

EXHIBIT 3:

OPERATING REVENUE

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2.3 EXHIBIT 3: OPERATING REVENUE

2.3.1 LOAD AND REVENUE FORECASTS

This Exhibit provides the details of Espanola Regional Hydro Distribution Corporation's ("ERHDC") operating revenue for 2012 Board Approved, 2017 Actual, 2018 Actual, 2019 Actual, 2020 Bridge Year ("Bridge Year") and the 2021 Test Year ("Test Year"). This Exhibit also provides a detailed variance analysis by rate classification of the operating revenue components. Distribution revenue excludes revenue from commodity sales.

ERHDC is proposing a total Service Revenue Requirement of \$2,272,419 for the 2021 Test Year. This amount includes a Base Revenue Requirement of \$2,071,003 plus Other Revenue of \$201,416.

Other Revenue include Late Payment charges, Specific Service charges, Rent from Electric Property, Miscellaneous Service revenues, Standard Supply Service ("SSS") Administrative charges and Interest. A summary of these operating revenues is presented with a materiality analysis of variances.

The following Table 3-1 summarizes ERHDC's total operating revenue. Revenue for each of the actual years is from ERHDC's audited Financial Statements. The Test Year is provided on the basis of both existing and proposed distribution rates. 2021 Test Year Revenue shown here is based on what revenues will look like in year 5. See rate mitigation section for explanation of phased in cost allocation approach for the progression of distribution revenues from year 1 to year 5.

Table 3 - 1: Summary of Operating Revenue

Description	2012 OEB Approved	2012 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test Year - Existing Rates	2021 Test Year - Proposed Rates
<u>Distribution Revenues</u>								
Residential	999,289	875,287	973,236	1,026,251	1,026,295	1,046,479	1,046,199	1,381,388
General Service < 50 kW	349,008	345,854	327,071	317,076	329,968	328,427	322,632	412,129
General Service 50 to 4,999 kW	222,980	186,096	217,052	211,545	206,720	213,972	217,041	245,332
Sentinel Lighting	1,748	1,246	1,999	1,992	1,992	1,802	1,805	2,869
Street Lighting	67,007	49,588	53,023	52,947	52,944	35,633	35,633	23,029
Unmetered Scattered Load	7,784	3,310	5,464	5,464	5,464	4,963	4,898	6,257
Distribution Revenue	1,647,816	1,461,380	1,577,845	1,615,275	1,623,383	1,631,276	1,628,208	2,071,003
<u>Other Revenue</u>								
SSS Admin Charges	10,900	12,342	10,418	10,543	10,598	10,500	10,500	10,500
Late Payment Charges	16,700	6,421	11,050	10,071	11,797	12,000	10,000	10,000
Specific Service Charges	68,500	68,517	37,568	33,631	35,872	15,050	15,050	15,050
Other Distribution Revenue	38,000	44,765	43,810	44,304	47,525	48,774	95,866	95,866
Other Income and Expenses	8,299	19,665	45,508	72,074	128,673	70,000	70,000	70,000
Other Revenue	142,399	151,710	148,353	170,623	234,465	156,324	201,416	201,416
Total Operating Revenue	1,790,215	1,613,090	1,726,198	1,785,897	1,857,848	1,787,600	1,829,624	2,272,419

(a) Summary of Load and Customer/Connection Forecast

The purpose of this evidence is to present the process used by ERHDC to prepare the weather normalized load and customer/connection forecast used to design the proposed 2021 distribution rates. This section explains the causes, assumptions and adjustments for volume forecast.

In summary, as a starting point, ERHDC used the same regression analysis methodology approved by the Ontario Energy Board in its 2012 Cost of Service (“COS”) application (EB-2011-0319) and updated the analysis for actual power purchases to the end of the 2019. The updated regression analysis included heating and cooling degree days, spring fall flag, and number of days in the month. The regression analysis methodology used in this application has also been used by a number of distributors in more recent cost of service rate applications to determine the forecasted volume. With regards to the overall process of load forecasting, ERHDC believes that conducting a regression analysis on historical electricity purchases to produce an equation that will predict purchases is appropriate. ERHDC has the data for the amount of electricity (in kWh) purchased from Hydro One for use by ERHDC's customers. No assumptions including economic assumptions were used. With a regression analysis, these

purchases can be related to other monthly explanatory variables such as heating degree days and cooling degree days which occur in the same month. The results of the regression analysis produce an equation that predicts the purchases based on the explanatory variables. This prediction model is then used as the basis to forecast the total level of weather normalized purchases for the Bridge and the Test Year which is converted to billed kWh and kW, where applicable, by rate class. A detailed explanation of the process is provided later in this evidence. A live Excel file named “ERHDC_2021 Load Forecast Model - With Regression Analysis_20201231” has also been provided.

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

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

Table 3 - 2: Summary of Weather Normalized Load and Customer/Connection Forecast

Year	Billed (GWh)	Growth (GWh)	Percent Change	Customer/ Connection Count	Growth		Percent Change (%)
Billed Energy (GWh) and Customer Count / Connections							
2012 Board Approved	62.2			4,410			
2010 Actual	60.8			4,392			
2011 Actual	61.4	0.6	1.0%	4,392	0.0		0.0%
2012 Actual	60.3	(1.1)	(1.8%)	4,383	(9.0)		(0.2%)
2013 Actual	61.4	1.1	1.9%	4,400	17.0		0.4%
2014 Actual	61.2	(0.2)	(0.3%)	4,399	(1.0)		(0.0%)
2015 Actual	58.5	(2.7)	(4.4%)	4,402	3.0		0.1%
2016 Actual	56.5	(2.1)	(3.6%)	4,395	(7.0)		(0.2%)
2017 Actual	54.9	(1.6)	(2.8%)	4,399	4.0		0.1%
2018 Actual	57.1	2.2	4.1%	4,411	12.0		0.3%
2019 Actual	57.5	0.4	0.6%	4,417	6.0		0.1%
2020 Bridge - Projected*	58.9	1.4	2.4%	4,154	(263.2)		(6.0%)
2021 Test - Normalized	58.7	(0.2)	(0.3%)	4,154	0.2		0.0%

*the 2020 projection for Streetlights results in a drop of 263 connections. This is due to a change in methodology from number of devices to number of connections.

1 In the above Table 3-2, the billed GWh data from 2010 to 2019 reflects actual weather and weather
2 normal conditions in each year. The weather normal values are the actual values adjusted by the weather
3 normal conversion factor set out in Table 3-8. The weather conversion factor is determined consistent
4 with the approach outlined by the Board in Appendix 2-IA. For 2020 and 2021, the forecasted billed
5 GWh is on a weather normal basis.

6 Customer/Connection values are on an average basis and street lights and sentinel lights are measured
7 as connections. The historical connection values for street lights have been measured as devices. For
8 the 2020 Bridge Year and 2021 Test Year Street Lights have been updated from number of devices to
9 number of connections. Therefore, you see that large drop from 1062 devices to 799 connections.

10 On a rate class basis, the actual and forecasted billed amounts are shown in Table 3-3. Actual volumes
11 have been weather normalized by rate class using the weather normal conversion factor from Table 3-
12 7 The actual and forecasted number of customers/connections is shown in Table 3-4. The Street Light
13 class see a significant reduction in the number of devices to the number of connections. In order to
14 ensure an accurate prediction of total purchases, historical total purchases were used to predict
15 consumption for all classes except Street Light. Street Light class was manually adjusted after the
16 regression to accommodate an update count and load profile completed in October 2020. The results
17 are provided in Table 3-5. The customer/connection usage on an actual and weather normal basis is
18 shown in Table 3-6.

Table 3 - 3: Billed GWh by Rate Class

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights		Unmetered Scattered Load	Total
Billed Energy (GWh)								
2012 Board Approved	32.7	11.3	17.4	0.0242	0.6		0.2	62.2
2010 Actual	31.2	11.6	17.2	0.025	0.6		0.2	60.8
2011 Actual	31.7	11.9	16.9	0.026	0.6		0.2	61.4
2012 Actual	30.8	11.7	17.0	0.026	0.6		0.1	60.3
2013 Actual	32.6	11.2	16.9	0.026	0.6		0.1	61.4
2014 Actual	32.9	10.7	17.1	0.026	0.4		0.1	61.2
2015 Actual	31.0	10.4	16.7	0.025	0.4		0.1	58.5
2016 Actual	29.5	10.1	16.4	0.025	0.3		0.1	56.5
2017 Actual	28.9	9.9	15.6	0.024	0.3		0.1	54.9
2018 Actual	31.1	10.2	15.4	0.024	0.3		0.1	57.1
2019 Actual	31.8	10.3	14.9	0.024	0.3		0.1	57.5
2020 Bridge - Normalized	32.7	10.4	15.4	0.024	0.2		0.1	58.9
2021 Test - Normalized	32.6	10.2	15.5	0.024	0.2		0.1	58.7

Table 3 - 4: Number of Customers/Connections

Number of Customers/Connections								
2012 Board Approved	2,847	425	27	26	1,053	32		4,410
2010 Actual	2,850	425	25	26	1,045	21		4,392
2011 Actual	2,847	425	25	26	1,048	21		4,392
2012 Actual	2,857	402	29	26	1,048	21		4,383
2013 Actual	2,858	401	29	27	1,064	21		4,400
2014 Actual	2,857	402	29	26	1,064	21		4,399
2015 Actual	2,856	406	29	30	1,064	21		4,406
2016 Actual	2,861	393	29	25	1,065	21		4,394
2017 Actual	2,872	388	28	34	1,065	21		4,408
2018 Actual	2,888	388	27	34	1,062	21		4,420
2019 Actual	2,901	380	28	25	1,062	21		4,417
2020 Bridge - Normalized	2,905	375	29	25	799	21		4,154
2021 Test - Normalized	2,910	369	30	25	799	21		4,154

Table 3 - 5: Weather Corrected Forecast

Year	Total	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load
2020	58,878,258	32,702,467	10,389,919	15,417,468	24,151	224,919	119,334
2021	58,793,724	32,706,054	10,211,911	15,511,400	24,258	224,919	115,182
USED	58,677,605	32,639,692	10,191,190	15,482,365	24,258	224,919	115,182

Table 3 - 6: Annual Usage per Customer/Connection by Rate Class

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights		Unmetered Scattered Load
Energy Usage per Customer/Connection (kWh per customer/connection)							
2012 Board Approved	11,479	26,508	646,029	929	592		6,665
2010 Actual	10,957	27,231	686,415	965	589		8,097
2011 Actual	11,135	28,069	677,947	995	585		8,089
2012 Actual	10,766	29,180	587,639	989	590		6,246
2013 Actual	11,409	27,911	581,036	954	580		6,292
2014 Actual	11,512	26,736	589,376	991	346		5,887
2015 Actual	10,842	25,601	574,816	949	348		5,887
2016 Actual	10,303	25,757	564,761	945	321		5,887
2017 Actual	10,055	25,555	556,818	969	320		5,887
2018 Actual	10,753	26,343	568,781	969	321		5,887
2019 Actual	10,954	27,018	533,912	969	321		5,887
2020 Bridge - Normalized	11,256	27,739	532,405	970	282		5,683
2021 Test - Normalized	11,216	27,618	516,079	970	282		5,485

A copy of the completed Appendix 2-IB is included in this Exhibit at Appendix 3-B.

