2014	Total
2011 Programs	8,554,399	8,530,297	8,514,761	8,420,412	34,019,869
2012 Programs		8,458,740	8,425,457	8,408,098	25,292,295
2013 Programs			18,809,279	18,809,279	37,618,557
2014 Programs				18,809,279	18,809,279
	8,554,399	16,989,037	35,749,497	54,447,067	115,740,000

Schedule to achieve 4 Year kW CDM Target

4 Year 2011 - 2014 kW CDM Target					
29,050					
%	2011	2012	2013	2014	Total
2011 Programs	10.4%	7.0%	7.0%	6.9%	31.4%
2012 Programs		15.4%	6.7%	6.7%	28.8%
2013 Programs			43.2%	43.2%	86.4%
2014 Programs				43.2%	43.2%
	10.4%	22.4%	57.0%	100.0%	189.8%

kWh	2011	2012	2013	2014	Total
2011 Programs	3,033	2,046	2,040	2,002	2,002
2012 Programs		4,463	1,955	1,950	1,950
2013 Programs			12,549	12,549	12,549
2014 Programs				12,549	12,549
	3,033	6,509	16,544	29,050	29,050

3

4

5 All savings outlined in the OPA’s 2012 Final Verified CDM Status Report (Exhibit 9, Tab 4,
 6 Schedule 1, Attachment 2) assume a full year of energy and demand savings in the year they



1 commenced. Veridian acknowledges that not all CDM activities and savings reported in a
2 particular year begin on January 1st, and as such do not generate a full 12 months of CDM results
3 in that year. Due to the absence of specific information regarding program timing, Veridian has
4 adjusted its 2014 net energy savings using the “half-year rule”. Likewise, Veridian has also
5 adjusted the 2014 persistence from 2011 and 2012 programs due to the fact that some savings are
6 already implicitly reflected in the actual load forecast data for those years prior to any manual
7 CDM adjustment. For this reason, the amount stated in Veridian’s Lost Revenue Adjustment
8 Mechanism Variance Account (“LRAMVA”) (Exhibit 9, Tab 4, Schedule 1) will be related to,
9 but not equal to, the CDM adjustment for the load forecast.

10

11 Veridian’s manual CDM adjustments are shown in the following table:

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1 **Table 3 – Manual Adjustments to CDM Savings**

	2014 CDM Threshold (kWh of incremental CDM savings needed in 2014)	Application Factor 1.0 Full Year 0.5 Half Year	2014 Net kWh Load Forecast CDM Adjustment
	A	B	C = A * B
Year			
2011	8,420,412	0.0	0
2012	8,408,098	0.5	4,204,049
2013	18,809,279	1.0	18,809,279
2014	18,809,279	0.5	9,404,639
	<u>54,447,067</u>		<u>32,417,967</u>

	2014 CDM Threshold (kW of incremental CDM savings needed in 2014)	Application Factor 1.0 Full Year 0.5 Half Year	2014 Net kW Load Forecast CDM Adjustment
	A	B	C = A * B
Year			
2011	2,002	0.0	0
2012	1,950	0.5	975
2013	12,549	1.0	12,549
2014	12,549	0.5	6,275
	<u>29,050</u>		<u>19,799</u>

2
 3 Loss factor adjustments are not required as Veridian has developed its load forecast on a billed
 4 basis.

5
 6 CDM adjustments have been applied against each of Veridian’s customer classes in relation to
 7 their share of the 2012 verified CDM savings. Demand savings for the Demand Response
 8 (“DR”) programs have been excluded as demand savings attributed to these program only occur
 9 during a DR event. Tables 4 and 5 below show these calculations under both a harmonized and
 10 non-harmonized rate structure. Veridian is proposing to harmonize its rates within this
 11 application, so Table 5 has been included for comparative purposes only.

12

13



1 **Table 4 – Harmonized Load Forecast by Customer Class (including CDM)**

kWh	Weather Normalized	Verified CDM	CDM Load	2014 CDM	
	2014F	Savings			Forecast
	A	B	D = B / C	F = D * E	F = A - E
Residential	973,174,502	1,790,135	19%	6,278,260	966,896,242
Residential - Seasonal	9,183,667	27,571	0%	96,697	9,086,970
GS<50	304,465,000	1,563,414	17%	5,483,118	298,981,882
GS>50	1,039,731,728	5,709,092	62%	20,022,608	1,019,709,120
Intermediate	126,308,499	18,407	0%	64,556	126,243,943
Large Use	115,197,786	134,790	1%	472,728	114,725,058
Street Lights	21,533,545	-	0%	-	21,533,545
Sentinel Lights	374,941	-	0%	-	374,941
USL	4,496,870	-	0%	-	4,496,870
Total	2,594,466,538	9,243,409	100%	32,417,967	2,562,048,571
		C		E	

kW	Weather Normalized	Verified CDM	CDM Load	2014 CDM	
	2014F	Savings			Forecast
	H	I	K = I / J	M = K * L	N = H - M
Residential (kWh)			0%	-	-
Residential - Seasonal			0%	-	-
GS<50 (kWh)			0%	-	-
GS>50 (kW)	2,504,507	1,067	97%	19,292	2,485,215
Intermediate (kW)	257,941	3	0%	54	257,887
Large Use (kW)	184,514	25	2%	452	184,062
Street Lights (kW)	59,945		0%	-	59,945
Sentinel Lights (kW)	1,580		0%	-	1,580
USL (kWh)			0%	-	-
Total	3,008,487	1,095	100%	19,799	2,988,689
		J		L	

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1 **Table 5 – Non-Harmonized Load Forecast by Customer Class (including CDM)**

2

Veridian_Main			
	Weather Normalized 2014F	CDM Load Forecast Adjustment	2014 CDM Adjusted Load Forecast
	A	B	C = A - B
kWh			
Residential	938,128,265	6,046,454	932,081,811
GS<50	289,065,931	5,029,508	284,036,423
GS>50	1,007,662,179	19,340,665	988,321,514
Intermediate	126,308,499	64,556	126,243,943
Large Use	115,197,786	472,728	114,725,058
Street Lights	20,938,760	-	20,938,760
Sentinel Lights	333,223	-	333,223
USL	4,496,870	-	4,496,870
Total	2,502,131,513	30,953,912	2,471,177,601

Veridian_Gravenhurst			
	Weather Normalized 2014F	CDM Load Forecast Adjustment	2014 CDM Adjusted Load Forecast
	A	B	C = A - B
kWh			
Residential-Urban	26,307,769	184,642	26,123,127
Residential-Suburban	8,738,468	47,163	8,691,305
Residential-Seasonal	9,183,667	96,697	9,086,970
GS<50	15,399,069	453,610	14,945,459
GS>50	32,069,549	681,943	31,387,606
Intermediate			-
Large Use			-
Street Lights	594,785		594,785
Sentinel Lights	41,718		41,718
USL			-
Total	92,335,025	1,464,055	90,870,970

