File Number: EB-2015-0083

Date Filed: June 1, 2015

Exhibit 3

OPERATING REVENUE

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Date Filed: June 1, 2015

Exhibit 3

Tab 1 of 3

Load and Revenue Forecasts

Load and Revenue Forecasts

LOAD AND REVENUE FORECASTS

An explanation of the causes, assumptions and adjustments for the volume forecast as well as the weather normalization methodology can be found in the Weather Normalized Distribution System Load Forecast: 2016-2020 Custom IR report prepared by Elenchus Research Associates Inc. (Elenchus) filed under Exhibit 3 Tab 1 Schedule 2 Attachment 1.

Kingston Hydro provided Elenchus with monthly class specific retail data from January 2010 to December 2014 exclusive of distribution system losses. Average annual customer counts were calculated by Elenchus using the monthly class specific data. As explained in the report, Elenchus selected the Multivariate Regression Model method for the forecast, as this approach yielded the most reasonable results given the data available.

The load forecast model developed by Elenchus includes the persistence of historical CDM programs and the impact of new CDM programs in the bridge and test years by rate class based on the CDM targets approved by the Board.

In accordance with the latest Chapter 2 Filing Requirements, the Appendix 2-IA Summary and Variances of Actual and Forecast Data is included as Attachment 1 to this section (Exhibit 3 Tab 1 Schedule 1).

In summary, the results of this load forecast are reasonable and consistent with recent and historical experience and in line with overall expectations for the 2016-2020 Test Years.

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OEB Appendix2-IA

Appendix 2-IA
Summary and Variances of Actual and Forecast Data

Replace "Rate Class #" with the appropriate rate classification.

	2011 Board Approved	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2014 Weather Normalized	2015 Bridge Forecast CDM Adjusted	2016 Test Forecast CDM Adjusted	2017 Test Forecast CDM Adjusted	2018 Test Forecast CDM Adjusted	2019 Test Forecast CDM Adjusted	2020 Test Forecast CDM Adjusted
Residential												
# of Customers	23,386	23,212	23,193	23,468	23,853	23,853	24,004	24,157	24,311	24,466	24,622	24,779
kWh	194,606,362	191,104,338	184,953,209	189,348,696	192,061,408	189,757,911	187,160,982	183,959,618	180,751,226	177,434,297	174,038,354	170,554,076
Variance Analysis (relative to 2011 Board Approved Figures)												
# of Customers		-0.74%	-0.83%	0.35%	2.00%	2.00%	2.64%	3.30%	3.96%	4.62%	5.28%	5.95%
kWh		-1.80%	-4.96%	-2.70%	-1.31%	-2.49%	-3.83%	-5.47%	-7.12%	-8.82%	-10.57%	-12.36%
GS<50*												
# of Customers	3,244	3,298	3,250	3,213	3,051	3,051	3,000	2,950	2,901	2,853	2,805	2,758
kWh	93,096,784	93,008,635	88,608,641	86,375,577	91,470,555	92,820,328	96,172,824	93,395,362	90,657,781	87,909,490	85,166,503	82,425,355
Variance Analysis (relative to 2011 Board Approved Figures)												
# of Customers		1.66%	0.18%	-0.96%	-5.94%	-5.94%	-7.51%	-9.05%	-10.57%	-12.07%	-13.54%	-14.98%
kWh		-0.09%	-4.82%	-7.22%	-1.75%	-0.30%	3.30%	0.32%	-2.62%	-5.57%	-8.52%	-11.46%
***NOTE: GS<50 Customer Count for 2010-2013 has been increased by 53 due to Reclassification of 53 customers that occurred in Jan 2014**												
GS>50**												
# of Customers	347	291	307	318	325	325	331	337	343	350	357	364
kWh	259,610,762	273,712,584	274,473,668	279,458,000	272,498,127	272,478,959	272,253,779	271,033,959	269,787,738	268,358,409	266,781,651	265,034,716
kW	701,859	766,581	781,260	767,156	743,905	743,853	743,238	739,908	736,506	732,604	728,299	723,530
Variance Analysis (relative to 2011 Board Approved Figures)												
# of Customers		-16.14%	-11.65%	-8.43%	-6.48%	-6.48%	-4.70%	-2.87%	-1.01%	0.88%	2.81%	4.78%
kWh		5.43%	5.73%	7.64%	4.96%	4.96%	4.87%	4.40%	3.92%	3.37%	2.76%	2.09%
kW		9.22%	11.31%	9.30%	5.99%	5.98%	5.90%	5.42%	4.94%	4.38%	3.77%	3.09%
****NOTE: GS>50 Customer Count for 2011-2013 has been reduced by 53 due to Reclassification of 53 customers that occurred in Jan 2014**												
Large User												
# of Customers	3	3	3	3	3	3	3	3	3	3	3	3
kWh	152,017,673	154,491,718	155,448,435	153,943,746	151,518,193	153,957,083	153,805,000	153,400,986	152,672,282	151,872,625	151,021,736	150,106,113
kW	297,737	294,114	323,212	291,732	286,452	291,063	290,775	290,012	288,634	287,122	285,513	283,782
Variance Analysis (relative to 2011 Board Approved Figures)												
# of Customers		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
kWh		1.63%	2.26%	1.27%	-0.33%	1.28%	1.18%	0.91%	0.43%	-0.10%	-0.66%	-1.26%
kW		-1.22%	8.56%	-2.02%	-3.79%	-2.24%	-2.34%	-2.59%	-3.06%	-3.57%	-4.11%	-4.69%
Street Light												
# of Connections	5,155	5,120	5,126	5,385	5,228	5,228	5,337	5,349	5,361	5,373	5,385	5,397
kWh	4,024,186	4,142,238	4,555,371	3,336,835	1,817,917	1,817,917	1,814,577	1,818,158	1,821,740	1,825,321	1,828,903	1,832,484
kW	11,336	11,237	10,984	8,304	5,045	5,045	5,036	5,046	5,056	5,066	5,076	5,086
Variance Analysis (relative to 2011 Board Approved Figures)												
# of Connections		-0.69%	-0.56%	4.46%	1.42%	1.42%	3.52%	3.75%	3.99%	4.22%	4.45%	4.68%
Unmetered Scattered Load												
# of Connections	164	156	152	151	147	147	143	141	138	135	132	129
kWh	2,275,040	1,517,655	1,484,560	1,499,820	1,247,036	1,247,036	1,221,326	1,196,145	1,171,483	1,147,330	1,123,675	1,100,508
Variance Analysis (relative to 2011 Board Approved Figures)												
# of Connections		-5.18%	-7.32%	-8.03%	-10.67%	-10.67%	-12.51%	-14.32%	-16.08%	-17.81%	-19.51%	-21.17%
kWh		-33.29%	-34.75%	-34.08%	-45.19%	-45.19%	-46.32%	-47.42%	-48.51%	-49.57%	-50.61%	-51.63%

Totals

Customers	26,980	26,804	26,752	27,002	27,231	27,231	27,339	27,448	27,559	27,672	27,786	27,903
Connections	5,319	5,275	5,278	5,536	5,375	5,375	5,480	5,489	5,498	5,507	5,517	5,526
kWh	705,630,807	717,977,169	709,523,884	713,962,674	710,613,236	712,079,234	712,428,488	704,804,228	696,862,250	688,547,472	679,960,822	671,053,252
kW from applicable classes	1,010,932	1,071,932	1,115,456	1,067,192	1,035,402	1,039,961	1,039,049	1,034,966	1,030,196	1,024,792	1,018,888	1,012,398

Totals - Variance

Customers		-0.65%	-0.84%	0.08%	0.93%	0.93%	1.33%	1.73%	2.14%	2.56%	2.99%	3.42%
Connections		-0.83%	-0.77%	4.08%	1.04%	1.04%	3.03%	3.20%	3.37%	3.54%	3.71%	3.89%
kWh		1.75%	0.55%	1.18%	0.71%	0.91%	0.96%	-0.12%	-1.24%	-2.42%	-3.64%	-4.90%
kW from applicable classes		6.03%	10.34%	5.57%	2.42%	2.87%	2.78%	2.38%	1.91%	1.37%	0.79%	0.15%

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OEB Appendix 2-IA2

Appendix 2-IA2
Summary and Variances of 2015 Bridge Year Forecast vs. 2014 Weather-Normalized and 2016-2020 Test Forecast

Replace "Rate Class #" with the appropriate rate classification.

	2015 Bridge Forecast CDM Adjusted	2014 Weather Normalized	2016 Test Forecast CDM Adjusted	2017 Test Forecast CDM Adjusted	2018 Test Forecast CDM Adjusted	2019 Test Forecast CDM Adjusted	2020 Test Forecast CDM Adjusted
Residential							
# of Customers	24,004	23,853	24,157	24,311	24,466	24,622	24,779
kWh	187,160,982	189,757,911	183,959,618	180,751,226	177,434,297	174,038,354	170,554,076
Variance Analysis (relative to 2015 Bridge Forecast)							
# of Customers		-0.63%	0.64%	1.28%	1.92%	2.57%	3.22%
kWh		1.39%	-1.71%	-3.42%	-5.20%	-7.01%	-8.87%
GS<50*							
# of Customers	3,000	3,051	2,950	2,901	2,853	2,805	2,758
kWh	96,172,824	92,820,328	93,395,362	90,657,781	87,909,490	85,166,503	82,425,355
Variance Analysis (relative to 2015 Bridge Forecast)							
# of Customers		1.70%	-1.67%	-3.31%	-4.93%	-6.51%	-8.08%
kWh		-3.49%	-2.89%	-5.73%	-8.59%	-11.44%	-14.29%
GS>50**							
# of Customers	331	325	337	343	350	357	364
kWh	272,253,779	272,478,959	271,033,959	269,787,738	268,358,409	266,781,651	265,034,716
kW	743,238	743,853	739,908	736,506	732,604	728,299	723,530
Variance Analysis (relative to 2015 Bridge Forecast)							
# of Customers		-1.88%	1.91%	3.86%	5.85%	7.87%	9.94%
kWh		0.08%	-0.45%	-0.91%	-1.43%	-2.01%	-2.65%
kW		0.08%	-0.45%	-0.91%	-1.43%	-2.01%	-2.65%
Large User							
# of Customers	3	3	3	3	3	3	3
kWh	153,805,000	153,957,083	153,400,986	152,672,282	151,872,625	151,021,736	150,106,113
kW	290,775	291,063	290,012	288,634	287,122	285,513	283,782
Variance Analysis (relative to 2015 Bridge Forecast)							
# of Customers		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
kWh		0.10%	-0.26%	-0.74%	-1.26%	-1.81%	-2.40%
kW		0.10%	-0.26%	-0.74%	-1.26%	-1.81%	-2.40%
Street Light							
# of Connections	5,337	5,228	5,349	5,361	5,373	5,385	5,397
kWh	1,814,577	1,817,917	1,818,158	1,821,740	1,825,321	1,828,903	1,832,484
kW	5,036	5,045	5,046	5,056	5,066	5,076	5,086
Variance Analysis (relative to 2015 Bridge Forecast)							
# of Connections		-2.03%	0.22%	0.45%	0.67%	0.90%	1.12%
kWh		0.18%	0.20%	0.39%	0.59%	0.79%	0.99%
kW		0.18%	0.20%	0.39%	0.59%	0.79%	0.99%
Unmetered Scattered Load							
# of Connections	143	147	141	138	135	132	129
kWh	1,221,326	1,247,036	1,196,145	1,171,483	1,147,330	1,123,675	1,100,508
Variance Analysis (relative to 2015 Bridge Forecast)							
# of Connections		2.11%	-2.06%	-4.08%	-6.06%	-8.00%	-9.89%
kWh		2.11%	-2.06%	-4.08%	-6.06%	-8.00%	-9.89%

Totals

Customers	27,339	27,231	27,448	27,559	27,672	27,786	27,903
Connections	5,480	5,375	5,489	5,498	5,507	5,517	5,526
kWh	712,428,488	712,079,234	704,804,228	696,862,250	688,547,472	679,960,822	671,053,252
kW from applicable classes	1,039,049	1,039,961	1,034,966	1,030,196	1,024,792	1,018,888	1,012,398

Totals - Variance

Customers		-0.39%	0.40%	0.81%	1.22%	1.64%	2.07%
Connections		-1.92%	0.16%	0.33%	0.50%	0.67%	0.84%
kWh		-0.05%	-1.07%	-2.18%	-3.35%	-4.56%	-5.81%
kW from applicable classes		0.09%	-0.39%	-0.85%	-1.37%	-1.94%	-2.56%

Load Forecast Model

LOAD FORECAST MODEL

Exhibit 3 Tab 1 Schedule 2 Attachment 1 is the Weather Normalized Distribution System Load Forecast: 2016-2020 Custom IR report prepared by Elenchus Research Associates Inc. (Elenchus) on behalf of Kingston Hydro.

File Number:EB-2015-0083

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Kingston Hydro Load Forecast 2016-2020

Custom IR Application
Kingston Hydro Corporation
Application

Weather Normalized Distribution System Load Forecast: 2016 - 2020 Custom IR

A Report Prepared by
Elenchus Research Associates Inc.

On Behalf of
Kingston Hydro

17/04/2015

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1 INTRODUCTION

This report outlines the results and methodology used to derive the weather normal load forecast prepared for use in the Custom IR application for 2016-2020 rates for Kingston Hydro Corporation ("Kingston Hydro").

The regression equations used to normalize and forecast Kingston Hydro's weather sensitive load use monthly heating degree days and cooling degree days as measured at Environment Canada's Hartington IHD to take into account temperature sensitivity. This location is approximately 30 km north of the City of Kingston near Harrowsmith and is the closest location to Kingston that has nearly interrupted temperature observations for the 1995-2014 period. There was however a stoppage of readings on May 15, 2011 which lasted 109 days. For those readings, the weather station Kingston Climate was used. Kingston is winter peaking and does not exhibit a substantial summer peak. Environment Canada defines heating degree days and cooling degree days as the difference between the average daily temperature and 18°C for each day (below for heating, above for cooling).

Overall economic activity also impacts energy consumption. In order to measure the impact of change in economic activity on energy consumption, a data series must be chosen which represents, as much as possible, that of the service territory. There is no known agency that publishes monthly economic accounts on a regional basis for Ontario. However, regional employment levels are available. Given that income from employment and labour sources accounts for the largest portion of GDP on an income basis, and a study by Statistics Canada that has indicated that "turning points in the growth of output and employment appear to have been virtually the same over the past three decades"[1], employment has been chosen as the economic variable to incorporate into the analysis. Specifically, the monthly full-time employment level for Ontario, as reported in Statistics Canada's Monthly Labour Force Survey (CANSIM series Table 282-0116) is used. A localized employment indicator for Kingston is available, but the Ontario measure is a more statistically significant predictor of energy use in Kingston Hydro's service territory.

In order to isolate demand determinants at the class specific level, equations to weather normalize and forecast kWh consumption for the Residential, GS<50 and GS>50 classes as well as the Large User class, which is comprised of three large institutional users that has significant cooling load, have been estimated.

In addition to the weather and economic variables, a time trend variable, number of days and number of working days in each month, number of customers, and month of year variables, have been examined for all rate classes. More details on the individual class specifications are provided in the next section.

[1] Philip Cross, "Cyclical changes in output and employment," *Canadian Economic Observer*, May 2009.

Finally, for classes with demand charges, an annual kW to kWh ratio is calculated using actual observations for each historical year and applied to the normalized kWh to derive a weather normal kW observation. For forecast values, the actual kW to kWh ratio for 2014 is applied.

1.1 SUMMARIZED RESULTS

The following table summarizes the historic and forecast kWh for 2009-2020:

Normal Forecast

kWh	Residential	GS < 50	GS > 50	Large Use	Street Light	USL	Total
2009 Actual	196,461,750	93,350,687	270,117,290	148,002,869	3,992,185	2,256,949	714,181,729
2010 Actual	197,410,764	94,126,083	273,806,098	149,058,790	4,076,824	2,229,012	720,707,571
2011 Actual	191,104,338	93,008,635	273,712,584	154,491,718	4,142,238	1,517,655	717,977,169
2012 Actual	184,953,209	88,608,641	274,473,668	155,448,435	4,555,371	1,484,560	709,523,884
2013 Actual	189,348,696	86,375,577	279,458,000	153,943,746	3,336,835	1,499,820	713,962,674
2014 Actual	192,061,408	91,470,555	272,498,127	151,518,193	1,817,917	1,247,036	710,613,237
2014 Normalized	189,757,911	92,820,328	272,478,959	153,957,083	1,817,917	1,247,036	712,079,235
2015 Forecast	187,846,947	96,525,307	273,251,618	154,368,712	1,814,577	1,221,326	715,028,487
2016 Forecast	185,951,800	94,406,782	273,969,108	155,062,234	1,818,158	1,196,145	712,404,228
2017 Forecast	184,072,570	92,323,639	274,745,148	155,477,670	1,821,740	1,171,483	709,612,250
2018 Forecast	182,209,360	90,275,286	275,580,396	155,959,780	1,825,321	1,147,330	706,997,473
2019 Forecast	180,362,271	88,261,142	276,475,519	156,509,313	1,828,903	1,123,675	704,560,822
2020 Forecast	178,531,405	86,280,637	277,431,189	157,127,028	1,832,484	1,100,508	702,303,252

Table 1 kWh forecast by class

The following table summarizes 2015-2020 CDM Adjusted Load Forecast kWh. Details for this calculation can be found in Schedule 6 of this report.

CDM Adjusted

kWh	Residential	GS < 50	GS > 50	Large Use	Street Light	USL	Total
2015 Forecast	187,160,982	96,172,824	272,253,779	153,805,000	1,814,577	1,221,326	712,428,487
2016 Forecast	183,959,618	93,395,362	271,033,959	153,400,986	1,818,158	1,196,145	704,804,228
2017 Forecast	180,751,226	90,657,781	269,787,738	152,672,282	1,821,740	1,171,483	696,862,250
2018 Forecast	177,434,297	87,909,490	268,358,409	151,872,625	1,825,321	1,147,330	688,547,473
2019 Forecast	174,038,354	85,166,503	266,781,651	151,021,736	1,828,903	1,123,675	679,960,822
2020 Forecast	170,554,076	82,425,355	265,034,716	150,106,113	1,832,484	1,100,508	671,053,252

Table 2 CDM Adjusted kWh forecast

The following table summarizes the historic and forecast kW for 2009-2020. The calculations can be found as follows:

Normal Forecast

kW	GS > 50	Large Use	Street Light	Total
2009 Actual	721,617	240,786	11,246	973,649
2010 Actual	747,917	289,659	11,251	1,048,827
2011 Actual	766,581	294,114	11,237	1,071,932
2012 Actual	781,260	323,212	10,984	1,115,456
2013 Actual	767,156	291,732	8,304	1,067,192
2014 Actual	743,905	286,452	5,045	1,035,402
2014 Normalized	743,853	291,063	5,045	1,039,961
2015 Forecast	745,962	291,841	5,036	1,042,839
2016 Forecast	747,921	293,152	5,046	1,046,119
2017 Forecast	750,039	293,938	5,056	1,049,033
2018 Forecast	752,319	294,849	5,066	1,052,234
2019 Forecast	754,763	295,888	5,076	1,055,727
2020 Forecast	757,372	297,056	5,086	1,059,513

Table 3 kW Forecast

The following table summarizes 2015-2020 CDM Adjusted Load Forecast kW. Details for this calculation can be found at the end of in Schedule 6 of this report.

