EXHIBIT 3 - REVENUES

2019 Cost of Service

Hydro 2000 Inc
EB-2019-0041

3.1 TABLE OF CONTENT

TABLE OF FIGURES

3.1 LOAD AND REVENUE FORECAST

3.1.1 INTRODUCTION

The evidence presented in this exhibit provides information supporting the revenues derived from activities regulated by the Ontario Energy Board. Actual operating revenues from regulated operations are derived mainly from fixed and variable tariff charges as well as pass through charges and specific service charges. Revenues are collected from five (5) customer classes: Residential, General Service less than 50 kW, General Service greater than 50 kW, Unmetered Scattered Load (USL), and Street Lighting. Hydro 2000 does not anticipate any significant changes in its customer classes.

This exhibit also describes Hydro 2000's load and customer forecasts. The load forecast methodology and assumptions are described in detail at 3.1.4 Load Forecast Methodology.

The evidence herein is organized per the following topics:

1) Revenue and Load Forecast
2) Impact and Persistence from Historical CDM Programs
3) Accuracy of Load Forecast and Variance Analysis, and
4) Other Revenues

3.1.2 OVERVIEW OF CURRENT REVENUES

Table 1 - Revenues at Current Rates below shows revenues from current distribution charges for 2019. Distribution Revenues are derived from a combination of fixed monthly charges and volumetric charges applied to the utility's proposed Load Forecast. Fixed rate revenues are determined by applying the current fixed monthly charge to the number of customers or connections in each of the customer classes in each month. Variable rate revenue is based on a volumetric rate applied to meter readings for consumption or demand volume.

Hydro 2000's 2020 forecasted revenues recovered through its currently approved distribution rates are projected at $538,444 (exclusive of all rate riders). The revenues at proposed distribution rates are presented in Exhibit 6 and Exhibit 8.

1

Table 1 - Revenues at Current Rates

Projected Revenues at Current Rates

2019 Rates at 2020 Load

Revenue from Existing Variable Charges

Customer Class Name	Variable Distribution Rate	per	Test Year Volume	Gross Variable Revenue	Transform. Allowance Rate	Transform. Allowance kW's	Transform. Allowance $'s	Net Variable Revenue
Residential	$0.0062	kWh	12,367,886	$76,681			$0.00	$76,681
General Service < 50 kW	$0.0099	kWh	3,861,286	$38,227			$0.00	$38,227
General Service > 50 to 4999 kW	$1.4631	kW	10,671	$15,613			$0.00	$15,613
Street Lighting	$7.2916	kW	421	$3,066			$0.00	$3,066
Unmetered Scattered Load	$0.0443	kWh	17,280	$766			$0.00	$766
0			0	$0			$0.00	$0
Total Variable Revenue			**16,257,544**	**$134,352**	**0**	**0**	**0**	**$134,352**

2019 Rates at 2020 Load

Revenue from Existing Fixed Charges

Customer Class Name	Fixed Rate	Customers (Connections)	Fixed Charge Revenue	Variable Revenue	TOTAL	% Fixed Revenue	% Variable Revenue	% Total Revenue
Residential	$25.92	1,113	$346,047.55	76,681	$422,728	81.86%	18.14%	78.51%
General Service < 50 kW	$22.77	141	$38,526.84	38,227	$76,754	50.20%	49.80%	14.25%
General Service > 50 to 4999 kW	$84.54	13	$13,208.53	15,613	$28,821	45.83%	54.17%	5.35%
Street Lighting	$1.25	370	$5,556.75	3,066	$8,623	64.44%	35.56%	1.60%
Unmetered Scattered Load	$15.68	4	$752.64	766	$1,518	49.58%	50.42%	0.28%
0			$0.00	-	$0			
Total Fixed Revenue		**1,641**	**$404,092.31**	**134,352**	**$538,444**			

2

2020 Rates at 2020 Load

Revenue from Proposed Variable Charges

Customer Class Name	Variable Distribution Rate	per	Test Year Volume	Gross Variable Revenue	Transform. Allowance Rate	Transform. Allowance kW's	Transform. Allowance $'s	Net Variable Revenue
Residential	$0.0034	kWh	12,367,886	$41,850			$0.00	$41,850
General Service < 50 kW	$0.0105	kWh	3,861,286	$40,520			$0.00	$40,520
General Service > 50 to 4999 kW	$1.4590	kW	10,671	$15,569	0.60		$0.00	$15,569
Street Lighting	$7.4372	kW	421	$3,127			$0.00	$3,127
Unmetered Scattered Load	$0.0146	kWh	17,280	$252			$0.00	$252
Total Variable Revenue			**16,257,544**	**$101,318**	**0.6**	**0**	**$0.00**	**$101,318**

2020 Rates at 2020 Load

Revenue from Proposed Fixed Charges

Customer Class Name	Fixed Rate	Customers (Connections)	Fixed Charge Revenue	Variable Revenue	TOTAL	% Fixed Revenue	% Variable Revenue	% Total Revenue
Residential	$31.45	1,113	$419,876.37	$41,850	$461,727	90.94%	9.06%	79.45%
General Service < 50 kW	$24.14	141	$40,837.88	$40,520	$81,358	50.20%	49.80%	14.00%
General Service > 50 to 4999 kW	$84.54	13	$13,208.53	$15,569	$28,777	45.90%	54.10%	4.95%
Street Lighting	$1.27	370	$5,667.70	$3,127	$8,795	64.44%	35.56%	1.51%
Unmetered Scattered Load	$5.65	4	$271.13	$252	$523	51.83%	48.17%	0.09%
Total Fixed Revenue		**1,641**	**$479,861.62**	**$101,318**	**$581,180**			

1   A completed Appendix 2-IB Load Forecast Analysis is presented at Appendix A of this Exhibit

2   and in Tab 10 of the RRWF.[1]

3   Hydro 2000 does not foresee or plan for any changes in the composition of its customer classes.

4   ### 3.1.3 PROPOSED LOAD FORECAST

5   The following section of the application covers the approach taken to determine the Load

6   Forecast. This section also covers economic assumptions and data sources for customer and

7   load forecasts. It explains wholesale purchases and subsequent adjustments to the wholesale

8   purchases. It also provides the rationale behind each variable used in the regression analysis.

9   Lastly, it presents the regression results and explains how they were used to determine the

10   forecast for the bridge and test year.

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[1] MFR - Completed Appendix 2-IB; the customer and load forecast for the test year must be entered on RRWF, Tab 10

1   Table 2 - Customer and Volume Trend **Table** below presents the actual and forecast trends for

2   customer/connection counts, kWh consumption and billed kW demand. The forecast trend is

3   what Hydro 2000 has based its proposed rates on.

4

5

1

Table 2 - Customer and Volume Trend Table

2

	Year	2012 BA	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020 CDM Adjusted
Residential	Cust/Conn	1061	1,064	1,069	1,072	1,075	1,068	1,083	1,085	1,087	1,113	1,113
	kWh	14578597	13,741,372	14,121,205	13,907,110	13,022,914	12,346,401	12,078,410	12,791,618	12,775,525	12,657,112	12,367,886
	kW											
General Service < 50 kW	Cust/Conn	142	142	141	142	142	143	142	141	141	141	141
	kWh	4672050	4,027,546	4,342,696	4,287,878	4,333,237	4,261,434	3,971,545	4,062,996	3,995,372	4,049,207	3,861,286
	kW											
General Service > 50 to 4999 kW	Cust/Conn	12	11	11	11	11	11	12	12	13	13	13
	kWh	4632461	4,474,560	4,601,708	4,359,419	4,194,222	3,976,846	4,195,330	4,274,766	4,084,117	4,111,838	3,984,230
	kW	11847	12,187	12,095	11,224	10,151	13,326	12,007	10,589	10,939	11,013	10,671
Unmetered Scattered Load	Cust/Conn	6	6	4	4	4	4	4	4	4	4	4
	kWh	18329	18,188	17,280	17,280	17,280	17,280	17,280	17,280	17,280	17,280	17,280
	kW											
Street Lighting	Cust/Conn	368	368	368	369	370	370	370	370	370	370	370
	kWh	343757	348,332	327,162	179,624	152,105	152,560	153,257	153,342	152,908	153,000	153,000
	kW	959	972	949	512	420	420	420	420	420	421	421
Total	Cust/Conn	1,589	1,591	1,593	1,597	1,602	1,596	1,611	1,612	1,615	1,641	1,641
	kWh	24,245,194	22,609,998	23,410,051	22,751,311	21,719,758	20,754,521	20,415,822	21,300,002	21,025,202	20,988,437	20,383,683
	kW	12,806	13,159	13,044	11,736	10,571	13,746	12,427	11,009	11,359	11,434	11,092

3

3.1.4 LOAD FORECAST METHODOLOGY AND DETAIL[2]

2   Hydro 2000's load forecast is prepared in two phases. The first phase, a billed energy forecast by

3   customer class for 2020, is developed using a total purchase (**Wholesale**) basis regression

4   analysis. Then, in the second phase, usage associated with the known change in customers for

5   2020 is determined and added (if applicable) (**Adjusted Wholesale**). The methodology

6   proposed in this application predicts wholesale consumption (**Predicted**) using a multiple

7   regression analysis that relates historical monthly wholesale kWh usage to carefully selected

8   variables. The one-way analysis of variance (**ANOVA**) is used to determine whether there are any

9   statistically significant differences between the means of three or more independent (unrelated)

10 groups. The ANOVA compares the means between the groups you are interested in and

11 determines whether any of those means are statistically significantly different from each other.

12 The utility did not test the NAC method because NAC is generally seen as an alternative when

13 sound historical data is not available. [3]

14 The most significant variables used in weather related regressions are monthly historical heating

15 degree days and cooling degree days. Heating degree-days provide a measure of how much (in

16 degrees), and for how long (in days), the outside temperature was below that base temperature.

17 The most readily available heating degree days come with a base temperature of 18°C. Cooling

18 degree-day figures also come with a base temperature, and provide a measure of how much,

19 and for how long, the outside temperature was above that base temperature.

20 For degree days, daily observations as reported in Ottawa are used. The regression model also

21 uses other variables which are tested to see their relationship and contribution to the fluctuating

22 wholesale purchases. Each variable is discussed in detail later in this section.

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24

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[2] MFR - Explanation of weather normalization methodology
[3] MFR - NAC Model - rationale for choice, data supporting NAC variables, description of accounting for CDM including license conditions, discussion of weather normalization considerations

1   **Explanation of Multiple Regression Analysis**

2   Multiple regression can be utilized for forecasting purposes by analyzing how several variables

3   have affected a depended variable historically. From this, the relationship between these

4   variables and the depended variable can be expressed as:

5          $Y = A + B1X1 + B2X2 ... + bNxN + E$

6   Where:

7   Y = Predicted depended variable value

8   A = the value of Y when all Xs are zero

9   X = the independent variable

10   B = the coefficients corresponding to the independent variables

11   n = the number of independent variables

12   E = an error term

13   By forecasting the independent variables, the dependent variable can be predicted. However, to

14   ascertain that the relationship is not coincidental, the utility must first assess the correlation

15   between the dependent and individual independent variables. This can be accomplished by the

16   Person Correlation Coefficient (otherwise known as "R") to each independent variable. This

17   depicts how much of the change in depended variable can be explained by the change in

18   independent variables. Those variables with a high R-squared should then be used for multiple

19   regression. The same correlation coefficient can be applied to multiple independent variables to

20   ascertain how much of the change in a dependent variable can be explained by changes in all

21   independent variables.

22         $R\ Squared = (B'X'Y - nAVG(Y)^2) / Y'Y - nAVG(Y)^2$

23   Where:

24   B',X',Y' = Matrixes of all combinations of B,X&Y respectively

25   ^2 = Squared

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1   The adjusted R-squared is calculated by "correcting" for the number of independent variables in

2   a multiple regression analysis. The formula: $Adj\ RSq = (1-(1-RSq)*((n-1)/(n-k)))$. It is often used to

3   compare models involving a different number of coefficients. The statistical significance of the

4   multiple regression can be tested with the F-test which is derived from a normal probability

5   distribution. A critical point along the distribution can be found given the degree of confidence

6   required, the number of variables and the number of observations. If the F-statistic is at this

7   point, then the analysis can be deemed statistically significant at the level of confidence.

8   F-statistic = (R Squared/k-1)/(1-R Squared)/(n-k)

9   Where:

10   K = number of independent variables

11   n = number of observations

12   Independent variables that are highly correlated themselves can lead to high variances in slope

13   estimation (B). This is known as "Multicollinearity." For this reason, independent variables with a

14   high level of multicollinearity to the other independent variables should consider being omitted

15   from the analysis.

16   The formula behind the monthly weather normalized values is as follows; (coefficient for the

17   intercept) + (monthly HDD*coefficient for HDD) + (monthly CDD*coefficient for CDD) +

18   (monthly Number of Days*coefficient for monthly Number of Days) + (monthly Employment

19   Stats*coefficient for monthly Employment Stats) + (monthly Daylight Hours*coefficient for

20   monthly Daylight Hours). When the regression line is linear (y = ax + b), the regression

21   coefficient is the constant (a) that represents the rate of change of one variable (y) as a function

22   of changes in the other (x); it is the slope of the regression line. The intercept is the predicted

23   value of the dependent variable when all predictor variables are set to 0.

24

1   ## 3.1.5 ECONOMIC OVERVIEW

2   Hydro 2000's economic overview is also presented in section 2.1 of the Business Plan and

3   duplicated below for ease of reference.

4   **Principal Demographic and Geographic Characteristics**

5   Information based on the StatsCan 2016 census.

6   Area   391.7 km^2
7   Population   More than 9,680
8   Towns and villages   Alfred, Plantagenet, Curran, Wendover, Treadwell, Lefaivre,
9   Pendleton
10   Predominant language   French
11   Bilingualism (English French) 70%
12   Population density   24.7
13   Average age   43.4

14   Made up of seven essentially Francophone villages including Alfred, Curran, Lefaivre, Pendleton,

15   Plantagenet, Treadwell and Wendover, our Municipality is strategically located between two

16   major urban centres: Ottawa, 45 minutes to the west and Montreal 75 minutes to the east. The

17   United States border crossing in Cornwall, Ontario is only 45 minutes to the south. A ferry at

18   Lefaivre provides direct access to the province of Quebec. On January 1, 1997, the villages of

19   Alfred and Plantagenet, along with the Township of Alfred and the Township of Plantagenet,

20   were merged to form the Township of Alfred and Plantagenet. Hydro 2000 serves two of the

21   seven villages those of Alfred and Plantagenet. The other villages are served by Hydro One.

22   **Strategic Choice Location**

23   Part of the United Counties of Prescott and Russell, the Township is advantageously located for

24   residents and businesses alike.

25

1   **Principal Economic Characteristics**

2   **Agriculture**

3   The primary economic engine is agriculture. As with the majority of the townships that
4   make up the United Counties of Prescott and Russell, agriculture makes up a large part
5   of the economic activity within the township of Alfred and Plantagenet. Based on 2001
6   census data, almost 10% of active residents in the Township are employed by agriculture
7   or related industries. In fact, within the United Counties of Prescott-Russell and based on
8   population percentage, Alfred and Plantagenet has the third highest number of residents
9   employed in agriculture, behind East Hawkesbury and The Nation. Population densities
10   of these three townships (20 residents per km2, 14.5 residents and 16.1 residents
11   respectively), illustrates the importance agriculture related industries play.

12   The agriculture industry in Eastern Ontario differs considerably from that of the
13   southwest of the province. There is less commercial growing and more dairy farming. In
14   general, the topography and soil are less suited to intensive farming as to dairy farming.
15   This fact is particularly noticeable in the Township of Alfred and Plantagenet where dairy
16   producers are reputed for having the highest daily output across Canada.

17   With almost 40% of all the farms specialized in dairy production, the dairy industry
18   constitutes the principal activity of overall farming agriculture operations in the region. In
19   2003, dairy farms of the United Counties of Prescott and Russell delivered 178,095
20   kilolitres of milk to dairy producers, that being close to 27% of total deliveries in Eastern
21   Ontario. This being said, the region also possesses a number of grain farms.

22   These farming operations are mostly "family corporations" and are subject to the same
23   constraints' dairy farmers face in the rest of Canada (raised prices of milk quotas, the
24   problem regarding succession, the tendency towards consolidation among farms, etc.).
25   The increased price of milk quotas levied by the province has had a profound impact on
26   the industry. Milk quotas represent additional costs that dairy producers must assume to
27   do business and constitute a significant barrier to market. These raised prices for quotas
28   have encouraged farmers to sell their operations and is the main contributor the

1   increasing consolidation of the agricultural industry. As elsewhere, the last several years

2   the region has seen a decrease in the number of operational farms. In May 2002 there

3   remained 1,048 in operation, a loss of 350 since 1986. Statistics show that from 1991 to

4   2001, the number of dairy producers decreased by 52% in Ontario.

