EXHIBIT 3 – LOAD FORECAST

2025 Cost of Service

Algoma Power Inc.

EB-2024-0007

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3.1 INTRODUCTION

1   The evidence presented in this exhibit provides information related to the forecasted billing units

2   for API's 2025 Test Year. Billing units include number of customers or devices, kWh consumption,

3   and peak monthly non-coincident kW demand.

4   The load forecasting methodology and assumptions are described in detail at 3.1.3. Customer

5   counts used throughout this Exhibit are based on annual average (by taking the average between

6   opening and closing number of customers per year).

7   3.1.2 PROPOSED LOAD FORECAST

8   The following section of the application describes the approach taken to determine the Load

9   Forecast. This section also explains the assumptions and data sources for customer and load

10 forecasts. It explains the forecasting methodology for wholesale purchases and subsequent

11 adjustments to the wholesale purchases. It also provides the rationale behind each variable

12 used in the regression analysis. Lastly, it presents the regression results and explains how they

13 were used to determine the forecast for the bridge and test year.

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

15

16 Table 1 below presents the actual and forecast trends for customer/connection counts, kWh

17 consumption and billed kW demand.

1

2

Table 1 - Customer and Volume Trend Table

	2020 Board Approved	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Bridge Weather Normal	2025 Test Weather Normal
Purchases										
Actual kWh Purchases		217,280,995	241,087,151	255,923,211	252,540,603	265,226,888	279,572,890	281,399,999		
Predicted kWh	246,292,289	222,969,696	231,004,602	238,654,515	248,745,294	265,662,737	281,017,552	282,763,701	287,962,762	288,843,744
% Difference between actual and predicted purchases		2.6%	(4.2%)	(6.7%)	(1.5%)	0.2%	0.5%	0.5%		
Loss Factor	1.0829								1.0873	1.0873
Total Billed	227,437,703	203,063,777	224,565,775	235,800,481	229,140,220	244,314,344	256,287,580	259,742,424	264,839,930	265,650,171
Billing Determinants										
Residential										
Customers	8,116	7,596	7,640	7,698	7,925	8,205	8,361	8,485	8,553	8,621
kWh	84,857,056	76,321,856	82,424,404	86,629,136	91,478,383	92,005,690	99,292,265	96,395,846	100,119,668	102,025,758
General Service < 50 kW										
Customers	997	961	961	951	969	999	1,025	1,055	1,054	1,053
kWh	28,480,011	25,604,789	26,132,430	26,695,949	27,143,067	27,745,373	29,567,137	28,496,501	29,334,547	29,627,607
R2 GS>50 kW										
Customers	37	38	40	40	41	43	46	47	46	45
kWh	107,645,160	94,512,143	109,385,574	115,631,849	103,396,925	117,544,957	120,294,405	128,188,723	128,802,125	179,389,418
kW	248,605	210,836	234,798	243,010	232,897	251,732	260,826	278,055	288,517	372,457
Street Lights										
Devices	1,128	1,070	1,067	1,075	1,105	1,141	1,146	1,132	1,144	1,156
kWh	581,104	582,537	577,097	566,130	592,582	594,156	592,975	537,366	543,140	548,977
kW	1,615	1,619	1,581	1,574	1,636	1,593	1,706	1,505	1,517	1,533
Seasonal										
Customers	2,960	3,108	3,076	3,039	2,990	2,925	2,849	2,793	2,755	2,717
kWh	5,874,372	6,042,453	6,046,269	6,277,417	6,529,263	6,424,168	6,540,797	6,123,988	6,040,450	5,958,052
Total										
Customer/Connection	13,238	12,774	12,784	12,801	13,028	13,312	13,426	13,512	13,551	13,592
kWh	227,437,703	203,063,777	224,565,775	235,800,481	229,140,220	244,314,344	256,287,580	259,742,424	264,839,930	317,549,813
kW	250,220	212,455	236,379	244,584	234,533	253,325	262,532	279,560	290,034	373,990

3

1   ## 3.1.3 LOAD FORECAST METHODOLOGY AND DETAIL

2   API utilized a multivariate regression analysis methodology, common among distributors in

3   previous COS applications, to establish a load forecast. The methodology involved utilizing historic

4   actual power purchased data from 2014 to 2023 to formulate a predictive regression equation.

5   The monthly variables incorporated include actual heating and cooling days, days in the month,

6   spring/fall flags, and customer counts, alongside historic actual purchases. The variables selected

7   are consistent with API's most recent (2020 COS) load forecast, with the exception of the

8   employment variable which was replaced with a number of customers variable, and the days in

9   month which improved the statistical outputs of the equation. As outlined below, API found this

10   combination of variables to result in a regression equation that provides reasonable regression

11   statistics, indicating an appropriate predictive strength.

12   The determination of the bridge and test years involved using the regression model with

13   forecasted values for each variable. A 10-year average was used for heating and cooling degree

14   days. The spring/fall flag and number of days in month were derived based on actual 2024 and

15   2025 values. The average of opening and year-end customer count variable was established by

16   utilizing the historic geometric mean to set values for 2024 and 2025.

17   API confirms that the monthly power purchases data includes locally purchased generation as well

18   as IESO purchases. The power purchase data has been updated with the amendments identified

19   with the MEGS report (Phase 2) include with Exhibit 9.

20   The weather-normalized load underwent a multi-step process.

21   1. Initially, a multifactor regression model was developed to forecast purchased energy under
22   weather-normal conditions, as mentioned earlier.

23   2. Subsequently, this weather-normal purchase was adjusted by the historical loss factor
24   (consistent with the proposal in Exhibit 8) to form the weather-normal billed energy
25   forecast.

26   3. Next, a billed energy forecast by rate class was computed by leveraging 2023 usage per
27   customer alongside forecasted customer counts.