CDM Adjusted

kW	GS > 50	Large Use	Street Light	Total
2015 Forecast	743,238	290,775	5,036	1,039,049
2016 Forecast	739,908	290,012	5,046	1,034,965
2017 Forecast	736,506	288,634	5,056	1,030,195
2018 Forecast	732,604	287,122	5,066	1,024,792
2019 Forecast	728,299	285,513	5,076	1,018,888
2020 Forecast	723,530	283,782	5,086	1,012,398

Table 4 CDM Adjusted kW Forecast

The following table summarizes the historic and forecast customer/connections for 2009-2020:

Customer Connections

	Residential	GS < 50	GS > 50	Large Use	Street Light	USL	Total
2009 Actual	23,107	3,319	295	3	5,114	163	32,002
2010 Actual	23,163	3,300	294	3	5,117	158	32,036
2011 Actual	23,212	3,298	291	3	5,120	156	32,079
2012 Actual	23,193	3,250	307	3	5,126	152	32,030
2013 Actual	23,468	3,213	318	3	5,385	151	32,537
2014 Actual	23,853	3,051	325	3	5,228	147	32,606
2015 Forecast	24,004	3,000	331	3	5,337	143	32,819
2016 Forecast	24,157	2,950	337	3	5,349	141	32,937
2017 Forecast	24,311	2,901	343	3	5,361	138	33,057
2018 Forecast	24,466	2,853	350	3	5,373	135	33,179
2019 Forecast	24,622	2,805	357	3	5,385	132	33,303
2020 Forecast	24,779	2,758	364	3	5,397	129	33,429

Table 5 Customer / Connection Forecast for 2009-2020

2 CLASS SPECIFIC KWH REGRESSION

2.1 RESIDENTIAL

For the Residential Class kWh consumption the equation was estimated using 72 observations from 2009:01-2014:12.

Heating and Cooling Degree days were used, as measured at the Hartington weather station as described in the introduction. A Trend variable was used, indicating 1 in January 2009, and incrementing once each month, reaching 72 in the last month of the regression, December 2014. Finally, a customer count, reflecting the number of residential customers in each month was used.

Several other variables were examined, and found to not show a statistically significant relationship to energy usage. Those included an economic indicator of full time employment, the number of days in the month, a binary indicator designating spring and fall shoulder seasons, and a binary indicator of the summer vacation for most faculty and students at the post-secondary educational institutions.

The following table outlines the resulting regression model:

Model 12: OLS, using observations 2009:01-2014:12 (T = 72)
Dependent variable: ReskWh

	coefficient	std. error	t-ratio	p-value
const	- 20,568,225	12,060,647	-1.705399783	9.28E-02
HDD	15,157	387	39.18143554	6.49E-48
CDD	38,815	3,197	12.14212762	1.38E-18
Trend	- 30,519	6,952	-4.390061059	4.12E-05
Res_Cust	1,363	527	2.587513859	1.18E-02

Mean dependent var	15,990,835	S.D. dependent var	3697974.11
Sum squared resid	3.00012E+13	S.E. of regression	669162.6598
R-squared	0.969100453	Adjusted R-squared	0.967255703
F(4, 67)	525.3291365	P-value(F)	8.67E-50
Log-likelihood	-1065.364865	Akaike criterion	2140.729729
Schwarz criterion	2152.11306	Hannan-Quinn	2145.261467
rho	-0.023272455	Durbin-Watson	2.02166701
Theil's U	0.27679		

Table 6 Residential Regression Model

Using the above model coefficients we derive the following:

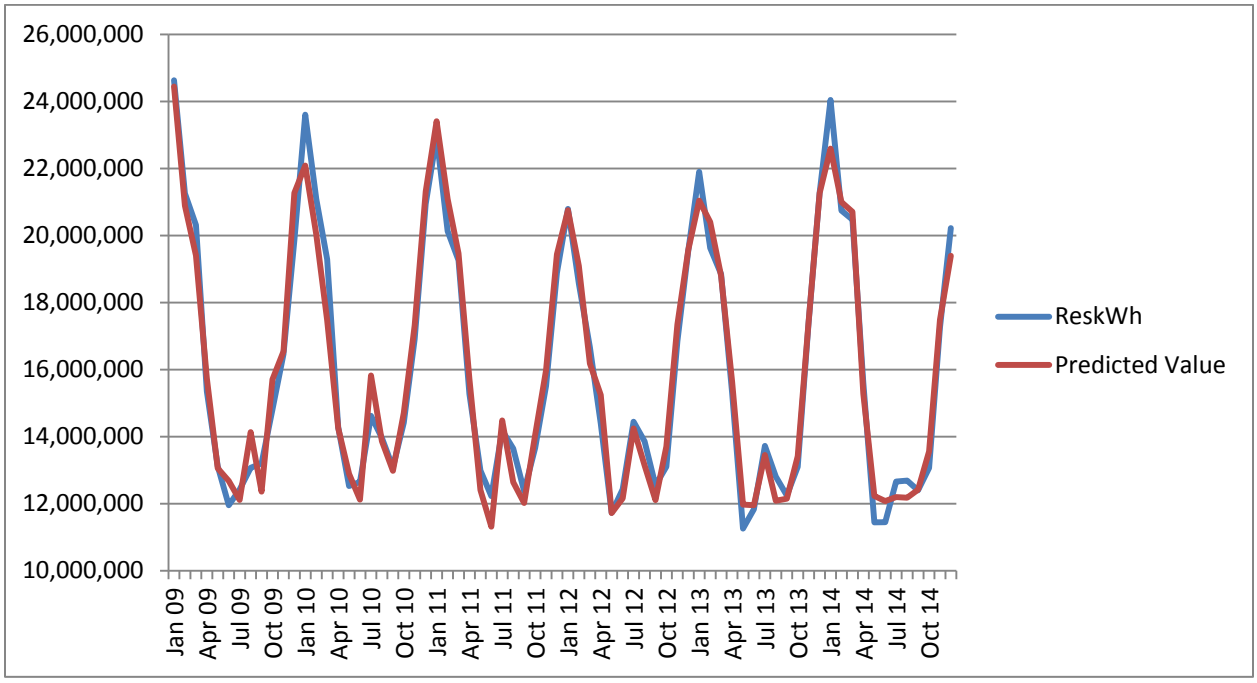

Figure 1 Residential Predicted vs Actual observations

Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 0.6%. Annual errors are calculated as the model is used to derive annual forecasts. However, in proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 3.3%.

Year	Res kWh Actual	Predicted	Absolute Error (%)
2009	196,461,750	198,369,025	1.0%
2010	197,410,764	194,884,761	1.3%
2011	191,104,338	192,037,552	0.5%
2012	184,953,209	185,288,403	0.2%
2013	189,348,696	189,623,847	0.1%
2014	192,061,408	191,136,578	0.5%
Mean Absolute Percentage Error (Annual)			0.6%
Mean Absolute Percentage Error (Monthly)			3.3%

Table 7 Residential model error

2.2 GS < 50

For the GS < 50 class, the regression equation was estimated using 72 observations from 2009:01-2014:12.

In January 2014 there was a bulk reclassification of customers between GS < 50 and GS > 50. This resulted in a net transfer of 53 customers from GS > 50 to GS < 50. A binary variable, "Reclassification" was used to capture the effect on the GS < 50 energy usage – indicating 0 from January 2009 – December 2013 and 1 January 2014 onwards.

Heating degree days and cooling degree days were used, as measured at the Hartington weather station as described in the introduction. A Trend variable was used, indicating 1 in January 2009, and incrementing once each month, reaching 72 in the last month of the regression, December 2014. A customer count GS_50_Cust was used.

A binary variable representing fall months' consumption has also been included. In recent cost-of-service filings in which Elenchus has participated, both Board Staff and intervenors have requested that separate variables for spring and fall be included for testing. The fall variable designates the months of September, October and November as fall months. Therefore, the variable takes a value of 1 in these months and a value of 0 in all other months. Binary variables for the months of February and April were also used.

Several other variables were examined, and found to not show a statistically significant relationship to energy usage. Those included an economic indicator of full time employment, the number of calendar and working days in the month, an indicator of the Spring months including March, April, and May, and an indicator of the summer vacation for most faculty and students at the post-secondary educational institutions.

The following table outlines the resulting regression model:

Model 9: OLS, using observations 2009:01-2014:12 (T = 72)
Dependent variable: GSlt50kWh

	coefficient	std. error	t-ratio	p-value
Const	- 4,820,550	3,817,887	-1.262622645	2.11E-01
HDD	3,224	145	22.20560636	1.71E-31
CDD	15,203	1,231	12.35457134	1.74E-18
Trend	- 7,343	3,099	-2.369619564	0.020882279
GS_50_Cust	3,523	1,157	3.044516291	3.40E-03
Reclassification	893,151	140,260	6.36784291	2.49E-08
Fall	- 173,591	76,156	-2.279419329	0.026039526
DFEB	- 323,196	104,500	-3.092789398	0.002954004
DAPR	- 425,160	104,015	-4.087487227	0.000125738

Mean dependent var	7,596,391	S.D. dependent var	801,475
Sum squared resid	3.13009E+12	S.E. of regression	2.23E+05
R-squared	0.931369238	Adjusted R-squared	0.92265422
F(8, 63)	106.8694638	P-value(F)	1.14E-33
Log-likelihood	-983.9986117	Akaike criterion	1985.997223
Schwarz criterion	2006.487218	Hannan-Quinn	1994.154351
Rho	0.262049189	Durbin-Watson	1.460479865
Theil's U	0.31399		

Table 8 GS < 50 Regression Model

Using the above model coefficients we derive the following:

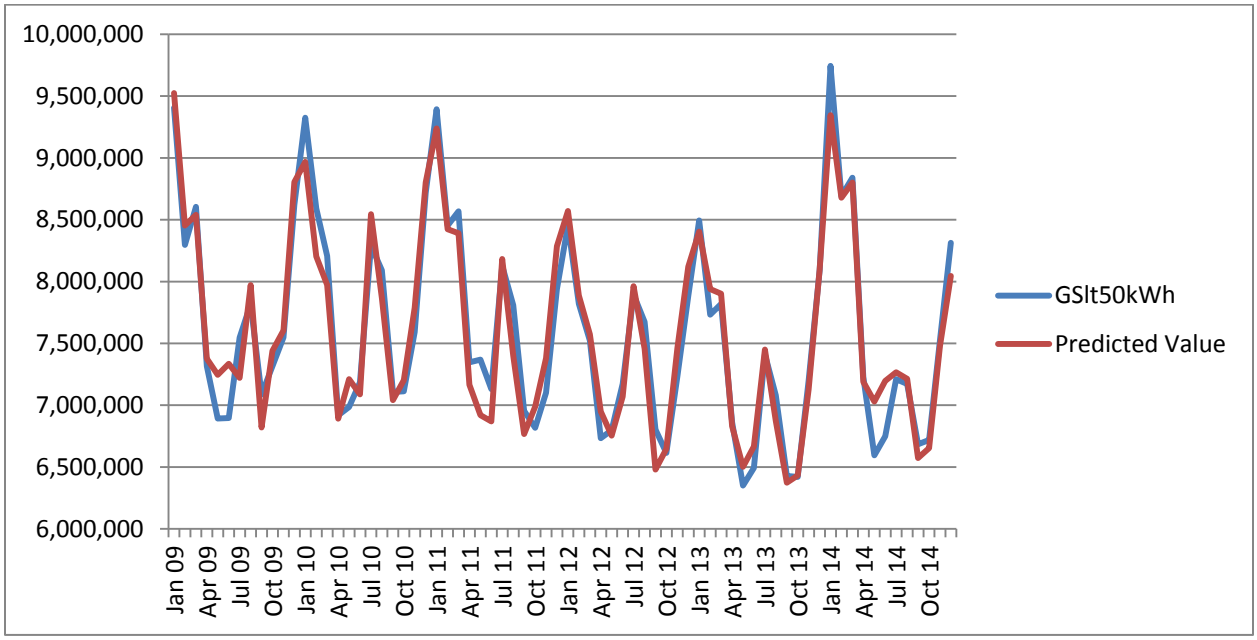

Figure 2 GS < 50 Predicted vs Actual observations

Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 0.6%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 2.2%.

	GS<50 kWh Actual	Predicted	Absolute Error (%)
2009	93,350,687	94,338,307	1.1%
2010	94,126,083	93,582,991	0.6%
2011	93,008,635	92,014,504	1.1%
2012	88,608,641	88,937,028	0.4%
2013	86,375,577	86,596,793	0.3%
2014	91,470,555	91,470,555	0.0%
Mean Absolute Percentage Error (Annual)			0.6%
Mean Absolute Percentage Error (Monthly)			2.2%

Table 9 GS < 50 model error

2.3 GS > 50

For the GS > 50 class, the regression equation was estimated using 72 observations from 2009:01-2014:12.

In January 2014 there was a bulk reclassification of customers between GS < 50 and GS > 50. This resulted in a net transfer of 53 customers from GS > 50 to GS < 50. A binary variable, "Reclassification" was used to capture the effect on the GS > 50 energy usage – indicating 0 from January 2009 – December 2013 and 1 January 2014 onwards.

Heating degree days and cooling degree days were used, as measured at the Hartington weather station as described in the introduction. A Trend variable was used, indicating 1 in January 2009, and incrementing once each month, reaching 72 in the last month of the regression, December 2014.

An economic indicator of full time employment in the province of Ontario was used. An indicator for Kingston, Ontario was examined, but the provincial indicator demonstrated a more statistically significant relationship to energy use in the Kingston Hydro service territory of downtown Kingston.

A binary variable representing fall months' consumption has also been included. In recent cost-of-service filings in which Elenchus has participated, both Board Staff and intervenors have requested that separate variables for spring and fall be included for testing. The fall variable designates the months of September, October and November as fall months. Therefore, the variable takes a value of 1 in these months and a value of 0 in all other months. A Binary variable representing the summer vacation of the post-secondary educational institutions in Kingston was used. Those months are May, June, July, and August. Binary variables for the months of February, April, and December, were also used.

Several other variables were examined, and found to not show a statistically significant relationship to energy usage. Those included an indicator of the number of calendar days in the month, the number of working days in the month, and an indicator of the number of GS > 50 customers.

The following table outlines the resulting regression model:

Model 6: OLS, using observations 2009:01-2014:12 (T = 72)
Dependent variable: GSgt50kWh

	coefficient	std. error	t-ratio	p-value
const	-14,985,611.92	8301060.819	-1.805264682	0.075968774
HDD	7,710.42	523.0682838	14.74074377	9.01E-22
CDD	32,421.00	2843.639203	11.40123422	9.33E-17
OntFTE	5,543.96	1315.904879	4.213041549	8.45E-05
Trend	- 31,159.12	10455.58927	-2.980140335	4.13E-03
Reclassification	- 439,218.30	180953.1692	-2.427248463	0.01818169
Fall	- 1,629,695.88	289240.8637	-5.634390171	4.76E-07
DFEB	- 1,507,735.56	213149.0004	-7.073622466	1.73E-09
DAPR	- 1,602,104.00	276498.1963	-5.794265633	2.58E-07
DDEC	- 1,130,663.39	224794.2625	-5.029769766	4.60E-06
PostSecondarySummer	- 1,248,171.77	353288.2808	-3.533012087	0.0007898

Mean dependent var	22,834,246.77	S.D. dependent var	1972351.179
Sum squared resid	1.10816E+13	S.E. of regression	4.26E+05
R-squared	0.959878781	Adjusted R-squared	0.953301532
F(10, 61)	145.9392488	P-value(F)	1.06E-38
Log-likelihood	-1029.510528	Akaike criterion	2081.021055
Schwarz criterion	2106.064382	Hannan-Quinn	2090.990878
rho	0.105344202	Durbin-Watson	1.772429667
Theil's U	0.22615		

Table 10 GS > 50 model

Using the above model coefficients we derive the following:

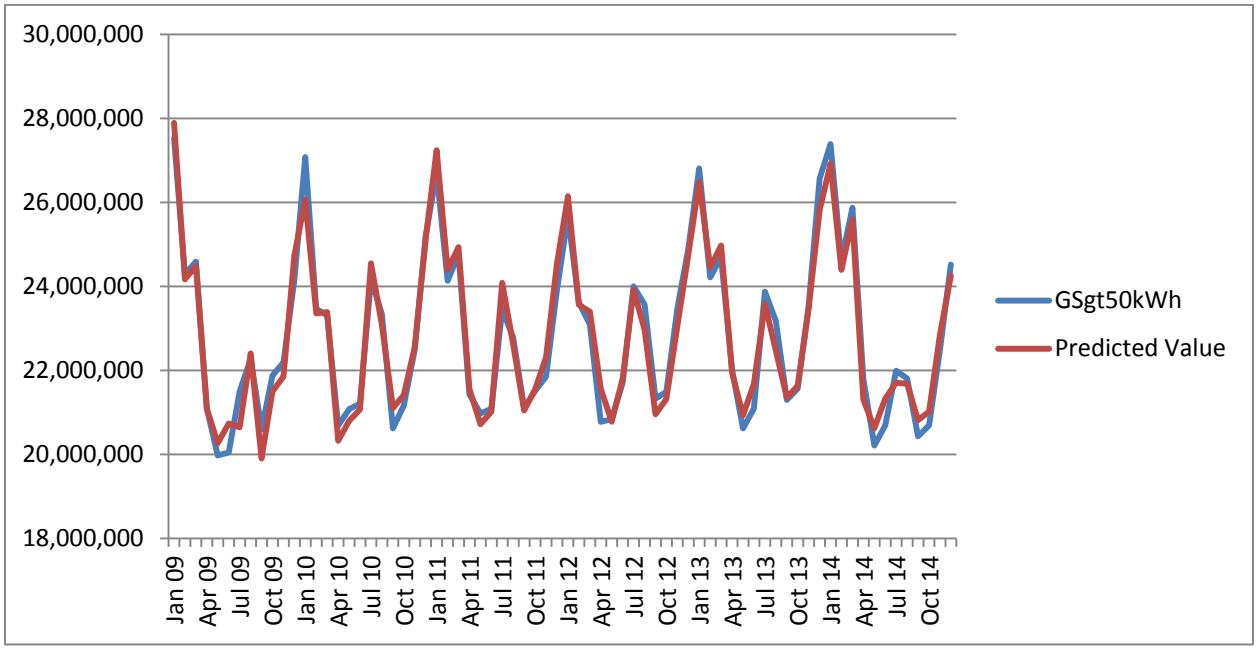

Figure 3 GS > 50 Predicted vs Actual

Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 0.3%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 1.4%.

