EXHIBIT 3

OPERATING REVENUE

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EXHIBIT 3 – OPERATING REVENUE

3.0 OVERVIEW

BHI provides evidence on its forecast of customers, energy and load, service revenue and other revenue in this Exhibit 3, for the 2014 – 2019 Actuals, the 2020 Bridge Year and the 2021 Test Year.

BHI is proposing a total Service Revenue Requirement of $37,220,971 for the 2021 Test Year which includes a Base Revenue Requirement of $35,529,884 and revenue offsets of $1,691,087 to be recovered through Other Operating Revenue.

Other Operating Revenue includes Specific Service Charges, Late Payment Charges, Retail Service Revenues, Standard Supply Service (“SSS”) Administrative charges, Rent from Electric Property, Revenue from Non-Utility Operations, Other Miscellaneous revenue and Administrative charges, and Interest Income.

3.1 LOAD AND REVENUE FORECASTS

BHI engaged Elenchus Research Associates ("Elenchus") - a leading Canadian consulting firm respected for its expertise and experience in economic regulation, focusing on the energy and the telecommunications sectors - to complete the 2021 Test Year load forecast. Elenchus provided forecasts by rate class for: consumption and demand (if applicable); and total number of customers and connections. The sales and energy forecast utilized actual data from January 2010 to June 2020. Forecasts were provided both with and without the impact arising from Conservation and Demand Management ("CDM") programs.

Elenchus used a multivariate regression model to determine the sales and energy forecast for the 2021 Test Year.

3.1.1 Multivariate Regression Model

BHI's load forecast relies on a multivariate regression methodology for weather-sensitive classes: Residential, GS<50 kW, and GS>50 kW. Monthly consumption per customer per day is used as the dependent variable in the multivariate regressions. Independent variables considered for each class model are described in further detail in Section 3.1.1.8 of this Exhibit and are as follows:

- Weather
  - Heating Degree Days ("HDD") and Cooling Degree Days ("CDD")
- Economic
  - Gross Domestic Product ("GDP")
  - Employment levels measured by Full Time Equivalents ("FTEs")
- Time Trend
  - Monthly trend variable incrementing by 1 each month. The value begins at 1 in January 2010 and reaches 144 in December 2021
- Calendar Binary
  - 12 monthly binary variables equal to 1 in the month associated with the observation and 0 in all other months
- Seasonal Binary
  - Spring binary variable equal to 1 in March, April, and May and 0 in all other months

- Fall binary variable equal to 1 in September, October, and November and 0 in all other months
- Shoulder binary variable equal to 1 in the Spring and Fall months and 0 in all other months

- Number of Days
  - The number of days in the month
  - The number of "Peak Days" (non-holiday weekdays) in the month
- Number of Customers

The load and customer forecast methodologies are unchanged from those approved by the OEB in BHI's 2014 Cost of Service application (EB-2013-0115). BHI's load forecast methodology consists of a three-step process which explicitly takes into account historical and forecast CDM impacts:

1. Actual historical cumulative CDM impacts are added to the monthly consumption dependent variable to derive a forecast of consumption as if there were no CDM activities;
2. The metered load (gross of CDM) is forecasted based on multifactor regression techniques; and
3. The cumulative forecast CDM impacts are deducted from the gross load forecast to derive the load forecast (net of CDM).

BHI has developed separate energy forecasts for each rate class. For rate classes whose billing units are monthly peak demand, the forecasted monthly billing demand by class is forecast based on historical relationships between energy and demand.

Streetlight and USL forecasts rely on an average consumption per device methodology.

3.1.1.1 Weather and Weather-Normalization Methodology

The regression equations used to normalize and forecast BHI's weather sensitive load use monthly weather variables: HDD and CDD as measured at Environment Canada's Burlington Piers Weather Station ("Burlington Piers"). This is the only weather station within BHI's service territory with sufficient weather data. Environment Canada defines HDD and CDD as the difference between the average daily temperature and a base 18°C for each day (below base

18°C for heating, above base 18°C for cooling). A range of degree day bases beyond 18°C were considered in each rate class regression model. HDD and CDD measures at temperatures lower than 18°C were found to be more predictive than the default 18°C. Burlington Piers is located on Lake Ontario and consequently temperatures measured at this location are likely somewhat colder than temperatures throughout the service territory.

BHI's proposed consumption forecast relies on the 10-year average weather variables using base degrees as identified in Table 1 below. Rationale for the use of these HDD and CDD base temperatures is provided in Section 3.1.1.8 of this Exhibit 3.

Table 1 – Weather Variables Used by Rate Class

Rate Class	HDD Base Temperature	CDD Base Temperature
Residential	12°C	14°C
GS<50 kW	12°C	16°C
GS>50 kW	14°C	14°C

Table 2 below displays the most recent 10-year average (2010 – 2019) of HDD and CDD for a number of temperature thresholds based on temperatures reported by Environment Canada at Burlington Piers. BHI's proposed load forecast in this Application was based on this 10-year average.

Table 2 – 10-year Average HDD and CDD

Month	8°C		10°C		12°C		14°C		16°C		18°C		20°C	
	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD
January	354	1	415	0	477	0	539	0	601	0	663	0	725	0
February	305	1	361	0	417	0	473	0	530	0	586	0	643	0
March	215	7	272	2	333	0	394	0	456	0	518	0	580	0
April	70	31	114	15	165	6	220	1	279	0	339	0	399	0
May	4	172	14	120	36	80	69	51	110	30	158	16	211	7
June	0	322	0	262	0	203	3	145	12	95	34	56	66	29
July	0	454	0	392	0	330	0	268	0	206	2	146	9	91
August	0	426	0	364	0	302	0	240	0	178	2	118	13	66
September	0	308	0	248	0	188	5	133	18	86	42	50	78	26
October	10	133	26	87	53	53	91	28	137	12	191	4	250	1
November	107	23	155	10	208	3	265	1	324	0	384	0	444	0
December	230	2	290	0	352	0	414	0	476	0	538	0	600	0

As part of the minimum filing requirements the OEB also requires LDCs to develop a consumption forecast using monthly degree days based on a 20-year trend. HDD and CDD

based on the 20-year trend (2000 – 2019) are provided in Table 3 below. The load forecast based on the 20-year trend is provided in Tab "Summary Tables 20yr Trend" of BHI's load forecast model filed as Attachment11_Load_Forecast_Model_BHI_10302020 ("Load Forecast Model").

Table 3 – 20-year Trend Average HDD and CDD

Month	8°C		10°C		12°C		14°C		16°C		18°C		20°C	
	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD	HDD	CDD
January	357	1	418	0	480	0	541	0	603	0	665	0	727	0
February	311	2	366	0	422	0	478	0	534	0	590	0	647	0
March	237	5	296	2	356	0	418	0	480	0	542	0	604	0
April	74	25	120	11	172	3	229	0	288	0	349	0	409	0
May	4	177	14	125	37	86	68	55	108	33	154	17	207	8
June	0	321	0	260	0	200	0	141	10	90	33	54	66	27
July	0	464	0	402	0	340	0	278	0	216	1	155	5	97
August	0	423	0	361	0	299	0	237	0	175	3	116	14	65
September	0	322	0	261	0	200	1	143	11	93	33	55	67	29
October	7	146	21	97	45	60	80	33	124	15	177	6	235	2
November	125	19	174	9	228	3	286	1	346	0	406	0	466	0
December	212	1	272	0	334	0	397	0	459	0	521	0	583	0

3.1.1.2 Economic Variables

Overall economic activity also impacts energy consumption. There is no known agency that publishes monthly economic accounts on a regional basis for Ontario. However, regional employment levels are available; specifically, the monthly FTE employment levels for Toronto, Hamilton, and Ontario, as reported in Statistics Canada's Monthly Labour Force Survey[1]. Overall GDP in Ontario was also considered but is available only on an annual basis.[2]

Forecasted GDP and employment in 2021 are based on forecast growth rates from four major Canadian banks: BMO, TD, Scotiabank, and RBC, as of August 20, 2020 and provided in Table 4 below.

[1] Statistics Canada Table 14-10-0294-01
[2] Statistics Canada Table 36-10-0402-01

Table 4 – GDP and Employment Forecasts

	BMO	TD	Scotiabank	RBC	Average
Report Date	**11-Jun-20**	**17-Jun-20**	**4-Aug-20**	**10-Jun-20**	
FTE (Employment growth % YoY)					
2020	-3.90%	-6.00%	-5.80%	-4.70%	**-5.10%**
2021	5.60%	5.90%	-6.00%	5.40%	**2.73%**
GDP (Real % YoY)					
2020	-6.00%	-6.20%	-6.40%	-5.80%	**-6.10%**
2021	6.00%	5.10%	5.30%	4.20%	**5.15%**

Average forecast growth rates are applied to the most recent GDP and Labour Force Survey monthly data available to estimate future GDP and FTE figures. For example, the 2020 forecast GDP growth rate, -6.1%, is applied to the January 2019 GDP to forecast GDP in January 2020. The January 2021 GDP forecast is then determined by applying 5.15%, the 2021 GDP forecast growth rate, to the January 2020 forecast. FTE data was available until July 2020 at the time the proposed forecast in this Application was produced - therefore FTE values from January 2020 to July 2020 are used in the 2020 forecast.

3.1.1.3 Impact of Conservation and Demand Management

To isolate the impact of CDM, persisting CDM as measured by the IESO is added back to rate class consumption to simulate the rate class consumption had there been no CDM program delivery. This is labeled as “Actual No CDM” throughout the Load Forecast model. The effect is to remove the impact of CDM from any explanatory variables, which may capture a trend, and focus on the external factors. A weather normalized forecast is produced first based on no CDM delivery, and then persisting CDM savings of historic programs are subtracted from the “No CDM” forecast to determine a weather normalized forecast including the impact of CDM.

CDM data from IESO persistence reports are used for the years 2010 to 2017. These are filed as attachments:

- Attachment12_Final_CDM_Evaluation_Results_for_2011_2014_BHI_10302020 (for 2011-2014)
- Attachment13_Final_CDM_Evaluation_Results_for_2015_2017_BHI_10302020 (for 2015-2017)

CDM in 2018 and 2019 is based on limited data in the IESO's Participation and Cost Report ("P&C Report") filed as:

Attachment14_April2019_Participation_and_Cost Report_BHI_10302020;

and additional 2019 programs not included in the IESO reports provided by BHI's third party CDM consultant. These are included in Tab "3-a. Rate Class Allocations" of the LRAMVA Workform attached as:

Attachment15_2021_LRAMVA_Workform_BHI_10302020.

As per the updated Chapter 2 Filing Requirements, forecast CDM in 2019 is limited to projects that are subject to contractual agreements as of April 30, 2019. These savings have been calculated based on savings for the projects subject to contractual agreements that were completed in 2019, adjusted by net-to-gross factors. While statistical regression is appropriate for estimating a relationship between explanatory variables and energy use, in the case of CDM, an independent measurement is available providing a greater level of accuracy than could be obtained through regression.

3.1.1.4 Additional Variables

In addition to the weather and economic variables the following variables have been examined for all weather-sensitive classes (Residential, GS<50 kW and GS>50 kW): Only variables which have a strong correlation to consumption are used in the rate class regression equations.

- a time trend variable;
- calendar month binary variable
- seasonal binary variables
- number of days and number of working days in each month; and
- number of customers

Details on the variables used in each rate class model are provided by rate class in Section 3.1.1.8 below.

3.1.1.5 Regression Model

Time-series autoregressive models using the Prais-Winsten estimation for each rate class were used instead of Ordinary least-squares ("OLS") regressions. OLS regressions exhibited errors with a high level of autocorrelation with Durbin-Watson statistics near 1.00[3]. A high level of autocorrelation can distort the models' statistical tests such that independent variables can be inappropriately considered statistically significant when they are not.

3.1.1.6 Demand Charges

For rate classes with demand charges (GS>50 kW and Street Light), an annual kW to kWh ratio is calculated using actual observations for each historical year and applied to the weather-normalized kWh to derive a weather normalized demand (kW).

3.1.1.7 Impact of COVID-19 Pandemic ("COVID-19")

The load forecast is intended to reflect the ongoing known impacts of COVID-19 on energy consumption that are expected to continue into the 2021 Test Year and beyond. BHI's 2021 Test Year load forecast reflects the ongoing impacts of COVID-19 by incorporating economic variables as at August 20, 2020 in each of the Residential, GS<50 kW and GS>50 kW forecasts. There are no manual adjustments to the forecast associated with the direct impact of COVID-19 i.e. COVID-19 is expected to reduce overall economic activity but the possibility of future shutdowns and a further increase in employees working from home are not reflected in the proposed load forecast. BHI intends to update the load forecast - before a decision is rendered on this Application - once full 2020 data is available; and may consider manual adjustments at that time if these direct impacts persist.

The 2020 Bridge Year forecast includes actual consumption data from January 2020 to June 2020 and forecast consumption from July 2020 to December 2020. Although there are no manual adjustments applied to the proposed 2021 Test Year forecast, BHI applied manual adjustments to forecast consumption from July 2020 to December 2020 to consider the direct impact COVID-19 has had on consumption from March 2020 to June 2020. These manual adjustments are described below:

[3] The Durbin-Watson statistic value of 2.00 suggests there is no error autocorrelation. Generally, a Durbin-Watson statistic of 1.5 to 2.5 is considered acceptable.

- Residential consumption has increased in 2020, despite negative economic indicators, due to an increase in the percentage of customers working from home. If BHI were to use the latest economic forecasts to predict residential consumption for the remainder of 2020, the result would not be representative of the current COVID-19 environment. As a result, BHI incorporated residential volumes in excess of the volumes predicted under normal economic circumstances (i.e. no economic downturn) in order to forecast July 2020 to December 2020 and reflect the increased residential consumption as a result of residential customers continuing to work from home.
- Forecasted GS<50 kW and GS>50 kW consumption for July 2020 to December 2020 relies on adjusted quarterly economic growth rates from Scotiabank and CIBC as at August 20, 2020. Commercial consumption decreased in April 2020 to June 2020, however, it did not decrease to the extent that would be predicted with Q2 economic growth rates (-41% GDP growth). Consequently, BHI adjusted Q3 and Q4 forecast growth rates to reflect the observed smaller impact of changes in quarterly GDP on consumption in Q2. This adjustment is necessary to align the magnitude of the anticipated economic recovery with the magnitude of the economic downturn.
- The manual adjustments do not persist to the 2021 Test Year forecast.

3.1.1.8 Load Forecast Methodology by Rate Class

3.1.1.8.1 Residential

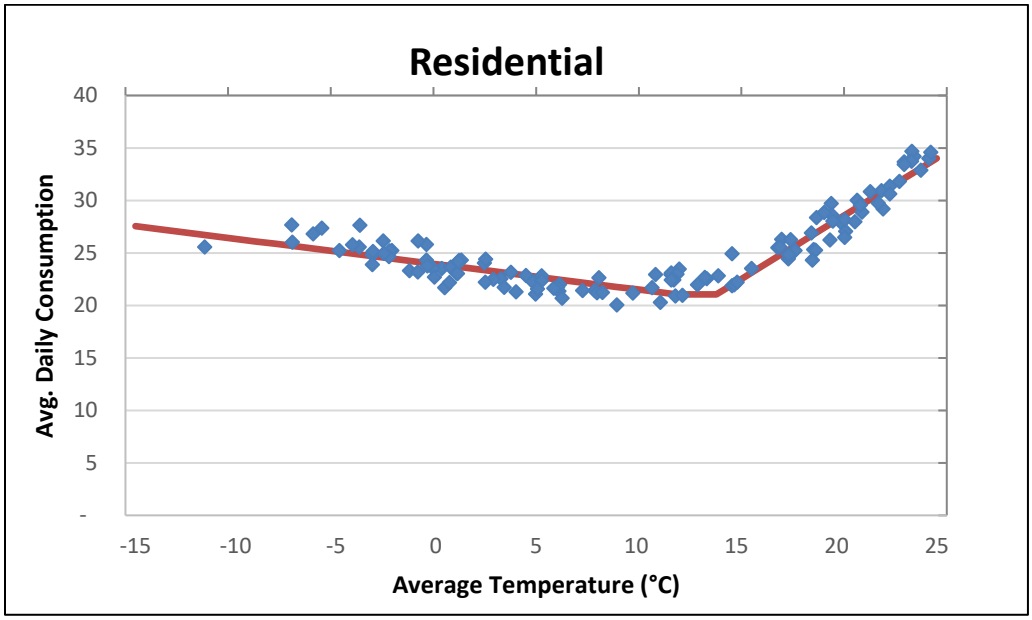
BHI provides its load forecast methodology for residential consumption and customer counts below.

1. Residential Consumption (kWh)

The regression equation to estimate average Residential kWh consumption per customer relied on 120 observations from January 2010 to December 2019. Multiple HDD and CDD thresholds were considered in the residential regression equation. Consumption is relatively stable when the average monthly temperature is between 12°C and 14°C and increases as average temperatures deviate from that range. HDD relative to 12°C and CDD relative to 14°C were found to provide the highest correlation to consumption. HDD and CDD measures near 12°C and 14°C, respectively, were also considered but were found to be less predictive of monthly

consumption. Figure 1 below maps average daily consumption per customer against average monthly temperatures. A trend line is included to show the typical impact of HDD and CDD on average daily consumption, with consumption trends shifting at 12°C and 14°C.

Figure 1 – Residential Average Daily Consumption based on Average Temperature



The regression equation includes a trend variable as an independent variable, set at one (1) in January 2010, and increasing by one each month, reaching 120 in the last month of the regression - December 2019. The time trend variable is used to account for changes in consumption over time that are not explained by any other independent variable.

The number of Residential customers and number of month days were each found to be statistically significant variables in regressions that used total Residential consumption as the dependent variable. The dependent variable was converted to consumption per customer per day to account for the interaction of customer counts and number of month days with the independent variables.

The seasonally adjusted number of Ontario FTEs was used as an independent economic variable and found to be more predictive than any other economic variable, including Toronto FTEs, Hamilton FTEs, and Ontario GDP.

A binary shoulder variable, equal to 1 in the spring months (March, April, and May) and fall months (September, October, and November) and 0 in all other months, is used to account for the observed lower consumption in these months.