	Weather Normalized 2014F	CDM Load Forecast Adjustment *	2014 CDM Adjusted Load Forecast
	A	B	C = A - B
kw			
Residential (kWh)		-	-
GS<50 (kWh)		-	-
GS>50 (kW)	2,426,856	18,635	2,408,221
Intermediate (kW)	257,941	54	257,887
Large Use (kW)	184,514	452	184,062
Street Lights (kW)	58,270	-	58,270
Sentinel Lights (kW)	1,453	-	1,453
USL (kWh)		-	-
Total	2,929,034	19,141	2,909,893

	Weather Normalized 2014F	CDM Load Forecast Adjustment	2014 CDM Adjusted Load Forecast
	A	B	C = A - B
kw			
Residential-Urban		-	-
Residential-Suburban		-	-
Residential-Seasonal		-	-
GS<50 (kWh)		-	-
GS>50 (kW)	77,650	657	76,993
Intermediate (kW)			-
Large Use (kW)			-
Street Lights (kW)	1,675		1,675
Sentinel Lights (kW)	127		127
USL (kWh)			-
Total	79,452	657	78,795

3



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Attachment 1 of 1

OEB Appendix 2-I CDM Forecast Calculation

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 Exhibit: 3
 Tab: 3
 Schedule: 1
 Page:
 Date: 31-Oct-13

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

Input the 2011-2014 CDM target in Cell B21.

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

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

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

4 Year (2011-2014) kWh Target:					
115,740,000					
	2011	2012	2013	2014	Total
2011 CDM Programs	7.39%	7.37%	7.36%	7.28%	29.39%
2012 CDM Programs		7.31%	7.28%	7.26%	21.85%
2013 CDM Programs			16.25%	16.25%	32.50%
2014 CDM Programs				16.25%	16.25%
Total in Year	7.39%	14.68%	30.89%	47.04%	100.00%
kWh					
2011 CDM Programs	8,554,399.00	8,530,297.00	8,514,761.00	8,420,412.00	34,019,869.00
2012 CDM Programs		8,458,740.00	8,425,457.00	8,408,098.00	25,292,295.00
2013 CDM Programs			18,809,278.67	18,809,278.67	37,618,557.33
2014 CDM Programs				18,809,278.67	18,809,278.67
Total in Year	8,554,399.00	16,989,037.00	35,749,496.67	54,447,067.33	115,740,000.00

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

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

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

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

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

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

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

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

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

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

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

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

	2011	2012	2013	2014	Total for 2014
	kWh				
Amount used for CDM threshold for LRAMVA (2014)	8,420,412.00	8,408,098.00	18,809,278.67	18,809,278.67	54,447,067.33
Manual Adjustment for 2014 Load Forecast (billed basis)	-	4,204,049.00	18,809,278.67	9,404,639.33	32,417,967.00
Proposed Loss Factor (TLF)		Format: X.XX%			
Manual Adjustment for 2014 Load Forecast (system purchased basis)	-	4,204,049.00	18,809,278.67	9,404,639.33	32,417,967.00

Manual adjustment uses "gross" versus "net" (i.e. numbers multiplied by (1 + g). The Weight factor is also used calculate the impact of each year's program on the CDM adjustment to the 2014 load forecast.

NOTE - Veridian has developed its load forecast on a class-specific billed basis, and has excluded the adjustment for losses



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Exhibit 3

Tab 4 of 8

Transformer Ownership Allowance



1 Overview and Calculations

2

3 Veridian forecasts harmonized transformer ownership allowance credits totaling \$863,751 in
 4 2013 and \$855,488 in 2014. Transformer ownership allowance credits are proposed on the basis
 5 of \$0.60 per kW for those customers who own their own transformer facilities.

6

7 All customers in the Intermediate and Large Use categories are eligible for this credit. Forecasts
 8 for eligible kW in the GS > 50 kW class are based on a 3-year average of kW volumes for
 9 transformer allowances billed in the GS > 50 kW class of the total kW billed in that class.

10

11 Table 1 below shows the calculation of the 3-year average of kW for transformer allowance in
 12 the GS > 50 kW class.

13

Table 1 - 3-year average of kW volumes for Transformer Allowance - GS > 50 kW Class

Veridian_Main				Veridian_Gravenhurst			Harmonized		
GS > 50 kW				GS > 50 kW			GS > 50 kW		
	kW - Trans			kW - Trans			kW - Trans		
	Allow	kW Billed	%age	Allow	kW Billed	%age	Allow	kW Billed	%age
2010	907,765	2,327,604	39.0%	19,823	79,964	24.8%	927,588	2,407,568	38.5%
2011	955,395	2,343,632	40.8%	19,652	84,007	23.4%	975,047	2,427,640	40.2%
2012	985,106	2,428,849	40.6%	19,885	79,013	25.2%	1,004,991	2,507,862	40.1%
			40.1%			24.4%			39.6%

14

15

16



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1 Table 2 below shows the calculated forecast volume and dollars for transformer ownership
 2 allowance for 2013 and 2014
 3

Table 2: 2013 and 2014 Forecast volumes and Dollars for Transformer Ownership Allowance

	2013			2014		
	Total Class kW Forecast	Total Trans Allow kW Forecast	\$\$	Total Class kW Forecast	Total Trans Allow kW Forecast	\$\$
GS > 50 kW	2,496,857	989,306	\$ 593,584	2,485,215	983,864	\$ 590,318
Intermediate	202,890	202,890	\$ 121,734	257,887	257,887	\$ 154,732
Large Use	247,389	247,389	\$ 148,433	184,062	184,062	\$ 110,437
Total		1,439,585	\$ 863,751		1,425,813	\$ 855,488

4
 5
 6 The total forecast eligible kW for the transformer allowance credit in 2013 is 1,439,585kW and
 7 for 2014 the total is 1,425,813 kW.



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Exhibit 3

Tab 5 of 8

Customer Forecast



1 Overview

2

3 As with the approach for load and energy forecasts, customer count forecasts by tariff zone were
4 developed and then aggregated to produce a harmonized customer forecast for the appropriate
5 harmonized rate classes.

6

7 With harmonization of distribution rates, Veridian is also proposing the harmonization of the
8 Residential class of the Main zone with the Residential-Urban and Residential-Suburban classes
9 of the Gravenhurst zone into a single Residential class. The existing Residential-Seasonal rate
10 class will remain as a separate rate class in 2014.

