Exhibit 3

Load and Other Revenue Forecast

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2.3.1 Load and Revenue Forecast

2.3.1.1 Introduction

The evidence presented in this exhibit provides information supporting the revenues derived from activities regulated by the Ontario Energy Board. Actual operating revenues from regulated operations are derived mainly from fixed and variable tariff charges as well as pass through charges and specific service charges. Niagara-on-the-Lake Hydro Inc. (NOTL Hydro) revenues are collected from five (5) customer classes:

1. Residential;
2. General Service less than 50 kW;
3. General Service 50 – 4,999 kW;
4. Unmetered Scattered Load (USL); and
5. Street Lighting.

In this Application, NOTL Hydro requests approval of a new Large User customer class to accommodate a customer that is expected to grow beyond 5,000 kW in the near future.

This exhibit also describes NOTL Hydro's load and customer forecasts. The load forecast methodology and assumptions are described in detail within this Exhibit.

The evidence herein is organized according into the following topics;

1. Revenue and Load Forecast;
2. Accuracy of Load Forecast and Variance Analysis, and
3. Other Revenues

2.3.1.2 Economic Overview

The Town of Niagara-on-the-Lake is a community in the Niagara region of Ontario. The community is located approximately one hour from Toronto. NOTL is bordered by St. Catharines to the west, Niagara Falls to the south, the Niagara River to the east and Lake Ontario to the north. The Queen Elizabeth Way (QEW) runs through the south west corner of NOTL and is the primary access. There is also a small airport which provides daily flights to Toronto as well as charter flights.

The primary industries are agriculture, hospitality and tourism. The agricultural industry is dominated by wineries, fruit farms and greenhouses. The hospitality industry includes the White Oaks Resort & Spa, many hotels and numerous inns and bed and breakfast establishments. In addition to the above the tourism industry includes the Shaw Festival, the historic Olde Town (Capital of Upper Canada from 1792-1797) and the new Outlet Mall. In addition, NOTL is home to a Niagara College campus and has a large and growing retirement community. There is almost no manufacturing in NOTL.

2.3.1.3 Overview of Revenue Forecast

Table 3.1 below shows estimated revenues from NOTL Hydro's current 2018 distribution charges applied to the 2019 Test Year load forecast. Distribution Revenues are derived through a combination of fixed monthly charges and volumetric charges applied to the utility's proposed Load Forecast. Fixed rate revenues are determined by applying the current fixed monthly charge to the number of customers or connections in each of the customer classes in each month. Variable rate revenue is based on a volumetric rate applied to metered consumption or demand volume. NOTL Hydro's 2019 forecasted revenues recovered through its currently approved distribution rates, and including the ICM rate rider, is projected at $5,494,023.

Table 3.1: Revenues at Current Rates

Customer Class	Variable Distribution Rate	per	Test Year Volume	Gross Variable Revenue
Residential	$ 0.0033	kWh	73,998,981	$ 244,197
GS < 50 kW	$ 0.0118	kWh	41,877,513	$ 494,155
GS > 50 kW	$ 2.2226	kW	212,896	$ 473,182
Large User	$ 2.2226	kW	60,000	$ 133,356
USL	$ 0.0064	kWh	251,508	$ 1,610
Streetlighting	30.6934	kW	2,475	$ 75,958
				$ 1,422,457
Customer Class	**Fixed Distribution Rate**		**Test Year # Customers**	**Gross Fixed Revenue**
Residential	$ 26.86		8,152	$ 2,627,674
GS < 50 kW	$ 39.41		1,338	$ 632,609
GS > 50 kW	$ 281.65		131	$ 442,754
Large User	$ 281.65		1	$ 3,380
USL	$ 21.20		26	$ 6,614
Streetlighting	$ 7.85		2,187	$ 205,993
				$ 3,919,024
less transformer allowance				$ (44,686)
Customer Class	**ICM Rate Rider**	**per**	**Test Year Volume**	**Gross ICM Revenue**
Residential	$ 0.0007	kWh	73,998,981	$ 51,799
GS < 50 kW	$ 0.0012	kWh	41,877,513	$ 50,253
GS > 50 kW	$ 0.3483	kW	212,896	$ 74,152
Large User	$ 0.3483	kW	60,000	$ 20,898
USL	$ 0.0005	kWh	251,508	$ 126
				$ 197,228
Total 2019 Distribution Revenue at Current Rates				$ 5,494,023

Forecast revenue for the 2019 Test Year at the proposed rates is calculated below:

Table 3.2: 2019 Forecast Revenues at Proposed Rates

Customer Class	Variable Distribution Rate	per	Test Year Volume	Gross Variable Revenue
Residential	$ -	kWh	73,998,981	$ -
GS < 50 kW	$ 0.0133	kWh	41,877,513	$ 556,971
GS > 50 kW	$ 2.6132	kW	212,896	$ 556,339
Large User	$ 2.6132	kW	60,000	$ 156,792
USL	$ 0.0085	kWh	251,508	$ 2,138
Streetlighting	17.7609	kW	2,475	$ 43,954
				$ 1,316,193
Customer Class	**Fixed Distribution Rate**		**Test Year # Customers**	**Gross Fixed Revenue**
Residential	$ 30.24		8,152	$ 2,958,334
GS < 50 kW	$ 39.41		1,338	$ 632,609
GS > 50 kW	$ 281.65		131	$ 442,754
Large User	$ 4,538.81		1	$ 54,466
USL	$ 20.15		26	$ 6,287
Streetlighting	$ 6.87		2,187	$ 180,277
				$ 4,274,726
				$ (44,686)
Customer Class	**ICM Rate Rider**	**per**	**Test Year Volume**	**Gross ICM Revenue**
Residential	$ -	kWh	73,998,981	$ -
GS < 50 kW	$ -	kWh	41,877,513	$ -
GS > 50 kW	$ -	kW	212,896	$ -
Large User	$ -	kW	60,000	$ -
USL	$ -	kWh	251,508	$ -
				$ -
Total 2019 Distribution Revenue at Proposed Rates				$ 5,546,234

Forecast revenue for the 2018 Bridge Year at current rates is provided in Table 3.3:

Table 3.3: 2018 Forecast Revenues at Current Rates

Customer Class	Variable Distribution Rate	per	Bridge Year Volume	Gross Variable Revenue
Residential	$ 0.0033	kWh	73,760,865	$ 243,411
GS < 50 kW	$ 0.0118	kWh	42,306,679	$ 499,219
GS > 50 kW	$ 2.2226	kW	221,277	$ 491,810
Large User	$ 2.2226	kW	-	$ -
USL	$ 0.0064	kWh	251,508	$ 1,610
Streetlighting	30.6934	kW	2,439	$ 74,859
				$ 1,310,908
Customer Class	**Fixed Distribution Rate**		**Bridge Year Volume**	**Gross Fixed Revenue**
Residential	$ 26.86		7,976	$ 2,570,945
GS < 50 kW	$ 39.41		1,335	$ 631,191
GS > 50 kW	$ 281.65		131	$ 441,089
Large User	$ 281.65		-	$ -
USL	$ 21.20		26	$ 6,614
Streetlighting	$ 7.85		2,155	$ 203,012
				$ 3,852,851
				$ (11,086)
Customer Class	**ICM Rate Rider**	**per**	**Bridge Year Volume**	**Gross ICM Revenue**
Residential	$ 0.0007	kWh	73,760,865	$ 51,633
GS < 50 kW	$ 0.0012	kWh	42,306,679	$ 50,768
GS > 50 kW	$ 0.3483	kW	221,277	$ 77,071
Large User	$ 0.3483	kW	-	$ -
USL	$ 0.0005	kWh	251,508	$ 126
				$ 179,471
Total 2018 Distribution Revenue at Current Rates				$ 5,332,144

Table 3.4 provides a trend analysis of actual and forecast revenues:

Table 3.4: Revenue Trend Analysis ($000's)

	2014	2015	2016	2017	2018F	2019F
Service Revenue	$4,729	$4,693	$4,844	$5,019	$5,153	$5,546
Annual Growth		-0.76%	3.22%	3.61%	2.67%	7.63%

The reduction in revenue in 2015 is the result of the rebasing following the 2014 Cost of Service application. The years 2016-2018 do not include the ICM rate rider as revenue as that is all

booked to the variance account. In 2019, the ICM is gone and revenue includes the portion of rates required to support the transformer installed in 2015. If this is backed out the growth in revenue from 2018 becomes 3.96% which is more consistent with historical growth.

2.3.1.4 Proposed Load Forecast

The following section of the application covers the approach taken to determine the Load Forecast. This section also covers economic assumptions and data sources for customer and load forecasts. It explains wholesale purchases and subsequent adjustments to the wholesale purchases. It also provides the rationale behind each variable used in the regression analysis. Lastly, it presents the regression results and explains how they were used to determine the forecast for the 2018 Bridge Year and the 2019 Test Year.

Table 3.5 below presents the actual and forecast trends for customer/connection counts, kWh consumption and billed kW demand.

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Table 3.5: Customer and Volume Trend Table

	Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Residential	Cust/Conn	6,594	6,716	6,912	7,110	7,389	7,661	7,838	7,976	8,152
	kWh	66,976,830	67,086,975	68,126,809	68,599,528	69,624,978	74,189,661	71,017,299	73,760,865	73,998,981
	kW									
General Service < 50 kW	Cust/Conn	1,235	1,269	1,221	1,312	1,322	1,333	1,332	1,335	1,338
	kWh	34,321,035	35,374,878	35,291,131	39,288,460	41,172,288	43,510,841	40,733,064	42,306,679	41,877,513
	kW									
General Service > 50 kW - 4999 kW	Cust/Conn	120	118	118	129	128	122	129	131	131
	kWh	78,632,457	77,993,648	77,896,093	80,076,899	81,848,511	83,681,624	84,099,297	85,961,669	82,705,771
	kW	199,918	202,738	204,593	208,043	213,949	211,155	211,534	221,277	212,896
Unmetered Scattered Load	Cust/Conn	22	22	21	22	20	18	21	26	26
	kWh	225,362	226,394	234,467	230,817	224,901	224,075	250,759	251,508	251,508
	kW									
Street Lights	Cust/Conn	1,946	1,947	1,949	2,051	2,081	2,120	2,124	2,155	2,187
	kWh	1,153,888	1,163,464	1,160,024	1,160,025	974,371	861,899	858,844	873,782	886,616
	kW	3,222	3,239	3,257	3,239	2,743	2,373	2,400	2,439	2,475
Large User	Cust/Conn	-	-	-	-	-	-	-	-	1
	kWh	-	-	-	-	-	-	-	-	23,308,825
	kW	-	-	-	-	-	-	-	-	60,000
Total	**Cust/Conn**	**9,917**	**10,072**	**10,222**	**10,624**	**10,940**	**11,253**	**11,444**	**11,623**	**11,835**
	kWh	**181,309,571**	**181,845,359**	**182,708,524**	**189,355,729**	**193,845,050**	**202,468,101**	**196,959,263**	**203,154,504**	**223,029,214**
	kW	**203,139**	**205,977**	**207,850**	**211,281**	**216,692**	**213,529**	**213,934**	**223,716**	**275,370**

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2.3.1.5 Overview of Load Forecast Methodology (OEB Ref 2.3.1.1)

NOTL Hydro's forecast is based on a multi-variate regression model developed based on monthly wholesale purchased kWh from January 2011 to December 2017 as measured at the wholesale points of delivery (exclusive of losses; i.e., not loss adjusted) with the addition of the renewable generation within the NOTL Hydro service territory. The multi-variate regression model was chosen as it has a strong correlation (r-squared) and is, intuitively, the most suitable model.

The methodology proposed in this application predicts wholesale consumption using a regression analysis that relates historical monthly wholesale kWh usage to monthly historical heating degree days and cooling degree days. Heating degree-day provides a measure of how much (in degrees), and for how long (in days), the outside temperature was below that base temperature. Cooling degree-day figures also come with a base temperature, and provide a measure of how much, and for how long, the outside temperature was above that base temperature. For degree days, daily observations as reported at Environment Canada's weather station at Port Weller *(latitude: 43°15'00.000" N; longitude: 79°13'00.000" W, elevation 79.00 metres)* are used. Seven years of heating and cooling data was used to match the available customer load data.

The other variables used are total customer count, daylight hours, days per month, a spring/fall flag and cost of power. Each variable is discussed in detail later in this section.

2.3.1.6 Customer Count

NOTL Hydro is projecting customer numbers to steadily increase (growth) in all customer classes as illustrated in the table below:

Table 3.6: Customer / Connection Projections

	Residential		GS<50 kW		GS>50 kW	
Year	Count	Growth Rate	Count	Growth Rate	Count	Growth Rate
2011	6,594		1,235		120	
2012	6,716	1.0185	1,269	1.0278	118	0.9806
2013	6,912	1.0292	1,221	0.9622	118	1.0014
2014	7,110	1.0286	1,312	1.0744	129	1.0976
2015	7,389	1.0392	1,322	1.0074	128	0.9894
2016	7,661	1.0368	1,333	1.0084	122	0.9492
2017	7,838	1.0232	1,332	0.9992	129	1.0614
Geomean		1.0292		1.0127		1.0120
2018	7,976	1.0176	1,335	1.0023	131	1.0120
2019	8,152	1.0221	1,338	1.0022	131	1.0038

	Large User		USL		Streetlights	
Year	Count	Growth Rate	Count	Growth Rate	Count	Growth Rate
2011	-		22		1,946	
2012	-	0.0000	22	0.9962	1,947	1.0004
2013	-	0.0000	21	0.9716	1,949	1.0010
2014	-	0.0000	22	1.0117	2,051	1.0526
2015	-	0.0000	20	0.9345	2,081	1.0143
2016	-	0.0000	18	0.8763	2,120	1.0189
2017	-	0.0000	21	1.2000	2,124	1.0018
Geomean		0.0000		0.9936		1.0147
2018	-	0.0000	26	1.2235	2,155	1.0147
2019	1	100.0000	26	1.0000	2,187	1.0147

Residential Customer Count Forecast

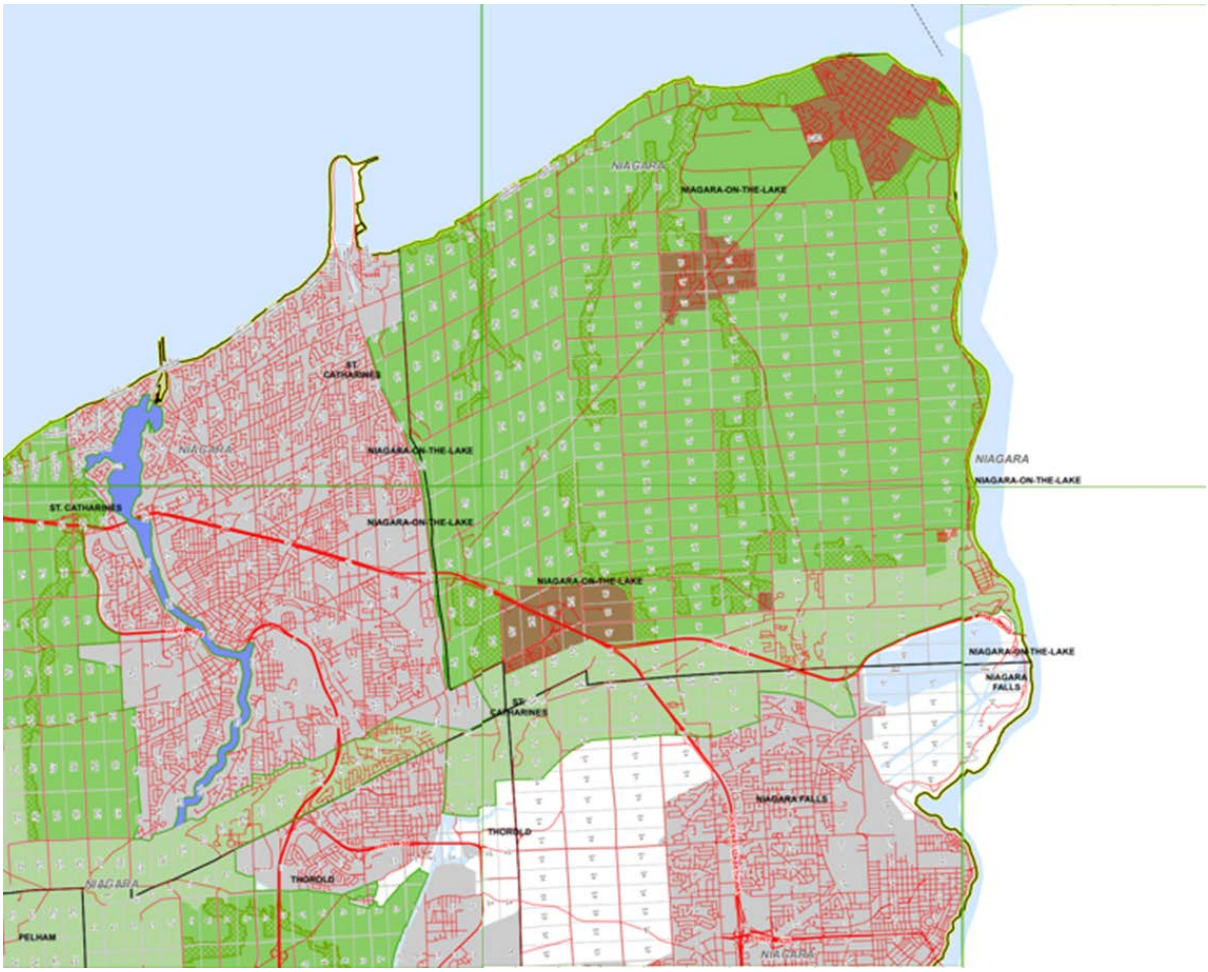
NOTL Hydro operates within the Town of Niagara-on-the-Lake and serves the entire Town with the exception of around 50 customers served by neighbouring LDCs due to load transfers. Upon reviewing the latest Census data (2016), Statistics Canada notes the following about Niagara-on-the-Lake:

> *In 2016, the enumerated population of Niagara-on-the-Lake (Town) was 17,511, which represents a change of 13.7% from 2011. This compares to the provincial average of 4.6% and the national average of 5.0%.*
>
> *Source: Statistics Canada*

The growth reported by Statistics Canada is consistent with the growth seen in NOTL Hydro's residential customer count and, to a lesser degree, the growth in NOTL Hydro's General Service < 50 kW customer count.

Most of Niagara-on-the-Lake is protected by the Greenbelt legislation with only the towns and villages of Niagara-on-the-Lake (Olde Town), Virgil, Glendale and St. David's available for development. Future development will therefore be largely driven by infill and small developments. This is consistent with the nature of the growth seen since 2011 with two significant exceptions.

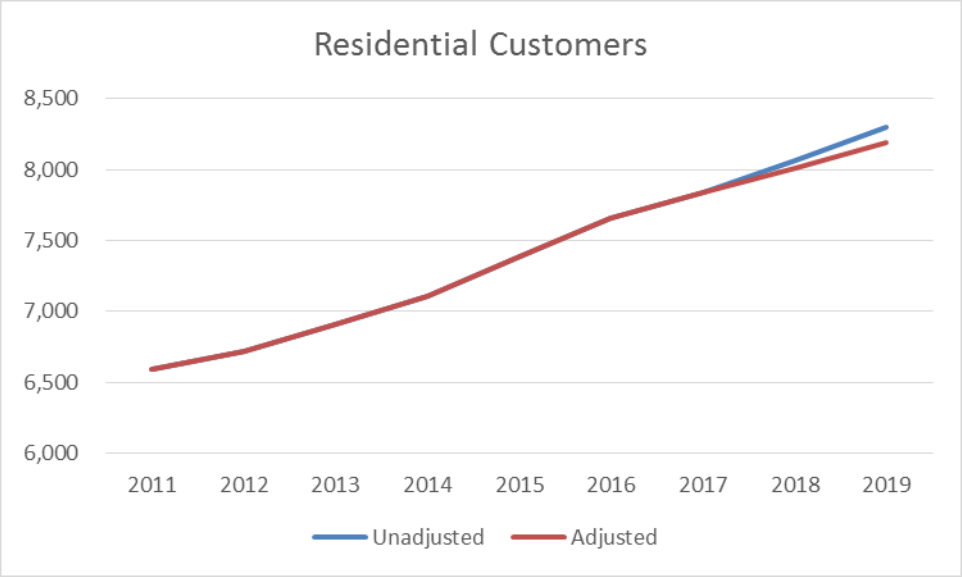
Table 3.7: Map of Greenbelt Designated Land in Niagara-on-the-Lake



Areas in green are designated Greenbelt land with restricted development

In 2015/2016, the Cannery Park residential development was completed. A total of 187 residential customers were added in these two years just from this development. There are no developments of this scale planned for 2018-2019 or even for the next five years. As a result, a regression analysis of 2011-2017 overstates future growth. Forecasted growth in residential customers has been reduced to 176 new customers each year to remove the impact of the Cannery Park development from the forecast.