2.3.1.1 Multivariate Regression Model

In summary, as a starting point, ERHDC used the same regression analysis methodology approved by the Ontario Energy Board in its 2012 Cost of Service (“COS”) application (EB-2011-0319) and updated the analysis for actual power purchases to the end of 2019.

ERHDC’s weather normalized load forecast is developed in a three-step process. First, a total system weather normalized purchased forecast is developed based on a regression analysis that incorporates variables that impact ERHDC usage. Total System weather normalized purchases includes amounts from Hydro One and embedded generation. Second, the weather normalized purchased forecast is adjusted by a historical loss factor to produce a weather normalized billed forecast. Finally, the forecast of billed energy by rate class is developed based on a forecast of customer numbers and historical usage patterns per customer. For the rate classes that have weather sensitive load, their forecasted billed energy is adjusted to ensure that the total billed energy forecast by rate class is equivalent to the total weather normalized billed energy forecast. The forecast of customers by rate class is determined using a geometric mean analysis and judgment of ERHDC. For those rate classes that use kW for the distribution volumetric billing determinant an adjustment factor is applied to the class energy forecast

1 based on the historical relationship between kW and kWh. The following will explain the forecasting
2 process in more detail. As mentioned above, the Street Light class uses actual consumption as updated
3 in October 2020 to reflect the adjustment in consumption moving forward. This adjustment in
4 consumption is from updating to LED lights in the township of Sables-Spanish River. This update in
5 consumption was made after the regression analysis.

6
7 (a) Purchased KWh Load Forecast

8 An equation to predict total system purchased energy is developed using a multivariate regression
9 model with independent variables outlined below. The regression model uses monthly kWh and
10 monthly values of independent variables from January 2010 to December 2019 to determine the
11 monthly regression coefficients. This provides 120 monthly data points which are a reasonable data set
12 for use in a multiple regression analysis.

13 With regards to weather normalization, ERHDC submits that it is appropriate to review the impact of
14 weather over the past ten years January 2010 to December 2019 since it is consistent with the time
15 period for weather normalization outlined in the filing requirements. It is also reflective of more recent
16 weather conditions. The average weather conditions over this period are applied in the prediction
17 formula to determine a weather normalized forecast. In accordance with the filing requirement, ERHDC
18 has also provided sensitivity analysis showing the impact on the 2021 forecast of purchases. This
19 analysis assumes weather normal conditions are based on a 20 year trend of weather data.

20
21 The multivariate regression model has determined drivers of year-over-year changes in ERHDC's load
22 growth are weather (heating and cooling degree days), calendar variables (days in month and seasonal
23 flag), and number of customers. These factors are captured within the multivariate regression model.

24
25 Weather impacts on load are apparent in both the winter heating season, and in the summer cooling
26 season. For that reason, both Heating Degree Days (i.e. a measure of coldness in winter) and Cooling
27 Degree Days (i.e. a measure of summer heat) are modeled.

Other factors determining energy use in the monthly model are the number of days in a particular month and a flag that indicates spring and fall months.

The regression analysis also indicates that the number of customers are significant contributors to the total energy used in the ERHDC service area.

The following outlines the predication model used by ERHDC to predict weather normal purchases for 2020 and 2021. The 2020 and 2021 weather normal purchases have been adjusted to include the impact of reduced consumption from the installation of new street lights. On a billed energy basis the average historical annual kWh for street lights from 2010 to 2013, of 616,182 kWh has been reduced to 224,919 kWh for 2020 and 2021 to reflect the consumption of the new energy efficient street lights installed during 2014 in the Town of Espanola and most recently August 2020 for the Township of Sables-Spanish River. The reduction in billed consumption of 391,263 (i.e. 616,182 minus 224,919) times the loss factor, explained below, of 1.0673 has been applied to the 2020 and 2021 forecast of weather normal purchases.

ERHDC Monthly Predicted kWh Purchases

$$\begin{aligned} &= \text{Heating Degree Days} * 3,551 \\ &+ \text{Cooling Degree Days} * 7,744 \\ &+ \text{Spring Fall Flag} * (407,111) \\ &+ \text{Number of Days in the Month} * 90,224 \\ &+ \text{Constant of } 1,093,721 \end{aligned}$$

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

The sources of data for the various data points are:

a) The Environment Canada website provided the monthly heating degree day and cooling degree information. Weather data from the Sudbury Station A was used. 18° C is the base numbers from which heating degree days and cooling degree days are measured.

b) The calendar provided information related to number of days in the month and the months defined to be spring or fall (i.e. March to May and September to November).

c) ERHDC's billing system provided the customer data.

Table 3-7 outlines the statistical results from the prediction formula, which generally indicate that the formula has a very good fit to the actual data set.

Table 3 - 7: Statistical Results

Statistic	Value
R Square	91.5%
Adjusted R Square	91.2%
F Test	309.8
MAPE (Monthly)	4.9%
T-stats by Coefficient	
Heating Degree Days	26.4
Cooling Degree Days	3.8
Spring Fall Flag	(5.4)
Constant	0.9

The annual results of the above prediction formula compared to the actual annual purchases from 2010 to 2019 are shown below in Table 3-8 along with the predicted total system purchases for ERHDC for 2020 and 2021 on a weather normal basis. In addition, weather normal values for 2021 are provided on a 20 year trend assumption for weather normalization. Information is also provided to show the Weather

Normal Conversion Factor which is used to weather normalize actual volume data. In Table 3-8, the Predicted Weather Normal values are similar to the Predicted amounts but the weather normalized heating degree days and cooling degree days used to determine the weather normal forecast for 2020 and 2021 are used in the prediction formula in place of actual heating degree days and cooling degree days. The ratio of Predicted Weather Normal to Predicted values results in a Weather Normal Conversion Factor. This factor is applied to the Actual amount which results in the Actual Weather Normal value.

Table 3 - 8: Total System Purchase

Year	Actual	Predicted	% Difference	Predicted Weather Normal	Weather Normal Conversion Factor	Actual Weather Normal
Purchased Energy (GWh)						
2010	64.8	61.6	(5.0%)	62.8	1.019	66.0
2011	66.4	62.7	(5.5%)	62.8	1.000	66.4
2012	63.3	61.6	(2.6%)	62.8	1.020	64.5
2013	63.6	62.9	(1.1%)	62.8	0.998	63.5
2014	65.4	64.3	(1.5%)	62.8	0.975	63.7
2015	61.1	63.2	3.4%	62.8	0.993	60.7
2016	59.8	62.6	4.7%	62.8	1.004	60.0
2017	59.5	62.1	4.4%	62.8	1.010	60.1
2018	61.8	63.8	3.3%	62.8	0.983	60.8
2019	62.1	62.8	1.1%	62.8	1.000	62.0
2020 - Bridge		62.8		62.8	1.000	
2021 - Test		62.6		62.6	1.000	
2021 - 20 year trend		62.9		62.9	1.000	

The weather normalized amount for 2021 is determined by using 2021 dependent variables in the prediction formula on a monthly basis along with the average monthly heating degree days and cooling degree days which have occurred from January 2010 to December 2019 (i.e. 10 years). The 2021 weather normal 20 year trend value reflects the trend in monthly heating degree days and cooling degree days which have occurred from January 2000 to December 2019.

Since the conversion of the Street Lights for the Township of Sables-Spanish River occurred in 2020, an adjustment was made to the forecast to account for this reduction in kWh. This has resulted in a kWh forecast of 224,919 for the Street Light Class which is a reduction of 116,118 kWh yearly from this

1 class (341,037 – 224,919). The reduction of 116,118 was removed from the Street Light Class which
2 reduced the total system predicted purchases.
3

4 (b) Billed KWh Load Forecast

5 To determine the total weather normalized energy billed forecast, the total system weather normalized
6 purchases forecast is adjusted by a historical loss factor. The historical loss factor used is 1.0673 which
7 represents the average loss factor from 2015 to 2019. With this average loss factor the total weather
8 normalized billed energy before the adjustment discussed below will be 58.8(GWh) for 2020 (i.e.
9 62.8/1.0673) and 58.7 (GWh) for 2021 (i.e. 62.6/1.0673). In 2021, an additional adjustment was made
10 to reflect the projected consumption for streetlights due to the conversion by the Township of Sables-
11 Spanish River in August 2020.

12 (c) Billed KWh Load Forecast and Customer/Connection Forecast by Rate Class

13 Since the total weather normalized billed ERHDC amount is known this amount needs to be distributed
14 by rate class for rate design purposes taking into consideration the customer/connection forecast and
15 expected usage per customer by rate class.
16

17 The next step in the forecasting process is to determine a customer/connection forecast. The
18 customer/connection forecast is based on reviewing historical customer/connection data that is
19 available as shown in the following Table 3-9.

Table 3 - 9: Historical Customer/Connection Data

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load	Total
Number of Customers/Connections							
2010	2,850	425	25	26	1,045	21	4,392
2011	2,847	425	25	26	1,048	21	4,392
2012	2,857	402	29	26	1,048	21	4,383
2013	2,858	401	29	27	1,064	21	4,400
2014	2,857	402	29	26	1,064	21	4,399
2015	2,856	406	29	30	1,064	21	4,406
2016	2,861	393	29	25	1,065	21	4,394
2017	2,872	388	28	34	1,065	21	4,408
2018	2,888	388	27	34	1,062	21	4,420
2019	2,901	380	28	25	1,062	21	4,417
2020	2,905	375	29	25	799	21	4,154
2021	2,910	369	30	25	799	21	4,154

From the historical customer/connection data the growth rate in customer/connection can be evaluated which is provided on the following Table 3-10.