11

12 Table 1 below provides the 2013 and 2014 forecast of harmonized customer connections.

13

14 **Table 1 – VCI Harmonized Customer Connections**

15

	2012	2013F	2014F
Residential	103,299	104,723	106,167
Res - Seasonal	1,591	1,588	1,585
GS<50	8,679	8,752	8,827
GS>50	1,057	1,065	1,073
Intermediate	3	4	5
Large Use	4	3	2
Street Light	29,226	29,778	30,340
Sentinel Light	538	506	475
USL	909	918	926
Total	145,307	147,336	149,400

16

17

18



1 Historic and forecast average customer connections by rate class for the Main and Gravenhurst
2 Tariff zones are provided in the following tables.

3

4 **Table 2 - Average Annual Customer Connections – VCI Main**

	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Residential	86,769	90,518	92,815	94,490	95,676	96,856	98,049	99,485	100,875	102,285
% chg		4.3%	2.5%	1.8%	1.3%	1.2%	1.2%	1.5%	1.4%	1.4%
GS<50 kW	7,450	7,565	7,604	7,655	7,706	7,809	7,892	7,961	8,034	8,109
% chg		1.5%	0.5%	0.7%	0.7%	1.3%	1.1%	0.9%	0.9%	0.9%
GS> 50 kW	996	1,012	1,020	1,038	1,019	1,006	1,005	1,021	1,028	1,036
% chg		1.6%	0.8%	1.8%	-1.9%	-1.2%	-0.1%	1.6%	0.0%	0.0%
Intermediate	2	2	2	2	2	2	3	3	4	5
Large Use	5	5	5	5	5	5	4	4	3	2
Street Light	23,912	24,769	25,669	26,070	26,468	27,108	27,885	28,273	28,825	29,387
% chg		3.6%	3.6%	1.6%	1.5%	2.4%	2.9%	1.4%	2.0%	2.0%
Sentinel Light	720	655	693	730	717	694	588	493	461	430
USL	756	759	868	875	887	914	917	909	918	926
% chg		0.3%	14.4%	0.7%	1.4%	3.0%	0.4%	-0.9%	0.9%	0.9%

5

6 **Table 3 – Annual Customer Connections – Gravenhurst**

	2005	2006	2007	2008	2009	2010	2011	2012	2013F	2014F
Res - Urban	2,900	2,906	2,930	2,945	2,993	3,010	3,017	3,038	3,059	3,079
% chg		0.2%	0.8%	0.5%	1.6%	0.6%	0.2%	0.7%	0.7%	0.7%
Res - SubUrban	689	700	719	728	749	762	765	776	790	803
% chg		1.6%	2.7%	1.2%	3.0%	1.7%	0.4%	1.5%	1.7%	1.7%
Res - Seasonal	1,612	1,613	1,607	1,602	1,608	1,602	1,596	1,591	1,588	1,585
% chg		0.1%	-0.4%	-0.3%	0.3%	-0.4%	-0.3%	-0.4%	-0.2%	-0.2%
GS < 50 kW	657	677	694	702	717	718	718	718	718	718
% chg		3.0%	2.5%	1.1%	2.1%	0.2%	0.1%	0.0%	0.0%	0.0%
GS > 50 kW	58	54	50	50	48	42	37	36	36	36
% chg		-6.8%	-7.2%	0.0%	-4.8%	-11.7%	-	-2.5%	-0.5%	0.0%
Street Light	906	906	947	947	947	952	953	953	953	953
% chg		0.0%	0.0%	0.0%	0.0%	-15.1%	0.0%	0.0%	0.0%	0.0%
Sentinel Light	53	53	53	53	53	45	45	45	45	45

7

8

9 As noted previously, there have been several instances of historic customer reclassifications
10 between GS > 50, Intermediate and Large Use classes. For the purpose of customer class
11 forecasting, the reclassified customers have been allocated to their current rate class for the entire
12 time series.



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1 **Residential Forecast 2013 – 2014**

2

3 Residential customer connections are forecasted to increase by 1,424 in 2013 and 1,444 in 2014,
4 an annual increase of 1.4% in each year. Forecasts are based on the average growth rate over the
5 past five years (geometric mean). This growth rate is generally consistent with the moderating
6 growth forecast for the housing market in the GTA by Canada Mortgage and Housing Corp. The
7 period of 2005 to 2007 was a time of high residential growth within Veridian's Main tariff zone
8 with an annual average increase of over 3,000 connections. New connections began to slow in
9 2008 through 2011 with a high of 1,675 and a low of 1,180 through this period. The majority of
10 the customer growth has been in Ajax, Pickering, Bowmanville and Newcastle. The increase in
11 2012 was stronger at 1,436 and is forecast at approximately the same level in 2013 and 2014.

12 Customer counts in the Residential-Seasonal class have been declining, likely as premises in this
13 class are converted from seasonal to full-time premises. The 2013 and 2014 forecast show a
14 minor reduction in connections in this class.

15

16 **GS < 50 kW Forecast 2013 – 2014**

17

18 Customer connections for the GS < 50 kW class are expected to increase by 73 in 2013 and 75 in
19 2014, an increase of 0.8% and 0.9% respectively. The forecast is based on average growth rate
20 over the past five years and are expected in the Main zone, rather than in the Gravenhurst zone
21 where there has been little growth over the past few years.

22

23 **GS > kW, Intermediate and Large Use Forecast 2013 - 2014**

24

25 Customer connections in the GS > 50 kW class are expected to increase by 8 in each of 2013 and
26 2014. Veridian's experience has been that although it experiences a larger number of new
27 connections for this class, a proportionate number of existing number of GS > 50 kW customers



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1 are reclassified to GS < 50 kW based on the results of Veridian's annual load and volume
2 review.

3

4 The customer forecast for Intermediate and Large Use class reflect the previously described loss
5 of a Large Use customer and the July 2013 reclassifications.

6

7 **Street Lighting, Sentinel Lighting and USL**

8

9 A modest increase of 1.9% in each of 2013 and 2014 for the number of Street Lighting
10 connections is forecast based on the expectation for residential development.

11

12 Sentinel lighting attachments have generally been declining for a number of years and this trend
13 is expected to continue.

14

15 Modest increases of 1.0% and 0.9% for each of 2013 and 2014 are expected in the USL rate
16 class.



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Exhibit 3

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Distribution Variance Analysis



1 Historic Distribution Revenue Variance 2 Analysis

3

4 Distribution revenues by harmonized rate class were provided in Table 2 in the overview section
5 of this exhibit. Total revenues are forecast at \$49,080,522 in 2014, based on current approved
6 rates, and including smart meter incremental revenue rate riders.

7

8 Historical distribution revenue variance analysis is provided through separate schedules for each
9 of Veridian's existing Tariff zones of Veridian_Main and Veridian_Gravenhurst.