Table 3.8: Forecast Residential Customers adjusted for Cannery Park Development



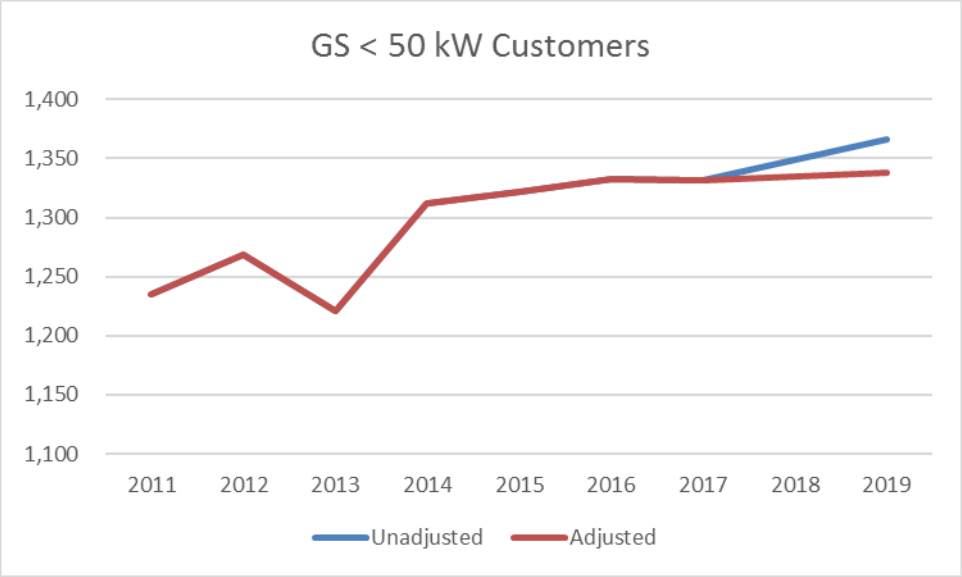
In late 2017, NOTL Hydro completed the transfers of loads with its neighbouring utilities, Alectra and Niagara Peninsula Energy Inc. As a result of these load transfers, a net of 38 residential customers were transferred to these other LDCs. The number of forecast residential customers in 2018 has been reduced by these 38 customers.

GS > 50 kW Customer Count Forecast

In 2014, the Outlet Mall at the intersection of Glendale Avenue and the QEW was completed. The impact of this Mall had been included in our 2014 Cost of Service application as an upward adjustment in our forecast. Almost, one hundred new General Service < 50 kW were added that year as each retail outlet in the Mall has its own account.

Growth in commercial activities in Niagara-on-the-Lake is entirely in service sectors with growth in the retail, tourism and winery industries. There are no developments of this scale planned for 2018-2019 or even for the next five years. As a result, a regression analysis of 2011-2017 overstates future growth. Forecasted growth in GS<50 kW customers has been reduced to 3 new customers each year to remove the impact of the Outlet Mall from the forecast.

Table 3.9: Forecast GS < 50 kW Customers Adjusted for Outlet Mall



Other Rate Classes Forecasted Customer Counts

Two other adjustments have been made to the forecasted customer counts:

- The number of unmetered loads has been increased to 26 to reflect the actual count in 2018,
- The Large User class with one customer has been created in 2019,
- The GS > 50 kW was reduced by one customer in 2019 due to the transfer to the Large User class,
- The streetlight count is forecast to grow at the historical rate.

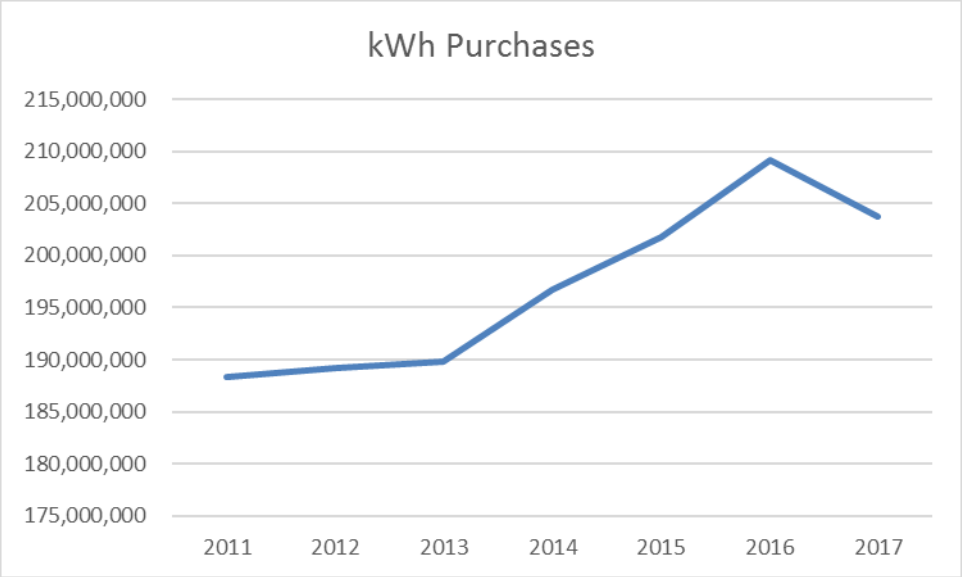
2.3.1.7 Overview of Wholesale Purchases

NOTL Hydro purchases its power from the Independent Electricity Systems Operator (IESO) and from over 140 renewable energy generators located in Niagara-on-the-Lake. The following tables summarize the kWh wholesale purchases:

Table 3.10: Wholesale kWh Purchases 2011-2017

	2011	2012	2013	2014	2015	2016	2017
IESO	172,952,898	175,015,278	174,453,179	182,267,235	186,601,102	194,519,543	190,337,392
SOP	15,095,889	12,668,908	13,566,559	12,179,335	12,739,289	12,038,127	10,971,592
FIT	3,911	598,435	650,444	851,260	866,605	895,000	867,723
MicroFIT	245,823	886,451	1,152,871	1,453,817	1,566,819	1,736,631	1,608,060
Total	188,298,521	189,169,073	189,823,053	196,751,647	201,773,815	209,189,302	203,784,767

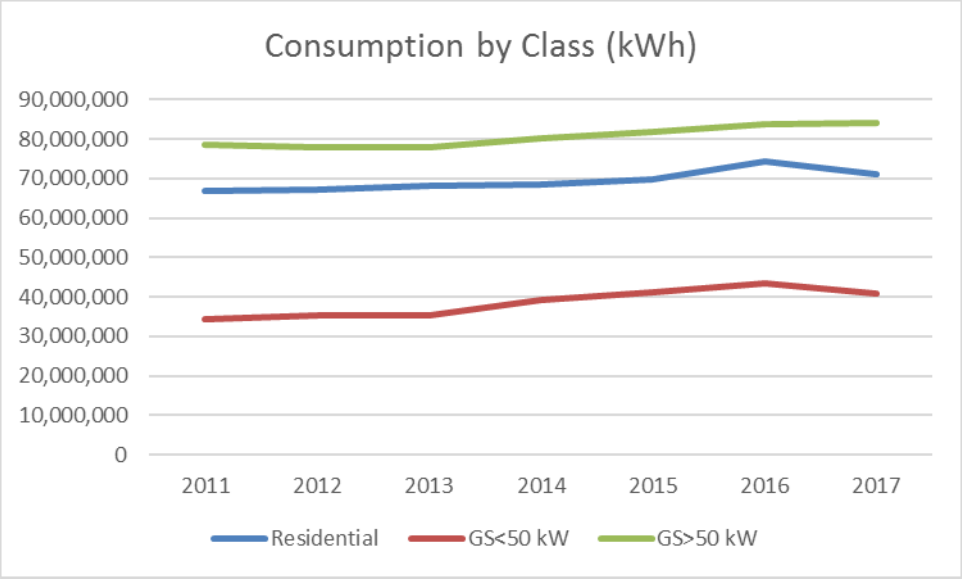
Table 3.11: Trend of Wholesale kWh Purchases 2011-2017



NOTL Hydro's load has been steadily rising over the six year period (2011 to 2017) with wholesale purchases increasing by 8% between 2011 and 2017. The reduction in wholesale purchases in 2017 is not the result of changes in specific customers or customer classes. Wholesale purchases were much higher than expected in 2016 due to the hotter summer and where lower than expected in 2017 due to cooler weather.

The table below illustrates NOTL Hydro's billed kWh energy volume by major customer class for 2011-2017:

Table 3.12: 2011-2017 Customer Billed kWh



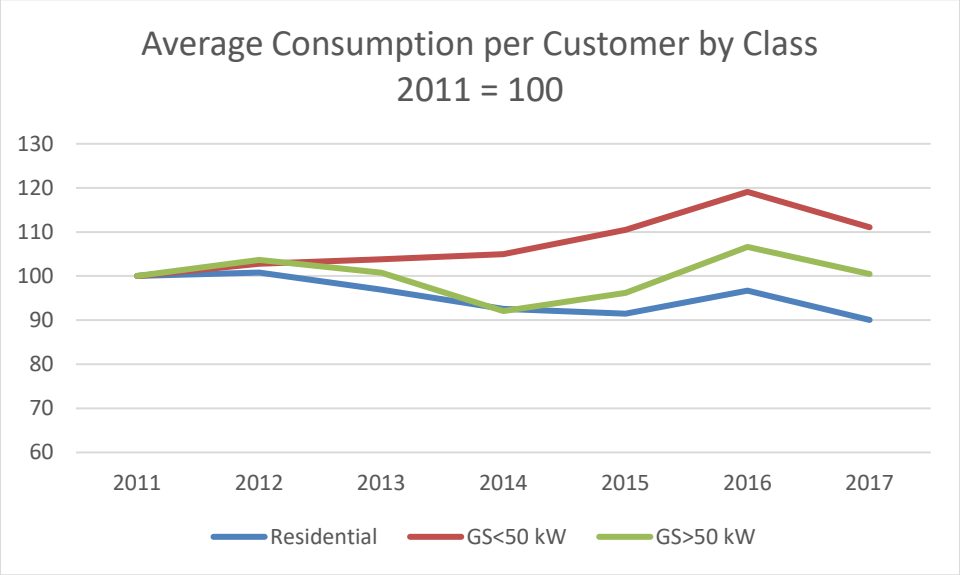
Consumption for all three classes has risen in aggregate during the last six years. Both the residential and GS<50 kW customer classes show the weather derived drop in consumption from 2016 to 2017.

Table 3.13: 2011-2017 Growth in Consumption by Class

Class	% Increase	kWh Increase
Residential	6.0%	4,040,469
GS<50 kW	18.7%	6,412,029
GS>50 kW	7.0%	5,466,840

The customer class with the most growth in both percentage terms and in kWh has been the GS<50 kWh class.

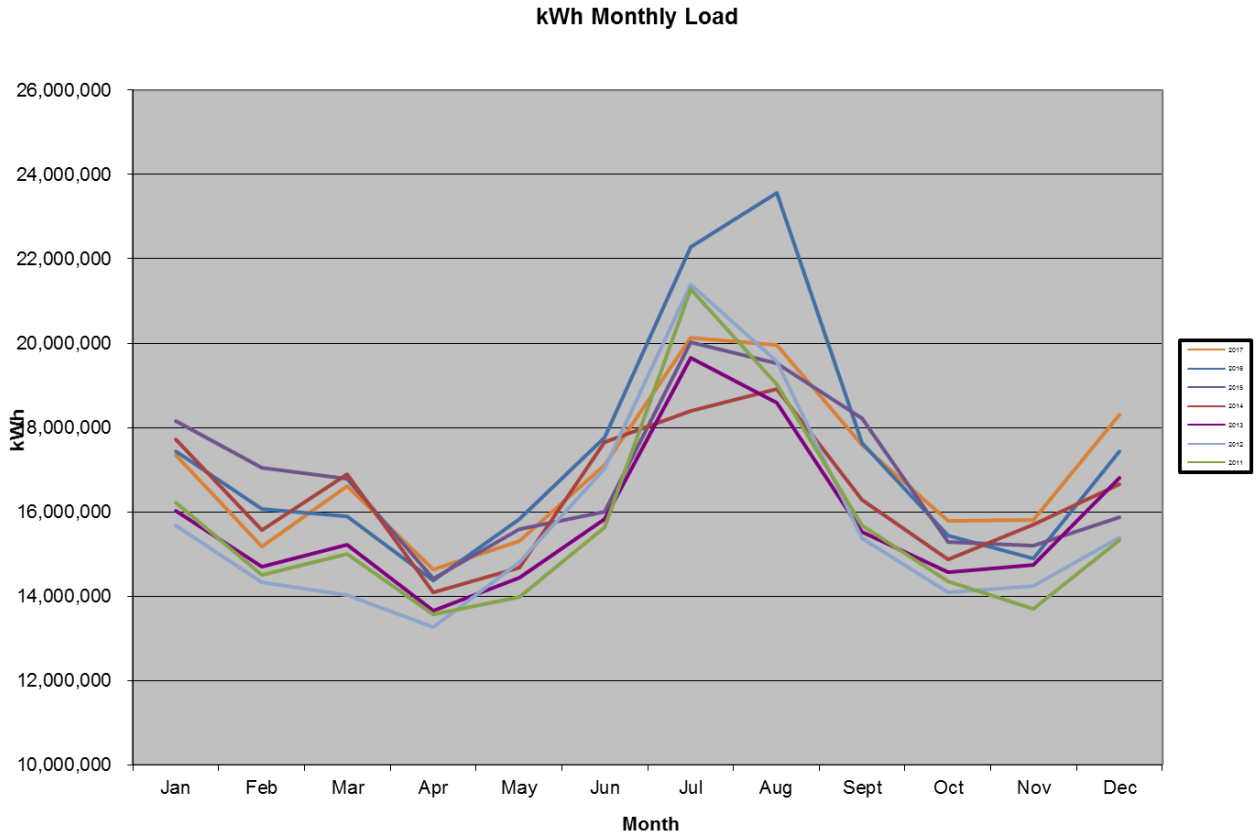
Table 3.14: 2011-2017 Customer Billed kWh



The average consumption by the GS<50 kWh Customer Class is growing rather than declining and has done so every year other than in 2017 which was due to the weather. The most likely explanation for this is economic growth as 2011-2017 have been growth years economically. Average consumption for residential customers during the same time period has fallen from 846 kWh per month in 2011 to 761 kWh. This is consistent with trends seen across Ontario. Average consumption per customer in the GS>50 kW Customer Class will be affected by unrelated variables specific to each customer so no general conclusions can be made. No one customer in this class is large enough to have a significant impact on the average consumption.

The chart below illustrates the monthly kWh purchases and shows the variances month-by-month over the 5-year period:

Table 3.15: kWh Wholesale Purchases by Month for 2011 - 2017



Purchases follow a regular monthly seasonal pattern with a general overall trend of higher purchases each year. The very high volume purchases in the summer of 2016 due to the unusually hot weather stand out as an outlier.

2.3.1.8 Overview of Variables Used

In addition to number of customers and monthly purchases of electricity, NOTL Hydro used the following factors in their analysis to estimate future demand:

a) Weather (e.g. heating and cooling) which is by far the most dominant effect for most systems;
b) Number of days per month;
c) Daylight hours.

Specifics relating to each variable used in the regression analysis are presented at the next section.

a) Weather - Heating and Cooling:

In order to determine the relationship between observed weather and energy consumption, monthly weather observations describing the extent of heating or cooling required within the month are necessary. Environment Canada publishes monthly observations on heating degree days (HDD) and cooling degree days (CDD) for selected weather stations across Canada. Heating degree-days for a given day are the number of Celsius degrees that the mean temperature is below 18°C. Cooling degree-days for a given day are the number of Celsius degrees that the mean temperature is above 18°C. For NOTL Hydro, the monthly HDD and CDD as reported at Environment Canada's weather station at Port Weller *(latitude: 43°15'00.000" N; longitude: 79°13'00.000" W, elevation 79.00 metres)* was used.

NOTL Hydro has adopted the 7 year average from 2011 to 2017 as the definition of weather normal in order to remain consistent with the other variables used in this analysis. The proposed normal weather methodology was chosen as the last seven years captures the impact of increasing temperatures from climate change and NOTL Hydro has no grounds for making any non-normal assumptions.

The following table outlines the monthly weather data used in the regression analysis.

Table 3.16: HDD and CDD as reported at Port Weller, ON. Weather Station

	Heating Degree Days						
	2011	2012	2013	2014	2015	2016	2017
Jan	678.00	554.40	556.40	727.80	696.25	597.25	556.50
Feb	578.50	482.40	565.90	648.10	776.40	537.40	468.50
Mar	527.45	366.70	508.70	636.20	596.90	444.60	528.40
Apr	342.60	296.30	341.30	356.60	325.90	373.25	273.05
May	187.10	99.50	150.35	174.70	131.80	157.95	181.80
Jun	21.90	18.90	44.30	27.00	61.20	19.10	27.00
Jul	-	-	3.20	0.60	2.60	-	-
Aug	-	-	-	0.90	2.20	-	0.30
Sep	26.90	37.90	51.60	46.40	17.10	14.40	25.10
Oct	185.70	191.90	159.95	173.70	186.05	141.90	94.70
Nov	284.90	381.90	416.30	416.00	284.45	270.50	383.85
Dec	463.70	462.50	608.50	509.75	372.95	540.90	617.20

	Cooling Degree Days						
	2011	2012	2013	2014	2015	2016	2017
Jan	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-
Mar	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-
May	4.10	22.40	12.15	3.00	9.75	31.00	2.80
Jun	41.80	105.60	47.50	39.10	19.50	67.10	62.80
Jul	196.90	203.50	139.50	78.40	121.20	166.60	111.60
Aug	146.30	148.70	106.40	88.10	104.30	198.85	102.00
Sep	39.90	50.30	34.40	42.30	84.00	88.80	59.50
Oct	4.20	2.60	4.80	5.70	1.80	12.35	14.90
Nov	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-

b) Number of Days per Month:

NOTL Hydro also used a “Days per Month” variable because this identifies seasonal peaks and less/more days in calendar months.

c) Customer Count

Results of analysis in section 2.3.1.5. Variable captures growth in demand.

d) Daylight Hours

Average daylight hours per month to capture variation in demand between months due to need for lighting.

	Daylight Hours						
	2011	2012	2013	2014	2015	2016	2017
Jan	9.12	9.12	9.12	9.12	9.12	9.12	9.12
Feb	10.20	10.20	10.20	10.20	10.20	10.20	10.20
Mar	11.50	11.50	11.50	11.50	11.50	11.50	11.50
Apr	13.26	13.26	13.26	13.26	13.26	13.26	13.26
May	14.47	14.47	14.47	14.47	14.47	14.47	14.47
Jun	15.30	15.30	15.30	15.30	15.30	15.30	15.30
Jul	15.11	15.11	15.11	15.11	15.11	15.11	15.11
Aug	14.00	14.00	14.00	14.00	14.00	14.00	14.00
Sep	12.27	12.27	12.27	12.27	12.27	12.27	12.27
Oct	10.52	10.52	10.52	10.52	10.52	10.52	10.52
Nov	9.31	9.31	9.31	9.31	9.31	9.31	9.31
Dec	8.50	8.50	8.50	8.50	8.50	8.50	8.50

e) Spring/Fall Flag.

Building on the heating/cooling days to capture the seasonality of demand across a year.

f) Blended RPP Rates.

Capturing the impact of higher and lower rates on the demand for electricity:

	Blended RPP Rates						
	2011	2012	2013	2014	2015	2016	2017
Jan	6.50	7.57	7.94	8.89	9.50	10.59	11.00
Feb	6.50	7.57	7.94	8.89	9.50	10.59	11.00
Mar	6.50	7.57	7.94	8.89	9.50	10.59	11.00
Apr	6.50	7.57	7.94	8.89	9.50	10.59	11.00
May	7.30	8.07	9.10	9.25	10.21	11.00	9.80
Jun	7.30	8.07	9.10	9.25	10.21	11.00	9.80
Jul	7.30	8.07	9.10	9.25	10.21	11.00	9.80
Aug	7.30	8.07	9.10	9.25	10.21	11.00	9.80
Sep	7.30	8.07	9.10	9.25	10.21	11.00	9.80
Oct	7.30	8.07	9.10	9.25	10.21	11.00	9.80
Nov	7.57	7.94	8.89	9.50	10.59	11.00	8.00
Dec	7.57	7.94	8.89	9.50	10.59	11.00	8.00

The table below shows the sources of data used for the variables used in NOTL Hydro's Load Forecast:

Table 3.17: Origin of Variables:

Variable	Source of Data
a) Heating and Cooling Days:	Environment Canada (http://climate.weather.gc.ca/) for Port Weller weather station
b) Number of Days per Month:	Used actual count of days per month for 2011 to 2017
c) Customer Count	Actual Customer / Connection count per Customer Class
d) Daylight Hours	http://www.climatemps.com/index.php
e) Spring/Fall Flag	"0" for March, April, May, September October, November "1" for January, February, June, July, August, December
f) Blended RPP Rates	www.ontario-hydro.com

NOTL Hydro initially ran the regression analysis with only the first three variables. The result of was a 92% confidence level. By adding the additional variables NOTL Hydro was able to further improve the confidence level.

2.3.1.9 Regression Results

The table below presents the regression results used to determine the load forecast:

Table 3.18: Correlation/Regression Results

Regression Statistics	
Multiple R	0.974758942
R Square	0.950154995
Adjusted R Square	0.945564008
Standard Error	496748.1233
Observations	84

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	7	3.57486E+14	5.10694E+13	206.9609294	8.55432E-47
Residual	76	1.87537E+13	2.46759E+11		
Total	83	3.7624E+14			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-10069379.72	2636179.515	-3.819686659	0.000271105	-15319786.26	-4818973.19	-15319786.26	-4818973.19
HDD	2942.139967	438.8822824	6.703710962	3.15793E-09	2068.030147	3816.249788	2068.030147	3816.249788
CDD	38923.64305	1817.701881	21.41365614	6.30975E-34	35303.376	42543.91009	35303.376	42543.91009
Daylight Hours	-41009.18644	36754.5207	-1.115758978	0.268040817	-114212.1586	32193.78571	-114212.1586	32193.78571
# Customers	1237.68037	222.5686342	5.560893046	3.82703E-07	794.3965176	1680.964222	794.3965176	1680.964222
Day per Month	446850.1022	70391.69102	6.348051819	1.44381E-08	306652.8993	587047.3052	306652.8993	587047.3052
Spring/Fall Flag	794263.8073	139065.0508	5.711455196	2.06731E-07	517291.7545	1071235.86	517291.7545	1071235.86
Blended Rate	25419.38343	82044.09536	0.309825872	0.757541318	-137985.5941	188824.3609	-137985.5941	188824.3609

The resulting regression equation yields an adjusted R-squared of 94.56%. An R-squared of over 90% indicates the regression analysis is significant.