5   The agricultural sector continues to be an important part of the active population total in

6   the region (5.9%) compared to Ontario (3.2%). With 21% of the farms occupying land

7   operating between 240-399 acres of land, the average size of the farms is superior to the

8   provincial average and the value of average sales per farm is also higher than the

9   provincial average. In effect, the average revenue of farms is estimated at 159,639 $ in

10   2001, which places the region in the top position for Eastern Ontario.

11   **Manufacturing and Construction**

12   Composed primarily of small and medium sized enterprises, these sectors provided

13   employment for 20% of active residents in 2001.

14   In total, there are close to 600 companies that are made up of the following: over 350

15   commercial and industrial companies and approximately 200 agricultural-based

16   companies. The relatively high number of small and medium sized enterprises

17   constitutes one of Alfred and Plantagenet's greatest strengths. [4]

18

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[4] MFR - Explanation of causes, assumptions and adjustments for volume forecast. Economic assumptions and data sources for customer and load forecasts
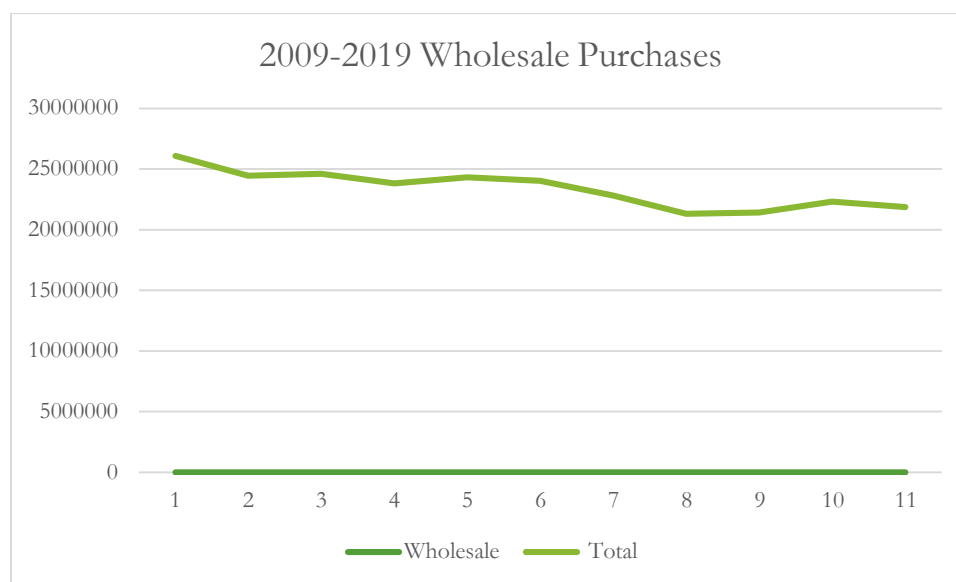
1 ## 3.1.6 OVERVIEW OF WHOLESALE PURCHASES

2 Hydro 2000 is fully embedded into the Hydro One service territory and as such the utility
3 purchases its electricity solely from Hydro One.

4 The following table outlines the unadjusted monthly wholesale purchases:

5 **Table 3 - Wholesale Purchases 2009-2019**

Wholesale	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	2,990,133	3,237,231	3,110,493	2,839,960	3,076,090	3,204,744	3,036,791	2,098,892	2,435,278	2,784,143	2,762,873
February	3,155,897	2,687,704	2,783,197	2,737,158	2,659,734	2,674,609	2,870,547	2,434,314	2,125,449	2,215,308	2,363,914
March	2,590,349	2,080,994	2,377,354	1,985,996	2,459,434	2,764,407	2,465,488	2,170,505	2,320,633	2,121,288	2,269,499
April	2,086,804	1,847,490	2,142,403	1,842,709	1,881,642	1,940,314	1,774,323	1,786,825	1,647,935	1,857,442	1,782,927
May	1,663,474	1,520,140	1,438,386	1,485,112	1,500,658	1,494,578	1,425,737	1,458,408	1,474,072	1,365,168	1,447,177
June	1,555,455	1,440,184	1,590,622	1,531,008	1,430,358	1,460,615	1,368,363	1,398,730	1,364,676	1,332,794	1,140,434
July	1,826,282	1,752,650	1,626,309	1,551,044	1,560,879	1,521,756	1,506,729	1,504,828	1,437,222	1,634,233	1,630,187
August	1,519,550	1,469,072	1,447,319	1,663,519	1,621,696	1,471,888	1,484,864	1,550,560	1,397,740	1,570,665	1,422,814
Sept	1,499,953	1,419,476	1,508,226	1,367,899	1,361,587	1,408,058	1,401,687	1,304,709	1,347,496	1,361,042	1,240,359
October	2,048,198	1,830,169	1,642,410	1,601,701	1,802,259	1,562,660	1,578,629	1,479,876	1,354,464	1,574,267	1,428,945
November	2,270,238	2,185,596	1,937,540	2,317,358	2,225,872	2,030,947	1,800,601	1,753,902	1,910,301	2,047,331	1,999,819
December	2,897,509	2,991,478	2,999,142	2,912,277	2,749,774	2,486,007	2,098,892	2,388,233	2,596,405	2,450,234	2,368,865
Total	26,103,842	24,462,184	24,603,401	23,835,741	24,329,984	24,020,582	22,812,651	21,329,782	21,411,671	22,313,915	21,857,813

6

7

1   Hydro 2000's load has seen a slight decline over the past ten years with the largest total

2   wholesale being in (2009). Wholesale purchases, on the whole, have decreased by 16.27% since

3   2009.

4

Monthly Wholesale
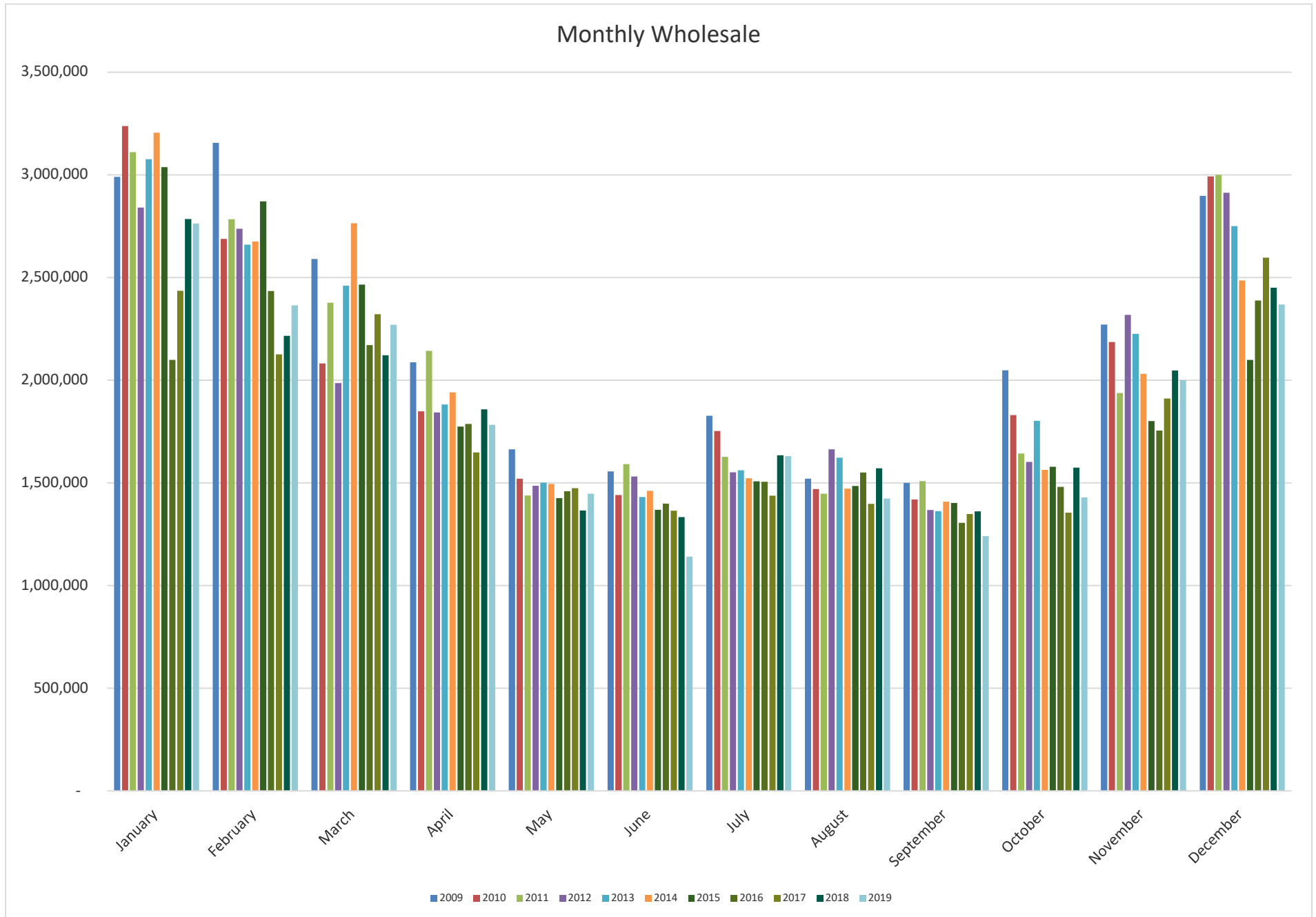
3.1.7 OVERVIEW OF VARIABLES USED[5]

In Hydro 2000's case, variation in monthly electricity consumption is influenced by 4 main factors – weather (e.g. heating and cooling), which is by far the most dominant effect on most systems; the spring and fall flag; and labour force. Specifics relating to each variable used in the regression analysis are presented in the next section.

Variables Tested and Rational for including and excluding variables

During the process of testing the regression analysis, many different variables and times periods are tested to arrive at the best R-Squared. The utility's rational behind selecting or dropping certain variables involves a "no-worse" rational. In other words, if a variable is justified and does not worsen the results, it is generally kept as one of the regression variables. In this case, the Days per Month only slightly improved the R-Square. However, the utility still opted to keep them as part of the regression analysis.

The list of variables tested include *Customer Numbers, Number of Days in Month, Spring/Fall Flag, Employment, Employment Rate, Full-Time Employment, Labour Force, Participation Rate, Part-time Employment, Population, Unemployment and Unemployment Rate*. Hydro 2000 ultimately selected the following four variables to end up with an Adjusted R-Square of 92.87%

Heating and Cooling:

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

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[5] MFR - Multivariate Regression Model - rationale for choice, regression statistics, explanation of weather normalization methodology, sources of data for endogenous and exogenous variables, any binary variables used to either account for individual data points or to account for seasonal or cyclical trends or for discontinuities in the historical data, explanation of any specific adjustments made; data used in load forecast must be provided in Excel format, including derivation of constructed variables

18°C. Cooling degree-days for a given day are the number of Celsius degrees that the mean temperature is above 18°C. For Hydro 2000, the monthly HDD and CDD as reported in Ottawa were used. Hydro 2000 has adopted the 11-year average from 2009 to 2019 as the definition of weather normal. Our view is that a ten-year average based on the most recent ten calendar years available is a reasonable compromise that likely reflects the "average" weather experienced in recent years. Many other LDCs have also adopted this definition for the purposes of cost-of-service rebasing. The following table outlines the monthly weather data used in the regression analysis.

Table 4 - HDD and CDD as reported at Utility Location

HDD	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	986.70	771.10	881.80	817.90	828.80	895.00	953.50	790.40	725.50	844.80	**934.90**
February	694.00	630.30	716.80	655.40	709.80	776.20	946.40	747.20	637.70	478.40	**762.20**
March	584.60	443.10	632.70	440.00	605.90	762.30	704.00	582.70	713.30	597.20	**666.10**
April	321.10	248.90	335.00	339.40	364.20	378.60	344.50	423.90	309.50	439.90	**398.80**
May	165.30	107.00	136.80	82.70	111.10	116.80	84.30	132.00	170.20	87.30	**213.20**
June	49.60	30.80	14.00	26.80	46.90	15.70	36.00	34.50	37.30	26.70	**52.70**
July	9.00	5.00	0.00	0.00	5.20	5.80	6.60	1.10	2.20	0.00	**0.00**
August	23.20	11.90	0.40	3.70	5.70	21.00	4.90	1.70	16.30	2.20	**6.30**
September	96.10	100.10	48.20	97.30	115.20	97.30	42.90	60.90	59.10	84.60	**104.00**
October	343.00	296.40	240.40	231.70	238.80	240.00	309.80	267.90	171.70	321.70	**286.80**
November	402.50	468.50	374.90	513.70	529.20	499.30	391.40	427.70	507.10	568.80	**590.60**
December	748.30	723.10	651.10	695.50	838.30	676.50	500.50	708.50	721.00	738.30	**717.20**
Total	4423.40	3836.20	4032.10	3904.10	4399.10	4484.50	4324.80	4178.50	4070.90	4189.90	**934.90**

CDD	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
February	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
March	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
April	3.60	0.20	0.00	3.20	0.00	0.00	0.00	0.00	1.00	0.00	**0.00**
May	1.60	39.70	17.80	28.70	15.90	11.30	33.30	32.10	10.80	21.40	**0.00**
June	49.90	46.60	67.00	81.40	48.20	62.20	29.00	60.30	55.10	46.60	**32.00**
July	50.80	155.70	147.60	159.00	122.60	66.20	116.50	113.80	81.10	168.60	**133.10**
August	88.70	84.70	84.80	113.90	68.90	57.20	77.00	134.70	58.60	118.40	**54.80**
September	7.80	28.30	44.00	28.10	12.80	32.00	58.60	32.00	55.50	50.80	**9.10**
October	0.00	0.00	2.90	0.70	2.60	2.60	0.00	0.00	2.50	4.80	**0.00**
November	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
December	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
Total	202.40	355.20	364.10	415.00	271.00	231.50	314.40	372.90	264.60	410.60	**0.00**

Spring Fall Flag:

Hydro 2000 also tested a "Spring/Fall Flag" variable. Although the variables did not yield particularly strong results, it did slightly improve the R-Square, and therefore Hydro 2000 opted to keep it as a variable. The variable accounts for the seasonal increase in consumption in the summer and winter months.

Labour Force:

Lastly, Hydro 2000 also tested a "Labour Force" variable. Although the variables did not yield particularly significant results, it did slightly improve the R-Square, and therefore Hydro 2000 opted to keep it as a variable. All relevant scenarios tested by the utility can be found in the regression model at tab 6.1 entitled Regression Scenarios.

Using a combination of wholesale purchases and variables listed above, a multiple regression analysis was used to develop an equation describing the relationship between monthly actual wholesale kWh and the explanatory variables. Hydro 2000 also used a correlation function to examine the relationship between the variables included in the analysis. The results of the correlation analysis for each scenario can also be found at tab 6.1 entitled Regression Scenarios.

To project the adjusted wholesale purchases for the bridge and test year, the model uses, for the most part, a simple average of the last ten years of historical data. Hydro 2000 has applied this method of prediction to all variables.