Table 3 - 10: Growth Rate in Customer/Connections

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load
Growth Rate in Customers/Connections						
2010						
2011	(0.1%)	0.0%	0.0%	0.0%	0.3%	0.0%
2012	0.4%	(5.4%)	16.0%	0.0%	0.0%	0.0%
2013	0.0%	(0.2%)	0.0%	3.8%	1.5%	0.0%
2014	(0.0%)	0.2%	0.0%	(3.7%)	0.0%	0.0%
2015	(0.0%)	1.0%	0.0%	0.0%	0.0%	0.0%
2016	0.2%	(3.2%)	0.0%	0.0%	0.1%	0.0%
2017	0.4%	(1.3%)	(3.4%)	(3.8%)	0.0%	0.0%
2018	0.6%	0.0%	(3.6%)	0.0%	(0.3%)	0.0%
2019	0.5%	(2.1%)	3.7%	0.0%	0.0%	0.0%
2020	0.1%	(1.4%)	3.4%	(0.4%)	(24.8%)	0.0%
2021	0.2%	(1.5%)	3.6%	0.4%	0.0%	0.0%
Geo Mean - 2010 to 2019	0.15%	(1.4%)	3.4%	(0.4%)	0.2%	0.0%

The geometric mean was determined for each rate class to reflect the average growth rate from 2010 to 2019.

The geometric mean analysis was used to forecast the number of customers/connections for 2020 and 2021 except for the Street Lights and Unmetered Scattered Load rate classes. For Unmetered Scattered Load a 0% change in the number of customers/connections was used as these values have seen minor changes in the last ten years. For Street Lights, a manual adjustment was made in 2020 to update the number of devices (1,062) to the number of connections (799). Therefore, there is a 24.8% reduction in 2020 and a 0% change in 2021. The results of the geometric mean analysis were applied to the 2019 customer/connection value to determine the 2020 customer/connection forecast. The 2021 customer/connection forecast is determined by applying the geometric mean factor to the 2020 forecast. Table 3-11 outlines the forecast of customers/connections by rate class.

Table 3 - 11: Customer/Connection Forecast

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load	Total
Forecast number of Customers/Connections							
2020 Bridge	2,905	375	29	25	799	21	4,154
2021 Test	2,910	369	30	25	799	21	4,154

The next step in the process is to review the historical customer/connection usage and to reflect this usage per customer in the forecast. Table 3-12 below provides the average annual usage per customer by rate class for 2019.

Table 3 - 12: 2019 Actual Annual Usage per Customer

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load
Annual kWh Usage Per Customer/Connection						
2019	10,954	27,018	533,912	969	321	5,887

The 2020 and 2021 forecast of usage per customer/connection have been adjusted by the geo mean for 2011-2019. ERHDC does not foresee a significant change in the annual usage per customer since as observed in Table 3-6 the usage per customer/connection has generally been declining since 2010. For the Street Light Class a factor of 0.8766 was used to reflect the reduced consumption based on the

Township of Spanish-Sables River converting their street lights to LED in August 2020. Table 3-13 below outlines the forecast annual kWh usage per customer/connection for 2020 and 2021.

Table 3 - 13: Forecast Annual kWh Usage per Customer/Connection

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load
Forecast Annual kWh Usage per Customers/Connection						
2020	11,256	27,739	532,405	970	282	5,683
2021	11,216	27,618	516,079	970	282	5,485

The preceding information is used to determine the non-normalized weather billed energy forecast by applying the forecast number of customer/connection from Table 3-11 by the forecast of annual usage per customer/connection from Table 3-13. The resulting non-normalized weather billed ERHDC forecast is shown in the following Table 3-14.

Table 3 - 14: Non-normalized Weather Billed ERHDC Forecast

Year	Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load	TOTAL
NON-normalized Weather Billed Energy Forecast (GWh)							
2020 Bridge	31.8	10.1	15.0	0.0	0.2	0.1	57.3
2021 Test	31.9	10.0	15.1	0.0	0.2	0.1	57.3

The non-normalized weather billed energy forecast has been determined but it needs to be adjusted in order to be aligned with the total weather normalized billed energy forecast. As previously determined, the total weather normalized billed energy forecast is 58.9 (GWh) for 2020 and 58.7 (GWh) for 2021.

The difference between the non-normalized and normalized forecast adjustments is 1.6 GWh in 2020 (i.e. 58.9 – 57.3) and 1.4 GWh in 2021 (i.e. 58.7 – 57.3). The difference is assumed to be the adjustment needed to move the forecast to a weather normal basis and this amount will be assigned to those rate classes that are weather sensitive. Based on the weather normalization work completed by Hydro One

for ERHDC for the cost allocation study, which has been used to support this Application, it was determined that the weather sensitivity by rate classes is as follows in Table 3-15.

Table 3 - 15: Weather Sensitivity by Rate Class

Residential	General Service < 50 kW	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	Unmetered Scattered Load
Weather Sensitivity					
93%	93%	85%	0%	0%	0%

For the GS > 50 kW class the weather sensitivity amount of 85.3% was provided in the weather normalization work completed by Hydro One. For the Residential and General Service < 50 kW classes, it was assumed in the 2012 COS application that the weather sensitivity for the Residential and General Service < 50 kW classes was mid-way between 100% and 85.3%, or 92.7%. This assumption has been maintained in this application.

The difference between the non-normalized and normalized forecast of 1.6 GWh in 2020 and 1.4 GWh in 2021 has been assigned on a pro rata basis to each rate class based on the above level of weather sensitivity.

(d) Billed KW Load Forecast

There are three rate classes that charge volumetric distribution on per kW basis. These include General Service 50 to 4,999 kW, Sentinel Lights and Street Lights. The forecast of kW for General Service 50 to 4,999 kW, and Sentinel Lights classes is based on a review of the historical ratio of kW to kWh. The ratio of kW to kWh for 2019 was used in the determination of the forecasted kW for 2020 Bridge year and 2021 Test year. ERHDC believes that the most recent actual year is a better indication of the overall average from 2010 to 2019 given that the kW consumption has seen steady decline in recent years for the GS >50 rate class. The Sentinel light class has remained relatively stable so using either the average or the 2019 ratio would be suitable but to keep consistent with other rate classes the 2019

actual ratio was used. The Street Light class had a reduction in kWh consumption in 2014-2015 when the lights were converted to LED's for the Town of Espanola. Most recently the Township of Spanish-Sables River converted to LED lights in August 2020. Therefore, ERHDC believes using the 2021 projection is a better reflection than historical average.

The following Table 3-16 outlines the annual demand units by applicable rate class on actual and weather normal basis. The weather normal values are actual values adjusted by the weather normal conversion factor outlined in Table 3-8. ERHDC is uncertain if this weather normalization adjustment is the appropriate adjustment to weather normalize monthly kW but it has been done to be consistent with the weather normalization adjustment used for kWh.

Table 3 - 16: Historical Annual kW per Applicable Rate Class

Year	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	TOTAL	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	TOTAL
Billed Annual kW								
2010	43,226	72	1,728	45,026	44,047	73	1,761	45,881
2011	40,289	72	1,728	42,089	41,054	73	1,761	42,888
2012	42,772	72	1,728	44,572	43,584	73	1,761	45,418
2013	42,806	72	1,728	44,606	43,619	73	1,761	45,453
2014	40,172	72	1,070	41,314	40,935	73	1,090	42,099
2015	41,215	72	1,040	42,327	41,998	73	1,060	43,131
2016	41,067	72	1,082	42,221	41,847	73	1,102	43,022
2017	39,273	67	1,082	40,422	40,019	69	1,102	41,190
2018	38,317	67	1,082	39,466	39,044	69	1,102	40,215
2019	37,232	67	1,082	38,381	37,939	69	1,102	39,109

The following Table 3-17 shows the historical ratio of kW/kWh as well as the average

Table 3 - 17: Historical kW/kWh Ratio per Applicable Rate Class

Year	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights
Ratio of kW to kWh			
2010	0.2519%	0.2869%	0.2806%
2011	0.2377%	0.2782%	0.2816%
2012	0.2510%	0.2799%	0.2795%
2013	0.2540%	0.2794%	0.2800%
2014	0.2350%	0.2794%	0.2903%
2015	0.2472%	0.2919%	0.2805%
2016	0.2507%	0.2931%	0.3160%
2017	0.2519%	0.2778%	0.3172%
2018	0.2495%	0.2778%	0.3172%
2019	0.2490%	0.2778%	0.3172%
Average 2010 to 2019	0.2478%	0.2822%	0.2960%
Used	0.2490%	0.2778%	0.2934%

The following Table 3-18 outlines the forecast of kW for the applicable rate classes.

Table 3 - 18: kW Forecast by Applicable Rate Class

Year	General Service 50 to 4,999 kW	Sentinel Lighting	Street Lights	TOTAL
Predicted Billed kW				
2020 Bridge	38,397	67	660	39,124
2021 Test	38,559	67	660	39,286

Table 3-19 provides a summary of the total load forecast on a power purchased and billed level from 2012 Board Approved to 2021 Test.

Table 3 - 19: Summary of Total Load Forecast

	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Actual kWh Purchases	63,284,545	63,602,962	65,352,027	61,104,721	59,794,104	59,491,335	61,810,133	62,050,761		
Predicted kWh Purchases	61,624,254	62,892,004	64,340,114	63,174,013	62,605,890	62,123,262	63,845,097	62,762,062	62,840,765	62,626,608
% Difference between actual and	(5.0%)	(5.5%)	(2.6%)	(1.1%)	(1.5%)	3.4%	4.7%	4.4%		
Loss Factor									1.0673	1.0673
Residential										
Customers	2,857	2,858	2,857	2,856	2,861	2,872	2,888	2,901	2,905	2,910
kWh	30,758,632	32,605,812	32,890,577	30,963,982	29,475,507	28,877,056	31,054,130	31,777,563	32,702,467	32,639,692
General Service < 50 kW										
Customers	402	401	402	406	393	388	388	380	375	369
kWh	11,730,167	11,192,454	10,747,812	10,393,804	10,122,403	9,915,385	10,221,050	10,266,816	10,389,919	10,191,190
General Service 50 to 4,999 kW										
Customers	29	29	29	29	29	28	27	28	29	30
kWh	17,041,535	16,850,053	17,091,907	16,669,657	16,378,057	15,590,915	15,357,084	14,949,541	15,417,468	15,482,365
kW	42,772	42,806	40,172	41,215	41,067	39,273	38,317	37,232	38,397	38,559
Street Lighting										
Connections	1,048	1,064	1,064	1,064	1,065	1,065	1,062	1,062	799	799
kWh	618,217	617,088	368,606	370,752	342,285	341,037	341,037	341,037	224,919	224,919
kW	1,728	1,728	1,070	1,040	1,082	1,082	1,082	1,082	660	660
Sentinel Lighting										
Connections	26	27	26	26	26	25	25	25	25	25
kWh	25,725	25,771	25,771	24,668	24,566	24,235	24,235	24,235	24,151	24,258
kW	72	72	72	72	72	67	67	67	67	67
Unmetered Scattered Load										
Customers	21	21	21	21	21	21	21	21	21	21
kWh	131,160	132,130	123,636	123,636	123,636	123,636	123,636	123,636	119,334	115,182
Total										
Customer/Connections	4,383	4,400	4,399	4,402	4,395	4,399	4,411	4,417	4,154	4,154
kWh	60,305,436	61,423,308	61,248,309	58,546,499	56,466,454	54,872,263	57,121,172	57,482,828	58,878,258	58,677,605
kW from applicable classes	44,572	44,606	41,314	42,327	42,221	40,422	39,466	38,381	39,124	39,286

2.3.1.2 Normalized Average use per Customer (“NAC”) Model

ERHDC did not use this methodology.