The prediction formula has the following statistical results:

Table 3.19: Regression Results

Statistic	Value
R Square	95.02%
Adjusted R Square	94.56%
F Test	248.68
T-stats by Coefficient:	
a) Intercept	(3.8197)
b) Heating Degree Days	6.7037
c) Cooling Degree Days	21.413
d) Number of Days in Month	6.3481
e) Customer Count	5.5609
f) Daylight Hours	-1.1158
g) Spring/Fall flag	5.7115
h) Blended RPP Rate	0.3098

Once a successful regression analysis has been run, the predicted wholesale purchases can be compared to the actual wholesale purchases. The table below provides this comparison.

Table 3.20: Actual Purchased kWh versus Predicted kWh

Year	kWh Purchased (Actual)	Forecast	
2011	188,298,521.00	190,530,219.37	1.19%
2012	189,169,072.93	195,964,358.13	3.59%
2013	189,823,053.14	191,903,721.59	1.10%
2014	196,751,647.39	193,844,611.69	1.48%
2015	201,773,815.26	200,603,195.60	0.58%
2016	209,189,301.69	212,828,670.71	1.74%
2017	203,784,766.55	207,071,865.40	1.61%
Mean Average Percentage Error (Mape) :			**1.61%**
Median			**1.48%**

To use the regression analysis to project for the 2018 bridge year and the 2019 test year the variables of heating and cooling days, customer counts and days in a month are required. The days in the month is a given but the other three input variables must be estimated.

2.3.1.10 Determination of Customer Count Forecast

As described above, NOTL Hydro has used a simple geometric mean function to determine the forecasted number of customers for the 2018 Bridge Year and 2019 Test Year. However, because there were anomalies in the growth rates of several of the customer classes this calculation has had to be adjusted. The table below provides the updated forecasts with the adjusted expectations in customer growth:

Table 3.21: Customer Forecast

Adjusted Forecasted Customer Counts

	Residential		GS<50 kW		GS>50 kW	
Year	Count	Growth Rate	Count	Growth Rate	Count	Growth Rate
2011	6,594		1,235		120	
2012	6,716	1.0185	1,269	1.0278	118	0.9806
2013	6,912	1.0292	1,221	0.9622	118	1.0014
2014	7,110	1.0286	1,312	1.0744	129	1.0976
2015	7,389	1.0392	1,322	1.0074	128	0.9894
2016	7,661	1.0368	1,333	1.0084	122	0.9492
2017	7,838	1.0232	1,332	0.9992	129	1.0614
Geomean		1.0292		1.0127		1.0120
2018	7,976	1.0176	1,335	1.0023	131	1.0120
2019	8,152	1.0221	1,338	1.0022	131	1.0038

	Large User		USL		Streetlights	
Year	Count	Growth Rate	Count	Growth Rate	Count	Growth Rate
2011	-		22		1,946	
2012	-	0.0000	22	0.9962	1,947	1.0004
2013	-	0.0000	21	0.9716	1,949	1.0010
2014	-	0.0000	22	1.0117	2,051	1.0526
2015	-	0.0000	20	0.9345	2,081	1.0143
2016	-	0.0000	18	0.8763	2,120	1.0189
2017	-	0.0000	21	1.2000	2,124	1.0018
Geomean		0.0000		0.9936		1.0147
2018	-	0.0000	26	1.2235	2,155	1.0147
2019	1	100.0000	26	1.0000	2,187	1.0147

Note:

Number of customers / connections is based on the count at the year-end (i.e. 31st December). Year average customer counts have been used for this analysis.

Residential Customers:

NOTL Hydro's residential customer count has been growing at a mean average of 2.92% per year. This growth rate is overstated due to the Cannery Park development in 2015-2016 which added almost 187 customers over what would normally be expected. The expected growth rate has been adjusted by reducing the growth rate to 2.21%; the historical growth rate without Cannery Park. In addition, in 2018, the expected growth was reduced by 38 customers as these were transferred to Alectra under load transfer arrangements.

General Service <50kW:

NOTL Hydro's General Service < 50 kW class has been growing at a mean average of 1.27% per year. This growth rate is overstated due to the Outlet Mall which opened in 2014 and added almost 90 new customers over what would normally be expected. The expected growth rate has been adjusted by reducing the growth rate to 1.00%; the historical growth rate without the Outlet Mall.

General Service 50-4999kW:

NOTL Hydro has used the geomean average of 1.012 to determine the expected growth of this class. However, in 2019 one customer has been removed from this class and added to the newly created Large User class.

Street Lighting:

NOTL Hydro has used the geomean average of 1.0147 to determine the expected growth of this class.

Unmetered Scattered Load:

NOTL Hydro has increased the expected Customer Count of this class to 26 based on the actual count in early 2018.

Large User:

NOTL Hydro has created a new Large User class based on the expected growth in demand from one of its customer.

To adjust its model to reflect the difference between the expected customer counts based on the last six years of actual growth and NOTL Hydro's expected customer counts adjusting for non-repeating factors over the past six years, NOTL Hydro has incorporated a Customer Count Adjustment Factor into its determination of Customer Count for the regression model.

2.3.1.11 Determination of Heating and Cooling Degree Days

The average of the past seven years has been used to determine the heating and cooling degree days for the 2018 bridge year and the 2019 test year. There are no grounds to make any assumptions as to whether either of those years will be any cooler or hotter than the average. It is noted that many of the recent years have been the hottest on record due to global warming. Using seven years of data rather than ten or twenty years is more relevant in this case as would more accurately reflect the increased average temperature.

2.3.1.12 Determination of Remaining Variables

Daylights hours, the Spring/Fall flag, and the number of days in the month would be unchanged in 2018 and 2019 from previous years. For the Blended RPP Rate the current rate has been assumed to remain in effect for the next two years.

2.3.1.13 Load Forecast

Based on the inputs for the 2018 bridge year and the 2019 test year described above the resulting wholesale purchases are estimated as follows:

Table 3.22: Forecast Wholesale Purchases

Month	HDD	CDD	Daylight Hours	# Customers	Day per Month	Spring/Fall Flag	Blended Rate	Weather Normalized
2018-January	623.80	0.00	9.12	9375.63	31.00	1.00	8.00	18,436,841
2018-February	579.60	0.00	10.20	9387.59	28.29	1.00	8.00	17,064,434
2018-March	515.56	0.00	11.50	9399.56	31.00	0.00	8.00	16,461,876
2018-April	329.86	0.00	13.26	9411.52	30.00	0.00	8.00	15,411,279
2018-May	154.74	12.17	14.47	9423.48	31.00	0.00	8.00	15,781,858
2018-June	31.34	54.77	15.30	9435.44	30.00	1.00	8.00	18,199,390
2018-July	0.91	145.39	15.11	9447.40	31.00	1.00	8.00	22,106,350
2018-August	0.49	127.81	14.00	9459.37	31.00	1.00	8.00	21,481,192
2018-September	31.34	57.03	12.27	9471.33	30.00	0.00	8.00	16,867,391
2018-October	161.99	6.62	10.52	9483.29	31.00	0.00	8.00	15,823,152
2018-November	348.27	0.00	9.31	9495.25	30.00	0.00	8.00	15,731,077
2018-December	510.79	0.00	8.50	9507.21	31.00	1.00	8.00	18,292,616
2019-January	623.80	0.00	9.12	9524.72	31.00	1.00	8.00	18,621,369
2019-February	579.60	0.00	10.20	9542.24	28.29	1.00	8.00	17,255,831
2019-March	515.56	0.00	11.50	9559.75	31.00	0.00	8.00	16,660,142
2019-April	329.86	0.00	13.26	9577.26	30.00	0.00	8.00	15,616,414
2019-May	154.74	12.17	14.47	9594.77	31.00	0.00	8.00	15,993,862
2019-June	31.34	54.77	15.30	9612.28	30.00	1.00	8.00	18,418,263
2019-July	0.91	145.39	15.11	9629.80	31.00	1.00	8.00	22,332,092
2019-August	0.49	127.81	14.00	9647.31	31.00	1.00	8.00	21,713,804
2019-September	31.34	57.03	12.27	9664.82	30.00	0.00	8.00	17,106,872
2019-October	161.99	6.62	10.52	9682.33	31.00	0.00	8.00	16,069,502
2019-November	348.27	0.00	9.31	9699.84	30.00	0.00	8.00	15,984,296
2019-December	510.79	0.00	8.50	9717.35	31.00	1.00	8.00	18,552,705

Year	Forecast Purchases
2018	211,657,455
2019	214,325,151

2.3.1.14 Load Forecast by Class

The wholesale purchases are allocated at this point based on historical weightings.

Table 3.23: Forecast Consumption – Residential Class

Residential							
Year	Residential Metered kWh	Wholesale Purchases	Weather Normalized	*Ratio%* *	Weather Normal	Average # Customers	Per customer
2011	66,976,830	188,298,521	190,530,219	35.57%	67,770,634	6,594	10,277
2012	67,086,975	189,169,073	195,964,358	35.46%	69,496,857	6,716	10,348
2013	68,126,809	189,823,053	191,903,722	35.89%	68,873,553	6,912	9,964
2014	68,599,528	196,751,647	193,844,612	34.87%	67,585,959	7,110	9,505
2015	69,624,978	201,773,815	200,603,196	34.51%	69,221,039	7,389	9,368
2016	74,189,661	209,189,302	212,828,671	35.47%	75,480,375	7,661	9,853
2017	71,017,299	203,784,767	207,071,865	34.85%	72,162,825	7,838	9,206
2018			211,657,456	34.85%	73,760,865	7,976	9,247
2019			214,325,152	34.85%	74,690,535	8,152	9,162

Table 3.24: Forecast Consumption – GS < 50 kW Class

General Service < 50 kW							
Year	GS<50 Metered kWh	Wholesale Purchases	Weather Normalized	*Ratio%* *	Weather Normal	Average # Customers	Per customer
2011	34,321,035	188,298,521	190,530,219	18.23%	34,727,805	1,235	28,127
2012	35,374,878	189,169,073	195,964,358	18.70%	36,645,606	1,269	28,878
2013	35,291,131	189,823,053	191,903,722	18.59%	35,677,960	1,221	29,219
2014	39,288,460	196,751,647	193,844,612	19.97%	38,707,967	1,312	29,507
2015	41,172,288	201,773,815	200,603,196	20.41%	40,933,421	1,322	30,974
2016	43,510,841	209,189,302	212,828,671	20.80%	44,267,820	1,333	33,216
2017	40,733,064	203,784,767	207,071,865	19.99%	41,390,099	1,332	31,081
2018			211,657,456	19.99%	42,306,679	1,335	31,698
2019			214,325,152	19.99%	42,839,906	1,338	32,026

For both residential and GS<50 kW classes the forecast loads have been weather normalized as load is influenced by variable weather significantly more than demand. The impact of this can be seen in the above comparison of historical actual purchases and weather normalized purchases.

As previously mentioned, there is one customer moving from the GS>50 kW class to the Large User class. The load of this customer from 2017 of 2,700,000 kWh, which under the regression, would not have changed too much by 2019 has been removed from the 2019 total volume for GS>50 kW.

To forecast demand (kW), the average of the ratio of demand to load (kW / kWh) over the seven year period has been calculated. This average has been applied to the 2018 and 2019 forecast loads to determine the forecast demand.

Table 3.25: Forecast Consumption and Demand – GS > 50 kW Class

General Service > 50 kW - 4999 kW								
Year	**kWh**	**Adjusted kWh**	**kWh**	**kW**	**Customer/ Connection**	**kWh per connection**	**KW per connection**	**KW/kWh Ratio**
2011	78,632,457		78,632,457	199,918	120	655,043.03	1,665.401	0.00254
2012	77,993,648		77,993,648	202,738	118	662,600.90	1,722.374	0.00260
2013	77,896,093		77,896,093	204,593	118	660,836.42	1,735.676	0.00263
2014	80,076,899		80,076,899	208,043	129	618,951.87	1,608.058	0.00260
2015	81,848,511		81,848,511	213,949	128	639,441.49	1,671.473	0.00261
2016	83,681,624		83,681,624	211,155	122	688,737.64	1,737.904	0.00252
2017	84,099,297		84,099,297	211,534	129	652,143.18	1,640.328	0.00252
2018	85,961,669		85,961,669	221,277	131	658,671.99	1,695.509	
2019	87,045,116	- 2,700,000	84,345,116	217,115	131	643,855.85	1,657.370	
Avg - Years =			7.00			*653,964.93*	*1,683.03*	*0.00257*

To estimate the load for this customer a monthly demand of 5,000 kW was assumed. The estimates of load from this customer vary from 4 MW to 20 MW but NOTL Hydro does not have any indication when their load will ramp up, how fast and how consistently. The 5 MW or 5,000 kW is therefore the proposed load above and below which NOTL Hydro is seeking approval to establish and use a variance account to capture the revenue implications of the actual load for this customer as presented in Exhibit 9, section 2.9.4. Using the same kW/kWh ratio as calculated below for all GS>50 W customers NOTL Hydro has calculated the load for this large user customer to be 23,308,825 kWh.

Table 3.26: Forecast Consumption – Large User Class

Large User								
Year	**kWh**	**Adjusted kWh**	**kWh**	**kW**	**Customer/ Connection**	**kWh per connection**	**KW per connection**	**KW/kWh Ratio**
2011	0		0	0	0	-	-	-
2012	0		0	0	0	-	-	-
2013	0		0	0	0	-	-	-
2014	0		0	0	0	-	-	-
2015	0		0	0	0	-	-	-
2016	0		0	0	0	-	-	-
2017	0		0	0	0	-	-	-
2018	0		0	0	0	-	-	
2019	23,308,825		23,308,825	60,000	1	23,308,825	60,000.000	0.00257

To convert the forecast demand into forecast consumption, the average kW/kWh ration from the GS>50 rate class from 2011-2017 has been used.

In the case of Unmetered Scattered Load, the load has been determined based on the actual load as determined in early 2018. Due to the increase in the number of customers this estimate was considered to be more accurate than the regression analysis.

Table 3.27: Forecast Consumption - Unmetered Scattered Load

Unmetered Scattered Load								
Year	**kWh**	**Adjusted kWh**	**kWh**	**kW**	**Customer/ Connection**	**kWh per connection**	**KW per connection**	**KW/kWh Ratio**
2011	225,362		225,362		22	10,205.08	-	-
2012	226,394		226,394		22	10,290.63	-	-
2013	234,467		234,467		21	10,969.23	-	-
2014	230,817		230,817		22	10,673.61	-	-
2015	224,901		224,901		20	11,129.13	-	-
2016	224,075		224,075		18	12,653.66	-	-
2017	250,759		250,759		21	11,800.44	-	-
2018	251,508		251,508		26	9,673.38	-	-
2019	251,508		251,508		26	9,673.38	-	-

For Street Lighting, the load has been determined based on the average usage in 2016 - 2017. Most of the streetlights in Niagara-on-the-Lake have been converted to LED streetlights with a resulting significant drop in energy consumption. The average energy consumption per connection for 2016-2017 has been used as estimate for 2018-2019 as it is considered a better estimate than the regression analysis. Demand has been forecast by applying the average of the historical load to demand ratios to the forecast load.

Table 3.28: Forecast Load and Demand - Street Lighting

Streetlighting								
Year	**kWh**	**Adjusted kWh**	**kWh**	**kW**	**Customer/ Connection**	**kWh per connection**	**KW per connection**	**KW/kWh Ratio**
2011	1,153,888		1,153,888	3,222	1,946	592.95	1.656	0.00279
2012	1,163,464		1,163,464	3,239	1,947	597.64	1.664	0.00278
2013	1,160,024		1,160,024	3,257	1,949	595.27	1.671	0.00281
2014	1,160,025		1,160,025	3,239	2,051	565.50	1.579	0.00279
2015	974,371		974,371	2,743	2,081	468.28	1.318	0.00282
2016	861,899		861,899	2,373	2,120	406.52	1.119	0.00275
2017	858,844		858,844	2,400	2,124	404.37	1.130	0.00279
2018	873,782		873,782	2,439	2,155	405.45	1.132	
2019	886,616		886,616	2,475	2,187	405.45	1.132	
Avg - Years =			7.00			*405*	*1.1247*	*0.00279*

2.3.1.15 Final Normalized Load Forecast

The table below illustrates the historical and projected Load Forecast by customer class before any adjustments for Conservation and Demand Management:

Table 3.29: Final Load Forecast (not CDM adjusted)

	Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Residential	Cust/Conn	6,594	6,716	6,912	7,110	7,389	7,661	7,838	7,976	8,152
	kWh	66,976,830	67,086,975	68,126,809	68,599,528	69,624,978	74,189,661	71,017,299	73,760,865	74,690,535
	kW									
General Service < 50 kW	Cust/Conn	1,235	1,269	1,221	1,312	1,322	1,333	1,332	1,335	1,338
	kWh	34,321,035	35,374,878	35,291,131	39,288,460	41,172,288	43,510,841	40,733,064	42,306,679	42,839,906
	kW									
General Service > 50 kW - 4999 kW	Cust/Conn	120	118	118	129	128	122	129	131	131
	kWh	78,632,457	77,993,648	77,896,093	80,076,899	81,848,511	83,681,624	84,099,297	85,961,669	84,345,116
	kW	199,918	202,738	204,593	208,043	213,949	211,155	211,534	221,277	217,115
Unmetered Scattered Load	Cust/Conn	22	22	21	22	20	18	21	26	26
	kWh	225,362	226,394	234,467	230,817	224,901	224,075	250,759	251,508	251,508
	kW									
Street Lights	Cust/Conn	1,946	1,947	1,949	2,051	2,081	2,120	2,124	2,155	2,187
	kWh	1,153,888	1,163,464	1,160,024	1,160,025	974,371	861,899	858,844	873,782	886,616
	kW	3,222	3,239	3,257	3,239	2,743	2,373	2,400	2,439	2,475
Large User	Cust/Conn	-	-	-	-	-	-	-	-	1
	kWh	-	-	-	-	-	-	-	-	23,308,825
	kW	-	-	-	-	-	-	-	-	60,000
Total	**Cust/Conn**	**9,917**	**10,072**	**10,222**	**10,624**	**10,940**	**11,253**	**11,444**	**11,623**	**11,835**
	kWh	**181,309,571**	**181,845,359**	**182,708,524**	**189,355,729**	**193,845,050**	**202,468,101**	**196,959,263**	**203,154,504**	**226,322,506**
	kW	**203,139**	**205,977**	**207,850**	**211,281**	**216,692**	**213,529**	**213,934**	**223,716**	**279,590**

2.3.1.16 CDM Adjustment for the Load Forecast (OEB Ref 2.3.1.3)

While the forecast as presented in the previous section assumes some level of embedded "natural conservation", it does not take into account the impacts on energy purchases arising from CDM programs undertaken by NOTL Hydro's customers. The load forecast is a projection of the expected level of electricity purchases that would occur over the specified period in the absence of any CDM initiatives. Therefore, in accordance with the filing requirements, the forecasted energy purchases are further adjusted to reflect CDM reductions.

The schedule below provides NOTL Hydro's actual results for 2015-2017 and forecast results for 2017-2020. As can be seen NOTL Hydro expects to exceed its 2015-2020 CDM plan. Full details of NOTL Hydro's CDM results are available in the latest report from the IESO in Appendix 3A.

Table 3.30: 2015-2020 CDM Program

6 Year (2015-2020) kWh Target:							
	11,680,000						
	2015	2016	2017	2018	2019	2020	Total
	%						
2015 CDM Programs	5.20%	5.19%	5.19%	5.11%	5.11%	5.11%	30.92%
2016 CDM Programs		6.72%	6.72%	6.72%	6.71%	6.65%	33.50%
2017 CDM Programs			6.21%	5.75%	5.75%	5.74%	23.44%
2018 CDM Programs				2.56%	2.54%	2.53%	7.62%
2019 CDM Programs					1.74%	1.73%	3.47%
2020 CDM Programs						1.04%	1.04%
Total in Year	**5.20%**	**11.91%**	**18.12%**	**20.13%**	**21.85%**	**22.80%**	**100.00%**
	kWh						
2015 CDM Programs	3,119,882.00	3,115,781.00	3,115,689.00	3,066,757.00	3,065,932.00	3,063,490.00	18,547,531.00
2016 CDM Programs		4,029,459.00	4,029,459.00	4,028,659.00	4,022,774.00	3,988,118.00	20,098,469.00
2017 CDM Programs			3,722,902.00	3,448,140.00	3,447,680.00	3,445,057.00	14,063,779.00
2018 CDM Programs				1,533,536.37	1,524,390.03	1,515,298.24	4,573,224.64
2019 CDM Programs					1,045,247.50	1,039,013.42	2,084,260.91
2020 CDM Programs						625,490.86	625,490.86
Total in Year	**3,119,882.00**	**7,145,240.00**	**10,868,050.00**	**12,077,092.37**	**13,106,023.53**	**13,676,467.52**	**59,992,755.42**

Table 3.31: Weight Factor Applied to 2017-2019 due to CDM

Weight Factor for Inclusion in CDM Adjustment to 2018 Load Forecast						
	2014	2015	2016	2017	2018	2019
Weight Factor for each year's CDM program impact on 2018 load forecast	**0**	**0**	**0**	**0.5**	**1**	**0.5**

Table 3.32: Effect of CDM Activity to be accounted for in 2019 Load Forecast

	2014	2015	2016	2017	2018	2019	Total for 2019
Amount used for CDM threshold for LRAMVA	1,320,428.00	1,320,428.00	1,320,428.00				**3,961,284.00**
Amount used for CDM threshold for LRAMVA (2019)				3,447,680.00	1,524,390.03	1,045,247.50	6,017,317.53
Total Manual Forecast to Load Forecast				1,723,840.00	1,524,390.03	522,623.75	**3,770,853.78**

The values entered in the 2015 - 2020 originate from the "Conservation First Framework LDC Tool Kit" published July 1, 2014 which shows NOTL Hydro's target to be 11.68 GWh.