Origin of variables

- HDD: Stats Canada
- CDD: Stats Canada
- Labour Force   Stats Canada
- Spring/Fall   Computed by the utility

1   3.1.8 REGRESSION RESULTS

2   Table 5 - Correlation/Regression Results below presents the regression results used to determine the load forecast

3   **Table 5 - Correlation/Regression Results**

? Equation Parameters			? 95% Confidence/Autocorrelation	
R Squared	0.9309	92.87% of the change in WS can be explained by	1.319	Durbin-Watson Statistic
Adjusted R Squared	0.9287	the change in the 4 independent variables	1.67 - 1.76	Positive autocorrelation detected
Standard Error	147229.7188	to +/- on result of Regression Equation	2.441	Critical F-Statistic - 95% Confidence
F - Statistic	427.4598	Therefore analysis IS Significant	86.12%	Confidence to which analysis holds

? Multiple Regression Equation					? Independent Analysis			? Auto Correlation	? Multicol
	Coefficients	Standard Error	t Stat	p Value	R Squared	Coefficient	Intercept	DI=1.70 Du=1.73 DW-Stat	Adjusted R-Squared against other Indep
Intercept	5,204,105.924	531,172.205	9.797	0.00%					
HDD	1,773.581	71.368	24.851	0.00%	85.58%	1676.34	1362483.25	0.35	64.08%
CDD	2,352.111	571.252	4.117	0.01%	24.10%	-6535.62	2123841.75	0.75	69.74%
Spring/Fall	-148,845.696	34,514.130	-4.313	0.00%	8.72%	-324447.05	2116203.50	1.34	43.57%
Labour force	-5,232.056	713.495	-7.333	0.00%	15.84%	-11495.68	10440838.00	0.15	8.68%

4

5

Predicted

$y = 0.9309x + 135099$
$R^2 = 0.9309$

Actual

1
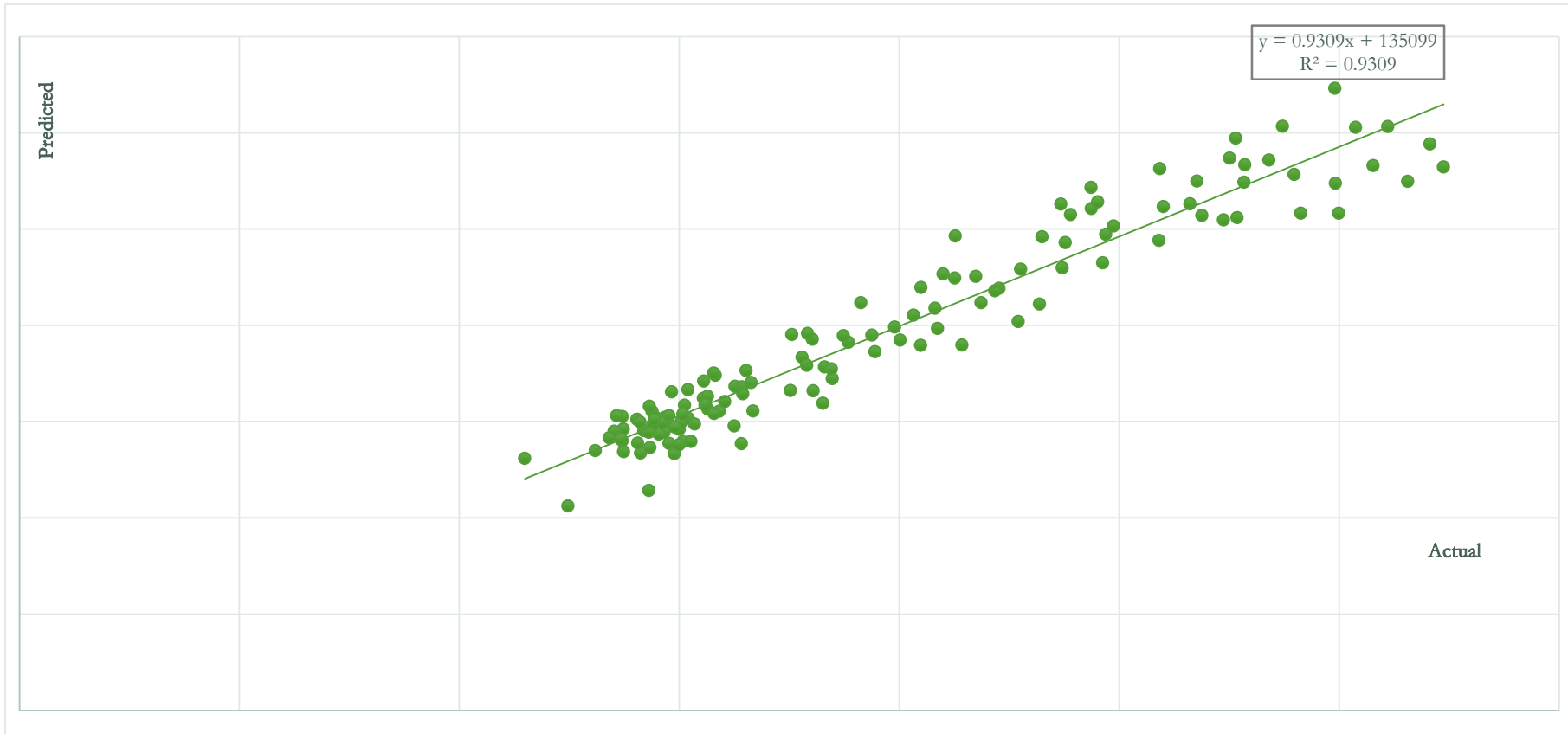
1   The resulting regression equation yields an adjusted R-squared of 0.9287. When actual annual

2   wholesale values are compared to annual values predicted by the regression equation, the mean

3   absolute percentage error (MAPE) is 0.386 per cent. More detailed model statistics can be found

4   in the next section.

5   Once Hydro 2000 calculated its preferred Regression Results, the Load Forecast model then uses

6   the coefficients from the regression results to adjust the wholesale purchases. Table 6 as seen

7   below, demonstrates the results of this adjustment. The table shows a comparison of the actual

8   and predicted wholesale purchases.

9   **Table 6 - Wholesale vs. Adjusted using the coefficients from the regression results**

Year	Wholesale	year over year	Predicted	year over year	Wholesale vs Predicted	
2009	26,103,842		26,103,842		0.00%	0.00%
2010	24,462,184	-6.29%	24,462,184	-6.29%	0.00%	0.00%
2011	24,603,401	0.58%	24,603,401	0.58%	0.00%	0.00%
2012	23,835,741	-3.12%	23,861,574	-3.02%	0.11%	0.11%
2013	24,329,984	2.07%	24,354,290	2.06%	0.10%	0.10%
2014	24,020,582	-1.27%	24,057,530	-1.22%	0.15%	0.15%
2015	22,812,651	-5.03%	22,851,027	-5.02%	0.17%	0.17%
2016	21,821,769	-4.34%	21,863,330	-4.32%	0.19%	0.19%
2017	21,411,671	-1.88%	21,461,565	-1.84%	0.23%	0.23%
2018	22,313,915	4.21%	22,383,218	4.29%	0.31%	0.31%
2019	21,857,813	-2.04%	21,923,391	-2.05%	0.30%	0.30%

10

11

12   Table **7** as seen below, shows the results of the mean absolute deviation (MAD), the mean

13   square error (MSE), the root mean square (RMSE) and the mean absolute Percentage error

14   (MAPE).

15

16   **Table 7 - MAP-MSE-MAPE**

Period	Actual	Forecast	Error	Absolute Value of Error	Square of Error	Absolute Values of Errors Divided by Actual Values.
t	A_t	F_t	$A_t - F_t$	$\lvert A_t - F_t \rvert$	$(A_t - F_t)\char`^2$	$\lvert (A_t - F_t)/A_t \rvert$
1	26,103,842	25,253,321	850,521	850,521	723,385,911,196	0.0326
2	24,462,184	23,506,552	955,632	955,632	913,232,006,257	0.0391
3	24,603,401	24,036,602	566,799	566,799	321,260,761,570	0.0230
4	23,835,741	22,881,849	953,892	953,892	909,910,739,400	0.0400
5	24,329,984	24,041,066	288,918	288,918	83,473,595,473	0.0119
6	24,020,582	23,210,172	810,409	810,409	656,763,327,433	0.0337
7	22,812,651	23,673,379	-860,728	860,728	740,853,454,098	0.0377
8	21,821,769	23,424,887	-1,603,118	1,603,118	2,569,986,473,348	0.0735
9	21,411,671	23,098,608	-1,686,937	1,686,937	2,845,755,959,767	0.0788
10	22,313,915	23,169,630	-855,715	855,715	732,247,801,719	0.0383
	Totals		-580326.688	9432668.965	10496870030262.500	0.409

1

2   The mean absolute deviation (MAD) is the sum of absolute differences between the actual value

3   and the forecast divided by the number of observations.

4   Mean square error (MSE) is probably the most commonly used error metric. It penalizes larger

5   errors because squaring larger numbers has a greater impact than squaring smaller numbers.

6   The MSE is the sum of the squared errors divided by the number of observations.

7   Mean Absolute Percentage Error (MAPE) is the average of absolute errors divided by actual

8   observation values.

9   In accordance with the Filing Requirements, Hydro 2000 has also provided a 2020 forecast

10   assuming twenty-year normal weather conditions. Table 8 below displays 20 years of historical

11   Heating Degree Days and Cooling Degree Days. The impact of using both a 11-year average as

12   well as a 20-year average to weather normalize wholesale purchases is presented in Table 9.

1

Table 8 - Forecast using a twenty-year weather normalization

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	10-year avg	20 year avg
HDD																						
Jan	875.0	848.0	709.0	977.0	1045.0	921.0	734.0	797.0	754.0	986.7	771.1	881.8	817.9	828.8	895.0	953.5	790.4	725.5	844.8	934.90	844.4	854.5
Feb	728.0	747.0	669.0	842.0	750.0	701.0	721.0	820.0	774.0	694.0	630.3	716.8	655.4	709.8	776.2	946.4	747.2	637.7	478.4	762.20	706.0	725.3
Mar	502.0	652.0	652.0	675.0	559.0	669.0	600.0	643.0	721.0	584.6	443.1	632.7	440.0	605.9	762.3	704.0	582.7	713.3	597.2	666.10	614.7	620.2
Apr	391.0	338.0	359.0	425.0	378.0	325.0	322.0	361.0	300.0	321.1	248.9	335.0	339.4	364.2	378.6	344.5	423.9	309.5	439.9	398.80	358.3	355.1
May	152.0	110.0	228.0	154.0	166.0	205.0	128.0	157.0	185.0	165.3	107.0	136.8	82.7	111.1	116.8	84.3	132.0	170.2	87.3	213.20	124.1	144.6
Jun	63.0	26.0	62.0	39.0	54.0	16.0	28.0	34.0	22.0	49.6	30.8	14.0	26.8	46.9	15.7	36.0	34.5	37.3	26.7	52.70	32.1	35.8
Jul	12.0	22.0	5.0	2.0	2.0	3.0	0.0	12.0	0.0	9.0	5.0	0.0	0.0	5.2	5.8	6.6	1.1	2.2	0.0	0.00	2.6	4.6
Aug	18.0	5.0	7.0	13.0	30.0	8.0	18.0	20.0	14.0	23.2	11.9	0.4	3.7	5.7	21.0	4.9	1.7	16.3	2.2	6.30	7.4	11.5
Sep	138.0	90.0	57.0	60.0	67.0	59.0	121.0	76.0	95.0	96.1	100.1	48.2	97.3	115.2	97.3	42.9	60.9	59.1	84.6	104.00	81.0	83.4
Oct	291.0	266.0	370.0	337.0	287.0	270.0	336.0	228.0	322.0	343.0	296.4	240.4	231.7	238.8	240.0	309.8	267.9	171.7	321.7	286.80	260.5	282.8
Nov	489.0	410.0	535.0	469.0	484.0	484.0	417.0	517.0	503.0	402.5	468.5	374.9	513.7	529.2	499.3	391.4	427.7	507.1	568.8	590.60	487.1	479.1
Dec	883.0	602.0	728.0	722.0	815.0	762.0	610.0	788.0	797.0	748.3	723.1	651.1	695.5	838.3	676.5	500.5	708.5	721.0	738.3	717.20	697.0	721.3
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	10-year avg	20 year
CDD																						
Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
Apr	0.0	0.0	10.0	0.0	2.0	0.0	0.0	0.0	0.0	3.6	0.2	0.0	3.2	0.0	0.0	0.0	0.0	1.0	0.0	0.00	0.4	1.0
May	3.0	14.0	7.0	0.0	4.0	2.0	17.0	17.3	0.0	1.6	39.7	17.8	28.7	15.9	11.3	33.3	32.1	10.8	21.4	0.00	21.1	13.8
Jun	31.0	76.0	40.0	55.0	27.0	112.0	48.0	66.9	61.0	49.9	46.6	67.0	81.4	48.2	62.2	29.0	60.3	55.1	46.6	32.00	52.8	54.8
Jul	59.0	78.0	121.0	90.0	87.0	129.0	131.0	65.1	79.0	50.8	155.7	147.6	159.0	122.6	66.2	116.5	113.8	81.1	168.6	133.10	126.4	107.7
Aug	60.0	128.0	107.0	106.0	48.0	115.0	68.0	79.3	50.0	88.7	84.7	84.8	113.9	68.9	57.2	77.0	134.7	58.6	118.4	54.80	85.3	85.2
Sep	14.0	26.0	51.0	24.0	11.0	33.0	5.0	25.7	25.0	7.8	28.3	44.0	28.1	12.8	32.0	58.6	32.0	55.5	50.8	9.10	35.1	28.7
Oct	0.0	0.0	4.0	0.0	0.0	6.0	0.0	1.9	0.0	0.0	0.0	2.9	0.7	2.6	2.6	0.0	0.0	2.5	4.8	0.00	1.6	1.4
Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0
Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0

2

1 **Table 9 - Forecast using a ten year vs. twenty-year weather normalization**

Date	Weather Normalized 10Year	Weather Normalized 20Year
2020-January	2700926.12	2713552.462
2020-February	2458835.42	2447138.22
2020-March	2146938.23	2155389.779
2020-April	1695633.37	1692112.194
2020-May	1330914.06	1341309.258
2020-June	1411215.85	1413878.541
2020-July	1541517.84	1542265.754
2020-August	1454716.68	1455393.874
2020-September	1297211.72	1294047.275
2020-October	1520413.98	1530932.102
2020-November	1896231.26	1899799.76
2020-December	2433102.65	2486419.354

2

1   **3.1.9 DETERMINATION OF CUSTOMER FORECAST**

2   Hydro 2000 has used a simple geometric mean function to determine the forecasted number of

3   customers of 2019 and 2020. The geometric mean is more appropriate to use when dealing with

4   percentages and rates of change. Although the formula is somewhat simplistic, it is reasonably

5   representative of Hydro 2000's natural customer growth. The geometric mean results were

6   analyzed by Hydro 2000 and then further adjusted for known particulars – in Hydro 2000's case

7   the MicroFit related consumption was removed from the Wholesale Purchases. Historical

8   customer counts and projected customer counts for 2019 and 2020 are presented in Table 10

9   below. A variance analysis of customer counts and projections is presented at 3.3.10.

1

Table 10 - Customer Forecast

Date	Residential		General Service < 50 kW		General Service > 50 to 4999 kW		Unmetered Scattered Load		Street Lighting	
	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate
2009	979		141		12		6		368	
2010	991	1.0127	141	1.0006	12	1.0035	6	1.0000	368	1.0000
2011	1044	1.0537	143	1.0142	11	0.9273	6	1.0000	368	1.0000
2012	1064	1.0186	142	0.9942	11	0.9851	6	0.9167	368	1.0000
2013	1069	1.0052	141	0.9877	11	0.9871	4	0.7273	368	1.0000
2014	1072	1.0025	142	1.0074	11	0.9923	4	1.0000	369	1.0016
2015	1075	1.0031	142	1.0000	11	1.0494	4	1.0000	370	1.0038
2016	1068	0.9930	143	1.0103	11	0.9728	4	1.0000	370	1.0000
2017	1083	1.0142	142	0.9936	12	1.0758	4	1.0000	370	1.0000
2018	1085	1.0022	141	0.9924	12	1.0282	4	1.0000	370	1.0000
Geomean		1.0115		1.0000		1.0015		0.9559		1.0006
2019	1087		141		13		4		370	
2020	1100		141		13		4		370	

2   **Adjusted for known customer additions**

Date	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate	Customers or Connections	Growth Rate
2019	1087	1.0018	141	1.0000	13	1.0685	4	0.9559	370	1.0006
2020	1113	1.0235	141	1.0000	13	1.0015	4	0.9559	370	1.0006

3

3.1.10 DETERMINATION OF WEATHER NORMALIZED FORECAST

Allocation to specific weather sensitive rate classes (Residential, GS<50, GS>50) is based on the share (%) of each classes' actual retail kWh (exclusive of distribution losses) and a share of actual wholesale kWh. Weather normalized wholesale kWh, for historical years, are allocated to these classes based on these historical shares. Forecast values for 2020 are allocated based on the most recent year's 2019]) actual share. For those rate classes that use kW consumption as a billing determinant, sales for these customer classes are then converted to kW based on the historical volumetric relationship between kWh and kW. The utility then forecasts a consumption per customer and adds new customer's load to the total consumption for the class.

Allocation to specific non-weather sensitive rate classes (GS>50, USL, Sentinel and Streetlights) is based on an average of demand/customer. The utility then uses an appropriate historical average to determine an average demand per customer. This average is then applied to the customer count for the bridge and test year. [6]

Explanations for material changes in the definition of or major changes over time, explanations of the bridge and test year forecasts by rate class, variance analysis between the last OEB-approved and the actual and weather-normalized actual results are presented at Section 3.3.1 Variance Analysis of Load Forecast

---

[6] MFR - For consumption and demand - explanation to support how kWh are converted to kW for applicable demand-billed classes, year-over-year variances in kWh and kW by rate class and for system consumption overall (kWh) with explanations for material changes in the definition of or major changes over time (should be done for both historical actuals against each other and historical weather-normalized actuals over time), explanations of the bridge and test year forecasts by rate class, variance analysis between the last OEB-approved and the actual and weather-normalized actual results

1   3.1.11 LOAD FORECAST BY CLASS.

2   The following section presents class specific adjusted historical and forecast values for those

3   classes that have weather sensitive load. Historic class, specific kWh consumption is allocated

4   based on each class' share in wholesale kWh, exclusive of distribution losses. Forecast class

5   values are allocated based on a 11 year average of historical ratio.