2.3.1.3 CDM Adjustment for the Load Forecast for Distributors

ERHDC did not make a CDM adjustment because ERHDC does not foresee major CDM projects in 2020 and 2021. Therefore Chapter 2 Appendix 2-I is not applicable.

2.3.2 ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSES

The following discussion provides a year over year variance analysis on ERHDC’s billing determinants. The variance analysis will compare 2012 Board Approved to 2012 Actual; 2017 Actual to 2018 Actual; 2018 Actual to 2019 Actual; 2019 Actual to 2020 Bridge and 2020 Bridge Year to 2021 Test Year. The billing determinant variance analysis is based on data outlined in Table 3-19. Chapter 2 Appendices Appendix 2-IB has been provided in Appendix 3-B. The kWh are converted to kW using the conversion ratio provided in Table 3-17 for the Bridge and Test Year. Years 2017-2019 provided actual kWh and kW. Table 3-20 to Table 3-31 provide a year-over-year variance analysis for billing determinants and average consumption.

(a) 2012 Board Approved vs. 2012 Actual

Table 3 - 20: Billing Determinants – 2012 Board Approved vs 2012 Actual

Billing Determinants	Customer/Connections			kWh			kW		
	2012 Board Approved	2012 Actual	Difference	2012 Board Approved	2012 Actual	Volumetric Difference (kwh)	2012 Board Approved	2012 Actual	Volumetric Difference (kw)
Residential	2,847	2,857	10	32,680,721	30,758,632	-1,922,089			0
General Service < 50 kW	425	402	(23)	11,265,899	11,730,167	464,268			0
General Service 50 to 2,999 kW	27	29	2	17,442,772	17,041,535	-401,237	44,045	42,772	(1,273)
Sentinel Lighting	26	26	0	24,161	25,725	1,564	66	72	6
Street Lighting	1,053	1,048	(5)	623,166	618,217	-4,949	1,766	1,728	(38)
Unmetered Scattered Load	32	21	(11)	213,280	131,160	-82,120			0
Total	4,410	4,383	-27	62,249,999	60,305,436	-1,944,563	45,877	44,572	(1,305)
Total Percentage Difference			-0.6%			-3.1%			-2.8%

When comparing the 2012 actual results to the 2012 board approved amounts the customer/connection forecast GS<50 and Unmetered Scattered Load were low by 23 customers and 11 customers respectively. GS<50 actual had increased actual consumption for 2012 as compared to board approved

amounts. USL had a significant decrease in kWh consumption which can be directly related to the significant decrease in number of customers. All customer/connections are reflected as year-end values.

Table 3 - 21: Average Consumption – 2012 Actual vs 2012 Board Approved

Average Consumption or Demand per Customer/Connection	kWh/kW	2012 Board Approved (normalized)	2012 Weather Actual		2012 Actual Weather-Normalized	
			Average	Variance	Average	Variance
Residential	kWh	11,706	10,766	-8.0%	10,979	-6.2%
General Service < 50 kW	kWh	27,031	29,180	7.9%	29,756	10.1%
General Service 50 to 2,999 kW	kW	658,782	587,639	-10.8%	599,240	-9.0%
Sentinel Lighting	kW	948	989	4.4%	1,009	6.5%
Street Lighting	kW	603	590	-2.3%	602	-0.3%
Unmetered Scattered Load	kWh	6,797	6,246	-8.1%	6,369	-6.3%

Residential customers saw a slight reduction in overall consumption from CDM activity and a slightly milder winter than normal based on number of heating degree days. There was a customer shift in 2012 for the General Service Rate Classes. Customers moved from GS>50 to GS<50. This can be seen in Table 3-4 and Table 3-5 above. Unmetered scattered load saw a significant reduction due to the 2012 forecast. USL customer were predicted to grow from 21 to 32 customers which would have resulted in increase consumption. This did not occur resulting in lower consumption for 2012 actual.

(b) 2017 Actual vs. 2018 Actual.

Table 3 - 22: Billing Determinants - 2017 Actual vs 2018 Actual

Billing Determinants	Customer/Connections			kWh			kW		
	2017 Actual	2018 Actual	Difference	2017 Actual	2018 Actual	Volumetric Difference (kwh)	2017 Actual	2018 Actual	Volumetric Difference
Residential	2,872	2,888	16	28,877,056	31,054,130	2,177,075			0
General Service < 50 kW	388	388	0	9,915,385	10,221,050	305,665			0
General Service 50 to 4,999 kW	28	27	(1)	15,590,915	15,357,084	-233,831	39,273	38,317	(956)
Sentinel Lighting	25	25	0	24,235	24,235	0	67	67	0
Street Lighting	1,065	1,062	(3)	341,037	341,037	0	1,082	1,082	0
Unmetered Scattered Load	21	21	0	123,636	123,636	0			0
Total	4,399	4,411	12	54,872,263	57,121,172	2,248,909	40,422	39,466	(956)
Total Percentage Difference			0.3%			4.1%			-2.4%

There is no material variance in customer/connections and consumption for 2017 actuals vs. 2018 actuals.

Table 3 - 23: Average Consumption – 2017 Actual vs 2018 Actual

Average Consumption or Demand per	kWh/kW	Weather - Actual			Weather Normalized		
		2017	2018	Variance	2017	2018	Variance
Residential	kWh	10,054.69	10,752.82	6.9%	10,156.21	10,568.47	4.1%
General Service < 50 kW	kWh	25,555.12	26,342.91	3.1%	25,813.15	25,891.29	0.3%
General Service 50 to 2,999 kW	kW	556,818.39	568,780.88	2.1%	562,440.77	559,029.74	-0.6%
Sentinel Lighting	kW	969.40	969.41	0.0%	979.19	952.79	-2.7%
Street Lighting	kW	320.22	321.13	0.3%	323.46	315.62	-2.4%
Unmetered Scattered Load	kWh	5,887.43	5,887.43	0.0%	5,946.88	5,786.49	-2.7%

There is no material variance in the average consumption/customer within the various rate classes from 2017 to 2018.

(c) 2018 Actual vs. 2019 Actual

Table 3 - 24: Billing Determinants – 2018 Actual vs 2019 Actual

Billing Determinants	Customer/Connections			kWh		Volumetric Difference (kwh)	kW		Volumetric Difference
	2018 Actual	2019 Actual	Difference	2018 Actual	2019 Actual		2018 Actual	2019 Actual	
Residential	2,888	2,901	13	31,054,130	31,777,563	723,433			0
General Service < 50 kW	388	380	(8)	10,221,050	10,266,816	45,766			0
General Service 50 to 4,999 kW	27	28	1	15,357,084	14,949,541	-407,543	38,317	37,232	(1,085)
Sentinel Lighting	25	25	0	24,235	24,235	0	67	67	0
Street Lighting	1,062	1,062	0	341,037	341,037	0	1,082	1,082	0
Unmetered Scattered Load	21	21	0	123,636	123,636	0			0
Total	4,411	4,417	6	57,121,172	57,482,828	361,656	39,466	38,381	(1,085)
Total Percentage Difference			0.1%			0.6%			-2.7%

There is no material variance in customer/connections and consumption for 2017 actuals vs. 2018 actuals.

Table 3 - 25: Average Consumption – 2018 Actual vs 2019 Actual

Average Consumption or Demand per	kWh/kW	Weather - Actual			Weather Normalized		
		2018	2019	Variance	2018	2019	Variance
Residential	kWh	10,752.82	10,954.00	1.9%	10,568.47	10,951.99	3.6%
General Service < 50 kW	kWh	26,342.91	27,017.94	2.6%	25,891.29	27,012.98	4.3%
General Service 50 to 2,999 kW	kW	568,780.88	533,912.18	-6.1%	559,029.74	533,814.18	-4.5%
Sentinel Lighting	kW	969.41	969.41	0.0%	952.79	969.23	1.7%
Street Lighting	kW	321.13	321.13	0.0%	315.62	321.07	1.7%
Unmetered Scattered Load	kWh	5,887.43	5,887.43	0.0%	5,786.49	5,886.35	1.7%

The GS>50 class saw a reduction in a customer that had a larger average consumption in 2018 as compared to 2019. This resulted in an overall drop in the average consumption per customer in 2019. All other rate classes had no material difference.

(d) 2019 Actual vs. 2020 Bridge

Table 3 - 26: Billing Determinants – 2019 Actual vs 2020 Bridge

Billing Determinants	Customer/Connections			kWh			kW		
	2019 Actual	2020 Bridge	Difference	2019 Actual	2020 Bridge	Volumetric Difference (kwh)	2019 Actual	2020 Bridge	Volumetric Difference
Residential	2,901	2,905	4	31,777,563	32,702,467	924,904			0
General Service < 50 kW	380	375	(5)	10,266,816	10,389,919	123,103			0
General Service 50 to 4,999 kW	28	29	1	14,949,541	15,417,468	467,927	37,232	38,397	1,165
Sentinel Lighting	25	25	(0)	24,235	24,151	-84	67	67	0
Street Lighting	1,062	799	(263)	341,037	224,919	-116,118	1,082	660	(422)
Unmetered Scattered Load	21	21	0	123,636	119,334	-4,302			0
Total	4,417	4,154	-263	57,482,828	58,878,258	1,395,430	38,381	39,124	744
Total Percentage Difference			-6.0%			2.4%			1.9%

The number of customers/connections is down 6% overall which is directly attributed to the Street Light Class. The number of Street Light customers/connections was updated from number of devices to number of connections. The consumption for the Street Light class is also down due to the conversion to LED lights for the Township of Spanish-Sables River.