2.3.1.17 Allocation of CDM Results

NOTL Hydro's CDM target is 11,680,000 kWh between 2015 and 2020.

The overall CDM adjustment is shown in Table 3.33 and is calculated by:

- 2014 to 2016 are given no weighting as these CDM efforts are already built into the forecast through actual results.
- 2017 has been given a 50% weighting based on half the CDM efforts being already incorporated but recognizing the future impact of these conservation initiatives.
- The 2018 Bridge Year has been given a full weighting as CDM initiatives this year will have a full impact on the 2019 Test year.
- The 2019 Test Year CDM reduction is 50% as half the CDM initiatives are assumed not to have any impact in that year due to timing.

The manual adjustment used for the load forecast is allocated on pro-rata basis using the 2019 kWh forecast. The table below presents the pro-rata share and corresponding CDM reduction in consumption by rate class:

Table 3.33: CDM Adjustments to Load Forecast

kWh		Year	2019	2017-2018 Plan	Share	Target	Manual Reallocation	Final Adjusted (kWh)
Residential		kWh	74,690,535	691,555	21%	691,555		73,998,9810
General Service < 50 kW		kWh	42,839,906	962,392	29%	962,392		41,877,513 -
General Service > 50 kW - 4999 kW		kWh kW	84,345,116 217,115	1,639,345 4,220	50%	1,639,345 4,220		82,705,771 212,896
Unmetered Scattered Load		kWh	251,508	-	0%	0		251,508 -
Street Lights		kWh kW	886,616 2,475	-	0%	0		886,616 2,475
Large User		kWh kW	23,308,825 60,000	-	0%	0		23,308,825 60,000
Total kWh			226,322,506	3,293,292	100%	3,293,292	-	223,029,214
Total KW			279,590	4,220				

2.3.1.18 Final Weather Adjusted Load Forecast

The table below provides details of the Final Customer and Volume Load Forecast for each of the years. This summary of the billing determinants by rate class has been used to develop NOTL Hydro's proposed rates:

Table 3.34: Final Customer and Volume Load Forecast

	Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Residential	Cust/Conn	6,594	6,716	6,912	7,110	7,389	7,661	7,838	7,976	8,152
	kWh	66,976,830	67,086,975	68,126,809	68,599,528	69,624,978	74,189,661	71,017,299	73,760,865	73,998,981
	kW									
General Service < 50 kW	Cust/Conn	1,235	1,269	1,221	1,312	1,322	1,333	1,332	1,335	1,338
	kWh	34,321,035	35,374,878	35,291,131	39,288,460	41,172,288	43,510,841	40,733,064	42,306,679	41,877,513
	kW									
General Service > 50 kW - 4999 kW	Cust/Conn	120	118	118	129	128	122	129	131	131
	kWh	78,632,457	77,993,648	77,896,093	80,076,899	81,848,511	83,681,624	84,099,297	85,961,669	82,705,771
	kW	199,918	202,738	204,593	208,043	213,949	211,155	211,534	221,277	212,896
Unmetered Scattered Load	Cust/Conn	22	22	21	22	20	18	21	26	26
	kWh	225,362	226,394	234,467	230,817	224,901	224,075	250,759	251,508	251,508
	kW									
Street Lights	Cust/Conn	1,946	1,947	1,949	2,051	2,081	2,120	2,124	2,155	2,187
	kWh	1,153,888	1,163,464	1,160,024	1,160,025	974,371	861,899	858,844	873,782	886,616
	kW	3,222	3,239	3,257	3,239	2,743	2,373	2,400	2,439	2,475
Large User	Cust/Conn	-	-	-	-	-	-	-	-	1
	kWh	-	-	-	-	-	-	-	-	23,308,825
	kW	-	-	-	-	-	-	-	-	60,000
Total	**Cust/Conn**	**9,917**	**10,072**	**10,222**	**10,624**	**10,940**	**11,253**	**11,444**	**11,623**	**11,835**
	kWh	**181,309,571**	**181,845,359**	**182,708,524**	**189,355,729**	**193,845,050**	**202,468,101**	**196,959,263**	**203,154,504**	**223,029,214**
	kW	**203,139**	**205,977**	**207,850**	**211,281**	**216,692**	**213,529**	**213,934**	**223,716**	**275,370**

2.3.1.19 Normalized Average Use per Customer ("NAC") Model

NOTL Hydro did not use the Normalized Average Use per Customer ("NAC") Model as the multi-variant regression analysis yielded a strong correlation and is considered the superior tool for this type of analysis.

2.3.2 Accuracy of Load Forecast and Variance Analysis

2.3.2.1 Variance Analysis of Load Forecast

As per section 2.3.2 of the OEB Filing Requirements Applicants must demonstrate the historical accuracy of the load forecast approach. NOTL Hydro has provided revenue, customer/connection

count by rate class and total system load in kWh and variances. Appendix 2-1B is also provided as part of the Chapter 2 Appendices with its analysis.

The table below shows the yearly change in consumption and distribution revenue for the Residential class:

Table 3.35: Residential Variance

Year	Customers	# Change	% Change	kWh*	% Change	Average kWh / Customer / Month	Distribution Revenue**	% Change
2011	6,594			66,976,830		846	$ 2,279,685	
2012	6,716	122	1.9%	67,086,975	0.2%	832	$ 2,327,154	2.1%
2013	6,912	196	2.9%	68,126,809	1.5%	821	$ 2,397,641	3.0%
2014	7,110	198	2.9%	68,599,528	0.7%	804	$ 2,395,040	-0.1%
2014 Board Approved	7,083	(27)	-0.4%	67,753,410	-1.2%	797	$ 2,378,521	-0.7%
2015	7,389	279	3.9%	69,624,978	1.5%	785	$ 2,502,343	4.5%
2016	7,661	272	3.7%	74,189,661	6.6%	807	$ 2,663,094	6.4%
2017	7,838	178	2.3%	71,017,299	-4.3%	755	$ 2,728,047	2.4%
2018 - Bridge	7,976	138	1.8%	73,760,865	3.9%	771	$ 2,814,356	3.2%
2019 - Test	8,152	176	2.2%	74,690,535	1.3%	763	$ 2,958,334	5.1%
Average			2.7%		1.4%			3.3%

* 2018 and 2019 kWh are weather normalized and do not include CDM adjustments
** Includes Service Charge and and Variable Distribution Rate

The residential customer class count has been growing steadily since 2011 at a rate of 2.7% per annum. As discussed above, this growth rate is inflated by the Cannery Park development in 2015 and 2016. Once this is adjusted for the growth rate becomes an average of 2.2%. In 2017, NOTL Hydro lost 38 residential customers to Alectra as part of a load transfer.

The residential consumption has been growing less slowly at 1.4% per annum as our residential customers have become more efficient in their use of electricity. This is consistent with the pattern seen across Ontario. 2016 was substantially higher than would otherwise have been expected due to warmer weather.

Distribution revenue has been growing quicker than both number of customers and kWh load as it also reflects changes in rates.

The table below shows the yearly change in consumption and distribution revenue for the General Service <50 kW class:

Table 3.36: General Service < 50kW Variance

Year	Customers	# Change	% Change	kWh*	% Change	Average kWh / Customer / Month	Distribution Revenue**	% Change
2011	1,235			34,321,035		2,316	$ 1,138,672	
2012	1,269	34	2.8%	35,374,878	3.1%	2,323	$ 1,181,294	3.7%
2013	1,221	-48	-3.8%	35,291,131	-0.2%	2,409	$ 1,160,593	-1.8%
2014	1,312	91	7.4%	39,288,460	11.3%	2,496	$ 1,026,893	-11.5%
2014 Board Approved	1,291	-21	-1.6%	37,260,698	-5.2%	2,405	$ 994,862	-3.1%
2015	1,322	10	0.7%	41,172,288	4.8%	2,596	$ 1,064,064	3.6%
2016	1,333	11	0.8%	43,510,841	5.7%	2,721	$ 1,115,126	4.8%
2017	1,332	-1	-0.1%	40,733,064	-6.4%	2,549	$ 1,100,756	-1.3%
2018 - Bridge	1,335	3	0.2%	42,306,679	3.9%	2,642	$ 1,130,409	2.7%
2019 - Test	1,338	3	0.2%	42,839,906	1.3%	2,669	$ 1,202,380	6.4%
Average			1.0%		2.9%			0.8%

* 2018 and 2019 kWh are weather normalized and do not include CDM adjustments
** Includes Service Charge and and Variable Distribution Rate

The number of customers in the GS<50 kW class has been slowly increasing with the exception of the large increase in 2014 due to the opening of the Outlet Mall. Excluding the Outlet Mall, growth has been around 1 customer a year though for the forecast 3 new customers each year has been assumed. The actual number of customers also varies from year to year due to customers shifting to and from the GS>50 kW rate class depending on demand.

Consumption has been growing at a strong rate at almost 3% due to the addition of the Outlet Mall and the increase in average consumption per customer. NOTL Hydro believes the growth in the Ontario economy and tourist traffic in Niagara-on-the-Lake has been the reason for this.

Distribution revenue for this class has only slightly increased despite the growth in number of customers and kWh load. This is due to the decrease in rates during this time period. In 2011, the fixed and variable rates were $45.35 and $0.0136 respectively while in 2019 the fixed rate has decreased to $39.41 and the variable rate to $0.133.

The table below shows the yearly change in consumption and distribution revenue for the General Service 50-4,999kW class:

Table 3.37: General Service 50-4,999kW Variance

Year	Customers	# Change	% Change	kW*	% Change	Average kWh / Customer / Month	Distribution Revenue**	% Change
2011	120			199,918		139	$ 972,859	
2012	118	-2	-1.9%	202,738	1.4%	144	$ 979,474	0.7%
2013	118	0	0.1%	204,593	0.9%	145	$ 989,603	1.0%
2014	129	12	9.8%	208,043	1.7%	134	$ 851,026	-14.0%
2014 Board Approved	125	-4	-3.4%	201,178	-3.3%	134	$ 822,607	-3.3%
2015	128	-1	-1.1%	213,949	2.8%	139	$ 870,203	2.3%
2016	122	-7	-5.1%	211,155	-1.3%	145	$ 858,377	-1.4%
2017	129	7	6.1%	211,534	0.2%	137	$ 897,936	4.6%
2018 - Bridge	131	2	1.2%	221,277	4.6%	141	$ 932,899	3.9%
2019 - Test	131	0	0.4%	217,115	-1.9%	138	$ 1,010,120	8.3%
Average			1.2%		1.1%			0.7%

* 2018 and 2019 kW do not include CDM adjustments
** Includes Service Charge and and Variable Distribution Rate

The customer count for the GS>50 kW class has grown very slowly at an average of one customer per year. Most of this growth is also accounted for by the addition of the larger outlets in the Outlet Mall. Niagara-on-the-Lake has almost no industry so growth in this class is driven by growth in service industries such as retail, wineries and hotels. Year to year variations are also affected by customers shifting to the GS<50 kW class and vice versa.

Consumption has also been growing slowly. These customers have been the biggest beneficiaries of NOTL Hydro's conservation services. Average use per customer has been steady with the forecast decline in 2019 solely due to the transfer of the one customer to the Large User class with a resulting drop in consumption of 2,700,000 kWh.

Distribution revenue increases in the test year due to proposed rate changes. When compared to 2011, the number of customers has increase by 11. In 2011, the fixed and variable rates were $323.99 and $2.5318 respectively while in 2019 the fixed rate has decreased to $281.65 while the variable rate has increased to $2.6132. The 2019 revenue also reflects the impact of the transfer of the one customer to the large user class.

The table below shows the yearly change in consumption and distribution revenue for the Large User class:

Table 3.38: Large User Variance

Year	Customers	# Change	% Change	kW*	% Change	Average kWh / Customer / Month	Distribution Revenue**	% Change
2019 - Test	1	1	100.0%	60,000	100.0%	5,000	$ 211,258	100.0%

* 2018 and 2019 kW do not include CDM adjustments
** Includes Service Charge and and Variable Distribution Rate

The Large User class is a new class NOTL Hydro is proposing to create based on growth intentions provided by our largest and fastest growing customer. This customer has invested significantly to upgrade their electrical capabilities including paying for a largely dedicated feeder line. They are also substantially expanding their premises and production.

As NOTL Hydro does not have a reliable forecast for consumption or demand the forecast above has been created assuming a 5,000 kW a month demand. NOTL Hydro is proposing a variance account to capture the revenue implications of actual demand above or below this level. As a result of this variance account, the benefit of the expansion to 5,000 kW is captured in rates of all customers and the variance account will provide further benefits if demand exceeds the 5,000 kW.

Table 3.39: Street Lighting Variance

Year	Connections	# Change	% Change	kW*	% Change	Average kWh / Customer / Month	Distribution Revenue**	% Change
2011	1,946			3,222		0	$ 176,808	
2012	1,947	1	0.0%	3,239	0.5%	0	$ 178,659	1.0%
2013	1,949	2	0.1%	3,257	0.6%	0	$ 179,898	0.7%
2014	2,051	103	5.3%	3,239	-0.6%	0	$ 276,685	53.8%
2014 Board Approved	2,031	-20	-1.0%	3,377	4.3%	0	$ 278,887	0.8%
2015	2,081	29	1.4%	2,743	-15.3%	0	$ 268,442	-3.0%
2016	2,120	39	1.9%	2,373	-13.5%	0	$ 265,947	-0.9%
2017	2,124	4	0.2%	2,400	1.1%	0	$ 271,290	2.0%
2018 - Bridge	2,155	31	1.5%	2,439	1.6%	0	$ 277,870	2.4%
2019 - Test	2,187	32	1.5%	2,475	1.5%	0	$ 224,231	-19.3%
Average			1.5%		-3.0%			4.6%

* 2018 and 2019 kW do not include CDM adjustments
** Includes Service Charge and and Variable Distribution Rate

The number of streetlights has been growing but not consistently as it is based on new developments within Niagara-on-the-Lake. NOTL Hydro used the historical rate of increase to forecast and increase of 32 streetlights for 2019.

Streetlight consumption has fallen significantly due to the installation of LED streetlights in 2015-2016. NOTL Hydro also supported this with a CDM payment of over $200k.

Distribution revenue will decrease significantly in 2019 due to a change allocation of costs as per the OEB letter dated June 12, 2015 (EB-2012-0383).

Table 3.40: Unmetered Scattered Load

Year	Customers	# Change	% Change	kWh*	% Change	Average kWh / Customer / Month	Distribution Revenue**	% Change
2011	22			225,362		850	$ 17,827	
2012	22	0	-0.4%	226,394	0.5%	858	$ 17,937	0.6%
2013	21	-1	-2.8%	234,467	3.6%	914	$ 17,752	-1.0%
2014	22	0	1.2%	230,817	-1.6%	889	$ 6,588	-62.9%
2014 Board Approved	22	0	1.7%	240,322	4.1%	910	$ 6,735	2.2%
2015	20	-1	-6.6%	224,901	-2.6%	927	$ 6,297	-4.4%
2016	18	-3	-12.4%	224,075	-0.4%	1,054	$ 5,784	-8.2%
2017	21	4	20.0%	250,759	11.9%	983	$ 6,937	19.9%
2018 - Bridge	26	5	22.4%	251,508	0.3%	806	$ 8,193	18.1%
2019 - Test	26	0	0.0%	251,508	0.0%	806	$ 8,425	2.8%
Average			2.7%		1.5%			-4.4%

* 2018 and 2019 kWh are weather normalized and do not include CDM adjustments
** Includes Service Charge and and Variable Distribution Rate

NOTL Hydro has a small number of Unmetered Scattered Load Accounts that provide a small amount of revenue. The revenue from this class is expected to remain consistent in 2018 and 2019.

2.3.3 Other Revenues

2.3.3.1 Overview of Other Revenue

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

Other Distribution Revenues includes items such as:

- Specific Service Charges
- Late Payment Charges
- Other Distribution Revenues
- Other Income and Expenses

Other Operating Revenues

A detailed breakdown of Other Operating Revenue by USoA account is shown in the table below. These balance are consistent with those shown in Appendix 2-H:

Table 3.41: Specific Service Charges

	Actual	Actual	Actual	2017	Forecast	Forecast	Forecast
	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
	2014	2015	2016	2017	2018	2019	2019 (new rates)
	Total	Total	Total	Total	Total	Total	Total
Specific Service Charges							
Misc Revenue - microFIT service charge	$7,511.40	$7,819.20	$8,683.20	$8,758.80	$9,169.20	$9,266.40	$17,160.00
Misc Revenue Meter Reading	$0.00	$15.00	$0.00	$0.00	$0.00	$0.00	$0.00
Misc Revenue Account History	$0.00	$45.00	$0.00	$0.00	$0.00	$0.00	$0.00
Misc Revenue Stale Dated Cheques	($13,152.00)	$710.59	$670.91	$0.00	$0.00	$0.00	$0.00
Misc Rev Suppliers Dicounts	$851.12	$401.54	$1,666.68	$148.51	$148.51	$148.51	$148.51
Misc Revenue Bank & Clerical Errors	$0.00	$0.03	$0.00	$0.00	$0.00	$0.00	$0.00
FIT charge	$2,815.64	$2,256.00	$2,292.80	$2,331.20	$3,310.44	$3,310.44	$3,310.44
Arrears Certificate	$598.27	$613.27	$855.00	$675.00	$685.39	$685.39	$685.39
Statement of Account	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Pulling post-dated cheques	$0.00	$45.00	$15.00	$15.00	$15.00	$15.00	$15.00
Duplicate invoices for previous billing	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Request for other billing information	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Easement Letter	$75.00	$60.00	$30.00	$105.00	$67.50	$67.50	$67.50
Account history	$375.00	$270.00	$300.00	$95.00	$260.00	$260.00	$260.00
Credit reference/credit check (plus credit agency costs)	$1,035.00	$930.00	$1,139.11	$480.00	$896.03	$896.03	$896.03
Returned Cheque charge (plus bank charges)	$1,260.00	$1,527.35	$1,050.00	$795.00	$1,158.09	$1,158.09	$1,158.09
Charge to certify cheque	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Account set up charge / change of occupancy charge	$29,130.00	$34,230.00	$31,650.00	$31,080.00	$31,522.50	$31,522.50	$31,522.50
Special Meter reads	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Meter dispute charge plus Measurement Canada fees (if meter found correct)	$0.00	$60.00	$0.00	$0.00	$0.00	$0.00	$0.00
Collection of account charge – no disconnection	$24,720.00	$16,230.00	$25,650.00	$30,150.00	$24,187.50	$24,187.50	$24,187.50
Disconnect/Reconnect at meter – during regular hours	$2,970.00	$2,200.00	$1,940.00	$2,395.00	$2,376.25	$2,376.25	$3,472.98
Disconnect/Reconnect at meter – after regular hours	$0.00	$185.00	$0.00	$0.00	$0.00	$0.00	$0.00
Disconnect/Reconnect at pole – during regular hours	$555.00	$740.00	$185.00	$1,110.00	$555.00	$555.00	$555.00
Disconnect/Reconnect at pole – after regular hours	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Service call – customer-owned equipment	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Service call – after regular hours	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Install / remove load control device – during regular hours	$0.00	$0.00	$65.00	$65.00	$0.00	$0.00	$0.00
Install / remove load control device – after regular hours	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Temporary service install and remove – overhead – no transformer	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Temporary service install and remove – underground – no transformer	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Temporary service install and remove – overhead – with transformer	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
MARKUP	$3,652.56	$4,007.64	$4,436.95	$4,352.27	$4,112.36	$4,112.36	$4,112.36
Total Specific Service Charges	**$62,396.99**	**$72,345.62**	**$80,629.65**	**$82,555.78**	**$78,463.76**	**$78,560.96**	**$87,551.29**

Table 3.42: Late Payment Charges

	Actual	Actual	Actual	2017	Forecast	Forecast	Forecast
	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
	2014	2015	2016	2017	2018	2019	2019 (new rates)
	Total	Total	Total	Total	Total	Total	Total
Late Payment Charges							
Late Payment - per month	$46,082.97	$60,801.81	$64,838.15	$45,412.42	$54,283.84	$54,283.84	$54,283.84
Total Late Payment Charges	**$46,082.97**	**$60,801.81**	**$64,838.15**	**$45,412.42**	**$54,283.84**	**$54,283.84**	**$54,283.84**

Table 3.43: Other Distribution Revenue

	Actual	Actual	Actual	2017	Forecast	Forecast	Forecast
	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
	2014	2015	2016	2017	2018	2019	2019 (new rates)
	Total	Total	Total	Total	Total	Total	Total
Other Distribution Revenue							
Retailer Service Agreement -- monthly fixed charge (per retailer)	$6,932.50	$7,287.70	$6,962.00	$7,099.60	$7,099.60	$7,099.60	$7,099.60
Service Transaction Request - request fee,per request, applied to the requesting party	$174.50	$81.25	$48.75	$39.25	$39.25	$39.25	$39.25
Standard Supply Service -- Administrative Charge - Residential	$21,108.54	$21,910.36	$22,689.35	$23,577.21	$23,929.13	$24,457.13	$24,457.13
Standard Supply Service -- Administrative Charge - USL	$72.60	$51.41	$37.62	$75.08	$78.00	$78.00	$78.00
Standard Supply Service -- Administrative Charge - Streetlights	$15.25	$15.30	$15.15	$15.30	$15.00	$15.00	$15.00
Standard Supply Service -- Administrative Charge - GS<50	$3,735.42	$3,714.43	$3,711.48	$3,744.05	$4,004.00	$4,013.00	$4,013.00
Standard Supply Service -- Administrative Charge - GS>50	$323.69	$296.28	$282.20	$302.68	$391.52	$393.00	$393.00
Standard Supply Service -- Administrative Charge - Large User	$0.00	$0.00	$0.00	$0.00	$0.00	$3.00	$3.00
Specific Charge for Access to the Power Poles – per pole/year	$72,168.06	$72,017.20	$74,062.22	$73,363.79	$73,363.79	$73,363.79	$143,215.31
ROOM RENTAL P.O.P. SITE	$5,531.97	$4,700.62	$4,174.49	$4,234.75	$4,234.75	$4,234.75	$4,234.75
ROOF RENTAL FIT		$0.00	$0.00	$0.00	$2,800.00	$2,800.00	$2,800.00
Deferred Revenue Recognized (IFRS)	$0.00	$0.00	$44,490.55	$65,651.69	$89,470.28	$123,821.84	$123,821.84
Total Other Distribution Revenues	**$110,062.53**	**$110,074.55**	**$156,473.81**	**$178,103.40**	**$205,425.32**	**$240,318.35**	**$310,169.87**