6   **Table 11 - Residential Forecast (Weather Sensitive)**

Year	Residential Actual kWh	Total Actual Wholesale	Ratio%	Predicted Wholesale	Residential Weather Normal	Per customer
2009	14,568,734	26,103,842	57.69%	25,253,321	14,568,734	14,888
2010	15,503,393	24,462,184	65.95%	23,506,552	15,503,393	15,644
2011	14,112,097	24,603,401	58.71%	24,036,602	14,112,097	13,514
2012	13,741,372	23,861,574	60.05%	22,881,849	13,741,372	12,919
2013	14,121,205	24,354,290	58.74%	24,041,066	14,121,205	13,207
2014	13,907,110	24,057,530	59.92%	23,210,172	13,907,110	12,975
2015	13,022,914	22,851,027	55.01%	23,673,379	13,022,914	12,113
2016	12,346,401	21,863,330	52.71%	23,424,887	12,346,401	11,403
2017	12,078,410	21,461,565	52.29%	23,098,608	12,078,410	11,131
2018	12,791,618	22,383,218	55.21%	23,169,630	12,791,618	11,768
2019	12,775,525	21,923,391	59.07%	21,629,284	12,775,525	11,753
2020		*Avg*	57.76%	21,913,746	12,657,112	11,511

7

1   **Table 12 - General Service <50 Forecast (Weather Sensitive)**

Year	Actual kWh	Total Wholesale	Ratio%	Predicted Wholesale	Weather Normal	Per customer
2009	4,924,163	26,103,842	19.50%	25,253,321	4,924,163	34,923
2010	4,868,403	24,462,184	20.71%	23,506,552	4,868,403	34,507
2011	4,617,455	24,603,401	19.21%	24,036,602	4,617,455	32,271
2012	4,027,546	23,861,574	17.60%	22,881,849	4,027,546	28,313
2013	4,342,696	24,354,290	18.06%	24,041,066	4,342,696	30,909
2014	4,287,878	24,057,530	18.47%	23,210,172	4,287,878	30,294
2015	4,333,237	22,851,027	18.30%	23,673,379	4,333,237	30,615
2016	4,261,434	21,863,330	18.19%	23,424,887	4,261,434	29,800
2017	3,971,545	21,461,565	17.19%	23,098,608	3,971,545	27,952
2018	4,062,996	22,383,218	17.54%	23,169,630	4,062,996	28,816
2019	3,995,372	21,923,391	18.47%	21,629,284	3,995,372	28,336
2020		Avg	18.48%	21,913,746	4,049,207	28,718

2

3   **Table 13 - General Service >50 (kWh) (Weather Sensitive)**

Year	Actual kWh	Total Wholesale	Ratio%	Predicted Wholesale	Weather Normal	Per customer
2009	4,746,135	26,103,842	18.79%	25,253,321	4,746,135	395,511
2010	4,892,263	24,462,184	20.81%	23,506,552	4,892,263	406,278
2011	4,597,548	24,603,401	19.13%	24,036,602	4,597,548	411,721
2012	4,474,560	23,861,574	19.56%	22,881,849	4,474,560	406,778
2013	4,601,708	24,354,290	19.14%	24,041,066	4,601,708	423,795
2014	4,359,419	24,057,530	18.78%	23,210,172	4,359,419	404,586
2015	4,194,222	22,851,027	17.72%	23,673,379	4,194,222	370,918
2016	3,976,846	21,863,330	16.98%	23,424,887	3,976,846	361,531
2017	4,195,330	21,461,565	18.16%	23,098,608	4,195,330	354,535
2018	4,274,766	22,383,218	18.45%	23,169,630	4,274,766	351,351
2019	4,084,117	21,923,391	18.88%	21,629,284	4,084,117	314,163
2020		Avg	18.76%	21,913,746	4,111,838	315,811

4

5

1   **Table 14 - General Service >50 Demand (kW) (Non-Weather Sensitive)**

Year	kWh	kW	KW/kWh Ratio
2009	4,746,135	12,344	0.00260
2010	4,892,263	12,630	0.00258
2011	4,597,548	11,789	0.00256
2012	4,474,560	12,187	0.00272
2013	4,601,708	12,095	0.00263
2014	4,359,419	11,224	0.00257
2015	4,194,222	10,151	0.00242
2016	3,976,846	13,326	0.00335
2017	4,195,330	12,007	0.00286
2018	4,274,766	10,589	0.00248
2019	4,084,117	10,939	0.00268
2020	4,111,838	11,013	0.00268
Avg	4,746,135	12,344	0.00260

2

3   **Table 15 - Street Lighting (Non-Weather Sensitive)**

Year	kWh	kW	Connection	kWh per connection	KW per connection	KW/kWh Ratio
2010	334,038	972	368	908	2.6413	0.00291
2011	352,032	972	368	957	2.6413	0.00276
2012	348,332	972	368	947	2.6413	0.00279
2013	327,162	949	368	889	2.5788	0.00290
2014	179,624	512	369	487	1.3891	0.00285
2015	152,105	420	370	411	1.1351	0.00276
2016	152,560	420	370	412	1.1351	0.00275
2017	153,257	420	370	414	1.1351	0.00274
2018	153,342	420	370	414	1.1351	0.00274
2019	152,908	420	370	413	1.1345	0.00275
2020	153,000	421	370	413	1.1365	0.00275
2020	153,000	421	370	413	1.1351	0.00275
Avg				413	1.1351	0.00281
2010	334,038	972	368	908	2.6413	0.00291

4

5

1   **Table 16 - Unmetered Scattered Load (Non-Weather Sensitive)**

Year	kWh	Customer
2009	18,804	6
2010	18,778	6
2011	18,517	6
2012	18,188	6
2013	17,280	4
2014	17,280	4
2015	17,280	4
2016	17,280	4
2017	17,280	4
2018	17,280	4
2019	17,280	4
2020	17,280	4
Avg		5

2

1   3.1.12 FINAL NORMALIZED LOAD FORECAST

2   Table 17 below presents historical and projected weather normalized Load Forecast by customer

3   class.

4   **Table 17 - Final Load Forecast**

	Year	2019	2020	2020 CDM Adjusted
Residential	Cust/Conn	1,087	1,113	1,113
	kWh	12,775,525	12,657,112	12,367,886
	kW			
General Service < 50 kW	Cust/Conn	141	141	141
	kWh	3,995,372	4,049,207	3,861,286
	kW			
General Service > 50 to 4999 kW	Cust/Conn	13	13	13
	kWh	4,084,117	4,111,838	3,984,230
	kW	10,939	11,013	10,671
Unmetered Scattered Load	Cust/Conn	4	4	4
	kWh	17,280	17,280	17,280
	kW	1,087	1,113	1,113
Street Lighting	Cust/Conn	370	370	370
	kWh	152,908	153,000	153,000
	kW	420	421	421
Total	**Cust/Conn**	**1,615**	**1,641**	**1,641**
	kWh	**21,025,202**	**20,988,437**	**20,383,683**
	kW	**11,359**	**11,434**	**11,092**

5

| 1 | ## 3.2 IMPACT AND PERSISTENCE FROM HISTORICAL CDM PROGRAMS[7] |

| 2 | ### 3.2.1 LOAD FORECAST CDM ADJUSTMENT WORK FORM |

3   While the forecast as presented in the previous section assumes some level of embedded

4   "natural conservation," it does not consider the impacts on energy purchases arising from CDM

5   programs undertaken by Hydro 2000's customers. The load forecast is a projection of the

6   expected level of electricity purchases that would occur over the specified period in the absence

7   of any CDM initiatives. Therefore, in accordance with the filing requirements, the forecasted

8   energy purchases are further adjusted to reflect CDM reductions.

9   The schedule to achieve CDM targets are presented in Table 18 below:

---

[7] MFR - Quantification of any impacts arising from the persistence of historical CDM programs as well as the forecasted impacts arising from new programs in the bridge and test years through the current 6-year CDM framework.

1

Table 18 – OEB Appendix 2-I [8]

2015-2020 CDM Program - 2015, first year of the current CDM plan							
6 Year (2015-2020) kWh Target:							
1,050,000							
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
%							
2015 CDM Programs	1.64%	1.61%	1.58%	1.57%	1.57%	1.53%	9.50%
2016 CDM Programs		5.13%	5.13%	5.13%	5.13%	5.13%	25.65%
2017 CDM Programs			7.71%	6.19%	6.19%	6.19%	26.29%
2018 CDM Programs				5.58%	5.58%	5.58%	16.74%
2019 CDM Programs					5.39%	5.39%	10.79%
2020 CDM Programs						11.03%	11.03%
Total in Year	**1.64%**	**6.75%**	**14.42%**	**18.47%**	**23.87%**	**34.85%**	**100.00%**

kWh							
2015 CDM Programs	90,935.00	89,503.00	87,315.00	87,132.00	87,132.00	84,690.00	526,707.00
2016 CDM Programs		284,454.00	284,393.00	284,331.00	284,331.00	284,331.00	1,421,840.00
2017 CDM Programs			427,620.00	343,324.00	343,324.00	343,324.00	1,457,592.00
2018 CDM Programs				309,292.33	309,292.33	309,292.33	927,876.99
2019 CDM Programs					298,982.45	298,982.45	597,964.91
2020 CDM Programs						611,543.57	611,543.57

---

[8] MFR - Completed Appendix 2-I

1

Weight Factor for Inclusion in CDM Adjustment to 2014 Load Forecast										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Weight Factor for each year's CDM program impact on 2014 load forecast *Default Value selection rationale.*	0	0	0	0	0	0	0.5	1	0.5	Distributor can select "0", "0.5", or "1" from drop-down list

2011-2014 and 2015-2020 LRAMVA and 2015 CDM adjustment to Load Forecast										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total for 2019
	kWh	kWh	kWh	kWh	kWh	kWh	kWh	kWh	kWh	kWh
Amount used for CDM threshold for LRAMVA (2012)	255,525.00	255,525.00	255,525.00	255,525.00	255,525.00	255,525.00	255,525.00			
Amount used for CDM threshold for LRAMVA (2019)								298,982.45	611,543.57	910,526.02
Manual Adjustment for 2019 Load Forecast (billed basis)	-	-						298,982.45	305,771.79	**604,754.24**

2

1   The values entered in the 2015-2017 report originate from the IESO issued Final OPA CDM

2   Results. The most recent IESO results are filed along with this Exhibit.

3   The values entered in the 2018-2020 originate from Hydro 2000's approved CDM plan which

4   shows Hydro 2000's targets to be 1.05 GWh. .[9]

---

[9] MFR - CDM Adjustment - account for CDM in [Test Year] load forecast. Consider impact of persistence of historical CDM and impact of new programs. Adjustments may be required for IESO reported results which are full year impacts

1   3.2.2 ALLOCATION OF CDM RESULTS

2   Table 19 below presents the method behind Hydro 2000's allocation of CDM reduction in

3   consumption.

4   **Table 19 - CDM adjustments to Load Forecast**

Weather Adjusted Load Forecast Results

	Year	2019	2020	2018-2020 CDM Plan	total	Share	Target	Target
Residential	Cust/Conn	1,087	1,113					
	kWh	12,775,525	12,657,112	435,462	435,462	47.83%	289,226	12,367,886
	kW		-					
GS < 50 kW	Cust/Conn	141	141					
	kWh	3,995,372	4,049,207	282,936	282,936	31.07%	187,920	3,861,286
	kW		-					
GS > 50 to 4999 kW	Cust/Conn	13	13					
	kWh	4,084,117	4,111,838	192,129	192,129	21.10%	127,608	3,984,230
	kW	10,939	11,013	515	515	100.00%	342	10,671
Unmetered Scattered Load	Cust/Conn	4	4					
	kWh	17,280	17,280			0.00%	-	17,280
	kW	-	-			0.00%		
Street Lighting	Cust/Conn	370	370					370
	kWh	152,908	153,000			0.00%	-	153,000
	kW	420	421			0.00%		421
Total	**Cust/Conn**	**1,245**	**1,270**					
	kWh	**21,025,202**	**20,988,437**			100.00%		**20,383,683**
	kW	**11,359**	**11,434**			100.00%	**604,754.24**	**11,092**

5   The following table shows the per class allocation of the amount used for CDM threshold for

6   LRAMVA (2020).

1   **Table 20 - Allocation of amount used for CDM threshold for LRAMVA[10]**

	Year	CDM Plan	total	Share	Target
Residential	Cust/Conn				
	kWh	435,462	435,462	47.83%	435,462
	kW				
GS < 50 kW	Cust/Conn				
	kWh	282,936	282,936	31.07%	282,936
	kW				
GS > 50 to 4999 kW	Cust/Conn				
	kWh	192,129	192,129	21.10%	192,129
	kW	515			313
Unmetered Scattered Load	Cust/Conn				
	kWh				
	kW				
Street Lighting	Cust/Conn				
	kWh				
	kW				
Total	**Cust/Conn**				
	kWh	**911,041**	**910,526**	**100.00%**	
	kW				**910,526.02**

2

---

[10] MFR - CDM savings for [Hist Year 3] LRAMVA balance and adjustment to [Hist Year 3] load forecast; data by customer class and for both kWh and, as applicable, kW. Provide rationale for level of CDM reductions in [Hist Year 3] load forecast

3.2.3 FINAL CDM ADJUSTED LOAD FORECAST

The table below provides details of the Final Customer and Volume Load Forecast for each of

the years. This summary of the billing determinants by rate class will be used to develop Hydro

2000's proposed rates.

1   **Table 21 - Final Customer and Volume Load Forecast**

Customers or Connections

Customer Class Name	Last Board Appr	Actual							Projected	
		2012	2013	2014	2015	2016	2017	2018	2019	2020
Residential	1,061	1,064	1,069	1,072	1,075	1,068	1,083	1,085	1,087	1,113
General Service < 50 kW	142	142	141	142	142	143	142	141	141	141
General Service > 50 to 4999 kW	12	11	11	11	11	11	12	12	13	13
Street Lighting	368	368	368	369	370	370	370	370	370	370
Unmetered Scattered Load	6	6	4	4	4	4	4	4	4	4
TOTAL	**1,589**	**1,590**	**1,593**	**1,597**	**1,602**	**1,596**	**1,611**	**1,612**	**1,615**	**1,641**

Consumption (kWh)

Customer Class Name	Last Board Appr	Actual							Projected	
		2012	2013	2014	2015	2016	2017	2018	2019	2020
Residential	14,578,597	13,741,372	14,121,205	13,907,110	13,022,914	12,346,401	12,078,410	12,791,618	12,775,525	12,657,112
General Service < 50 kW	4,672,050	4,027,546	4,342,696	4,287,878	4,333,237	4,261,434	3,971,545	4,062,996	3,995,372	4,049,207
General Service > 50 to 4999 kW	4,632,461	4,474,560	4,601,708	4,359,419	4,194,222	3,976,846	4,195,330	4,274,766	4,084,117	4,111,838
Street Lighting	343,757	348,332	327,162	179,624	152,105	152,560	153,257	153,342	152,908	153,000
Unmetered Scattered Load	18,329	18,188	17,280	17,280	17,280	17,280	17,280	17,280	17,280	17,280
TOTAL	**24,245,194**	**22,609,998**	**23,410,051**	**22,751,311**	**21,719,758**	**20,754,521**	**20,415,822**	**21,300,002**	**21,025,202**	**20,988,437**

2

3

1

CDM Adjusted Consumption (kWh)

	Projected
Customer Class Name	**2020**
Residential	12,367,886
General Service < 50 kW	3,861,286
General Service > 50 to 4999 kW	3,984,230
Street Lighting	153,000
Unmetered Scattered Load	17,280
TOTAL	**20,383,683**

Consumption (kW)

		Actual							Projected	
Customer Class Name	**Last Board Appr**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Residential										
General Service < 50 kW										
General Service > 50 to 4999 kW	11,847	12,187	12,095	11,224	10,151	13,326	12,007	10,589	10,939	11,013
Street Lighting	959	972	949	512	420	420	420	420	420	421
Unmetered Scattered Load	0	0	0	0	0	0	0	0	**0**	**0**
TOTAL	**12,806**	**13,159**	**13,044**	**11,736**	**10,571**	**13,746**	**12,427**	**11,009**	**11,359**	**11,434**

CDM Adjusted Consumption (kW)

	Projected
Customer Class Name	**2020**
Residential	**0**
General Service < 50 kW	**0**
General Service > 50 to 4999 kW	10,671
Street Lighting	421
Unmetered Scattered Load	**0**
TOTAL	**11,092**

2

1 ## 3.3 ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSIS

2 ### 3.3.1 VARIANCE ANALYSIS OF LOAD FORECAST[11]

3 Table 22 below shows the yearly change in consumption for the Residential class.

4 ### Table 22 - Residential Variance

Year	Cust	% chg.	kWh	% chg.
2009	979		14,568,734	
2010	991	1%	15,503,393	6%
2011	1,044	5%	14,112,097	-9%
2012	1,064	2%	13,741,372	-3%
2013	1,069	1%	14,121,205	3%
2014	1,072	0%	13,907,110	-2%
2015	1,075	0%	13,022,914	-6%
2016	1,068	-1%	12,346,401	-5%
2017	1,083	1%	12,078,410	-2%
2018	1,085	0%	12,791,618	6%
2019	1,087	0%	12,775,525	0%
2020	1,113	2%	12,657,112	-1%

5

6 The number of residential customers has increased slowly but steadily since 2009. The

7 consumption has also seen a slow decrease over the same period. Based on timing of the

8 decrease, Hydro 2000 can assume that the effects of conservation measures have contributed to

9 the reduction in overall consumption since 2010. The Load Forecast model uses a 11-year

10 average to determine the projections and the projected consumption for 2020 factors in the

11 reduction in CDM targets. Hydro 2000 notes that the relatively stagnant change in customer

12 count is an indication that there is some stability in economic situation in the service area.