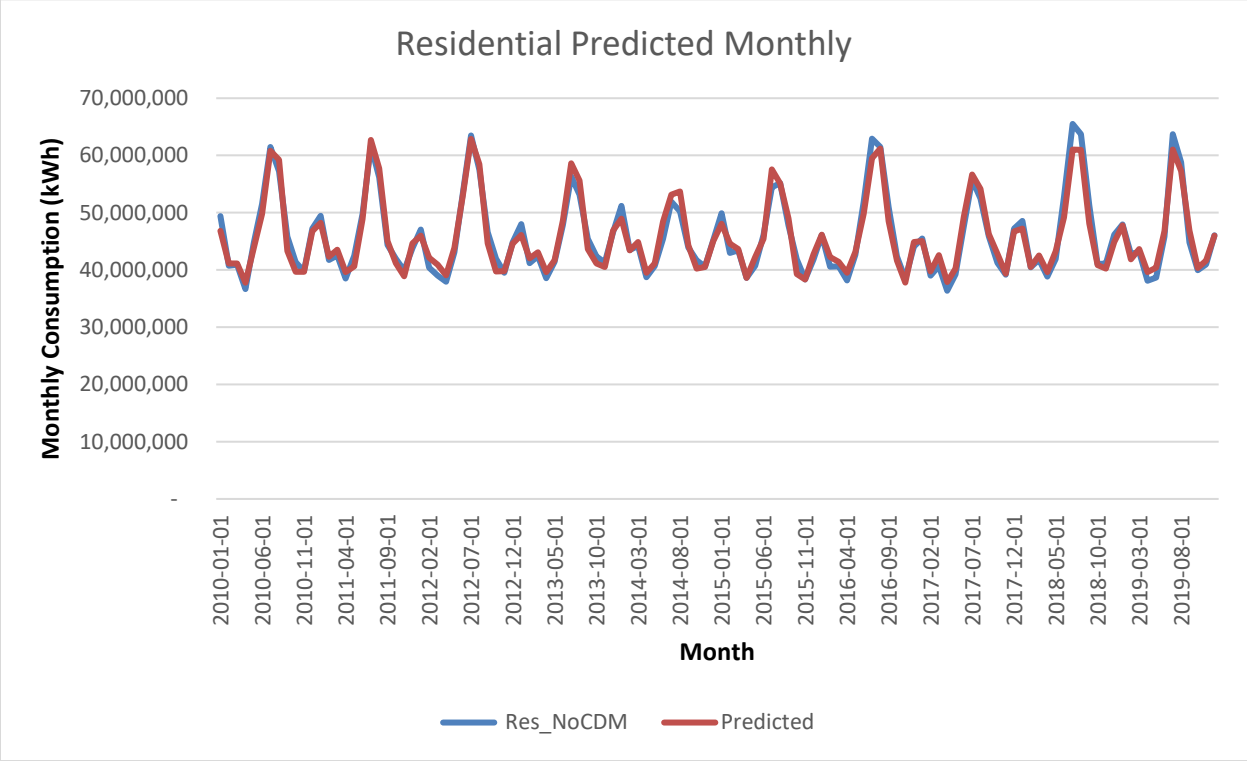
Table 5 below provides the statistical model results for the Residential Rate Class. The dependent variable, labeled "AvgResD", represents the average consumption per customer per day.

Table 5 – Statistical Model Results - Residential

Residential Statistical Model Results				
Model 1: Prais-Winsten, using observations 2010:01-2019:12 (T = 120)				
Dependent variable: AvgResD				
rho = 0.288176				
	coefficient	std. error	t-ratio	p-value
const	-4.4308	13.0004	-0.3408	0.7339
HDD12	0.0079	0.0008	10.2756	0.0000
CDD14	0.0387	0.0015	26.2238	0.0000
Trend	-0.0445	0.0155	-2.8805	0.0047
Ont_FTEAdj	0.0042	0.0020	2.0681	0.0409
Shoulder	-1.1856	0.2042	-5.8073	0.0000
Statistics based on the rho-differenced data				
Mean dependent var	25.18850	S.D. dependent var		3.58306
Sum squared resid	72.86969	S.E. of regression		0.79950
R-squared	0.95234	Adjusted R-squared		0.95025
F(5, 114)	342.09335	P-value(F)		0.00000
rho	-0.00954	Durbin-Watson		1.99295

Using the model coefficients identified in Table 5 above, Figure 2 below identifies the predicted monthly consumption (derived by multiplying the predicted average usage per customer per day by the number of customers and number of days in the month) as compared to actual monthly consumption.

Figure 2 – Predicted Residential Monthly Consumption



Annual volumes predicted with the statistical model results are compared to actual volumes from 2010 to 2019 in Table 6 below. The mean absolute percentage error ("MAPE") for annual predicted values for the period (the average of Absolute Error %) is 1.0%. The average monthly MAPE over the period is 2.5%. The annual and monthly MAPE values are low, which indicates the model is strongly predictive of actual consumption.

Table 6 – Absolute Error for Predicted Consumption - Residential

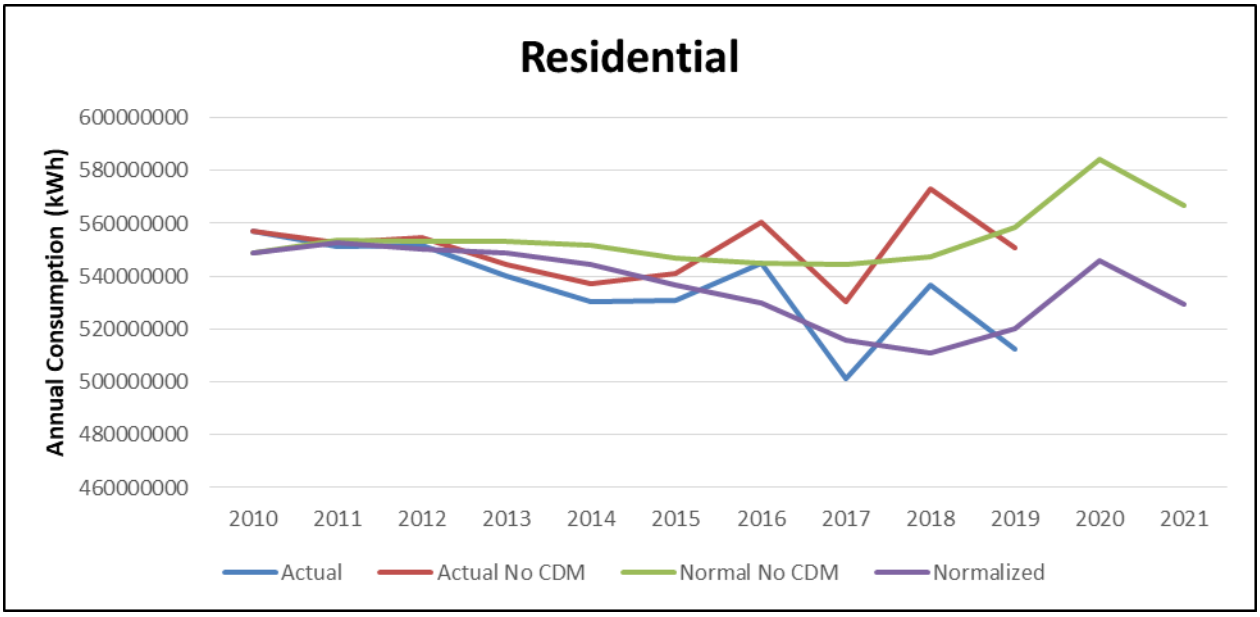
Year	Residential kWh		
	Actual Data (CDM Added Back)	Predicted Data	Absolute Error (%)
2010	556,896,336	550,035,688	1.2%
2011	552,441,916	553,414,950	0.2%
2012	554,745,010	555,025,156	0.1%
2013	544,522,484	547,599,724	0.6%
2014	537,297,948	543,326,042	1.1%
2015	541,177,795	544,616,590	0.6%
2016	560,271,576	555,772,134	0.8%
2017	530,172,279	540,781,588	2.0%
2018	573,254,017	558,398,231	2.6%
2019	550,902,275	553,366,089	0.4%
Mean Absolute Percentage Error (Annual)			1.0%
Mean Absolute Percentage Error (Monthly)			2.5%

Weather-normalized consumption and forecast values are calculated for the Residential class in Table 7 below, which incorporates the forecast economic variables, 10-year weather normal HDD and CDD, the time trend variable and binary shoulder variable. Figure 3 below compares actual consumption with and without CDM to the weather normalized forecast with and without CDM.

Table 7 – Weather Normalized Forecast - Residential

Year	Residential kWh					
	Actual	Cumulative Persisting CDM	Actual No CDM	Normal Predicted No CDM	Cumulative Persisting CDM	Normalized (no CDM Adj)
	A	B	C = A + B	D	E = B	F = D - E
2010	556,896,336	0	556,896,336	548,718,429	0	548,718,429
2011	551,353,006	1,088,910	552,441,916	553,723,683	1,088,910	552,634,773
2012	551,839,571	2,905,439	554,745,010	553,358,494	2,905,439	550,453,055
2013	540,087,395	4,435,089	544,522,484	553,152,369	4,435,089	548,717,281
2014	530,303,117	6,994,831	537,297,948	551,624,758	6,994,831	544,629,928
2015	530,999,846	10,177,949	541,177,795	546,662,697	10,177,949	536,484,748
2016	545,123,880	15,147,696	560,271,576	544,914,359	15,147,696	529,766,663
2017	501,428,451	28,743,828	530,172,279	544,333,453	28,743,828	515,589,625
2018	536,801,589	36,452,428	573,254,017	547,437,334	36,452,428	510,984,906
2019	512,580,883	38,321,392	550,902,275	558,395,426	38,321,392	520,074,034
2020				583,984,795	37,931,162	546,053,632
2021				566,717,625	37,472,221	529,245,405

Figure 3 – Residential Consumption Actuals/Forecasts



2. Residential Customer Counts

Residential customer counts are forecast using data from January 2010 to July 2020. The customer forecast for 2020 relies on actual customer counts from January 2020 to July 2020. The monthly equivalent of the geometric mean growth rate from 2010 to 2019 is applied to actual 2020 data in order to determine the counts for the remaining months in 2020. The 2020 growth rate provided in the table below reflects a blend of actual and geometric mean growth from 2019 to 2020. The geometric mean of the annual growth from 2010 to 2019 was used to forecast the growth rate from 2020 to 2021. Table 8 below identifies the customer counts from 2010 to 2021.

Table 8 – Residential Customer Counts

Year	Customers	Percent of Prior Year
2010	57,917	
2011	58,488	100.99%
2012	59,068	100.99%
2013	59,319	100.43%
2014	59,824	100.85%
2015	60,123	100.50%
2016	60,319	100.33%
2017	60,502	100.30%
2018	60,920	100.69%
2019	61,428	100.83%
2020	61,651	100.36%
2021	62,056	100.66%

3.1.1.8.2 GS<50 kW

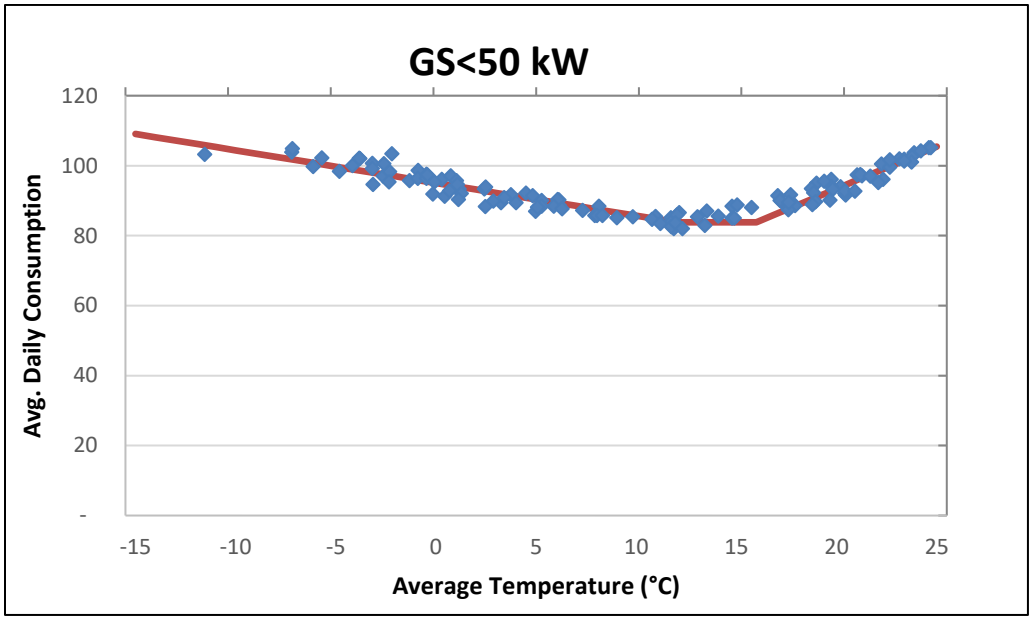
BHI provides its load forecast methodology for GS<50 kW consumption and customer counts below.

1. GS<50 kW Consumption (kWh)

The regression equation to estimate average GS<50 kW consumption (kWh) per customer relied on 120 observations from January 2010 to December 2019. Multiple HDD and CDD thresholds were considered in the GS<50 kW regression equation. Consumption is relatively stable when the average monthly temperature is between 12°C and 16°C and increases as average temperatures deviate from that range. HDD relative to 12°C and CDD relative to 16°C

were found to have the highest correlation to consumption. HDD and CDD measures near 12°C and 16°C, respectively, were also considered but found to be less predictive of monthly consumption. Figure 4 below maps average daily consumption per customer against average monthly temperatures. A trend line is included to show the typical impact of HDD and CDD on average daily consumption, with consumption trends shifting at 12°C and 16°C.

Figure 4 – GS<50 kW Average Daily Consumption based on Average Temperature



The regression equation includes a trend variable as an independent variable, set at one (1) in January 2010, and increasing by one each month, reaching 120 in the last month of the regression, December 2019. The time trend variable is used to account for changes in consumption over time that are not explained by any other independent variable.

The number of GS<50 kW customers and number of month days were each found to be statistically significant variables in regressions that used total GS<50 kW consumption as the dependent variable. The dependent variable was converted to consumption per customer per day to account for the interaction of customer counts and number of month days with the independent variables.

The seasonally adjusted number of Toronto FTEs was used as an independent economic variable and found to be more predictive than any other economic variable, including Ontario FTEs, Hamilton FTEs, and Ontario GDP.

A binary shoulder variable, equal to 1 in the spring months (March, April, and May) and fall months (September, October, and November) and 0 in all other months, is used to account for the observed lower consumption in these months.

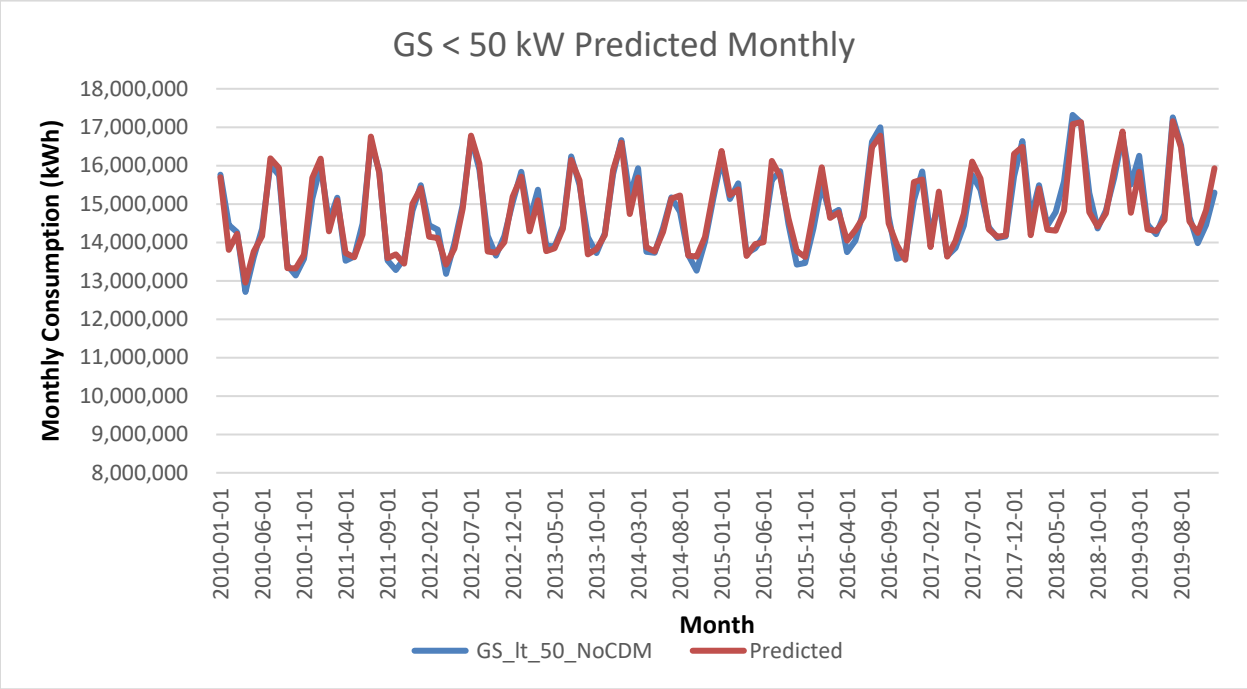
Table 9 below provides the statistical model results for the GS<50 kW Rate Class. The dependent variable, labeled "AvgGSlt50D", represents average consumption per customer per day.

Table 9 – Statistical Model Results – GS<50 kW

GS < 50 kW Statistical Model Results				
Model 2: Prais-Winsten, using observations 2010:01-2019:12 (T = 120) Dependent variable: AvgGSlt50D rho = 0.198428				
	coefficient	std. error	t-ratio	p-value
const	54.0937	14.4288	3.7490	0.0003
HDD12	0.0308	0.0015	20.8601	0.0000
CDD16	0.0790	0.0038	20.9584	0.0000
Trend	-0.0922	0.0278	-3.3097	0.0013
Tor_FTEAdj	0.0115	0.0051	2.2567	0.0259
Shoulder	-1.9638	0.4253	-4.6175	0.0000
Statistics based on the rho-differenced data				
Mean dependent var	93.04018	S.D. dependent var		6.11024
Sum squared resid	319.99092	S.E. of regression		1.67539
R-squared	0.92827	Adjusted R-squared		0.92512
F(5, 114)	280.94791	P-value(F)		0.00000
rho	0.00008	Durbin-Watson		1.96573

Using the model coefficients identified in Table 9 above, Figure 5 below identifies the predicted monthly consumption (derived by multiplying the predicted average usage per customer per day by the number of customers and number of days in the month) as compared to actual monthly consumption.

Figure 5 – Predicted GS<50 kW Monthly Consumption



Annual volumes predicted with the statistical model results are compared to actual volumes from 2010 to 2019 in Table 10 below. The mean absolute percentage error ("MAPE") for annual predicted values for the period (the average of Absolute Error %) is 0.5%. The average monthly MAPE over the period is 1.4%. The annual and monthly MAPE values are low, which indicates the model is strongly predictive of actual consumption for the GS<50 kW Rate Class.