Table 3.44: Other Income and Expenses

	Actual	Actual	Actual	2017	Forecast	Forecast	Forecast
	CGAAP	CGAAP	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
	2014	2015	2016	2017	2018	2019	2019 (new rates)
	Total	Total	Total	Total	Total	Total	Total
Other Income and Expenses							
Regulatory Debit	($223,973.78)	-$18,904.87	$0.00	$0.00	$0.00	$0.00	$0.00
4305 CGAAP Accounting Changes	($96,075.39)	-$145,981.35	-$200,949.82	-$239,781.83	-$277,138.39	-$92,379.46	$0.00
REVENUE FROM JOBS	$28,107.64	$30,384.92	$139,972.87	$37,213.35	$37,213.35	$37,213.35	$37,213.35
PROFIT/LOSS ON INVESTMENT	$45,452.00	$36,133.00	$62,352.00	$46,137.00	$0.00	$0.00	$0.00
GAIN ON DISP OF PROPERTY	($3,380.74)	$0.00	$0.00	$9,413.44	$0.00	$0.00	$0.00
Loss on Disposal of Property	$0.00	$0.00	$0.00	-$19,023.31	$0.00	$0.00	$0.00
REVENUES NON-UTILITY OPERATIO	$644,642.68	$3,723.32	$0.00	$0.00	$0.00	$0.00	$0.00
EXPENSES NON-UTILITY OPERATIO	($674,289.75)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
CDM REV	$0.00	$956,195.28	$371,343.55	$597,786.59	$500,000.00	$300,000.00	$300,000.00
CDM EXP	$0.00	-$875,823.97	-$381,147.39	-$512,228.80	-$500,000.00	-$300,000.00	-$300,000.00
MISC INCOME SALE OF SCRAP	$4,754.10	$0.00	$6,254.50	$3,019.50	$3,507.03	$3,507.03	$3,507.03
MISC INCOME ADMIN EXP RECOVER	$5,572.56	$6,783.72	$6,962.58	$4,377.96	$5,924.21	$5,924.21	$5,924.21
INT & DIV INCOME MISCELLANEOUS	$0.00	$3,679.73	$9,779.83	$0.00	$0.00	$0.00	$0.00
INT & DIV INCOME CIBC T-BILLS	$0.00	$0.00	$0.00	$1,170.23	$1,170.23	$1,170.23	$1,170.23
INT & DIV INCOME CIBC 69-0211	$6,208.41	$9,503.40	$2,362.55	$3,119.19	$3,119.19	$3,119.19	$3,119.19
					$0.00		
Total Other Income and Expenses	**($262,982.27)**	**$5,693.18**	**$16,930.67**	**-$68,796.68**	**-$226,204.39**	**-$41,445.46**	**$50,934.00**
Total Other Revenue	**-$44,439.78**	**$248,915.16**	**$318,872.28**	**$237,274.92**	**$111,968.52**	**$331,717.68**	**$502,939.00**

2.3.3.2 Other Revenue Variance Analysis

The tables below provide year over year variances of other operating revenues. Due to the high number of individual accounts only the summary level of balances are provided with written explanations as to the cause of the variance. The details are the same as those provided above:

Table 3.45: Variance Analysis of Other Operating Revenues:
– 2014 Board Approved to 2014 Actual

	Board Approved	Actual		
	CGAAP	CGAAP		
	2014	2014	$ Variance	% Variance
Specific Service Charges	$ 76,330	$ 62,397	$ (13,933)	-18%
Late Payment Charges	$ 38,000	$ 46,083	$ 8,083	21%
Other Distribution Revenue	$ 112,847	$ 110,063	$ (2,784)	-2%
Other Income and Expenses	$ 55,700	$ (262,982)	$ (318,682)	-572%
Total	**$ 282,877**	**$ (44,440)**	**$ (327,317)**	**-116%**

Actual Service Charge revenue was lower than the approved amount due to a debit of $13k due to reversing stale dated cheques that had been written-off to revenue in 2013. Late Payment revenue was higher as the number of late payment accounts was higher than expected. This will vary from year to year based on customer behavior. Other Distribution Revenue is largely as Board approved. The variation in Other Income and Expenses is entirely due to the Regulatory

Debit (Account 4305-0000) and CGAAP Accounting Changes (Account 4305-1576); otherwise the revenue was as Board approved. The CGAAP Accounting Change was the expense booked to offset the reduction in the depreciation expense from lengthening the expected life of many of the assets under IFRS until the new rates came into effect:

Table 3.46: Variance Analysis of Other Operating Revenues – 2014 to 2015

	Actual CGAAP 2014	Actual CGAAP 2015	$ Variance	% Variance
Specific Service Charges	$ 62,397	$ 72,346	$ 9,949	16%
Late Payment Charges	$ 46,083	$ 60,802	$ 14,719	32%
Other Distribution Revenue	$ 110,063	$ 110,075	$ 12	0%
Other Income and Expenses	$ (262,982)	$ 5,693	$ 268,675	-102%
Total	**$ (44,440)**	**$ 248,915**	**$ 293,355**	**-660%**

The increase in Specific Services revenues is the lack of the $13k write-off in 2014. Late payment charges fluctuated significantly upward for no reason other than customer behavior. Other Distribution Revenue was unchanged. Significant changes in Other Income and Expenses included a $155k reduction in the Regulatory Debit (Account 4305-0000) and CGAAP Accounting Changes (Account 4305-1576); the removal of water billing services to an affiliated company as it had a loss of $30k in 2014 and $84k of CDM revenue.

Table 3.47: Variance Analysis of Other Operating Revenues – 2015 to 2016

	Actual CGAAP 2015	Actual CGAAP 2016	$ Variance	% Variance
Specific Service Charges	$ 72,346	$ 80,630	$ 8,284	11%
Late Payment Charges	$ 60,802	$ 64,838	$ 4,036	7%
Other Distribution Revenue	$ 110,075	$ 156,474	$ 46,399	42%
Other Income and Expenses	$ 5,693	$ 16,931	$ 11,237	197%
Total	**$ 248,915**	**$ 318,872**	**$ 69,957**	**28%**

The increase in Specific Service Charges is due to the increase in collection charges which grew by $9,420 due to an increase in the number of charges from 541 to 855. Late payment charges fluctuated significantly upward for no reason other than customer behavior. Other Distribution

Revenue grew by Deferred Revenue of $44k which is the amortization of contributed capital under IFRS. Other Income and Expenses had the following significant variations:

Table 3.48: Variance Analysis of Other Income and Expenses – 2015 to 2016

Variation (000's)	Cause
$109	Increase in job revenue with close of Outlet Mall job
-$55	Increase in CGAAP adjustment for change in depreciation
-$91	Lower net CDM revenue in 2016 vs 2015
$26	Higher mark-to-market valuation on interest rate swaps
$19	No regulatory debit in 2016
$3	Other
$11	**Total Variation**

Table 3.49: Variance Analysis of Other Operating Revenues – 2016 to 2017

	Actual CGAAP 2016	Actual CGAAP 2017	$ Variance	% Variance
Specific Service Charges	$ 80,630	$ 82,556	$ 1,926	2%
Late Payment Charges	$ 64,838	$ 45,412	$ (19,426)	-30%
Other Distribution Revenue	$ 156,474	$ 178,103	$ 21,630	14%
Other Income and Expenses	$ 16,931	$ (68,797)	$ (85,727)	-506%
Total	**$ 318,872**	**$ 237,275**	**$ (81,597)**	**-26%**

No significant change in Specific Service Charges. Late payment charges fluctuated significantly downward for no reason other than customer behavior. Other Distribution Revenue grew due to growth in Deferred Revenue of $21k. Other Income and Expenses had the following significant variations:

Table 3.50: Variance Analysis of Other Income and Expenses – 2016 to 2017

Variation (000's)	Cause
-$102	Job revenues returned to normal annual levels
$95	Increase in CDM revenue
-$39	Increase in CGAAP adjustment for change in depreciation
-$18	Lower mark-to-market valuation increase on interest rate swaps
-$19	Loss on disposal of load transfer assets
-$3	Other
$-86	**Total Variation**

Table 3.51: Variance Analysis of Other Operating Revenues – 2017 to 2018 Bridge Year

	Actual	Forecast		
	CGAAP	CGAAP		
	2017	2018	$ Variance	% Variance
Specific Service Charges	$ 82,556	$ 78,464	$ (4,092)	-5%
Late Payment Charges	$ 45,412	$ 54,284	$ 8,871	20%
Other Distribution Revenue	$ 178,103	$ 205,425	$ 27,322	15%
Other Income and Expenses	$ (68,797)	$ (226,204)	$ (157,408)	229%
Total	**$ 237,275**	**$ 111,969**	**$ (125,306)**	**-53%**

Specific Service Charges are lower due to an expected drop in connection charges of $6k based on average connection charges since 2014. Late payment Charges are expected to increase by $9K based on average connection charges since 2014. Other Distribution Revenue is expected to remain largely unchanged with the exception of continued growth in Deferred Revenue. Other Income and Expenses had the following significant variations:

Table 3.52: Variance Analysis of Other Income and Expenses – 2017 to 2018

Variation (000's)	Cause
-$85	Lower net CDM revenue as none assumed for 2018
-$38	Increase in CGAAP adjustment for change in depreciation
-$36	No gains or losses on assets sales or swap mark-to-market assumed
$2	Other
$-157	**Total Variation**

Table 3.53: Variance Analysis of Other Operating Revenues – 2018 Bridge Year to 2019 Test Year

	Forecast	Forecast		
	CGAAP	CGAAP		
	2018	2019	$ Variance	% Variance
Specific Service Charges	$ 78,464	$ 87,551	$ 9,088	12%
Late Payment Charges	$ 54,284	$ 54,284	$ -	0%
Other Distribution Revenue	$ 205,425	$ 310,170	$ 104,745	51%
Other Income and Expenses	$ (226,204)	$ 50,934	$ 277,138	-123%
Total	**$ 111,969**	**$ 502,939**	**$ 390,970**	**349%**

Specific Service Charges are higher due to a proposed increase in the monthly charge for MicroFIT contracts from $5.40 to $10.00. Late payment Charges are expected to remain constant. Other Distribution Revenue is $70k higher due to the OEB approved increase in pole connection costs to $43.63 per pole and $34k higher due to continued growth in Deferred Revenue. Other Income and Expenses is $277k higher as the CGAAP Accounting Change has been removed as

this rate rider and accounting adjustment will no longer be necessary after this cost of service application.

2.3.3.3 Proposed Specific Service Charges

NOTL Hydro proposes to change the current monthly Service Charge for the utility's MicroFIT customer class to $10.00 per month. NOTL Hydro incurs a $8.00 monthly fee per MicroFIT meter point from the utility's settlement provider, UtiliSmart. This $8.00 per month per MicroFIT meter point settlement fee pays for the collation of daily interval 15-minute data and calculating the total kWh generated that needs to be deducted from IESO kWh purchases. As the settlement cost is a recoverable expense, in NOTL Hydro's opinion, the cost for this specific charge associated with MicroFIT data should be recovered directly from the MicroFIT rate class. The remaining $2.00 is required to pay for the labour required to prepare and send the monthly statements, prepare and remit the monthly payments and make changes to the MicroFIT accounts as requested from time to time.

A number of LDCs have received approval for a $10.00 or higher monthly MicroFIT fee including St. Thomas Energy Inc., Wellington North Power Inc. and Centre Wellington Hydro Ltd.

NOTL Hydro proposes that this charge should be passed onto the utility's MicroFIT customers effective from May 1, 2019.

NOTL Hydro is also proposing to amend the following current Specific Service Charges:

Table 3.54: Proposed Specific Service Charges

Specific Service Charge	Current Charge	Proposed
Meter dispute charge plus meter testing fees (if meter found correct)	$30.00	$190.00
Disconnect/Reconnect at meter – during regular hours	$65.00	$95.00
Disconnect/Reconnect at meter – after regular hours	$185.00	$315.00
Disconnect/Reconnect at pole – after regular hours	$415.00	$610.00
Install / remove load control device – during regular hours	$65.00	$95.00
Install / remove load control device – after regular hours	$185.00	$315.00
Service call – after regular hours	$165.00	$315.00

It should be noted that other than the charge for Disconnect/Reconnect at meter – during regular hours, for which the incremental revenue from the change is $1,097, these charges are almost never incurred by our customers. NOTL Hydro does not currently use load control devices and in the period from 2014-2017 did not charges any customers for meter disputes, after hours service calls or after hour disconnects/reconnects at the pole. Nevertheless, NOTL Hydro believes it is important that posted charges fairly reflect the costs to be incurred by NOTL Hydro should these services be requested in the future.

Table 3.55: Determination of Proposed Specific Service Charges

Staff / Truck	Rate	# Hours	Calculation	Proposed Fee
Meter dispute charge plus meter testing fees (if meter found correct)				
Sr. Technologist	$74.76	2		
Service Truck	$22.45	2	$194.42	$190.00
Disconnect/Reconnect at meter – during regular hours				
Sr. Technologist	$74.76	1		
Service Truck	$22.45	1	$97.21	$95.00
Disconnect/Reconnect at meter – after regular hours				
Journeyman Lineman	$69.88	4		
Service Truck	$22.45	2	$324.42	$315.00
Disconnect/Reconnect at pole – after regular hours				
Lead hand	$74.76	4		
Journeyman Lineman	$69.88	4		
Line Truck	$46.54	1	$625.10	$610.00
Install / remove load control device – during regular hours				
Sr. Technologist	$74.76	1		
Service Truck	$22.45	1	$97.21	$95.00
Install / remove load control device – after regular hours				
Journeyman Lineman	$69.88	4		
Service Truck	$22.45	2	$324.42	$315.00
Service call – after regular hours				
Journeyman Lineman	$69.88	4		
Service Truck	$22.45	2	$324.42	$315.00

NOTL Hydro proposes that these updated Specific Service Charges come into effect May 1, 2019. There are no discrete customer groups that will be materially affected by these changes.

2.3.3.4 Affiliate Service Charges

NOTL Hydro has two affiliates; Niagara-on-the-Lake Energy Inc. (NOTL Energy) and Energy Services Niagara Inc. (ESNI).

NOTL Energy is a holding company that has no active operations or revenue. Its only expenses are those it directly incurs as a corporate entity: corporate insurance and auditor charges for the preparation of the annual tax return.

ESNI is a subsidiary of NOTL Energy and a sister company to NOTL Hydro. The non-regulated activities of NOTL Energy are conducted within ESNI. During the period from 2014-2019 these have included: a water heater rental business, water billing services on behalf of the Town of Niagara-on-the-Lake and solar generation. ESNI has no direct employees so all services supplied by NOTL Hydro staff are billed to ESNI on a cost plus basis.

The following is a breakdown of the services supplied to ESNI by year:

Table 3.56: Services to ESNI (2014-2019)

Year: **2014**

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service	% Allocation
From	To			$	$	
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Billing- Customer Service-Billing/collecting/Account Inquiries/Reports/Water reads	Cost-Base	$89,478.97	$74,791.81	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Gas Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$2,229.83	$1,880.76	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Electric Water Heaters- Finance-Accounts Payable/Receivable, Account Reconcilations, Payroll	Cost-Base	$2,993.78	$2,496.64	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Bills- Printed/Cancelled bills	Cost-Base	$37,441.89	$34,038.08	# of bills printed/cancelled * proportion related to water bills* cost of bill print plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Adminstrative Expenses- Mtce General Plant, Property Taxes, Property Insurance	Cost-Base	$6,129.81	$5,572.55	0.0483% on mtce of building, property taxes, property insurance plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Board Of Directors-Payroll	Cost-Base	$8,400.00	$8,400.00	2 members x $250 + 2 @ $100 per meeting

Year: **2015**

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service	Allocation
From	To			$	$	
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Billing- Customer Service-Billing/collecting/Account Inquiries/Reports/Water reads	Cost-Base	$78,748.12	$65,755.40	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Gas Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$385.97	$321.64	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Electric Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$813.71	$679.75	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Bills- Printed/Cancelled bills	Cost-Base	$38,403.77	$34,912.52	# of bills printed/cancelled * proportion related to water bills* cost of bill print plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Meter Installs- Verifying meter installs, water reads/billing for water # meters installs	Cost-Base	$28,716.66	$24,190.30	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Adminstrative Expenses- Mtce General Plant, Property Taxes, Property Insurance, Audit Fees, Office Supplies	Cost-Base	$7,462.07	$6,783.70	0.0543% on mtce of building, property taxes, property insurance plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Board Of Directors-Payroll	Cost-Base	$8,400.00	$8,400.00	2 members x $250 + 2 @ $100 per meeting

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Year: **2016**

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service	Allocation
From	To			$	$	
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Billing- Customer Service-Billing/collecting/Account Inquiries/Reports/Water reads	Cost-Base	$82,471.07	$69,251.08	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Gas Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$921.18	$767.61	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Electric Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$753.98	$628.31	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Bills- Printed/Cancelled bills	Cost-Base	$41,844.14	$38,040.13	# of bills printed/cancelled * proportion related to water bills* cost of bill print plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Meter Installs- Verifying meter installs, water reads/contractor charges # meters installs	Cost-Base	$14,013.00	$12,573.76	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Adminstrative Expenses- Mtce General Plant, Property Taxes, Property Insurance, Audit Fees, Office Supplies	Cost-Base	$7,595.49	$6,904.99	0.0543% on mtce of building, property taxes, property insurance plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Board Of Directors-Payroll	Cost-Base	$8,400.00	$8,400.00	2 members x $250 + 2 @ $100 per meeting

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Year: **2017**

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service	Allocation
From	To			$	$	
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Billing- Customer Service-Billing/collecting/Account Inquiries/Reports/Water reads	Cost-Base	$81,313.67	$68,029.88	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Gas Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$147.14	$122.61	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Electric Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll/Solar Panel- Engineering Consulting	Cost-Base	$7,358.83	$6,132.68	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Bills- Printed/Cancelled bills	Cost-Base	$43,059.47	$39,144.97	# of bills printed/cancelled * proportion related to water bills* cost of bill print plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Meter Installs- Contractor charges for #Meter Installed	Cost-Base	$17,435.20	$15,850.19	Service Cost is marked up as follows: Labour 20%, Truck 10%, Material 10%, Contractor 10% Accounts Paybale Misc 10%
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Adminstrative Expenses- Mtce General Plant, Property Taxes, Property Insurance, Audit Fees, Office Supplies	Cost-Base	$4,815.75	$4,377.95	0.0337% on mtce of building, property taxes, property insurance plus 10% mark-up
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Board Of Directors-Payroll	Cost-Base	$8,400.00	$8,400.00	2 members x $250 + 2 @ $100 per meeting

3

Year: **2018**

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Billing- Customer Service-Billing/collecting/Account Inquiries/Reports/Water reads	Cost-Base	$82,741.94	$69,221.61
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Gas Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$0.00	$0.00
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Electric Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll/Solar Panel- Engineering Consulting	Cost-Base	$3,863.69	$3,219.74
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Bills- Printed/Cancelled bills	Cost-Base	$43,554.03	$39,594.58
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Meter Installs- Contractor charges for #Meter Installed	Cost-Base	$12,078.00	$10,980.00
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Adminstrative Expenses- Mtce General Plant, Property Taxes, Property Insurance, Audit Fees, Office Supplies	Cost-Base	$6,516.63	$5,924.21
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Board Of Directors-Payroll	Cost-Base	$8,400.00	$8,400.00

Year: **2019**

Shared Services

Name of Company		Service Offered	Pricing Methodology	Price for the Service	Cost for the Service
From	To			$	$
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Billing- Customer Service-Billing/collecting/Account Inquiries/Reports/Water reads	Cost-Base	$83,991.64	$70,263.03
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Gas Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll	Cost-Base	$0.00	$0.00
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Electric Water Heaters- Finance-Accounts Payable/Receivable,Account Reconcilations, Payroll/Solar Panel- Engineering Consulting	Cost-Base	$2,893.26	$2,411.05
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Bills- Printed/Cancelled bills	Cost-Base	$44,076.65	$40,069.68
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Water Meter Installs- Contractor charges for #Meter Installed	Cost-Base	$12,078.00	$10,980.00
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Adminstrative Expenses- Mtce General Plant, Property Taxes, Property Insurance, Audit Fees, Office Supplies	Cost-Base	$6,516.63	$5,924.21
Niagara-on-the-Lake Hydro Inc	Energy Services Inc	Board Of Directors-Payroll	Cost-Base	$8,400.00	$8,400.00

The following table provides a comparison of shared services between the OEB approved 2014, the actual 2017 and the test year 2019:

Table 3.57: Services to ESNI Comparisons

Service	2014 OEB Approved	2017 Actual	2019 Proposed
Water heaters rental support	$4,200	$7,505	$2,103
Water and waste water billing	$110,500	$141,808	$141,871
Administration	$5,800	$4,816	$6,517
Board of Directors	-	$8,400	$8,400
Total	**$120,500**	**$162,530**	**$158,891**

The water heater support business was sold in 2014. Some administrative services are still being provided to the purchaser but these are declining over time.