---

[11] MFR - For customer/connection counts - identification as to whether customer/connection count is shown in year-end or average format, year-over-year variances in changes of customer/connection counts with explanation of major changes, explanations of bridge and test year forecasts by rate class, for last rebasing variance analysis between last OEB-approved and actuals with explanations for material differences

1   As explained in Section 3.1.9 Determination of Customer Forecast, Hydro 2000 has used a simple

2   11-year (2009-2019]) geometric mean function to determine the forecasted number of

3   customers for 2020. The methodology behind the 2020 projections are explained in detailed at

4   Section 3.3.1.

5   Table 23 below shows the yearly change in consumption for the GS<50 kW class.

6   **Table 23 - GS <50 kW Variance**

Year	Cust	% chg.	kWh	% chg.
2009	141		4,924,163	
2010	141	0%	4,868,403	-1%
2011	143	1%	4,617,455	-5%
2012	142	-1%	4,027,546	-13%
2013	141	-1%	4,342,696	8%
2014	142	1%	4,287,878	-1%
2015	142	0%	4,333,237	1%
2016	143	1%	4,261,434	-2%
2017	142	-1%	3,971,545	-7%
2018	141	-1%	4,062,996	2%
2019	141	0%	3,995,372	-2%
2020	141	0%	4,049,207	1%

7

8   The number of customers in the GS<50 kW class have remained steady over the past ten years

9   with a slight decrease per year. The projected consumption for 2020 factors is lower than any

10   historical years due to the reduction attributed to CDM targets. The Load Forecast model uses a

11   11-year average to determine the projections.

12   As explained in Section 3.1.9 Determination of Customer Forecast, Hydro 2000 has used a simple

13   11-year (2009-2019) geometric mean function to determine the forecasted number of

14   customers for 2020. The methodology behind the projections 2020 are explained in detailed at

15   Section 3.3.1.

16

1   Table 27 below shows the yearly change in consumption for the GS>50kW class.

2   **Table 24 - GS>50 Variance**

Year	Cust	% chg.	kWh	% chg.	kW	% chg.
2009	12		4,746,135		12,344	
2010	12	0%	4,892,263	3%	12,630	2%
2011	11	-7%	4,597,548	-6%	11,789	-7%
2012	11	-1%	4,474,560	-3%	12,187	3%
2013	11	-1%	4,601,708	3%	12,095	-1%
2014	11	-1%	4,359,419	-5%	11,224	-7%
2015	11	5%	4,194,222	-4%	10,151	-10%
2016	11	-3%	3,976,846	-5%	13,326	31%
2017	12	8%	4,195,330	5%	12,007	-10%
2018	12	3%	4,274,766	2%	10,589	-12%
2019	13	7%	4,084,117	-4%	10,939	3%
2020	13	0%	4,111,838	1%	11,013	1%

3

4   Similar to the GS<50kW, the number of customers in the GS>50 kW class have also remained

5   relatively steady over the past 10 years. The projected consumption for 2020 factors is lower

6   than any historical years due to the reduction attributed to CDM targets. The Load Forecast

7   model uses a 11-year average to determine the projections.

8   Hydro 2000 does not anticipate any new GS>50 customers in 2019 and 2020.

9   As explained in Section 3.1.9 Determination of Customer Forecast, Hydro 2000 has used a simple

10   11-year (2009-2019) geometric mean function to determine the forecasted number of

11   customers for 2020. The methodology behind the projections for 2020 are explained in detailed

12   at Section 3.3.1.

13

14   Table 25 -Streetlights Variance below shows the yearly change in consumption for the

15   Streetlight class.

16

1   **Table 25 -Streetlights Variance**

Year	Cust	% chg.	kWh	% chg.	kW	% chg.
2009	368		331,590		972	
2010	368	0%	334,038	1%	972	0%
2011	368	0%	352,032	5%	972	0%
2012	368	0%	348,332	-1%	972	0%
2013	368	0%	327,162	-6%	949	-2%
2014	369	0%	179,624	-45%	512	-46%
2015	370	0%	152,105	-15%	420	-18%
2016	370	0%	152,560	0%	420	0%
2017	370	0%	153,257	0%	420	0%
2018	370	0%	153,342	0%	420	0%
2019	370	0%	153,000	0%	421	0%
2020	370	0%	153,000	0%	421	0%

2

3   Connection count and consumption for the Streetlight class has been consistent since 2008.

4   The Load Forecast model uses a 10-year (2009-2018) average to determine the projections.

5   As explained in Section 3.1.9 Determination of Customer Forecast, Hydro 2000 has used a simple

6   11-year (2008-2019]) geometric mean function to determine the forecasted number of

7   customers for 2020. The methodology behind the projections for 2020 are explained in detailed

8   at Section 3.3.1.

9

1   Table 26 - USL Variance below shows the yearly change in consumption for the USL class.

2   **Table 26 - USL Variance**

Year	Cust	% chg.	kWh	% chg.
2009	6		18,804	
2010	6	0%	18,778	0%
2011	6	0%	18,517	-1%
2012	6	-8%	18,188	-2%
2013	4	-27%	17,280	-5%
2014	4	0%	17,280	0%
2015	4	0%	17,280	0%
2016	4	0%	17,280	0%
2017	4	0%	17,280	0%
2018	4	0%	17,280	0%
2019	4	-4%	17,280	0%
2020	4	-4%	17,280	0%

3

4   Hydro 2000 does not anticipates any changes in USL connection for the 2020 Test year. The

5   Load Forecast model uses a 11-year average to determine the projections. The methodology

6   behind the projections for 2020 are explained in detailed at Section 3.3.1.

7   In summary, for customer counts Hydro 2000 expects slight decrease in weather sensitive

8   classes. Hydro 2000 projects no material changes in the GS>50, Streetlights, USL.

9

1   Table 27 – 2012 Board Approved VS **2020** below shows the difference between the 2012

2   Board Approved Load Forecast and the 2020 Load Forecast. Hydro 2000 notes that has little

3   control over its Board Approved Load Forecast as the OEB dictates the manner in which the

4   forecast is determined (i.e. using a multivariate regression analysis based on multi-year historical

5   values.) In other words, the Load Forecasting process is formulaic in natures and year over year

6   variances are outside of the utility's control. That said Hydro 2000 notes that all classes have

7   remained relatively unchanged since the utility's Board Approved [BA] Load Forecast.

8   The overall consumption decline can be explained by the decline in customer count and

9   changes in weather patterns and effects of energy efficiencies.

10

1 **Table 27 – 2012 Board Approved VS 2020**

		2012 Board Approved	2020	Var
Residential	Fixed	$12.87	$31.45	$18.58
	Variable	$0.0129	$0.0034	-$0.0095
				0
	Cust/Conn	1,061	1,113	52
	kWh	14,578,597	12,367,886	-2210711
	Revenues	$351,924.74	$461,726.19	$109,801.45
				0%
				0
General Service < 50 kW	Fixed	$28.85	$24.14	-$4.71
	Variable	$0.0125	$0.0105	-$0.0020
				0
	Cust/Conn	142	141	-1
	kWh	4,672,050	3,861,286	-810764
	Revenues	$107,561.03	$81,357.66	-$26,203.36
				0%
				0
General Service > 50 kW - 4999 kW	Fixed	$120.73	$84.54	-$36.19
	Variable	$2.0893	$1.4590	-$0.6303
				0
	Cust/Conn	12	13	1
	kWh	4,632,461	3,984,230	-648231
	kW	11,847	10,671	-1176
	Revenues	$25,052.80	$28,777.19	$3,724.40
				0%
				0
Unmetered Scattered Load	Fixed	$14.75	$5.65	-$9.10
	Variable	$0.0416	$0.0146	-$0.0270
				0
	Cust/Conn	6	4	-2
	kWh	18,329	17,280	-1049
	Revenues	$1,824	$500	-$1,324.72
Streetlighting	Fixed	$1.16	$1.27	$0.11
	Variable	$6.8609	$7.4372	$0.5763
				0
	Cust/Conn	368	370	2
	kWh	343,757	153,000	-190757
	kW	959	421	-538
	Revenues	$36,877.34	$8,795.02	-$28,082.31
				0%
				0
Total	Cust/Conn	1,589	1,641	52

kWh	24,245,194	20,383,683	-3861511
kW	474,116	554,675	80559
$	61,930	$581,155.83	$57,915.45

1

2 Table 32 below, presents variances between actuals and 2012 Board Approved. As shown in the
3 table below, the trend in Residential customer count increased between the last Board Approved
4 and its 2020 forecast resulting in a gain of 49 customer . Most classes saw a moderate decrease
5 in consumption in 2020 as a result of CDM target reductions in 2020.

6 With respect to consumption, as explained in section 3.1.6, the assumption is that the effects of
7 energy efficient changes have contributed to the modest decline in consumption vs the increase
8 in customer count. The customer/connection count for all other classes has remained relatively
9 unchanged.

10

1

Table 28 - Yearly Variances from Last Board Approved

	Year	2012 Board Approved	BA to 2012 Actual Variance	2012-2013 Variance	2013-2014 Variance	2014-2015 Variance	2015-2016 Variance	2016-2017 Variance	2017-2018 Variance	2018-2019 Variance	2019-2020 Variance
Residential	Fixed	$12.87	$0.00	$0.75	$1.06	$0.19	$3.44	$3.79	$0.00	$3.82	$5.53
	Variable	$0.0129	$0.0000	$0.0008	$0.0011	$0.0002	-$0.0030	-$0.0029	$0.0000	-$0.0029	-$0.0028
	Cust/Conn	1,061	3	6	3	3	-8	15	2	2	26
	kWh	14,578,597	-837225	379833	-214095	-884196	-676513	-267991	713208	-16093	-407639
	Revenues	$351,924.74	-$10,388.36	$26,682.35	$26,428.00	-$7,452.57	-$4,467.94	$14,332.61	$7,108.99	$13,140.91	$44,417.45
GS < 50 kW	Fixed	$28.85	$0.00	-$3.59	-$3.42	$0.28	$0.00	$0.35	$0.00	$0.30	$1.37
	Variable	$0.0125	$0.0000	-$0.0015	-$0.0015	$0.0001	$0.0000	$0.0002	$0.0000	$0.0001	$0.0006
	Cust/Conn	142	0	-2	1	0	1	-1	-1	0	0
	kWh	4,672,050	-644504	315150	-54818	45359	-71803	-289889	91451	-67624	-134086
	Revenues	$107,561.03	-$7,969.75	-$9,233.26	-$12,527.94	$1,338.96	-$301.36	-$1,635.19	$604.11	$244.42	$3,276.64
GS > 50 kW – 4999 kW	Fixed	$120.73	$0.00	-$13.22	-$26.46	$1.05	$0.00	$1.31	$0.00	$1.13	$0.00
	Variable	$2.0893	$0.0000	-$0.2287	-$0.4579	$0.0182	$0.0000	$0.0227	$0.0000	$0.0195	-$0.0041
	Cust/Conn	12	-1	0	0	0	0	1	0	1	0
	kWh	4,632,461	-157901	127148	-242289	-165197	-217376	218484	79436	-190649	-99887
	kW	11,847	340	-92	-871	-1073	3175	-1319	-1418	350	-268
	Revenues	$25,052.80	$684.37	-$2,988.54	-$6,819.56	-$1,312.98	$4,506.40	-$1,584.00	-$2,041.86	$13,695.90	-$415.32
USL	Fixed	$14.75	$0.00	$0.07	$0.21	$0.20	$0.00	$0.24	$0.00	$0.21	-$10.03
	Variable	$0.0416	$0.00	$0.0002	$0.0006	$0.0006	$0.0000	$0.0007	$0.0000	$0.0006	-$0.0297
	Cust/Conn	6	0	-2	0	0	0	0	0	0	0
	kWh	18,329	-141	-908	0	0	0	0	0	0	0
	Revenues	$1,824	-$5.87	-$384.96	$20.45	$19.97	$0.00	$23.62	$0.00	-$12.71	-$985.22
Streetlighting	Fixed	$1.16	$0.00	$0.01	$0.02	$0.02	$0.00	$0.02	$0.00	$0.02	$0.02
	Variable	$6.8609	$0.0000	$0.0329	$0.0965	$0.0909	$0.0000	$0.1133	$0.0000	$0.0971	$0.1456
	Cust/Conn	368	0	0	1	1	0	0	0	0	0
	kWh	343,757	4575	-21170	-147538	-27519	455	697	85	-434	92
	kW	959	13	-23	-437	-92	0	0	0	0	1
	Revenues	$36,877.34	$89.19	$18.71	-$2,488.11	-$82.50	$0.00	$550.64	$0.00	-$26,349.45	$179.21
Total	Cust/Conn	1,589	2	2	4	5	-6	15	2	3	26
	kWh	24,245,194	-1635196	800053	-658740	-1031553	-965237	-338699	884180	-274800	-641519
	kW	474,116	-18011	16949	12613	-7259	-1594	11402	6295	13723	46442
	$	$523,240.39	-$17,590.42	$14,094.30	$4,612.84	-$7,489.12	-$262.90	$11,687.67	$5,671.24	$719.07	$46,472.76

2

1   **2012 Board Approved VS 2012 Actual**

2   The total distribution revenue in 2012 Actual was -$17,590 lower than the 2012 Board Approved
3   the reason being that the regression analysis used in Cost of Service applications overestimate
4   the Load Forecast compared to actuals.

5   **2012 Actual VS 2013 Actual**

6   The total distribution revenue in 2013 was $14,094 higher than the 2012 Actual. Hydro 2000's
7   rates came into effect in the Spring of 2012 therefore the full effects of the Cost of Service were
8   felt in 2013 as well as 2012. 2013 Was also subject to an IRM increase.

9   **2013 Actual VS 2014 Actual**

10 The total distribution revenue in 2014 was $4,612 higher than the 2013 Actual therefore no
11 further explanation is required. The increase is due to the effects of the 2014 IRM.

12 **2014 Actual VS 2015 Actual**

13 The total distribution revenue in 2015 was $-7489 less than the 2014 Actual therefore no further
14 explanation is required.

15 **2015 Actual VS 2016 Actual**

16 The total distribution revenue in 2016 was $-262 less than the 2015 Actual therefore no further
17 explanation is required.

18 **2016 Actual VS 2017 Actual**

19 The total distribution revenue in 2017 was $11,687 more than the 2016 Actual therefore no
20 explanation is required. The increase is due to the effects of the 2017 IRM.

21 **2017 Actual VS 2018 Actual**

22 The total distribution revenue in 2018 was a marginal $5,671 more than the 2016 Actual
23 therefore no explanation is required. No IRM application was filed in 2017.

24 **2018 Actual VS 2019 Predicted**

25 The total distribution revenue in 2019 is projected to be $719 greater than 2018. The increase is
26 marginal therefore no further explanation is required.

1   **2019 Predicted VS 2020**

2   The total distribution revenue in 2020 is $46,472 more than the 2019. The majority of the

3   variance is attributed to the request for new rates to eliminate the revenue deficiency caused by

4   an increase in OM&A and investment in capital expenditures.

5

1   **Table 29 – OEB Appendix 2-IA**

	Calendar Year (for [Hist Year 3] Cost of Service)	Customers / Connections		Consumption (kWh) [3]			Demand (kW or kVA)			Revenues	
				Weather-actual	Weather-normalized		Weather-actual	Weather-normalized		Weather-actual	Weather-normalized
Historical											
Historical											
Historical											
Historical											
Historical											
Bridge Year (Forecast)											
Test Year (Forecast)											

2   Due to its length when printed, Hydro 2000 has filed the OEB Appendix 2-IB at Appendix A of this Exhibit.[12]

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[12] MFR - Completed Appendix 2-IB; the customer and load forecast for the test year must be entered on RRWF, Tab 10

1   Table 34 below presents the actual average use per customer, by customer class, and historical

2   and adjusted forecast average use per customer generated using the load forecast. As can be

3   seen from the results below, the predicted use per customer follows the trend created from its

4   historical usage per customer.[13]

5   **Table 30 - Average per customer use**

Average per customer

Year	Residential kWh/Cust	GS<50 kWh/Cust	GS>50 kWh/Cust	GS>50 kW/Cust	USL kWh/Cust	USL kW/Cust		Street Lighting kW/Cust
2009	14,888	34,923	395,511	1,029	3,134	0	901	3
2010	15,644	34,507	406,278	1,049	3,130	0	908	3
2011	13,514	32,271	411,721	1,056	3,086	0	957	3
2012	12,919	28,313	406,778	1,108	3,307	0	947	3
2013	13,207	30,909	423,795	1,114	4,320	0	889	3
2014	12,975	30,294	404,586	1,042	4,320	0	487	1
2015	12,113	30,615	370,918	898	4,320	0	411	1
2016	11,403	29,800	361,531	1,211	4,320	0	412	1
2017	11,131	27,952	354,535	1,015	4,320	0	414	1
2018	11,768	28,816	351,351	870	4,320	0	414	1
2019	11,753	28,336	314,163	841	4,519	0	413	1
2020	11,511	28,718	315,811	846	4,727	0	413	1

6

7   The next section details a variance analysis of the utility's past and projected revenues.

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[13] MFR - With respect to average consumption, for each rate class, distributors are to provide weather-actual and weather-normalized average annual consumption or demand per customer as applicable for last OEB approved and historical, weather normalized average annual consumption or demand per customer for the bridge and test years, explanation of the net change in average consumption from last OEB-approved and actuals from historical, bridge and test years based on year-over-year variances and any apparent trends in data

1   ## 3.3.2 VARIANCE ANALYSIS OF DISTRIBUTION REVENUES[14]

2   The tables below provide details of the Final Customer and Volume Load Forecast for each of

3   the years. This summary of the billing determinants by rate class will be used to develop Hydro

4   2000's proposed rates.