	GS>50 kWh Actual	Predicted	Absolute Error (%)
2009	270,117,290	269,681,646	0.2%
2010	273,806,098	272,843,451	0.4%
2011	273,712,584	276,014,116	0.8%
2012	274,473,668	274,234,961	0.1%
2013	279,458,000	278,793,466	0.2%
2014	272,498,127	272,498,127	0.0%
Mean Absolute Percentage Error (Annual)			0.3%
Mean Absolute Percentage Error (Monthly)			1.4%

Table 11 GS > 50 model error

2.4 LARGE USE

For the GS > 50 class, the regression equation was estimated using 72 observations from 2009:01-2014:12.

Heating degree days and cooling degree days were used, as measured at the Hartington weather station as described in the introduction. An indicator of the number of calendar days in the month, "MonthDays" was used to capture the effect of the differing month lengths. A Trend variable was used, indicating 1 in January 2009, and incrementing once each month, reaching 72 in the last month of the regression, December 2014.

An economic indicator of full time employment in the province of Ontario was used. An indicator for Kingston, Ontario was examined, but the provincial indicator demonstrated a more statistically significant relationship to energy use in the Kingston Hydro service territory of downtown Kingston.

A binary variable representing fall months' consumption has also been included. In recent cost-of-service filings in which Elenchus has participated, both Board Staff and intervenors have requested that separate variables for spring and fall be included for testing. The fall variable designates the months of September, October and November as fall months. Therefore, the variable takes a value of 1 in these months and a value of 0 in all other months. A Binary variable representing the summer vacation of the post-secondary educational institutions in Kingston was used. Those months are May, June, July, and August. Binary variables for the months of April, and December, were also used.

Other variables were examined, and found to not show a statistically significant relationship to energy usage, a count of the Large Use customers, the number of working days in the month, as well as binary indicators for February, and the spring months of the year.

The following table outlines the resulting regression model:

Model 14: OLS, using observations 2009:01-2014:12 (T = 72)
Dependent variable: LUkWh

	coefficient	std. error	t-ratio	p-value
const	- 36,743,885	6,422,458	-5.721155801	3.28E-07
HDD	- 1,950	394	-4.943946653	6.14E-06
CDD	18,999	2,150	8.836584531	1.42E-12
MonthDays	344,019	50,069	6.870843611	3.60E-09
OntFTE	6,243	983	6.350255172	2.82E-08
Trend	- 38,272	7,429	-5.151934401	2.84E-06
Fall	- 1,051,550	211,802	-4.964782994	5.69E-06
DAPR	- 1,041,289	201,026	-5.179872958	2.56E-06
DDEC	- 986,240	167,958	-5.871950917	1.83E-07
PostSecondarySummer	- 1,707,342	262,434	-6.505805113	1.53E-08

Mean dependent var	12,673,108	S.D. dependent var	1,113,801
Sum squared resid	6.4164E+12	S.E. of regression	321699.1824
R-squared	0.927151895	Adjusted R-squared	0.91657717
F(9, 62)	87.67621887	P-value(F)	7.65E-32
Log-likelihood	-1009.839228	Akaike criterion	2039.678457
Schwarz criterion	2062.445118	Hannan-Quinn	2048.741932
rho	0.417711109	Durbin-Watson	1.160933888
Theil's U	0.306668		

Table 12 Large Use Model

Using the above model coefficients we derive the following:

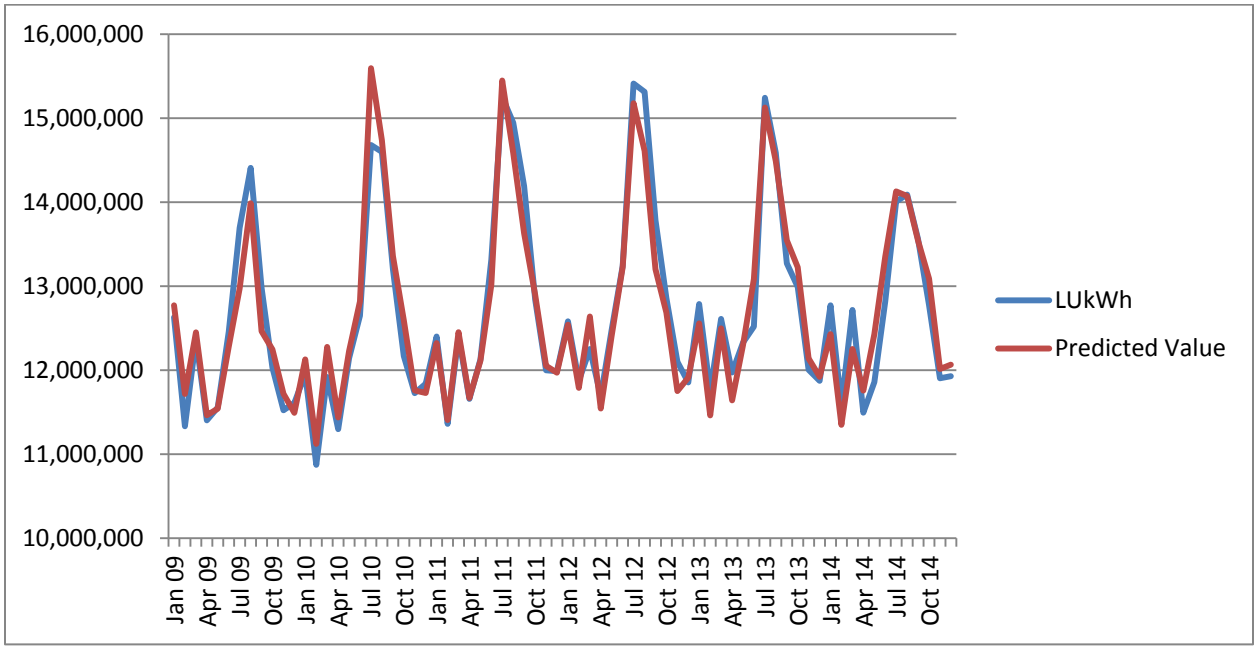

Figure 4 Large Use Predicted vs Actual

Annual estimates using actual weather are compared to actual values in the table below. Mean absolute percentage error (MAPE) for annual estimates for the period is 0.8%. Annual errors are calculated as the model is used to derive annual forecasts. However, in recent proceedings Elenchus has been involved in, intervenors and Board Staff have requested MAPE calculated on a monthly basis and this has been provided as well. The MAPE calculated monthly over the period is 1.7%.

	LU kWh		Absolute Error
	Actual	Predicted	(%)
2009	148,002,869	147,116,188	0.6%
2010	149,058,790	151,794,488	1.8%
2011	154,491,718	153,573,349	0.6%
2012	155,448,435	153,495,702	1.3%
2013	153,943,746	153,995,625	0.0%
2014	151,518,193	152,488,400	0.6%
Mean Absolute Percentage Error (Annual)			0.8%
Mean Absolute Percentage Error (Monthly)			1.7%

Table 13 Large Use Model Error

3 WEATHER NORMALIZATION AND ECONOMIC FORECAST

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

The table below displays the most recent 10 year average of heating degree days and cooling degree days as reported by Environment Canada for Hartington IHD, which is used as the weather station for Kingston Hydro.

10 Year Average

		HDD	CDD
Hartington IHD	January	784.29	0
Hartington IHD	February	682.51	0
Hartington IHD	March	556.99	0
Hartington IHD	April	326.59	0.39
Hartington IHD	May	144.96	8.67
Hartington IHD	June	41.51	44.41
Hartington IHD	July	5.01	96.91
Hartington IHD	August	12.72	77.23
Hartington IHD	September	86.57	19.9
Hartington IHD	October	270.3	1.21
Hartington IHD	November	444.05	0
Hartington IHD	December	684.01	0

Table 14 10 Year Average HDD and CDD

As part of the minimum filing requirements the OEB has requested monthly degree days calculated using a trend based on 20 years. This is shown in the table below.

20 Year Trend (2016)

		HDD	CDD
Hartington IHD	January	738.32	0.00
Hartington IHD	February	657.50	0.00
Hartington IHD	March	525.81	0.00
Hartington IHD	April	302.45	0.82
Hartington IHD	May	114.01	11.10
Hartington IHD	June	47.66	35.25
Hartington IHD	July	2.26	107.60
Hartington IHD	August	5.45	87.84
Hartington IHD	September	78.63	24.57
Hartington IHD	October	266.10	1.57
Hartington IHD	November	426.33	0.00
Hartington IHD	December	688.11	0.00

Table 15 20 Year Trend HDD and CDD

Forecasts for Ontario's employment outlook for 2015 and 2016 are available from four Canadian Chartered Banks at time of writing. Their forecasts are summarized below.

Employment Forecast - Ontario

(figures in annual percentage change)

	BMO	TD	Scotia	RBC	Average
	06-Mar-15	26-Jan-15	26-Feb-15	26-Feb-15	
2015	0.90%	1.40%	0.90%	1.40%	1.15%
2016	1.20%	1.10%	1.00%	1.20%	1.13%

Table 16 Employment Forecast

In order to give the annual forecast change in employment a monthly periodicity, monthly employment levels for 2014 are compared to the annual average for that year. For each month, the average ratio of monthly employment level to annual average employment for 2014, is used to project the monthly employment into 2015-2020. The annual average of each forecast year (2014 and 2015) will result in an annual increase over the previous year equal to the percentage averages in Table 2.6 above.

4 CLASS SPECIFIC NORMALIZED FORECASTS

4.1 RESIDENTIAL

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

Year	Res kWh Actual	Annual Change	Normalized	Annual Change
2009	196,461,750		199,546,506	
2010	197,410,764	0.5%	196,067,450	-1.7%
2011	191,104,338	-3.2%	192,468,474	-1.8%
2012	184,953,209	-3.2%	187,753,434	-2.4%
2013	189,348,696	2.4%	187,855,598	0.1%
2014	192,061,408	1.4%	189,757,911	1.0%
2015			187,846,947	-1.0%
2016			185,951,800	-1.0%
2017			184,072,570	-1.0%
2018			182,209,360	-1.0%
2019			180,362,271	-1.0%
2020			178,531,405	-1.0%

Table 17 Actual vs Normalized Residential kWh

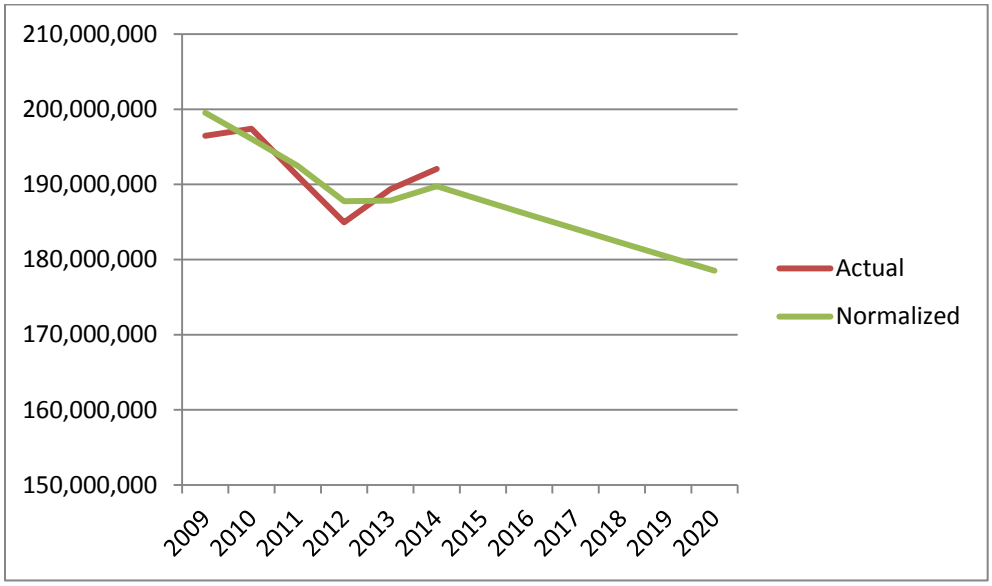

Figure 5 Actual vs Normalized Residential kWh

Customer counts are forecasted for Residential both for the purpose of the regression model as well as for the purpose direct use in rate setting. The Geometric mean of the annual growth from 2009 to 2014

was used to forecast the growth rate from 2015 to 2020. The following table includes the customer Actual / Forecast customer count on this basis:

Year	Residential Customers	Annual Change
2009	23,107	
2010	23,163	0.24%
2011	23,212	0.21%
2012	23,193	-0.08%
2013	23,468	1.19%
2014	23,853	1.64%
2015	24,004	0.64%
2016	24,157	0.64%
2017	24,311	0.64%
2018	24,466	0.64%
2019	24,622	0.64%
2020	24,779	0.64%

Table 18 Forecasted Residential Customer Count

4.2 GS < 50

Year	GS<50 kWh Actual	Annual Change	Normalized	Annual Change
2009	93,350,687		96,482,575	
2010	94,126,083	0.8%	94,604,326	-1.9%
2011	93,008,635	-1.2%	93,451,849	-1.2%
2012	88,608,641	-4.7%	90,368,676	-3.3%
2013	86,375,577	-2.5%	87,743,515	-2.9%
2014	91,470,555	5.9%	92,820,328	5.8%
2015			96,525,307	4.0%
2016			94,406,782	-2.2%
2017			92,323,639	-2.2%
2018			90,275,286	-2.2%
2019			88,261,142	-2.2%
2020			86,280,637	-2.2%

Table 19 Actual vs Normalized GS < 50 kWh

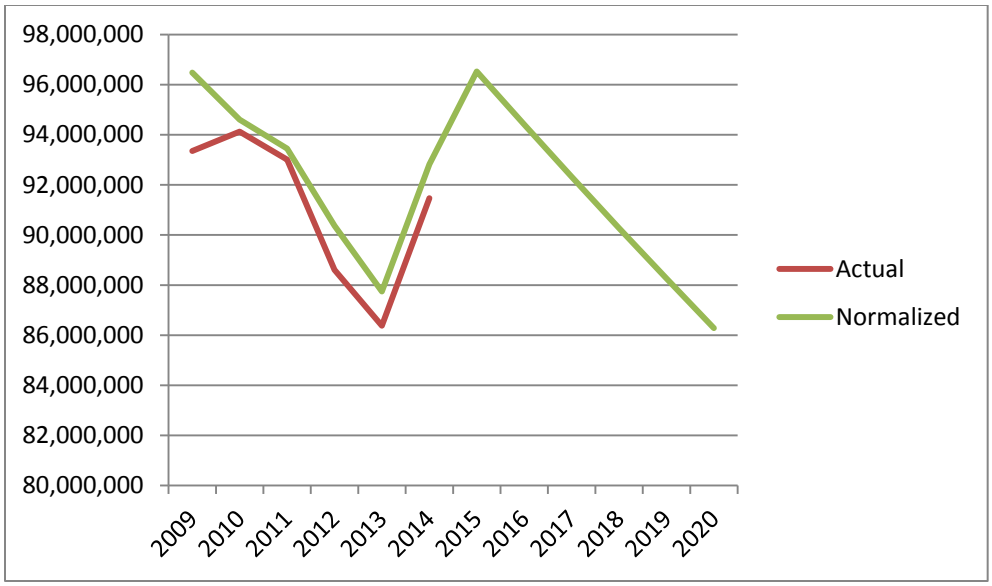

Figure 6 Actual vs Normalized GS < 50 kWh

Customer counts are forecasted for GS < 50 both for the purpose of the regression model as well as for the purpose direct use in rate setting. The Geometric mean of the annual growth from 2009 to 2014 was used to forecast the growth rate from 2015 to 2020. In order to appropriately reflect the growth rate in the class, without being skewed by the 2014 reclassification, the historic years 2009-2013 were adjusted to reflect the reclassified customers having always been in their present class.

The following table includes the customer Actual / Forecast customer count on this basis:

	GS < 50	Annual
Year	Customers	Change
2009	3,319	
2010	3,300	-0.58%
2011	3,298	-0.07%
2012	3,250	-1.45%
2013	3,213	-1.14%
2014	3,051	-5.02%
2015	3,000	-1.67%
2016	2,950	-1.67%
2017	2,901	-1.67%
2018	2,853	-1.67%
2019	2,805	-1.67%
2020	2,758	-1.67%

Table 20 Forecasted GS < 50 Customer Count*

*NOTE: 2009-2013 historic customer counts have been adjusted for Jan 2014 reclassification of 53 customers

4.3 GS > 50

Year	GS>50 kWh Actual	Annual Change	Normalized	Annual Change
2009	270,117,290		271,420,410	
2010	273,806,098	1.4%	272,534,007	0.4%
2011	273,712,584	0.0%	276,373,015	1.4%
2012	274,473,668	0.3%	274,828,836	-0.6%
2013	279,458,000	1.8%	278,356,828	1.3%
2014	272,498,127	-2.5%	272,478,959	-2.1%
2015			273,251,618	0.3%
2016			273,969,108	0.3%
2017			274,745,148	0.3%
2018			275,580,396	0.3%
2019			276,475,519	0.3%
2020			277,431,189	0.3%

Table 21 Actual vs Normalized GS > 50 kWh

Figure 7 Actual vs Normalized GS > 50 kWh

While GS > 50 customer counts are not a component of the regression model, they are forecasted for the purpose of rate setting. The Geometric mean of the annual growth from 2009 to 2014 was used to forecast the growth rate from 2015 to 2020. In order to appropriately reflect the growth rate in the class, without being skewed by the 2014 reclassification, the historic years 2009-2013 were adjusted to reflect the reclassified customers having always been in their present class. The following table includes the customer Actual / Forecast customer count on this basis:

Year	GS > 50 Customers	Annual Change
2009	295	
2010	294	-0.45%
2011	291	-0.94%
2012	307	5.32%
2013	318	3.64%
2014	325	2.12%
2015	331	1.91%
2016	337	1.91%
2017	343	1.91%
2018	350	1.91%
2019	357	1.91%
2020	364	1.91%

Table 22 Forecasted GS > 50 Customer Count*

***NOTE: 2009-2013 historic customer counts have been adjusted for Jan 2014 reclassification of 53 customers**

In order to normalize and forecast class kW for those classes that bill based on kW (demand) billing determinants, the relationship between billed kW and kWh is used. The ratio from the most recent historic year is used to forecast kW for all future years.