The water and wastewater billing services have increased over time with the growth in the number of customers. Beginning in 2015, the Town of Niagara-on-the-Lake began installing transmitters to remotely read the water readers in a manner similar to electric smart meters. This initially increased the costs being charged for this service but as the transition problems are being resolved and the benefits of the remote reading realized the costs are expected to decline.

Administration is an allocation of overhead including premises, insurance and other similar charges.

Two of the Board members are on the Board of ESNI. Technically they are paid by ESNI but as ESNI has no employees and no payroll system the costs flow through NOTL Hydro.

Appendix

List of Appendices

Appendix 3A	IESO Final Results Report for NOTL Hydro (CDM) for 2015 to 2017

APPENDIX

3A

2019

NIAGARA-ON-THE-LAKE HYDRO

COST OF SERVICE RATE APPLICATION

EB-2018-0056

2017 Final Verified Annual LDC CDM Program Results Report
Letter from the Vice-President, Policy, Engagement & Innovation

June 29, 2018

To: Ontario's Local Distribution Companies

At the mid-way point of the Conservation First Framework (CFF) Ontario's Local Distribution Companies (LDCs) along with the IESO have shown significant progress towards the 2020 CFF 7.0 TWh target. The province has achieved 1.8 TWh of persisting energy savings in 2017, the highest performing year on record. Approximately 20% ($364M) of the allocated $1.835B CFF LDC Conservation Demand Management (CDM) budget was accounted for in 2017. From 2015, LDCs have achieved 4.8 TWh of energy savings, representing 69% of the CFF 7.0 TWh target. The savings realized to date demonstrate the significant efforts made by LDCs and the IESO in delivering and promoting conservation programs across the province.

Key highlights from the 2017 results include:

- The share of residential portfolio savings increased for the third consecutive year, accounting for 46% of 2017 results, while the business portfolio program contributed to 45%, and local/pilot/centrally delivered programs accounting for 9% of 2017 savings.
- The Coupon & Instant Discount residential retail program produced a record achievement of 740 GWh of persisting energy savings, increasing by over 53% of the results from 2016. LED light bulbs remained the most common measure accounting 91% of savings.
- The Retrofit program achieved 663 GWh of persisting energy savings in 2017, which represents a small reduction in savings despite completing approximately half the number projects compared to 2016 results (including adjustments). Lighting continues to represent the majority of results, representing 79% of savings in 2017.
- The Process and Systems Upgrades Program achieved 15 GWh in 2017, but also verified an additional 65 GWh in 2016 completed projects and 11 GWh in 2015 completed projects as part of this year's evaluation. Behind-the-meter generation projects account for 82% of program savings-to-date.
    - o The data lag associated with unreported (yet completed) 2017 projects for the Retrofit and Process and Systems Upgrade programs remain an ongoing challenge. Together with the Heating & Cooling program, these programs have approximately 723 GWh in unverified savings yet to be reported by LDCs for which is anticipated to be reported a future verified annual results reports as 2017 adjustments.

Minor revisions were made to the final 2017 results relative to the preliminary 2017 results issued to LDCs on June 1, 2018. Details on the revisions between the 2017 preliminary and final verified results can be found in the 2017 Frequently Asked Questions (FAQs) along with key 2017 evaluation findings and province-wide and local program cost effectiveness test results posted alongside LDC results.

Consistent with prior year evaluation cycles, all 2017 final verified annual results reports will be posted on the IESO website in early July. LDC-specific cost effectiveness test results (program- and portfolio-level) will be available by September 15, 2017. Finally, 2017 EM&V reports will be available later this summer along with key program recommendations to be shared with the Joint Program Operations Committee (JPOC) and associated committees.

I look forward to the continued collaboration with LDCs and stakeholders building off lessons learned and implementing feedback from the mid-term review process to enhance current programs and future efforts.

Sincerely,

Terry Young
Vice-President, Policy, Engagement & Innovation
Independent Electricity System Operator

2017 Final Verified Annual LDC CDM Program Results Report
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2017 Final Verified Annual LDC CDM Program Results Report
Summary

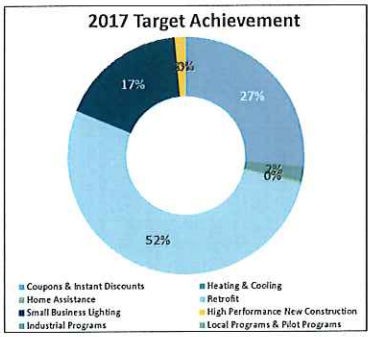
For: Niagara-on-the-Lake Hydro Inc.

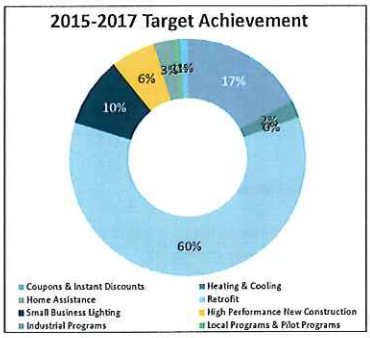
Results

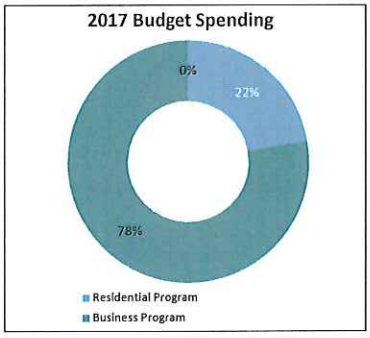
#	Metric	2015 Verified Results	2016 Verified Results	2017 Verified Results	2015-2017 Verified Results	Allocated Target / Budget	2015-2017 Progress versus Allocated Target / Budget	2015-2020 LDC CDM Plan Forecast	2015-2017 Progress versus 2015-2020 LDC CDM Plan Forecast	2017 LDC CDM Plan Forecast	2017 Progress versus 2017 LDC CDM Plan Forecast	2015-2017 LDC CDM Plan Forecast	2015-2017 Progress versus 2015-2017 LDC CDM Plan Forecast
1	Net Verified Annual Energy Savings Persisting to 2020	3,063 MWh	3,988 MWh	3,445 MWh	10,497 MWh	11,680 MWh	90 %	12,188 MWh	86 %	2,472 MWh	139 %	9,028 MWh	116 %
2	LDC Ranking - Net Verified Annual Energy Savings Persisting to 2020	38	36	40	38	43	12	43	8	37	30	37	46
3	Total Spending ($)	$ 0	$ 425,446	$ 647,548	$ 1,072,994	$ 2,993,633	36 %	$ 2,221,857	48 %	$ 674,316	96 %	$ 1,099,317	98 %
4	LDC Ranking - Total Spending ($)	41	41	41	40	43	22	46	4	39	29	40	17

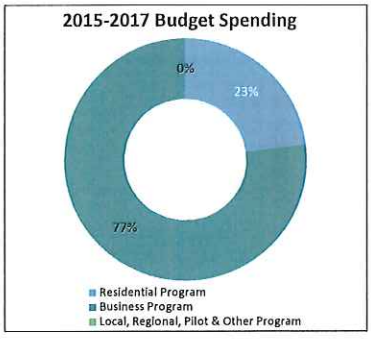
Annual FCR Progress

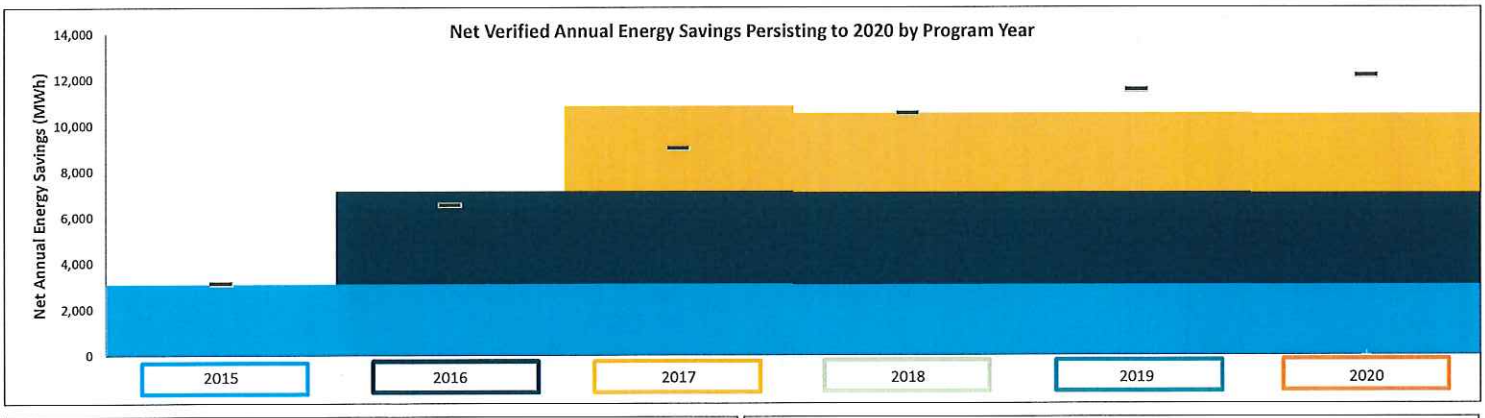
#	Metric	2015 Program Year	2016 Program Year	2017 Program Year	Total 2015-2017 Framework-to-Date
1	Net Verified 2020 Annual Energy Savings from Full Cost Recovery Programs	18 MWh	3,988 MWh	3,445 MWh	7,451 MWh
2	CDM Plan Forecasted Net 2020 Annual Energy Savings from Full Cost Recovery Programs	2,607 MWh *(2015 Annual Milestone from FCR Programs)*	2,729 MWh *(2016 Annual Milestone from FCR Programs)*	2,184 MWh *(2017 Annual Milestone from FCR Programs)*	7,520 MWh *(Cumulative FCR Milestone)*
	FCR Progress				99.1 %

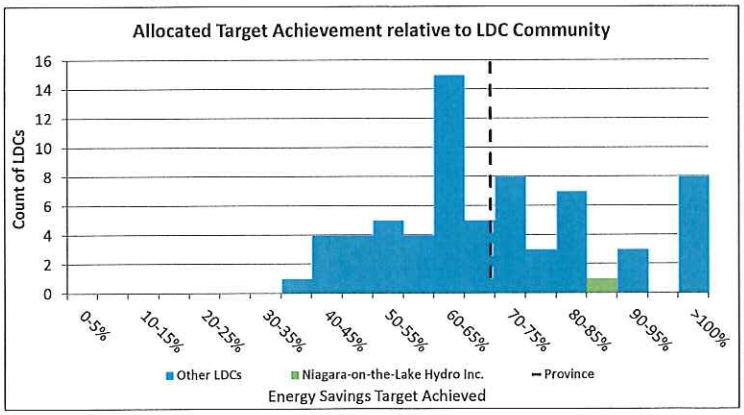


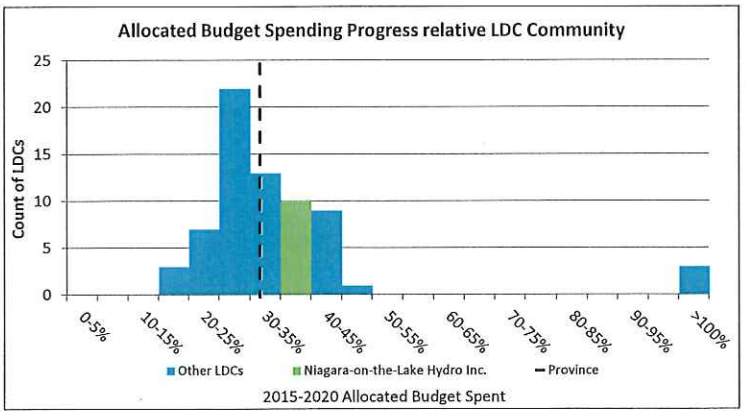












2017 Final Verified Annual LDC CDM Program Results Report
LDC Rankings

#	LDC	Net Verified Annual Energy Savings Persisting to 2020																			
		2015 Verified 2015 Savings		2016 Verified 2015 Adjustment Savings		2017 Verified 2015 Adjustment Savings		Total Verified 2015 Savings		2016 Verified 2016 Savings		2017 Verified 2016 Adjustment Savings		Total Verified 2016 Savings		2017 Verified 2017 Savings		Total Verified 2015-2017 Savings		Allocated Savings Target	
		Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)
44	Niagara-on-the-Lake Hydro Inc.	2,598,018	39	369,192	37	96,276	30	3,063,486	38	3,401,852	33	586,267	38	3,988,119	36	3,445,058	40	10,496,663	38	11,680,000	43
LDC Total		1,117,211,477		372,759,951		68,785,651		1,558,757,080		1,152,109,308		357,805,953		1,509,915,261		1,790,833,794		4,859,506,135		6,999,990,000	
Independent Electricity System Operator		278,348		16,467		0		294,815		2,045,490		35,884		2,081,374		1,773,007		4,149,196		n/a	
Province-Wide Total		1,117,489,826		372,776,418		68,785,651		1,559,051,895		1,154,154,798		357,841,837		1,511,996,635		1,792,606,801		4,863,655,331		6,999,990,000	

2017 Progress Savings versus Allocated Savings Target		2015-2017 Progress Savings versus Allocated Savings Target		2015-2020 LDC CDM Plan Savings Forecast		2017 Progress versus 2015-2020 LDC CDM Plan Savings Forecast		2015-2017 Progress versus 2015-2020 LDC CDM Plan Savings Forecast		2017 LDC CDM Plan Savings Forecast		2017 Progress versus 2017 LDC CDM Plan Savings Forecast		2015-2017 LDC CDM Plan Savings Forecast		2015-2017 Progress versus 2015-2017 LDC CDM Plan Savings Forecast	
Value (%)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value (kWh)	LDC Ranking (#)	Value (%)	LDC Ranking (#)
29	16	90	12	12,187,558	43	28	14	86	8	2,471,690	37	139	30	9,027,755	37	116	46
26		69		7,402,554,217		24		66		1,268,253,723		141		3,844,200,598		126	
n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a	
26		69		7,402,554,217		24		66		1,268,253,723		141		3,844,200,598		126	

Total Spending										
2015 Verified 2015 Spending		2016 Verified 2015 Adjustment Spending		2017 Verified 2015 Adjustment Spending		Total Verified 2015 Spending		2016 Verified 2016 Spending		2017 Verified 2016 Adjustment Spending
Value ($)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value ($)
0	28	0	27	0	1	0	41	424,921	41	525
22,389,524		2,398,698		0		24,788,222		205,478,076		27,300
0		0		0		0		0		0
22,389,524		2,398,698		0		24,788,222		205,478,076		27,300

	Total Verified 2016 Spending		2017 Verified 2017 Spending		Total Verified 2015-2017 Spending		Allocated Budget		2017 Progress Spending versus Allocated Budget		2015-2017 Progress Spending versus Allocated Budget		2015-2020 LDC CDM Plan Spending Forecast		2017 Progress versus 2015-2020 LDC CDM Plan Spending Forecast		2015-2017 Progress versus 2015-2020 LDC CDM Plan Spending Forecast		2017 LDC CDM Plan Spending Forecast		2017 Progress versus 2017 LDC CDM Plan Spending Forecast		2015-2017 LDC CDM Plan Spending Forecast		2015-2017 Progress versus 2015-2017 LDC CDM Plan Spending Forecast	
LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value (%)	LDC Ranking (#)	Value ($)	LDC Ranking (#)	Value (%)	LDC Ranking (#)
12	425,446	41	647,548	41	1,072,994	40	2,993,633	43	22	23	36	22	2,221,857	46	29	5	48	4	674,316	39	96	29	1,099,317	40	98	17
	205,505,376		362,798,888		593,092,486		1,835,264,933		20		32		1,800,344,744		20		33		400,311,151		91		724,466,399		82	
	0		0		0		n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a		n/a	
	205,505,376		362,798,888		593,092,486		1,835,264,933		20		32		1,800,344,744		20		33		400,311,151		91		724,466,399		82	

Savings Persistence Report

For: Niagara-on-the-Lake Hydro Inc.

#	Program / Initiative Name	Gross Verified Annual Energy Savings (kWh)											
		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2015 Verified 2015 Results													
67	Appliance Retirement Initiative	7,121	7,121	7,121	7,121	5,247	-	-	-	-	-	-	-
68	Coupon Initiative	52,483	51,998	51,998	51,998	51,998	51,998	51,998	51,987	51,987	51,987	48,253	48,092
69	Bi-Annual Retailer Event Initiative	89,393	87,804	87,804	87,804	87,804	87,804	87,804	87,758	87,758	87,758	80,925	76,759
70	HVAC Incentives Initiative	145,547	145,547	145,547	145,547	145,547	145,547	145,547	145,547	145,547	145,547	145,547	145,547
72	Energy Audit Initiative	82,968	82,968	82,968	82,968	-	-	-	-	-	-	-	-
73	Efficiency: Equipment Replacement Incentive Initiative	2,399,823	2,399,823	2,392,286	2,392,286	2,392,286	2,392,286	2,327,844	2,327,844	2,224,911	2,011,032	1,472,863	1,446,146
74	Direct Install Lighting and Water Heating Initiative	126,937	107,703	80,330	80,330	80,330	80,330	80,330	80,330	80,330	80,330	80,330	17,532
75	New Construction and Major Renovation Initiative	851,700	851,700	414,612	414,612	414,612	414,612	414,612	414,612	414,612	414,612	414,612	414,612
76	Existing Building Commissioning Incentive Initiative	60,772	60,772	60,772	-	-	-	-	-	-	-	-	-
78	Process and Systems Upgrades Initiatives - Energy Manager Initiative	378,412	378,412	378,412	378,412	378,412	378,412	378,412	129,968	17,448	17,448	-	-
80	Low Income Initiative	2,983	2,510	2,418	2,326	2,326	2,326	2,326	2,326	1,614	1,614	1,461	1,461
82	Program Enabled Savings	40,750	40,750	40,750	40,750	40,750	40,750	40,750	40,750	40,750	40,750	40,750	-
Subtotal: 2015 Verified 2015 Results		**4,238,889**	**4,217,108**	**3,745,018**	**3,684,154**	**3,599,312**	**3,594,065**	**3,529,623**	**3,281,122**	**3,064,957**	**2,851,078**	**2,284,741**	**2,150,149**
2016 Verified 2015 Results Adjustments													
89	Save on Energy Retrofit Program	17,921	17,921	17,921	17,921	17,921	17,921	17,921	17,921	17,921	17,921	-	-
150	Coupon Initiative	14,137	14,006	14,006	14,006	14,006	14,006	14,006	14,002	14,002	14,002	13,804	13,796
151	Bi-Annual Retailer Event Initiative	925	914	914	914	914	914	914	912	912	912	773	767
152	HVAC Incentives Initiative	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428	1,428
154	Energy Audit Initiative	5,583	5,583	5,583	5,583	88,551	88,551	88,551	88,551	88,551	88,551	88,551	88,551
155	Efficiency: Equipment Replacement Incentive Initiative	41,677	41,677	41,677	41,677	41,677	41,677	41,677	41,677	41,677	41,677	41,677	12,149
157	New Construction and Major Renovation Initiative	-	-	437,089	437,089	437,089	437,089	437,089	437,089	437,089	437,089	437,089	437,089
Subtotal: 2016 Verified 2015 Results Adjustments		**81,671**	**81,529**	**518,618**	**518,618**	**601,586**	**601,586**	**601,586**	**601,580**	**601,580**	**601,580**	**583,322**	**553,780**
2017 Verified 2015 Results Adjustments													
197	Conservation Cultivator LDC Innovation Fund Pilot Program	90,118	90,118	90,118	90,118	90,118	90,118	90,118	90,118	90,118	90,118	90,118	78,912
237	Efficiency: Equipment Replacement Incentive Initiative	-9,650	-9,650	-2,113	158	158	158	64,599	64,599	74,662	59,472	6,017	158
238	Direct Install Lighting and Water Heating Initiative	-46,441	-27,207	166	8,072	8,072	8,072	8,072	8,072	8,072	8,072	8,072	7,003
Subtotal: 2017 Verified 2015 Results Adjustments		**34,027**	**53,261**	**88,171**	**98,348**	**98,348**	**98,348**	**162,789**	**162,789**	**172,852**	**157,662**	**104,207**	**86,073**
2016 Verified 2016 Results													
247	Save on Energy Coupon Program	-	378,082	378,082	378,082	378,082	378,082	378,082	378,082	378,031	378,031	376,350	371,702
249	Save on Energy Heating & Cooling Program	-	150,667	150,667	150,667	150,667	150,667	150,667	150,667	150,667	150,667	150,667	150,667
251	Save on Energy Home Assistance Program	-	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,661	2,256
253	Save on Energy Retrofit Program	-	2,431,204	2,376,125	2,376,125	2,376,125	2,376,125	2,293,723	2,293,723	2,293,723	2,293,723	2,293,723	2,293,500
254	Save on Energy Small Business Lighting Program	-	297,014	297,014	296,457	292,048	264,261	238,404	185,502	138,852	54,231	29,258	17,649
255	Save on Energy High Performance New Construction Program	-	237,108	237,108	237,108	237,108	237,108	237,108	237,108	237,108	237,108	237,108	237,108
Subtotal: 2016 Verified 2016 Results		**-**	**3,496,736**	**3,441,657**	**3,441,100**	**3,436,691**	**3,408,904**	**3,300,645**	**3,247,743**	**3,201,042**	**3,116,421**	**3,089,767**	**3,072,882**
2017 Verified 2016 Results Adjustments													
329	Save on Energy Coupon Program	-	43,107	43,107	43,107	43,107	43,107	43,107	43,107	43,103	43,103	43,163	43,190
331	Save on Energy Heating & Cooling Program	-	2,797	2,797	2,797	2,797	2,797	2,797	2,797	2,797	2,797	2,797	2,797
335	Save on Energy Retrofit Program	-	424,654	479,733	479,733	479,733	479,733	479,733	479,733	479,733	431,891	431,891	431,747
336	Save on Energy Small Business Lighting Program	-	60,840	60,840	60,617	59,293	53,321	45,821	36,015	27,227	13,186	9,338	7,795
Subtotal: 2017 Verified 2016 Results Adjustments		**-**	**531,398**	**586,477**	**586,254**	**584,930**	**578,958**	**571,458**	**561,652**	**552,860**	**490,977**	**487,189**	**485,529**
2017 Verified 2017 Results													
411	Save on Energy Coupon Program	-	-	479,095	385,552	385,552	385,552	385,552	385,552	385,552	385,548	385,548	384,600
412	Save on Energy Instant Discount Program	-	-	433,191	310,003	310,003	310,003	310,003	310,003	310,003	309,995	309,995	309,995
413	Save on Energy Heating & Cooling Program	-	-	87,201	87,201	87,201	87,201	87,201	87,201	87,201	87,201	87,201	87,201
415	Save on Energy Home Assistance Program	-	-	10,395	10,395	10,395	10,395	10,395	10,395	10,395	10,395	10,395	10,395
417	Save on Energy Retrofit Program	-	-	2,002,149	2,007,980	2,007,980	2,007,980	2,007,980	1,969,326	1,969,326	1,969,326	1,968,784	1,968,784
418	Save on Energy Small Business Lighting Program	-	-	719,798	719,798	719,244	716,081	710,345	670,467	584,771	494,935	298,487	153,154
419	Save on Energy High Performance New Construction Program	-	-	93,636	93,636	93,636	93,636	93,636	93,636	93,636	93,636	93,636	93,636
Subtotal: 2017 Verified 2017 Results		**-**	**-**	**3,825,465**	**3,614,565**	**3,614,011**	**3,610,848**	**3,605,112**	**3,526,580**	**3,440,884**	**3,351,036**	**3,154,046**	**3,007,765**
Total		**4,354,587**	**8,380,032**	**12,205,406**	**11,943,039**	**11,934,878**	**11,892,709**	**11,771,213**	**11,381,466**	**11,034,175**	**10,568,754**	**9,703,272**	**9,356,178**