Table 10 – Absolute Error for Predicted Consumption – GS<50 kW

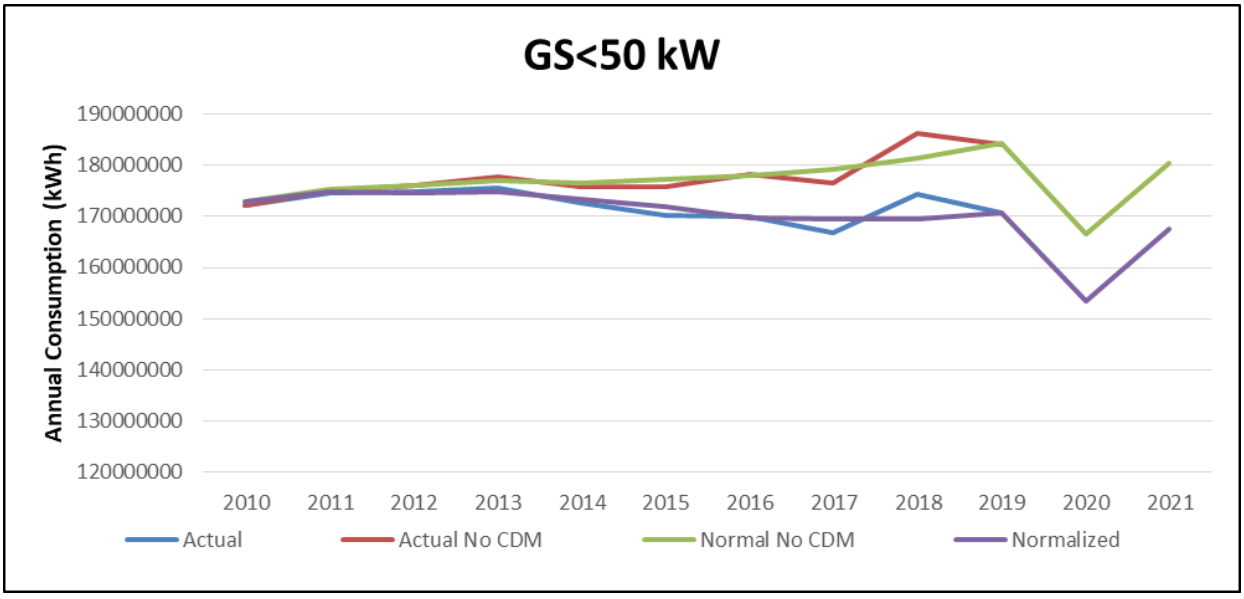
GS<50 kW Consumption (kWh)			
Year	Actual Data (CDM Added Back)	Predicted Data	Absolute Error (%)
2010	172,200,325	172,745,353	0.3%
2011	175,038,865	175,402,398	0.2%
2012	176,077,042	175,344,570	0.4%
2013	177,641,893	176,425,659	0.7%
2014	175,728,868	176,018,974	0.2%
2015	175,760,337	177,256,607	0.9%
2016	178,331,752	179,229,040	0.5%
2017	176,570,011	177,985,380	0.8%
2018	186,180,271	183,597,935	1.4%
2019	184,127,433	183,890,997	0.1%
Mean Absolute Percentage Error (Annual)			0.5%
Mean Absolute Percentage Error (Monthly)			1.4%

Weather-normalized consumption and forecast values are calculated for the GS<50 kW class in Table 11 below, which incorporates the forecast economic variables, 10-year weather normal HDD and CDD, the time trend variable and the binary shoulder variable. Figure 6 below compares actual consumption with and without CDM to the weather normalized forecast with and without CDM.

Table 11 – Weather Normalized Forecast – GS<50 kW

GS<50 kW Consumption (kWh)						
Year	Actual	Cumulative Persisting CDM	Actual No CDM	Normal Predicted No CDM	Cumulative Persisting CDM	Normalized (no CDM Adj)
	A	B	C = A + B	D	E = B	F = D - E
2010	172,200,325	0	172,200,325	172,769,867	0	172,769,867
2011	174,484,065	554,800	175,038,865	175,412,502	554,800	174,857,702
2012	174,704,767	1,372,275	176,077,042	176,055,197	1,372,275	174,682,921
2013	175,467,402	2,174,491	177,641,893	177,059,472	2,174,491	174,884,980
2014	172,644,356	3,084,512	175,728,868	176,435,782	3,084,512	173,351,271
2015	170,245,509	5,514,828	175,760,337	177,347,411	5,514,828	171,832,584
2016	169,905,557	8,426,195	178,331,752	178,033,319	8,426,195	169,607,124
2017	166,894,185	9,675,826	176,570,011	179,066,794	9,675,826	169,390,968
2018	174,257,110	11,923,161	186,180,271	181,464,787	11,923,161	169,541,627
2019	170,703,484	13,423,949	184,127,433	184,196,327	13,423,949	170,772,378
2020				166,567,138	13,145,852	153,421,286
2021				180,300,829	12,700,386	167,600,444

Figure 6 – GS<50 kW Consumption Actuals/Forecasts



2. GS<50 kW Customer Counts

GS<50 kW customer counts are forecast using data from January 2010 to July 2020. The customer forecast for 2020 relies on actual customer counts from January 2020 to July 2020.

The monthly equivalent of the geometric mean growth rate from 2010 to 2019 is applied to actual 2020 data in order to determine the counts for the remaining months in 2020. The 2020 growth rate provided in the Table 12 below reflects a blend of actual and geometric mean growth from 2019 to 2020 and a reclassification of 40 customers from GS<50 kW to GS>50 kW in November 2019. BHI intends to make an adjustment to the customer counts for the 2020 reclassification before the OEB renders a decision on this Application. The geometric mean of the annual growth from 2010 to 2019 was used to forecast the growth rate from 2020 to 2021. Table 12 below identifies the customer counts from 2010 to 2021.

Table 12 – GS<50 kW Customer Counts

Year	Customers	Percent of Prior Year
2010	4,988	
2011	5,091	102.05%
2012	5,138	100.93%
2013	5,159	100.40%
2014	5,198	100.77%
2015	5,239	100.77%
2016	5,273	100.66%
2017	5,342	101.31%
2018	5,428	101.61%
2019	5,490	101.14%
2020	5,506	100.29%
2021	5,564	101.07%

3.1.1.8.3 GS>50 kW

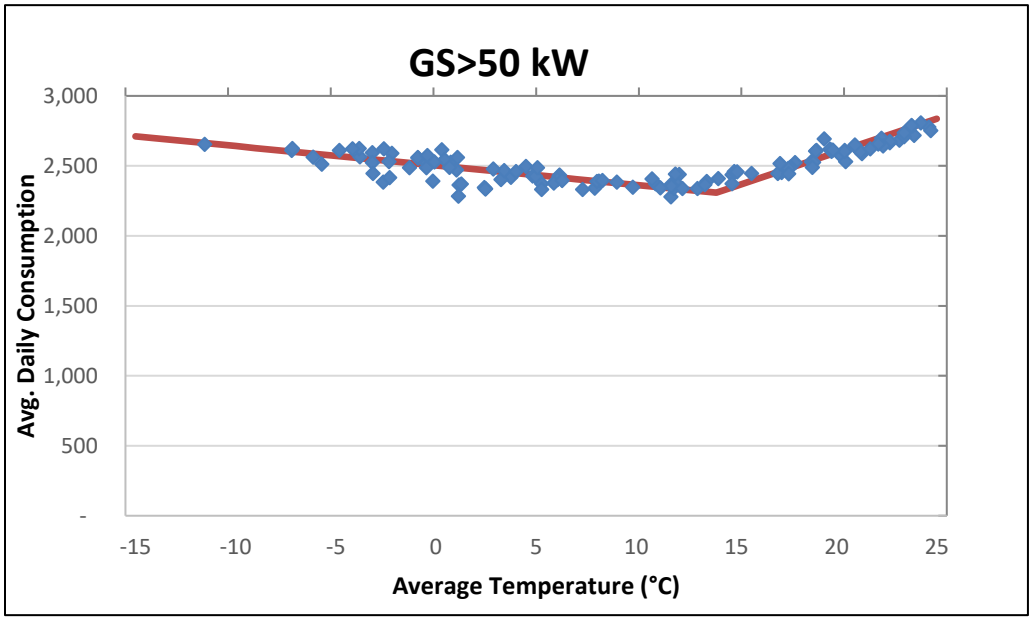
BHI provides its load forecast methodology for GS>50 kW consumption, demand, and customer counts below.

1. GS>50 kW Consumption

The regression equation to estimate average GS>50 kW consumption (kWh) per customer relied on 120 observations from January 2010 to December 2019. GS>50 kW consumption increases as average temperatures deviate from 14°C. HDD relative to 14°C and CDD relative to 14°C were found to have the highest correlation to consumption. HDD and CDD measures near 14°C were also considered but found to be less predictive of monthly consumption. Figure 7 below maps average daily consumption per customer against average monthly temperatures.

A trendline is included to show the typical impact of HDD and CDD on average daily consumption, with consumption trends shifting at 14°C rather than 18°C.

Figure 7 – Average Monthly Consumption based on Average Temperature – GS>50 kW



The regression equation includes a trend variable, set at one (1) in January 2010, and increasing by one each month, reaching 120 in the last month of the regression, December 2019. The time trend variable is used to account for changes in consumption over time that are not explained by any other independent variable.

The number of GS>50 kW customers and number of month days were each found to be statistically significant variables in regressions that used total GS>50 kW consumption as the dependent variable. The dependent variable was converted to consumption per customer per day to account for the interaction of customer counts and number of month days with the independent variables. Consumption per customer per peak day (non-holiday workday) was also considered but found to provide weaker results than month days.

Ontario GDP was found to be more predictive than any other economic variable, including Toronto FTEs, Hamilton FTEs, and Ontario FTEs.

A December binary variable, equal to 1 in December and 0 in all other months, is used to account for the observed lower consumption in December,

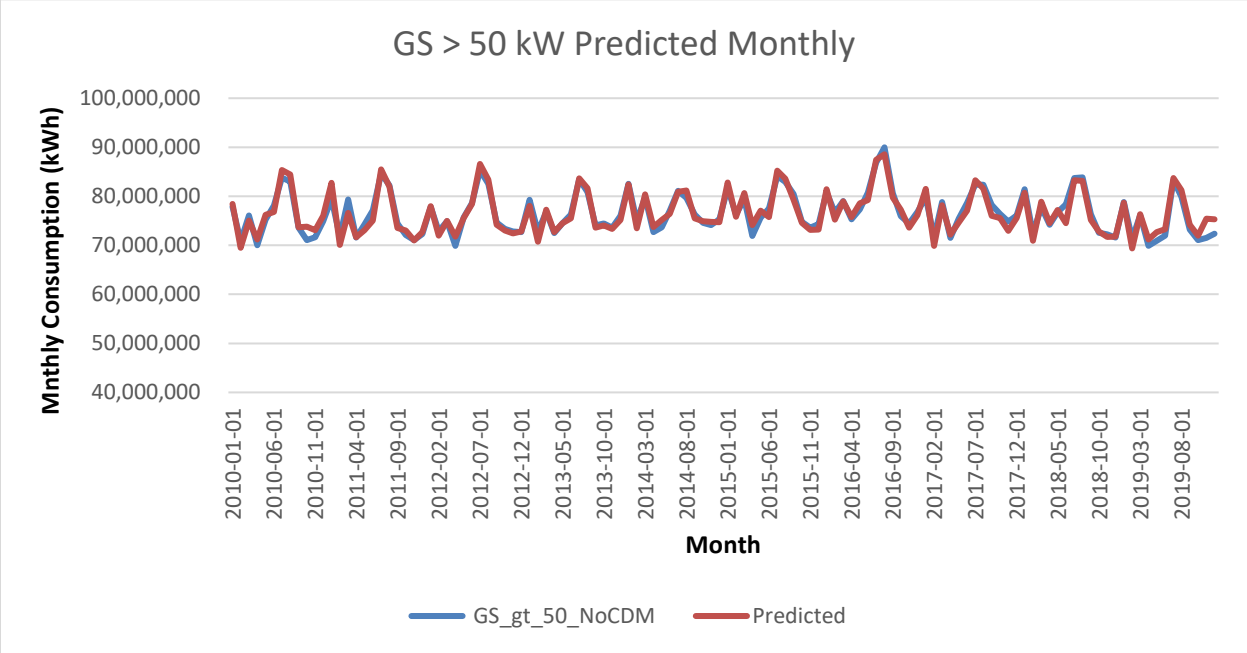
Table 13 below provides the statistical model results for the GS>50 kW Rate Class. The dependent variable, labeled "AvgGSgt50D", represents average consumption per customer per day.

Table 13 – Statistical Model Results – GS>50 kW

GS>50 kW Statistical Model Results				
Model 3: Prais-Winsten, using observations 2010:01-2019:12 (T = 120) Dependent variable: AvgGSgt50MD rho = 0.166648				
	coefficient	std. error	t-ratio	p-value
const	565.6203	508.8406	1.1116	0.2687
HDD14	0.4557	0.0326	13.9796	0.0000
CDD14	1.5483	0.0612	25.2893	0.0000
GDP	0.0029	0.0009	3.4000	0.0009
Trend	-3.5629	1.0801	-3.2986	0.0013
Dec	-107.5127	16.0380	-6.7036	0.0000
Statistics based on the rho-differenced data				
Mean dependent var	2505.58685	S.D. dependent var		124.82732
Sum squared resid	200107.20971	S.E. of regression		41.89662
R-squared	0.89211	Adjusted R-squared		0.88738
F(5, 114)	180.03620	P-value(F)		0.00000
rho	-0.00096	Durbin-Watson		1.97400

Using the model coefficients identified in Table 13 above, Figure 8 below identifies predicted monthly consumption (derived by multiplying the resulting average use per customer per day by the number of customers and number of days in the month) as compared to actual monthly consumption.

Figure 8 – Predicted GS>50 kW Monthly Consumption



Annual volumes predicted with the statistical model results are compared to actual volumes from 2010 to 2019 in Table 14 below. The mean absolute percentage error ("MAPE") for annual predicted values for the period (the average of Absolute Error %) is 0.6%. The average monthly MAPE over the period is 1.3%. The annual and monthly MAPE values are low, which indicates the model is strongly predictive of actual consumption for the GS < 50 kW Rate Class.

Table 14 – Absolute Error for Predicted Consumption

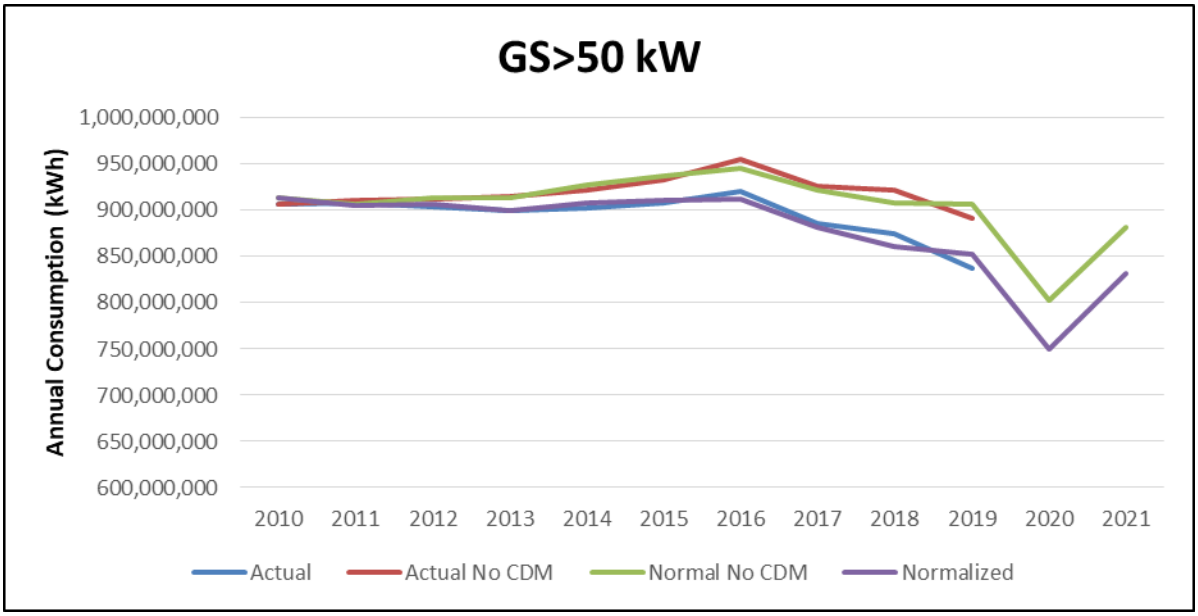
Year	GS > 50 kW Consumption (kWh)		
	Actual Data (CDM Added Back)	Predicted Data	Absolute Error (%)
2010	906,197,008	913,482,206	0.8%
2011	910,448,523	906,945,669	0.4%
2012	911,276,434	913,113,867	0.2%
2013	914,608,977	910,204,211	0.5%
2014	921,825,089	923,590,512	0.2%
2015	932,632,185	935,264,892	0.3%
2016	954,581,898	951,898,457	0.3%
2017	926,195,688	918,334,823	0.8%
2018	921,141,218	914,706,455	0.7%
2019	890,395,013	903,366,701	1.5%
Mean Absolute Percentage Error (Annual)			0.6%
Mean Absolute Percentage Error (Monthly)			1.3%

Weather-normalized consumption and forecast values are calculated for the GS>50 kW class in Table 15 below, which incorporates the forecast economic variables, 10-year weather normal HDD and CDD, and the December binary variable. Figure 9 below compares actual consumption with and without CDM to the weather normalized forecast with and without CDM.

Table 15 – Weather Normalized Forecast – GS>50 kW

Year	GS>50 kW Consumption (kWh)					
	Actual	Cumulative Persisting CDM	Actual No CDM	Normal Predicted No CDM	Cumulative Persisting CDM	Normalized (no CDM Adj)
	A	B	C = A + B	D	E = B	F = D - E
2010	906,197,008	0	906,197,008	913,117,800	0	913,117,800
2011	908,229,110	2,219,413	910,448,523	906,983,930	2,219,413	904,764,517
2012	903,337,846	7,938,588	911,276,434	913,868,099	7,938,588	905,929,511
2013	899,933,878	14,675,099	914,608,977	913,546,621	14,675,099	898,871,522
2014	901,672,321	20,152,768	921,825,089	927,229,639	20,152,768	907,076,872
2015	907,051,642	25,580,543	932,632,185	936,327,639	25,580,543	910,747,096
2016	920,835,908	33,745,990	954,581,898	945,415,071	33,745,990	911,669,082
2017	885,596,225	40,599,463	926,195,688	921,476,689	40,599,463	880,877,226
2018	874,283,086	46,858,132	921,141,218	907,204,011	46,858,132	860,345,878
2019	837,536,595	52,858,418	890,395,013	905,738,655	52,858,418	852,880,237
2020				801,886,661	52,155,214	749,731,447
2021				881,397,446	49,805,696	831,591,749

Figure 9 – GS>50 kW Consumption Actuals/Forecasts



2. GS>50 kW Customer Counts

GS>50 kW customer counts are forecast using data from January 2010 to July 2020. The customer forecast for 2020 relies on actual customer counts from January 2020 to July 2020.