10

11 The tables below provide a summary of distribution revenues by class for each Tariff zone.

12

Table 1: Summary of Distribution Revenues - Veridian_Main

	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Forecast at Existing Rates	2014 Forecast at Existing Rates
Distribution Revenues						
Residential	27,257,445	27,483,508	27,378,658	27,942,904	29,476,012	29,765,470
GS < 50 kW	6,259,410	6,239,773	6,196,969	6,181,187	6,471,180	6,459,317
GS > 50 kW*	8,356,141	8,264,753	8,130,101	8,534,639	8,425,297	8,316,632
Intermediate Use*	197,838	206,646	289,110	313,593	293,198	337,444
Large Use*	817,520	918,012	791,850	759,527	754,134	686,039
USL	178,585	198,557	199,374	173,260	166,038	167,532
Sentinel Lighting	45,692	15,888	18,449	15,918	37,064	34,600
Street Lighting	409,000	379,606	412,450	426,169	434,626	443,106
Total	43,521,631	43,706,743	43,416,960	44,347,195	46,057,548	46,210,139

13 * *Net of Transformer Allowance*



Table 2: Summary of Distribution Revenues - Veridian_Gravenhurst

	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Forecast at Existing Rates	2014 Forecast at Existing Rates
Distribution Revenues						
Residential - Urban	882,433	865,249	900,565	918,998	926,353	926,518
Residential - Suburban	322,369	301,463	338,513	367,875	407,966	410,297
Residential - Seasonal	822,331	786,132	811,230	803,176	838,194	833,423
GS < 50 kW	376,777	413,852	392,599	363,160	371,660	364,556
GS > 50 kW*	346,471	399,338	353,374	351,679	329,627	327,687
Sentinel Lighting	1,378	1,309	1,602	1,768	2,343	2,343
Street Lighting	5,561	6,601	5,665	5,683	5,589	5,589
Total	2,757,320	2,773,945	2,803,548	2,812,340	2,881,732	2,870,414

* Net of Transformer Allowance

Distribution revenues are derived through monthly service charges and volumetric energy or load charges.

Year over year variances in distribution revenues are related to changes in the billing determinants levels (kWh or kW for the volumetric revenues or customer count volumes for the monthly service charge) or changes in distribution rates.

The tables presented in Exhibit 3, Tab 6, Schedule 1, Attachments 1 and 2 provide detailed distribution revenue information for the Main and Gravenhurst Tariff zones for the weather sensitive rate classes of residential, GS < 50 kW and GS > 50 kW for the period of 2010 Board Approved to 2012 Actuals.



1 **High Level Variance Analysis**

2

3 Distribution revenues are derived through monthly service charges and volumetric or load
4 charges. Variance analysis on distribution revenues are generally related to key drivers such as
5 customer growth or decline, price changes and changes in consumption – generally related to
6 weather for the weather sensitive classes and generally related to economic conditions for the
7 non-weather sensitive classes such as Intermediate and Large Use classes.

8

9 Both volumetric revenues and monthly service charge revenues are sensitive to increases in
10 customer counts. Growth in customer counts during the period of 2010 to 2012 was lower than
11 previously experienced in the period 2005 through 2008. The majority of the customer growth is
12 within the Residential rate class and in the Main tariff zone. This customer growth contributes to
13 a steady increase in monthly service charge growth year over year in the Main tariff zone.

14

15 Variations are seen between weather normalized and actual kWh volumes for both Main and
16 Gravenhurst and are to be expected as kWh consumption for these classes (Residential and GS <
17 50 kW particularly) is highly weather sensitive.

18

19 **Historic Actuals of Volumes**

20

21 The following details of volumes (in kWh and kW as applicable to each rate class) for each rate
22 class are provided in schedules within the ERA Forecast Report. Historical Actual and
23 Historical weather normalized (where applicable) for the past 5 years and for the Bridge and Test
24 Years (Tables 7, 8, 9, 11, 18, 20 and 21)

25



Historic Distribution Revenue

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- 1 Historical Board Approved volumes are provided in the variance analysis tables in Exhibit 3,
- 2 Tab 6, Schedule 1, Attachments 1 and 2.



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Attachment 1 of 2

Veridian Main Distribution Revenue Variance Analysis

Variance Analysis -Veridian_Main Distribution Revenue by Rate Class - Actual vs Weather Normalized

Volumetric Revenue	2010 Board Approved			2010 Actual			2010 Weather Normalized	Variance Actual to Normal
	kWh or kW	\$\$	\$/kWh or kW	kWh or kW	\$\$	\$/kWh or kW	kWh	kWh
Residential	927,385,803	14,467,219	\$ 0.0156	927,252,312	16,597,317	\$ 0.0179	927,385,803	133,491
GS < 50 kW	294,966,007	4,984,926	\$ 0.0169	287,377,091	5,451,980	\$ 0.0190	294,966,007	7,588,916
GS >50 kW	2,408,247	7,266,163	\$ 3.0172	2,327,604	7,226,384	\$ 3.1046	N/A	N/A

Monthly Service Charge	2010 Board Approved			2010 Actual		
	Customer Counts	\$\$	\$/Customer	Customer Counts	\$\$	\$/Customer
Residential	96,370	12,790,226	\$ 132.72	96,856	10,886,191	\$ 112.40
GS < 50 kW	7,758	1,274,484	\$ 164.28	7,809	787,793	\$ 100.88
GS >50 kW	1,038	1,678,072	\$ 1,616.64	1,006	1,038,369	\$ 1,032.00

Variance Analysis -Veridian_Main Distribution Revenue by Rate Class - Actual vs Weather Normalized

Volumetric Revenue	2010 Actual			2011Actual			2011 Weather Normalized	Actual to Normal
	kWh or kW	\$\$	\$/kWh or kW	kWh or kW	\$\$	\$/kWh or kW	kWh	kWh
Residential	927,252,312	16,597,317	\$ 0.0179	910,519,407	14,206,820	\$ 0.0156	914,711,528	4,192,121
GS < 50 kW	287,377,091	5,451,980	\$ 0.0190	290,249,187	4,881,113	\$ 0.0168	291,585,523	1,336,336
GS >50 kW	2,327,604	7,226,384	\$ 3.1046	2,343,632	6,520,942	\$ 2.7824	N/A	N/A

Monthly Service Charge	2010 Actual			2011Actual		
	Customer Counts	\$\$	\$/Customer	Customer Counts	\$\$	\$/Customer
Residential	96,856	10,886,191	\$ 112.40	98,049	13,171,838	\$ 134.34
GS < 50 kW	7,809	787,793	\$ 100.88	7,892	1,315,856	\$ 166.73
GS >50 kW	1,006	1,038,369	\$ 1,032.00	1,005	1,609,159	\$ 1,601.15

Variance Analysis -Veridian_Main Distribution Revenue by Rate Class - Actual vs Weather Normalized