28   4. Lastly, the billed energy per class from step 3 above for the classes sensitive to weather
29   were adjusted by allocating the weather normalized load (from step 2), based on the

1   weather sensitivity of each class. For the rate classes billed based on kW, monthly peak

2   billing kW were forecasted based on the allocated energy forecast, adjusted by the

3   historical relationship between kWh and kW.

4   The principal weather-related variables used in the regression are the monthly historical heating

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

6   degrees), and for how long (in days), the outside temperature was below a given base

7   temperature. The most readily available heating degree days come with a base temperature of

8   18°C. Cooling degree-day figures also come with a base temperature, and provide a measure of

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

10   For degree days, daily observations as reported in Wawa were used. The regression model also

11   uses other variables which are tested to determine their relationship and contribution to the

12   fluctuating wholesale purchases. While the regression used in API's last load forecast included an

13   employment variable, API found the number of customers variable to be statistically strong.

14   Additionally, API found it has more knowledge to forecast number of customers compared to

15   forecasting employment.   Each variable is discussed in detail later in this section.

1   **Explanation of Multiple Regression Analysis**

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

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

4   and the dependent variable can be expressed as:

5          $Y = A + B_1X_1 + B_2X_2 \ldots + B_nX_n + E$

6   Where:

7   Y = Predicted dependent variable value

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

9   X = the independent variable

10   B = the coefficients corresponding to the independent variables

11   n = the number of independent variables

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

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

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

15   Pearson Correlation Coefficient (otherwise known as "R") to each independent variable. This

16   depicts how much of the change in dependent variable can be explained by the change in

17   independent variables. The combination of variables with a high R-squared should then be used

18   for multiple regression. The same correlation coefficient can be applied to multiple independent

19   variables to ascertain how much of the change in a dependent variable can be explained by

20   changes in all independent variables.

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

22   Where:

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

24   ^2 = Squared

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

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

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

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

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

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

5   then the analysis can be deemed statistically significant at the level of confidence.

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

7   Where:

8   k = number of independent variable

9   n = number of observations

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

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

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

13   from the analysis.

14   The formula behind the monthly weather normalized values is as follows:

15   (intercept) +

16   (monthly HDD*coefficient for HDD) +

17   (monthly CDD*coefficient for CDD) +

18   (spring/fall flag*coefficient for spring/fall flag) +

19   (number of customers* coefficient for number of customers) +

20   (number of days in a month* coefficient for number of days in month)

21   =predicted purchases in a given month

22   When the regression line is linear ($y = ax + b$), the regression coefficient is the constant (a) that

23   represents the rate of change of one variable (y) as a function of changes in the other (x); it is the

1　slope of the regression line. The intercept is the predicted value of the dependent variable when

2　all predictor variables are set to 0.

1 ## 3.1.4 ECONOMIC OVERVIEW

2 API's economic and service area overview is presented in Section 3.1 of the Business Plan and

3 duplicated below for ease of reference:

4 **Location and Geography**

5 API's service area extends approximately 93 km east and 255 km north of the City of Sault
6 Ste. Marie, covering approximately 14,200 km^2, which includes 7 First Nation Reserves,
7 14 organized townships, and a large number of unorganized townships. This vast service
8 area is located in the Canadian Shield; a rugged and unyielding expanse of bare rock,
9 lakes, muskeg, and trees. It also spans two different forest zones (the Great Lakes – St.
10 Lawrence forest zone and the Boreal forest zone), with the result that the majority of API's
11 distribution lines, 99% of which are overhead, are constructed through areas of dense
12 vegetation.

13 **Employment and Industry**

14 Employment in API's service area has historically been driven by the natural resource,
15 agricultural and tourism sectors. Development and maintenance of hydroelectric
16 generation facilities has also been a large part of the economy, particularly in the Wawa
17 to Montreal River area. Private and public sector service industries supporting these
18 industries and local populations have also been large employers.

19 Approximately two thirds of API's customers are residential. Among these customers is
20 a mix of customers employed by organizations in API's service area, and customers
21 residing in API's service area but commuting to other municipalities for work, mostly in
22 the City of Sault Ste. Marie. An aging population also means that API's residential class
23 includes a large base of retirees. As of the 2021 census, the median age in the Algoma
24 District was 50.0 years, compared to 41.6 years for Ontario as a whole. Commercial and
25 Industrial customers currently comprise less than one-tenth of API's total customer base,
26 with only 0.4% of all accounts having a demand greater than 50 kW.

27 The rugged wilderness, rural and remote nature, and recreational opportunities
28 associated with API's service area attracts a relatively large seasonal population, with
29 about one-fifth of API's customer accounts classified as Seasonal. The proportion of
30 seasonal customers has decreased over time as a result of customers converting from
31 Seasonal to Residential accounts.

32

1   **Climate**

2   The climate in API's service area is humid continental, which is characterized by large

3   variations in seasonal temperatures including cold winters and warm, humid summers.

4   Due to the size of its service area, temperatures and weather conditions are often quite

5   varied between the northern and southern limits of its service area. The annual[1] average

6   temperature ranges from 2.1°C in Wawa to 4.7°C in Sault Ste. Marie[2]. Daily average

7   temperatures in Wawa and Sault Ste. Marie fluctuate from a low of approximately −10°C

8   to −14°C in January to a high of approximately 15°C to 18°C in July and August. Weather

9   extremes are more pronounced, with Wawa experiencing extreme minimum

10   temperatures as cold as −50°C and Sault Ste. Marie experiencing extreme maximums of

11   36.°C.

12   The entire API service territory is located on the leeward shore of Lake Superior. As a

13   result, the region is prone to lake effect precipitation which occasionally limits API's ability

14   to access portions of its service territory. In recent years, API has seen a number of severe

15   storms, with significant precipitation, and winds approaching, and in some cases

16   exceeding, current design standards.   While API's distribution assets have generally

17   withstood these weather conditions, the winds and associated precipitation have caused

18   a large number of tree-related outages during major event days.

19

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[1] Statistics are based on data from 1981 to 2010 Canadian Climate Normal stations data, which was the most recent data available.