The monthly equivalent of the geometric mean growth rate from 2010 to 2019 is applied to actual 2020 data in order to determine the counts for the remaining months in 2020. The 2020 growth rate provided in Table 16 below reflects a blend of actual and geometric mean growth from 2019 to 2020 and a reclassification of 40 customers from GS<50 kW to GS>50 kW in November 2019. BHI intends to make an adjustment to the customer counts for the 2020 reclassification before the OEB renders a decision on this Application. The geometric mean of the annual growth from 2010 to 2019 was used to forecast the growth rate from 2020 to 2021.

Table 16 – GS>50 kW Customer Counts

Year	Customers	Percent of Prior Year
2010	996	
2011	987	99.14%
2012	998	101.16%
2013	1,008	100.92%
2014	1,021	101.36%
2015	1,028	100.63%
2016	1,034	100.63%
2017	1,004	97.05%
2018	986	98.22%
2019	985	99.90%
2020	1,004	101.98%
2021	1,003	99.88%

3. GS>50 kW Demand (kW)

In order to normalize and forecast class kW for those classes that bill based on kW billing determinants, the relationship between billed kW and kWh is used. The trend of the kW/kWh ratio from 2014-2019 was used to determine kW, as there is a clear trend in the kW/kWh ratio over time. Figure 10 below shows actual kW/kWh ratios from 2010 to 2019, the continuing trend that is used in the kW forecast, and the average ratio.

Figure 10 – GS>50 kW/kWh Ratio

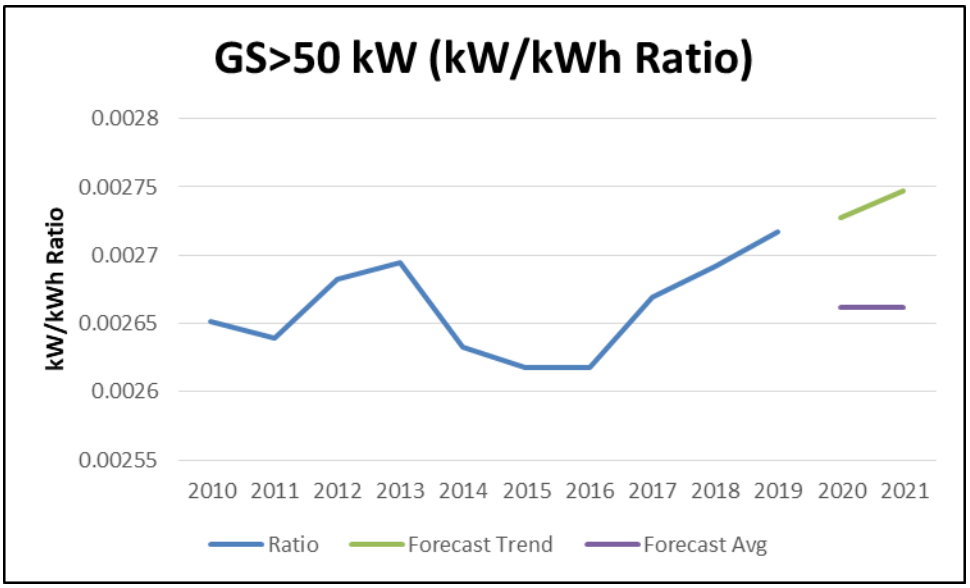


Table 17 below identifies actual consumption and demand, the calculated kW/kWh ratios, forecast consumption, the average kW/kWh ratios, and the resulting demand forecast.

Table 17 – GS>50 kW Demand Forecast

Year	GS>50 kW			
	kWh	kW	kW/kWh Ratio	
	A	B	C = B / A	
2010	906,197,008	2,403,006	0.00265	
2011	908,229,110	2,396,756	0.00264	
2012	903,337,846	2,423,043	0.00268	
2013	899,933,878	2,424,733	0.00269	
2014	901,672,321	2,373,361	0.00263	
2015	907,051,642	2,374,100	0.00262	
2016	920,835,908	2,410,544	0.00262	
2017	885,596,225	2,363,980	0.00267	
2018	874,283,086	2,353,522	0.00269	
2019	837,536,595	2,275,484	0.00272	
Year	kWh Normalized	kW Normalized	Average kW/kWh Ratio	Trend Ratio
	D	E = D * G	F	G
2019	852,880,237	2,309,173	0.002661	0.002708
2020	749,731,447	2,044,867	0.002661	0.002727
2021	831,591,749	2,284,740	0.002661	0.002747

3.1.1.8.4 Street Lighting

BHI provides its load forecast methodology for Street Lighting consumption, demand, and customer devices below.

1. Street Lighting Consumption (kWh)

The Street Lighting rate class is not weather-sensitive and consequently forecasted consumption is based on average consumption per device. Table 18 below summarizes the historic and forecast annual energy consumption for the Street Light class.

Table 18 – Street Lighting Forecast

Year	Street Lights			
	Actual (kWh)	Lamps / Devices	Average kWh per Device	Normal Predicted (No CDM)
	A	B	C = A / B	D = B * C
2010	9,467,387	14,652	646	9,467,387
2011	9,847,280	15,024	655	9,847,280
2012	9,866,380	15,083	654	9,866,380
2013	9,864,267	15,114	653	9,864,267
2014	9,908,447	15,171	653	9,908,447
2015	9,918,681	15,229	651	9,918,681
2016	9,945,876	15,253	652	9,945,876
2017	11,286,655	17,184	657	11,286,655
2018	6,528,023	17,184	380	6,528,023
2019	5,537,653	17,184	322	5,537,653
2020		17,197	322	5,541,714
2021		17,283	322	5,569,644

The City of Burlington undertook a series of projects in 2017 and 2018 under the Retrofit Program to retrofit streetlights to a more energy efficient Light Emitting Diode ("LED") technology; resulting in a significant decrease in consumption and demand. This is discussed in further detail in Section 4.6.2 of Exhibit 4. Since completion of the LED conversion program, (i.e. from December 2018 to July 2020), the Street Light class has had consistent demand per device. This usage/device is expected to continue into 2021 as identified in Figure 11 below.

Figure 11 – Street Lighting Average Consumption (kWh) per Device

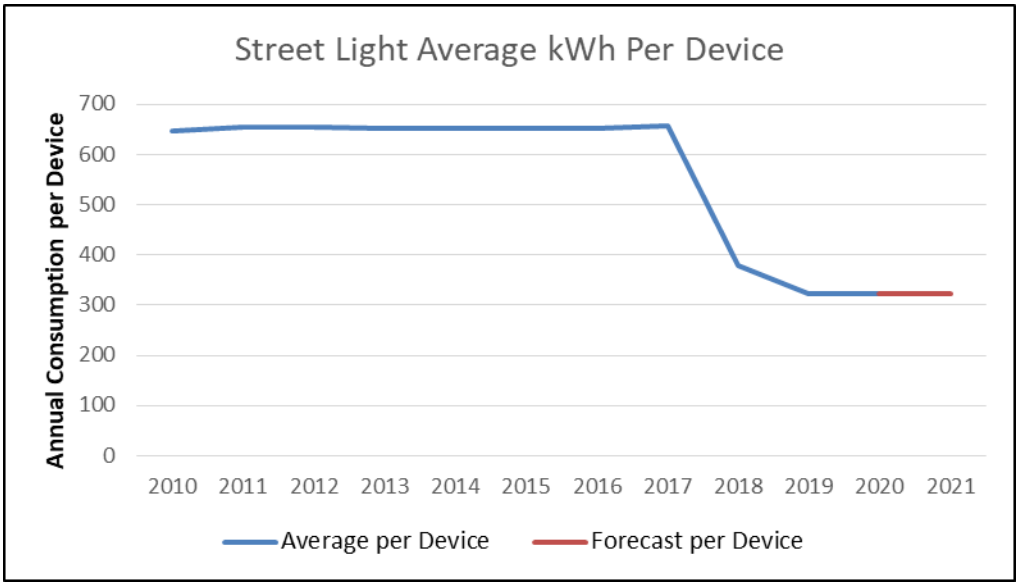
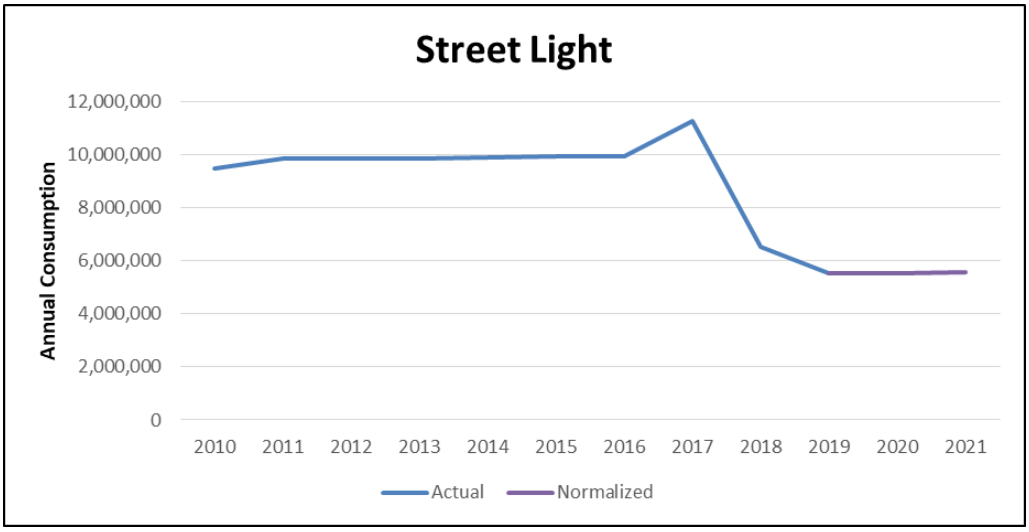


Figure 12 illustrates total actual and forecast consumption for the Street Light rate class from 2010 to 2021.

Figure 12 – Street Lighting Annual Consumption



2. Street Lighting Device Counts

Street Light device counts are forecast using data from January 2010 to July 2020. The device forecast for 2020 relies on actual device counts from January 2020 to July 2020. The monthly equivalent of the geometric mean growth rate from 2010 to 2019 is applied to actual 2020 data

in order to determine the counts for the remaining months in 2020. The 2020 growth rate provided in Table 19 below reflects a blend of actual and geometric mean growth from 2019 to 2020. The geometric mean of the annual growth from 2010 to 2019 was used to forecast the growth rate from 2020 to 2021. The increase from 2016 to 2017 reflects a streetlight recount, and not a significant increase in device count in that year. The increase in 2017 does not reflect BHI's streetlight attachment trends so it is excluded from the geometric mean calculation.

Table 19 – Street Light Device Counts

Year	Devices	Percent of PY
2010	14,652	
2011	15,024	102.54%
2012	15,083	100.39%
2013	15,114	100.21%
2014	15,171	100.37%
2015	15,229	100.38%
2016	15,253	100.16%
2017	17,184	112.66%
2018	17,184	100.00%
2019	17,184	100.00%
2020	17,197	100.07%
2021	17,283	100.50%

3. Street Light Demand (kW) Forecast

Street Light demand is forecast by applying the average kW/kWh ratio from 2010 to 2019 to forecast consumption. The kW/kWh ratio has been consistent since 2010 and consequently the average ratio over the period from 2010 to 2019 is used to forecast kW demand. The kW/kWh ratio in 2017, the year the LED Conversion began, is not representative of the class' ongoing kW/kWh ratio and as such it is excluded from the average kW/kWh calculation. Table 20 below identifies actual consumption and demand, the calculated kW/kWh ratios, forecast consumption, the average kW/kWh ratios, and the resulting demand forecast.

Table 20 – Street Light Demand Forecast

Year	kWh	kW	kW/kWh Ratio
	A	B	C = B / A
2010	9,467,387	26,416	0.00279
2011	9,847,280	27,334	0.00278
2012	9,866,380	27,457	0.00278
2013	9,864,267	27,500	0.00279
2014	9,908,447	27,636	0.00279
2015	9,918,681	27,661	0.00279
2016	9,945,876	27,648	0.00278
2017	11,286,655	30,452	0.00270
2018	6,528,023	18,201	0.00279
2019	5,537,653	15,446	0.00279
Year	**kWh Normalized**	**kW Normalized**	**Average kW/kWh Ratio**
	D	E = D * F	F
2019	5,537,653	15,434	0.00279
2020	5,541,714	15,448	0.00279
2021	5,569,644	15,528	0.00279

3.1.1.8.5 Unmetered Scattered Load ("USL")

BHI provides its load forecast methodology for USL consumption and customer counts below.

1. USL Consumption (kWh)

Table 21 below summarizes historic and forecast annual energy consumption for BHI's USL class.

Table 21 – USL Consumption Forecast

Year	Actual kWh	Devices	Average kWh per Device	Normal Predicted kWh No CDM
	A	B	C = A / B	D = B * C
2010	3,512,551	604	5,819	3,512,551
2011	3,296,779	604	5,460	3,296,779
2012	3,353,868	605	5,548	3,353,868
2013	3,104,444	569	5,460	3,104,444
2014	3,098,633	559	5,543	3,098,633
2015	3,110,148	557	5,586	3,110,148
2016	3,115,033	559	5,572	3,115,033
2017	3,130,244	562	5,571	3,130,244
2018	3,138,478	563	5,571	3,138,478
2019	3,144,191	562	5,600	3,144,191
2020		559	5,600	3,128,398
2021		554	5,600	3,103,371

Consumption per device has been relatively consistent since 2015, as identified in Figure 13 below. Consumption per device in 2019 is used as the forecast consumption per device in 2020 and 2021.

Figure 13 – USL Consumption per Device

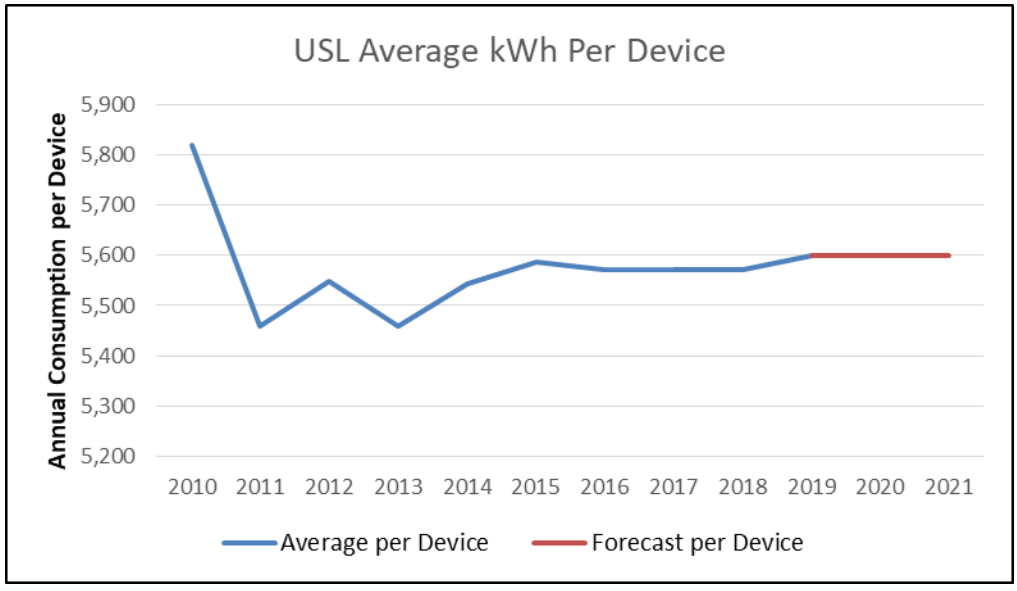
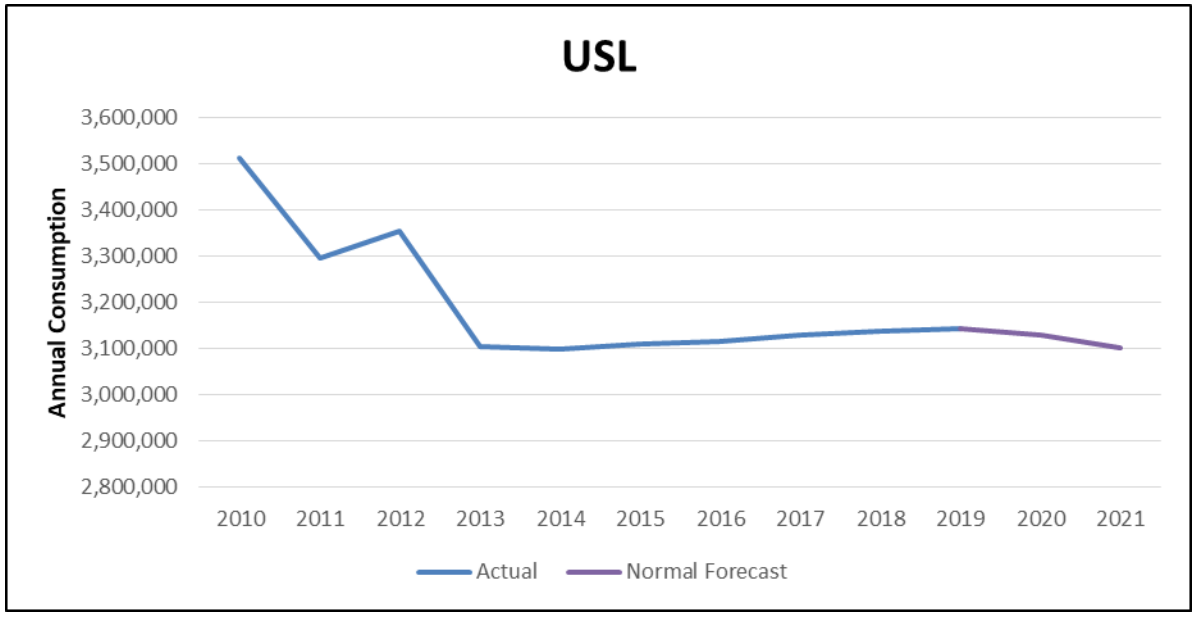


Figure 14 shows total actual and forecast consumption for the class from 2010 to 2021.

Figure 14 – USL Consumption



2. USL Device Counts

USL device counts are forecast using data from January 2010 to July 2020. The device forecast for 2020 relies on actual device counts from January 2020 to July 2020. The monthly equivalent of the geometric mean growth rate from 2010 to 2019 is applied to actual 2020 data in order to determine the devices for the remaining months in 2020. The 2020 growth rate provided in Table 22 reflects a blend of actual and geometric mean growth from 2019 to 2020. The geometric mean of the annual growth from 2010 to 2019 was used to forecast the growth rate from 2020 to 2021.