	GS>50		
Year	kWh Actual	Ratio	kW Actual
	A	**C = B / A**	**B**
2009	270,117,290	0.002671	721,617
2010	273,806,098	0.002732	747,917
2011	273,712,584	0.002801	766,581
2012	274,473,668	0.002846	781,260
2013	279,458,000	0.002745	767,156
2014	272,498,127	0.00273	743,905
	kWh Normalized		
	D	**E**	**F = D * E**
2015	273,251,618	0.00273	745,962
2016	273,969,108	0.00273	747,921
2017	274,745,148	0.00273	750,039
2018	275,580,396	0.00273	752,319
2019	276,475,519	0.00273	754,763
2020	277,431,189	0.00273	757,372

Table 23 Forecasted GS > 50 kW

4.4 LARGE USE

Year	LU kWh Actual	Annual Change	Normalized	Annual Change
2009	148,002,869		149,122,149	
2010	149,058,790	0.7%	149,917,704	0.5%
2011	154,491,718	3.6%	153,782,311	2.6%
2012	155,448,435	0.6%	151,928,995	-1.2%
2013	153,943,746	-1.0%	155,099,352	2.1%
2014	151,518,193	-1.6%	153,957,083	-0.7%
2015			154,368,712	0.3%
2016			155,062,234	0.4%
2017			155,477,670	0.3%
2018			155,959,780	0.3%
2019			156,509,313	0.4%
2020			157,127,028	0.4%

Table 24 Actual vs Normalized Large Use kWh

Figure 8 Actual vs Normalized Large Use kWh

Large Use customer count has remained stable at 3 customers for the past several years, and is forecasted to remain at 3 customers throughout the test years.

In order to normalize and forecast class kW for those classes that bill based on kW (demand) billing determinants, the relationship between billed kW and kWh is used. The ratio from the most recent historic year is used to forecast kW for all future years.

	Large Use		
Year	kWh Actual	Ratio	kW Actual
	A	**C = B / A**	**B**
2009	148,002,869	0.001627	240,786
2010	149,058,790	0.001943	289,659
2011	154,491,718	0.001904	294,114
2012	155,448,435	0.002079	323,212
2013	153,943,746	0.001895	291,732
2014	151,518,193	0.001891	286,452
	kWh Normalized		
	D	**E**	**F = D * E**
2015	154,368,712	0.001891	291,841
2016	155,062,234	0.001891	293,152
2016	155,477,670	0.001891	293,938
2016	155,959,780	0.001891	294,849
2016	156,509,313	0.001891	295,888
2016	157,127,028	0.001891	297,056

Table 25 Forecasted Large Use kW

5 STREET LIGHT AND USL FORECAST

The Street Lighting and Unmetered Scattered Load Classes are non-weather sensitive classes. The tables below summarize the historic annual energy consumption for both classes and the anticipated consumption in the forecast period.

Kingston Hydro performed a forecast of Street Light based on anticipated connections for 2015 and historic growth in the streetlight lamp (device) count. For the USL class, the Geometric Mean growth of the connection count was forecasted. These forecasts are given below:

Street Light Year	Lamps / Devices	Annual Change
2009	5,114	
2010	5,117	0.06%
2011	5,120	0.05%
2012	5,126	0.13%
2013	5,385	5.05%
2014	5,228	-2.91%
2015	5,337	2.07%
2016	5,349	0.22%
2017	5,361	0.22%
2018	5,373	0.22%
2019	5,385	0.22%
2020	5,397	0.22%

Table 26 Forecasted Street Light lamps (devices)

USL Year	Connections	Annual Change
2009	163	
2010	158	-2.67%
2011	156	-1.74%
2012	152	-2.25%
2013	151	-0.77%
2014	147	-2.87%
2015	143	-2.06%
2016	141	-2.06%
2017	138	-2.06%
2018	135	-2.06%
2019	132	-2.06%
2020	129	-2.06%

Table 27 Forecasted USL connections

In the summer of 2013, the city of Kingston converted the bulk of their street lights to LEDs. The last remaining street lights were converted in 2014.

Year	Street Light Actual	Normalized	Annual Change
2009	3,992,185	3,992,185	
2010	4,076,824	4,076,824	2.12%
2011	4,142,238	4,142,238	1.60%
2012	4,555,371	4,555,371	9.97%
2013	3,336,835	3,336,835	-26.75%
2014	1,817,917	1,817,917	-45.52%
2015		1,814,577	-0.18%
2016		1,818,158	0.20%
2017		1,821,740	0.20%
2018		1,825,321	0.20%
2019		1,828,903	0.20%
2020		1,832,484	0.20%

Table 28 Forecasted Street Light kWh

Causation for changes in USL demand energy, is typically based on connection counts, changes in equipment, and re-classifications. Of these, only changes in connection counts can reasonably be forecasted. Therefore, in forecasting USL, the full year 2014 was used as the basis for forecasting USL energy going forward, with adjustments for forecasted connection counts.

Year	USL Actual	Normalized	Annual Change
2009	2,256,949	2,256,949	
2010	2,229,012	2,229,012	-1.24%
2011	1,517,655	1,517,655	-31.91%
2012	1,484,560	1,484,560	-2.18%
2013	1,499,820	1,499,820	1.03%
2014	1,247,036	1,247,036	-16.85%
2015		1,221,326	-2.06%
2016		1,196,145	-2.06%
2017		1,171,483	-2.06%
2018		1,147,330	-2.06%
2019		1,123,675	-2.06%
2020		1,100,508	-2.06%

Table 29 Forecasted USL kWh

Street Light			
Year	kWh Actual	Ratio	kW Actual
	A	**C = B / A**	**B**
2009	3,992,185	0.002817	11,246
2010	4,076,824	0.00276	11,251
2011	4,142,238	0.002713	11,237
2012	4,555,371	0.002411	10,984
2013	3,336,835	0.002489	8,304
2014	1,817,917	0.002775	5,045
	kWh Normalized		
	D	**E**	**F = D * E**
2015	1,814,577	0.002775	5,036
2016	1,818,158	0.002775	5,046
2016	1,821,740	0.002775	5,056
2016	1,825,321	0.002775	5,066
2016	1,828,903	0.002775	5,076
2016	1,832,484	0.002775	5,086

Table 30 Forecasted Street Light kW

6 CDM ADJUSTMENT TO LOAD FORECAST

The current Chapter 2 OEB Minimum Filing requirements, consistent with the Board's CDM Guideline EB-2012-0003, expects the distributor to integrate an adjustment into its load forecast that takes into account the six-year (2015-2020) targets for kWh and kW reductions.

The filing requirements note that the distributors license condition targets and the LRAMVA balances are based on the OPA targets, which are annualized. It is recognized that the CDM programs in a year are not in effect for the full year, although persistence of previous year's programs will be. Therefore, the actual impact on the load forecast for the first year of the program should not be the full annualized amount. For this reason, the amount that will be used for the LRAMVA will be related to, but not necessarily equal to, the CDM adjustment for the load forecast.

The following table shows Kingston Hydro's proposed annual CDM targets.

6 Year (2015-2020) kWh Target:							
			34,500,000				
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
			%				
2015 Programs	15.07%						15.07%
2016 Programs		13.91%					13.91%
2017 Programs			15.94%				15.94%
2018 Programs				17.10%			17.10%
2019 Programs					18.55%		18.55%
2020 Programs						15.07%	15.07%
Total in Year	**15.07%**	**13.91%**	**15.94%**	**17.10%**	**18.55%**	**15.07%**	**95.65%**
			kWh				
2015 Programs	5,200,000						5,200,000
2016 Programs		4,800,000					4,800,000
2017 Programs			5,500,000				5,500,000
2018 Programs				5,900,000			5,900,000
2019 Programs					6,400,000		6,400,000
2020 Programs						6,900,000	6,900,000
Total in Year	**5,200,000**	**4,800,000**	**5,500,000**	**5,900,000**	**6,400,000**	**6,900,000**	**34,700,000**

Table 31 Proposed CDM Targets

Consistent with recent Board decisions Elenchus includes the full value of the estimated 2015 CDM in 2016. Persistence is included assuming that the full influence of those programs would continue through to 2020. It is also assumed that only one half of the estimated programs would impact the year in which they are delivered.

	Impact Year					
Delivery Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
2015 Programs	2,600,000	5,200,000	5,200,000	5,200,000	5,200,000	5,200,000
2016 Programs		2,400,000	4,800,000	4,800,000	4,800,000	4,800,000
2017 Programs			2,750,000	5,500,000	5,500,000	5,500,000
2018 Programs				2,950,000	5,900,000	5,900,000
2019 Programs					3,200,000	6,400,000
2020 Programs						3,450,000
Total in Year	**2,600,000**	**7,600,000**	**12,750,000**	**18,450,000**	**24,600,000**	**31,250,000**

Table 32 Proposed CDM Impacts

The following is the proposed allocation of the CDM kWh load forecast adjustment and final proposed load forecast.

Retail kWh	Weather Normalized 2016 Forecast - Classes with CDM programs anticipated		CDM Load Forecast Adjustment	2016 CDM Adjusted Load Forecast	
	A	**C = A / B**	**E = D * C**	**F = A - E**	
Residential	185,951,800	26%	1,992,182	183,959,618	
GS < 50	94,406,782	13%	1,011,421	93,395,362	
GS > 50	273,969,108	39%	2,935,149	271,033,959	
Large Use	155,062,234	22%	1,661,249	153,400,986	
Total	709,389,924	100%	7,600,000	701,789,924	1.1%
	B		**D**		

Retail kWh	Weather Normalized 2017 Forecast - Classes with CDM programs anticipated		CDM Load Forecast Adjustment	2017 CDM Adjusted Load Forecast	
	A	**C = A / B**	**E = D * C**	**F = A - E**	
Residential	184,072,570	26%	3,321,345	180,751,226	
GS < 50	92,323,639	13%	1,665,857	90,657,781	
GS > 50	274,745,148	39%	4,957,411	269,787,738	
Large Use	155,477,670	22%	2,805,388	152,672,282	
Total	706,619,027	100%	12,750,000	693,869,027	1.8%
	B		**D**		

Retail kWh	Weather Normalized 2018 Forecast - Classes with CDM programs anticipated		CDM Load Forecast Adjustment	2018 CDM Adjusted Load Forecast	
	A	**C = A / B**	**E = D * C**	**F = A - E**	
Residential	182,209,360	26%	4,775,063	177,434,297	
GS < 50	90,275,286	13%	2,365,796	87,909,490	
GS > 50	275,580,396	39%	7,221,987	268,358,409	
Large Use	155,959,780	22%	4,087,154	151,872,625	
Total	704,024,822	100%	18,450,000	685,574,822	2.6%
	B		**D**		

Retail kWh	Weather Normalized 2019 Forecast - Classes with CDM programs anticipated		CDM Load Forecast Adjustment	2019 CDM Adjusted Load Forecast	
	A	**C = A / B**	**E = D * C**	**F = A - E**	
Residential	180,362,271	26%	6,323,916	174,038,354	
GS < 50	88,261,142	13%	3,094,639	85,166,503	
GS > 50	276,475,519	39%	9,693,868	266,781,651	
Large Use	156,509,313	22%	5,487,577	151,021,736	
Total	701,608,245	100%	24,600,000	677,008,245	3.5%
	B		**D**		

Retail kWh	Weather Normalized 2020 Forecast - Classes with CDM programs anticipated		CDM Load Forecast Adjustment	2020 CDM Adjusted Load Forecast	
	A	**C = A / B**	**E = D * C**	**F = A - E**	
Residential	178,531,405	26%	7,977,329	170,554,076	
GS < 50	86,280,637	12%	3,855,282	82,425,355	
GS > 50	277,431,189	40%	12,396,473	265,034,716	
Large Use	157,127,028	22%	7,020,916	150,106,113	
Total	699,370,260	100%	31,250,000	668,120,260	4.5%
	B		**D**		

Table 33 Proposed CDM Adjustment

In order to calculate the kW Elenchus proposes using a proportional ratio utilizing the base load forecast kW and kWh.

kW	Weather Normalized 2016 Forecast - Classes with CDM programs anticipated G	I = G / H	CDM Load Forecast Adjustment J = G / A * E	2016 CDM Adjusted Load Forecast K = G - J	
GS > 50	747,921	72%	8,013	739,908	
Large Use	293,152	28%	3,141	290,012	
Total	1,041,073	100%	11,153	1,029,919	-1.1%
	H				

kW	Weather Normalized 2017 Forecast - Classes with CDM programs anticipated G	I = G / H	CDM Load Forecast Adjustment J = G / A * E	2017 CDM Adjusted Load Forecast K = G - J	
GS > 50	750,039	72%	13,533	736,506	
Large Use	293,938	28%	5,304	288,634	
Total	1,043,977	100%	18,837	1,025,140	-1.8%
	H				

kW	Weather Normalized 2018 Forecast - Classes with CDM programs anticipated G	I = G / H	CDM Load Forecast Adjustment J = G / A * E	2018 CDM Adjusted Load Forecast K = G - J	
GS > 50	752,319	72%	19,716	732,604	
Large Use	294,849	28%	7,727	287,122	
Total	1,047,168	100%	27,443	1,019,726	-2.6%
	H				

kW	Weather Normalized 2019 Forecast - Classes with CDM programs anticipated G	I = G / H	CDM Load Forecast Adjustment J = G / A * E	2019 CDM Adjusted Load Forecast K = G - J	
GS > 50	754,763	72%	26,464	728,299	
Large Use	295,888	28%	10,375	285,513	
Total	1,050,651	100%	36,838	1,013,813	-3.5%
	H				

kW	Weather Normalized 2020 Forecast - Classes with CDM programs anticipated G	I = G / H	CDM Load Forecast Adjustment J = G / A * E	2020 CDM Adjusted Load Forecast K = G - J	
GS > 50	757,372	72%	33,842	723,530	
Large Use	297,056	28%	13,273	283,782	
Total	1,054,428	100%	47,115	1,007,313	-4.5%
	H				

Table 34 Proposed kW CDM adjustment

For 2016-2020 For LRAMVA Elenchus reasons that the effects of 2014-2020 OPA CDM programs should be included in the LRAMVA calculation.

	CDM Threshold (kWh of incremental CDM savings needed)				
Delivery Year	**2016**	**2017**	**2018**	**2019**	**2020**
2015 Programs	5,200,000	5,200,000	5,200,000	5,200,000	5,200,000
2016 Programs	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000
2017 Programs		5,500,000	5,500,000	5,500,000	5,500,000
2018 Programs			5,900,000	5,900,000	5,900,000
2019 Programs				6,400,000	6,400,000
2020 Programs					6,900,000
Total in Year	**10,000,000**	**15,500,000**	**21,400,000**	**27,800,000**	**34,700,000**

Table 35 Proposed LRAMVA CDM Thresholds

Retail kWh	Weather Normalized 2016 Forecast - Classes with CDM programs anticipated		LRAMVA (kWh)
	A	**C = A / B**	**E = D * C**
Residential	185,951,800	26%	2,621,292
GS < 50	94,406,782	13%	1,330,817
GS > 50	273,969,108	39%	3,862,038
Large Use	155,062,234	22%	2,185,853
Total	709,389,924	100%	10,000,000
	B		**D**

Retail kWh	Weather Normalized 2017 Forecast - Classes with CDM programs anticipated		LRAMVA (kWh)
	A	**C = A / B**	**E = D * C**
Residential	184,072,570	26%	4,037,713
GS < 50	92,323,639	13%	2,025,160
GS > 50	274,745,148	39%	6,026,656
Large Use	155,477,670	22%	3,410,471
Total	706,619,027	100%	15,500,000
	B		**D**

Retail kWh	Weather Normalized 2018 Forecast - Classes with CDM programs anticipated		LRAMVA (kWh)
	A	**C = A / B**	**E = D * C**
Residential	182,209,360	26%	5,538,555
GS < 50	90,275,286	13%	2,744,067
GS > 50	275,580,396	39%	8,376,722
Large Use	155,959,780	22%	4,740,656
Total	704,024,822	100%	21,400,000
	B		**D**

Retail kWh	Weather Normalized 2019 Forecast - Classes with CDM programs anticipated		LRAMVA (kWh)
	A	**C = A / B**	**E = D * C**
Residential	180,362,271	26%	7,146,540
GS < 50	88,261,142	13%	3,497,193
GS > 50	276,475,519	39%	10,954,859
Large Use	156,509,313	22%	6,201,408
Total	701,608,245	100%	27,800,000
	B		**D**

Retail kWh	Weather Normalized 2020 Forecast - Classes with CDM programs anticipated		LRAMVA (kWh)
	A	**C = A / B**	**E = D * C**
Residential	178,531,405	26%	8,858,026
GS < 50	86,280,637	12%	4,280,906
GS > 50	277,431,189	40%	13,765,044
Large Use	157,127,028	22%	7,796,025
Total	699,370,260	100%	34,700,000
	B		**D**

Table 36 LRAMVA kWh threshold by class

kW	Weather Normalized 2016 Forecast - Classes with CDM programs anticipated		LRAMVA (kW)
	G	**I = G / H**	**J = G / A * E**
GS > 50	747,921	72%	10,543
Large Use	293,152	28%	4,132
Total	1,041,073	100%	14,676
	H		

kW	Weather Normalized 2017 Forecast - Classes with CDM programs anticipated		LRAMVA (kW)
	G	**I = G / H**	**J = G / A * E**
GS > 50	750,039	72%	16,452
Large Use	293,938	28%	6,448
Total	1,043,977	100%	22,900
	H		

kW	Weather Normalized 2018 Forecast - Classes with CDM programs anticipated		LRAMVA (kW)
	G	**I = G / H**	**J = G / A * E**
GS > 50	752,319	72%	22,868
Large Use	294,849	28%	8,962
Total	1,047,168	100%	31,830
	H		

kW	Weather Normalized 2019 Forecast - Classes with CDM programs anticipated		LRAMVA (kW)
	G	**I = G / H**	**J = G / A * E**
GS > 50	754,763	72%	29,906
Large Use	295,888	28%	11,724
Total	1,050,651	100%	41,630
	H		

kW	Weather Normalized 2020 Forecast - Classes with CDM programs anticipated		LRAMVA (kW)
	G	**I = G / H**	**J = G / A * E**
GS > 50	757,372	72%	37,578
Large Use	297,056	28%	14,739
Total	1,054,428	100%	52,317
	H		

* Note that LRRAMVA kW is the proportional LF kW over LF kWh times kWH LRAMVA

Table 37 LRAMVA kW threshold by class

CDM Adjustment

CDM ADJUSTMENT

The load forecast model developed by Elenchus includes the persistence of historical CDM programs and the impact of new CDM programs in the bridge and test years by rate class based on the CDM targets approved by the Board.