Volumetric Revenue	2011 Actual			2012 Actual			2012 Weather Normalized	Actual to Normal
	kWh or kW	\$\$	\$/kWh or kW	kWh or kW	\$\$	\$/kWh or kW	kWh	kWh
Residential	910,519,407	14,206,820	\$ 0.0156	920,303,885	14,441,149	\$ 0.0157	916,911,589	(3,392,296)
GS < 50 kW	290,249,187	4,881,113	\$ 0.0168	283,573,696	4,834,218	\$ 0.0170	282,528,426	(1,045,270)
GS >50 kW	2,343,632	6,520,942	\$ 2.7824	2,428,849	6,891,300	\$ 2.8373	N/A	N/A

Monthly Service Charge	2011 Actual			2012 Actual		
	Customer Counts	\$\$		Customer Counts	\$\$	
Residential	98,049	13,171,838	\$ 134.34	99,485	13,501,755	\$ 135.72
GS < 50 kW	7,892	1,315,856	\$ 166.73	7,961	1,346,969	\$ 169.19
GS >50 kW	1,005	1,609,159	\$ 1,601.15	1,021	1,643,338	\$ 1,609.14



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Veridian Gravenhurst Distribution Revenue Variance Analysis

Variance Analysis -Veridian_Grav Distribution Revenue by Rate Class - Actual vs Weather Normalized

Volumetric Revenue	2010 Board Approved			2010 Actual			2010 Weather Normalized	Actual to Normal
	kWh or kW	(\$000's)	\$/kWh or kW	kWh or kW	(\$000's)	\$/kWh or kW	kWh	kWh
Residential-Urban	27,397,075	526,024	\$ 0.0192	26,991,764	596,484	\$ 0.0221	27,397,075	405,311
Residential-Suburban	9,458,013	190,106	\$ 0.0201	9,195,150	177,379	\$ 0.0193	9,458,013	262,863
Residential-Seasonal	9,730,721	317,222	\$ 0.0326	9,102,888	293,175	\$ 0.0322	9,730,721	627,833
GS < 50 kW Rate Class	14,769,007	287,996	\$ 0.0195	15,324,559	331,497	\$ 0.0216	14,769,007	(555,552)
GS >50 kW Rate Class	68,687	280,099	\$ 4.0779	79,964	374,220	\$ 4.6799	N/A	N/A
Monthly Service Charge	2010 Board Approved		<i>\$/Customer</i>	2010 Actual		<i>\$/Customer</i>		
	Customer Counts	(\$000's)		Customer Counts	(\$000's)			
Residential-Urban	2,985	356,409	\$ 119.40	2,906	268,765	\$ 92.49		
Residential-Suburban	757	132,263	\$ 174.72	700	124,084	\$ 177.26		
Residential-Seasonal	1,592	505,110	\$ 317.28	1,613	492,957	\$ 305.62		
GS < 50 kW Rate Class	727	100,239	\$ 137.88	677	82,356	\$ 121.65		
GS >50 kW Rate Class	50	66,372	\$ 1,327.44	54	25,118	\$ 465.15		

Variance Analysis -Veridian_Grav Distribution Revenue by Rate Class - Actual vs Weather Normalized

Volumetric Revenue	2010 Actual			2011 Actual			2011 Weather Normalized	Variance Actual to Normal
	kWh or kW	(\$000's)	\$/kWh or kW	kWh or kW	(\$000's)	\$/kWh or kW	kWh	kWh
Residential-Urban	26,991,764	596,484	\$ 0.0221	27,119,271	526,887	\$ 0.0194	26,584,504	(534,767)
Residential-Suburban	9,195,150	177,379	\$ 0.0193	8,875,257	195,687	\$ 0.0220	8,700,245	(175,012)
Residential-Seasonal	9,102,888	293,175	\$ 0.0322	9,381,400	303,500	\$ 0.0324	9,252,637	(128,763)
GS < 50 kW Rate Class	15,324,559	331,497	\$ 0.0216	16,265,662	296,871	\$ 0.0183	15,944,918	(320,744)
GS >50 kW Rate Class	79,964	374,220	\$ 4.6799	84,007	290,614	\$ 3.4594	N/A	N/A
Monthly Service Charge	2010 Actual		<i>\$/Customer</i>	2011 Actual		<i>\$/Customer</i>		
	Customer Counts	(\$000's)		Customer Counts	(\$000's)			
Residential-Urban	2,906	268,765	\$ 92.49	2,930	373,678	\$ 127.54		
Residential-Suburban	700	124,084	\$ 177.26	719	142,826	\$ 198.65		
Residential-Seasonal	1,613	492,957	\$ 305.62	1,607	507,730	\$ 315.95		
GS < 50 kW Rate Class	677	82,356	\$ 121.65	694	95,727	\$ 137.94		
GS >50 kW Rate Class	54	25,118	\$ 465.15	50	62,761	\$ 1,255.21		

Variance Analysis -Veridian_Grav Distribution Revenue by Rate Class - Actual vs Weather Normalized

Volumetric Revenue	2011 Actual			2012 Actual			Variance from 2011 Actual			2012 Weather Normalized	Actual to Normal
	kWh or kW	(\$000's)	\$/kWh or kW	kWh or kW	(\$000's)	\$/kWh or kW	kWh	(\$000's)			
Residential-Urban	27,119,271	526,887	\$ 0.0194	26,769,303	533,975	\$ 0.0199	(349,969)	7,088	\$ (0.0203)	26,206,378	(562,925)
Residential-Suburban	8,875,257	195,687	\$ 0.0220	8,891,773	205,964	\$ 0.0232	16,516	10,277	\$ 0.6222	8,704,790	(186,983)
Residential-Seasonal	9,381,400	303,500	\$ 0.0324	9,220,330	294,318	\$ 0.0319	(161,070)	(9,182)	\$ 0.0570	9,218,828	(1,502)
GS < 50 kW Rate Class	16,265,662	296,871	\$ 0.0183	15,669,225	272,393	\$ 0.0174	(596,438)	(24,478)	\$ 0.0410	15,339,721	(329,504)
GS >50 kW Rate Class	84,007	290,614	\$ 3.4594	79,013	291,615	\$ 3.6907	(4,995)	1,001	\$ (0.2004)	N/A	N/A
Monthly Service Charge	2011 Actual		\$/Customer	2012 Actual		\$/Customer					
	Customer Counts	(\$000's)		Customer Counts	(\$000's)						
Residential-Urban	2,930	373,678	\$ 127.54	2,945	385,024	\$ 130.74					
Residential-Suburban	719	142,826	\$ 198.65	728	161,912	\$ 222.41					
Residential-Seasonal	1,607	507,730	\$ 315.95	1,602	508,858	\$ 317.64					
GS < 50 kW Rate Class	694	95,727	\$ 137.94	702	90,767	\$ 129.30					
GS >50 kW Rate Class	50	62,761	\$ 1,255.21	50	60,065	\$ 1,201.29					



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Exhibit 3

Tab 7 of 8

Average Consumption



1 Historic Average Consumption Analysis

2

3 Historical average use per customer, by rate class, and historical weather normalized and weather
 4 normal forecast average use per customer is provided in separate schedules for each of
 5 Veridian’s existing Tariff zones of Veridian_Main and Veridian_Gravenhurst.