Table 22 – USL Device Counts

Year	Devices	Percent of PY
2010	604	
2011	604	100.04%
2012	605	100.11%
2013	569	94.06%
2014	559	98.31%
2015	557	99.60%
2016	559	100.42%
2017	562	100.51%
2018	563	100.25%
2019	562	99.67%
2020	559	99.50%
2021	554	99.20%

3.1.1.9 Summary Tables

Tables 23-25 below summarize the historic and forecasted kWh, kW and counts/devices respectively for 2014 to 2021. The 2020 Bridge Year and the 2021 Test Year kWh and kW are not CDM Adjusted.

Table 23 – Actual and Forecast Consumption 2014 to 2021

Rate Class	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2019 Normalized	2020 Bridge Year	2021 Test Year
Residential	530,303,117	530,999,846	545,123,880	501,428,451	536,801,589	512,580,883	520,074,034	546,053,632	529,245,405
GS<50 kW	172,644,356	170,245,509	169,905,557	166,894,185	174,257,110	170,703,484	170,772,378	153,421,286	167,600,444
GS>50 kW	901,672,321	907,051,642	920,835,908	885,596,225	874,283,086	837,536,595	852,880,237	749,731,447	831,591,749
Street Lights	9,908,447	9,918,681	9,945,876	11,286,655	6,528,023	5,537,653	5,537,653	5,541,714	5,569,644
USL	3,098,633	3,110,148	3,115,033	3,130,244	3,138,478	3,144,191	3,144,191	3,128,398	3,103,371
Total	**1,617,626,874**	**1,621,325,826**	**1,648,926,254**	**1,568,335,760**	**1,595,008,286**	**1,529,502,806**	**1,552,408,493**	**1,457,876,477**	**1,537,110,612**

Table 24 – Actual and Forecast Demand 2014 to 2021

Rate Class	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2019 Normalized	2020 Bridge Year	2021 Test Year
GS>50 kW	2,373,361	2,374,100	2,410,544	2,363,980	2,353,522	2,275,484	2,309,173	2,044,867	2,284,740
Street Lights	27,636	27,661	27,648	30,452	18,201	15,446	15,434	15,448	15,528
Total	**2,400,997**	**2,401,761**	**2,438,192**	**2,394,432**	**2,371,723**	**2,290,930**	**2,324,607**	**2,060,314**	**2,300,269**

Table 25 – Customer/Device Counts 2014 to 2021

Rate Class	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge Year	2021 Test Year
Residential	59,824	60,123	60,319	60,502	60,920	61,428	61,651	62,056
GS<50 kW	5,198	5,239	5,273	5,342	5,428	5,490	5,506	5,564
GS>50 kW	1,021	1,028	1,034	1,004	986	985	1,004	1,003
Street Lights	15,171	15,229	15,253	17,184	17,184	17,184	17,197	17,283
USL	559	557	559	562	563	562	559	554
Total	**81,774**	**82,175**	**82,438**	**84,593**	**85,081**	**85,648**	**85,916**	**86,461**

The consumption forecast provided above in Table 23 relies on 10-year average weather variables. An alternate forecast based on 20-year weather variable trends is provided in Tables 26 and 27 below. The tables are provided in accordance with the Section 3.1 of the Chapter 2 Filing Requirements but do not reflect BHI's proposed load forecast.

Table 26 – Actual and Forecast Consumption 2014 to 2021 (20-year Trend)

Rate Class	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2019 Normalized	2020 Bridge Year	2021 Test Year
Residential	530,303,117	530,999,846	545,123,880	501,428,451	536,801,589	512,580,883	520,074,034	547,600,984	531,202,540
GS<50 kW	172,644,356	170,245,509	169,905,557	166,894,185	174,257,110	170,703,484	170,772,378	153,728,944	167,974,856
GS>50 kW	901,672,321	907,051,642	920,835,908	885,596,225	874,283,086	837,536,595	852,880,237	750,784,931	832,891,355
Street Lights	9,908,447	9,918,681	9,945,876	11,286,655	6,528,023	5,537,653	5,537,653	5,541,714	5,569,644
USL	3,098,633	3,110,148	3,115,033	3,130,244	3,138,478	3,144,191	3,144,191	3,128,398	3,103,371
Total	**1,617,626,874**	**1,621,325,826**	**1,648,926,254**	**1,568,335,760**	**1,595,008,286**	**1,529,502,806**	**1,552,408,493**	**1,460,784,971**	**1,540,741,765**

Table 27 – Actual and Forecast Demand 2014 to 2021 (20-year Trend)

Rate Class	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2019 Normalized	2020 Bridge Year	2021 Test Year
GS>50 kW	2,373,361	2,374,100	2,410,544	2,363,980	2,353,522	2,275,484	2,309,173	2,047,740	2,288,311
Street Lights	27,636	27,661	27,648	30,452	18,201	15,446	15,434	15,448	15,528
Total	**2,400,997**	**2,401,761**	**2,438,192**	**2,394,432**	**2,371,723**	**2,290,930**	**2,324,607**	**2,063,187**	**2,303,839**

3.1.2 Normalized Average Use per Customer Model

As stated above, BHI uses a multivariate regression model to determine its load forecast.

3.1.3 CDM Adjustment for the Load Forecast for Distributors

BHI has integrated an adjustment into the 2021 load forecast that takes into account CDM impacts, consistent with the OEB's *Guidelines for Electricity Distributor Conservation and Demand Management*.[4] BHI has fully considered measured impacts persisting from prior years within its load forecast and confirms that its results from January 2015 to April 2019 are consistent with the results provided by the IESO. For 2015 to 2017 program years, BHI has relied on the IESO annual verified results; and for 2018 up to April 15, 2019, BHI has relied on the April 2019 P&C Report made available by the IESO.

Table 28 identifies the proposed forecast of the CDM kWh load forecast adjustment, based on a half-year of savings from 2019, and a full year of savings from 2020. There are no forecast savings for 2021. The CDM figures reflect savings from that year persisting to 2021. CDM figures are assigned directly to classes based on the rate class of the customer associated with each outstanding CDM project. BHI provides OEB Appendix 2-IB in Tab "App.2-IB-Load_Forecast_Analysis" of the Chapter 2 Appendices attached as live Excel file Attachment4_2I_OEB_Chapter2Appendices_BHI_10302020 ("Chapter 2 Appendices – 2I").

Table 28 –Forecasted kWh Savings by Rate Class

Rate Class	2019			2020	2021	CDM Adj.	LRAMVA Target
	kWh	Weight	Amount	kWh	kWh	kWh	kWh
	A	B	C = A * B	D	E	F = C + D	G = A + D
Residential	28,270	0.5	14,135	0	0	14,135	28,270
GS<50 kW	955,494	0.5	477,747	119,523	0	597,270	1,075,017
GS>50 kW	7,335,111	0.5	3,667,556	2,490,400	0	6,157,956	9,825,511
TOTAL	**8,318,875**	**0.5**	**4,159,438**	**2,609,923**	**0**	**6,769,360**	**10,928,798**

[4] EB-2012-0003

The proposed forecast of the CDM kW load adjustment is only applicable to the GS>50 kW class. The CDM adjustment is based on the kWh CDM as a proportion of the total class kWh, as calculated in Table 29 below.

Table 29 – Forecasted kW Savings for the GS>50 kW Rate Class

Rate Class	2021 Forecast kWh			2021 Forecast kW		LRAMVA		
	Weather-Normal Forecast	CDM	% Savings	Weather-Normal Forecast	CDM	LRAMVA kWh	% Savings	LRAMVA kW
	A	B	C = B / A	D	E = C * D	F	G = F / B	H = D * G
GS>50 kW	749,731,447	6,157,956	0.82%	2,044,867	16,796	9,825,511	1.31%	26,799

The CDM-adjusted 2021 Test Year consumption and demand forecasts are provided in Tables 30 and 31 below, respectively.

Table 30 – CDM Adjusted Consumption Forecast

kWh	2021 Weather Normal Forecast	CDM Adjustment	2021 CDM Adjusted Forecast
Residential	529,245,405	14,135	529,231,270
GS<50 kW	167,600,444	597,270	167,003,174
GS>50 kW	831,591,749	6,157,956	825,433,794
Street Lights	5,569,644	0	5,569,644
USL	3,103,371	0	3,103,371
Total	**1,537,110,612**	**6,769,360**	**1,530,341,252**

Table 31 – CDM Adjusted Demand Forecast

kW	2021 Weather Normal Forecast	CDM Adjustment	2021 CDM Adjusted Forecast
GS>50 kW	2,284,740	16,796	2,267,945
Street Lights	15,528	0	15,528
Total	**2,300,269**	**16,796**	**2,283,473**

3.2 ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSIS

BHI provides a year over year variance analysis for customer/devices; consumption and demand; and revenue in this section. OEB Appendix 2-IB is attached in Tab "App.2-IB-Load_Forecast_Analysis" of the Chapter 2 Appendices – 2I. BHI provides the data used to determine customers/connections; and demand and load forecasts as a live Excel file Attachment 11_Load_Forecast_Model_BHI_10302020. For the purposes of the variance analysis for revenue, BHI has used the materiality threshold of $180,000 as defined in Section 1.4.6 of Exhibit 1.

3.2.1 Customer/Devices Counts

BHI identifies its customer/connection counts and year over year changes for the 2014 Cost of Service, the 2014-2019 Actuals, the 2020 Bridge Year and the 2021 Test Year in Table 32 below.

Table 32 – Customer/Connection Counts

Total	Customers/ Connections	2014 Cost of Service	2014	2015	2016	2017	2018	2019	2020 Bridge Year	2021 Test Year
Residential	Customers	59,869	59,824	60,123	60,319	60,502	60,920	61,428	61,651	62,056
GS<50 kW	Customers	5,224	5,198	5,239	5,273	5,342	5,428	5,490	5,506	5,564
GS>50 kW	Customers	1,012	1,021	1,028	1,034	1,004	986	985	1,004	1,003
Street Lights	Connections	15,272	15,171	15,229	15,253	17,184	17,184	17,184	17,197	17,283
Unmetered Scattered Load	Connections	605	559	557	559	562	563	562	559	554

Year over Year Change	Customers/ Connections	2014 Cost of Service	2014	2015	2016	2017	2018	2019	2020 Bridge Year	2021 Test Year
Residential	Customers		(45)	299	196	183	418	508	224	404
GS<50 kW	Customers		(26)	40	34	69	86	62	16	59
GS>50 kW	Customers		9	6	7	(31)	(18)	(1)	19	(1)
Street Lights	Connections		(101)	58	24	1,931	-	-	13	87
Unmetered Scattered Load	Connections		(46)	(2)	2	3	1	(2)	(3)	(4)

Year over Year % Change	Customers/ Connections	2014 Cost of Service	2014	2015	2016	2017	2018	2019	2020 Bridge Year	2021 Test Year	Average
Residential	Customers		(0.07%)	0.50%	0.33%	0.30%	0.69%	0.83%	0.36%	0.66%	0.45%
GS<50 kW	Customers		(0.49%)	0.77%	0.66%	1.31%	1.61%	1.14%	0.29%	1.07%	0.79%
GS>50 kW	Customers		0.91%	0.63%	0.63%	(2.95%)	(1.78%)	(0.10%)	1.98%	(0.12%)	(0.11%)
Street Lights	Connections		(0.66%)	0.38%	0.16%	12.66%	0.00%	0.00%	0.07%	0.50%	1.56%
Unmetered Scattered Load	Connections		(7.60%)	(0.40%)	0.42%	0.51%	0.25%	(0.33%)	(0.50%)	(0.80%)	(1.09%)

Customer/connection counts are based on the average for the year.

BHI has not experienced any material changes in the composition of each customer class. In 2017 and 2018 there was a net reclassification of customers from the GS>50 kW class to the GS<50 kW rate class however it was not significant. BHI conducts its reclassification exercise annually in compliance with and as required in the Distribution System Code; customer movement between the GS<50 kW and GS>50 kW rate classes occurs as a result of changes in customer demand to year to year.

BHI has experienced low customer growth in its residential and GS>50 kW rate classes since 2014 - 0.45% and 0.79% respectively on an average annual basis. BHI has experienced negative customer growth since 2014 in its GS>50 kW class with the number of customers in the 2021 Test Year projected at 1,003, as compared to 1,021 in 2014.

BHI has not experienced any material changes in customer/connection counts year over year with the exception of the Street Lighting Class. Table 32 above identifies an increase in the number of street lighting connections of 1,931 from 2016 to 2017. This increase was a result of recount in street lighting connections at the beginning of 2017 in advance of the BHI's LED street lighting conversion; the increase was associated with growth in multiple prior years and not solely attributable to 2017. Although consumption and demand in the Residential, GS<50 kW and GS>50 kW rate classes respectively has been impacted by COVID-19, customer counts have not been impacted (as of September 2020).

The 2020 Bridge Year and 2021 Test Year forecasts are based on the geometric mean growth rate from 2010 to 2019, adjusted for actual customer counts in the first half of 2020. Customer counts are forecast on a monthly basis using actual customer counts from January 2020 to July 2020 and the monthly equivalent of the annual geometric mean growth rate from 2010 to 2019 applied to the remaining months of August 2020 to December 2021. Table 33 below identifies the derivation of Customer Counts/Connections by rate class.

Table 33 – Derivation of Customer Counts/Connections

Residential		Percent
Year	Customers	of PY
2010	57,917	
2011	58,488	100.99%
2012	59,068	100.99%
2013	59,319	100.43%
2014	59,824	100.85%
2015	60,123	100.50%
2016	60,319	100.33%
2017	60,502	100.30%
2018	60,920	100.69%
2019	61,428	100.83%
2020	61,651	100.36%
2021	62,056	100.66%

GS < 50 kW		Percent
Year	Customers	of PY
2010	4,988	
2011	5,091	102.05%
2012	5,138	100.93%
2013	5,159	100.40%
2014	5,198	100.77%
2015	5,239	100.77%
2016	5,273	100.66%
2017	5,342	101.31%
2018	5,428	101.61%
2019	5,490	101.14%
2020	5,506	100.29%
2021	5,564	101.07%

GS > 50 kW		Percent
Year	Customers	of PY
2010	996	
2011	987	99.14%
2012	998	101.16%
2013	1,008	100.92%
2014	1,021	101.36%
2015	1,028	100.63%
2016	1,034	100.63%
2017	1,004	97.05%
2018	986	98.22%
2019	985	99.90%
2020	1,004	101.98%
2021	1,003	99.88%

Street Lights		Percent
Year	Devices	of PY
2010	14,652	
2011	15,024	102.54%
2012	15,083	100.39%
2013	15,114	100.21%
2014	15,171	100.37%
2015	15,229	100.38%
2016	15,253	100.16%
2017	17,184	112.66%
2018	17,184	100.00%
2019	17,184	100.00%
2020	17,197	100.07%
2021	17,283	100.50%

USL		Percent
Year	Devices	of PY
2010	604	
2011	604	100.04%
2012	605	100.11%
2013	569	94.06%
2014	559	98.31%
2015	557	99.60%
2016	559	100.42%
2017	562	100.51%
2018	563	100.25%
2019	562	99.67%
2020	559	99.50%
2021	554	99.20%

There are no material differences between the 2014 actuals and the 2014 Cost of Service with the exception of Unmetered Scattered load for which connections in 2014 were 559 as compared to the 2014 Cost of Service connections of 605. The connections in 2014 of 559 are consistent with the 2013 actuals of 569.

3.2.2 Consumption and Demand

BHI identifies its consumption and demand and year over year changes for the 2014 Cost of Service, the 2014-2019 Actuals, the 2020 Bridge Year and the 2021 Test Year below. Tables 34 and 35 below identify BHI's weather-actual and weather normalized annual consumption/demand respectively, by rate class for the 2014 Cost of Service and 2014 to 2019 Actuals. Consumption and demand include the CDM adjustment for the 2020 Bridge and 2021 Test Years.

Table 34 – Weather-Actual Consumption/Demand

Total	Billing Determinant	2014 Cost of Service	2014	2015	2016	2017	2018	2019
Residential	kWh	553,858,289	530,303,117	530,999,846	545,123,880	501,428,451	536,801,589	512,580,883
GS<50 kW	kWh	173,842,956	172,644,356	170,245,509	169,905,557	166,894,185	174,257,110	170,703,484
GS>50 kW	kW	2,451,173	2,373,361	2,374,100	2,410,544	2,363,980	2,353,522	2,275,484
Street Lights	kW	30,525	27,636	27,661	27,648	30,452	18,201	15,446
Unmetered Scattered Load	kWh	3,151,827	3,098,633	3,110,148	3,115,033	3,130,244	3,138,478	3,144,191

Year over Year Change	Customers/ Connections	2014 Cost of Service	2014	2015	2016	2017	2018	2019
Residential	kWh		(23,555,172)	696,729	14,124,034	(43,695,429)	35,373,138	(24,220,706)
GS<50 kW	kWh		(1,198,600)	(2,398,847)	(339,952)	(3,011,372)	7,362,925	(3,553,626)
GS>50 kW	kW		(77,812)	739	36,444	(46,564)	(10,458)	(78,038)
Street Lights	kW		(2,889)	25	(13)	2,804	(12,251)	(2,755)
Unmetered Scattered Load	kWh		(53,194)	11,515	4,885	15,211	8,234	5,713

Year over Year % Change	Customers/ Connections	2014 Cost of Service	2014	2015	2016	2017	2018	2019
Residential	kWh		(4.25%)	0.13%	2.66%	(8.02%)	7.05%	(4.51%)
GS<50 kW	kWh		(0.69%)	(1.39%)	(0.20%)	(1.77%)	4.41%	(2.04%)
GS>50 kW	kW		(3.17%)	0.03%	1.54%	(1.93%)	(0.44%)	(3.32%)
Street Lights	kW		(9.46%)	0.09%	(0.05%)	10.14%	(40.23%)	(15.14%)
Unmetered Scattered Load	kWh		(1.69%)	0.37%	0.16%	0.49%	0.26%	0.18%

Table 35 – Weather-Normalized Consumption/Demand

Total	Billing Determinant	2014 Cost of Service	2014	2015	2016	2017	2018	2019	2020 Bridge Year	2021Test Year
Residential	kWh	553,858,289	544,629,928	536,484,748	529,766,663	515,589,625	510,984,906	520,074,034	546,039,497	529,231,270
GS<50kW	kWh	173,842,956	173,351,271	171,832,584	169,607,124	169,390,968	169,541,627	170,772,378	152,883,777	167,003,174
GS>50kW	kW	2,451,173	2,387,587	2,393,115	2,413,739	2,349,802	2,312,210	2,309,173	2,031,467	2,267,945
Street Lights	kW	30,525	27,636	27,661	27,648	30,452	18,201	15,446	15,448	15,528
Unmetered Scattered Load	kWh	3,151,827	3,098,633	3,110,148	3,115,033	3,130,244	3,138,478	3,144,191	3,128,398	3,103,371