1　**3.1.5 OVERVIEW OF WHOLESALE PURCHASES**

2　API purchases electricity from the IESO as a market participant, via Hydro One's transmission

3　system, as well as from embedded generation. API confirms it has no customers who are

4　wholesale market participants ("WMPs"), and does not expect any new WMPs.

5　The table below outlines the historical actual monthly wholesale purchases. API notes it has

6　reflected the adjustments identified in Exhibit 9 in the power purchases used to establish this

7　load forecast.

8　**Table 2 - Wholesale Purchases 2014-2023**

9　**1**

10
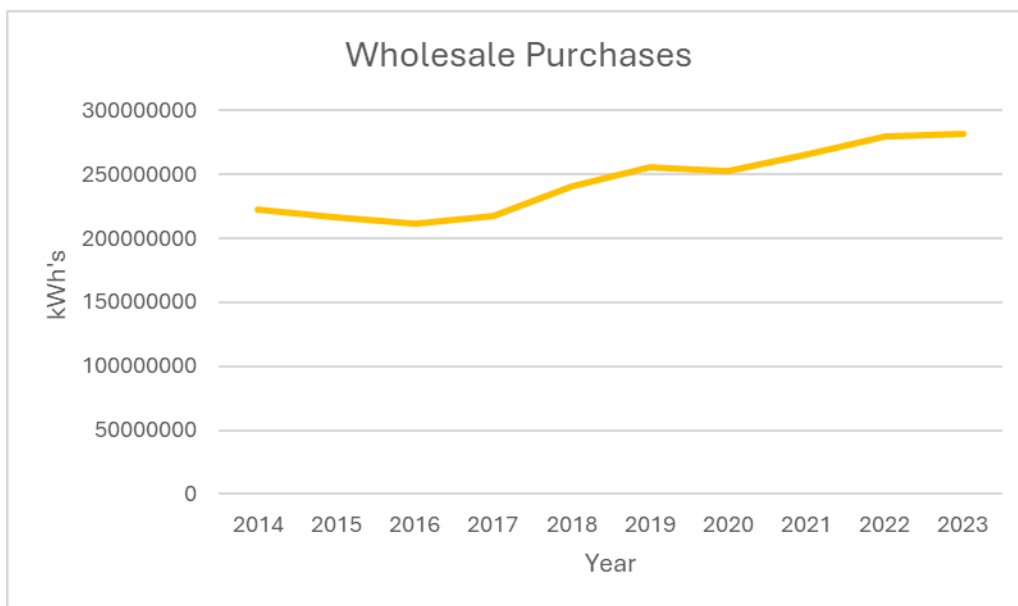
11　API's load has seen an increase over the past ten years with the largest total wholesale being in

12　2023. This increase is primarily associated with the R2 rate class as well as population growth in

13　the service area. Fluctuations in kWh billed are further explained below and the changes in kWh

14　billed are driven by the same factors attributable to the changes in kWh purchased. Wholesale

15　actual power purchases are shown in the table below

Table 3- 2014-2023 Wholesale Purchases by Month

2
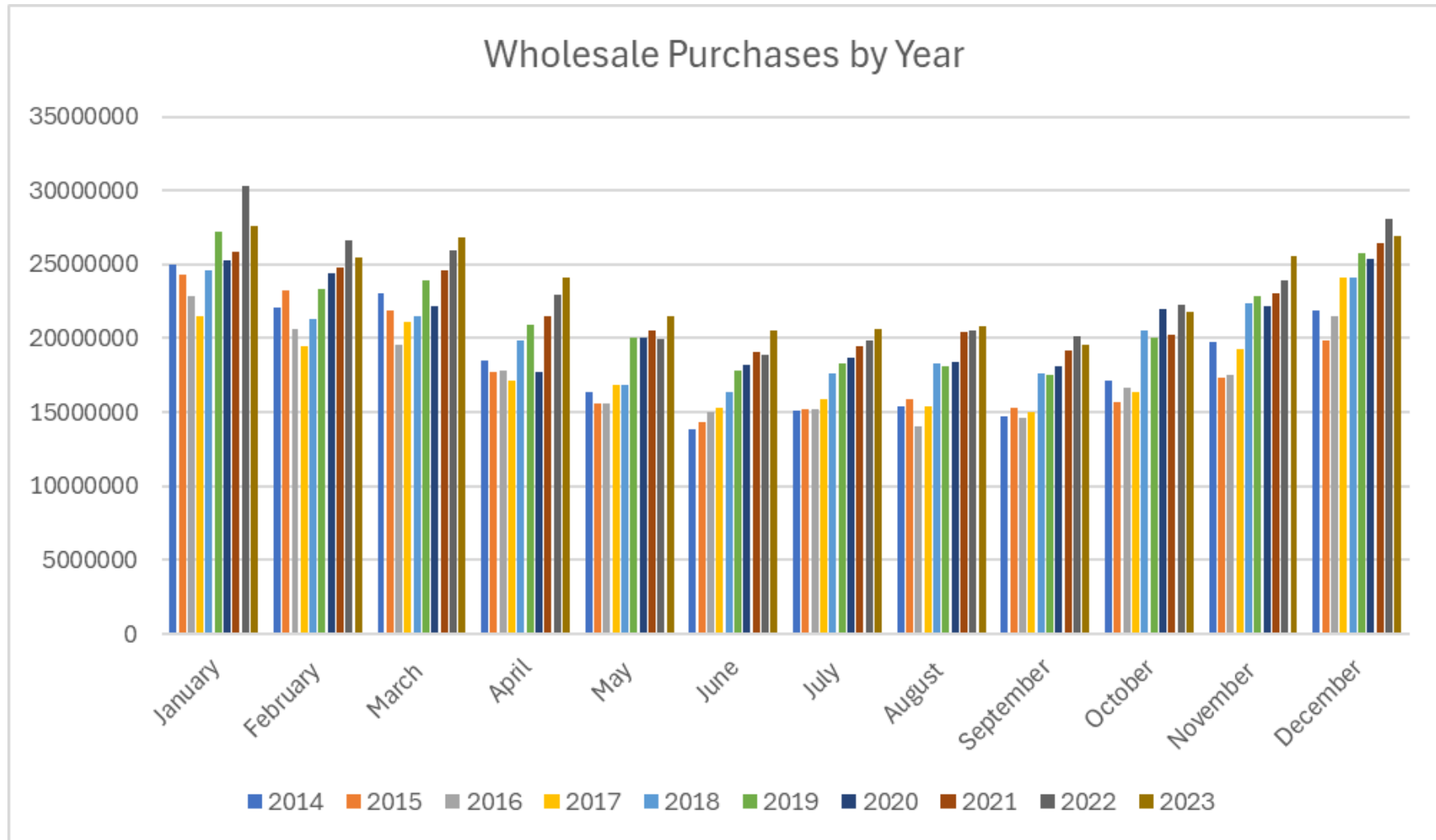
1   ## 3.1.6 OVERVIEW OF VARIABLES USED