5

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[14] MFR - For revenues - calculation of bridge year forecast of revenues at existing rates, calculation of test year forecasted revenues at existing and proposed rates, year-over-year variances in revenues comparing historical actuals and bridge and test year forecasts

1

Table 31 - Revenues at proposed rates

2020 Rates at 2020 Load								
	Revenue from Proposed Variable Charges							
Customer Class Name	**Variable Distribution Rate**	**per**	**Test Year Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0034	kWh	12,367,886	$41,850			$0.00	$41,850
General Service < 50 kW	$0.0105	kWh	3,861,286	$40,520			$0.00	$40,520
General Service > 50 to 4999 kW	$1.4590	kW	10,671	$15,569	0.60		$0.00	$15,569
Street Lighting	$7.4372	kW	421	$3,127			$0.00	$3,127
Unmetered Scattered Load	$0.0146	kWh	17,280	$252			$0.00	$252
Total Variable Revenue			**16,257,544**	**$101,318**	**0.6**	0	**$0.00**	**$101,318**

2020 Rates at 2020 Load							
	Revenue from Proposed Fixed Charges						
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$31.45	1,113	$419,876.37	$41,850	$461,727	90.94%	9.06%	79.45%
General Service < 50 kW	$24.14	141	$40,837.88	$40,520	$81,358	50.20%	49.80%	14.00%
General Service > 50 to 4999 kW	$84.54	13	$13,208.53	$15,569	$28,777	45.90%	54.10%	4.95%
Street Lighting	$1.27	370	$5,667.70	$3,127	$8,795	64.44%	35.56%	1.51%
Unmetered Scattered Load	$5.65	4	$271.13	$252	$523	51.83%	48.17%	0.09%
Total Fixed Revenue		**1,641**	**$479,861.62**	**$101,318**	**$581,180**		

2

3.4 OTHER REVENUES

1

3.4.1 OVERVIEW OF OTHER REVENUE

2

3   Other Distribution Revenues are revenues that are distribution related but are sourced from

4   means other than distribution rates. For this reason, other revenues are deducted from Hydro

5   2000's proposed revenue requirement. Further details on the derivation of the Revenue

6   Requirement is presented in Exhibit 6.

7   Other Distribution Revenues includes items such as:

8   • Specific Service Charges

9   • Late Payment Charges

10 • Other Distribution Revenues

11 • Other Income and Expenses

12 Hydro 2000 is not proposing to the MicroFit Service Charges.

OEB APPENDIX 2-H OTHER OPERATING REVENUES

13

14 A detailed breakdown by USoA account is shown in Table 37 - OEB Appendix 2-H presented on

15 the next page. Year over year variance analysis follow at Section 3.4.2 - Other Revenue Variance

16 Analysis.

1

Table 32 – OEB Appendix 2-H[15]

	Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP
		2012	2012	2012	2013	2014	2015	2016	2017	2018	2019	2020
	USoA Description	Board Approved										
4235	**4235-Miscellaneous Service Revenues**	-$4,032	-$8,518	-$8,518	-$8,115	-$8,202	$0	-$15,137	-$7,243	-$19,683	-$5,307	-$7,596
4225	**4225-Late Payment Charges**	-$6,120	-$5,973	-$5,973	-$6,789	-$8,542	-$9,103	-$10,385	-$10,604	-$7,953	-$5,453	-$6,337
4082	4082-Retail Services Revenues	-$3,663	-$2,029	-$2,029	-$2,141	-$2,184	-$2,141	-$2,080	-$5,761	-$5,758	-$3,563	-$3,119
4084	4084-Service Transaction Requests (STR) Revenues	-$75	-$1	-$1	-$2	-$2	-$3	-$2	$0	$0	-$1	-$1
4086	4086-SSS Administration Revenue	$0	$0	$0	-$3,563	-$3,607	-$3,762	-$3,631	$0	$0	-$3,681	-$3,766
4205	4205-Interdepartmental Rents	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
4210	4210-Rent from Electric Property	-$6,413	-$2,152	-$2,152	-$6,574	-$7,605	-$6,374	-$9,584	-$9,922	-$9,145	-$9,700	-$6,702
4220	4220-Other Electric Revenues	-$3,000	$0	$0	$0	$0	$0	$0	$0	$0	-$19,365	$0
4305	4305-Regulatory Debits	$0	$0	$0	$19,154	$3,130	$0	$0	$0	$0	$0	$0
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	$0	$0	$0	$0	-$8,283	-$2,400	$0	$0	$0	$0
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	$0	$0	$0	$2,750	$0	$0	$0	$0
4355	4355-Gain on Disposition of Utility and Other Property	$0	-$3,575	-$3,575	$0	$0	$0	$0	$0	$0	$0	$0
4360	4360-Loss on Disposition of Utility and Other Property	$0	$0	$0	$0	$0	$4,676	$6,442	$1,779	$5,517	$5,000	$0
4375	4375-Revenues from Non-Utility Operations	$0	$0	$0	$0	$0	-$79,954	-$41,394	-$19,745	-$29,687	-$28,136	-$19,090
4380	4380-Expenses of Non-Utility Operations	$0	$0	$0	$7,554	$0	$81,849	$31,456	$18,532	$29,845	$28,136	$19,090
4385	4385-Non-Utility Rental Income	$0	-$78,875	-$78,875	$584	-$23,668	$0	-$6,539	-$5,874	$1,461	$0	$0
4390	4390-Miscellaneous Non-Operating Income	$0	-$960	-$960	-$992	-$257	-$1,268	-$2,135	$0	-$598	-$1,857	-$243
4405	4405-Interest and Dividend Income	$0	-$6,924	-$6,924	-$20,618	-$7,765	-$7,036	-$6,584	-$7,993	-$13,059	-$567	-$592
	Total	-$23,303	-$109,009	-$109,009	-$21,502	-$58,702	-$31,398	-$31,398	-$31,398	-$31,398	-$31,398	-$28,356
	Specific Service Charges	-$4,032	-$8,518	-$8,518	-$8,115	-$8,202	$0	-$15,137	-$7,243	-$19,683	-$5,307	-$7,596
	Late Payment Charges	-$6,120	-$5,973	-$5,973	-$6,789	-$8,542	-$9,103	-$10,385	-$10,604	-$7,953	-$5,453	-$6,337
	Other Distribution/Operating Revenues	-$13,151	-$4,183	-$4,183	-$12,281	-$13,397	-$12,279	-$15,297	-$15,683	-$14,903	-$36,310	-$13,588
	Other Income or Deductions	$0	-$90,335	-$90,335	$5,683	-$28,560	-$10,016	-$18,404	-$13,302	-$6,521	$2,577	-$835
	Total	-$23,303	-$109,009	-$109,009	-$21,502	-$58,702	-$31,398	-$59,223	-$46,832	-$59,223	-$44,493	-$28,356

2

[15] MFR - Completed Appendix 2-H

3.4.2 OTHER REVENUE VARIANCE ANALYSIS[16]

Table 38 to 45 below presents year over year variances of other operating revenues:

Table 33 - Variance Analysis of Other Operating Revenues

2012 Board Approved – 2012 Actuals

	USoA Description	2012 Board Approved	2012	$	%
4235	**4235-Miscellaneous Service Revenues**	-$4,032	-$8,518	-$4,486	111.27%
4225	**4225-Late Payment Charges**	-$6,120	-$5,973	$147	2.40%
4082	4082-Retail Services Revenues	-$3,663	-$2,029	$1,634	44.60%
4084	4084-Service Transaction Requests (STR) Revenues	-$75	-$1	$74	98.33%
4086	4086-SSS Administration Revenue	$0	$0	$0	
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$6,413	-$2,152	$4,261	66.44%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	-$3,000	$0	$3,000	100.00%
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$0	$0	$0	
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	$0	$0	
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	-$3,575	-$3,575	
4360	4360-Loss on Disposition of Utility and Other Property	$0	$0	$0	
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	$0	$0	$0	
4380	4380-Expenses of Non-Utility Operations	$0	$0	$0	
4385	4385-Non-Utility Rental Income	$0	-$78,875	-$78,875	
4390	4390-Miscellaneous Non-Operating Income	$0	-$960	-$960	
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	$0	-$6,924	-$6,924	
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$23,303	-$109,009	-$85,706	$4

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[16] MFR - Variance analysis - year over year, historical, bridge and test

Specific Service Charges	-$4,032	-$8,518	-$4,486	111.27%
Late Payment Charges	-$6,120	-$5,973	$147	2.40%
Other Distribution/Operating Revenues	-$13,151	-$4,183	$8,968	68.19%
Other Income or Deductions	$0	-$90,335	-$90,335	
Total	-$23,303	-$109,009	-$85,706	367.79%

2012 Actual over 2012 Board Approved - The Other Revenues variance reflects an increase of $85,706. This decrease was for the most part due to the following:

Account 4235 includes 2011 Tariff Rates allocation for Rate Rider for Recovery of Late Payment Penalty Litigation Costs until April 30, 2012 @ $0.20 per customer for a total of $2,255.29; Disconnection charge $1,085; Collection Charge $999; NSF Charges $864; Set-up Fee (new account) $3,315.

In account 4210, the revenue from Eastlink was recorded twice in 2011 for approximately $4K. The average of 2011 ($10K) and 2012 ($2K) amounts to approximately $6K which is in line with the 2012 Board Approved.

Account 4385 shows a variance of -$78,875. To the best of the knowledge of Hydro 2000's current management the revenue of approximately $78,000 recorded in account 4385 in 2012 was the result of the disposition of rate rider revenue collected sometime during or prior to 2010. The details underpinning the apparent rider revenue are unknown to Hydro 2000's current management and will require further research into the history of Hydro 2000's approved rate riders in and before 2010, including, possibly, the assistance of Board Staff.

Table 34 - Variance Analysis of Other Operating Revenues

2012 Actual-2013 Actual

	USoA Description	2012	2013	$	%
4235	4235-Miscellaneous Service Revenues	-$8,518	-$8,115	$404	4.74%
4225	4225-Late Payment Charges	-$5,973	-$6,789	-$816	13.66%
4082	4082-Retail Services Revenues	-$2,029	-$2,141	-$112	5.52%
4084	4084-Service Transaction Requests (STR) Revenues	-$1	-$2	-$1	60.00%
4086	4086-SSS Administration Revenue	$0	-$3,563	-$3,563	
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$2,152	-$6,574	-$4,422	205.45%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	$0	$0	$0	
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$0	$19,154	$19,154	
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	

4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	$0	$0	
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	-$3,575	$0	$3,575	100.00%
4360	4360-Loss on Disposition of Utility and Other Property	$0	$0	$0	
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	$0	$0	$0	
4380	4380-Expenses of Non-Utility Operations	$0	$7,554	$7,554	
4385	4385-Non-Utility Rental Income	-$78,875	$584	$79,459	100.74%
4390	4390-Miscellaneous Non-Operating Income	-$960	-$992	-$31	3.27%
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$6,924	-$20,618	-$13,694	197.78%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$109,009	-$21,502	$87,507	80%
	Specific Service Charges	-$8,518	-$8,115	$404	4.74%
	Late Payment Charges	-$5,973	-$6,789	-$816	13.66%
	Other Distribution/Operating Revenues	-$4,183	-$12,281	-$8,098	193.60%
	Other Income or Deductions	-$90,335	$5,683	$96,018	106.29%
	Total	-$109,009	-$21,502	$87,507	80.28%

2013 Actual over 2012 Actual - The Other Revenues variance reflects a decrease of $87,505. This decrease was for the most part due to the following:

The balance in 4210 is normally $6K. In 2011, the balance was $10K and in 2012 $2K. The difference of $4K was recorded in 2011 instead of 2012.

The balance of $19,154 in account 4305 is the difference between the old and the new methods of amortization on tangible capital assets. The credit went into account 1576.

The amount in account 4380 is the expenses for a solar panel project which was considered. The project however never materialized.

The difference in account 4405 is due to carrying charges on variances. Some carrying charges go to account 4405 and some to account 6035 depending on whether it was a debit or credit. The balance also varies depending the balance of the variances.

Table 35 - Variance Analysis of Other Operating Revenues

2013 Actual-2014 Actual

		2013	2014	$	%
	USoA Description				
4235	**4235-Miscellaneous Service Revenues**	-$8,115	-$8,202	-$88	1.08%
4225	**4225-Late Payment Charges**	-$6,789	-$8,542	-$1,753	25.82%
4082	4082-Retail Services Revenues	-$2,141	-$2,184	-$43	1.98%
4084	4084-Service Transaction Requests (STR) Revenues	-$2	-$2	$0	0.00%
4086	4086-SSS Administration Revenue	-$3,563	-$3,607	-$44	1.23%
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$6,574	-$7,605	-$1,030	15.67%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	$0	$0	$0	
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$19,154	$3,130	-$16,024	83.66%
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	$0	$0	
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	$0	$0	
4360	4360-Loss on Disposition of Utility and Other Property	$0	$0	$0	
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	$0	$0	$0	
4380	4380-Expenses of Non-Utility Operations	$7,554	$0	-$7,554	100.00%
4385	4385-Non-Utility Rental Income	$584	-$23,668	-$24,252	4150.13%
4390	4390-Miscellaneous Non-Operating Income	-$992	-$257	$735	74.12%
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$20,618	-$7,765	$12,852	62.34%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$21,502	-$58,702	-$37,200	173%
	Specific Service Charges	-$8,115	-$8,202	-$88	1.08%
	Late Payment Charges	-$6,789	-$8,542	-$1,753	25.82%
	Other Distribution/Operating Revenues	-$12,281	-$13,397	-$1,116	9.09%
	Other Income or Deductions	$5,683	-$28,560	-$34,243	602.56%
	Total	-$21,502	-$58,702	-$37,200	173.01%

2014 Actual over 2013 Actual - The Other Revenues variance reflects an increase of $37,200. This
The increase in for the most part due to the following.

The amounts in account 4305 is the difference between the old and new method of amortization. The difference was less in 2014 because some items were fully amortized.

The amount in account 4385 is related to revenues related to Direct Lighting.

The difference in account 4405 is due to carrying charges on variances. Some carrying charges go to account 4405 and some to account 6035 depending on whether it was a debit or credit. The balance also varies depending the balance of the variances.

Table 36 - Variance Analysis of Other Operating Revenues

2014 Actual-2015 Actual

	USoA Description	2014	2015	$	%
4235	**4235-Miscellaneous Service Revenues**	-$8,202	$0	$8,202	100.00%
4225	**4225-Late Payment Charges**	-$8,542	-$9,103	-$561	6.57%
4082	4082-Retail Services Revenues	-$2,184	-$2,141	$43	1.97%
4084	4084-Service Transaction Requests (STR) Revenues	-$2	-$3	-$1	37.50%
4086	4086-SSS Administration Revenue	-$3,607	-$3,762	-$155	4.29%
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$7,605	-$6,374	$1,230	16.18%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	$0	$0	$0	
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$3,130	$0	-$3,130	100.00%
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	-$8,283	-$8,283	
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	$0	$0	
4360	4360-Loss on Disposition of Utility and Other Property	$0	$4,676	$4,676	
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	$0	-$79,954	-$79,954	
4380	4380-Expenses of Non-Utility Operations	$0	$81,849	$81,849	
4385	4385-Non-Utility Rental Income	-$23,668	$0	$23,668	100.00%
4390	4390-Miscellaneous Non-Operating Income	-$257	-$1,268	-$1,011	393.81%
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$7,765	-$7,036	$730	9.40%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$58,702	-$31,398	$27,303	47%

Specific Service Charges	-$8,202	$0	$8,202	100.00%
Late Payment Charges	-$8,542	-$9,103	-$561	6.57%
Other Distribution/Operating Revenues	-$13,397	-$12,279	$1,118	8.34%
Other Income or Deductions	-$28,560	-$10,016	$18,544	64.93%
Total	-$58,702	-$31,398	$27,303	46.51%

2015 Actual over 2014 Actual - The Other Revenues variance reflects a decrease of $27,304. This The decrease in for the most part due to the following:

The balance of $8,283 in 2015 should be in account 4235, not 4325.