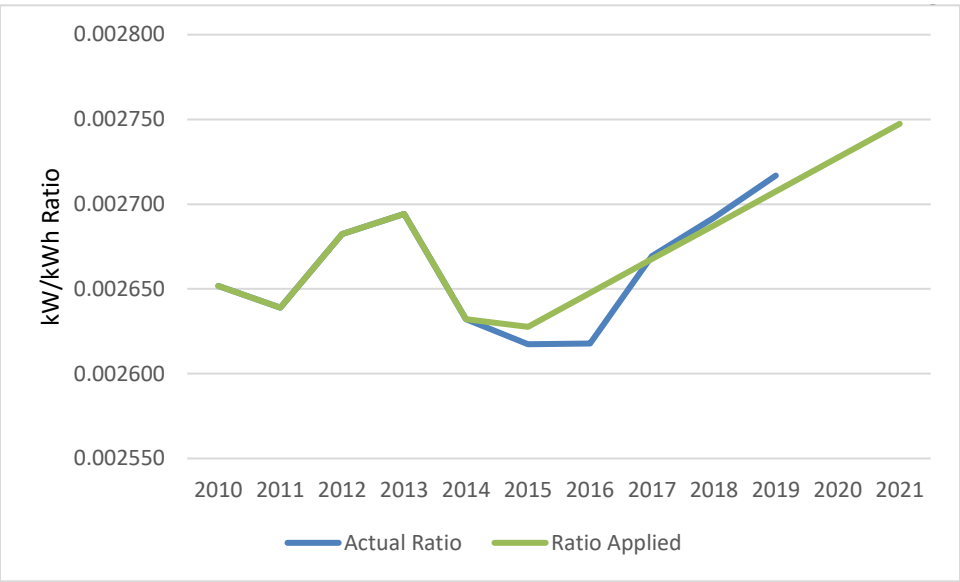
Year over Year Change	Customers/ Connections	2014 Cost of Service	2014	2015	2016	2017	2018	2019	2020	2021
Residential	kWh		(9,228,361)	(8,145,180)	(6,718,085)	(14,177,039)	(4,604,719)	9,089,128	25,965,464	(16,808,227)
GS<50kW	kWh		(491,685)	(1,518,687)	(2,225,460)	(216,156)	150,659	1,230,751	(17,888,601)	14,119,396
GS>50kW	kW		(63,586)	5,528	20,624	(63,938)	(37,592)	(3,036)	(277,706)	236,478
Street Lights	kW		(2,889)	25	(13)	2,804	(12,251)	(2,755)	2	80
Unmetered Scattered Load	kWh		(53,194)	11,515	4,885	15,211	8,234	5,713	(15,793)	(25,027)

Year over Year % Change	Customers/ Connections	2014 Cost of Service	2014	2015	2016	2017	2018	2019	2020	2021
Residential	kWh		(1.67%)	(1.50%)	(1.25%)	(2.68%)	(0.89%)	1.78%	4.99%	(3.08%)
GS<50kW	kWh		(0.28%)	(0.88%)	(1.30%)	(0.13%)	0.09%	0.73%	(10.48%)	9.24%
GS>50kW	kW		(2.59%)	0.23%	0.86%	(2.65%)	(1.60%)	(0.13%)	(12.03%)	11.64%
Street Lights	kW		(9.46%)	0.09%	(0.05%)	10.14%	(40.23%)	(15.14%)	0.01%	0.52%
Unmetered Scattered Load	kWh		(1.69%)	0.37%	0.16%	0.49%	0.26%	0.18%	(0.50%)	(0.80%)

BHI has two demand-billed classes: the Street Light class, for which weather-normalization is not required, and the GS>50 kW class. Weather-normalized kW demand for the GS>50 kW class is derived with kW/kWh ratios applied to weather-normalized kWh consumption. As previously described for the derivation of the demand forecast for GS>50 kW, the kW/kWh ratio fluctuated between 2010 and 2014, followed by an increasing trend since 2015 as identified in Figure 15 below. The 2020 and 2021 kW forecast relies on a continuation of the trend from 2015 to 2019 through the test year. For the years 2010 to 2014, as the ratio fluctuated, the actual kW/kWh

ratio is applied to weather-normalized consumption. For the years 2015 to 2019, the kW/kWh ratio from the 2014 to 2019 trend is applied to weather-normalized consumption. The kW/kWh ratios are provided for the GS>50 kW and Street Light classes in Tables 17 and 20 above, respectively.

Figure 15 – GS>50 kW Normalized kW/kWh Ratio



Approximately 63% of BHI's distribution revenue is collected from the Residential rate class. As such, historically, weather has had a significant impact on residential consumption and distribution revenue. BHI expects residential distribution revenue to be relatively stable in 2020 and 2021 due to the transition of residential customers to a fixed monthly distribution service charge over a four-year transition period commencing in 2016 and ending in 2019.[5]

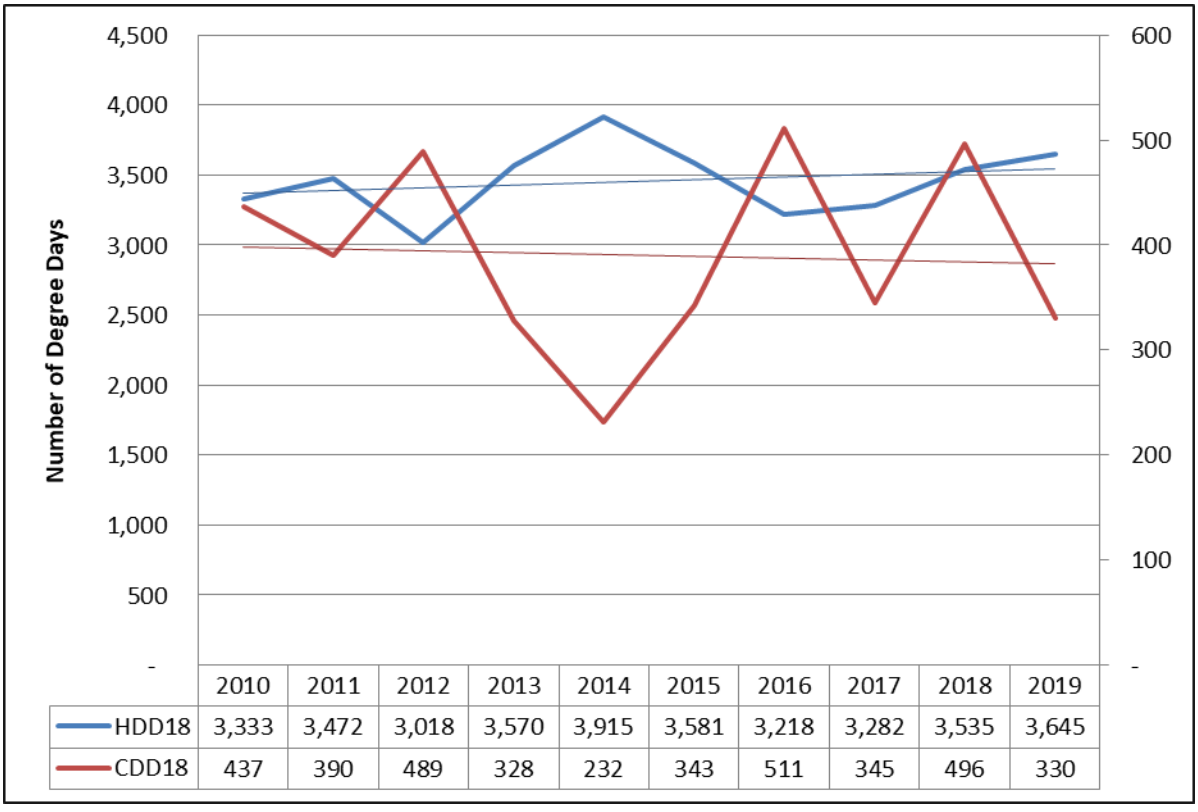
The GS<50 kW accounts for approximately 13% of BHI's distribution revenue and includes small commercial businesses typically neighbouring residential areas of BHI's service area. Consumption patterns are similar to the residential rate class and are weather dependent.

[5] OEB Board Policy: *A New Distribution Rate Design for Residential Electricity Customers* (EB-2014-0210), April 2, 2015

The GS>50 kW class includes large commercial and industrial businesses and accounts for approximately 23% of BHI's distribution revenue. Demand is highly dependent on the economic and political environment and less so on weather patterns.

Ontario is typically a summer peaking province - the highest times of peak demand tend to be during hot, humid days and/or during a heat wave when air conditioner load increases. Similarly, BHI is typically a summer peaking utility. Figure 16 below identifies the HDD and CDD from 2014-2019. Consumption and consequently variable distribution revenue from the Residential and GS<50 kW rate classes are directly impacted by HDD and CDD.

Figure 16 – HDD and CDD from 2010 to 2019



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
HDD18	3,333	3,472	3,018	3,570	3,915	3,581	3,218	3,282	3,535	3,645
CDD18	437	390	489	328	232	343	511	345	496	330

3.2.3 Variance Analysis

BHI provides a year-over-year variance analysis for consumption and demand below. From 2014 to 2020, material changes in distribution revenue are primarily driven by consumption and demand - distribution rates did increase but were adjusted by the Price Cap IR annual adjustment which was less than 2% annually in each year.

2014 Actuals vs. 2014 Cost of Service

BHI provides a comparison of the 2014 Actuals to the 2014 Cost of Service for weather actual and weather normalized results in Table 36 below. 2014 consumption in the residential and GS<50 kW rate classes was significantly impacted by a lower number of cooling degree days as compared to other years (232 CDD as compared to the 10-year average of 390); 2014 weather actuals were 23.6GWh and 1.2GWh lower than the 2014 Cost of Service respectively. Weather normalized consumption and demand in 2014 were lower than the 2014 Cost of Service for all rate classes in part due to the success of conservation and demand management programs (savings were higher than that forecast in the 2014 Cost of Service). Demand for the street lighting class was overestimated in the 2014 Cost of Service. Annual demand of 27,636kW in the 2014 actuals is consistent with 2010-2013 historical data.

Table 36 – 2014 Actuals vs. 2014 Cost of Service – Consumption and Demand

Rate Class	Billing Determinant	2014 Actuals (Weather Actual)	2014 Cost of Service	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	530,303,117	553,858,289	(23,555,172)	(4.3%)
GS<50kW	kWh	172,644,356	173,842,956	(1,198,600)	(0.7%)
GS>50kW	kW	2,373,361	2,451,173	(77,812)	(3.2%)
Street Lights	kW	27,636	30,525	(2,889)	(9.5%)
Unmetered Scattered Load	kWh	3,098,633	3,151,827	(53,194)	(1.7%)

Rate Class	Billing Determinant	2014 Actuals (Weather Normal)	2014 Cost of Service	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	544,629,928	553,858,289	(9,228,361)	(1.7%)
GS<50kW	kWh	173,351,271	173,842,956	(491,685)	(0.3%)
GS>50kW	kW	2,387,587	2,451,173	(63,586)	(2.6%)
Street Lights	kW	27,636	30,525	(2,889)	(9.5%)
Unmetered Scattered Load	kWh	3,098,633	3,151,827	(53,194)	(1.7%)

2015 Actuals vs. 2014 Actuals

BHI provides a comparison of the 2015 Actuals to the 2014 Actuals for weather actual and weather normalized results in Table 37 below. There are no material variances in the 2015 weather actuals as compared to 2014 with the exception of the GS<50 kW rate class. CDM savings increased from 3.1GWh to 5.5GWh, accounting for the majority of the 2.4GWh year-over-year decrease. The residential rate class experienced similar CDM savings; however these were offset by an increase in consumption due to weather – CDD increased from 232 to 343. Weather normalized consumption and demand in 2015 were consistent with 2014 with the exception of the residential and GS<50 kW rate classes for which consumption was lower due to continued success of conservation and demand management programs.

Table 37– 2015 Actuals vs. 2014 Actuals – Consumption and Demand

Weather Actual	Billing Determinant	2015 Actuals	2014 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	530,999,846	530,303,117	696,729	0.1%
GS<50kW	kWh	170,245,509	172,644,356	(2,398,847)	(1.4%)
GS>50kW	kW	2,374,100	2,373,361	739	0.0%
Street Lights	kW	27,661	27,636	25	0.1%
Unmetered Scattered Load	kWh	3,110,148	3,098,633	11,515	0.4%

Weather Normalized	Billing Determinant	2015 Actuals	2014 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	536,484,748	544,629,928	(8,145,180)	(1.5%)
GS<50kW	kWh	171,832,584	173,351,271	(1,518,687)	(0.9%)
GS>50kW	kW	2,393,115	2,387,587	5,528	0.2%
Street Lights	kW	27,661	27,636	25	0.1%
Unmetered Scattered Load	kWh	3,110,148	3,098,633	11,515	0.4%

2016 Actuals vs. 2015 Actuals

BHI provides a comparison of the 2016 Actuals to the 2015 Actuals for weather actual and weather normalized results in Table 38 below. Weather actual consumption for the residential rate class increased significantly from 2015 to 2016 due to an increase in the CDD from 343 to 511. 2016 has the highest number of CDD over the 10-year period from 2010-2019. The GS<50 kW rate class is similarly impacted by weather; however the impact of weather was more than offset by an increase in savings from CDM. The weather normalized actuals 2016 reflect the continued reduction in consumption due to CDM.

Table 38 – 2016 Actuals vs. 2015 Actuals – Consumption and Demand

Weather Actual	Billing Determinant	2016 Actuals	2015 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	545,123,880	530,999,846	14,124,034	2.7%
GS<50kW	kWh	169,905,557	170,245,509	(339,952)	(0.2%)
GS>50kW	kW	2,410,544	2,374,100	36,444	1.5%
Street Lights	kW	27,648	27,661	(13)	(0.0%)
Unmetered Scattered Load	kWh	3,115,033	3,110,148	4,885	0.2%

Weather Normalized	Billing Determinant	2016 Actuals	2015 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	529,766,663	536,484,748	(6,718,085)	(1.3%)
GS<50kW	kWh	169,607,124	171,832,584	(2,225,460)	(1.3%)
GS>50kW	kW	2,413,739	2,393,115	20,624	0.9%
Street Lights	kW	27,648	27,661	(13)	(0.0%)
Unmetered Scattered Load	kWh	3,115,033	3,110,148	4,885	0.2%

2017 Actuals vs. 2016 Actuals

BHI provides a comparison of the 2017 Actuals to the 2016 Actuals for weather actual and weather normalized results in Table 39 below. Weather actual consumption for the residential and GS<50 kW rate class decreased significantly from 2015 to 2016 due to a decrease in the CDD from 511 to 345, well below the 10-year average of 390. This decrease was not as significant for the GS<50 kW rate class for which the number of customers increased by 69 in part due to a reclassification of customers from the GS<50 kW rate class to GS<50 kW. Demand for the GS>50 kW rate class decreased due to (i) a decrease in the number of customers as a result of reclassification and (ii) a decrease in monthly peak demand per customer. Demand for the street lighting rate class increased as a result of the increase in the number of connections as described above. The weather normalized actuals 2016 reflect the continued reduction in consumption and demand due to CDM for the residential, GS<50 kW and GS>50 kW rate classes.

Table 39 – 2017 Actuals vs. 2016 Actuals – Consumption and Demand

Weather Actual	Billing Determinant	2017 Actuals	2016 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	501,428,451	545,123,880	(43,695,429)	(8.0%)
GS<50kW	kWh	166,894,185	169,905,557	(3,011,372)	(1.8%)
GS>50kW	kW	2,363,980	2,410,544	(46,564)	(1.9%)
Street Lights	kW	30,452	27,648	2,804	10.1%
Unmetered Scattered Load	kWh	3,130,244	3,115,033	15,211	0.5%

Weather Normalized	Billing Determinant	2017 Actuals	2016 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	515,589,625	529,766,663	(14,177,039)	(2.7%)
GS<50kW	kWh	169,390,968	169,607,124	(216,156)	(0.1%)
GS>50kW	kW	2,349,802	2,413,739	(63,938)	(2.6%)
Street Lights	kW	30,452	27,648	2,804	10.1%
Unmetered Scattered Load	kWh	3,130,244	3,115,033	15,211	0.5%

2018 Actuals vs. 2017 Actuals

BHI provides a comparison of the 2018 Actuals to the 2017 Actuals for weather actual and weather normalized results in Table 40 below. Weather actual consumption for the residential and GS<50 kW rate class increased significantly from 2015 to 2016 due to an increase in the CDD from 345 to 496. Weather normalized actuals reflect the continued reduction in consumption and demand due to CDM. The GS<50 kW decrease as result of CDM was mitigated by an increase of 86 customers and an associated increase in consumption (non-weather related). Street lighting demand decreased by 40.2% as compared to 2017 due to the LED Street Light replacement program in the City of Burlington. The program converted all street lights from High Pressure Sodium ("HPS") light bulbs to Light Emitting Diodes ("LED") light bulbs. The work commenced in late 2017 and was completed in 2018.

Table 40 – 2018 Actuals vs. 2017 Actuals – Consumption and Demand

Weather Actual	Billing Determinant	2018 Actuals	2017 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	536,801,589	501,428,451	35,373,138	7.1%
GS<50kW	kWh	174,257,110	166,894,185	7,362,925	4.4%
GS>50kW	kW	2,353,522	2,363,980	(10,458)	(0.4%)
Street Lights	kW	18,201	30,452	(12,251)	(40.2%)
Unmetered Scattered Load	kWh	3,138,478	3,130,244	8,234	0.3%

Weather Normalized	Billing Determinant	2018 Actuals	2017 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	510,984,906	515,589,625	(4,604,719)	(0.9%)
GS<50kW	kWh	169,541,627	169,390,968	150,659	0.1%
GS>50kW	kW	2,312,210	2,349,802	(37,592)	(1.6%)
Street Lights	kW	18,201	30,452	(12,251)	(40.2%)
Unmetered Scattered Load	kWh	3,138,478	3,130,244	8,234	0.3%

2019 Actuals vs. 2018 Actuals

BHI provides a comparison of the 2019 Actuals to the 2018 Actuals for weather actual and weather normalized results in Table 41 below. Weather actual consumption for the residential and GS<50 kW rate class decreased significantly from 2018 to 2019 due to a decrease in the CDD from 496 to 330, well below the 10-year average of 390. Street lighting demand decreased by 15.1% as compared to 2018 due to the LED conversion. Although the work was completed in 2018, it occurred throughout the year and the full reduction in demand was not realized until 2019.