2   In API's case, variation in monthly electricity consumption is influenced by several factors:

3   - weather (e.g. heating and cooling), which is by far the most dominant effect on most
4   systems customer count,
5   - number of days in the month;
6   - number of customers; and
7   - the spring/fall flag.

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

10   **Heating and Cooling:**

11   To determine the relationship between observed weather and energy consumption, monthly
12   weather observations describing the extent of heating or cooling required within the month are
13   necessary.

14   Environment Canada publishes monthly observations on heating degree days (HDD) and
15   cooling degree days (CDD) for selected weather stations across Canada. Heating degree-days
16   for a given day are the number of Celsius degrees that the mean temperature is below 18°C.
17   Cooling degree-days for a given day are the number of Celsius degrees that the mean
18   temperature is above 18°C. For API, the monthly HDD and CDD as reported in Wawa were used
19   as they offered a complete 10 years of history.

20   API has used the 10-year average from 2014 to 2023 as to determine weather-normal CDD and
21   HDD, consistent with the Filing Requirements. API's view is that a ten-year average based on the
22   most recent ten calendar years available is a reasonable compromise that likely reflects the
23   "average" weather experienced in recent years. Many other LDCs have also adopted this
24   definition for the purposes of cost-of-service rebasing. The following table outlines the monthly
25   weather data used in the regression analysis.

1 **Table 4 -10-year Historical HDD and CDD(Wawa)**

2   **3**

Sum of Heating Degree Days in Wawa										
HDD	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
January	980.30	957.50	794.20	710.90	860.40	1,069.60	839.80	833.70	1,077.80	832.80
February	912.00	1,015.20	731.20	638.70	769.00	889.30	827.60	854.70	936.70	795.60
March	895.00	786.60	588.80	706.20	737.70	804.70	691.30	665.10	746.30	766.40
April	511.10	474.40	499.70	392.10	585.90	501.40	558.00	441.40	520.50	504.50
May	267.90	242.90	241.20	273.80	214.00	377.40	332.00	318.60	261.80	289.20
June	96.90	141.80	116.80	104.10	104.50	172.10	148.20	110.70	187.40	86.80
July	88.10	52.60	27.20	42.00	19.60	81.80	33.20	52.10	122.50	79.20
August	63.40	37.50	17.10	55.50	24.60	101.40	69.60	35.70	59.20	82.10
September	158.20	75.50	65.10	112.70	135.00	165.10	222.50	171.40	165.40	112.70
October	341.00	331.20	277.40	266.30	376.40	378.60	484.20	267.60	327.30	344.30
November	616.10	413.00	391.50	497.40	604.10	701.20	516.60	561.70	521.30	586.40
December	691.40	541.20	689.80	849.90	686.60	839.20	740.80	786.10	775.10	603.90
Total	5,621.40	5,069.40	4,440.00	4,649.60	5,117.80	6,081.80	5,463.80	5,098.80	5,701.30	5,083.90

3

Sum of Cooling Degree Days in Wawa										
CDD	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
January	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
April	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	0.80	1.10	3.50	0.00	5.60	0.00	3.80	0.00	4.10	0.60
June	12.00	0.40	8.60	3.50	17.10	0.00	6.70	8.30	9.50	6.80
July	6.40	29.20	44.20	13.80	59.60	4.00	21.60	4.20	0.30	2.40
August	13.50	35.60	51.70	9.20	45.50	0.10	11.60	25.60	5.90	3.60
September	1.40	31.40	12.80	33.30	22.50	3.60	0.00	3.10	4.50	10.30
October	0.00	0.00	0.00	1.90	0.00	0.00	0.00	0.70	0.00	3.70
November	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	34.10	97.70	120.80	61.70	150.30	7.70	43.70	41.90	24.30	27.40

4

1   **Spring Fall Flag:**

2   API has also employed a "Spring/Fall Flag" variable. The variable accounts for the unusual

3   consumption patterns in the spring and fall "shoulder months" which skew the typical relationship

4   between HDD (in the fall) and CDD(in the spring).

5   **Number of Days in a Month**

6   This variable measures the number of days in a month.

7   **Number of Customers**

8   The variable shows the quantity of monthly customers, excluding street lighting connections.

9   **Summary**

10   Using a combination of wholesale purchases and variables listed above, a multiple regression

11   analysis was used to develop an equation describing the relationship between monthly actual

12   wholesale kWh and the explanatory variables.

13   **Origin of variables**

14   - HDD: Environment Canada
15   - CDD: Environment Canada
16   - Spring/Fall   Calendar Based
17   - Number of Days in Month Calendar Based
18   - Number of Customers   API Statistics (levelized monthly growth assumption)

19   **Rationale for including and excluding variables**

20   As outlined above, API was able to achieve a strong equation by beginning with the variables in

21   its 2020 COS, and replacing the employment variable with number of customers. API has better

22   and more specific information regarding the number of customers, as well as a greater ability to

23   forecast the number of customers.