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48,092	47,940	47,940	47,921	17,365	17,365	17,365	17,365	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76,759	75,108	75,108	74,932	27,760	27,760	27,760	27,760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
145,547	145,547	145,547	145,547	145,547	145,547	138,539	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
484,394	484,394	484,394	415,995	344,646	344,646	344,646	344,646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
367,612	367,612	367,612	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,461	1,461	561	479	479	479	479	479	479	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,123,865	**1,122,062**	**1,121,162**	**684,874**	**535,797**	**535,797**	**528,789**	**390,250**	**479**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13,796	13,778	13,778	13,764	4,932	4,932	4,932	4,932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
767	743	743	740	309	309	309	309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,428	1,428	1,428	1,428	1,428	1,428	1,428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88,551	61,986	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12,149	12,149	12,149	10,031	2,285	2,285	2,285	2,285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116,691	**90,084**	**28,098**	**25,963**	**8,954**	**8,954**	**8,954**	**7,526**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
78,912	78,912	78,912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-7,087	-7,087	-7,087	-7,271	-7,943	-7,943	-7,943	-7,943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71,825	**71,825**	**71,825**	**-7,271**	**-7,943**	**-7,943**	**-7,943**	**-7,943**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
371,489	371,489	369,535	316,752	316,752	137,774	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150,667	150,667	150,667	150,667	150,667	150,667	150,667	147,614	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,256	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,692,513	511,763	511,763	396,834	1,464	1,464	1,464	1,464	1,464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15,622	4,223	4,223	4,223	4,223	4,223	4,223	4,223	1,375	784	784	784	784	784	-	-	-	-	-	-	-	-	-	-
237,108	237,108	237,108	237,108	206,743	189,715	64,403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,469,655	**1,277,456**	**1,275,502**	**1,107,790**	**682,055**	**486,049**	**222,963**	**155,507**	**5,045**	**784**	**784**	**784**	**784**	**784**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
43,228	43,228	43,120	37,244	37,244	14,661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,797	2,797	2,797	2,797	2,797	2,797	2,797	2,734	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
333,382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,180	2,009	2,009	2,009	2,009	2,009	2,009	2,009	662	382	382	382	382	382	-	-	-	-	-	-	-	-	-	-
386,587	**48,034**	**47,926**	**42,050**	**42,050**	**19,467**	**4,806**	**4,743**	**662**	**382**	**382**	**382**	**382**	**382**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
376,548	376,488	376,488	376,459	320,009	320,009	37,478	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305,446	305,066	305,066	255,395	255,395	195,047	164,316	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87,201	87,201	87,201	87,201	87,201	87,201	87,201	87,201	86,436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9,340	9,340	9,340	9,340	9,081	8,926	8,926	8,926	8,926	8,926	3,584	3,584	3,584	3,584	3,584	-	-	-	-	-	-	-	-	-
1,901,476	1,699,446	697,261	592,374	178,261	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48,835	30,430	19,553	8,218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93,636	93,636	93,636	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,822,482	**2,601,607**	**1,588,545**	**1,328,987**	**849,947**	**611,183**	**297,921**	**96,127**	**95,362**	**8,926**	**3,584**	**3,584**	**3,584**	**3,584**	**3,584**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6,991,105	**5,211,068**	**4,133,058**	**3,182,393**	**2,110,860**	**1,653,507**	**1,055,490**	**646,210**	**101,548**	**10,092**	**4,750**	**4,750**	**4,750**	**4,750**	**3,584**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Gross Verified Energy Savings

Gross Verified Annual Peak Demand Savings (kW)

2015	2016	2017	2018	2019	2020	2021	2022
1	1	1	1	1	-	-	-
3	3	3	3	3	3	3	3
6	6	6	6	6	6	6	6
77	77	77	77	77	77	77	77
18	18	18	18	-	-	-	-
367	367	365	365	365	365	352	352
30	25	18	18	18	18	18	18
132	132	68	68	68	68	68	68
20	20	20	-	-	-	-	-
54	54	54	54	54	54	54	13
-	-	-	-	-	-	-	-
5	5	5	5	5	5	5	5
713	**708**	**635**	**615**	**597**	**596**	**583**	**542**
5	5	5	5	5	5	5	5
1	1	1	1	1	1	1	1
-	-	-	-	-	-	-	-
1	1	1	1	1	1	1	1
1	1	1	1	19	19	19	19
12	12	12	12	12	12	12	12
-	-	64	64	64	64	64	64
20	**20**	**84**	**84**	**102**	**102**	**102**	**102**
12	12	12	12	12	12	12	12
-3	-3	-	-	-	-	13	13
-11	-7	-	2	2	2	2	2
-2	**2**	**12**	**14**	**14**	**14**	**27**	**27**
-	25	25	25	25	25	25	25
-	44	44	44	44	44	44	44
-	-	-	-	-	-	-	-
-	410	398	398	398	398	385	385
-	61	61	61	60	57	54	44
-	57	57	57	57	57	57	57
-	**597**	**585**	**585**	**584**	**581**	**565**	**555**
-	3	3	3	3	3	3	3
-	1	1	1	1	1	1	1
-	46	57	57	57	57	57	57
-	13	13	13	13	12	11	9
-	**63**	**74**	**74**	**74**	**73**	**72**	**70**
-	-	33	27	27	27	27	27
-	-	29	21	21	21	21	21
-	-	24	24	24	24	24	24
-	-	1	1	1	1	1	1
-	-	375	376	376	376	376	370
-	-	176	176	176	175	175	169
-	-	18	18	18	18	18	18
-	**-**	**656**	**643**	**643**	**642**	**642**	**630**
731	**1,390**	**2,046**	**2,015**	**2,014**	**2,008**	**1,991**	**1,926**

2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	Gross Verified Peak Demand Savings	Gross Verified Savings	Net Verified Annual Energy Savings (kWh) 2015	2016	2017	2018	2019	2020
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			3,267	3,267	3,267	3,267	2,442	-
3	3	3	3	3	3	3	3	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			85,913	85,119	85,119	85,119	85,119	85,119
6	6	5	5	5	5	5	5	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			146,333	143,732	143,732	143,732	143,732	143,732
77	77	77	77	77	77	77	77	77	77	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			65,698	65,698	65,698	65,698	65,698	65,698
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			71,357	71,357	71,357	71,357	-	-
318	275	161	152	137	137	137	126	111	111	111	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			1,703,597	1,703,597	1,697,753	1,697,753	1,697,753	1,697,753
18	18	18	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			113,027	95,901	71,527	71,527	71,527	71,527
68	68	68	68	61	61	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			425,850	425,850	207,306	207,306	207,306	207,306
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			57,642	57,642	57,642	-	-	-
2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			283,809	283,809	283,809	283,809	283,809	283,809
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			2,983	2,510	2,418	2,326	2,326	2,326
5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			40,750	40,750	40,750	40,750	40,750	40,750
497	**454**	**337**	**309**	**283**	**283**	**283**	**211**	**191**	**191**	**183**	**114**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			**3,000,226**	**2,979,232**	**2,730,378**	**2,672,644**	**2,600,462**	**2,598,020**
5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			17,921	17,921	17,921	17,921	17,921	17,921
1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			23,142	22,927	22,927	22,927	22,927	22,927
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			1,514	1,496	1,496	1,496	1,496	1,496
1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			645	645	645	645	645	645
19	19	19	19	19	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			4,802	4,802	4,802	4,802	76,159	76,159
12	12	12	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			31,501	31,501	31,501	31,501	31,501	31,501
64	64	64	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	218,544	218,544	218,544	218,544
102	**102**	**97**	**87**	**23**	**17**	**4**	**4**	**3**	**3**	**3**	**2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			**79,525**	**79,292**	**297,836**	**297,836**	**369,193**	**369,193**
12	12	12	8	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			90,118	90,118	90,118	90,118	90,118	90,118
18	14	2	-	-2	-2	-2	-2	-2	-2	-2	-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-8,635	-8,635	-2,791	-1,029	-1,029	-1,029
2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-41,352	-24,226	148	7,188	7,188	7,188
32	**28**	**16**	**10**	**6**	**6**	**6**	**-2**	**-2**	**-2**	**-2**	**-2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			**40,131**	**57,257**	**87,475**	**96,277**	**96,277**	**96,277**
25	25	25	24	24	24	24	20	20	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	566,176	566,176	566,176	566,176	566,176
44	44	44	44	44	44	44	44	44	44	44	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	106,387	106,387	106,387	106,387	106,387
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	2,661	2,661	2,661	2,661	2,661
385	385	385	385	275	93	93	86	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	2,356,545	2,303,157	2,303,157	2,303,157	2,303,157
35	16	10	7	6	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	304,897	304,897	304,325	299,799	271,274
57	57	57	57	57	57	57	57	46	39	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	152,197	152,197	152,197	152,197	152,197
546	**527**	**521**	**517**	**406**	**220**	**220**	**209**	**113**	**95**	**60**	**44**	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			**-**	**3,488,863**	**3,435,475**	**3,434,903**	**3,430,377**	**3,401,852**
3	3	3	3	3	3	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	64,552	64,552	64,552	64,552	64,552
1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	1,977	1,977	1,977	1,977	1,977
57	57	57	57	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	411,613	465,001	465,001	465,001	465,001
7	4	3	3	3	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	62,454	62,454	62,226	60,867	54,736
68	**65**	**64**	**64**	**43**	**5**	**5**	**4**	**4**	**3**	**2**	**2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			**-**	**540,596**	**593,984**	**593,756**	**592,397**	**586,266**
27	27	27	27	25	25	25	25	21	21	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	618,234	497,523	497,523	497,523
21	21	21	21	20	20	20	17	17	13	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	577,532	418,242	418,242	418,242
24	24	24	24	24	24	24	24	24	24	24	24	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	67,894	67,894	67,894	67,894
1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	10,395	10,395	10,395	10,395
370	370	370	370	357	318	82	52	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	1,798,912	1,804,151	1,804,151	1,804,151
156	136	86	46	14	9	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	596,919	596,919	596,459	593,836
18	18	18	18	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	53,016	53,016	53,016	53,016
617	**597**	**547**	**507**	**458**	**414**	**174**	**120**	**77**	**58**	**38**	**24**	**23**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			**-**	**-**	**3,722,902**	**3,448,140**	**3,447,680**	**3,445,057**
1,862	**1,773**	**1,582**	**1,494**	**1,219**	**945**	**692**	**546**	**386**	**348**	**284**	**184**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**			**3,119,882**	**7,145,240**	**10,868,050**	**10,543,556**	**10,536,386**	**10,496,665**

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85,119	85,102	85,102	85,102	78,989	78,726	78,726	78,476	78,476	78,445	28,426	28,426	28,426	28,426	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
143,732	143,657	143,657	143,657	132,472	125,651	125,651	122,949	122,949	122,662	45,442	45,442	45,442	45,442	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65,698	65,698	65,698	65,698	65,698	65,698	65,698	65,698	65,698	65,698	65,698	65,698	62,534	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,659,705	1,659,705	1,581,164	1,454,662	1,134,788	1,117,463	371,683	371,683	371,683	319,623	266,462	266,462	266,462	266,462	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71,527	71,527	71,527	71,527	71,527	15,611	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
207,306	207,306	207,306	207,306	207,306	207,306	183,806	183,806	183,806	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
283,809	97,476	13,086	13,086	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,326	2,326	1,614	1,614	1,461	1,461	1,461	1,461	561	479	479	479	479	479	479	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40,750	40,750	40,750	40,750	40,750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,559,972	**2,373,547**	**2,209,904**	**2,083,402**	**1,732,991**	**1,611,916**	**827,025**	**824,073**	**823,173**	**586,907**	**406,507**	**406,507**	**403,343**	**340,809**	**479**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
17,921	17,921	17,921	17,921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22,927	22,921	22,921	22,921	22,597	22,583	22,583	22,554	22,554	22,531	8,074	8,074	8,074	8,074	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,496	1,492	1,492	1,492	1,265	1,255	1,255	1,217	1,217	1,212	506	506	506	506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
645	645	645	645	645	645	645	645	645	645	645	645	645	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76,159	76,159	76,159	76,159	76,159	76,159	76,159	53,311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31,501	31,501	31,501	31,501	31,501	8,603	8,603	8,603	8,603	7,073	1,477	1,477	1,477	1,477	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
218,544	218,544	218,544	218,544	218,544	218,544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
369,193	**369,183**	**369,183**	**369,183**	**350,711**	**327,789**	**109,245**	**86,330**	**33,019**	**31,461**	**10,702**	**10,702**	**10,702**	**10,057**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
90,118	90,118	90,118	90,118	90,118	78,912	78,912	78,912	78,912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37,018	37,018	43,544	34,798	2,770	-1,029	-6,647	-6,647	-6,647	-6,610	-6,473	-6,473	-6,473	-6,473	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,188	7,188	7,188	7,188	7,188	6,236	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
134,324	**134,324**	**140,850**	**132,104**	**100,076**	**84,119**	**72,265**	**72,265**	**72,265**	**-6,610**	**-6,473**	**-6,473**	**-6,473**	**-6,473**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
566,176	566,176	566,100	566,100	563,582	556,623	556,303	556,303	553,377	474,334	474,334	206,315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106,387	106,387	106,387	106,387	106,387	106,387	106,387	106,387	106,387	106,387	106,387	106,387	106,387	103,334	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,661	2,661	2,661	2,661	2,661	2,256	2,256	2,206	2,206	2,206	2,206	2,206	2,206	2,206	2,206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,223,286	2,223,286	2,223,286	2,223,286	2,223,286	2,223,070	1,640,538	496,047	496,047	384,648	1,419	1,419	1,419	1,419	1,419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
244,731	190,426	142,537	55,670	30,034	18,117	16,037	4,335	4,335	4,335	4,335	4,335	4,335	4,335	1,411	805	805	805	805	805	-	-	-	-	-	-	-	-	-	-
152,197	152,197	152,197	152,197	152,197	152,197	152,197	152,197	152,197	152,197	132,706	121,775	41,339	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,295,438	**3,241,133**	**3,193,168**	**3,106,301**	**3,078,147**	**3,058,650**	**2,473,718**	**1,317,475**	**1,314,549**	**1,124,107**	**721,387**	**442,437**	**155,686**	**111,294**	**5,036**	**805**	**805**	**805**	**805**	**805**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
64,552	64,552	64,546	64,546	64,637	64,677	64,734	64,734	64,572	55,772	55,772	21,954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,977	1,977	1,977	1,977	1,977	1,977	1,977	1,977	1,977	1,977	1,977	1,977	1,977	1,914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
465,001	465,001	465,001	418,628	418,628	418,488	323,144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47,037	36,971	27,950	13,536	9,586	8,002	7,371	2,062	2,062	2,062	2,062	2,062	2,062	2,062	679	392	392	392	392	392	-	-	-	-	-	-	-	-	-	-
578,567	**568,501**	**559,474**	**498,687**	**494,828**	**493,144**	**397,226**	**68,773**	**68,611**	**59,811**	**59,811**	**25,993**	**4,039**	**3,976**	**679**	**392**	**392**	**392**	**392**	**392**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
497,523	497,523	497,523	497,518	497,518	496,295	485,905	485,828	485,828	485,790	412,946	412,946	48,362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
418,242	418,242	418,242	418,234	418,234	418,234	410,619	409,904	409,904	346,108	346,108	268,077	212,470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
67,894	67,894	67,894	67,894	67,894	67,894	67,894	67,894	67,894	67,894	67,894	67,894	67,894	66,556	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10,395	10,395	10,395	10,395	10,395	10,395	9,340	9,340	9,340	9,340	9,081	8,926	8,926	8,926	8,926	8,926	3,584	3,584	3,584	3,584	3,584	-	-	-	-	-	-	-	-	-
1,804,151	1,769,421	1,769,421	1,769,421	1,768,934	1,768,934	1,708,458	1,526,936	626,483	532,243	160,166	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
589,079	556,009	484,942	410,443	247,531	127,009	40,499	25,235	16,215	6,815	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53,016	53,016	53,016	53,016	53,016	53,016	53,016	53,016	53,016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,440,300	**3,372,500**	**3,301,433**	**3,226,921**	**3,063,522**	**2,941,777**	**2,775,731**	**2,578,153**	**1,668,680**	**1,448,190**	**996,195**	**757,843**	**337,652**	**76,820**	**75,482**	**8,926**	**3,584**	**3,584**	**3,584**	**3,584**	**3,584**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10,377,794	**10,059,188**	**9,774,012**	**9,416,598**	**8,820,275**	**8,517,395**	**6,655,210**	**4,947,069**	**3,980,297**	**3,243,866**	**2,188,129**	**1,637,009**	**904,949**	**536,483**	**81,676**	**10,123**	**4,781**	**4,781**	**4,781**	**4,781**	**3,584**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Net Verified Energy Savings

Net Verified Peak Demand Savings

Net Verified Savings

Net Verified Annual Peak Demand Savings (kW)

2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	10	10	10	10	10	10	10	10	10	8	8	8	8	8	8	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	15	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
249	249	247	247	247	247	239	239	214	189	121	115	104	104	104	95	85	85	85	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	22	16	16	16	16	16	16	16	16	16	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	66	34	34	34	34	34	34	34	34	34	34	31	31	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	44	44	44	44	44	44	11	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	5	5	5	5	5	5	5	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
475	471	431	413	397	397	389	356	321	296	224	201	183	183	183	143	125	125	121	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	5	5	5	5	5	5	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	1	1	1	16	16	16	16	16	16	16	16	16	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	9	9	9	9	9	9	9	9	9	9	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	32	32	32	32	32	32	32	32	32	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	16	48	48	63	63	63	63	63	63	58	51	19	14	3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	12	12	12	12	12	12	12	12	12	12	8	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-3	-3	-1	-	-	-	8	8	11	8	1	-	-2	-2	-2	-2	-2	-2	-2	-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-10	-6	-	2	2	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-1	3	11	14	14	14	22	22	25	22	15	10	6	6	6	-2	-2	-2	-2	-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	37	37	37	37	37	37	37	37	37	37	35	35	35	35	30	30	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	396	385	385	385	385	372	372	372	372	372	372	266	90	90	83	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	58	58	58	57	54	51	42	33	15	9	6	6	2	2	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	29	25	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	560	549	549	548	545	529	520	511	493	487	482	376	196	196	184	94	73	44	31	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	44	55	55	55	55	55	55	55	55	55	55	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	12	12	12	12	11	10	9	7	4	3	3	3	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	61	72	72	72	71	70	69	67	64	63	63	42	6	6	6	6	3	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	43	35	35	35	35	35	35	35	35	35	33	33	33	33	28	28	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	40	29	29	29	29	29	29	29	29	29	27	27	27	23	23	18	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	420	421	421	421	421	414	414	414	414	414	399	355	92	58	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	146	146	146	145	145	140	129	113	71	38	12	7	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	679	661	661	660	660	648	637	621	579	546	500	451	185	135	86	65	36	19	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
490	1,111	1,790	1,757	1,755	1,750	1,733	1,678	1,624	1,559	1,426	1,353	1,126	856	579	469	312	267	204	143	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Progress Report

For: Niagara-on-the-Lake Hydro Inc.