Table 3 - 27: Average Consumption – 2019 Actual vs 2020 Bridge Year

Average Consumption or Demand per	kWh/kW	Weather - Actual			Weather Normalized		
		2019	2020	Variance	2019	2020	Variance
Residential	kWh	10,954.00	11,256.00	2.8%	10,951.99	11,256.00	2.8%
General Service < 50 kW	kWh	27,017.94	27,739.37	2.7%	27,012.98	27,739.37	2.7%
General Service 50 to 2,999 kW	kW	533,912.18	532,405.11	-0.3%	533,814.18	532,405.11	-0.3%
Sentinel Lighting	kW	969.41	969.86	0.0%	969.23	969.86	0.1%
Street Lighting	kW	321.13	281.50	-12.3%	321.07	281.50	-12.3%
Unmetered Scattered Load	kWh	5,887.43	5,682.59	-3.5%	5,886.35	5,682.59	-3.5%

The Street Lighting Class drops in average consumption per customer due to the updating of street lights in the Township of Sables-Spanish River to LED's. All other rate classes see no material differences.

(e) 2020 Bridge vs. 2021 Test

Table 3 - 28: Billing Determinants – 2020 Bridge vs 2021 Test

Billing Determinants	Customer/Connections			kWh			kW		Volumetric Difference (kw)
	2020 Bridge	2021 Test	Difference	2020 Bridge	2021 Test	Volumetric Difference (kwh)	2020 Bridge	2021 Test	
Residential	2,905	2,910	5	32,665,460	32,603,903	-61,556			0
General Service < 50 kW	375	369	(6)	10,382,316	10,184,499	-197,817			0
General Service 50 to 4,999 kW	29	30	1	15,408,583	15,474,658	66,075	38,489	38,654	165
Sentinel Lighting	25	25	0	24,151	24,257	106	67	67	0
Street Lighting	799	799	0	227,795	227,795	0	660	660	0
Unmetered Scattered Load	21	21	0	118,978	114,804	-4,174			0
Total	4,154	4,154	0	58,827,283	58,629,917	-197,366	39,216	39,381	165
Total Percentage Difference			0.0%			-0.3%			0.4%

The methodology used for forecasting the 2020 bridge year and 2021 test year is described in detail above in section 2.3.1.1. Flat growth rates, flat kWh consumption and decreasing kW demand are appropriate for rate setting on a go forward basis. There is no material variance in customer/connections and consumption for 2020 bridge year vs. 2021 test year.

Table 3 - 29: Average Consumption – 2020 Bridge vs 2021 Test

Average Consumption or Demand per	kWh/kW	Weather - Actual			Weather Normalized		
		2020	2021	Variance	2020	2021	Variance
Residential	kWh				11,256.00	11,216.39	-0.4%
General Service < 50 kW	kWh				27,739.37	27,618.40	-0.4%
General Service 50 to 2,999 kW	kW				532,405.11	516,078.84	-3.1%
Sentinel Lighting	kW				969.86	970.30	0.0%
Street Lighting	kW				281.50	281.50	0.0%
Unmetered Scattered Load	kWh				5,682.59	5,484.88	-3.5%

There is no material difference in the average consumption per customer from the 2020 Bridge year to 2021 Test year.

(f) 2012 Board Approved vs. 2021 Test Year

Table 3 - 30: Billing Determinants – 2012 Board Approved vs 2021 Test Year

Billing Determinants	Customer/Connections			kWh			kW		
	2012 Board Approved	2021 Test	Difference	2012 Board Approved	2021 Test	Volumetric Difference (kwh)	2012 Board Approved	2021 Test	Volumetric Difference
Residential	2,847	2,910	63	32,680,721	32,639,692	-41,029		0	0
General Service < 50 kW	425	369	(56)	11,265,899	10,191,190	-1,074,709			0
General Service 50 to 4,999 kW	27	30	3	17,442,772	15,482,365	-1,960,407	44,045	38,559	(5,486)
Sentinel Lighting	26	25	(1)	24,161	24,258	96	66	67	1
Street Lighting	1,053	799	(254)	623,166	224,919	-398,248	1,766	660	(1,106)
Unmetered Scattered Load	32	21	(11)	213,280	115,182	-98,098			0
Total	4,410	4,154	-256	62,249,999	58,677,605	(3,572,394)	45,877	39,286	-6,591
Total Percentage Difference			-5.8%			-5.7%			-14.4%

The number of customers/connections has not changed significantly when comparing 2012 Board Approved to 2021 Test Year. The Street Light class did see a big reduction which as mentioned above was due to the change in methodology of counting the number of connections. In 2012 each individual device was counted as a connection and in 2021 this has changed to number of connections.

The consumption has also seen a slight decrease from 2012 to 2021 which is a result of CDM programs, increase number of customers for residential class, decrease number of customers from general service classes. The unmetered scattered load class see a reduction due to the forecasting used in 2012 as compared to 2021.

Table 3 - 31: Average Consumption – 2012 Board Approved vs 2021 Test Year

Average Consumption or Demand per	kWh/kW	Weather - Actual			Weather Normalized		
		2012	2021	Variance	2012	2021	Variance
Residential	kWh				11,705.61	11,216.39	-4.2%
General Service < 50 kW	kWh				27,031.29	27,618.40	2.2%
General Service 50 to 2,999 kW	kW				658,781.70	516,078.84	-21.7%
Sentinel Lighting	kW				947.63	970.30	2.4%
Street Lighting	kW				603.48	281.50	-53.4%
Unmetered Scattered Load	kWh				6,796.58	5,484.88	-19.3%

The main reason for the shift in average consumption per customer in the general service class is the shuffle of customers from the GS>50 to GS<50. Some of the smaller average users in the GS>50 have shifted down a class to GS<50. The street light class drop in average consumption per customer is due to the conversion to LED lights for both the Town of Espanola in 2014 and Township of Sables-Spanish River in August 2020. The unmetered scattered load reduction is due to a forecasting difference from 2012 to 2021.

The following Table 3-32 to Table 3-34 provide Distribution Revenue at existing rates for 2020 and 2021 along with distribution revenue at proposed rates for 2021.

Table 3 - 32: 2020 Distribution Revenue at Existing Rates

Class	Annual kWh	annual kW	Annualized Customer/ Connections	Monthly Fixed Charge	Volumetric Charge	Dist Rev Including transformer Allowance	Transformer Allowance	Distribution Revenue
Residential	32,702,467	-	2,905	14.07	0.017	1,046,478.78		1,046,479
General Service < 50 kW	10,389,919	-	375	25.22	0.0207	328,426.61		328,427
General Service 50 to 2,999 kW	15,417,468	38,397	29	196.43	3.7949	213,972.03	6941	207,031
Sentinel Lighting	24,151	67	25	2.14	17.2571	1,802.31		1,802
Street Lighting	224,919	660	799	1.99	25.0801	35,632.99		35,633
Unmetered Scattered Load	119,334	-	21	12.26	0.0157	4,963.07		4,963
Total						1,631,276		1,624,335

Table 3 - 33: 2021 Distribution Revenue at Existing Rates

Class	Annual kWh	annual kW	Annualized Customer/ Connections	Monthly Fixed Charge	Volumetric Charge	Dist Rev Including transformer Allowance	Transformer Allowance	Distribution Revenue
Residential	32,639,692	-	2,910	14.07	0.017	1,046,199.16		1,046,199
General Service < 50 kW	10,191,190	-	369	25.22	0.0207	322,631.79		322,632
General Service 50 to 2,999 kW	15,482,365	38,559	30	196.43	3.7949	217,041.19	6941	210,101
Sentinel Lighting	24,258	67	25	2.14	17.2571	1,804.82		1,805
Street Lighting	224,919	660	799	1.99	25.0801	35,632.99		35,633
Unmetered Scattered Load	115,182	-	21	12.26	0.0157	4,897.88		4,898
Total						1,628,208		1,621,267

Table 3 - 34: 2021 Distribution Revenue at Proposed Rates

Class	Annual kWh	annual kW	Annualized Customer/ Connections	Monthly Fixed Charge	Volumetric Charge	Dist Rev Including transformer Allowance	Transformer Allowance	Distribution Revenue	Expected
Residential	32,639,692	-	2,910	22.77	0.0180	1,382,643		1,382,643	1,381,388
General Service < 50 kW	10,191,190	-	369	32.22	0.0264	411,718		411,718	412,129
General Service 50 to 2,999 kW	15,482,365	38,559	30	229.37	4.4011	252,274	6941	245,333	245,332
Sentinel Lighting	24,258	67	25	3.40	27.4341	2,869		2,869	2,869
Street Lighting	224,919	660	799	1.29	16.2041	23,070		23,070	23,029
Unmetered Scattered Load	115,182	-	21	15.66	0.0201	6,261		6,261	6,257
Total						2,078,834		2,071,893	2,071,003

The main difference in revenue at proposed rates compared to existing rates is due to the impact of rebasing. The difference between \$2,071,893 and \$2,071,003 is due to rate rounding.

2.3.3 OTHER REVENUE

(a) Variance Analysis of Other Revenue

Other Distribution Revenues are revenues that are distribution related but are sourced from means other than distribution rates. For this reason, other revenues are deducted from ERHDC's proposed revenue requirement. Further details on the derivation of the Revenue Requirement are presented at Exhibit 6.

ERHDC does not have any discrete customer groups that may be materially impacted by changes to other rates and charges.

Other Distribution revenues include such items as:

- Specific Service Charges

ERHDC was previously charging the Town of Espanola \$18,136 for water billing collection. This is no longer included in revenue, as ERHDC is no longer performing these services for the Town of Espanola.

- Late Payment Charges

- There are no major deviations from historical late payment charges year over year.

- Other Distribution Revenues

- Other Distribution Revenues have increased by approximately \$47,000. This is a result of the increase to wireline pole attachment revenues that will now be recorded in account 4210 instead of being allocated to the 1508 – Pole Attachment Revenue Variance Account.

- Other Income and Expenses

- Other income and expenses has remained constant in the historical years with the exception of 2019. There were additional interest income from 2019 due to funds being

1 held in trust for the North Bay Hydro Acquisition of ERHDC. There was also a
2 difference in CDM revenue to CDM expenses of approximately \$24,000. These
3 amounts mentioned above have been removed from 2020 Bridge year and 2021 Test
4 year.