Kingston Hydro submitted a 2015-2020 Conservation Plan to the IESO on May 1, 2015. At the time of preparation and completion of this application Kingston Hydro's plan for achieving its 2020 kWh conservation targets have not been approved by the IESO.

As a result, CDM Adjustments have been calculated based on the assumption that Kingston Hydro will continue its historically strong conservation performance and meet its 2020 target of 34.5 GWh of verified energy savings persisting as of Dec. 31, 2020.

Kingston Hydro assumes that achievement of verified savings under the new 2015-2020 "Conservation First" framework will occur relatively evenly throughout the 2015-2020 period. Minor differences in 2015 and 2016 savings are due to the timing of expected completion dates for known, pre-approved conservation projects. From 2016 onwards, it is assumed that Kingston Hydro can achieve marginal savings growth year over year as we improve offerings and the required persistence of conservation measures decreases, making savings towards the target easier to achieve.

All verified conservation savings from 2006-2009 were integrated into Kingston Hydro's 2010 CoS application Load Forecast, and remain integrated into forward looking forecasts. Verified conservation savings achieved from 2010-2014 have been calculated

for each rate class and integrated into the current application's load forecast. Projected future savings to be achieved from 2015 through 2020 are outlined in the Load Forecast Appendix 2-I found in Exhibit 3 Tab 1 Schedule 3 Attachment 1, and have been integrated into Kingston Hydro's 2015 Load forecast.

In order to ensure that Kingston Hydro and Kingston Hydro's customers are kept whole in regards to projected conservation savings and lost revenues. Kingston Hydro is applying for continuance of its LRAMVA account. Going forward, this variance account will track savings achievements against this load forecast's projected 2015-2020 savings, rather than assuming a base case going forward that does not include conservation impacts. This will significantly reduce the magnitude of Kingston Hydro's LRAMVA going forward.

Full details of the CDM adjustment are available in Exhibit 3 Tab 1 Schedule 3 Attachment 1. Details of Kingston Hydro's application for LRAMVA disposition are available in Exhibit 4 Tab 6, Schedule 1. Details of Kingston Hydro's 2011-2014 conservation achievements are available in Exhibit 1 Tab 4 Schedule 1.

The following tables outline CDM Adjustments to the load forecast for 2015-2020.

Table 1 - Kingston Hydro Conservation Achievements Forecast 2015-2020

6 Year (2015-2020) kWh Target:							
34,500,000							
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
%							
2015 CDM Programs	15.07%						15.07%
2016 CDM Programs		13.91%					13.91%
2017 CDM Programs			15.94%				15.94%
2018 CDM Programs				17.10%			17.10%
2019 CDM Programs					18.55%		18.55%
2020 CDM Programs						20.00%	20.00%
Total in Year	**15.07%**	**13.91%**	**15.94%**	**17.10%**	**18.55%**	**20.00%**	**100.58%**
kWh							
2015 CDM Programs	5,200,000.00						5,200,000.00
2016 CDM Programs		4,800,000.00					4,800,000.00
2017 CDM Programs			5,500,000.00				5,500,000.00
2018 CDM Programs				5,900,000.00			5,900,000.00
2019 CDM Programs					6,400,000.00		6,400,000.00
2020 CDM Programs						6,900,000.00	6,900,000.00
Total in Year	**5,200,000.00**	**4,800,000.00**	**5,500,000.00**	**5,900,000.00**	**6,400,000.00**	**6,900,000.00**	**34,700,000.00**

Table 2 - Kingston Hydro - CDM Adjustment to Load Forecast

	2011 kWh	**2012**	**2013**	**2014**	**2015**	**Total for 2014**	**Total for 2015**
Amount used for CDM threshold for LRAMVA (2014)	3,302,477.00	5,415,664.00	6,158,825.00	1,196,240.00		16,073,206.00	
2011 CDM adjustment (per Board Decision in 2011 Cost of Service Application) (enter as negative)	-	-	-	-		-	
Amount used for CDM threshold for LRAMVA (2015)					5,200,000.00		5,200,000.00
Manual Adjustment for 2015 Load Forecast (billed basis)	3,302,477.00	5,415,664.00	6,158,825.00	598,120.00	-		15,475,086.00
Proposed Loss Factor (TLF)	3.93%	Format: X.XX%					
Manual Adjustment for 2015 Load Forecast (system purchased basis)	3,432,264.35	5,628,499.60	6,400,866.82	621,626.12	-		16,083,256.88

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Exhibit: 3
Tab: 1
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Date Filed: June 1, 2015

Attachment 1 of 1

OEB Appendix 2-I

File Number:	EB-2015-0083
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Appendix 2-I
Load Forecast CDM Adjustment Work Form (2015)

The 2014 bridge year is the last year of the current four year (2011-2014) CDM program, and 2015 is the first year of a new six year (2015-2020) CDM program, per the

Appendix 2-I was developed to help determine what would be the amount of CDM savings needed in each year to cumulatively achieve the four year 2011-2014 CDM

It is assumed that the new six year (2015-2020) CDM program will work similar to the existing 2011-2014 CDM program, meaning that distributors will offer programs

With this approach, it is necessary to account for estimated savings for the last year of the current program, particularly the estimated savings for new CDM programs

2011-2014 CDM Program - 2014, last year of the current CDM plan

Input the 2011-2014 CDM target in Cell B21.

Input the measured results for 2011 CDM programs for each of the years 2011 and persistence into 2012, 2013 and 2014 into cells B31 to E31. These results are taken
Measured results for 2012 CDM programs for each of the years 2012 and persistence into 2013 and 2014 are input into cells C32 to E32. These results are taken from
the final 2012 CDM Report issued by the OPA for that distributor in the fall of 2013.

Measured results for 2013 CDM programs for each of the years 2013 and persistence into 2014 are input into cells C33 to E33. These results are taken from the final

Based on these inputs, the residual kWh to achieve the 4 year CDM target icalculated for 2014 CDM under the assumption that the distributor will at least achieve the

4 Year (2011-2014) kWh Target:					
	37,160,000				
	2011	**2012**	**2013**	**2014**	**Total**
2011 CDM Programs	8.89%	8.89%	8.89%	8.89%	35.55%
2012 CDM Programs		14.57%	14.57%	14.57%	43.72%
2013 CDM Programs			16.57%	16.57%	33.15%
2014 CDM Programs				5.42%	5.42%
Total in Year	**8.89%**	**23.46%**	**40.03%**	**45.45%**	**117.83%**
kWh					
2011 CDM Programs	3,302,477.00	3,302,477.00	3,302,477.00	3,302,477.00	13,209,908.00
2012 CDM Programs		5,415,664.00	5,415,664.00	5,415,664.00	16,246,992.00
2013 CDM Programs			6,158,825.00	6,158,825.00	12,317,650.00
2014 CDM Programs				2,012,762.00	2,012,762.00
Total in Year	**3,302,477.00**	**8,718,141.00**	**14,876,966.00**	**16,889,728.00**	**43,787,312.00**

2015-2020 CDM Program - 2015, first year of the current CDM plan

For the first year of the new 2015-2020 CDM plan, it is assumed that each year's program will achieve an equal amount of new CDM savings. The new targets for 2015-

6 Year (2015-2020) kWh Target:							
34,500,000							
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**Total**
%							
2015 CDM Programs	15.07%						15.07%
2016 CDM Programs		13.91%					13.91%
2017 CDM Programs			15.94%				15.94%
2018 CDM Programs				17.10%			17.10%
2019 CDM Programs					18.55%		18.55%
2020 CDM Programs						20.00%	20.00%
Total in Year	**15.07%**	**13.91%**	**15.94%**	**17.10%**	**18.55%**	**20.00%**	**100.58%**
kWh							
2015 CDM Programs	5,200,000.00						5,200,000.00
2016 CDM Programs		4,800,000.00					4,800,000.00
2017 CDM Programs			5,500,000.00				5,500,000.00
2018 CDM Programs				5,900,000.00			5,900,000.00
2019 CDM Programs					6,400,000.00		6,400,000.00
2020 CDM Programs						6,900,000.00	6,900,000.00
Total in Year	**5,200,000.00**	**4,800,000.00**	**5,500,000.00**	**5,900,000.00**	**6,400,000.00**	**6,900,000.00**	**34,700,000.00**

Determination of 2015 Load Forecast Adjustment

The Board has determined that the "net" number should be used in its Decision and Order with respect to Centre Wellington Hydro Ltd.'s 2013 Cost of Service rates (EB-

From each of the 2006-2010 CDM Final Report, and the 2011, 2012 and 2013 CDM Final Reports, issued by the OPA for the distributor, the distributor should input the

Net-to-Gross Conversion				
Is CDM adjustment being done on a "net" or "gross" basis?				**net**
Persistence of Historical CDM programs to 2014	**Gross kWh**	**Net kWh**	**Difference kWh**	**Net-to-Gross Conversion Factor ('g')**
2006-2010 CDM programs				
2011 CDM program				
2012 CDM program				
2013 CDM program				
2006 to 2013 OPA CDM programs: Persistence to 2015	0	0		0.00%

The default values represent the factor that each year's CDM program is factored into the manual CDM adjustment. Distributors can choose

These factors do not mean that CDM programs are excluded, but also reflect the assumption that impacts of 2011 and 2012 programs are already

Weight Factor for Inclusion in CDM Adjustment to 2014 Load Forecast

	2011	**2012**	**2013**	**2014**	**2015**	
Weight Factor for each year's CDM program impact on 2014 load forecast	**1**	**1**	**1**	**0.5**	**0**	Distributor can select "0", "0.5", or "1" from drop-down list
Default Value selection rationale.	*Full year persistence of 2011 CDM programs on 2015 load forecast. Full impact assumed because of 50% impact in 2011 (first year) but full year persistence impact on 2012 and 2013, and thus reflected in base forecast before the CDM adjustment.*	*Full year persistence of 2012 CDM programs on 2015 load forecast. Full impact assumed because of 50% impact in 2012 (first year) but full year persistence impact on 2013, and thus reflected in base forecast before the CDM adjustment.*	*Default is 0, but one option is for full year impact of persistence of 2013 CDM programs on 2015 load forecast, but 50% impact in base forecast (first year impact of 2013 CDM programs on 2013 load forecast, which is part of the data for the load forecast.*	*Full year impact of persistence of 2014 programs on 2015 load forecast. 2014 CDM programs not in base forecast.*	*Only 50% of 2015 CDM programs are assumed to impact the 2015 load forecast based on the "half-year" rule.*	

2011-2014 and 2015-2020 LRAMVA and 2015 CDM adjustment to Load Forecast

One manual adjustment for CDM impacts to the 2015 load forecast is made. However, the distributor will have two associated annualized CDM impacts, one for the

The Amount used for the CDM threshold of the LRAMVA is the kWh that will be used to determine the base amount for the LRAMVA balance for 2014, for assessing

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

The Manual Adjustment for the 2015 Load Forecast is the amount manually subtracted from the load forecast derived from the base forecast from historical data, and

If the distributor has developed their load forecast on a system purchased basis, then the manual adjustment should be on system purchased basis, including the

The distributor should determine the allocation of the savings to all customer classes in a reasonable manner (e.g. taking into account what programs and what OPA-

	2011 kWh	2012	2013	2014	2015	Total for 2014	Total for 2015
Amount used for CDM threshold for LRAMVA (2014)	3,302,477.00	5,415,664.00	6,158,825.00	1,196,240.00		16,073,206.00	
2011 CDM adjustment (per Board Decision in 2011 Cost of Service Application) (enter as negative)	-	-	-	-		-	
Amount used for CDM threshold for LRAMVA (2015)					5,200,000.00		5,200,000.00
Manual Adjustment for 2015 Load Forecast (billed basis)	3,302,477.00	5,415,664.00	6,158,825.00	598,120.00	-		15,475,086.00
Proposed Loss Factor (TLF)	3.93%	Format: X.XX%					
Manual Adjustment for 2015 Load Forecast (system purchased basis)	3,432,264.35	5,628,499.60	6,400,866.82	621,626.12	-		16,083,256.88

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

Pass-through Charges

PASS-THROUGH CHARGES

Pass-through charges (the cost of power) is one of the components used in the calculation of the Working Capital Allowance that is included in rate base. Cost of power is comprised of costs for electricity commodity, global adjustment, transmission, low voltage, wholesale market service and rural or remote electricity rate protection, and smart metering entity charge.

For 2015 to 2020, energy revenue is assumed to equal the cost of power, with no impact to net income, notwithstanding known timing variances associated with the smart metering entity charge. Kingston has calculated its cost of power for the 2015 Bridge Year and 2016 – 2020 Test Years using Kingston's 2015 – 2020 load forecasts adjusted for the impact of conservation and demand activities and proposed loss factors.

Kingston's wholesale market participant (WMP) customer has been excluded from the commodity and global adjustment costs forecast since they transact directly with the Independent Electricity System Operator (IESO) for the purchase of electricity. WMP has been included in retail transmission costs calculations.

Commodity Price Estimate

A weighted average commodity price estimate of $0.0965 per kWh has been used for bridge year 2015, and test years 2016 – 2020 in the calculation of commodity supply costs.

Kingston is proposing in this application that the commodity and global adjustment rates for RPP and non-RPP customers be updated to reflect the most current data available in the RPP Price Reports and Ontario Wholesale Electricity Market Price Forecast, which are to be issued by the Board in the fall of 2015. And further that annually these rates be adjusted to reflect most current data for each of the test years in the calculation of power supply costs.

The commodity weighted average price estimate used for bridge year 2015, and test years 2016 – 2020, reflects a mix of weighted Non-RPP and RPP rates. The weighted average price estimate has been determined by the split between Kingston's RPP and Non-RPP customers based on actual 2014 data. The bridge year 2015 weighted commodity price estimate makes use of the RPP (TOU) prices provided in the Board's *Regulated Price Plan (RPP) Report – November 1, 2014 to October 31, 2015* issued October 16, 2014.

The commodity price for non-RPP customers was calculated using Navigant Consulting's *Ontario Wholesale Electricity Market Price Forecast for the Period November 1, 2014 through April 30, 2016,* issued October 8, 2014. The quarterly rates provided in 'Table ES-1: HOEP Forecast' were used to calculate a 2015 calendar average hourly Ontario energy price (HOEP) rate of $20.84 per MWh.

The global adjustment rate of $74.88 per MWh was used in the calculation of the weighted average commodity price estimate and comes from the Board's *Regulated Price Plan Report – November 1, 2014 to October 31, 2015* issued October 16, 2014.

The following table provides detail of the commodity price estimate: the rates, 2014 consumption data and weightings used to calculate the commodity price estimate.

Commodity Price Estimate

Customer Class Name	Total	2014 ACTUAL kWh's non-RPP	TOU Off-Peak	TOU Mid-Peak	TOU On-Peak	*RPP*
Residential	192,061,408	8,722,926	118,458,811	31,774,825	33,104,847	0
General Service < 50 kW	91,470,555	15,185,274	39,954,953	13,922,517	14,551,168	7,856,643
General Service 50 to 4999 kW *	268,270,495	223,126,199	-	-	-	45,144,296
Large Use	151,518,193	151,518,193	-	-	-	0
Unmetered Scattered Load	1,247,036	1,247,036	-	-	-	0
Street Lighting	1,817,917	1,817,917	-	-	-	0
Standby Approved on an Interim Basis	0					0
TOTAL	**706,385,604**	**401,617,545**	**158,413,764**	**45,697,342**	**47,656,015**	**53,000,939**
%	***100.00%***	***56.86%***	***22.43%***	***6.47%***	***6.75%***	**7.50%**
Forecast Price						
HOEP ($/MWh)		$ 20.84				
Global Adjustment ($/MWh)		$ 74.88				
TOTAL ($/MWh)		**$95.72**	$ 77.00	$ 114.00	$ 140.00	$ 95.160
$/kWh		***$0.09572***	***$0.07700***	***$0.11400***	***$0.14000***	**$0.09516**
%		56.86%	22.43%	6.47%	6.75%	7.50%
Weighted Average Price	**$0.09565**	$0.0544	$0.0173	$0.0074	$0.0094	$0.0071

** Excludes WMP kWh*

Transmission Costs

Kingston's cost of power calculation includes transmission costs. Kingston has partially embedded status, and as such, incurs transmission costs based on wholesale uniform transmission rates (UTRs) and transmission costs based on Hydro One Networks retail transmission service rates (RTSRs) for its Sub-Transmission (ST) rate class.

For 2015 bridge year, the transmission cost estimate is based upon Kingston's current 2015 customer class retail transmission rates from rate order EB-2014-0088 applied to the 2015 customer class load forecast. For 2016 – 2020 test years, the retail transmission rates calculated in Kingston's 2016 RTSR model (Exhibit 8 Tab 2) for each customer class have been applied to 2016 – 2020 customer class load forecasts.

Kingston proposes to update the cost of power and working capital calculations to reflect most current actual rates available in the 2016 through 2020 test years.

Low Voltage ("LV")

Kingston's low voltage costs for the 2015 bridge year reflect Kingston's 2015 load forecast and Kingston's current 2015 LV rates, which vary by customer class, and are those amounts set in Kingston's 2011 Cost of Service rate application EB-2010-0136.

Kingston is proposing to adjust its LV rates for the 2016 test year based upon current Hydro One Networks applicable LV rates and 2016 forecast LV purchases and then on an annual basis to update the LV rates to reflect actual rates.