1   ## 3.1.7 REGRESSION RESULTS

2   Table 5 below presents the regression results used to determine the load forecast

3   ### Table 5 - Correlation/Regression Results

4   4

Statistical Results	
R Square	93.86%
Adjusted R Square	93.59%
F Test	348.7133
MAPE (Monthly)	2.65%
Durbin-Watson Calculation	0.6891

5

	Coefficients	Standard Error	t Stat	P-value
Intercept	- 87,733,913.50	5,029,212.71	-17.44	0.00
Heating Degree Days	10,453.64	347.84	30.05	0.00
Cooling Degree Days	23,178.95	9,672.31	2.40	0.02
Days in Month	688,833.56	107,844.39	6.39	0.00
Spring Fall Flag	- 835,060.00	182,822.94	-4.57	0.00
Number of Customers	6,967.04	323.29	21.55	0.00

6

1   The resulting regression equation yields an adjusted R-squared of 0.94. When actual annual

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

3   absolute percentage error (MAPE) is 2.65%. More detailed model statistics can be found in the

4   next section.

5   The Load Forecast model then uses the coefficients from the regression results to predict

6   historical wholesale purchases. Table compares the actual and predicted wholesale purchases

7   for the 2014-2023 period.

8   **Table 6 – Wholesale Actual vs. Predicted**

Year	Wholesale	Annual Change	Predicted	Annual Change	Wholesale vs Predicted
2014	222,844,848.00		228,113,503.04		2.36%
2015	216,436,884.00	-2.88%	223,845,144.65	-1.87%	3.42%
2016	211,050,246.00	-2.49%	220,586,970.40	-1.46%	4.52%
2017	217,280,995.02	2.95%	222,969,696.20	1.08%	2.62%
2018	241,087,151.13	10.96%	231,004,601.66	3.60%	-4.18%
2019	255,923,211.00	6.15%	238,654,515.30	3.31%	-6.75%
2020	252,540,603.00	-1.32%	248,745,294.03	4.23%	-1.50%
2021	265,226,888.00	5.02%	265,662,736.63	6.80%	0.16%
2022	279,572,890.00	5.41%	281,017,552.01	5.78%	0.52%
2023	281,399,999.13	0.65%	282,763,701.36	0.62%	0.48%

9

10   Table as seen below, shows the results of the mean absolute deviation (MAD), the mean square

11   error (MSE), the root mean square (RMSE) and the mean absolute Percentage error (MAPE).

1   **Table 7 – Assessment of Relative Error for Regression**

Year	Actual A_t	Forecast F_t	Error $A_t - F_t$	Absolute Value of Error $|A_t - F_t|$	Square of Error $(A_t - F_t)^2$	Absolute Values of Errors Divided by Actual Values $|(A_t - F_t)/A_t|$
2014	222,844,848	228,113,503	- 5,268,655	5,268,655	27,758,725,952,656	0.02364
2015	216,436,884	223,845,145	- 7,408,261	7,408,261	54,882,325,820,478	0.03423
2016	211,050,246	220,586,970	- 9,536,724	9,536,724	90,949,112,188,641	0.04519
2017	217,280,995	222,969,696	- 5,688,701	5,688,701	32,361,321,118,277	0.02618
2018	241,087,151	231,004,602	10,082,549	10,082,549	101,657,803,885,855	0.04182
2019	255,923,211	238,654,515	17,268,696	17,268,696	298,207,851,070,781	0.06748
2020	252,540,603	248,745,294	3,795,309	3,795,309	14,404,370,173,363	0.01503
2021	265,226,888	265,662,737	- 435,849	435,849	189,964,027,192	0.00164
2022	279,572,890	281,017,552	- 1,444,662	1,444,662	2,087,048,328,038	0.00517
2023	281,399,999	282,763,701	- 1,363,702	1,363,702	1,859,683,784,133	0.00485
Total						0.02652

2

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

4   and the forecast divided by the number of observations.

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

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

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

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

9   observation values.

3.1.8 DETERMINATION OF CUSTOMER FORECAST

API has used a simple geometric mean function to determine the forecasted number of customers for 2024 and 2025. The geometric mean is more appropriate to use when working with percentages and rates of change. The formula is reasonably representative of API's natural customer growth. For the 2024 forecast customers counts, the 2023 averages were used as a starting point increased by the geomean from 2015 to 2019.

During the COVID-19 pandemic, API observed above-average customer growth due to individuals relocating from other areas of the province. API believes this trend was limited to the COVID-19 pandemic, and is unlikely to continue. API considers that the geomean excluding 2020, 2021 and 2022 presents a more accurate viewpoint of the typical customer growth expected in future years, now that COVID impacts are slowing.

Additionally, 2020 had an above normal increase due to the acquisition of a new service area, ie: the customers of the former Dubreuil Lumber Inc. (DLI) The customer growth resulting from the DLI customers is a one-time occurrence and therefore should not factor into the forecasted growth rates.

To determine the 2024 bridge year customer count, the actual 2023 values were increased by the 2015-2019 geomean. The same geomean was applied to the 2024 forecast to determine the 2025 Test Year forecast. Historical customer counts and projected customer counts for 2024 and 2025 are presented in Table below. A variance analysis of customer counts and projections is presented at 3.3.10.