5
6 (b) Proposed New Service Charges

7 ERHDC is not proposing any new specific service charge or incorporated new rates or rules that would
8 impact Other Revenue.

9 (c) Revenue from Affiliate Transactions, Shared Services and Corporate Cost Allocation

10 ERHDC does not have any affiliate transactions, shared services and corporate cost allocation that
11 will be affecting its 2021 rates.

12
13 ERHDC confirms that there are no discrete customer groups that are materially impacted by changes
14 to other rates and charges.

15
16 A detailed breakdown by USoA account is shown below in Table 3-35 – OEB Appendix 2-H. Year
17 over year variance analysis will follow with a discussion on those variances over \$50,000.

1

Table 3 - 35: OEB Appendix 2-H Other Operating Revenue

Appendix 2-H						
Other Operating Revenue						
USoA #	USoA Description	2017 Actual ²	2018 Actual ²	2019 Actual	Bridge Year	Test Year
		2017	2018	2019	2020	2021
	<i>Reporting Basis</i>	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
4080-2	SSS Revenue	-\$ 10,418	-\$ 10,543	-\$ 10,598	-\$ 10,500	-\$ 10,500
4082	Retail Services Revenues	-\$ 5,357	-\$ 4,622	-\$ 8,188	-\$ 7,900	-\$ 7,900
4084	Serv Tx Requests	-\$ 13	-\$ 8	-\$ 9	-\$ 30	-\$ 10
4210	Rent from Electric Property	-\$ 38,441	-\$ 39,674	-\$ 39,328	-\$ 40,806	-\$ 86,756
4225	Late Payment Charges	-\$ 11,050	-\$ 10,071	-\$ 11,797	-\$ 12,000	-\$ 10,000
4235	Misc. Service Revenues	-\$ 37,568	-\$ 33,631	-\$ 35,872	-\$ 15,050	-\$ 15,050
4245	Government Assistance Directly Credited to Income	-\$ 1,430	\$ -	\$ -	\$ -	\$ -
4324	Special Purpose Charge Recovery	\$ -	\$ -	\$ -	\$ -	\$ -
4325	Revenues from Merchandise, Jobbing, Etc.	-\$ 2,214	-\$ 5,945	-\$ 1,970	-\$ 1,200	-\$ 1,200
4362	Loss from Retirement of Utility and Other Property	\$ -	\$ -	\$ -	\$ -	\$ -
4375	Revenues from Non-Utility Operations	-\$ 13,553	-\$ 174,826	-\$ 225,890	-\$ 598,703	-\$ 49,604
4380	Expenses of Non-Utility Operations	\$ 12,952	\$ 174,392	\$ 201,611	\$ 599,865	\$ 49,604
4390	Miscellaneous Non-Operating Income	-\$ 5,885	-\$ 4,479	-\$ 4,597	\$ -	\$ -
4398	Foreign Exchange Gains and Losses, Including Amortization	\$ -	\$ -	\$ -	\$ -	\$ -
	Specific Service Charges	-\$ 37,568	-\$ 33,631	-\$ 35,872	-\$ 15,050	-\$ 15,050
	Late Payment Charges	-\$ 11,050	-\$ 10,071	-\$ 11,797	-\$ 12,000	-\$ 10,000
	Other Operating Revenues	-\$ 55,658	-\$ 54,847	-\$ 58,123	-\$ 59,236	-\$ 105,166
	Other Income or Deductions	-\$ 8,700	-\$ 10,856	-\$ 30,846	-\$ 38	-\$ 1,200
	Total	-\$ 112,974	-\$ 109,405	-\$ 136,639	-\$ 86,324	-\$ 131,416

2

1 ERHDC's service revenue requirement for the purpose of this application is \$2,272,419 with the base
2 revenue requirement of \$2,071,003. The materiality threshold used to analyze Other Distribution
3 Revenue accounts in accordance with the OEB Filing Requirements is \$50,000 for a distributor with a
4 distribution revenue requirement less than or equal to \$10 million. ERHDC's materiality threshold is
5 \$50,000. Therefore, ERHDC has no material changes in Other Distribution Revenue from 2017 to 2021
6 Test Year. ERHDC has determined based on the filing requirements that no further variance analysis is
7 required.

8
9
10
11

APPENDIX 3-A

MONTHLY DATA USED FOR REGRESSION ANALYSIS

	Purchased kWh	Heating Degree Days	Cooling Degree Days	Spring Fall Flag	Number of Days in Month	Predicted Purchases
Jan-10	7,177,749	878.80	-	-	31.00	7,011,565
Feb-10	7,114,370	750.70	-	-	28.00	6,285,969
Mar-10	5,311,814	502.90	-	1.00	31.00	5,269,508
Apr-10	4,914,696	324.10	-	1.00	30.00	4,544,306
May-10	4,779,232	138.90	33.10	1.00	31.00	4,233,134
Jun-10	4,124,469	70.50	9.10	-	30.00	4,121,265
Jul-10	4,708,130	8.30	100.00	-	31.00	4,694,485
Aug-10	4,926,116	26.60	70.70	-	31.00	4,532,588
Sep-10	4,287,110	180.90	8.50	1.00	30.00	4,101,575
Oct-10	5,014,291	364.70	-	1.00	31.00	4,778,714
Nov-10	5,454,156	525.30	-	1.00	30.00	5,258,834
Dec-10	6,984,956	804.90	-	-	31.00	6,749,122
Jan-11	7,898,853	1,005.10	-	-	31.00	7,460,099
Feb-11	7,055,612	797.20	-	-	29.00	6,541,329
Mar-11	6,068,078	752.70	-	1.00	31.00	6,156,631
Apr-11	5,833,656	453.00	-	1.00	30.00	5,002,073
May-11	4,007,643	187.90	4.90	1.00	31.00	4,188,782
Jun-11	4,529,150	61.50	14.90	-	30.00	4,134,216
Jul-11	4,702,217	2.40	104.60	-	31.00	4,709,152
Aug-11	4,300,840	16.20	49.80	-	31.00	4,333,814
Sep-11	4,515,954	128.90	16.20	1.00	30.00	3,976,531
Oct-11	4,716,307	304.30	0.50	1.00	31.00	4,568,085
Nov-11	5,284,405	481.40	-	1.00	30.00	5,102,931
Dec-11	7,485,467	752.90	-	-	31.00	6,564,453
Jan-12	6,612,159	861.50	-	-	31.00	6,950,127
Feb-12	6,302,097	720.20	-	-	28.00	6,177,653
Mar-12	5,646,609	527.00	-	1.00	31.00	5,355,095
Apr-12	4,955,514	420.60	-	1.00	30.00	4,887,010
May-12	3,945,791	145.50	11.10	1.00	31.00	4,086,215
Jun-12	4,598,078	43.70	45.50	-	30.00	4,307,955
Jul-12	4,549,659	0.40	94.30	-	31.00	4,622,291
Aug-12	4,387,558	30.10	47.40	-	31.00	4,364,593
Sep-12	4,527,837	165.30	11.80	1.00	30.00	4,071,728
Oct-12	4,721,308	351.90	-	1.00	31.00	4,733,257
Nov-12	5,471,632	571.40	-	1.00	30.00	5,422,551
Dec-12	7,566,302	775.80	-	-	31.00	6,645,778

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Jan-13	6,827,261	914.40	-	-	31.00	7,137,993
Feb-13	6,079,479	810.90	-	-	28.00	6,499,759
Mar-13	6,067,974	687.60	-	1.00	31.00	5,925,439
Apr-13	4,963,590	363.80	-	1.00	30.00	4,685,294
May-13	4,286,764	163.30	3.80	1.00	31.00	4,092,901
Jun-13	4,049,848	81.40	16.80	-	30.00	4,219,600
Jul-13	4,273,195	30.00	59.20	-	31.00	4,455,612
Aug-13	4,606,952	49.40	30.80	-	31.00	4,304,591
Sep-13	3,900,735	154.10	1.30	1.00	30.00	3,950,646
Oct-13	4,536,913	320.80	-	1.00	31.00	4,622,810
Nov-13	5,989,141	623.80	-	1.00	30.00	5,608,641
Dec-13	8,021,110	985.00	-	-	31.00	7,388,717
Jan-14	7,852,017	1,037.50	-	-	31.00	7,575,162
Feb-14	7,171,636	886.50	-	-	29.00	6,858,463
Mar-14	6,267,039	884.70	-	1.00	31.00	6,625,407
Apr-14	5,156,663	498.90	-	1.00	30.00	5,165,079
May-14	4,478,322	209.20	2.70	1.00	31.00	4,247,389
Jun-14	4,232,924	48.80	20.80	-	30.00	4,134,801
Jul-14	3,755,179	52.20	18.30	-	31.00	4,217,740
Aug-14	4,571,476	57.20	21.40	-	31.00	4,259,502
Sep-14	3,937,076	166.00	4.70	1.00	30.00	4,019,235
Oct-14	4,897,682	366.80	-	1.00	31.00	4,786,172
Nov-14	5,947,394	675.80	-	1.00	30.00	5,793,310
Dec-14	7,084,619	779.20	-	-	31.00	6,657,853
Jan-15	7,167,685	1,038.50	-	-	31.00	7,578,713
Feb-15	7,443,817	1,043.50	-	-	28.00	7,325,799
Mar-15	5,786,226	787.70	-	1.00	31.00	6,280,928
Apr-15	4,996,208	440.40	-	1.00	30.00	4,957,326
May-15	3,910,103	176.10	6.10	1.00	31.00	4,156,168
Jun-15	4,294,868	69.90	6.10	-	30.00	4,095,904
Jul-15	4,067,508	31.40	55.10	-	31.00	4,428,835
Aug-15	3,801,329	35.20	39.80	-	31.00	4,323,854
Sep-15	4,091,908	87.80	38.10	1.00	30.00	4,000,155
Oct-15	4,583,287	393.40	-	1.00	31.00	4,880,637
Nov-15	5,009,268	488.30	-	1.00	30.00	5,127,435
Dec-15	5,952,516	599.10	-	-	31.00	6,018,258