Kingston's low voltage costs for 2016 through 2020 test years have been based on the 2016 proposed LV rates applied to 2016 – 2020 forecasts. Kingston Hydro proposes to update the Cost of Power and Working Capital calculations to reflect actual rates in the 2016 to 2020 test years.

Wholesale Market Service (WMS) and Rural or Remote Electricity Rate Protection (RRRP)

The Wholesale Market Service ("WMS") and Rural or Remote Electricity Rate Protection ("RRRP") costs have been based on the most recent WMS and RRRP rates approved by the Board and the forecast purchases for each of the 2015 Bridge and 2016 – 2020 test years.

The WMS rate of $0.0044 per kWh and the RRRP rate of $0.0013 per kWh from rate order EB-2014-0347 were applied to the test years.

Kingston Hydro proposes to update the Cost of Power and Working Capital calculations to reflect actual rates in the 2016 to 2020 Test Years.

Smart Metering Entity ("SME") Charge

Kingston Hydro's cost of power calculation includes the impacts arising from the SME charge approved by the Board on March 28, 2013 (EB-2012-0100/EB-2012-0211). SME costs are calculated using the rate of $0.788 per month (effective until October 31, 2018), for each Residential and General Service < 50 kW customer multiplied by the previous year-end customer count.

Although the current SME charge is in effect until October 31, 2018, Kingston has included the current rate through all of the test years 2016 – 2020. Kingston proposes to update the cost of power and working capital calculations as part of an annual adjustment to reflect actual rates in the 2016 to 2020 test years.

Cost of Power Proposed Annual Update

Kingston proposes that the Cost of Power forecast for the 2016 – 2020 test years be adjusted annually to reflect the most current rates available for the following:

1. RPP (TOU) rates
2. Hourly Ontario Energy Price (HOEP)
3. Global Adjustment
4. Uniform Transmission and Sub-transmission rates
5. Low Voltage Rates
6. Wholesale Market Service (WMS) Rates
7. Rural or Remote Electricity Rate Protection (RRRP)

8. Smart Meter Entity (SME) Charge
9. Changes in the ratio of RPP to non-RPP volumes

The annual adjustment would use the above most current rates available, applied to the appropriate Board approved load forecast test year.

Table 1 in Exhibit 3 Tab 1 Schedule 4 Attachment 1, provides pass-through charges calculations for 2015 bridge and 2016 through 2020 test years.

Attachment 1 of 1

Table 1 - Pass Through Charges

Table 1: Pass-through Charges

Electricity - Commodity	**Customer**	**Revenue**	**Expense**	**2015**	*rate ($/kWh):*	$ 0.09565	**2016**	*rate ($/kWh):*	$ 0.09565
	Class Name	**USA #**	**USA #**	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	4006	4705	194,513,934		18,605,207	191,186,799		18,286,968
kWh	General Service < 50 kW	4010	4705	99,951,145		9,560,301	97,064,565		9,284,200
kWh	General Service 50 to 4999 kW	4035	4705	278,340,052		26,623,154	277,092,963		26,503,870
kWh	Large Use	4035	4705	156,697,641		14,988,089	156,286,029		14,948,718
kWh	Unmetered Scattered Load	4035	4705	1,269,308		121,409	1,243,138		118,906
kWh	Street Lighting	4035	4705	1,885,866		180,383	1,889,588		180,739
kWh	Standby Approved on an Interim Basis	4035	4705						
	TOTAL			**732,657,946**		**70,078,542**	**724,763,081**		**69,323,400**
Transmission - Network	**Customer**	**Revenue**	**Expense**	**2015**			**2016**		
	Class Name	**USA #**	**USA #**	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	4066	4714	194,513,934	$ 0.0067	1,301,270	191,186,799	$ 0.0071	1,357,426
kWh	General Service < 50 kW	4066	4714	99,951,145	$ 0.0060	603,650	97,064,565	$ 0.0063	611,507
kW	General Service 50 to 4999 kW	4066	4714	743,238	$ 2.6313	1,955,646	739,908	$ 2.7797	2,056,722
kW	Large Use	4066	4714	290,775	$ 3.1704	921,883	290,012	$ 3.3492	971,308
kWh	Unmetered Scattered Load	4066	4714	1,269,308	$ 0.0067	8,491	1,243,138	$ 0.0071	8,826
kW	Street Lighting	4066	4714	5,036	$ 1.9006	9,571	5,046	$ 2.0078	10,131
kW	Standby Approved on an Interim Basis	4066	4714		$ -			$ -	
	TOTAL			**296,773,436**		**4,800,512**	**290,529,468**		**5,015,921**
Transmission - Connection	**Customer**	**Revenue**	**Expense**	**2015**			**2016**		
	Class Name	**USA #**	**USA #**	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	4068	4716	194,513,934	$ 0.0051	992,638	191,186,799	$ 0.0056	1,070,646
kWh	General Service < 50 kW	4068	4716	99,951,145	$ 0.0046	463,698	97,064,565	$ 0.0051	495,029
kW	General Service 50 to 4999 kW	4068	4716	743,238	$ 2.0128	1,495,977	739,908	$ 2.2225	1,644,464
kW	Large Use	4068	4716	290,775	$ 2.4253	705,218	290,012	$ 2.6780	776,652
kWh	Unmetered Scattered Load	4068	4716	1,269,308	$ 0.0051	6,477	1,243,138	$ 0.0056	6,962
kW	Street Lighting	4068	4716	5,036	$ 1.4538	7,321	5,046	$ 1.6053	8,100
kW	Standby Approved on an Interim Basis	4068	4716		$ -			$ -	
	TOTAL			**296,773,436**		**3,671,330**	**290,529,468**		**4,001,853**
Wholesale Market Service	**Customer**	**Revenue**	**Expense**	**2015**	*rate ($/kWh):*		**2016**	*rate ($/kWh):*	
	Class Name	**USA #**	**USA #**	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	4062	4708	194,513,934	$ 0.0044	855,861	191,186,799	$ 0.0044	841,222
kWh	General Service < 50 kW	4062	4708	99,951,145	$ 0.0044	439,785	97,064,565	$ 0.0044	427,084
kWh	General Service 50 to 4999 kW	4062	4708	278,340,052	$ 0.0044	1,224,696	277,092,963	$ 0.0044	1,219,209
kWh	Large Use	4062	4708	156,697,641	$ 0.0044	689,470	156,286,029	$ 0.0044	687,659
kWh	Unmetered Scattered Load	4062	4708	1,269,308	$ 0.0044	5,585	1,243,138	$ 0.0044	5,470
kWh	Street Lighting	4062	4708	1,885,866	$ 0.0044	8,298	1,889,588	$ 0.0044	8,314
kWh	Standby Approved on an Interim Basis	4062	4708						
	TOTAL			**732,657,946**		**3,223,695**	**724,763,081**		**3,188,958**

Table 1: Pass-through Charges - cont'd

Electricity - Commodity	Customer	2017	rate ($/kWh):	$ 0.09565	2018	rate ($/kWh):	$ 0.09565
	Class Name	Volume		Amount	Volume		Amount
kWh	Residential	187,852,360		17,968,029	184,405,119		17,638,302
kWh	General Service < 50 kW	94,219,433		9,012,064	91,363,171		8,738,864
kWh	General Service 50 to 4999 kW	275,818,882		26,382,004	274,357,600		26,242,233
kWh	Large Use	155,543,620		14,877,707	150,335,202		14,379,523
kWh	Unmetered Scattered Load	1,217,507		116,454	1,192,405		114,053
kWh	Street Lighting	1,893,310		181,095	1,897,032		181,451
kWh	Standby Approved on an Interim Basis						
	TOTAL	**716,545,113**		**68,537,354**	**703,550,529**		**67,294,425**
Transmission - Network	**Customer**	**2017**	**2017**		**2018**	**2018**	
	Class Name	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	187,852,360	$ 0.0071	1,333,752	184,405,119	$ 0.0071	1,309,276
kWh	General Service < 50 kW	94,219,433	$ 0.0063	593,582	91,363,171	$ 0.0063	575,588
kW	General Service 50 to 4999 kW	736,506	$ 2.7797	2,047,266	732,604	$ 2.7797	2,036,419
kW	Large Use	288,634	$ 3.3492	966,693	287,122	$ 3.3492	961,629
kWh	Unmetered Scattered Load	1,217,507	$ 0.0071	8,644	1,192,405	$ 0.0071	8,466
kW	Street Lighting	5,056	$ 2.0078	10,151	5,066	$ 2.0078	10,172
kW	Standby Approved on an Interim Basis		$ -			$ -	
	TOTAL	**284,319,496**		**4,960,089**	**277,985,487**		**4,901,550**
Transmission - Connection	**Customer**	**2017**	**2017**		**2018**	**2018**	
	Class Name	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	187,852,360	$ 0.0056	1,051,973	184,405,119	$ 0.0056	1,032,669
kWh	General Service < 50 kW	94,219,433	$ 0.0051	480,519	91,363,171	$ 0.0051	465,952
kW	General Service 50 to 4999 kW	736,506	$ 2.2225	1,636,903	732,604	$ 2.2225	1,628,231
kW	Large Use	288,634	$ 2.6780	772,962	287,122	$ 2.6780	768,913
kWh	Unmetered Scattered Load	1,217,507	$ 0.0056	6,818	1,192,405	$ 0.0056	6,677
kW	Street Lighting	5,056	$ 1.6053	8,116	5,066	$ 1.6053	8,132
kW	Standby Approved on an Interim Basis		$ -			$ -	
	TOTAL	**284,319,496**		**3,957,292**	**277,985,487**		**3,910,574**
Wholesale Market Service	**Customer**	**2017**	*rate ($/kWh):*		**2018**	*rate ($/kWh):*	
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	187,852,360	$ 0.0044	826,550	184,405,119	$ 0.0044	811,383
kWh	General Service < 50 kW	94,219,433	$ 0.0044	414,566	91,363,171	$ 0.0044	401,998
kWh	General Service 50 to 4999 kW	275,818,882	$ 0.0044	1,213,603	274,357,600	$ 0.0044	1,207,173
kWh	Large Use	155,543,620	$ 0.0044	684,392	154,728,924	$ 0.0044	680,807
kWh	Unmetered Scattered Load	1,217,507	$ 0.0044	5,357	1,192,405	$ 0.0044	5,247
kWh	Street Lighting	1,893,310	$ 0.0044	8,331	1,897,032	$ 0.0044	8,347
kWh	Standby Approved on an Interim Basis						
	TOTAL	**716,545,113**		**3,152,798**	**707,944,251**		**3,114,955**

Table 1: Pass-through Charges - cont'd

Electricity - Commodity	**Customer**	**2019**	*rate ($/kWh):*	$ 0.09565	**2020**	*rate ($/kWh):*	$ 0.09565
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	180,875,761		17,300,720	177,254,597		16,954,356
kWh	General Service < 50 kW	88,512,421		8,466,190	85,663,582		8,193,699
kWh	General Service 50 to 4999 kW	272,745,594		26,088,045	270,959,606		25,917,216
kWh	Large Use	153,862,032		14,716,863	152,929,189		14,627,637
kWh	Unmetered Scattered Load	1,167,821		111,702	1,143,743		109,399
kWh	Street Lighting	1,900,755		181,807	1,904,476		182,163
kWh	Standby Approved on an Interim Basis						
	TOTAL	**699,064,382**		**66,865,327**	**689,855,193**		**65,984,470**
Transmission - Network	**Customer**	**2019**	**2019**		**2020**	**2020**	
	Class Name	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	180,875,761	$ 0.0071	1,284,218	177,254,597	$ 0.0071	1,258,508
kWh	General Service < 50 kW	88,512,421	$ 0.0063	557,628	85,663,582	$ 0.0063	539,681
kW	General Service 50 to 4999 kW	728,299	$ 2.7797	2,024,453	723,530	$ 2.7797	2,011,196
kW	Large Use	285,513	$ 3.3492	956,240	283,782	$ 3.3492	950,443
kWh	Unmetered Scattered Load	1,167,821	$ 0.0071	8,292	1,143,743	$ 0.0071	8,121
kW	Street Lighting	5,076	$ 2.0078	10,192	5,086	$ 2.0078	10,212
kW	Standby Approved on an Interim Basis		$ -			$ -	
	TOTAL	**271,574,890**		**4,841,022**	**265,074,320**		**4,778,159**
Transmission - Connection	**Customer**	**2019**	**2019**		**2020**	**2020**	
	Class Name	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	180,875,761	$ 0.0056	1,012,904	177,254,597	$ 0.0056	992,626
kWh	General Service < 50 kW	88,512,421	$ 0.0051	451,413	85,663,582	$ 0.0051	436,884
kW	General Service 50 to 4999 kW	728,299	$ 2.2225	1,618,663	723,530	$ 2.2225	1,608,064
kW	Large Use	285,513	$ 2.6780	764,604	283,782	$ 2.6780	759,968
kWh	Unmetered Scattered Load	1,167,821	$ 0.0056	6,540	1,143,743	$ 0.0056	6,405
kW	Street Lighting	5,076	$ 1.6053	8,149	5,086	$ 1.6053	8,165
kW	Standby Approved on an Interim Basis		$ -			$ -	
	TOTAL	**271,574,890**		**3,862,272**	**265,074,320**		**3,812,111**
Wholesale Market Service	**Customer**	**2019**	*rate ($/kWh):*		**2020**	*rate ($/kWh):*	
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	180,875,761	$ 0.0044	795,853	177,254,597	$ 0.0044	779,920
kWh	General Service < 50 kW	88,512,421	$ 0.0044	389,455	85,663,582	$ 0.0044	376,920
kWh	General Service 50 to 4999 kW	272,745,594	$ 0.0044	1,200,081	270,959,606	$ 0.0044	1,192,222
kWh	Large Use	153,862,032	$ 0.0044	676,993	152,929,189	$ 0.0044	672,888
kWh	Unmetered Scattered Load	1,167,821	$ 0.0044	5,138	1,143,743	$ 0.0044	5,032
kWh	Street Lighting	1,900,755	$ 0.0044	8,363	1,904,476	$ 0.0044	8,380
kWh	Standby Approved on an Interim Basis						
	TOTAL	**699,064,382**		**3,075,883**	**689,855,193**		**3,035,363**

Table 1: Pass-through Charges

Rural Rate Protection	**Customer**	**Revenue**	**Expense**	**2015**	*rate ($/kWh):*	$ 0.00130	**2016**	*rate ($/kWh):*	$ 0.00130
	Class Name	**USA #**	**USA #**	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	4062	4730	194,513,934		252,868	191,186,799		248,543
kWh	General Service < 50 kW	4062	4730	99,951,145		129,936	97,064,565		126,184
kWh	General Service 50 to 4999 kW	4062	4730	278,340,052		361,842	277,092,963		360,221
kWh	Large Use	4062	4730	156,697,641		203,707	156,286,029		203,172
kWh	Unmetered Scattered Load	4062	4730	1,269,308		1,650	1,243,138		1,616
kWh	Street Lighting	4062	4730	1,885,866		2,452	1,889,588		2,456
kWh	Standby Approved on an Interim Basis	4062	4730						
	TOTAL			**732,657,946**		**952,455**	**724,763,081**		**942,192**
Debt Retirement Charge	**Customer**	**Revenue**	**Expense**	**2015**	*rate ($/kWh):*	$ 0.00700	**2016**	*rate ($/kWh):*	$ 0.00700
	Class Name	**USA #**	**USA #**	**Volume**		**Amount**	**Volume**		**Amount**
	TOTAL								
Low Voltage Charges	**Customer**	**Revenue**	**Expense**		**2015**			**2016**	
	Class Name	**USA #**	**USA #**	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	4075	4750	187,160,982	0.0007	131,013	183,959,618	0.0012	220,752
kWh	General Service < 50 kW	4075	4750	96,172,824	0.0006	57,704	93,395,362	0.0011	102,735
kW	General Service 50 to 4999 kW	4075	4750	743,238	0.2520	187,296	739,908	0.4669	345,463
kW	Large Use	4075	4750	290,775	0.3036	88,279	290,012	0.5625	163,132
kWh	Unmetered Scattered Load	4075	4750	1,221,326	0.0007	855	1,196,145	0.0012	1,435
kW	Street Lighting	4075	4750	5,036	0.1820	917	5,046	0.3372	1,702
kW	Standby Approved on an Interim Basis	4075	4750						
	TOTAL			**285,594,181**		**466,063**	**279,586,091**		**835,218**
Smart Meter Entity Charge	**Customer**	**Revenue**	**Expense**	**2015**	*rate ($/kWh):*		**2016**	*rate ($/kWh):*	
	Class Name	**USA #**	**USA #**	**Volume**		**Amount**	**Volume**		**Amount**
Cust	Residential	4076	4751	24,004	0.788	18,915	24,157	0.788	19,036
Cust	General Service < 50 kW	4076	4751	3,000	0.788	2,364	2,950	0.788	2,325
Cust	General Service 50 to 4999 kW	4076	4751	331			337		
Cust	Large Use	4076	4751	3			3		
Cust	Unmetered Scattered Load	4076	4751	145			141		
Cust	Street Lighting	4076	4751	5,337			5,349		
Cust	Standby Approved on an Interim Basis	4076	4751						
	TOTAL			**32,820**		**21,279**	**32,937**		**21,360**
GRAND TOTAL						**83,213,877**			**83,328,903**