1   **Table 8 – Historical Customer/Connection (Average)**

2

3   5

Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	Total
Number of Customers/Connections						
2014	7,398	956	43	3,255	1,019	12,670
2015	7,480	954	42	3,176	1,023	12,675
2016	7,544	951	42	3,140	1,066	12,743
2017	7,596	961	38	3,108	1,070	12,774
2018	7,640	961	40	3,076	1,067	12,784
2019	7,698	951	40	3,039	1,075	12,801
2020	7,925	969	41	2,990	1,105	13,028
2021	8,205	999	43	2,925	1,141	13,312
2022	8,361	1,025	46	2,849	1,146	13,426
2023	8,485	1,055	47	2,793	1,132	13,512

4

5

1

Table 9 – Growth Rate in Customers/Connections

2   **6**

Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
Growth Rate in Customers/Connections					
2014					
2015	1.1%	(0.1%)	(2.9%)	(2.4%)	0.4%
2016	0.9%	(0.3%)	(0.2%)	(1.1%)	4.3%
2017	0.7%	1.1%	(9.3%)	(1.0%)	0.3%
2018	0.6%	(0.0%)	4.1%	(1.0%)	(0.3%)
2019	0.8%	(1.0%)	(0.6%)	(1.2%)	0.7%
2020	2.9%	1.8%	2.5%	(1.6%)	2.8%
2021	3.5%	3.1%	4.9%	(2.2%)	3.3%
2022	1.9%	2.7%	7.1%	(2.6%)	0.4%
2023	1.5%	2.9%	3.3%	(1.9%)	(1.3%)
Geometric Mean ('15-'19)	**0.8%**	**(0.1%)**	**(1.9%)**	**(1.4%)**	**1.1%**

3

Table 10 – Customer/Connection Forecast

5   **7**

Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	Total
Forecast Number of Customers/Connections						
2024 Bridge	8,553	1,054	46	2,755	1,144	13,551
2025 Test	8,621	1,053	45	2,717	1,156	13,592

6

1   **Historical Loss Factors to Determine Billed Energy**

2   For both the 2024 bridge year and the 2025 test year, the historical loss factor employed is the

3   five-year average total loss factor of 1.0873, as detailed in Chapter 2, Appendix 2-R. This factor

4   was applied to adjust the forecasted purchased amount derived from the multivariate regression

5   model in order to predict the total billed energy amount.

1 ## 3.1.9 DETERMINATION OF BILLED ENERGY BY RATE CLASS

2 The subsequent step in the process involved calculating billed energy by rate class. This was

3 achieved by computing historical customer usage and applying the usage per customer in the

4 forecast. The forecasted usage per customer for both the bridge and test years corresponds to

5 the 2023 usage per customer.

6 **Table 11 – 2023 Actual Annual Usage per Customer**

Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
Annual kWh Usage Per Customer/Connection					
7 | 2023 | 11,361 | 27,011 | 2,727,420 | 2,193 | 475 |

8 API selected 2023 values as they are the most current and representative of recent consumption

9 patterns. During the COVID-19 pandemic, customer consumption patterns changed. Residential

10 consumption was impacted upwards due to stay-home orders, school closures, and an increase

11 in working from home. API believes that 2023 represents an appropriate assumption for post-

12 pandemic usage per customer, reflecting new trends such as a long-term increase in working

13 from home, but not the impacts of stay-home or other emergency public health requirements.

14 In the street lighting class, API has also maintained the 2023 consumption per connection levels

15 for the purpose of forecasting 2024 and 2025. Over time, the street lighting class has seen a

16 decrease in the levels of consumption per connection as a result of conversion of traditional

17 lighting fixtures to LED lighting.

18 The average usage per customer was applied to the forecasted customer counts for the bridge

19 and test years. By multiplying the 2023 usage per customer by the forecasted customer counts,

20 the non-weather normalized billed energy was established.

21 An adjustment was made to convert the forecast to weather-normalized usage, with this value

22 being allocated to weather-sensitive rate classes on a prorated basis. API has not made any

23 changes to the weather sensitivity assumption per class used in prior rate applications.

1 **Table 12 – Weather Sensitivity by Rate Class**

2 **8**

	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
Weather Sensitivity					
	83%	83%	65%	0%	0%

3

4

5 For the R2 commercial class, API has made a manual adjustment to increase the forecast for the

6 anticipated load associated with increased customer usage from the #4 Circuit project which is

7 detailed in Exhibit 2. The project will bring 8MW in increased maximum customer load. API has

8 applied appropriate historic ratios to reflect: (a) the relationship between this peak maximum

9 load and the monthly peak load for billing; and (b) the relationship between the resultant

10 monthly peak load and monthly kWh usage. These ratios were used to determine the "manual

11 adjustment" to arrive at the total Residential R2 forecast for the Test Year.

12 **Table 13 – Alignment of Non-Normal to Weather Normal Forecast**

13 **9**

Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	Total
Non-normalized Weather Billed Energy Forecast (GWh)						
2024 Bridge	97.2	28.5	125.8	6.0	0.5	257.5
2025 Test	97.9	28.4	123.4	6.0	0.5	255.8
Weather Adjustment (GWh)						
2024 Bridge	3.0	0.9	3.0	0.0	0.0	6.8
2025 Test	4.1	1.2	4.1	0.0	0.0	9.3
R2 "Manual Adjustment						
2025 Test	-	-	51.9	-	-	-
Weather Normalized Billed Energy Forecast (GWh)						
2024 Bridge	100.1	29.3	128.8	6.0	0.5	264.3
2025 Test	102.0	29.6	179.4	6.0	0.5	317.0

14

15 For those rate classes that use kW consumption as a billing determinant, sales for these

16 customer classes are then converted to kW based on the historical volumetric relationship

17 between kWh and kW. API used the 10-year historic average to determine the conversion rate

18 for the bridge and test year, featured below for the rate class R2 and Streetlights. For the R2

1 "manual adjustment", API applied a separate ratio appropriate for the nature of the incremental

2 expected load.