6

7 The tables below provide information from 2005 through 2012 on Actuals and 2005 through
 8 2014 on a weather normalized basis.

9

Table 1 - Average Annual Use Per Customer – VCI Main

Actual
kWh

Year	Residential	GS<50	GS>50	Intermediate	Large Use	Street	Sentinel	USL
2005	10,451	38,005	1,009,902	18,512,534	47,448,383	817	1,352	9,011
2006	9,763	38,882	971,854	18,482,305	48,908,843	745	1,226	8,642
2007	9,864	38,349	947,885	23,256,017	41,265,244	716	1,341	6,804
2008	9,854	38,687	897,520	26,354,498	34,901,052	722	1,160	6,560
2009	9,366	37,136	909,280	21,169,481	37,523,745	724	1,133	7,124
2010	9,574	36,800	953,036	24,735,985	35,030,453	664	863	6,505
2011	9,286	36,778	978,297	19,998,396	45,132,665	699	891	6,389
2012	9,251	35,620	1,002,122	18,298,232	47,660,755	713	774	4,855

Weather Normal kWh

Year	Residential	GS<50	GS>50	Intermediate	Large Use	Street	Sentinel	USL
2005	10,177	37,009	983,435	18,512,534	47,448,383	817	1,352	9,011
2006	9,580	38,155	953,684	18,482,305	48,908,843	745	1,226	8,642
2007	9,799	38,094	941,593	23,256,017	41,265,244	716	1,341	6,804
2008	10,015	39,318	912,161	26,354,498	34,901,052	722	1,160	6,560
2009	9,445	37,452	916,994	21,169,481	37,523,745	724	1,133	7,124
2010	9,455	36,345	941,252	24,735,985	35,030,453	664	863	6,505
2011	9,329	36,947	982,801	19,998,396	45,132,665	699	891	6,389
2012	9,217	35,489	998,428	18,298,232	47,660,755	713	774	4,855
2013	9,190	35,553	983,858	22,654,083	58,554,886	713	774	4,855
2014	9,172	35,650	973,102	25,261,700	57,598,893	713	774	4,855

10



Historic Average Consumption

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Table 2 - Average Annual Use Per Customer - Gravenhurst

Actual
 kWh

Year	Res Urban	Res Suburban	Res Seasonal	GS < 50	GS > 50	Sentinel Lighting	Street Lighting
2005	9,587	13,567	5,824	22,892	539,487	886	617
2006	9,550	13,158	5,441	20,907	509,173	971	621
2007	9,491	12,087	5,692	21,841	562,082	872	606
2008	9,475	13,241	5,998	21,444	582,141	825	632
2009	9,058	14,264	6,054	19,782	643,496	801	630
2010	8,969	12,070	5,684	21,353	778,865	927	623
2011	8,989	11,604	5,877	22,644	874,440	927	624
2012	8,811	11,455	5,797	21,813	902,272	389	624

Weather Normal kWh

Year	Res Urban	Res Suburban	Res Seasonal	GS < 50	GS > 50	Sentinel Lighting	Street Lighting
2005	9,556	13,524	5,796	22,818	537,751	886	617
2006	9,980	13,749	5,796	21,847	532,070	971	621
2007	9,591	12,214	5,796	22,071	567,981	872	606
2008	9,439	13,190	5,796	21,363	579,924	825	632
2009	8,845	13,928	5,796	19,317	628,346	801	630
2010	8,770	11,802	5,796	20,880	761,615	927	623
2011	8,812	11,375	5,796	22,197	857,196	927	624
2012	8,625	11,214	5,796	21,355	883,298	927	624
2013	8,584	11,045	5,796	21,404	889,040	927	624
2014	8,544	10,880	5,796	21,447	890,821	927	624



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Exhibit 3

Tab 8 of 8

Other Revenue



1 Overview of Other Revenue

2

3 Veridian has classified Other Revenues (also referred to as Revenue Offsets) into the groupings
4 as provided in the OEB Appendix 2-H: Specific Service Charges, Late Payment Charges, Other
5 Operating Revenue, and Other Income and Deductions. Appendix 2-H has been completed and
6 provided as Exhibit 3, Tab 8, Schedule 2, Attachment 1.

7

8 The total of Revenue Offsets is deducted from Service Revenue Requirement to derive Base
9 Revenue Requirement, which is the underpinning for distribution rates. Total revenue Offsets
10 are forecast at \$3,767,464.

11

12 Table 1 provides a summary of Veridian’s Other Revenue from 2010 Board Approved through
13 Forecast 2014. In its 2010 COS Application, Veridian had originally forecast Other Revenue at
14 \$4,218,100. As a part of a complete Settlement Agreement, the forecast for Other Revenue was
15 increased by \$245,000, to \$4,463,100. Specifically the 2010 forecast amount for Other Income
16 and Deductions was increased from \$844,150 to \$1,089,150.

17

18 **Table 1 – Summary Other Revenue**

Other Revenue	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Forecast	2014 Forecast
Specific Service Charges	1,772,300	1,801,327	1,528,227	1,832,907	1,928,360	1,789,404
Late Payment	618,650	530,440	480,368	460,466	506,561	494,459
Other Operating Revenue	983,000	1,004,096	969,186	948,585	957,441	969,428
Other	1,089,150	740,291	715,278	451,432	528,969	514,173



Other Revenue	2010 Board Approved	2010 Actual	2011 Actual	2012 Actual	2013 Forecast	2014 Forecast
Income and Deductions						
Total	\$4,463,100	\$4,076,154	\$3,693,059	\$3,693,390	\$3,921,331	\$3,767,464

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Specific Service Charges

Veridian’s current specific service charges are listed in its 2013 Tariff of Rates and Charges (EB-2012-0170). The specific service charges are common to all service areas.

Veridian proposes no changes to the nature and/or rates of its specific service charges. Veridian’s current specific service charges are the generic charges and rates as provided in the 2006 EDR Model with the exception of one utility specific charge – Customer Substation Isolation – After Hours.

Late Payment Charges

Veridian proposes to continue the practice of charging 1.5% (19.56% annually) interest on overdue accounts.