Table 1: Pass-through Charges - cont'd

Rural Rate Protection	**Customer**	**2017**	*rate ($/kWh):*	$ 0.00130	**2018**	*rate ($/kWh):*	$ 0.00130
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	187,852,360		244,208	184,405,119		239,727
kWh	General Service < 50 kW	94,219,433		122,485	91,363,171		118,772
kWh	General Service 50 to 4999 kW	275,818,882		358,565	274,357,600		356,665
kWh	Large Use	155,543,620		202,207	154,728,924		201,148
kWh	Unmetered Scattered Load	1,217,507		1,583	1,192,405		1,550
kWh	Street Lighting	1,893,310		2,461	1,897,032		2,466
kWh	Standby Approved on an Interim Basis						
	TOTAL	**716,545,113**		**931,509**	**707,944,251**		**920,328**
Debt Retirement Charge	**Customer**	**2017**	*rate ($/kWh):*	$ 0.00700	**2018**	*rate ($/kWh):*	$ 0.00700
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
	TOTAL						
Low Voltage Charges	**Customer**	**2017**	**2017**		**2018**	**2018**	
	Class Name	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	180,751,226	0.0012	216,901	177,434,297	0.0012	212,921
kWh	General Service < 50 kW	90,657,781	0.0011	99,724	87,909,490	0.0011	96,700
kW	General Service 50 to 4999 kW	736,506	0.4669	343,875	732,604	0.4669	342,053
kW	Large Use	288,634	0.5625	162,357	287,122	0.5625	161,506
kWh	Unmetered Scattered Load	1,171,483	0.0012	1,406	1,147,330	0.0012	1,377
kW	Street Lighting	5,056	0.3372	1,705	5,066	0.3372	1,708
kW	Standby Approved on an Interim Basis						
	TOTAL	**273,610,686**		**825,967**	**267,515,909**		**816,266**
Smart Meter Entity Charge	**Customer**	**2017**	*rate ($/kWh):*		**2018**	*rate ($/kWh):*	
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
Cust	Residential	24,311	0.788	19,157	24,466	0.788	19,279
Cust	General Service < 50 kW	2,901	0.788	2,286	2,853	0.788	2,248
Cust	General Service 50 to 4999 kW	343			350		
Cust	Large Use	3			3		
Cust	Unmetered Scattered Load	138			135		
Cust	Street Lighting	5,361			5,373		
Cust	Standby Approved on an Interim Basis						
		33,057		**21,443**	**33,180**		**21,527**
				82,386,451			**80,979,625**

Table 1: Pass-through Charges - cont'd

Rural Rate Protection	**Customer**	**2019**	*rate ($/kWh):*	$ 0.00130	**2020**	*rate ($/kWh):*	$ 0.00130
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
kWh	Residential	180,875,761		235,138	177,254,597		230,431
kWh	General Service < 50 kW	88,512,421		115,066	85,663,582		111,363
kWh	General Service 50 to 4999 kW	272,745,594		354,569	270,959,606		352,247
kWh	Large Use	153,862,032		200,021	152,929,189		198,808
kWh	Unmetered Scattered Load	1,167,821		1,518	1,143,743		1,487
kWh	Street Lighting	1,900,755		2,471	1,904,476		2,476
kWh	Standby Approved on an Interim Basis						
	TOTAL	**699,064,382**		**908,784**	**689,855,193**		**896,812**
Debt Retirement Charge	**Customer**	**2019**	*rate ($/kWh):*	$ 0.00700	**2020**	*rate ($/kWh):*	$ 0.00700
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
	TOTAL						
Low Voltage Charges	**Customer**	**2019**	**2019**		**2020**	**2020**	
	Class Name	**Volume**	**Rate**	**Amount**	**Volume**	**Rate**	**Amount**
kWh	Residential	174,038,354	0.0012	208,846	170,554,076	0.0012	204,665
kWh	General Service < 50 kW	85,166,503	0.0011	93,683	82,425,355	0.0011	90,668
kW	General Service 50 to 4999 kW	728,299	0.4669	340,043	723,530	0.4669	337,816
kW	Large Use	285,513	0.5625	160,601	283,782	0.5625	159,627
kWh	Unmetered Scattered Load	1,123,675	0.0012	1,348	1,100,508	0.0012	1,321
kW	Street Lighting	5,076	0.3372	1,712	5,086	0.3372	1,715
kW	Standby Approved on an Interim Basis						
	TOTAL	**261,347,420**		**806,233**	**255,092,337**		**795,812**
Smart Meter Entity Charge	**Customer**	**2019**	*rate ($/kWh):*		**2020**	*rate ($/kWh):*	
	Class Name	**Volume**		**Amount**	**Volume**		**Amount**
Cust	Residential	24,622	0.788	19,402	24,779	0.788	19,526
Cust	General Service < 50 kW	2,805	0.788	2,210	2,758	0.788	2,173
Cust	General Service 50 to 4999 kW	357			364		
Cust	Large Use	3			3		
Cust	Unmetered Scattered Load	132			129		
Cust	Street Lighting	5,385			5,397		
Cust	Standby Approved on an Interim Basis						
	$ -	**33,304**		**21,612**	**33,430**		**21,699**
				80,381,134			**79,324,426**

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Exhibit 3

Tab 2 of 3

Accuracy of Load Forecast and Variance Analyses

Accuracy of Load Forecast and Variance Analyses

ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSES

The annual schedule of volumes (kWh and kW) and customer/connections count by rate class as well as system totals are summarized in Appendix 2-IA which is filed under Exhibit 3 Tab 1 Schedule 1 Attachment 1.

The annual schedule of revenues, provided on the basis of existing and proposed rates is summarized in Exhibit 3 Tab 2 Schedule 1 Attachment 1.

Elenchus used six historical years of customer rate class data to develop the Weather-Normalized Load Forecast Model. Average annual customer counts were forecast using the monthly class specific data. The Weather-Normalized Load Forecast Model is summarized in Exhibit 3 Tab 1 Schedule 2.

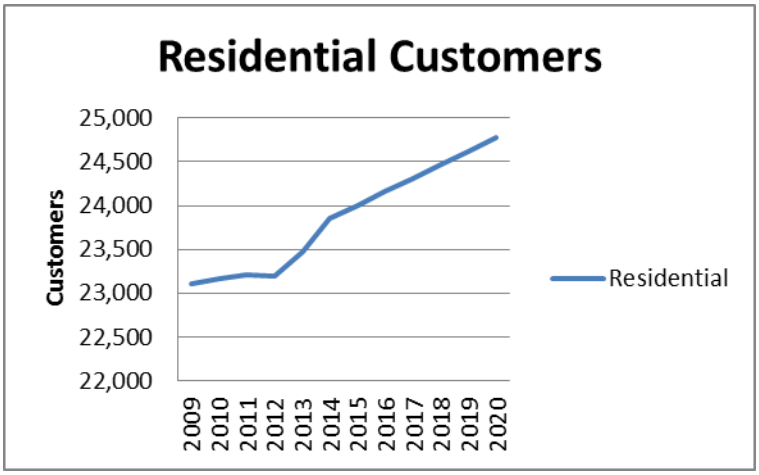
Details for the development of the billing kW value for GS>50, Large User and Streetlights are described in the Elenchus Load Forecast Model in Exhibit 3 Tab 1 Schedule 2.

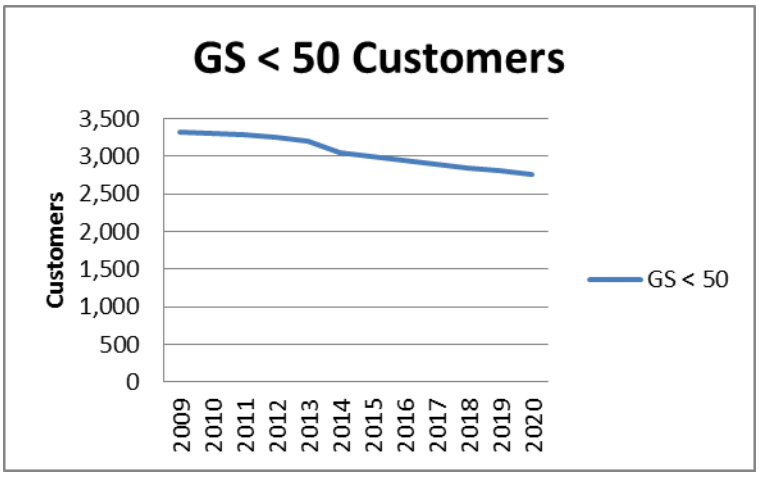
The variance analyses of the 2011 Board Approved actuals vs. Historical Actual and Historical Actual-Weather-Normalized are summarized in Appendix 2-IA which is filed under Exhibit 3 Tab 1 Schedule 1 Attachment 1.

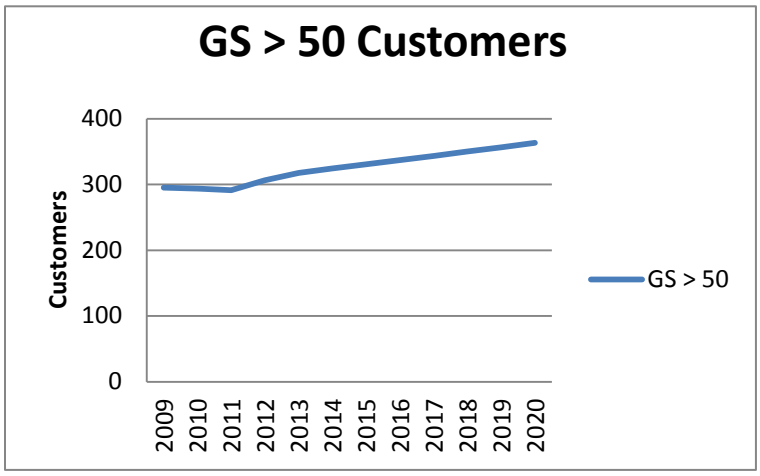
The variance analyses of the Historical Actual-Weather-Normalized vs. preceding year's Historical Actual-Weather Normalized data can be found in the Elenchus Load Forecast Model in Exhibit 3 Tab 1 Schedule 2.

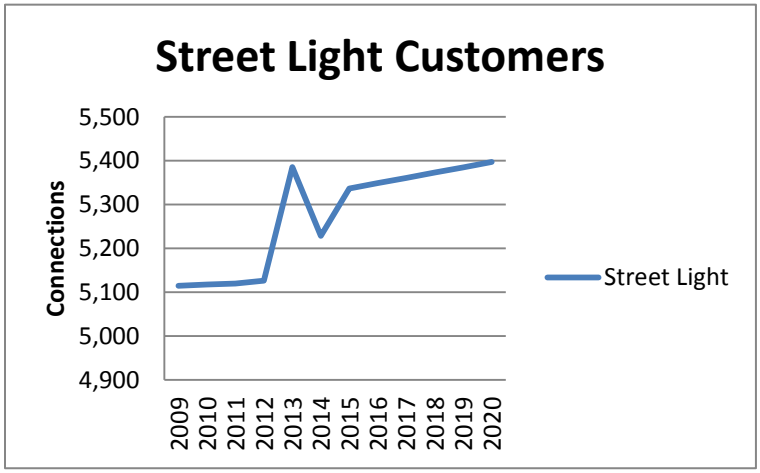
The variance analyses of the 2015 Bridge Year forecast vs. 2014 Weather-Normalized and 2016-2020 Test Years are summarized in Appendix 2-IA2 which is filed under Exhibit 3 Tab 1 Schedule 1 Attachment 1.

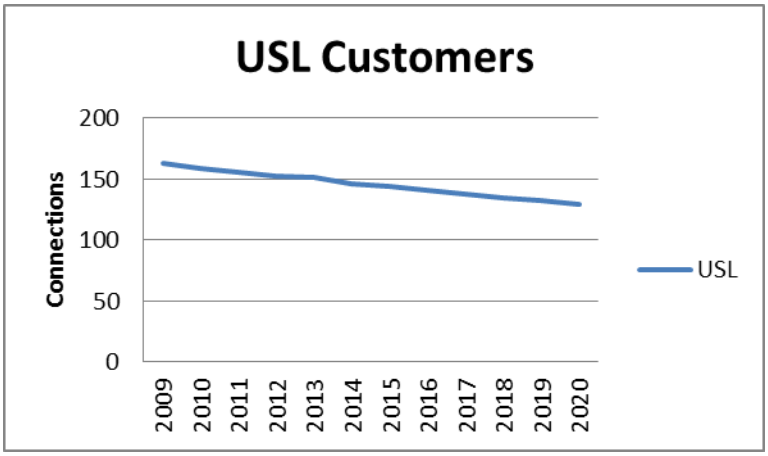
For the historic and forecast period of 2009 to 2020 there are no changes in rate class definitions to report. However, general trends (increasing or decreasing) in the rate class composition (number of customers) for the historic and forecast period can be observed in the charts below.






GS > 50 Customers
Customers
400
300
200
100
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
GS > 50


Street Light Customers
Connections
5,500
5,400
5,300
5,200
5,100
5,000
4,900
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Street Light


USL Customers
Connections
200
150
100
50
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
USL

Residential Trend

The residential customer count has increased in recent years and is attributed primarily to a combination of new construction and sub-metering of existing apartment buildings initiated by customers. This trend is expected to continue.

GS<50 Trend

The GS<50 customer count has been steadily declining and this trend is forecast to continue. It is difficult to identify the major cause(s) for this steady decline and reclassification is clearly not the only cause. There may be a correlation with the general economy of the downtown business core but this is difficult to quantify.

GS>50 Trend

The increasing trend in GS>50 customers is attributed to retail, commercial and institutional upgrades around the City including a box store development at Division Street and Dalton Avenue. Reclassification has resulted in both positive and negative increases in the number of GS>50 customers. For example, some GS<50 accounts were reclassified as a GS>50 account between October 2011 and December 2013 in conjunction with meter change outs. Conversely, a mass re-classification of 53 customers from the GS>50 rate class to the GS<50 rate class occurred in January 2014.

Street Light Trend

Throughout 2013-2014, the City of Kingston undertook an aggressive LED Retrofit Program of all Streetlights. Through a collaborative effort, Kingston Hydro and the City

of Kingston updated the streetlight asset registry in conjunction with the LED Retrofit Program. In 2012, prior to the LED Retrofit program, the asset registry indicated that there were 5126 streetlight connections. Upon completion of the LED Retrofit Program in December 31, 2014, the asset registry indicated there were 5273 streetlight connections. During the LED Retrofit program the quantity of Streetlight connections fluctuated due to the number and frequency of updates to the asset registry. It is also important to note that streetlight energy consumption has been significantly reduced as a result of the LED Retrofit Program and this has been factored into the streetlight forecast. Streetlight connections are forecast to increase at a rate of 12 per year as streetlights are upgraded in conjunction with traffic light upgrades at major intersections.

USL Trend

The Unmetered Scattered Load (USL) connections have been steadily declining and this trend is forecast to continue. Whenever possible, Kingston Hydro encourages customers to install smart meters on USL connections which results in a reclassification from USL to GS<50.

File Number:EB-2015-0083

Exhibit: 3
Tab: 2
Schedule: 1

Date Filed: June 1, 2015

Attachment 1 of 1

Revenue at Current and Proposed Rates

Revenue at Current and Proposed Rates

This attachment provides distribution revenue at (a) current rates by customer class and (b) proposed rates by customer class.

(a) Revenue at Current Rates

	2015 PROJECTED REVENUE FROM EXISTING 2015 VARIABLE CHARGES							
Customer Class Name	**Variable Distribution Rate**	**per**	**Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0154	kWh	187,160,982	2,882,279	$0.00	-	0	2,882,279
General Service < 50 kW	$0.0106	kWh	96,172,824	1,019,432	$0.00	-	0	1,019,432
General Service 50 to 4999 kW	$2.0063	kW	743,238	1,491,158	$0.60	282,411	169,446	1,660,605
Large Use	$1.0535	kW	290,775	306,331	$0.60	98,343	59,006	365,338
Unmetered Scattered Load	$0.0141	kWh	1,221,326	17,221	$0.00	-	0	17,221
Street Lighting	$4.6750	kW	5,036	23,543	$0.60	-	0	23,543
Standby Approved on an Interim Basis	$0.0000	kW	0	0			0	0
TOTAL VARIABLE REVENUE				**5,739,965**		**380,754**	**228,452**	**5,968,417**

	2015 PROJECTED DISTRIBUTION REVENUE AT EXISTING 2015 RATES							
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$12.5600	24,004	3,617,883	2,882,279	6,500,162	55.66%	44.34%	54.62%
General Service < 50 kW	$25.8500	3,000	930,600	1,019,432	1,950,032	47.72%	52.28%	16.39%
General Service 50 to 4999 kW	$280.0900	331	1,112,517	1,660,605	2,773,122	40.12%	59.88%	23.30%
Large Use	$5,164.0000	3	185,904	365,338	551,242	33.72%	66.28%	4.63%
Unmetered Scattered Load	$11.5500	145	20,097	17,221	37,318	53.85%	46.15%	0.31%
Street Lighting	$1.0200	5,337	65,325	23,543	88,868	73.51%	26.49%	0.75%
Standby Approved on an Interim Basis	$0.0000	0	0	0	0			0.00%
DISTRIBUTION REVENUE			**5,932,326**	**5,968,417**	**11,900,744**	49.85%	50.15%	100.00%

	2016 PROJECTED REVENUE FROM 2015 VARIABLE CHARGES							
Customer Class Name	**Variable Distribution Rate**	**per**	**Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0154	kWh	183,959,618	2,832,978	$0.00	-	0	2,832,978
General Service < 50 kW	$0.0106	kWh	93,395,362	989,991	$0.00	-	0	989,991
General Service 50 to 4999 kW	$2.0063	kW	739,908	1,484,477	$0.60	281,145	168,687	1,653,165
Large Use	$1.0535	kW	290,012	305,528	$0.60	98,085	58,851	364,379
Unmetered Scattered Load	$0.0141	kWh	1,196,145	16,866	$0.00	-	0	16,866
Street Lighting	$4.6750	kW	5,046	23,590	$0.60	-	0	23,590
Standby Approved on an Interim Basis	$0.0000	kW	0	0			0	0
TOTAL VARIABLE REVENUE				**5,653,430**		**379,231**	**227,538**	**5,880,968**

	2016 PROJECTED DISTRIBUTION REVENUE AT 2015 RATES							
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$12.5600	24,157	3,640,943	2,832,978	6,473,921	56.24%	43.76%	54.68%
General Service < 50 kW	$25.8500	2,950	915,090	989,991	1,905,081	48.03%	51.97%	16.09%
General Service 50 to 4999 kW	$280.0900	337	1,132,684	1,653,165	2,785,849	40.66%	59.34%	23.53%
Large Use	$5,164.0000	3	185,904	364,379	550,283	33.78%	66.22%	4.65%
Unmetered Scattered Load	$11.5500	141	19,543	16,866	36,408	53.68%	46.32%	0.31%
Street Lighting	$1.0200	5,349	65,472	23,590	89,062	73.51%	26.49%	0.75%
Standby Approved on an Interim Basis	$0.0000	0	0	0	0			0.00%
DISTRIBUTION REVENUE			**5,959,635**	**5,880,968**	**11,840,603**	50.33%	49.67%	100.00%