The balances are similar. The amount in accounts 4375 and 4380 are revenues and expenses related to CDM programs. The net is an amount of $2K. Accounts 4375 and 4380 are related to CDM programs. Amounts varies from year to year depending on various factors such as government policy and customer participation.

The amount in account 4385 was only in 2014 (revenue from Direct Lighting). There were no amounts allocated to Direct Lighting in 2015. This amount should have been recorded in account 4375.

Table 37 - Variance Analysis of Other Operating Revenues

2015 Actual-2016 Actual

		2015	2016	$	%
	USoA Description				
4235	**4235-Miscellaneous Service Revenues**	$0	-$15,137	-$15,137	
4225	**4225-Late Payment Charges**	-$9,103	-$10,385	-$1,282	14.08%
4082	4082-Retail Services Revenues	-$2,141	-$2,080	$61	2.84%
4084	4084-Service Transaction Requests (STR) Revenues	-$3	-$2	$1	45.45%
4086	4086-SSS Administration Revenue	-$3,762	-$3,631	$131	3.47%
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$6,374	-$9,584	-$3,210	50.36%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	$0	$0	$0	
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$0	$0	$0	
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	-$8,283	-$2,400	$5,883	71.02%
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$2,750	$2,750	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	

4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	$0	$0	
4360	4360-Loss on Disposition of Utility and Other Property	$4,676	$6,442	$1,766	37.77%
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	-$79,954	-$41,394	$38,560	48.23%
4380	4380-Expenses of Non-Utility Operations	$81,849	$31,456	-$50,393	61.57%
4385	4385-Non-Utility Rental Income	$0	-$6,539	-$6,539	
4390	4390-Miscellaneous Non-Operating Income	-$1,268	-$2,135	-$868	68.45%
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$7,036	-$6,584	$452	6.42%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$31,398	-$31,398	$0	0%
	Specific Service Charges	$0	-$15,137	-$15,137	
	Late Payment Charges	-$9,103	-$10,385	-$1,282	14.08%
	Other Distribution/Operating Revenues	-$12,279	-$15,297	-$3,017	24.57%
	Other Income or Deductions	-$10,016	-$18,404	-$8,389	83.76%
	Total	-$31,398	-$59,223	-$27,824	88.62%

2016 Actual over 2015 Actual - The Other Revenues variance reflects an increase of $27,824. This increase was for the most part due to the following:

The balance of $8,283 in account 4325 in 2015 should be in account 4235. The balance for 4235 in 2016 is $9,434.

Accounts 4375 and 4380 are related to CDM programs. Amounts varies from year to year depending on various factors such as government policy and customer participation.

Table 38 - Variance Analysis of Other Operating Revenues

2016 Actual-2017 Actual

		2016	*2017*	*$*	*%*
	USoA Description				
4235	**4235-Miscellaneous Service Revenues**	-$15,137	-$7,243	$7,894	52.15%
4225	**4225-Late Payment Charges**	-$10,385	-$10,604	-$219	2.11%
4082	4082-Retail Services Revenues	-$2,080	-$5,761	-$3,681	176.97%
4084	4084-Service Transaction Requests (STR) Revenues	-$2	$0	$2	100.00%
4086	4086-SSS Administration Revenue	-$3,631	$0	$3,631	100.00%
4205	4205-Interdepartmental Rents	$0	$0	$0	

4210	4210-Rent from Electric Property	-$9,584	-$9,922	-$338	3.53%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	$0	$0	$0	
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$0	$0	$0	
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	-$2,400	$0	$2,400	100.00%
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$2,750	$0	-$2,750	100.00%
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	$0	$0	
4360	4360-Loss on Disposition of Utility and Other Property	$6,442	$1,779	-$4,663	72.39%
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	-$41,394	-$19,745	$21,649	52.30%
4380	4380-Expenses of Non-Utility Operations	$31,456	$18,532	-$12,924	41.09%
4385	4385-Non-Utility Rental Income	-$6,539	-$5,874	$664	10.16%
4390	4390-Miscellaneous Non-Operating Income	-$2,135	$0	$2,135	100.00%
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$6,584	-$7,993	-$1,409	21.40%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$59,223	-$31,398	$27,824	47%
	Specific Service Charges	-$15,137	-$7,243	$7,894	52.15%
	Late Payment Charges	-$10,385	-$10,604	-$219	2.11%
	Other Distribution/Operating Revenues	-$15,297	-$15,683	-$386	2.53%
	Other Income or Deductions	-$18,404	-$13,302	$5,102	27.72%
	Total	-$59,223	-$46,832	$12,391	20.92%

2017 Actual over 2016 Actual - The Other Revenues variance reflects a decrease of $12,391. This decrease was for the most part due to the following:

The variance in 2019 of $19,365 in Account 4220 with respect to Electric Revenues relates to the final reconciliation between HONI and Hydro 2000 concerning the elimination of load transfer agreements between the two companies in 2016, as documented in EB-2016-0194. Because, as part of the transfer of customers between companies, Hydro 2000 ended up with net additional customers, there was revenue collected from newly transferred Hydro 2000 customers in 2016

by HONI that was ultimately payable to Hydro 2000. The settlement of that revenue in the amount of $19,365 was finalized in 2019.

Table 39 - Variance Analysis of Other Operating Revenues

2017 Actual-2018 Actual

		2017	*2018*	*$*	*%*
	USoA Description				
4235	**4235-Miscellaneous Service Revenues**	-$7,243	-$19,683	-$12,440	171.75%
4225	**4225-Late Payment Charges**	-$10,604	-$7,953	$2,651	25.00%
4082	4082-Retail Services Revenues	-$5,761	-$5,758	$3	0.05%
4084	4084-Service Transaction Requests (STR) Revenues	$0	$0	$0	
4086	4086-SSS Administration Revenue	$0	$0	$0	
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$9,922	-$9,145	$777	7.83%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	$0	$0	$0	
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$0	$0	$0	
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	$0	$0	
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	$0	$0	
4360	4360-Loss on Disposition of Utility and Other Property	$1,779	$5,517	$3,738	210.17%
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	-$19,745	-$29,687	-$9,943	50.36%
4380	4380-Expenses of Non-Utility Operations	$18,532	$29,845	$11,313	61.05%
4385	4385-Non-Utility Rental Income	-$5,874	$1,461	$7,335	124.87%
4390	4390-Miscellaneous Non-Operating Income	$0	-$598	-$598	
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$7,993	-$13,059	-$5,066	63.38%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$46,832	-$31,398	$15,434	33%
	Specific Service Charges	-$7,243	-$19,683	-$12,440	171.75%
	Late Payment Charges	-$10,604	-$7,953	$2,651	25.00%
	Other Distribution/Operating Revenues	-$15,683	-$14,903	$780	4.97%
	Other Income or Deductions	-$13,302	-$6,521	$6,780	50.97%
	Total	-$46,832	-$59,223	-$2,229	26.46%

2018 Actual over 2017 Actual - The Other Revenues variance reflects an increase of $2,229. The variance is marginal and does not require any variance explanations.

Table 40 - Variance Analysis of Other Operating Revenues

2018 Actual-2019 Actual

	USoA Description	2018	2019	$	%
4235	**4235-Miscellaneous Service Revenues**	-$19,683	-$5,307	$14,377	73.04%
4225	**4225-Late Payment Charges**	-$7,953	-$5,453	$2,500	31.43%
4082	4082-Retail Services Revenues	-$5,758	-$3,563	$2,195	38.12%
4084	4084-Service Transaction Requests (STR) Revenues	$0	-$1	-$1	
4086	4086-SSS Administration Revenue	$0	-$3,681	-$3,681	
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$9,145	-$9,700	-$555	6.07%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	$0	-$19,365	-$19,365	
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$0	$0	$0	
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	$0	$0	
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	$0	$0	
4360	4360-Loss on Disposition of Utility and Other Property	$5,517	$5,000	-$517	9.37%
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	-$29,687	-$28,136	$1,552	5.23%
4380	4380-Expenses of Non-Utility Operations	$29,845	$28,136	-$1,709	5.73%
4385	4385-Non-Utility Rental Income	$1,461	$0	-$1,461	100.00%
4390	4390-Miscellaneous Non-Operating Income	-$598	-$1,857	-$1,259	210.74%
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$13,059	-$567	$12,493	95.66%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$49,060	-$31,398	$17,662	36%
	Specific Service Charges	-$19,683	-$5,307	$14,377	73.04%
	Late Payment Charges	-$7,953	-$5,453	$2,500	31.43%
	Other Distribution/Operating Revenues	-$14,903	-$36,310	-$21,407	143.64%
	Other Income or Deductions	-$6,521	$2,577	$9,098	139.51%
	Total	-$49,060	-$44,493	$4,568	9.31%

2019 Actual over 2018 Actual - The Other Revenues variance reflects a decrease of $4,568. The variance is marginal and does not require any variance explanations.

Table 41 - Variance Analysis of Other Operating Revenues

2019 Actual-2020 Actual

		2019	2020	$	%
	USoA Description				
4235	**4235-Miscellaneous Service Revenues**	-$5,307	-$7,596	-$2,289	43.14%
4225	**4225-Late Payment Charges**	-$5,453	-$6,337	-$884	16.21%
4082	4082-Retail Services Revenues	-$3,563	-$3,119	$444	12.47%
4084	4084-Service Transaction Requests (STR) Revenues	-$1	-$1	$0	0.00%
4086	4086-SSS Administration Revenue	-$3,681	-$3,766	-$85	2.31%
4205	4205-Interdepartmental Rents	$0	$0	$0	
4210	4210-Rent from Electric Property	-$9,700	-$6,702	$2,998	30.91%
4215	4215-Other Utility Operating Income	$0	$0	$0	
4220	4220-Other Electric Revenues	-$19,365	$0	$19,365	100.00%
4240	4240-Provision for Rate Refunds	$0	$0	$0	
4245	4245-Government Assistance Directly Credited to Income	$0	$0	$0	
4305	4305-Regulatory Debits	$0	$0	$0	
4310	4310-Regulatory Credits	$0	$0	$0	
4315	4315-Revenues from Electric Plant Leased to Others	$0	$0	$0	
4320	4320-Expenses of Electric Plant Leased to Others	$0	$0	$0	
4324	4324-Special Purpose Charge Recovery	$0	$0	$0	
4325	4325-Revenues from Merchandise Jobbing, Etc.	$0	$0	$0	
4330	4330-Costs and Expenses of Merchandising Jobbing, Etc.	$0	$0	$0	
4335	4335-Profits and Losses from Financial Instrument Hedges	$0	$0	$0	
4340	4340-Profits and Losses from Financial Instrument Investments	$0	$0	$0	
4345	4345-Gains from Disposition of Future Use Utility Plant	$0	$0	$0	
4350	4350-Losses from Disposition of Future Use Utility Plant	$0	$0	$0	
4355	4355-Gain on Disposition of Utility and Other Property	$0	$0	$0	
4360	4360-Loss on Disposition of Utility and Other Property	$5,000	$0	-$5,000	100.00%
4365	4365-Gains from Disposition of Allowances for Emission	$0	$0	$0	
4370	4370-Losses from Disposition of Allowances for Emission	$0	$0	$0	
4375	4375-Revenues from Non-Utility Operations	-$28,136	-$19,090	$9,046	32.15%
4380	4380-Expenses of Non-Utility Operations	$28,136	$19,090	-$9,046	32.15%
4385	4385-Non-Utility Rental Income	$0	$0	$0	
4390	4390-Miscellaneous Non-Operating Income	-$1,857	-$243	$1,614	86.91%
4395	4395-Rate-Payer Benefit Including Interest	$0	$0	$0	
4398	4398-Foreign Exchange Gains and Losses, Including Amortization	$0	$0	$0	
4405	4405-Interest and Dividend Income	-$567	-$592	-$25	4.46%
4415	4415-Equity in Earnings of Subsidiary Companies	$0	$0	$0	
other	other	$0	$0	$0	
other	other	$0	$0	$0	
	Total	-$44,493	-$28,356	$16,137	36%
	Specific Service Charges	-$5,307	-$7,596	-$2,289	43.14%
	Late Payment Charges	-$5,453	-$6,337	-$884	16.21%
	Other Distribution/Operating Revenues	-$36,310	-$13,588	$22,722	62.58%
	Other Income or Deductions	$2,577	-$835	-$3,412	132.41%
	Total	-$44,493	-$28,356	$16,137	36.27%

2020 Actual over 2019 Actual - The Other Revenues variance reflects a decrease of $16,137. The variance is marginal and does not require any variance explanations.

3.4.3 PROPOSED SPECIFIC SERVICE CHARGES[17]

Hydro 2000 is not proposing any changes to the current specific services charges including MicroFit service charge.

There are no classes or discrete customer groups that may be materially impacted by changes to other rates and charges.[18]

3.4.4 REVENUE FROM AFFILIATE TRANSACTIONS, SHARED SERVICES, CORPORATE COST ALLOCATION.

Hydro 2000 no longer has any affiliates and as such does not have any affiliate transactions, shared services and corporate cost allocation that will be affecting its 2020 rates.[19] Historical transactions are discussed in Exhibit 4 of this application.

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[17] MFR – Any new proposed specific service charges
[18] MFR - Distributors must identify any discrete customer groups that may be materially impacted by changes to other rates and charges
[19] MFR - Revenue from affiliate transactions, shared services, corporate cost allocation

APPENDICES

Appendix A	OEB Appendix 2-IB

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Appendix 2-IB
Customer, Connections, Load Forecast and Revenues Data and Analysis

This sheet is to be filled in accordance with the instructions documented in section 2.3.2 of Chapter 2 of the Filing Requirements for Distribution Rate Applications, in terms of one set of tables per customer class.

Color coding for Cells: Data input   Drop-down List

                              No data entry required   Blank or calculated value

Distribution System (Total)

	Calendar Year (for 2020 Cost of Service			Consumption (kWh) [3]		
				Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014		Actual	24,020,581.53	23,210,172.17	
Historical	2015		Actual	22,812,650.63	23,673,379.07	
Historical	2016		Actual	21,821,769.46	23,424,887.20	
Historical	2017		Actual	21,411,671.07	23,098,607.93	
Historical	2018		Actual	22,313,915.39	23,169,630.18	
Bridge Year	2019		Actual	21,857,813.00	21,629,284.20	
Test Year	2020		Forecast		21,913,746.25	

Variance Analysis		Year	Year-over-year		Versus OEB-approved
		2014			
		2015	-5.0%	2.0%	
		2016	-4.3%	-1.0%	
		2017	-1.9%	-1.4%	
		2018	4.2%	0.3%	
		2019	-2.0%	-6.6%	
		2020	-100.0%	1.3%	
		Geometric Mean	-2.4%	-1.1%	

Customer Class Analysis (one for each Customer Class, excluding MicroFIT and Standby)

| 1 | Customer Class: | Residential | | Is the customer class billed on consumption (kWh) or demand (kW or kVA)? | kWh |

	Calendar Year (for 2020 Cost of Service)	Customers				Consumption (kWh) [3]					Consumption (kWh) per Customer		
						Actual (Weather actual)	Weather-normalized	Weather-normalized			Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual	1,072		Actual	13,907,110.00	13,907,110.00			Actual	12,974.56	12,974.56	
Historical	2015	Actual	1,075		Actual	13,022,914.00	13,022,914.00			Actual	12,112.61	12,112.61	
Historical	2016	Actual	1,068		Actual	12,346,401.00	12,346,401.00			Actual	11,564.81	11,564.81	
Historical	2017	Actual	1,083		Actual	12,078,410.04	12,078,410.04			Actual	11,155.31	11,155.31	
Historical	2018	Actual	1,085		Actual	12,791,618.00	12,791,618.00			Actual	11,788.60	11,788.60	
Bridge Year	2019	Actual	1,087		Actual	12,775,525.00	12,775,525.00			Actual	11,753.01	11,753.01	
Test Year	2020	Forecast	1,113		Forecast		12,657,111.65			Forecast	0.00	11,372.07	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved
	2014			2014				2014			
	2015	0.3%		2015	-6.4%	-6.4%		2015	-6.6%	-6.6%	
	2016	-0.7%		2016	-5.2%	-5.2%		2016	-4.5%	-4.5%	
	2017	1.4%		2017	-2.2%	-2.2%		2017	-3.5%	-3.5%	
	2018	0.2%		2018	5.9%	5.9%		2018	5.7%	5.7%	
	2019	0.2%		2019	-0.1%	-0.1%		2019	-0.3%	-0.3%	
	2020	2.4%		2020		-0.9%		2020		-3.2%	
	Geometric Mean	0.8%		Geometric Mean	-2.7%	-1.9%		Geometric Mean	-3.1%	-2.6%	

	Calendar Year (for 2020 Cost of Service)	Revenues		Test Year Versus OEB-approved
Historical	2014	Actual	$ 394,647	
Historical	2015	Actual	$ 387,194	
Historical	2016	Actual	$ 382,726	
Historical	2017	Actual	$ 397,059	
Historical	2018	Actual	$ 404,168	
Bridge Year (Foreca	2019	Actual	$ 417,309	
Test Year (Forecast	2020	Forecast	$ 461,220	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015	-1.9%	
	2016	-1.2%	
	2017	3.7%	
	2018	1.8%	
	2019	3.3%	
	2020	10.5%	
	Geometric Mean	3.2%	