Other Operating Revenue

Included here is revenue from regulated Retail Service Charges for services provided to retailers in relation to transactions in the settlement of retail competitive electricity contracts. Veridian proposes no changes to its Retail Service Charges



1 Also included in Other Operating Revenue is the Standard Service Supply (SSS) Administrative
2 Charge. Veridian proposes to continue to charge \$0.25 per month for customers whose
3 electricity is supplied under the Board's Standard Supply Service.

4

5 Pole Rental revenue is also included in Other Operating Revenue.

6

7 **Other Income and Deductions**

8

9 Revenues in Other Income and Deductions can be grouped into 3 categories: interest income,
10 miscellaneous income and work for others.

11

12 Interest Income

13 Interest income relates to interest earned on cash balances.

14

15 Miscellaneous Income

16 Miscellaneous Income consists of items such as scrap metal revenue.

17

18 Work for Others

19 Work for others includes shared services to affiliates and amounts collected in excess of cost
20 from third parties for recoverable and capital work.

21

22 *Shared Services to Affiliates*

23 Shared corporate services are provided to Veridian Corporation. These services are provided
24 under a service level agreement (SLA).

25

26 Shared Corporate Services include governance, executive strategy support, accounting and
27 financial services. Pricing of shared services are done on a fully allocated cost approach.



1 The details of these shared services can be found at Exhibit 4, Tab 5 Corporate Cost Allocation.

2

3 *Collections from Third Parties*

4 These net revenues can be categorized as situations where fixed fees charged exceed actual costs
5 or contributions for work/jobs performed for others. Charges could be for items such as
6 construction for others, recovery of costs for damaged plant, minor pole relocations, dig-ins or
7 theft of power. Recoveries and expenses are recorded on a job by job basis and any over/under
8 recovery of costs is allocated to the net revenue.



1 Variance Analysis

2

3 Specific Service Charges

4

5 2014 forecast revenues from specific service charges are 0.97% above 2010 Board Approved
6 amounts. The marginal increase is due to customer growth. Some decrease in revenue from
7 Change of Occupancy has been experienced from 2010 to 2014.

8

9 Table 2 provides details of the forecasted amounts of revenues from the various specific service
10 charges

11

12 Table 2 – Details of Specific Service Charges – 2014 Forecast

Specific Service Charge	Forecast 2014 Revenue
Change of Occupancy	\$444,345
Reconnection Charges	\$288,315
Dispute Meter Test Charges	\$400
Lawyer's Letters	\$195
Collection Charges	\$1,044,550
MicroFIT Monthly Service Charge	\$11,599
Total	\$1,789,404

13

14

15



1 **Late Payment Charges**

2

3 Revenue from late payment charges in 2014 are forecast at \$494,459. This is a 20.1% decrease
4 over the 2010 Board Approved amount of \$618,650. This decrease can be attributed to changes
5 in the economic conditions and customer service standards. On January 1, 2011 OEB Customer
6 Service Amendments came into effect that require security deposits to be applied against arrears
7 before disconnection notices can be issued to a customer. This had the effect of reducing the
8 outstanding balance of security deposits and decreasing late payment charge revenue. In 2011,
9 \$1,409,270 in deposits were refunded; reducing the number of collection notices that were issued
10 and reducing late payment charges in general.

11

12 **Other Operating Revenue**

13

14 Retail Service Revenue

15 Revenues from retail service charges forecasted in 2014 to be lower than 2010 Board Approved.
16 Veridian has seen a reduction in the numbers of retail enrolled customers over recent years as
17 contracts expire and few new customers are enrolled.

Year	Number of Retail Enrolled Customers
2010	15,705
2011	13,094
2012	10,666

18

19 Standard Supply Service

20 In 2014 standard supply administrative charges are forecast at \$357,000 based on the 2014
21 forecast customer count.



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Other Income and Deductions

Other Income and Deductions are forecast to be approximately \$514,000 in 2014. This is a decrease of \$353,000 or 40.7% from 2010 Board Approved amount. As noted in the overview, as part of a complete Settlement Agreement in its 2010 COS application, the 2010 forecast and Board Approved amount for this group of Other Income was increased by \$245,000 over Veridian's original 2010 proposed amount.

The 2010 actual amount for Other Income or Deductions was \$740,291 compared with the Board Approved amount of \$1,089,150, which included the Settlement Agreement adjustment of \$245,000. Veridian had been hopeful that the agreed upon increase in Other Revenues would materialize but that was not the case.

The nature of these Other Income and Deductions are such that the level of revenue in any year are largely beyond Veridian's ability to control. Interest income arises from cash balances and prevailing short term interest rates. In the period 2010 through 2012, Veridian generally had low cash balances due to high capital requirements. Interest rates paid on deposits have been at record low levels. Lower cash balances and low interest rates are expected to continue through 2013 and the 2014 test year.

Other decreases were driven by reductions in shared services revenues and collections from third parties. Between 2010 and 2014, there was a reduction in the shared services provided from Veridian to its holding company and its affiliate, Veridian Energy Inc. Facilities maintenance services provided to Veridian Corporation for the leased property at 1465 Pickering Parkway were eliminated with the expiry of the head lease in 2012. Billing, call centre and maintenance services associated with Veridian Energy Inc. were eliminated when that affiliate exited the



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- 1 rental equipment business. All of these changes were executed as proposed in Veridian's 2010
- 2 rate application.



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OEB Appendix 2-H Other Operating Revenue

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**Appendix 2-H
 Other Operating Revenue**