Table 41 – 2019 Actuals vs. 2018 Actuals – Consumption and Demand

Weather Actual	Billing Determinant	2019 Actuals	2018 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	512,580,883	536,801,589	(24,220,706)	(4.5%)
GS<50 kW	kWh	170,703,484	174,257,110	(3,553,626)	(2.0%)
GS>50 kW	kW	2,275,484	2,353,522	(78,038)	(3.3%)
Street Lights	kW	15,446	18,201	(2,755)	(15.1%)
Unmetered Scattered Load	kWh	3,144,191	3,138,478	5,713	0.2%

Weather Normalized	Customers/ Connections	2019 Actuals	2018 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	520,074,034	510,984,906	9,089,128	1.8%
GS<50 kW	kWh	170,772,378	169,541,627	1,230,751	0.7%
GS>50 kW	kW	2,309,173	2,312,210	(3,036)	(0.1%)
Street Lights	kW	15,446	18,201	(2,755)	(15.1%)
Unmetered Scattered Load	kWh	3,144,191	3,138,478	5,713	0.2%

2020 Bridge Year vs. 2019 Actuals

BHI provides a comparison of the 2020 Bridge Year to the 2019 Actuals for weather actual and weather normalized results in Table 42 below. The variance between the 2020 Bridge Year and 2019 Actuals is largely due to COVID-19. In response to COVID-19, many GS<50 kW and GS>50 kW customers shut down or reduced their on-site operations. Residential consumption increased significantly as Burlington residents increasingly worked from home and remained at home in accordance with public safety advisories.

Table 42 – 2020 Bridge Year vs. 2019 Actuals – Consumption and Demand

Weather Actual	Billing Determinant	2020 Bridge Year	2019 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	546,039,497	512,580,883	33,458,614	6.5%
GS<50 kW	kWh	152,883,777	170,703,484	(17,819,707)	(10.4%)
GS>50 kW	kW	2,031,467	2,275,484	(244,017)	(10.7%)
Street Lights	kW	15,448	15,446	2	0.0%
Unmetered Scattered Load	kWh	3,128,398	3,144,191	(15,793)	(0.5%)

Weather Normalized	Billing Determinant	2020 Bridge Year	2019 Actuals	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	546,039,497	520,074,034	25,965,464	5.0%
GS<50 kW	kWh	152,883,777	170,772,378	(17,888,601)	(10.5%)
GS>50 kW	kW	2,031,467	2,309,173	(277,706)	(12.0%)
Street Lights	kW	15,448	15,446	2	0.0%
Unmetered Scattered Load	kWh	3,128,398	3,144,191	(15,793)	(0.5%)

2021 Test Year vs. 2020 Bridge Year

BHI provides a comparison of the 2021 Test Year to the 2020 Bridge Year for weather actual and weather normalized results in Table 43 below.

Table 43 – 2021 Test Year vs. 2020 Bridge Year – Consumption and Demand

Weather Normalized	Billing Determinant	2021 Test Year	2020 Bridge Year	Increase/ (Decrease)	Increase/ (Decrease) %
Residential	kWh	529,231,270	546,039,497	(16,808,227)	(3.1%)
GS<50 kW	kWh	167,003,174	152,883,777	14,119,396	9.2%
GS>50 kW	kW	2,267,945	2,031,467	236,478	11.6%
Street Lights	kW	15,528	15,448	80	0.5%
Unmetered Scattered Load	kWh	3,103,371	3,128,398	(25,027)	(0.8%)

Residential consumption is expected to decline from the 2020 Bridge Year to the 2021 Test Year as workers resume working arrangements in place prior to COVID-19 (i.e. return to the office vs. working from home). Consumption and demand for the GS<50 kW and GS>50 kW rate classes respectively are forecast to rebound in anticipation of a post COVID-19 recovery. The 2021 Test Year is forecast to be more consistent with consumption and demand in 2010 to 2019 than the 2020 Bridge Year as the temporary impacts of COVID-19 are expected to subside. Historical trends in the Street Light and USL rate classes are expected to continue in the 2021 Test Year as consumption and demand are unaffected by COVID-19.

3.2.4 Distribution Revenues

BHI identifies its 2020 Bridge Year forecast of revenues at existing rates in Table 44 below; and the calculation of the 2021 Test Year forecasted revenues at existing rates and proposed rates in Tables 45-46 below. The 2021 Test Year forecast revenues at proposed rates are consistent with that reported in Exhibit 6 - Revenue Requirement and Revenue Sufficiency/Deficiency; Exhibit 8 - Rate Design and in the OEB's Revenue Requirement WorkForm filed as Attachment 16_2020RRWF_BHI_10302020 ("RRWF").

Distribution Revenue includes (i) the OEB approved monthly fixed service charge multiplied by the number of customers/connections; (ii) the OEB approved distribution volumetric rate multiplied by consumption/demand; and (iii) lost revenue associated with conservation and demand management programs, recorded in the year incurred or expected to be incurred for 2014 to April 30, 2021.

Table 44 – 2020 Bridge Year Revenues at Existing Rates

Total	Billing Determinant	Customers/ Connections	kW/KWh	Fixed Rate	Variable Rate	Total Distribution Revenue	Transformer Allowance Credit	Total Net Distribution Revenue
Residential	kWh	61,651	546,039,497	$26.51	$0.0000	$19,612,507		$19,612,507
GS<50 kW	kWh	5,506	152,883,777	$27.06	$0.0145	$4,004,580		$4,004,580
GS>50 kW	kW	1,004	2,031,467	$63.44	$3.1231	$7,109,022	($524,046)	$6,584,976
Street Lights	kW	17,197	15,448	$0.65	$4.7037	$206,794		$206,794
Unmetered Scattered Load	kWh	559	3,128,398	$9.73	$0.0169	$118,101		$118,101
Total						**$31,051,005**	**($524,046)**	**$30,526,959**

Table 45 – 2021 Test Year Revenues at Existing Rates

Total	Billing Determinant	Customers/ Connections	kW/KWh	Fixed Rate	Variable Rate	Total Distribution Revenue	Transformer Allowance Credit	Total Net Distribution Revenue
Residential	kWh	62,056	529,231,270	$26.51	$0.0000	$19,741,165		$19,741,165
GS<50 kW	kWh	5,564	167,003,174	$27.06	$0.0145	$4,228,441		$4,228,441
GS>50 kW	kW	1,003	2,267,945	$63.44	$3.1231	$7,846,651	($514,689)	$7,331,962
Street Lights	kW	17,283	15,528	$0.65	$4.7037	$207,849		$207,849
Unmetered Scattered Load	kWh	554	3,103,371	$9.73	$0.0169	$117,157		$117,157
Total						**$32,141,262**	**($514,689)**	**$31,626,573**

Table 46 – 2021 Test Year Revenues at Proposed Rates

Total	Billing Determinant	Customers/ Connections	kW/KWh	Fixed Rate	Variable Rate	Total Gross Distribution Revenue	Transformer Allowance Credit	Total Net Distribution Revenue
Residential	kWh	62,056	529,231,270	$29.78	$0.0000	$22,177,594		$22,177,594
GS<50 kW	kWh	5,564	167,003,174	$30.40	$0.0163	$4,750,309		$4,750,309
GS>50 kW	kW	1,003	2,267,945	$72.13	$3.5199	$8,851,187	($514,689)	$8,336,498
Street Lights	kW	17,283	15,528	$0.56	$4.0616	$179,474		$179,474
Unmetered Scattered Load	kWh	554	3,103,371	$7.14	$0.0124	$86,009		$86,009
Total						**$36,044,573**	**($514,689)**	**$35,529,884**

BHI identifies its revenues and year over year changes for the 2014 Cost of Service, the 2014-2019 Actuals, the 2020 Bridge Year and the 2021 Test Year in Table 47 below.

Table 47 – Base Distribution Revenue (Net of Transformer Allowance)

Total	2014 Cost of Service	2014 Actuals	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	2021 Test Year
Residential	17,480,231	17,877,960	17,515,273	18,131,912	18,327,348	18,848,916	19,082,514	19,612,507	22,177,594
GS<50 kW	3,864,127	4,007,276	3,881,114	3,989,017	4,062,265	4,267,285	4,277,731	4,004,580	4,750,309
GS>50 kW	7,138,613	7,026,526	7,098,026	7,448,486	7,450,542	7,552,404	7,470,865	6,584,976	8,336,498
Street Lights	239,506	226,483	229,171	232,469	236,635	251,191	230,884	206,794	179,474
Unmetered Scattered Load	113,055	113,021	109,588	111,567	114,259	106,832	116,159	118,101	86,009
Total	**28,835,532**	**29,251,265**	**28,833,172**	**29,913,452**	**30,191,049**	**31,026,627**	**31,178,154**	**30,526,959**	**35,529,884**

Year over Year Change	2014 Cost of Service	2014 Actuals	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	2021 Test Year
Residential		397,729	(362,686)	616,638	195,436	521,568	233,598	529,993	2,565,087
GS<50 kW		143,148	(126,162)	107,903	73,248	205,020	10,446	(273,151)	745,729
GS>50 kW		(112,087)	71,500	350,460	2,057	101,862	(81,539)	(885,889)	1,751,521
Street Lights		(13,023)	2,688	3,299	4,165	14,556	(20,307)	(24,089)	(27,321)
Unmetered Scattered Load		(34)	(3,433)	1,979	2,691	(7,427)	9,328	1,942	(32,093)
Total		**415,733**	**(418,093)**	**1,080,280**	**277,597**	**835,578**	**151,527**	**(651,195)**	**5,002,925**

Year over Year % Change	2014 Cost of Service	2014 Actuals	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	2021 Test Year
Residential		2.3%	(2.0%)	3.5%	1.1%	2.8%	1.2%	2.8%	13.1%
GS<50 kW		3.7%	(3.1%)	2.8%	1.8%	5.0%	0.2%	(6.4%)	18.6%
GS>50 kW		(1.6%)	1.0%	4.9%	0.0%	1.4%	(1.1%)	(11.9%)	26.6%
Street Lights		(5.4%)	1.2%	1.4%	1.8%	6.2%	(8.1%)	(10.4%)	(13.2%)
Unmetered Scattered Load		(0.0%)	(3.0%)	1.8%	2.4%	(6.5%)	8.7%	1.7%	(27.2%)
Total		**1.4%**	**(1.4%)**	**3.7%**	**0.9%**	**2.8%**	**0.5%**	**(2.1%)**	**16.4%**

The historical year over year variance is a result of (i) inflationary increases as prescribed by the OEB and approved in BHI's IRM applications from 2015 to 2020; and (ii) the variances in customer counts/connections and consumption/demand as described above. In summary:

- 2014 actual distribution revenue is higher than that approved in the 2014 Cost of Service despite consumption/demand in all rate classes being lower than prior year. The decline in consumption/demand was more than offset by the revenue recovery associated with the Smart Meter Incremental Rate Rider;
- 2015 distribution revenue is lower than 2014 distribution revenue by ($418,093) due to a decrease in distribution rates from 2014; and a decrease in GS<50 kW consumption. Distribution rates effective May 1, 2014 – April 30, 2015 were lower than those from May 1, 2013 to April 30, 2014.
- 2016 distribution revenue was higher than 2015 distribution revenue by $1,080,280, primarily driven by increased consumption in the residential rate class due to weather; and higher demand in the GS>50 kW rate class;
- 2017 distribution revenue was higher than 2016 distribution revenue by $277,597; despite consumption in the Residential and GS<50 kW rate classes, and demand in the GS>50 kW rate classes, being lower than prior year. The inflationary increase in distribution rates more than offset the decline in consumption and demand; and the decline in residential consumption had less of an impact than prior years as 2017 was the second year of the transition to fully fixed rates;
- 2018 distribution revenue was higher than 2017 distribution revenue by $835,578, primarily driven by inflationary distribution rate increases and increased consumption in the residential and GS<50 kW rate classes due to weather. Although this was the third year of the transition to fully fixed rates, residential consumption was significantly higher than 2017 and;
- 2019 distribution revenue was higher than 2018 distribution revenue by $151,527 driven by inflationary distribution rate increases. Although residential and GS<50 kW consumption was lower than 2018 due to weather, BHI completed the transition to fully fixed rates for the residential customer class effective May 1, 2019 and as such distribution revenue was not negatively impacted for this customer class; and
- 2020 distribution revenue is expected to be lower than 2019 distribution revenue by ($651,195). In response to COVID-19, many GS<50 kW and GS>50 kW customers shut

down or reduced their on-site operations. Residential consumption increased significantly as Burlington residents increasingly worked from home and remained at home in accordance with public safety advisories. Since residential customers are on fully fixed rates there is no increase in distribution revenue for this customer class. The decline in commercial consumption/demand, and consequently revenues is only partially offset by inflationary distribution rate increases.

The increase in distribution revenue from the 2020 Bridge Year to the 2021 Test Year is driven by (i) an increase in customer counts/connections and consumption/demand of $1,099,614 and (ii) a proposed increase in rates due to a revenue deficiency of $3,903,311 as identified in Table 48 below.

Table 48 – Distribution Revenue 2020 Bridge Year and 2021 Test Year

Total	2020 Bridge Year at Existing Rates	Change in Billing Quntities	2021 Test Year at Existing Rates	Revenue Deficency/ (Sufficiency)	2021 Test Year at Proposed Rates
Residential	19,612,507	128,658	19,741,165	2,436,429	22,177,594
GS<50 kW	4,004,580	223,860	4,228,441	521,869	4,750,309
GS>50 kW	6,584,976	746,985	7,331,962	1,004,536	8,336,498
Street Lights	206,794	1,055	207,849	(28,375)	179,474
Unmetered Scattered Load	118,101	(945)	117,157	(31,148)	86,009
Total	**30,526,959**	**1,099,614**	**31,626,573**	**3,903,311**	**35,529,884**

3.2.5 Average Consumption by Rate Class

BHI provides average weather-actual consumption or demand per customer/connection, as applicable by rate class in Table 49 below. The number of customers/connections in each rate class has remained fairly constant since 2014 with the exception of the Street Light class for which the number of connections has increased from 15,272 in 2014 to 17,184 in 2019 as new street lights installed. As such, for these rates classes, changes in consumption/demand per customer/connection is driven by usage for which an explanation is provided in Section 3.2.3. The variability in residential and commercial usage per customer from 2019 to the 2021 Test Year is a result of COVID-19 as described above. The decrease in demand per connection for the Street Light Class is a result of the LED conversion program as previously discussed.

Table 49 – Actual Consumption/Demand per Customer/Connection

Rate Class	Billing Determinant	2014 Cost of Service	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual
Residential	kWh/Count	9,251	8,864	8,832	9,037	8,288	8,812	8,344
GS<50 kW	kWh/Count	33,278	33,211	32,499	32,223	31,244	32,105	31,096
GS>50 kW	kW/Count	2,422	2,324	2,310	2,331	2,355	2,387	2,311
Street Light	kW/Connection	2.0	1.8	1.8	1.8	1.8	1.1	0.9
USL	kWh/Connection	5,210	5,543	5,586	5,572	5,571	5,571	5,600

BHI provides average weather-normalized and forecasted annual consumption or demand per customer, as applicable for each rate class in Table 50 below.

Table 50 – Weather-Normalized Consumption/Demand per Customer/Connection

Rate Class	Billing Determinant	2014 Cost of Service	2014 Normal	2015 Normal	2016 Normal	2017 Normal	2018 Normal	2019 Normal	2020 Bridge Year	2021 Test Year
Residential	kWh/Count	9,251	9,104	8,923	8,783	8,522	8,388	8,466	8,857	8,528
GS<50 kW	kWh/Count	33,278	33,347	32,802	32,166	31,711	31,236	31,109	27,769	30,012
GS>50 kW	kW/Count	2,422	2,338	2,329	2,334	2,341	2,345	2,345	2,023	2,261
Street Light	kW/Connection	2.0	1.8	1.8	1.8	1.8	1.1	0.9	0.9	0.9
USL	kWh/Connection	5,210	5,543	5,586	5,572	5,571	5,571	5,600	5,600	5,600

BHI provides the data used to determine the customers/connections, demand and load forecasts in live Excel file Attachment 11_Load_Forecast_Model_BHI_10302020.

3.3 OTHER REVENUE

3.3.1 Overview

Other Revenue, also referred to as Revenue Offsets, is comprised of all utility revenues other than distribution and cost of power revenues. BHI provides a summary of its other revenues for the 2014-2019 Actuals, the 2020 Bridge Year and the 2021 Test year (Appendix 2-H – Other Operating Revenue) in Table 51 below and in Tab "App.2-H_Other_Oper_Rev" of Attachment2_Main_OEB_Chapter2Appendices_BHI_10302020 (Chapter 2 Appendices - Main).

Table 51 – Other Revenues

Total	2014 Actuals	2015 Actuals	2016 Actuals	2017 Actuals	2018 Actuals	2019 Actuals	2020 Bridge Year	2021 Test Year
Specific Service Charges	$830,577	$843,967	$918,256	$784,544	$797,598	$727,127	$876,020	$416,360
Late Payment Charges	$265,006	$263,719	$278,227	$271,656	$304,816	$263,965	$286,000	$294,000
Retail Services Revenues	$25,835	$29,655	$26,345	$22,661	$19,869	$22,890	$23,520	$23,990
STR Revenue	$785	$656	$590	$444	$401	$477	$539	$550
SSS Revenue	$189,676	$191,572	$192,823	$195,423	$198,141	$199,651	$200,679	$202,041
Rent from Electric Property	$329,782	$329,782	$329,782	$329,782	$329,782	$329,782	$329,800	$460,300
Other Electric Revenue	$77,008	$6,346	$150,106	$11,078	$22,527	$9,953	$59,977	$12,796
Regulatory Credits	$0	$55,848	$33,021	$21,400	$332,135	$70,262	$125,669	$27,669
Loss on Disposition	($169,000)	$47,972	$24,500	$9,181	$35,976	($12,278)	$0	($98,000)
Rev.from Non-Utility Oper.	$485,608	$935,081	$491,155	$470,882	$1,588,315	$600,835	$707,115	$643,218
Exp.from Non-Utility Oper.	($474,387)	($488,532)	($541,509)	($556,360)	($757,752)	($883,511)	($522,116)	($535,889)
Miscellaneous Income	$29,794	$345,091	$191,674	$114,774	$169,556	$1,003,989	$483,154	$121,600
Interest & Dividend Income	$223,208	$129,351	$101,475	$127,902	$228,209	$281,819	$120,052	$122,453
Total	**$1,813,891**	**$2,690,509**	**$2,196,444**	**$1,803,367**	**$3,269,574**	**$2,614,960**	**$2,690,408**	**$1,691,087**
Increase/(Decrease) vs. PY		**$876,618**	**($494,065)**	**($393,076)**	**$1,466,207**	**($654,614)**	**$75,448**	**($999,321)**

3.3.2 Other Revenue Variance Analysis

BHI provides a year over year variance analysis of other revenue below.