2 Customer Class: GS<50kWh   Is the customer class billed on consumption (kWh) or demand (kW or kVA)?   kWh

	Calendar Year (for 2020 Cost of Service)	Customers				Consumption (kWh) [3]				Consumption (kWh) per Customer		
						Actual (Weather actual)	Weather-normalized	Weather-normalized		Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual	142		Actual	4,287,878.00	4,287,878.00		Actual	30,294.10	30,294.10	
Historical	2015	Actual	142		Actual	4,333,237.00	4,333,237.00		Actual	30,615.26	30,615.26	
Historical	2016	Actual	143		Actual	4,261,434.00	4,261,434.00		Actual	29,800.24	29,800.24	
Historical	2017	Actual	142		Actual	3,971,545.42	3,971,545.42		Actual	27,952.23	27,952.23	
Historical	2018	Actual	141		Actual	4,062,996.00	4,062,996.00		Actual	28,815.57	28,815.57	
Bridge Year	2019	Actual	141		Actual	3,995,372.00	3,995,372.00		Actual	28,335.97	28,335.97	
Test Year	2020	Forecast	141		Forecast		4,049,206.92		Forecast	0.00	28,717.78	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved
	2014			2014				2014			
	2015	0.0%		2015	1.1%	1.1%		2015	1.1%	1.1%	
	2016	1.0%		2016	-1.7%	-1.7%		2016	-2.7%	-2.7%	
	2017	-0.6%		2017	-6.8%	-6.8%		2017	-6.2%	-6.2%	
	2018	-0.8%		2018	2.3%	2.3%		2018	3.1%	3.1%	
	2019	0.0%		2019	-1.7%	-1.7%		2019	-1.7%	-1.7%	
	2020	0.0%		2020		1.3%		2020		1.3%	
	Geometric Mean	-0.1%		Geometric Mean	-1.8%	-1.1%		Geometric Mean	-1.7%	-1.1%	

	Calendar Year (for 2020 Cost of Service)	Revenues			Test Year Versus OEB-approved
Historical	2014	Actual	$	77,830	
Historical	2015	Actual	$	79,169	
Historical	2016	Actual	$	78,868	
Historical	2017	Actual	$	77,232	
Historical	2018	Actual	$	77,837	
Bridge Year (Foreca	2019	Actual	$	78,081	
Test Year (Forecast	2020	Forecast	$	81,729	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015	1.7%	
	2016	-0.4%	
	2017	-2.1%	
	2018	0.8%	
	2019	0.3%	
	2020	4.7%	
	Geometric Mean	1.0%	

3   Customer Class: GS>50kW   Is the customer class billed on consumption (kWh) or demand (kW or kVA)?   kW

	Calendar Year (for 2020 Cost of Service	Customers				Consumption (kW) [3]				Consumption (kWh) per Customer		
							Actual (Weather actual)	Weather-normalized	Weather-normalized		Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual	11		Actual	11,224.00	11,224.00		Actual	1,020.36	1,020.36	
Historical	2015	Actual	11		Actual	10,150.80	10,150.80		Actual	922.80	922.80	
Historical	2016	Actual	11		Actual	13,326.00	13,326.00		Actual	1,211.45	1,211.45	
Historical	2017	Actual	12		Actual	12,007.12	12,007.12		Actual	1,000.59	1,000.59	
Historical	2018	Actual	12		Actual	10,588.70	10,588.70		Actual	882.39	882.39	
Bridge Year	2019	Actual	13		Actual	10,938.60	10,938.60		Actual	841.43	841.43	
Test Year	2020	Forecast	13		Forecast		11,012.85		Forecast	0.00	847.14	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved
	2014			2014				2014			
	2015	0.0%		2015	-9.6%	-9.6%		2015	-9.6%	-9.6%	
	2016	0.0%		2016	31.3%	31.3%		2016	31.3%	31.3%	
	2017	9.1%		2017	-9.9%	-9.9%		2017	-17.4%	-17.4%	
	2018	0.0%		2018	-11.8%	-11.8%		2018	-11.8%	-11.8%	
	2019	8.3%		2019	3.3%	3.3%		2019	-4.6%	-4.6%	
	2020	0.0%		2020		0.7%		2020		0.7%	
	Geometric Mean	3.4%		Geometric Mean	-1.9%	-0.4%		Geometric Mean	-4.7%	-3.7%	

	Calendar Year (for 2020 Cost of Service	Revenues		
Historical	2014	Actual	$	15,929
Historical	2015	Actual	$	14,616
Historical	2016	Actual	$	19,122
Historical	2017	Actual	$	17,538
Historical	2018	Actual	$	15,497
Bridge Year (Foreca	2019	Actual	$	29,193
Test Year (Forecast	2020	Forecast	$	28,851

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015	-8.2%	
	2016	30.8%	
	2017	-8.3%	
	2018	-11.6%	
	2019	88.4%	
	2020	-1.2%	
	Geometric Mean	12.6%	

4 Customer Class: Unmettered Scattered Load   Is the customer class billed on consumption (kWh) or demand (kW or kVA)?   kWh

	Calendar Year (for 2020 Cost of Service	Customers			Consumption (kWh) [3] Actual (Weather actual)	Weather-normalized	Weather-normalized		Consumption (kWh) per Customer Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual	4		Actual 17,280.00	17,280.00		Actual	4,320.00	4,320.00	
Historical	2015	Actual	4		Actual 17,280.00	17,280.00		Actual	4,320.00	4,320.00	
Historical	2016	Actual	4		Actual 17,280.00	17,280.00		Actual	4,320.00	4,320.00	
Historical	2017	Actual	4		Actual 17,280.00	17,280.00		Actual	4,320.00	4,320.00	
Historical	2018	Actual	4		Actual 17,280.00	17,280.00		Actual	4,320.00	4,320.00	
Bridge Year	2019	Actual	4		Actual 17,280.00	17,280.00		Actual	4,320.00	4,320.00	
Test Year	2020	Forecast	4		Forecast	17,280.00		Forecast	0.00	4,320.00	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved	Year	Year-over-year		Test Year Versus OEB-approved
	2014			2014				2014			
	2015	0.0%		2015	0.0%	0.0%		2015	0.0%	0.0%	
	2016	0.0%		2016	0.0%	0.0%		2016	0.0%	0.0%	
	2017	0.0%		2017	0.0%	0.0%		2017	0.0%	0.0%	
	2018	0.0%		2018	0.0%	0.0%		2018	0.0%	0.0%	
	2019	0.0%		2019	0.0%	0.0%		2019	0.0%	0.0%	
	2020	0.0%		2020		0.0%		2020		0.0%	
	Geometric Mean	0.0%		Geometric Mean	0.0%	0.0%		Geometric Mean	0.0%	0.0%	

	Calendar Year (for 2020 Cost of Service	Revenues	
Historical	2014	Actual	$ 1,454
Historical	2015	Actual	$ 1,474
Historical	2016	Actual	$ 1,474
Historical	2017	Actual	$ 1,498
Historical	2018	Actual	$ 1,498
Bridge Year (Foreca	2019	Actual	$ 1,485
Test Year (Forecast	2020	Forecast	$ 518

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015	1.4%	
	2016	0.0%	
	2017	1.6%	
	2018	0.0%	
	2019	-0.8%	
	2020	-65.1%	
	Geometric Mean	-18.6%	

5 Customer Class: Streetlighting

Is the customer class billed on consumption (kWh) or demand (kW or kVA)?   kW

	Calendar Year (for 2020 Cost of Service)	Customers		
Historical	2014	Actual	369	
Historical	2015	Actual	370	
Historical	2016	Actual	370	
Historical	2017	Actual	370	
Historical	2018	Actual	370	
Bridge Year	2019	Actual	370	
Test Year	2020	Forecast	370	

	Consumption (kWh) [3]		
	Actual (Weather actual)	Weather-normalized	Weather-normalized
Actual	512.00	512.00	
Actual	420.00	420.00	
Actual	420.00	420.00	
Actual	420.00	420.00	
Actual	420.00	420.00	
Actual	420.00	420.00	
Forecast		421.00	

	Consumption (kWh) per Customer		
	Actual (Weather actual)	Weather-normalized	Weather-normalized
Actual	1.39	1.39	
Actual	1.14	1.14	
Actual	1.14	1.14	
Actual	1.14	1.14	
Actual	1.14	1.14	
Actual	1.14	1.14	
Forecast	0.00	1.14	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015	0.3%	
	2016	0.0%	
	2017	0.0%	
	2018	0.0%	
	2019	0.0%	
	2020	0.0%	
	Geometric Mean	0.1%	

Variance Analysis	Year	Year-over-year		Test Year Versus OEB-approved
	2014			
	2015	-18.0%	-18.0%	
	2016	0.0%	0.0%	
	2017	0.0%	0.0%	
	2018	0.0%	0.0%	
	2019	0.0%	0.0%	
	2020		0.2%	
	Geometric Mean	-6.4%	-3.8%	

Variance Analysis	Year	Year-over-year		Test Year Versus OEB-approved
	2014			
	2015	-18.2%	-18.2%	
	2016	0.0%	0.0%	
	2017	0.0%	0.0%	
	2018	0.0%	0.0%	
	2019	0.0%	0.0%	
	2020		0.2%	
	Geometric Mean	-6.5%	-3.9%	

	Calendar Year (for 2020 Cost of Service)	Revenues	
Historical	2014	Actual	$ 34,497
Historical	2015	Actual	$ 34,415
Historical	2016	Actual	$ 34,415
Historical	2017	Actual	$ 34,965
Historical	2018	Actual	$ 34,965
Bridge Year (Foreca	2019	Actual	$ 8,616
Test Year (Forecast	2020	Forecast	$ 8,837

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015	-0.2%	
	2016	0.0%	
	2017	1.6%	
	2018	0.0%	
	2019	-75.4%	
	2020	2.6%	
	Geometric Mean	-23.8%	

6 Customer Class: | Is the customer class billed on consumption (kWh) or demand (kW or kVA)? | kWh

	Calendar Year (for 2020 Cost of Service)	Customers			Consumption (kWh) [3]			Consumption (kWh) per Customer		
					Actual (Weather actual)	Weather-normalized	Weather-normalized	Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual			Actual			Actual		
Historical	2015	Actual			Actual			Actual		
Historical	2016	Actual			Actual			Actual		
Historical	2017	Actual			Actual			Actual		
Historical	2018	Actual			Actual			Actual		
Bridge Year	2019	Actual			Actual			Actual		
Test Year	2020	Forecast			Forecast			Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved
	2014			2014			2014		
	2015			2015			2015		
	2016			2016			2016		
	2017			2017			2017		
	2018			2018			2018		
	2019			2019			2019		#VALUE!
	2020			2020			2020		
	Geometric Mean			Geometric Mean			Geometric Mean		

	Calendar Year (for 2020 Cost of Service)	Revenues		
Historical	2014	Actual		
Historical	2015	Actual		
Historical	2016	Actual		
Historical	2017	Actual		
Historical	2018	Actual		
Bridge Year (Foreca	2019	Actual		
Test Year (Forecast	2020	Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015		
	2016		
	2017		
	2018		
	2019		
	2020		
	Geometric Mean		

7 Customer Class: [   ]   Is the customer class billed on consumption (kWh) or demand (kW or kVA)?   [kWh]

	Calendar Year (for 2020 Cost of Service)	Customers		
Historical	2014	Actual		
Historical	2015	Actual		
Historical	2016	Actual		
Historical	2017	Actual		
Historical	2018	Actual		
Bridge Year	2019	Actual		
Test Year	2020	Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015		
	2016		
	2017		
	2018		
	2019		
	2020		
	Geometric Mean		

	Consumption (kWh) [3]		
	Actual (Weather actual)	Weather-normalized	Weather-normalized
Actual			
Actual			
Actual			
Actual			
Actual			
Actual			
Forecast			

Year	Year-over-year	Test Year Versus OEB-approved
2014		
2015		
2016		
2017		
2018		
2019		
2020		
Geometric Mean		

	Consumption (kWh) per Customer		
	Actual (Weather actual)	Weather-normalized	Weather-normalized
Actual			
Actual			
Actual			
Actual			
Actual			
Actual			
Forecast			

Year	Year-over-year	Test Year Versus OEB-approved
2014		
2015		
2016		
2017		
2018		
2019	#VALUE!	
2020		
Geometric Mean		

	Calendar Year (for 2020 Cost of Service)	Revenues		
Historical	2014	Actual		
Historical	2015	Actual		
Historical	2016	Actual		
Historical	2017	Actual		
Historical	2018	Actual		
Bridge Year (Foreca	2019	Actual		
Test Year (Forecast	2020	Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015		
	2016		
	2017		
	2018		
	2019		
	2020		
	Geometric Mean		

8 Customer Class: [   ]   Is the customer class billed on consumption (kWh) or demand (kW or kVA)?   [kWh]

	Calendar Year (for 2020 Cost of Service)	Customers			Consumption (kWh) [3]			Consumption (kWh) per Customer		
					Actual (Weather actual)	Weather-normalized	Weather-normalized	Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual			Actual			Actual		
Historical	2015	Actual			Actual			Actual		
Historical	2016	Actual			Actual			Actual		
Historical	2017	Actual			Actual			Actual		
Historical	2018	Actual			Actual			Actual		
Bridge Year	2019	Actual			Actual			Actual		
Test Year	2020	Forecast			Forecast			Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved
	2014			2014			2014		
	2015			2015			2015		
	2016			2016			2016		
	2017			2017			2017		
	2018			2018			2018		
	2019			2019			2019	#VALUE!	
	2020			2020			2020		
	Geometric Mean			Geometric Mean			Geometric Mean		

	Calendar Year (for 2020 Cost of Service)	Revenues		
Historical	2014	Actual		
Historical	2015	Actual		
Historical	2016	Actual		
Historical	2017	Actual		
Historical	2018	Actual		
Bridge Year (Foreca	2019	Actual		
Test Year (Forecast	2020	Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015		
	2016		
	2017		
	2018		
	2019		
	2020		
	Geometric Mean		

9 Customer Class: [_____] Is the customer class billed on consumption (kWh) or demand (kW or kVA)? [kWh]

	Calendar Year (for 2020 Cost of Service	Customers			Consumption (kWh) [3] Actual (Weather actual)	Weather-normalized	Weather-normalized	Consumption (kWh) per Customer Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual			Actual			Actual		
Historical	2015	Actual			Actual			Actual		
Historical	2016	Actual			Actual			Actual		
Historical	2017	Actual			Actual			Actual		
Historical	2018	Actual			Actual			Actual		
Bridge Year	2019	Actual			Actual			Actual		
Test Year	2020	Forecast			Forecast			Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved
	2014			2014			2014		
	2015			2015			2015		
	2016			2016			2016		
	2017			2017			2017		
	2018			2018			2018		
	2019			2019			2019		#VALUE!	
	2020			2020			2020		
	Geometric Mean			Geometric Mean			Geometric Mean		

	Calendar Year (for 2020 Cost of Service	Revenues		
Historical	2014	Actual		
Historical	2015	Actual		
Historical	2016	Actual		
Historical	2017	Actual		
Historical	2018	Actual		
Bridge Year (Foreca	2019	Actual		
Test Year (Forecast	2020	Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015		
	2016		
	2017		
	2018		
	2019		
	2020		
	Geometric Mean		

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10 Customer Class: _____   Is the customer class billed on consumption (kWh) or demand (kW or kVA)? | kWh |

	Calendar Year (for 2020 Cost of Service	Customers			Consumption (kWh) [3]				Consumption (kWh) per Customer		
					Actual (Weather actual)	Weather-normalized	Weather-normalized		Actual (Weather actual)	Weather-normalized	Weather-normalized
Historical	2014	Actual			Actual				Actual		
Historical	2015	Actual			Actual				Actual		
Historical	2016	Actual			Actual				Actual		
Historical	2017	Actual			Actual				Actual		
Historical	2018	Actual			Actual				Actual		
Bridge Year	2019	Actual			Actual				Actual		
Test Year	2020	Forecast			Forecast				Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved	Year	Year-over-year	Test Year Versus OEB-approved
	2014			2014			2014		
	2015			2015			2015		
	2016			2016			2016		
	2017			2017			2017		
	2018			2018			2018		
	2019			2019			2019	#VALUE!	
	2020			2020			2020		
	Geometric Mean			Geometric Mean			Geometric Mean		

	Calendar Year (for 2020 Cost of Service	Revenues		
Historical	2014	Actual		
Historical	2015	Actual		
Historical	2016	Actual		
Historical	2017	Actual		
Historical	2018	Actual		
Bridge Year (Foreca	2019	Actual		
Test Year (Forecast	2020	Forecast		

Variance Analysis	Year	Year-over-year	Test Year Versus OEB-approved
	2014		
	2015		
	2016		
	2017		
	2018		
	2019		
	2020		
	Geometric Mean		

Note: If there are more than ten (10) customer classes, please contact OEB Staff to add tables for additional customer classes.