USoA #	USoA Description	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³ 2013	Bridge Year ³ 2013	Test Year 2014
	<i>Reporting Basis</i>						
4082	Retail Services Revenues	\$ 175,729	\$ 151,973	\$ 126,706	\$ 109,083		\$ 141,250
4084	Service Trans Req.(STR) Re	\$ 8,531	\$ 4,108	\$ 3,742	\$ 3,029		\$ 4,800
4086	SSS Admin Charge	\$ 347,906	\$ 351,395	\$ 374,525	\$ 366,249		\$ 357,204
4210	Pole Rentals	\$ 471,930	\$ 461,710	\$ 443,612	\$ 479,080	\$ -	\$ 466,174
4225	Late Payment Charges	\$ 530,440	\$ 480,368	\$ 460,466	\$ 506,561		\$ 494,459
4235	Specific Service Charges	\$ 1,801,327	\$ 1,528,227	\$ 1,832,907	\$ 1,928,360		\$ 1,789,404
4325	Revenues From Third Parti	\$ 1,185,300	\$ 1,525,546	\$ 1,209,728	\$ 1,304,921		\$ 1,306,385
4330	Costs and Expense of Third	-\$ 1,020,903	-\$ 1,439,693	-\$ 1,150,234	-\$ 1,203,610		-\$ 1,203,610
4335	Miscellaneous Income	\$ 225,857	\$ 210,752	\$ 41,513	\$ 59,230		\$ 50,372
4355	Gain on Sale of Property	\$ 27,434	\$ 38,177	\$ 11,400	\$ 1,714		\$ 20,000
4360	Loss on Sale of Property	-\$ 14,788	\$ -	\$ -	\$ -		\$ -
4390	Miscellaneous Non-Operati	\$ 298,374	\$ 349,009	\$ 323,105	\$ 315,538		\$ 306,026
4405	Interest and Dividened Incc	\$ 39,017	\$ 31,487	\$ 15,920	\$ 51,176		\$ 35,000
		\$ 4,076,154	\$ 3,693,059	\$ 3,693,390	\$ 3,921,331		\$ 3,767,464
	Specific Service Charges	\$ 1,801,327	\$ 1,528,227	\$ 1,832,907	\$ 1,928,360	\$ -	\$ 1,789,404
	Late Payment Charges	\$ 530,440	\$ 480,368	\$ 460,466	\$ 506,561	\$ -	\$ 494,459
	Other Operating Revenues	\$ 1,004,096	\$ 969,186	\$ 948,585	\$ 957,441	\$ -	\$ 969,428
	Other Income or Deductions	\$ 740,291	\$ 715,278	\$ 451,432	\$ 528,969	\$ -	\$ 514,173
	Total	\$ 4,076,154	\$ 3,693,059	\$ 3,693,390	\$ 3,921,331		\$ 3,767,464

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

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

Account Breakdown Details

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

Account 4082 - Retail Services Revenue	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³ 2013	Bridge Year ³ 2013	Test Year 2014
<i>Reporting Basis</i>						
Service agreements-Retailer Standard Cha	\$ 200	\$ 300	\$ 100	\$ 365		\$ 250
Retailer Monthly Fixed Charge	\$ 4,840	\$ 4,940	\$ 5,120	\$ 5,349		\$ 5,000
Retailer per Customer Charge	\$ 110,548	\$ 92,509	\$ 76,079	\$ 65,162		\$ 86,000
Retailer-Distrib Consolidated Billing	\$ 60,159	\$ 54,242	\$ 45,425	\$ 38,187		\$ 50,000
Retailer Consolidated Billing	-\$ 18	-\$ 18	-\$ 18	\$ 20		
Total	\$ 175,729	\$ 151,973	\$ 126,706	\$ 109,083	\$ -	\$ 141,250

Account 4084 - Service Trans Requests (STR) Revenue

	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³	Bridge Year ³	Test Year
				2013	2013	2014
Reporting Basis						
STR-Retailer ISTR-Retailer Request Fee	\$ 3,264	\$ 1,492	\$ 1,351	\$ 1,137		\$ 1,800
STR-Retailer ISTR-Retailer Processing Fee	\$ 5,267	\$ 2,616	\$ 2,391	\$ 1,893		\$ 3,000
Total	\$ 8,531	\$ 4,108	\$ 3,742	\$ 3,030	\$ -	\$ 4,800

Account 4210 - Pole Rentals

	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³	Bridge Year ³	Test Year
				2013	2013	2014
Reporting Basis						
Revenue-Pole Rentals	\$ 471,930	\$ 458,210	\$ 440,112	\$ 475,580		\$ 462,674
Revenue-POP License		\$ 3,500	\$ 3,500	\$ 3,500		\$ 3,500
Total	\$ 471,930	\$ 461,710	\$ 443,612	\$ 479,080	\$ -	\$ 466,174

Account 4325/4330 - Revenue/Expense From Third Parties

	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³	Bridge Year ³	Test Year
				2013	2013	2014
Reporting Basis						
Credit Reference Check	\$ 9,301	\$ 9,617	\$ 8,677	\$ 7,262		\$ 8,725
Revenue MARR Recoverable	\$ 1,175,999	\$ 1,515,929	\$ 1,201,051	\$ 1,297,660		\$ 1,297,660
Expense MARR Recoverable	-\$ 1,020,903	-\$ 1,439,693	-\$ 1,150,234	-\$ 1,203,610		-\$ 1,203,610
Total	\$ 164,397	\$ 85,853	\$ 59,494	\$ 101,312	\$ -	\$ 102,775

Account 4335 - Miscellaneous Income

	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³	Bridge Year ³	Test Year
				2013	2013	2014
Reporting Basis						
Discount on Accounts Payable	\$ 283	\$ 522	\$ 7,326	\$ 3,903		
Other Misc Revenue	\$ 225,574	\$ 193,274	\$ 34,187	\$ 44,043		\$ 50,372
Sales Tax Refund				\$ 11,284		
WSIB Refund		\$ 16,956				
Total	\$ 225,857	\$ 210,752	\$ 41,513	\$ 59,230	\$ -	\$ 50,372

Account 4355/4360 - Gain/Loss on Sale of Property

	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³	Bridge Year ³	Test Year
				2013	2013	2014
Reporting Basis						
Gain on Sale of Property	\$ 27,434	\$ 38,177	\$ 11,400	\$ 1,714		\$ 20,000
Loss on Sale of Property	-\$ 14,788					
Total	\$ 12,646	\$ 38,177	\$ 11,400	\$ 1,714	\$ -	\$ 20,000

Account 4390 - Miscellaneous Non Operating Income

	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³	Bridge Year ³	Test Year
				2013	2013	2014
Reporting Basis						
Shared Services to Veridian Corporation	\$ 182,784	\$ 195,036	\$ 162,420	\$ 164,744		\$ 181,026
Shared Services to Veridian Energy	\$ 50,450	\$ 24,000				
Sale of Scrap Metal	\$ 65,140	\$ 129,973	\$ 160,685	\$ 150,794		\$ 125,000
Total	\$ 298,374	\$ 349,009	\$ 323,105	\$ 315,538	\$ -	\$ 306,026

Account 4405 - Interest and Dividend Income

	2010 Actual	2011 Actual	2012 Actual ²	Bridge Year ³	Bridge Year ³	Test Year
				2013	2013	2014
Reporting Basis						
Short-term Investment Interest						
Bank Deposit Interest	\$ 39,017	\$ 31,487	\$ 15,920	\$ 51,176		\$ 35,000
Miscellaneous Interest Revenue						
Total	\$ 39,017	\$ 31,487	\$ 15,920	\$ 51,176	\$ -	\$ 35,000

Notes:

- 1 List and specify any other interest revenue.
- 2 If the applicant is adopting IFRS or an alternate accounting standard as of January 1, 2012 for financial reporting purposes, 2011
- 3 If the applicant is adopting IFRS or an alternate accounting standard as of January 1, 2013 for financial reporting purposes, 2012
- 4 If the applicant is adopting IFRS or an alternate accounting standard as of January 1, 2014 for financial reporting purposes, 2013