2015 Actual vs. 2014 Actual Variance Analysis

Other revenue increased by $876,618 from the 2014 actuals to $2,690,509 in the 2015 actuals as identified in Table 52 below.

Table 52 – 2015 vs. 2014 Actual Other Revenue

Description	2014 Actuals	2015 Actuals	Increase/ (Decrease) $	Increase/ (Decrease) %
Specific Service Charges	$830,577	$843,967	$13,390	1.6%
Late Payment Charges	$265,006	$263,719	($1,286)	(0.5%)
Other Operating Revenues	$623,086	$558,011	($65,075)	(10.4%)
Other Income or Deductions	$95,223	$1,024,811	$929,588	976.2%
Total	**$1,813,891**	**$2,690,509**	**$876,618**	**48.3%**

Then increase of $876,618 is primarily driven by Other Income and Deductions as follows:

- An increase in CDM program revenue of $456,212 due to the receipt of a CDM incentive payment of $494,597; and
- An increase in miscellaneous income of $315,297 driven by (i) a reversal of a retroactive carrying charge adjustment of $268,239 in 2015, disallowed by the OEB as it was not in compliance with the Accounting Procedures Handbook ("APH")[6]; and (ii) a ($140,199) one-time adjustment in 2014 to USoA Account 1576 as per BHI's Settlement Agreement in its 2014 Cost of Service Application[7]; and
- A decrease in a net loss on disposal of property of $216,972.

2016 Actual vs. 2015 Actual Variance Analysis

Other revenue decreased by ($494,065) from the 2015 actuals to $2,196,444 in the 2016 actuals as identified in Table 53 below.

[6] Decision and Order, EB-2014-0059, March 19, 2015, p5
[7] EB-2013-0115

Table 53 – 2016 vs. 2015 Actual Other Revenue

Description	2015 Actuals	2016 Actuals	Increase/ (Decrease) $	Increase/ (Decrease) %
Specific Service Charges	$843,967	$918,256	$74,289	8.8%
Late Payment Charges	$263,719	$278,227	$14,508	5.5%
Other Operating Revenues	$558,011	$699,645	$141,634	25.4%
Other Income or Deductions	$1,024,811	$300,315	($724,496)	(70.7%)
Total	**$2,690,509**	**$2,196,444**	**($494,065)**	**(18.4%)**

The decrease of ($494,065) is primarily driven a decrease in other income and deductions partially offset by an increase on other operating revenues as follows:

- A decrease in CDM program revenue of ($428,945) due to the receipt of a CDM incentive payment in 2015; and
- A decrease in miscellaneous income – 2015 included the reversal of a retroactive carrying charge adjustment of ($268,239); partly offset by
- An increase in other electric revenue of $143,760 due to revenue associated with subdivision administrative fees.

2017 Actual vs. 2016 Actual Variance Analysis

Other revenue decreased by ($393,076) from the 2016 actuals to $1,803,367 in the 2017 actuals as identified in Table 54 below.

Table 54 – 2017 vs. 2016 Actual Other Revenue

Description	2016 Actuals	2017 Actuals	Increase/ (Decrease) $	Increase/ (Decrease) %
Specific Service Charges	$918,256	$784,544	($133,712)	(14.6%)
Late Payment Charges	$278,227	$271,656	($6,571)	(2.4%)
Other Operating Revenues	$699,645	$559,388	($140,258)	(20.0%)
Other Income or Deductions	$300,315	$187,780	($112,536)	(37.5%)
Total	**$2,196,444**	**$1,803,367**	**($393,076)**	**(17.9%)**

The decrease of ($393,076) is primarily driven by a decrease in specific service charges; other operating revenue; and other income and deductions as follows:

- An decrease in miscellaneous service revenues of ($137,152) due to a reduction in the specific service charges for disconnects/reconnects and Collection of Account charges as a result of the Winter Disconnection Moratorium ("Moratorium") introduced by the OEB[8] - during the Moratorium, LDCs are prohibited from disconnecting customers and are required to waive any Collection of Account Charge that could otherwise be charged in relation to an occupied residential property during the Moratorium.[9] ;
- A decrease in other electric revenue of ($137,257) associated with subdivision administrative fees; and
- A decrease in miscellaneous income of ($38,331) primarily driven by a decrease in revenue from scrap material disposals.

2018 Actual vs. 2017 Actual Variance Analysis

Other revenue increased by $1,466,207 from the 2017 actuals to $3,269,574 in the 2018 actuals as identified in Table 55 below.

Table 55 – 2018 vs. 2017 Actual Other Revenue

Description	2017 Actuals	2018 Actuals	Increase/ (Decrease) $	Increase/ (Decrease) %
Specific Service Charges	$784,544	$797,598	$13,054	1.7%
Late Payment Charges	$271,656	$304,816	$33,160	12.2%
Other Operating Revenues	$559,388	$570,720	$11,333	2.0%
Other Income or Deductions	$187,780	$1,596,440	$1,408,660	750.2%
Total	**$1,803,367**	**$3,269,574**	**$1,466,207**	**81.3%**

The increase of $1,466,207 is primarily driven by an increase in other income and deductions as follows:

- An increase in regulatory credits associated with the transition from IFRS to CGAAP of $310,735 – loss on disposals related to 2018 and prior years were recorded in USoA Account 1575 with an offset to regulatory credits. Entries to USoA Account 1575 are discussed in further detail in Section 9.1 of Exhibit 9;

[8] EB-2017-0318 Decision and Order, *Amending Electricity Distributor Licences to Prohibit the Disconnection of Residential Customers and Related Matters*, November 2, 2017, p 1
[9] Decision and Order EB-2017-0101, Paragraph 1.5

- An increase in CDM program revenue of $917,602 – BHI received its mid-term incentive payment for the 2015-2020 Conservation First Framework; and
- An increase in interest and dividend income of $100,307.

2019 Actual vs. 2018 Actual Variance Analysis

Other revenue decreased by ($654,614) from the 2018 actuals to $2,614,960 in the 2019 actuals as identified in Table 56 below.

Table 56 – 2019 vs. 2018 Actual Other Revenue

Description	2018 Actuals	2019 Actuals	Increase/ (Decrease) $	Increase/ (Decrease) %
Specific Service Charges	$797,598	$727,127	($70,472)	(8.8%)
Late Payment Charges	$304,816	$263,965	($40,852)	(13.4%)
Other Operating Revenues	$570,720	$562,753	($7,967)	(1.4%)
Other Income or Deductions	$1,596,440	$1,061,116	($535,324)	(33.5%)
Total	**$3,269,574**	**$2,614,960**	**($654,614)**	**(20.0%)**

The decrease of ($654,614) is primarily driven by a decrease in late payment charges; other income and deductions and specific service charges as follows:

- A decrease in regulatory credits of ($261,873) - 2018 included a large credit associated with the transition from IFRS to CGAAP;
- A decrease in CDM program net revenue of ($439,682) – BHI received its mid-term incentive payment for the 2015-2020 Conservation First Framework in 2018;
- A decrease in specific service charges of ($70,741) associated with the Moratorium described above; and
- A decrease in late payment charges of ($40,852); partly offset by
- Recovery of a prior period bad debt write-off $260,716.

2020 Bridge Year vs. 2019 Actual Variance Analysis

Other revenue is expected to increase by $75,448 from the 2019 actuals to $2,690,408 in the 2020 Bridge Year as identified in Table 57 below.

Table 57 – 2020 Bridge Year vs. 2019 Actual Other Revenue

Description	2019 Actuals	2020 Bridge Year	Increase/ (Decrease) $	Increase/ (Decrease) %
Specific Service Charges	$727,127	$876,020	$148,893	20.5%
Late Payment Charges	$263,965	$286,000	$22,035	8.3%
Other Operating Revenues	$562,753	$614,515	$51,762	9.2%
Other Income or Deductions	$1,061,116	$913,873	($147,243)	(13.9%)
Total	**$2,614,960**	**$2,690,408**	**$75,448**	**2.9%**

The increase of $75,448 is primarily driven by the following:

- An increase in specific service charges of $148,893 due to an increase in Collection of Account charges. Effective February 23, 2017, LDCs were required to waive any Collection of Account Charges during the Moratorium. Prior to July 1, 2019, these charges could still be collected from customers, as applicable, outside of the Moratorium. On March 14, 2019, the OEB gave notice to amend codes and a rule (the "March 2019 Notice")[10] in which it permanently eliminated the Collection of Account charge for all customers effective July 1, 2019. The March 2019 Notice stated that a distributor could apply for a deferral account to record the lost revenue associated with the elimination of the Collection of Account Charge. BHI applied to the OEB on June 28, 2019[11] for this deferral account and received OEB approval on September 19, 2019 to establish the account effective July 1, 2019 until BHI's next rebasing period.[12] As a result, from July 1, 2019 to April 30, 2021, BHI has recorded and will record the lost revenue associated with the Collection of Account charge of $30 in operating revenue with an offset to a deferral account for future recovery from ratepayers. Consequently, BHI recorded a full year of lost revenue associated with the Collection of Account charge in 2020, as compared to 2019 for which it was not permitted to record lost revenue during the Moratorium from January 1, 2019 to April 30, 2019. This resulted in an increase in specific service charges as compared to 2019;

[10] Notice of Amendments to Codes and a Rule, EB-2017-0183, March 14, 2019
[11] EB-2019-0179
[12] Ibid, Decision and Order, September 19, 2019

- One-time revenue of $474,000 associated with the implementation of Metrolinx Regional Express Rail ("RER") project in BHI's service territory for material handling and site mobilization; and
- An increase in subdivision administrative fees $58,187; partly offset by
- A decrease in CDM program net revenue of ($398,627) – BHI received its mid-term incentive payment for the 2015-2020 Conservation First Framework in 2018; and
- Recovery of a prior period bad debt write-off of ($260,716) in 2019;
- A decrease in interest and dividend income of ($161,767).

2021 Test Year vs. 2020 Bridge Year Variance Analysis

Other revenue is expected to decrease by ($999,321) from the 2020 Bridge Year to $1,691,087 in the 2021 Test Year as identified in Table 58 below.

Table 58 – 2021 Test Year vs. 2020 Bridge Year Other Revenue

Description	2020 Bridge Year	2021 Test Year	Increase/ (Decrease) $	Increase/ (Decrease) %
Specific Service Charges	$876,020	$416,360	($459,660)	(52.5%)
Late Payment Charges	$286,000	$294,000	$8,000	2.8%
Other Operating Revenues	$614,515	$699,677	$85,162	13.9%
Other Income or Deductions	$913,873	$281,050	($632,823)	(69.2%)
Total	**$2,690,408**	**$1,691,087**	**($999,321)**	**(37.1%)**

The decrease of ($999,321) is primarily driven by a decrease in in specific service charges and other income and deductions as follows:

- A decrease in the Collection of Account charges of ($459,660) –As stated above BHI plans to record the lost revenue associated with the collection of account charge of $30 in operating revenue with an offset to a deferral account for future recovery from ratepayers until April 30, 2021, the end of its last rebasing period. Effective May 1, 2021, BHI will no longer record this lost revenue;
- A decrease in CDM program revenue of ($70,000) due to the termination of the Conservation First Framework effective April 1, 2019. Programs are now delivered centrally by the IESO and BHI does not expect any revenue from the programs it continues to deliver locally (i.e. PoolSaver Program which ends December 31, 2020)

- A decrease in one-time revenue of ($393,200) associated with the implementation of Metrolinx Regional Express Rail ("RER") project in BHI's service territory for material handling and site mobilization – BHI will continue to collect this revenue in 2021 at an expected amount of $404,000 but has amortized this amount over 2021-2025 as the Metrolinx project is expected to be completed in 2022. The rates set in the 2021 Test Year are effectively in place for a five year period with the exception of adjustments for inflation. As such, if BHI were to include 100% of the $404,000 in the 2021 Test Year it would not recover enough revenue to fund its operations when the Metrolinx project ended. Consequently BHI has amortized this revenue over the five year rate period.

3.3.3 Proposed New Service Charges

BHI is not proposing any new specific service charges. It is proposing to distinguish between the specific charge for wireline access to the power poles for carriers and non-carriers on its Tariff of Rates and Charges. This proposal is discussed in further detail in Section 8.6 of Exhibit 8.

3.3.4 Revenue from Affiliate Transactions, Shared Services and Corporate Cost Allocation

BHI provides a summary of revenue from affiliate transactions, shared services, and corporate cost allocations in Section 2.4.3.2 of Exhibit 4. For each affiliate transaction, BHI has identified the service, the nature of the service provided to affiliated entities, the accounts used to record the revenue, and the associated costs to provide the service. This schedule is filed in Tab "App.2-N_Corp_Cost_Allocation" of the Chapter 2 Appendices.

Accounts related to affiliate revenue and affiliate expense are in the footnote of Appendix 2-H of Chapter 2 Appendices - Main (i.e. itemized in the details of Account 4375 and Account 4380).

Revenue from affiliate transactions is recorded in Account 4375, Revenues from Non Rate-Regulated Utility Operations.

Expenses from affiliate transactions are recorded in Account 4380, Expenses of Non Rate-Regulated Utility Operations.

BHI has broken down each account in more detail, and identified the components of each account in Tab "App.2-H_Other_Oper_Rev of Chapter 2 Appendices - Main.

Reconciliation of Balances in Account 4375 to OEB Appendix 2-N

BHI provides a reconciliation of the balances recorded in Account 4375, Revenues from Non Rate-Regulated Utility Operations to the balances recorded in OEB Appendix 2-N – Shared Services and Corporate Cost Allocation in Table 59 below. Amounts highlighted in green are the items in USoA Account 4375 that are included in OEB Appendix 2-N.

Total Intercompany revenue in OEB Appendix 2-N includes the following items which are not included in Appendix 2-H. These were non-revenue generating affiliate transactions:

- Streetlight Installation and Maintenance Services and Installation of EV infrastructure were non-revenue affiliate transactions

Table 59 – Reconciliation of Account 4375 to OEB Appendix 2-N

Account	Description	Included in BHI Intercompany Revenue 2-N	Actual						2020 Bridge Year	2021 Test Year
			2014	2015	2016	2017	2018	2019		
4375	Water & Wastewater Billing Services Rev	Yes	$361,593	$380,080	$384,503	$395,685	$399,321	$390,267	$401,000	$402,734
	Misc. Intercompany Services Revenue	Yes	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$17,000	$18,000
	FIT & MicroFIT Revenue	No	$3,228	$5,000	-$15,000	$5,000	$0	$650	$0	$0
	CDM Program Revenue	No	$38,385	$494,597	$65,652	$11,726	$929,328	$40,718	$70,000	$0
	BESI Control Room Services	Yes	$0	$0	$0	$0	$201,743	$110,000	$157,000	$159,000
	BESI Management Services Revenue	Yes	$78,403	$51,404	$52,000	$54,471	$53,922	$55,200	$62,115	$63,484
	Total Revenue 4375 per 2-H		**$485,608**	**$935,081**	**$491,155**	**$470,882**	**$1,588,315**	**$600,835**	**$707,115**	**$643,218**
2-N	**Total Intercompany Revenue 4375 included in 2-N**		**$443,996**	**$435,484**	**$440,503**	**$454,156**	**$658,987**	**$559,467**	**$637,115**	**$643,218**
	Add Streetlight Installation and Maintenance Services		$0	$0	$0	$84,313	$126,211	$0	$0	$0
	Add Installation of Electric Vehicle Infrastructure		$0	$0	$0	$0	$93,539	$0	$0	$0
	Total Intercompany Transactions per 2-N		**$443,996**	**$435,484**	**$440,503**	**$538,469**	**$878,737**	**$559,467**	**$637,115**	**$643,218**

Reconciliation of Balances in Account 4380 to OEB Appendix 2-N

BHI provides a reconciliation of the balances recorded in Account 4380, Expenses of Non Rate-Regulated Utility Operations, to the balances recorded in Appendix 2-N – Shared Services and Corporate Cost Allocation in Table 60 below. Amounts highlighted in green are the items in USoA Account 4380 that are included in OEB Appendix 2-N. As identified above, Streetlight Installation and Maintenance Services and Installation of EV infrastructure were not recorded in Accounts 4375 and 4380.

Table 60 – Reconciliation of Account 4380 to OEB Appendix 2-N

Account	Description	Included in BHI Intercompany Expenses 2-N	Actual						2020 Bridge Year	2021 Test Year
			2014	2015	2016	2017	2018	2019		
4380	Water & Wastewater Billing Services Exp	Yes	$294,520	$301,545	$299,152	$309,601	$315,871	$319,810	$299,859	$309,230
	Directors' Fees	Yes	$81,839	$77,329	$84,356	$79,239	$70,001	$55,110	$0	$0
	Intercompany Accounting Services	Yes	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$15,885	$17,042
	CDM Program Expense	No	$5,625	$6,754	$0	$7,049	$21,020	$248,198	$0	$0
	COB Additional Pole Attachment Charges	No								
	BESI Control Room Services	Yes	$0	$0	$0	$0	$190,936	$99,193	$147,638	$148,977
	BESI Management Services	Yes	$78,403	$51,404	$52,000	$54,471	$53,922	$55,200	$58,734	$60,640
	Heating Supply and Back-up Generation	Yes	$0	$42,500	$102,000	$102,000	$102,000	$102,000	$0	$0
	GSC Membership	Yes	$10,000	$5,000	$0	$0	$0	$0	$0	$0
	Total Revenue 4375 per 2-H		**$474,387**	**$488,532**	**$541,509**	**$556,359**	**$757,751**	**$883,511**	**$522,116**	**$535,889**
Total	**Total Intercompany Expense 4380 included in 2-N**		**$468,762**	**$481,777**	**$541,509**	**$549,310**	**$736,731**	**$635,313**	**$522,116**	**$535,889**
	Streetlight Installation and Maintenance Services					$84,313	$126,211			
	Installation of Electric Vehicle Infrastructure						$93,539			
	Total Intercompany Transactions per 2-N		**$468,762**	**$481,777**	**$541,509**	**$633,623**	**$956,481**	**$635,313**	**$522,116**	**$535,889**

BHI confirms that revenue related to microFIT charges is recorded as a revenue offset in Account 4235 – Miscellaneous Service Revenue and is not included as part of BHI's base distribution revenue requirement.

BHI confirms that costs included in its OM&A are excluded from the account balances incorporated into Appendix 2-H – Other Operating Revenue (i.e. excluded as offsets to the revenue requirement) and vice versa for the 2021 Test Year. Costs that are included in BHI's OM&A for the 2021 Test Year are excluded from Appendix 2-N – Shared Services and Corporate Cost Allocation.

BHI confirms that its transfer pricing and allocation of cost methods do not result in cross-subsidization between regulated and non-regulated lines of business, products or services; and is in compliance with Article 340 of the APH.

There are no discrete customer groups that are materially impacted by changes to other rates and charges.

Revenues or costs (including interest) associated with deferral and variance accounts are not included in other revenues.