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Jan-16	6,646,637	884.60	-	-	31.00	7,032,163
Feb-16	6,312,100	856.90	-	-	28.00	6,663,120
Mar-16	5,718,320	659.40	-	1.00	31.00	5,825,292
Apr-16	4,966,411	542.90	-	1.00	30.00	5,321,338
May-16	4,082,621	190.10	12.60	1.00	31.00	4,256,220
Jun-16	3,965,564	72.80	30.40	-	30.00	4,294,371
Jul-16	4,382,848	22.40	72.70	-	31.00	4,533,160
Aug-16	4,538,383	11.00	73.30	-	31.00	4,497,321
Sep-16	2,619,577	88.70	10.70	1.00	30.00	3,791,178
Oct-16	5,551,448	330.20	0.50	1.00	31.00	4,660,065
Nov-16	4,830,363	452.40	-	1.00	30.00	4,999,942
Dec-16	6,179,832	800.00	-	-	31.00	6,731,720
Jan-17	6,233,963	795.50	-	-	31.00	6,715,739
Feb-17	5,518,076	715.30	-	-	28.00	6,160,252
Mar-17	5,958,533	772.90	-	1.00	31.00	6,228,368
Apr-17	4,622,529	403.80	-	1.00	30.00	4,827,347
May-17	4,130,500	242.10	1.30	1.00	31.00	4,353,387
Jun-17	4,056,483	69.00	8.90	-	30.00	4,114,390
Jul-17	4,274,955	28.60	31.10	-	31.00	4,233,046
Aug-17	4,172,563	65.20	11.60	-	31.00	4,212,026
Sep-17	3,970,017	108.70	33.70	1.00	30.00	4,040,307
Oct-17	4,258,566	249.30	-	1.00	31.00	4,368,890
Nov-17	5,336,612	599.70	-	1.00	30.00	5,523,054
Dec-17	6,958,538	973.10	-	-	31.00	7,346,456
Jan-18	7,018,037	927.60	-	-	31.00	7,184,871
Feb-18	6,075,931	756.50	-	-	28.00	6,306,566
Mar-18	5,717,923	720.00	-	1.00	31.00	6,040,503
Apr-18	5,277,726	575.40	-	1.00	30.00	5,436,756
May-18	4,044,194	162.80	16.60	1.00	31.00	4,190,243
Jun-18	3,984,889	65.70	22.50	-	30.00	4,207,983
Jul-18	4,578,298	3.80	78.90	-	31.00	4,515,115
Aug-18	4,530,212	14.30	61.70	-	31.00	4,419,215
Sep-18	3,945,712	136.40	23.50	1.00	30.00	4,059,694
Oct-18	4,687,619	438.90	-	1.00	31.00	5,042,223
Nov-18	5,592,501	666.00	-	1.00	30.00	5,758,507
Dec-18	6,357,092	786.40	-	-	31.00	6,683,422

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Jan-19	7,328,335	981.60	-	-	31.00	7,376,643
Feb-19	6,341,294	846.90	-	-	28.00	6,627,607
Mar-19	6,193,341	737.90	-	1.00	31.00	6,104,071
Apr-19	4,929,700	462.80	-	1.00	30.00	5,036,876
May-19	4,252,814	276.70	-	1.00	31.00	4,466,197
Jun-19	3,903,992	74.60	11.70	-	30.00	4,155,959
Jul-19	4,526,242	4.50	70.10	-	31.00	4,449,458
Aug-19	4,170,749	37.40	20.60	-	31.00	4,182,991
Sep-19	3,744,253	137.80	1.80	1.00	30.00	3,896,631
Oct-19	4,465,900	295.90	-	1.00	31.00	4,534,382
Nov-19	5,691,780	572.90	-	1.00	30.00	5,427,878
Dec-19	6,502,363	735.70	-	-	31.00	6,503,370
Jan-20		932.51	-	-	31.00	7,202,308
Feb-20		818.46	-	-	29.00	6,616,831
Mar-20		703.28	-	1.00	31.00	5,981,124
Apr-20		448.57	-	1.00	30.00	4,986,341
May-20		189.26	9.22	1.00	31.00	4,227,064
Jun-20		65.79	18.67	-	30.00	4,178,644
Jul-20		18.40	68.43	-	31.00	4,485,890
Aug-20		34.26	42.71	-	31.00	4,343,050
Sep-20		135.46	15.03	1.00	30.00	3,990,768
Oct-20		341.62	0.10	1.00	31.00	4,697,523
Nov-20		565.70	-	1.00	30.00	5,402,308
Dec-20		799.21	-	-	31.00	6,728,915
Jan-21		932.51	-	-	31.00	7,202,308
Feb-21		818.46	-	-	28.00	6,526,607
Mar-21		703.28	-	1.00	31.00	5,981,124
Apr-21		448.57	-	1.00	30.00	4,986,341
May-21		189.26	9.22	1.00	31.00	4,227,064
Jun-21		65.79	18.67	-	30.00	4,178,644
Jul-21		18.40	68.43	-	31.00	4,485,890
Aug-21		34.26	42.71	-	31.00	4,343,050
Sep-21		135.46	15.03	1.00	30.00	3,990,768
Oct-21		341.62	0.10	1.00	31.00	4,697,523
Nov-21		565.70	-	1.00	30.00	5,402,308
Dec-21		799.21	-	-	31.00	6,728,915

APPENDIX 3-B

Chapter 2 Appendices – Appendix 2-IB

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 2021 Cost of Service)		Consumption (kWh) ⁽³⁾		
			Actual (Weather actual)	Weather- normalized	Weather- normalized
Historical	2015		Actual	61,104,721.27	60,695,120.46
Historical	2016		Actual	59,794,103.87	60,018,429.78
Historical	2017		Actual	59,491,334.83	60,092,038.76
Historical	2018		Actual	61,810,132.54	60,750,463.77
Historical	2019		Actual	62,050,760.91	62,039,370.71
Bridge Year	2020		Forecast		62,840,765.03
Test Year	2021		Forecast		62,626,608.33

Variance Analysis		Year	Year-over-year		Versus OEB- approved
		2015			
		2016	-2.1%	-1.1%	
		2017	-0.5%	0.1%	
		2018	3.9%	1.1%	
		2019	0.4%	2.1%	
		2020		1.3%	
		2021		-0.3%	
		Geometric Mean	0.5%	0.6%	

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 2021 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	2015	Actual	2,856		Actual	30,963,982.24	30,756,422.63	Actual	10,841.73	10,769.06
Historical	2016	Actual	2,861		Actual	29,475,507.11	29,586,088.58	Actual	10,302.52	10,341.17
Historical	2017	Actual	2,872		Actual	28,877,055.71	29,168,637.01	Actual	10,054.69	10,156.21
Historical	2018	Actual	2,888		Actual	31,054,130.41	30,521,740.48	Actual	10,752.82	10,568.47
Historical	2019	Actual	2,901		Actual	31,777,563.04	31,771,729.87	Actual	10,954.00	10,951.99
Bridge Year	2020	Forecast	2,905		Forecast		32,702,467.45	Forecast	0.00	11,256.00
Test Year	2021	Forecast	2,910		Forecast		32,639,691.74	Forecast	0.00	11,216.39

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
		2015				2015				2015			
		2016	0.2%			2016	-4.8%	-3.8%		2016	-5.0%	-4.0%	
		2017	0.4%			2017	-2.0%	-1.4%		2017	-2.4%	-1.8%	
		2018	0.6%			2018	7.5%	4.6%		2018	6.9%	4.1%	
		2019	0.5%			2019	2.3%	4.1%		2019	1.9%	3.6%	
		2020	0.1%			2020		2.9%		2020		2.8%	
		2021	0.2%			2021		-0.2%		2021		-0.4%	
		Geometric Mean	0.4%			Geometric Mean	0.9%	1.2%		Geometric Mean	0.3%	0.8%	

	Calendar Year (for 2021 Cost of Service)	Revenues		
Historical	2015	Actual	\$ 1,012,842	
Historical	2016	Actual	\$ 981,306	
Historical	2017	Actual	\$ 969,312	
Historical	2018	Actual	\$ 1,024,269	
Historical	2019	Actual	\$ 1,026,295	
Bridge Year (Forecast)	2020	Forecast	\$ 1,046,479	
Test Year (Forecast)	2021	Forecast	\$ 1,046,199	

Variance Analysis		Year	Year-over-year		Test Year Versus OEB- approved
		2015			
		2016	-3.1%		
		2017	-1.2%		
		2018	5.7%		
		2019	0.2%		
		2020	2.0%		
		2021	0.0%		
		Geometric Mean	0.7%		

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

	Calendar Year (for 2021 Cost of Service)	Customers		Consumption (kWh) ⁽¹⁾			Consumption (kWh) per Customer		
				Actual (Weather actual)	Weather- normalized	Weather- normalized	Actual (Weather actual)	Weather- normalized	Weather- normalized
Historical	2015	Actual	406	Actual	10,393,804.16	10,324,131.79	Actual	25,600.50	25,428.90
Historical	2016	Actual	393	Actual	10,122,402.63	10,160,378.23	Actual	25,756.75	25,853.38
Historical	2017	Actual	388	Actual	9,915,384.95	10,015,503.91	Actual	25,555.12	25,813.15
Historical	2018	Actual	388	Actual	10,221,049.75	10,045,820.76	Actual	26,342.91	25,891.29
Historical	2019	Actual	380	Actual	10,266,815.94	10,264,931.34	Actual	27,017.94	27,012.98
Bridge Year	2020	Forecast	375	Forecast	10,389,918.54		Forecast	0.00	27,739.37
Test Year	2021	Forecast	369	Forecast	10,191,189.98		Forecast	0.00	27,618.40

Variance Analysis	Year		Year-over-year	Test Year Versus OEB- approved	Year	Year		Year-over-year	Test Year Versus OEB- approved	Year	Year		Year-over-year	Test Year Versus OEB- approved
	2015				2015					2015				
	2016		-3.2%		2016		-2.6%	-1.6%		2016		0.6%	1.7%	
	2017		-1.3%		2017		-2.0%	-1.4%		2017		-0.8%	-0.2%	
	2018		0.0%		2018		3.1%	0.3%		2018		3.1%	0.3%	
	2019		-2.1%		2019		0.4%	2.2%		2019		2.6%	4.3%	
	2020		-1.4%		2020			1.2%		2020			2.7%	
	2021		-1.5%		2021			-1.9%		2021			-0.4%	
	Geometric Mean		-1.9%		Geometric Mean		-0.4%	-0.3%		Geometric Mean		1.8%	1.7%	

	Calendar Year (for 2021 Cost of Service)	Revenues	
Historical	2015	Actual	\$ 323,630
Historical	2016	Actual	\$ 324,925
Historical	2017	Actual	\$ 327,048
Historical	2018	Actual	\$ 317,061
Historical	2019	Actual	\$ 329,968
Bridge Year (Forecast)	2020	Forecast	\$ 328,427
Test Year (Forecast)	2021	Forecast	\$ 322,632