3

4

5 **Table 14 – Average 2014-2023 kW/kWh Ratio per Applicable Rate Class**

6 **10**

Year	R2 GS>50 kW	Street Lights
Ratio of kW to kWh		
2014	0.2356%	0.2865%
2015	0.2407%	0.2865%
2016	0.2427%	0.2776%
2017	0.2231%	0.2779%
2018	0.2147%	0.2739%
2019	0.2102%	0.2780%
2020	0.2252%	0.2761%
2021	0.2142%	0.2682%
2022	0.2168%	0.2877%
2023	0.2169%	0.2801%
Average	**0.2240%**	**0.2793%**

7

8 **Table 15 – kW Forecast by Applicable Rate Class**

9 **11**

Year	R2 GS>50 kW	Street Lights	Total
Predicted Billed kW			
2024 Bridge	288,517	1,517	290,034
2025	372,457	1,533	373,990

10

11 Explanations for material changes over time, explanations of the bridge and test year forecasts

12 by rate class, as well as variance analysis between the last OEB-approved and the actual and

13 weather-normalized historical results are presented at Section 3.3.1 Variance Analysis of Load

14 Forecast.

1

3.1.10 FINAL NORMALIZED LOAD FORECAST

3 Table 16 below presents historical actual and projected weather normalized Load Forecast by

4 customer class.

5 **Table 16 – Forecast Summary**

	2020 Board Approved	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Bridge Weather Normal	2025 Test Weather Normal
Purchases										
Actual kWh Purchases		217,280,995	241,087,151	255,923,211	252,540,603	265,226,888	279,572,890	281,399,999		
Predicted kWh	246,292,289	222,969,696	231,004,602	238,654,515	248,745,294	265,662,737	281,017,552	282,763,701	287,962,762	288,843,744
% Difference between actual and predicted purchases		2.6%	(4.2%)	(6.7%)	(1.5%)	0.2%	0.5%	0.5%		
Loss Factor	1.0829								1.0873	1.0873
Total Billed	227,437,703	203,063,777	224,565,775	235,800,481	229,140,220	244,314,344	256,287,580	259,742,424	264,839,930	265,650,171
Billing Determinants										
Residential										
Customers	8,116	7,596	7,640	7,698	7,925	8,205	8,361	8,485	8,553	8,621
kWh	84,857,056	76,321,856	82,424,404	86,629,136	91,478,383	92,005,690	99,292,265	96,395,846	100,119,668	102,025,758
General Service < 50 kW										
Customers	997	961	961	951	969	999	1,025	1,055	1,054	1,053
kWh	28,480,011	25,604,789	26,132,430	26,695,949	27,143,067	27,745,373	29,567,137	28,496,501	29,334,547	29,627,607
R2 GS>50 kW										
Customers	37	38	40	40	41	43	46	47	46	45
kWh	107,645,160	94,512,143	109,385,574	115,631,849	103,396,925	117,544,957	120,294,405	128,188,723	128,802,125	179,389,418
kW	248,605	210,836	234,798	243,010	232,897	251,732	260,826	278,055	288,517	372,457
Street Lights										
Devices	1,128	1,070	1,067	1,075	1,105	1,141	1,146	1,132	1,144	1,156
kWh	581,104	582,537	577,097	566,130	592,582	594,156	592,975	537,366	543,140	548,977
kW	1,615	1,619	1,581	1,574	1,636	1,593	1,706	1,505	1,517	1,533
Seasonal										
Customers	2,960	3,108	3,076	3,039	2,990	2,925	2,849	2,793	2,755	2,717
kWh	5,874,372	6,042,453	6,046,269	6,277,417	6,529,263	6,424,168	6,540,797	6,123,988	6,040,450	5,958,052
Total										
Customer/Connection	13,238	12,774	12,784	12,801	13,028	13,312	13,426	13,512	13,551	13,592
kWh	227,437,703	203,063,777	224,565,775	235,800,481	229,140,220	244,314,344	256,287,580	259,742,424	264,839,930	317,549,813
kW	250,220	212,455	236,379	244,584	234,533	253,325	262,532	279,560	290,034	373,990

6

7

3.2 IMPACT AND PERSISTENCE FROM HISTORICAL CDM PROGRAMS

API has not made any specific adjustments related to Conservation and Demand Management programs. API has not applied for any distributor-specific CDM programs.

The impacts of historical programs and their persistence are reflected in the historical actual power purchases and billed energy on which API has developed its load forecast (including for example, the average usage per customer).

Consistent with the approach in Exhibit 9, API is not proposing any future LRAMVA-eligible activities at this time, and therefore has not proposed any LRAMVA baseline. As no new CDM program savings have been built into the forecast, API expects any future LRAMVA claim would be considered against zero-baseline.

1   ## 3.3 ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSIS

2   ## 3.3.1 VARIANCE ANALYSIS OF LOAD FORECAST- APPENDIX 2-IB

3   The table below represents the completed Appendix 2-IB

1

2   **Table 17 – Appendix 2-IB**

3   **12**

4

Customers/Connections

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))	7,698	7,925	8,205	8,361	8,485	8,553	8,621
General Service < 50 kW (Residential R1(ii))	961	951	969	999	1,025	1,054	1,053
General Service >= 50 kW (Residential R2)	40	41	43	46	47	46	45
Seasonal	3,039	2,990	2,925	2,849	2,793	2,755	2,717
Street Lighting	1,075	1,105	1,141	1,146	1,132	1,144	1,156

Customers/Connections Variance Analysis

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))		2.9%	3.5%	1.9%	1.5%	0.8%	0.8%
General Service < 50 kW (Residential R1(ii))		-1.0%	1.8%	3.1%	2.7%	2.8%	-0.1%
General Service >= 50 kW (Residential R2)		2.5%	4.9%	7.1%	3.3%	-1.9%	-1.9%
Seasonal		-1.6%	-2.2%	-2.6%	-1.9%	-1.4%	-1.4%
Street Lighting		2.8%	3.3%	0.4%	-1.3%	1.1%	1.1%

Consumption (Actual)

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))	86,629,136	91,478,383	92,005,690	99,292,265	96,395,846	100,119,668	102,025,758
General Service < 50 kW (Residential R1(ii))	26,695,949	27,143,067	27,745,373	29,567,137	28,496,501	29,334,547	29,627,607
General Service >= 50 kW (Residential R2)	115,631,849	103,396,925	117,544,957	120,294,405	128,188,723	128,802,125	179,389,418
Seasonal	6,277,417	6,529,263	6,424,168	6,540,797	6,123,988	6,040,450	5,958,052
Street Lighting	566,130	592,582	594,156	592,975	537,366	543,140	548,977