	2017 PROJECTED REVENUE FROM 2016 VARIABLE CHARGES							
Customer Class Name	**Variable Distribution Rate**	**per**	**Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0129	kWh	180,751,226	2,331,691	$0.00	-	0	2,331,691
General Service < 50 kW	$0.0107	kWh	90,657,781	970,038	$0.00	-	0	970,038
General Service 50 to 4999 kW	$2.0718	kW	736,506	1,525,893	$0.60	279,853	167,912	1,693,805
Large Use	$1.1247	kW	288,634	324,627	$0.60	97,619	58,572	383,198
Unmetered Scattered Load	$0.0122	kWh	1,171,483	14,292	$0.00	-	0	14,292
Street Lighting	$9.4722	kW	5,056	47,891	$0.60	-	0	47,891
Standby Approved on an Interim Basis	$0.0000	kW	0	0			0	0
TOTAL VARIABLE REVENUE				**5,214,432**		**377,472**	**226,483**	**5,440,916**

	2017 PROJECTED DISTRIBUTION REVENUE AT 2016 RATES							
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$16.0900	24,311	4,693,968	2,331,691	7,025,659	66.81%	33.19%	55.36%
General Service < 50 kW	$28.4300	2,901	989,705	970,038	1,959,743	50.50%	49.50%	15.44%
General Service 50 to 4999 kW	$315.1700	343	1,297,240	1,693,805	2,991,044	43.37%	56.63%	23.57%
Large Use	$5,631.5500	3	202,736	383,198	585,934	34.60%	65.40%	4.62%
Unmetered Scattered Load	$6.1400	138	10,168	14,292	24,460	41.57%	58.43%	0.19%
Street Lighting	$0.8900	5,361	57,255	47,891	105,147	54.45%	45.55%	0.83%
Standby Approved on an Interim Basis	$0.0000	0	0	0	0			0.00%
DISTRIBUTION REVENUE			**7,251,072**	**5,440,916**	**12,691,987**	57.13%	42.87%	100.00%

	2018 PROJECTED REVENUE FROM 2017 VARIABLE CHARGES							
Customer Class Name	**Variable Distribution Rate**	**per**	**Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0088	kWh	177,434,297	1,561,422	$0.00	-	0	1,561,422
General Service < 50 kW	$0.0111	kWh	87,909,490	975,795	$0.00	-	0	975,795
General Service 50 to 4999 kW	$2.1689	kW	732,604	1,588,945	$0.60	278,370	167,022	1,755,967
Large Use	$1.1613	kW	287,122	333,435	$0.60	97,108	58,265	391,700
Unmetered Scattered Load	$0.0126	kWh	1,147,330	14,456	$0.00	-	0	14,456
Street Lighting	$10.7827	kW	5,066	54,625	$0.60	-	0	54,625
Standby Approved on an Interim Basis	$0.0000	kW	0	0			0	0
TOTAL VARIABLE REVENUE				**4,528,678**		**375,478**	**225,287**	**4,753,965**

	2018 PROJECTED DISTRIBUTION REVENUE AT 2017 RATES							
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$19.6200	24,466	5,760,275	1,561,422	7,321,697	78.67%	21.33%	55.63%
General Service < 50 kW	$29.1800	2,853	999,006	975,795	1,974,802	50.59%	49.41%	15.00%
General Service 50 to 4999 kW	$324.4500	350	1,362,690	1,755,967	3,118,657	43.69%	56.31%	23.69%
Large Use	$5,827.6900	3	209,797	391,700	601,496	34.88%	65.12%	4.57%
Unmetered Scattered Load	$6.3300	135	10,255	14,456	24,711	41.50%	58.50%	0.19%
Street Lighting	$1.0200	5,373	65,766	54,625	120,391	54.63%	45.37%	0.91%
Standby Approved on an Interim Basis	$0.0000	0	0	0	0			0.00%
DISTRIBUTION REVENUE			**8,407,788**	**4,753,965**	**13,161,754**	63.88%	36.12%	100.00%

	2019 PROJECTED REVENUE FROM 2018 VARIABLE CHARGES							
Customer Class Name	**Variable Distribution Rate**	**per**	**Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0045	kWh	174,038,354	783,173	$0.00	-	0	783,173
General Service < 50 kW	$0.0115	kWh	85,166,503	979,415	$0.00	-	0	979,415
General Service 50 to 4999 kW	$2.2643	kW	728,299	1,649,087	$0.60	276,734	166,041	1,815,128
Large Use	$1.1979	kW	285,513	342,016	$0.60	96,564	57,938	399,954
Unmetered Scattered Load	$0.0129	kWh	1,123,675	14,495	$0.00	-	0	14,495
Street Lighting	$12.0276	kW	5,076	61,052	$0.60	-	0	61,052
Standby Approved on an Interim Basis	$0.0000	kW	0	0			0	0
TOTAL VARIABLE REVENUE				**3,829,238**		**373,298**	**223,979**	**4,053,217**

	2019 PROJECTED DISTRIBUTION REVENUE AT 2018 RATES							
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$23.1500	24,622	6,839,992	783,173	7,623,164	89.73%	10.27%	55.99%
General Service < 50 kW	$29.7500	2,805	1,001,385	979,415	1,980,800	50.55%	49.45%	14.55%
General Service 50 to 4999 kW	$331.8400	357	1,421,603	1,815,128	3,236,730	43.92%	56.08%	23.77%
Large Use	$6,018.0200	3	216,649	399,954	616,603	35.14%	64.86%	4.53%
Unmetered Scattered Load	$6.5100	132	10,312	14,495	24,807	41.57%	58.43%	0.18%
Street Lighting	$1.1300	5,385	73,021	61,052	134,073	54.46%	45.54%	0.98%
Standby Approved on an Interim Basis	$0.0000	0	0	0	0			0.00%
DISTRIBUTION REVENUE			**9,562,960**	**4,053,217**	**13,616,177**	70.23%	29.77%	100.00%

	2020 PROJECTED REVENUE FROM 2019 VARIABLE CHARGES							
Customer Class Name	**Variable Distribution Rate**	**per**	**Volume**	**Gross Variable Revenue**	**Transform. Allowance Rate**	**Transform. Allowance kW's**	**Transform. Allowance $'s**	**Net Variable Revenue**
Residential	$0.0000	kWh	170,554,076	0	$0.00	-	0	0
General Service < 50 kW	$0.0119	kWh	82,425,355	980,862	$0.00	-	0	980,862
General Service 50 to 4999 kW	$2.3580	kW	723,530	1,706,084	$0.60	274,922	164,953	1,871,037
Large Use	$1.2331	kW	283,782	349,932	$0.60	95,978	57,587	407,519
Unmetered Scattered Load	$0.0132	kWh	1,100,508	14,527	$0.00	-	0	14,527
Street Lighting	$13.2134	kW	5,086	67,203	$0.60	-	0	67,203
Standby Approved on an Interim Basis	$0.0000	kW	0	0			0	0
TOTAL VARIABLE REVENUE				**3,118,607**		**370,900**	**222,540**	**3,341,147**

	2020 PROJECTED DISTRIBUTION REVENUE AT 2019 RATES							
Customer Class Name	**Fixed Rate**	**Customers (Connections)**	**Fixed Charge Revenue**	**Variable Revenue**	**TOTAL**	**% Fixed Revenue**	**% Variable Revenue**	**% Total Revenue**
Residential	$26.6600	24,779	7,927,298	0	7,927,298	100.00%	0.00%	56.37%
General Service < 50 kW	$30.3400	2,758	1,004,133	980,862	1,984,994	50.59%	49.41%	14.11%
General Service 50 to 4999 kW	$338.3000	364	1,477,694	1,871,037	3,348,731	44.13%	55.87%	23.81%
Large Use	$6,196.2400	3	223,065	407,519	630,583	35.37%	64.63%	4.48%
Unmetered Scattered Load	$6.6700	129	10,325	14,527	24,852	41.55%	58.45%	0.18%
Street Lighting	$1.2400	5,397	80,307	67,203	147,511	54.44%	45.56%	1.05%
Standby Approved on an Interim Basis	$0.0000	0	0	0	0			0.00%
DISTRIBUTION REVENUE			**10,722,822**	**3,341,147**	**14,063,969**	76.24%	23.76%	100.00%

(b) Revenue at Proposed Rates

These proposed rates are reconciled to the Revenue Requirement in Exhibit 8 Tab 4 Schedule 2.

2016

DISTRIBUTION CHARGES

	Fixed Charge			Variable Charge			
Customer Class Name	**Rate [1]**	**Volume [2]**	**Revenue [3]**	**Rate [1]**	**Volume [2]**	**Revenue [3]**	**Calculated ***
Residential	$16.09	289,884	4,664,234	$0.0129	183,959,618	2,373,079	7,037,313
General Service < 50 kW	$28.43	35,400	1,006,422	$0.0107	93,395,362	999,330	2,005,752
General Service 50 to 4999 kW	$315.17	4,044	1,274,547	$2.0718	739,908	1,532,941	2,807,489
Large Use	$5,631.55	36	202,736	$1.1247	290,012	326,177	528,912
Unmetered Scattered Load	$6.14	1,692	10,389	$0.0122	1,196,145	14,593	24,982
Street Lighting	$0.89	64,188	57,127	$9.4722	5,046	47,797	104,924
Standby Approved on an Interim Basis	$0.00	0	0	$0.0000	0	0	0
TOTAL			**7,215,455**			**5,293,917**	**12,509,372**

** Sum of 'Revenue' columns*

[2] Fixed Charge = # Customers (Connections) multiplied by 12 (months); Variable Charge = # kW's or kWh's, as applicable

[3] Rate x Volume

2017

DISTRIBUTION CHARGES

	Fixed Charge			Variable Charge			
Customer Class Name	**Rate**	**Volume [2]**	**Revenue [3]**	**Rate [1]**	**Volume [2]**	**Revenue [3]**	**Calculated ***
Residential	$19.62	291,732	5,723,782	$0.0088	180,751,226	1,590,611	7,314,393
General Service < 50 kW	$29.18	34,812	1,015,814	$0.0111	90,657,781	1,006,301	2,022,116
General Service 50 to 4999 kW	$324.45	4,116	1,335,436	$2.1689	736,506	1,597,408	2,932,844
Large Use	$5,827.69	36	209,797	$1.1613	288,634	335,191	544,988
Unmetered Scattered Load	$6.33	1,656	10,482	$0.0126	1,171,483	14,761	25,243
Street Lighting	$1.02	64,332	65,619	$10.7827	5,056	54,517	120,136
Standby Approved on an Interim Basis	$0.00	0	0	$0.0000	0	0	0
TOTAL			**8,360,930**			**4,598,789**	**12,959,719**

** Sum of 'Revenue' columns*

[2] Fixed Charge = # Customers (Connections) multiplied by 12 (months); Variable Charge = # kW's or kWh's, as applicable

[3] Rate x Volume

2018

DISTRIBUTION CHARGES

	Fixed Charge			Variable Charge			
Customer Class Name	**Rate**	**Volume [2]**	**Revenue [3]**	**Rate [1]**	**Volume [2]**	**Revenue [3]**	**Calculated ***
Residential	$23.15	293,592	6,796,655	$0.0045	177,434,297	798,454	7,595,109
General Service < 50 kW	$29.75	34,236	1,018,521	$0.0115	87,909,490	1,010,959	2,029,480
General Service 50 to 4999 kW	$331.84	4,200	1,393,728	$2.2643	732,604	1,658,835	3,052,563
Large Use	$6,018.02	36	216,649	$1.1979	287,122	343,943	560,592
Unmetered Scattered Load	$6.51	1,620	10,546	$0.0129	1,147,330	14,801	25,347
Street Lighting	$1.13	64,476	72,858	$12.0276	5,066	60,932	133,790
Standby Approved on an Interim Basis	$0.00	0	0	$0.0000	0	0	0
TOTAL			**9,508,957**			**3,887,925**	**13,396,881**

** Sum of 'Revenue' columns*

[2] Fixed Charge = # Customers (Connections) multiplied by 12 (months); Variable Charge = # kW's or kWh's, as applicable

[3] Rate x Volume

2019

DISTRIBUTION CHARGES

	Fixed Charge			Variable Charge			
Customer Class Name	**Rate**	**Volume [2]**	**Revenue [3]**	**Rate [1]**	**Volume [2]**	**Revenue [3]**	**Calculated ***
Residential	$26.66	295,464	7,877,070	$0.0000	174,038,354	0	7,877,070
General Service < 50 kW	$30.34	33,660	1,021,244	$0.0119	85,166,503	1,013,481	2,034,726
General Service 50 to 4999 kW	$338.30	4,284	1,449,277	$2.3580	728,299	1,717,329	3,166,606
Large Use	$6,196.24	36	223,065	$1.2331	285,513	352,066	575,131
Unmetered Scattered Load	$6.67	1,584	10,565	$0.0132	1,123,675	14,833	25,398
Street Lighting	$1.24	64,620	80,129	$13.2134	5,076	67,071	147,200
Standby Approved on an Interim Basis	$0.00	0	0	$0.0000	0	0	0
TOTAL			**10,661,351**			**3,164,780**	**13,826,131**

** Sum of 'Revenue' columns*

[2] Fixed Charge = # Customers (Connections) multiplied by 12 (months); Variable Charge = # kW's or kWh's, as applicable

[3] Rate x Volume

2020

DISTRIBUTION CHARGES

	Fixed Charge			Variable Charge			
Customer Class Name	**Rate**	**Volume [2]**	**Revenue [3]**	**Rate [1]**	**Volume [2]**	**Revenue [3]**	**Calculated ***
Residential	$27.27	297,348	8,108,680	$0.0000	170,554,076	0	8,108,680
General Service < 50 kW	$30.84	33,096	1,020,681	$0.0123	82,425,355	1,013,832	2,034,513
General Service 50 to 4999 kW	$341.86	4,368	1,493,244	$2.4371	723,530	1,763,315	3,256,559
Large Use	$6,323.66	36	227,652	$1.2607	283,782	357,764	585,416
Unmetered Scattered Load	$6.83	1,548	10,573	$0.0135	1,100,508	14,857	25,430
Street Lighting	$1.35	64,764	87,431	$14.2851	5,086	72,654	160,085
Standby Approved on an Interim Basis	$0.00	0	0	$0.0000	0	0	0
TOTAL			**10,948,261**			**3,222,422**	**14,170,683**

[2] Fixed Charge = # Customers (Connections) multiplied by 12 (months); Variable Charge = # kW's or kWh's, as applicable

[3] Rate x Volume

File Number: EB-2015-0083

Date Filed: June 1, 2015

Exhibit 3

Tab 3 of 3

Other Revenues

Other Revenues

OTHER REVENUES

Summary of Other Revenue

In addition to revenues recovered through distribution rates, Kingston Hydro earns other revenue from specific services charges, late payment charges, other operating revenues and other income and deductions.

Variance Analysis

Other revenue significantly decreased in 2013, this decrease is primarily due to 4305 Regulatory Debits which is related to the adjustment for financial differences arising as a result of changes to the accounting capitalization or depreciation policies effective January 1, 2013. The offset to this entry was a credit to account 1576 – Accounting Changes under CGAAP.

Kingston Hydro reviewed all revenue offset amounts for anomalies and trends to calculate revenue offsets. Overall, Kingston Hydro has relatively constant revenue offsets which have resulted in constant forecasted balances over the term of this application.

As part of the filing requirements, Kingston Hydro has completed Appendix 2H.

File Number:EB-2015-0083

Exhibit: 3
Tab: 3
Schedule: 1

Date Filed: June 1, 2015

Attachment 1 of 1

OEB Appendix 2-H

Appendix 2-H
Other Operating Revenue

USoA #	USoA Description	2011	2012	2013	2014	Bridge Year[2]	Test Year
						2015	2016
		CGAAP	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS
4082	Retail Service Revenues	$ 25,652	$ 22,088	$ 19,545	$ 16,858	$ 16,858	$ 16,858
4084	Service Transaction Requests (STR) Revenues	$ 542	$ 1,046	$ 1,234	$ 732	$ 1,441	$ 1,441
4210	Rent from Electric Property	$ 176,650	$ 154,608	$ 162,839	$ 163,504	$ 163,504	$ 163,504
4225	Late Payment Charges	$ 48,410	$ 16,175	$ 19,091	$ 52,875	$ 50,642	$ 50,642
4235	Miscellaneous Service Revenues	$ 153,237	$ 193,190	$ 106,739	$ 104,542	$ 108,532	$ 108,532
4305	Regulatory Debits			$ 1,153,881	$ 1,173,011	$ 1,126,167	$ -
4325	Revenues from Merchandise, Jobbing, Etc	$ 3,589	$ 5,605	$ 6,687	$ 2,681	$ 4,403	$ 4,403
4375	Revenues from Non-Utility	$ 2,775	$ 29,993	$ -	$ -	$ -	$ -
4380	Expenses of Non-Utility Operations		$ 2,960				
4390	Miscellaneous Non-Operating Revenue	$ 84,633	$ 93,112	$ 120,345	$ 41,755	$ 63,695	$ 63,695
4405	Interest and Dividend Income	$ 115,360	$ 131,211	$ 34,492	$ 211,322	$ 161,043	$ 90,589
Specific Service Charges		$ 153,237	$ 193,190	$ 106,739	$ 104,542	$ 108,532	$ 108,532
Late Payment Charges		$ 48,410	$ 16,175	$ 19,091	$ 52,875	$ 50,642	$ 50,642
Other Operating Revenues		$ 202,844	$ 177,741	$ 183,618	$ 181,094	$ 181,803	$ 181,803
Other Income or Deductions		$ 206,357	$ 262,881	$ 1,315,405	$ 1,428,769	$ 1,355,308	$ 158,687
Total		$ 610,848	$ 649,987	$ 1,624,852	$ 1,767,280	$ 1,696,285	$ 499,664
		$ -	$ -	$ -	$ -	$ -	$ -

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

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

Account Breakdown Details

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

Account 4405 - Interest and Dividend Income

	2011	2012	2013	2014	Bridge Year	Test Year
					2015	2016
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS
Investment and Bank Interest	5,681	3,567	3,920	1,955	2,397	2,397
Interest and Service Charges	184	265	-	-	-	-
Interest on Amount owed from City	38,690	14,341	35,987	63,746	45,004	51,179
Net interest on Regulatory Assets/Liabilitities	70,806	113,038	(5,415)	145,621	113,642	37,013
Total	$ 115,360	$ 131,211	$ 34,492	$ 211,322	$ 161,043	$ 90,589
	$ -	$ -	$ -	$ -	$ -	$ -

Notes:

1 List and specify any other interest revenue.

2 In the transition year to IFRS, the applicant is to present information in both MIFRS and CGAAP. For the typical applicant that is adopting IFRS on January 1, 2015, 2014 must be presented in both a CGAAP and MIFRS basis.