Variance Analysis	Year		Year-over-year	Test Year Versus OEB- approved
	2015			
	2016		0.4%	
	2017		0.7%	
	2018		-3.1%	
	2019		4.1%	
	2020		-0.5%	
	2021		-1.8%	
	Geometric Mean		-0.1%	

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

	Calendar Year (for 2021 Cost of Service)	Customers		Consumption (kWh) ⁽¹⁾			Consumption (kWh) per Customer		
				Actual (Weather actual)	Weather- normalized	Weather- normalized	Actual (Weather actual)	Weather- normalized	Weather- normalized
Historical	2015	Actual	29	Actual	16,669,657.21	16,557,916.17	Actual	574,815.77	570,962.63
Historical	2016	Actual	29	Actual	16,378,057.41	16,439,501.97	Actual	564,760.60	566,879.38
Historical	2017	Actual	28	Actual	15,590,914.83	15,748,341.52	Actual	556,818.39	562,440.77
Historical	2018	Actual	27	Actual	15,357,083.89	15,093,603.07	Actual	568,780.88	559,029.74
Historical	2019	Actual	28	Actual	14,949,541.12	14,946,796.94	Actual	533,912.18	533,814.18
Bridge Year	2020	Forecast	29	Forecast	15,417,467.87		Forecast	0.00	532,405.11
Test Year	2021	Forecast	30	Forecast	15,482,365.19		Forecast	0.00	516,078.84

Variance Analysis	Year		Year-over-year	Test Year Versus OEB- approved	Year	Year		Year-over-year	Test Year Versus OEB- approved	Year	Year		Year-over-year	Test Year Versus OEB- approved
	2015				2015					2015				
	2016		0.0%		2016		-1.7%	-0.7%		2016		-1.7%	-0.7%	
	2017		-3.4%		2017		-4.8%	-4.2%		2017		-1.4%	-0.8%	
	2018		-3.6%		2018		-1.5%	-4.2%		2018		2.1%	-0.6%	
	2019		3.7%		2019		-2.7%	-1.0%		2019		-6.1%	-4.5%	
	2020		3.4%		2020			3.1%		2020			-0.3%	
	2021		3.6%		2021			0.4%		2021			-3.1%	
	Geometric Mean		0.7%		Geometric Mean		-3.6%	-1.3%		Geometric Mean		-2.4%	-2.0%	

	Calendar Year (for 2021 Cost of Service)	Revenues	
Historical	2015	Actual	\$ 224,278
Historical	2016	Actual	\$ 224,257
Historical	2017	Actual	\$ 217,052
Historical	2018	Actual	\$ 211,545
Historical	2019	Actual	\$ 206,720
Bridge Year (Forecast)	2020	Forecast	\$ 213,972
Test Year (Forecast)	2021	Forecast	\$ 217,316

Variance Analysis	Year		Year-over-year	Test Year Versus OEB- approved
	2015			
	2016		0.0%	
	2017		-3.2%	
	2018		-2.5%	
	2019		-2.3%	
	2020		3.5%	
	2021		1.6%	
	Geometric Mean		-0.6%	

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4 Customer Class: Street Light Is the customer class billed on consumption (kWh) or demand (kW or kVA)? kW

	Calendar Year (for 2021 Cost of Service)	Customers		Consumption (kWh) ⁽¹⁾			Consumption (kWh) per Customer		
				Actual (Weather actual)	Weather- normalized	Weather- normalized	Actual (Weather actual)	Weather- normalized	Weather- normalized
Historical	2015	Actual	1,064	Actual	370,751.73	368,266.48	Actual	348.45	346.12
Historical	2016	Actual	1,065	Actual	342,284.80	343,568.93	Actual	321.39	322.60
Historical	2017	Actual	1,065	Actual	341,036.80	344,480.36	Actual	320.22	323.46
Historical	2018	Actual	1,062	Actual	341,036.80	335,190.09	Actual	321.13	315.62
Historical	2019	Actual	1,062	Actual	341,036.80	340,974.20	Actual	321.13	321.07
Bridge Year	2020	Forecast	799	Forecast	224,918.50		Forecast	0.00	281.50
Test Year	2021	Forecast	799	Forecast	224,918.50		Forecast	0.00	281.50

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
	2015			2015			2015		
	2016	0.1%		2016	-7.7%	-6.7%	2016	-7.8%	-6.8%
	2017	0.0%		2017	-0.4%	0.3%	2017	-0.4%	0.3%
	2018	-0.3%		2018	0.0%	-2.7%	2018	0.3%	-2.4%
	2019	0.0%		2019	0.0%	1.7%	2019	0.0%	1.7%
	2020	-24.8%		2020		-34.0%	2020		-12.3%
	2021	0.0%		2021		0.0%	2021		0.0%
	Geometric Mean	-5.6%		Geometric Mean	-2.7%	-9.4%	Geometric Mean	-2.7%	-4.0%

	Calendar Year (for 2021 Cost of Service)	Revenues	
Historical	2015	Actual	\$ 56,895
Historical	2016	Actual	\$ 52,999
Historical	2017	Actual	\$ 53,023
Historical	2018	Actual	\$ 52,947
Historical	2019	Actual	\$ 52,944
Bridge Year (Forecast)	2020	Forecast	\$ 35,633
Test Year (Forecast)	2021	Forecast	\$ 35,633

Variance Analysis	Year	Year-over-year	Test Year Versus OEB- approved
	2015		
	2016	-6.8%	
	2017	0.0%	
	2018	-0.1%	
	2019	0.0%	
	2020	-32.7%	
	2021	0.0%	
	Geometric Mean	-8.9%	

5 Customer Class: Sentinel Lights Is the customer class billed on consumption (kWh) or demand (kW or kVA)? kW

	Calendar Year (for 2021 Cost of Service)	Customers		Consumption (kWh) ⁽¹⁾			Consumption (kWh) per Customer		
				Actual (Weather actual)	Weather- normalized	Weather- normalized	Actual (Weather actual)	Weather- normalized	Weather- normalized
Historical	2015	Actual	26	Actual	24,668.04	24,502.68	Actual	948.77	942.41
Historical	2016	Actual	26	Actual	24,566.40	24,658.56	Actual	944.86	948.41
Historical	2017	Actual	25	Actual	24,235.00	24,479.71	Actual	969.40	979.19
Historical	2018	Actual	25	Actual	24,235.20	23,819.71	Actual	969.41	952.79
Historical	2019	Actual	25	Actual	24,235.20	24,230.75	Actual	969.41	969.23
Bridge Year	2020	Forecast	25	Forecast	24,151.49		Forecast	0.00	965.06
Test Year	2021	Forecast	25	Forecast	24,257.61		Forecast	0.00	970.30

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
	2015			2015			2015		
	2016	0.0%		2016	-0.4%	0.6%	2016	-0.4%	0.6%
	2017	-3.8%		2017	-1.3%	-0.7%	2017	2.6%	3.2%
	2018	0.0%		2018	0.0%	-2.7%	2018	0.0%	-2.7%
	2019	0.0%		2019	0.0%	1.7%	2019	0.0%	1.7%
	2020	0.0%		2020		-0.3%	2020		-0.3%
	2021	0.0%		2021		0.4%	2021		0.4%
	Geometric Mean	-0.8%		Geometric Mean	-0.6%	-0.2%	Geometric Mean	0.7%	0.6%

	Calendar Year (for 2021 Cost of Service)	Revenues	
Historical	2015	Actual	\$ 1,920
Historical	2016	Actual	\$ 2,000
Historical	2017	Actual	\$ 1,999
Historical	2018	Actual	\$ 1,992
Historical	2019	Actual	\$ 1,992
Bridge Year (Forecast)	2020	Forecast	\$ 1,796
Test Year (Forecast)	2021	Forecast	\$ 1,798

Variance Analysis	Year	Year-over-year	Test Year Versus OEB- approved
	2015		
	2016	4.2%	
	2017	-0.1%	
	2018	-0.4%	
	2019	0.0%	
	2020	-9.8%	
	2021	0.1%	
	Geometric Mean	-1.3%	

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

	Calendar Year (for 2021 Cost of Service)	Customers			Consumption (kWh) ⁽²⁾			Consumption (kWh) per Customer		
		Actual			Actual (Weather actual)	Weather- normalized	Weather- normalized	Actual (Weather actual)	Weather- normalized	Weather- normalized
Historical	2015	Actual	21		Actual	123,636.00	122,807.24	Actual	5,887.43	5,847.96
Historical	2016	Actual	21		Actual	123,636.00	124,099.84	Actual	5,887.43	5,909.52
Historical	2017	Actual	21		Actual	123,636.00	124,884.39	Actual	5,887.43	5,946.88
Historical	2018	Actual	21		Actual	123,636.00	121,516.39	Actual	5,887.43	5,786.49
Historical	2019	Actual	21		Actual	123,636.00	123,613.31	Actual	5,887.43	5,886.35
Bridge Year	2020	Forecast	21		Forecast		119,334.39	Forecast	0.00	5,682.59
Test Year	2021	Forecast	21		Forecast		115,182.45	Forecast	0.00	5,484.88

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
	2015			2015				2015		
	2016	0.0%		2016	0.0%	1.1%		2016	0.0%	1.1%
	2017	0.0%		2017	0.0%	0.6%		2017	0.0%	0.6%
	2018	0.0%		2018	0.0%	-2.7%		2018	0.0%	-2.7%
	2019	0.0%		2019	0.0%	1.7%		2019	0.0%	1.7%
	2020	0.0%		2020	0.0%	-3.5%		2020	0.0%	-3.5%
	2021	0.0%		2021	0.0%	-3.5%		2021	0.0%	-3.5%
	Geometric Mean	0.0%		Geometric Mean	0.0%	-1.3%		Geometric Mean	0.0%	-1.3%

	Calendar Year (for 2021 Cost of Service)	Revenues		
		Actual		
Historical	2015	Actual	\$ 5,434	
Historical	2016	Actual	\$ 5,464	
Historical	2017	Actual	\$ 5,464	
Historical	2018	Actual	\$ 5,464	
Historical	2019	Actual	\$ 5,464	
Bridge Year (Forecast)	2020	Forecast	\$ 4,963	
Test Year (Forecast)	2021	Forecast	\$ 4,898	

Variance Analysis	Year	Year-over-year	Test Year Versus OEB- approved
	2015		
	2016	0.5%	
	2017	0.0%	
	2018	0.0%	
	2019	0.0%	
	2020	-9.2%	
	2021	-1.3%	
	Geometric Mean	-2.1%	