#	Programs	Unit of Measure	Participation Forecasted (#) 2015	2016	2017	2018	2019	2020	Total	Participation Verified (#) 2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Progress vs Forecast (%) Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Participation Group	Net Incremental 2020 Annual Energy Savings Forecasted (kWh) 2015	2016	2017	2018	2019	2020	Total	Verified (kWh) 2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results
2015-2020 Conservation First Framework Programs																																						
Residential Province-Wide Programs																																						
1	Save on Energy Coupon Program	Products	-	-	-	-	-	-	-	-	-	-	-	21,107	2,390	23,497	20,272	43,769	#VALUE!			#VALUE!		-	-	-	-	-	-	-	-	-	-	566,176	64,552	630,728	497,523
2	Save on Energy Instant Discount Program	Products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,765	15,765						-	-	-	-	-	-	-	-	-	-	-	-	-	418,242
3	Save on Energy Heating & Cooling Program	Equipment	-	-	-	-	-	-	-	-	-	-	-	224	2	226	79	305						-	-	-	-	-	-	-	-	-	-	106,387	1,977	108,364	67,894
4	Save on Energy New Construction Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Save on Energy Home Assistance Program	Homes	1	1	-	-	-	-	2	-	-	-	-	1	-	1	5	6	-	300		400		2,326	2,661	-	-	-	-	4,987	-	-	-	-	2,661	-	2,661	10,395
Sub-total: Residential Province-Wide Programs																								2,326	2,661	-	-	-	-	4,987	-	-	-	-	675,224	66,529	741,753	994,054
Business Province-Wide Programs																																						
6	Save on Energy Audit Funding Program	Projects	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-			-		76,159	-	-	-	-	-	76,159	-	-	-	-	-	-	-	-
7	Save on Energy Retrofit Program	Projects	1	1	49	21	17	9	98	-	-	-	-	53	2	55	45	100	-	5,500	92	5,592		1,747,175	2,303,157	1,737,959	734,038	603,524	285,591	7,411,444	-	17,921	-	17,921	2,303,157	465,001	2,768,158	1,804,151
8	Save on Energy Small Business Lighting Program	Projects	1	1	104	43	12	-	161	-	-	-	-	48	1	49	106	155	-	4,900	102	5,002		71,527	271,274	290,157	124,958	39,182	-	797,098	-	-	-	-	271,274	54,736	326,010	593,836
9	Save on Energy High Performance New Construction Program	Projects	1	1	1	1	1	2	7	-	-	-	-	4	-	4	1	5	-	400	100	500		425,850	152,197	57,000	57,000	57,000	114,000	863,047	-	-	-	-	152,197	-	152,197	53,016
10	Save on Energy Existing Building Commissioning Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Save on Energy Business Refrigeration Incentive Program	Projects	-	-	20	30	-	-	50	-	-	-	-	-	-	-	-	-			-	-		-	-	98,400	147,600	-	-	246,000	-	-	-	-	-	-	-	-
12	Save on Energy Process & Systems Upgrades Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Save on Energy Energy Manager Program	Projects	1	-	-	140	50	-	191	-	-	-	-	-	-	-	-	-	-			-		283,809	-	-	133,000	47,500	-	464,309	-	-	-	-	-	-	-	-
14	Save on Energy Monitoring & Targeting Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Save on Energy Retrofit Program – P4P	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Save on Energy Process & Systems Upgrades Program - P4P	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Business Province-Wide Programs																								2,604,520	2,726,628	2,183,516	1,196,596	747,206	399,591	9,858,057	-	17,921	-	17,921	2,726,628	519,737	3,246,365	2,451,003
Local & Regional Programs																																						
17	Adaptive Thermostat Local Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Business Refrigeration Incentives Local Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Conservation on the Coast Home Assistance Local Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Conservation on the Coast Small Business Lighting Local Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	First Nations Conservation Local Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	High Efficiency Agricultural Pumping Local Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Instant Savings Local Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	OPsaver Local Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Pool Saver Local Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	PUMPsaver Local Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	RTUsaver Local Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Social Benchmarking Local Program	Participants	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Local & Regional Programs																								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LDC Innovation Fund Pilot Programs																																						
29	Air Source Heat Pump – For Residential Space Heating LDC Innovation Fu	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Air Source Heat Pump – For Residential Water Heating LDC Innovation Fu	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Block Heater Timer LDC Innovation Fund Pilot Program	Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Commercial Energy Management and Load Control (CEMLC) LDC Innovat	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	Conservation Cultivator LDC Innovation Fund Pilot Program	Projects	1	-	-	-	-	-	1	-	-	-	-	4	4	-	-	4	400			400		187,000	-	-	-	-	-	187,000	-	-	90,118	90,118	-	-	-	-
34	Data Centre LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	Electronics Take Back LDC Innovation Fund Pilot Program	Equipment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Energy Reinvestment LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	Home Energy Assessment & Retrofit LDC Innovation Fund Pilot Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Hotel/Motel LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Intelligent Air Technology LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	OPsaver LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	PUMPsaver LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Residential Direct Install LDC Innovation Fund Pilot Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Residential Direct Mail LDC Innovation Fund Pilot Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	Residential Ductless Heat Pump LDC Innovation Fund Pilot Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	Retrocommissioning LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	RTUsaver LDC Innovation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	Small & Medium Business Energy Management System LDC Innovation F	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	Solar Powered Attic Ventilation LDC Innovation Fund Pilot Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	Toronto Hydro – Enbridge Joint Low-Income Program LDC Innovation Fu	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	Truckload Event LDC Innovation Fund Pilot Program	Products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: LDC Innovation Fund Pilot Programs																								187,000	-	-	-	-	-	187,000	-	-	90,118	90,118	-	-	-	-
Centrally Delivered Programs																																						
51	Industrial Accelerator Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52	Save on Energy Energy Performance Program for Multi-Site Customers	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53	Whole Home Pilot Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Centrally Delivered Programs																								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Enabled Savings																																						
54	Save on Energy Retrofit Program Enabled Savings	Claims	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	Save on Energy High Performance New Construction Program Enabled S	Claims	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56	Save on Energy Process & Systems Upgrades Program Enabled Savings	Claims	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Program Enabled Savings																								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other																																						
57	Non-Approved Program	Various	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	Unassigned Program	Various	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Other																								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: 2015-2020 Conservation First Framework																								2,791,846	2,729,289	2,183,516	1,196,596	747,206	399,591	10,050,044	-	17,921	90,118	108,039	3,401,852	586,266	3,988,118	3,445,057
Conservation Fund																																						
59	Conservation Voltage Reduction Conservation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	EnerNOC Conservation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	Home Depot Home Appliance Market Uplift Conservation Fund Pilot Pro	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
62	Loblaw P4P Conservation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	Ontario Clean Water Agency P4P Conservation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	Performance Based Conservation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Social Benchmarking Conservation Fund Pilot Program	Participants	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	Strategic Energy Group Conservation Fund Pilot Program	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Conservation Fund																								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011-2014+2015 Extension Legacy Framework Programs																																						
Residential Program																																						
67	Appliance Retirement Initiative	Appliances	-	-	-	-	-	-	-	8	-	-	8	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	Coupon Initiative	Products	1	1	9,000	9,000	9,000	7,500	34,502	3,549	938	-	4,487	-	-	-	-	4,487	448,700	-	-	50		253,274	566,176	260,280	260,280	260,280	216,900	1,817,190	85,119	22,927	-	108,046	-	-	-	-
69	Bi-Annual Retailer Event Initiative	Products	-	-	-	-	-	-	-	6,102	67	-	6,169	-	-	-	-	6,169						-	-	-	-	-	-	-	143,732	1,496	-	145,228	-	-	-	-
70	HVAC Incentives Initiative	Equipment	1	1	70	120	50	-	242	174	1	-	175	-	-	-	-	175	17,500	-	-	243		66,343	106,387	27,895	53,422	25,528	-	279,575	65,698	645	-	66,343	-	-	-	-
71	Residential New Construction and Major Renovation Initiative	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Residential Program																								319,617	672,563	288,175	313,702	285,808	216,900	2,096,765	294,549	25,068	-	319,617	-	-	-	-
Commercial & Institutional Program																																						
72	Energy Audit Initiative	Projects	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-						-	-	-	-	-	-	-	-	76,159	-	76,159	-	-	-	-
73	Efficiency: Equipment Replacement Incentive Initiative	Projects	-	-	-	-	-	-	-	70	8	3	81	-	-	-	-	81						-	-	-	-	-	-	-	1,697,753	31,501	-1,029	1,728,225	-	-	-	-
74	Direct Install Lighting and Water Heating Initiative	Projects	-	-	-	-	-	-	-	47	-	-	47	-	-	-	-	47						-	-	-	-	-	-	-	71,527	-	7,188	78,715	-	-	-	-
75	New Construction and Major Renovation Initiative	Projects	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	1						-	-	-	-	-	-	-	207,306	218,544	-	425,850	-	-	-	-
76	Existing Building Commissioning Incentive Initiative	Projects	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	1						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Commercial & Institutional Program																								-	-	-	-	-	-	-	1,976,586	326,204	6,159	2,308,949	-	-	-	-
Industrial Program																																						
77	Process and Systems Upgrades Initiatives - Project Incentive Initiative	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
78	Process and Systems Upgrades Initiatives - Energy Manager Initiative	Projects	-	-	-	-	-	-	-	5	-	-	5	-	-	-	-	5						-	-	-	-	-	-	-	283,809	-	-	283,809	-	-	-	-
79	Process and Systems Upgrades Initiatives - Monitoring and Targeting Init	Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total: Industrial Program																								-	-	-	-	-	-	-	283,809	-	-	283,809	-	-	-	-
Low Income Program																																						
80	Low Income Initiative	Homes	-	-	-	-	-	-	-	2	-	-	2	-	-	-	-	-						-	-	-	-	-	-	-	2,326	-	-	2,326	-	-	-	-
Sub-total: Low-Income Program																								-	-	-	-	-	-	-	2,326	-	-	2,326	-	-	-	-
Other																																						
81	Aboriginal Conservation Program	Homes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82	Program Enabled Savings	Claims	1	-	-	-	-	-	1	1	-	-	1	-	-	-	-	1	100			100		40,750	-	-	-	-	-	40,750	40,750	-	-	40,750	-	-	-	-
Sub-total: Other																								40,750	-	-	-	-	-	40,750	40,750	-	-	40,750	-	-	-	-
Sub-total: 2011-2014+2015 Extension Legacy Framework																								360,367	672,563	288,175	313,702	285,808	216,900	2,337,515	2,598,020	351,272	6,159	2,955,451	-	-	-	-
Total																								3,152,213	3,401,852	2,471,691	1,510,298	1,033,014	616,491	12,387,559	2,598,020	369,193	96,277	3,063,490	3,401,852	586,266	3,988,118	3,445,057

Total	Progress (%)				2015-2020 CFF LDC CDM Plan Allocated Target (kWh)	Progress versus Target (%)
	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total		
1,128,251						
418,242						
176,258						
-						
13,056	-	100		262		
1,735,807	-	27.875		34.807		
-	-			-		
4,590,230	1	120	104	79		
919,846	-	120	205	145		
205,213	-	100	93	92		
-						
-			-	-		
-						
-	-			-		
-						
-						
-						
5,715,289	1	119	112	76		
-						
-						
-			

Total	Progress (%)				Net Incremental First Year Energy Savings	Net Incremental First Year Peak Demand Savings																			Net-to-Gross Adjustment - Energy																				Net-to-Gross Adjustment - Energy	Net-to-Gross
	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total		Forecasted (kW)							Verified (kW)								Progress (%)				Forecasted (%)							Verified (%)								Comparison (%)					Forecasted (%)	
						2015	2016	2017	2018	2019	2020	Total	2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total	2015	2016	2017	2018	2019	2020	Total	2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total			
1,248,962						-	-	-	-	-	-	-	-	-	-	-	37	4	41	43	84																												
577,532						-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	40																												
176,258						-	-	-	-	-	-	-	-	-	-	-	32	1	33	19	52																												
-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																												
13,056	-	100		262		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1																												
2,015,808	-	27,875		40,421		-	-	-	-	-	-	-	-	-	-	-	69	5	74	103	177					100	100																						
-	-			-		16	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-			-																								
4,584,991	1	120	104	79		256	385	293	119	101	44	1,196	-	5	-	5	396	44	440	420	865	2	114	144	93	100																								
964,270	-	135	206	152		16	54	41	18	6	-	135	-	-	-	-	58	12	70	146	216	-	130	356	195	100	100	72	73	72	72		100			97	97	97	90	-	-3	18		100	100		
205,213	-	100	93	32		66	37	18	18	18	36	193	-	-	-	-	37	-	37	10	47	-	100	56	33	100	100	94	94	94					103	103	103	83		3	-11		100	100		
-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					100	100	54	54	54	54					64		64	57		-36	3		100	100		
-				-		-	-	12	18	-	-	30	-	-	-	-	-	-	-	-	-			-	-			82	82																		
-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																												
-	-			-		44	-	-	15	5	-	64	-	-	-	-	-	-	-	-	-	-			-		100		95	95																		
-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																												
-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																												
-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																												
5,754,474	1	121	112	77		398	476	362	188	130	80	1,634	-	5	-	5	491	56	547	576	1,128	1	115	159	91																								
-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

s Adjustment - Peak Demand

					Verified (%)									Comparison (%)			
2017	2018	2019	2020	Total	2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total
									148	133	146	130					
												138					
									73	100	73	79					
												100					
73	76	74	75			100		100	97	96	96	112		-	-4	39	
93	95	100							95	92	95	83			-5	-10	
53	53	53	54						65		65	56			-35	3	
86	86																
	94	83															
							100	100						-			
					100			100									
100	100	100	100		200	100		175						75			
					167			167									
51	49	45			45	-		45						-55			
					83	100		84									
					68	75	100	68									
					87		91	84									
					50			50									
					90			90									
					81			81									
					100			100						-			

Net-to-Gross Adjustment - Peak Demand

Realization Rate - Energy / Realization Rate - Peak Demand

Realization Rate - Energy: Verified (%)									Realization Rate - Peak Demand: Verified (%)								
2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total
				163	177	164	274						167	150	165	275	
							88									88	
				112	112	112	109						110	100	110	71	
				65		65	70						-		-	17	
	101		101	97	105	98	102			100		100	96	131	99	110	
				74		90	87						53		64	67	
				123		123	114						121		121	113	
		48	48														
100			100						100			100					
100	102		100						100	50		80					
100	97		100						100			100					
100	116		100						100			101					
100			107						100			106					
104	105	-508	103						79	80	-100	78					
68			43						58			37					
113			113						73			73					
100			100						143			143					
101			101						117			117					
80			80														
102			102						100			100					

Gross Incremental First Year Energy Savings

Forecasted (kWh)					
2015	2016	2017	2018	2019	2020
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
2,326	2,661	-	-	-	-
2,326	2,661	-	-	-	-
76,159	-	-	-	-	-
1,747,175	2,303,157	2,411,692	1,001,062	836,880	396,441
71,527	271,274	308,677	132,934	41,683	-
425,850	152,197	105,555	105,555	105,555	211,111
-	-	-	-	-	-
-	-	120,000	180,000	-	-
-	-	-	-	-	-
283,809	-	-	140,000	50,000	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
2,604,320	2,726,628	2,945,924	1,559,551	1,034,118	607,552
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
187,000	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
187,000	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
2,793,846	2,729,289	2,945,924	1,559,551	1,034,118	607,552
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
253,274	566,176	260,280	260,280	260,280	216,900
-	-	-	-	-	-
66,343	106,387	58,654	113,130	54,476	-
-	-	-	-	-	-
319,617	672,563	318,934	373,410	314,756	216,900
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
40,750	-	-	-	-	-
40,750	-	-	-	-	-
360,367	672,563	318,934	373,410	314,756	216,900
3,154,213	3,401,852	3,264,858	1,932,961	1,348,874	824,452

Realization Rate - Peak Demand

Total	Verified (kWh)									Progress (%)				Gross Incremental First Year Energy Savings	Gross Incremental First Year Peak Demand Savings								Verified (kW)								Progress (%)				Gross Incremental First Year Peak Demand Savings	Savings Group	Participant Incentive Spending							
	2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total		Forecasted (kW) 2015	2016	2017	2018	2019	2020	Total	2015 Verified 2015 Results	2016 Verified 2015 Results Adjustments	2017 Verified 2015 Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total			Forecasted (S) 2015	2016	2017	2018	2019	2020	Total	Verified (S 2015 Verified 2015 Results
-	-	-	-	-	378,082	43,107	421,189	479,095	900,284						-	-	-	-	-	-	-	-	-	25	3	28	33	63								-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	433,191	433,191						-	-	-	-	-	-	-	-	-	-	-	-	-	29	29								-	-	-	-	-	-	-	-
-	-	-	-	-	150,667	2,797	153,464	87,201	240,665						-	-	-	-	-	-	-	-	-	44	1	45	24	69								-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-	-
4,987	-	-	-	-	2,661	-	2,661	10,395	13,056	-	100		242		-	-	-	-	-	-	-	-	-	-	-	-	-	1	1								-	1,421	-	-	-	-	1,421	-
4,987	-	-	-	-	531,410	45,904	577,314	1,009,842	1,587,156	-	21,695		21,937		-	-	-	-	-	-	-	-	-	-	-	-	69	4	73	87	160								-	1,421	-	-	-	-	1,421	-
76,139	-	-	-	-	-	-	-	-	-				-		16	-	-	-	-	-	16	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-	-
8,496,407	-	17,921	-	17,921	2,431,204	424,654	2,855,858	2,007,149	4,879,928	1	124	83	79		256	385	396	157	137	59	1,390	-	-	5	-	5	410	46	456	375	836		2	118	95	81			-	159,156	280,500	108,000	97,000	40,500	685,156	-
826,095	-	-	-	-	297,014	60,840	357,854	719,798	1,077,652	-	132	233	163		16	54	44	19	6	-	139	-	-	-	-	-	61	13	74	176	250		-	137	400	219			-	48,093	103,200	33,400	7,850	-	192,543	-
1,103,823	-	-	-	-	237,108	-	237,108	93,636	330,744	-	156	89	48		66	37	34	34	34	67	272	-	-	-	-	-	57	-	57	18	75		-	154	53	55			-	6,074	5,000	5,000	5,000	10,000	31,074	-
	-	-	-	-	-	-	-	-	-				-		-	-	14	21	-	-	35	-	-	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-	-
300,000	-	-	-	-	-	-	-	-	-			-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-	-	25,000	37,500	-	-	62,500	-
	-	-	-	-	-	-	-	-	-				-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-	-
473,809	-	-	-	-	-	-	-	-	-	-			-		44	-	-	16	6	-	66	-	-	-	-	-	-	-	-	-	-		-						-	-	-	39,900	15,000	-	54,900	-
	-	-	-	-	-	-	-	-	-				-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-				-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-				-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-	-
11,478,293	-	17,921	-	17,921	2,945,976	485,494	3,450,820	2,815,583	6,284,324	1	127	99	76		338	476	488	247	183	126	1,918	-	5	-	5	928	59	987	549	1,161		1	123	117	85			-	213,323	413,700	223,800	124,850	50,500	1,026,173	-
	-	-	-	-	-	-	-	-	-				-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								-	-	-	-	-	-	-

)							Progress (%)			
2016 Verified 2015 Results Adjustments	2017 Verified 2015 Results Adjustments	Total Verified 2015 Results	2016 Verified 2016 Results	2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total	Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total
-	-	-	34,037	-	34,037	82,002	116,039				
-	-	-	-	-	-	19,871	19,871				
-	-	-	55,150	-	55,150	19,050	74,200				
-	-	-	-	-	-	-	-				
-	-	-	1,421	-	1,421	8,070	9,491		100		668
-	-	-	90,608	-	90,608	128,993	219,601		6,376		15,454
-	-	-	-	-	-	-	-				
-	-	-	159,156	-	159,156	216,492	375,648		100	77	85
-	-	-	48,093	-	48,093	125,129	173,222		100	121	114
-	-	-	6,074	-	6,074	18,302	24,376		100	366	220
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-			-	-
-	-	-	-	-	-	10,000	10,000				
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-				
-	-	-	213,323	-	213,323	369,923	583,246		100	89	93
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-				
-	-	-	-	-	-	-	-

2017 Verified 2016 Results Adjustments	Total Verified 2016 Results	2017 Verified 2017 Results	Total
-	3,338	7,485	10,823
-	-	931	931
-	1,651	648	2,299
-	-	-	-
-	-	-	-
-	4,989	9,064	14,053

Progress (%)			
Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total

IESO Value Added Service Provider Cost / Variable Program Cost Administrative Expense Spending

Total Administrative Expense Spending

Forecasted ($)

2015	2016	2017	2018	2019	2020	Total
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	2,970	-	-	-	-	2,970
-	2,970	-	-	-	-	2,970
-	-	-	-	-	-	-
-	91,000	148,000	164,000	160,000	159,000	722,000
-	8,000	20,446	15,932	7,638	2,000	54,016
-	1,700	6,500	6,500	6,500	6,500	27,700
-	-	-	-	-	-	-
-	-	1,500	1,000	1,000	2,000	5,500
-	-	-	-	-	-	-
-	8,100	350	350	-	-	8,800
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	108,800	176,796	187,782	175,138	169,500	818,016

Total	Progress (%) Total Verified 2015 Results	Total Verified 2016 Results	2017 Verified 2017 Results	Total	2015-2020 CFF LDC CDM Plan Allocated Budget ($)	Progress versus Budget (%)	Total 2015 2020 CFF LDC CDM Plan Budget Spending	Spending Group
132,378								
20,807								
78,649								
-								
15,390		100		350				
247,219		2,342		5,630				
393								
574,380		100	76	85				
199,638		100	116	111				
29,867		100	192	155				
1								
-			-	-				
13,400								
8,100		100	-	96				
-								
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825,777		100	85	90				
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1,072,996		110	110	117				
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1,072,996		100	96	98	2,993,633	36		