Consumption (Actual) Variance Analysis

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))		5.6%	0.6%	7.9%	-2.9%	3.9%	1.9%
General Service < 50 kW (Residential R1(ii))		1.7%	2.2%	6.6%	-3.6%	2.9%	1.0%
General Service >= 50 kW (Residential R2)		-10.6%	13.7%	2.3%	6.6%	0.5%	39.3%
Seasonal		4.0%	-1.6%	1.8%	-6.4%	-1.4%	-1.4%
Street Lighting		4.7%	0.3%	-0.2%	-9.4%	1.1%	1.1%

Demand (Actual)

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))	-	-	-	-			
General Service < 50 kW (Residential R1(ii))	-	-	-	-			
General Service >= 50 kW (Residential R2)	243,010	232,897	251,732	260,826	278,055	288,517	372,457
Seasonal	-	-	-	-			
Street Lighting	1,574	1,636	1,593	1,706	1,505	1,517	1,533

Demand (Actual) Variance Analysis

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))							
General Service < 50 kW (Residential R1(ii))							
General Service >= 50 kW (Residential R2)		-4.2%	8.1%	3.6%	6.6%	3.8%	29.1%
Seasonal							
Street Lighting		3.9%	-2.6%	7.1%	-11.8%	0.8%	1.1%

Consumption (Weather Normalized)

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))	83,516,261	90,393,585	92,319,997	97,531,680	96,872,911	100,119,668	102,025,758
General Service < 50 kW (Residential R1(ii))	25,736,674	26,821,190	27,840,156	29,042,872	28,637,531	29,334,547	29,627,607
General Service >= 50 kW (Residential R2)	111,476,809	102,170,791	117,946,511	118,161,424	128,823,132	128,802,125	179,389,418
Seasonal	6,051,849	6,451,835	6,446,114	6,424,820	6,154,296	6,040,450	5,958,052
Street Lighting	545,787	585,555	596,186	582,461	540,025	543,140	548,977

Consumption (Weather Normalized) Variance Analysis

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))		8.2%	2.1%	5.6%	-0.7%	3.4%	1.9%
General Service < 50 kW (Residential R1(ii))		4.2%	3.8%	4.3%	-1.4%	2.4%	1.0%
General Service >= 50 kW (Residential R2)		-8.3%	15.4%	0.2%	9.0%	0.0%	39.3%
Seasonal		6.6%	-0.1%	-0.3%	-4.2%	-1.8%	-1.4%
Street Lighting		7.3%	1.8%	-2.3%	-7.3%	0.6%	1.1%

Demand (Weather Normalized)

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))	-	-	-	-	-	-	-
General Service < 50 kW (Residential R1(ii))	-	-	-	-	-	-	-
General Service >= 50 kW (Residential R2)	243,010	232,897	251,732	260,826	278,055	288,517	372,457
Seasonal	-	-	-	-	-	-	-
Street Lighting	1,574	1,636	1,593	1,706	1,505	1,517	1,533

Demand (Weather Normalized) Variance Analysis

Rate Class	Historical 2019	Historical 2020	Historical 2021	Historical 2022	Historical 2023	Bridge Year 2024	Test Year 2025
Residential (Residential R1(i))							
General Service < 50 kW (Residential R1(ii))							
General Service >= 50 kW (Residential R2)		-4.2%	8.1%	3.6%	6.6%	3.8%	29.1%
Seasonal							
Street Lighting		3.9%	-2.6%	7.1%	-11.8%	0.8%	1.1%

1

1 ## 3.3.2 VARIANCE ANALYSIS – NUMBER OF CUSTOMERS

2 The tables below outline the variances in API's number of customers in each class over time. As

3 outlined above, the number of customers represents average customers during the year,

4 computed by taking the average of the opening and closing number of customers each year.

5 **Table 18 - 2020 Board- Approved vs. 2020 Actual**

6 **13**

Rate Class	Customers / Connections	
	2020 Board Approved	2020 Actual
Residential	8,116	7,925
General Service < 50 kW	997	969
General Service 50 to 4,999 kW	37	41
Seasonal	2,960	2,990
Street Lights	1,128	1,105
Total	13,238	13,028
Variance	**Count**	**%**
Residential	(192)	-2.4%
General Service < 50 kW	(29)	-2.9%
General Service 50 to 4,999 kW	4	9.5%
Seasonal	30	1.0%
Street Lights	(23)	-2.0%
Total	(210)	-1.6%

7

8 Customer numbers in 2020 were lower than forecasted, with decreases in the residential and

9 small commercial class. API attributes a portion of the decrease to the averaging effect in 2020

10 actuals of the DLI customer additions, which were added in 2020. The Residential R2/General

11 Service >50 kW class saw 9.5% more customers than forecasted, however this only amounts to

12 four additional customers.

1   **Table 19 - 2021 Actual vs. 2020 Actual**

2   **14**

Rate Class	Customers / Connections	
	2020 Actual	**2021 Actual**
Residential	7,925	8,205
General Service < 50 kW	969	999
General Service 50 to 4,999 kW	41	43
Seasonal	2,990	2,925
Street Lights	1,105	1,141
Total	13,028	13,312
Variance	**Count**	**%**
Residential	280	3.5%
General Service < 50 kW	30	3.1%
General Service 50 to 4,999 kW	2	4.9%
Seasonal	(65)	-2.2%
Street Lights	36	3.3%
Total	284	2.2%

3

4   API experienced customer growth in almost every class in 2021. The highest level of growth was

5   in the R2/General Service >50kW class, which saw an increase of 2 customers, or 4.9% in relative

6   terms. API attributes some of the growth to the impact of the DLI customers, which was only

7   included in the "closing" balance for the purpose of averaging 2020, but both in the opening

8   and closing 2021.

1 **Table 20 - 2022 Actual vs 2021 Actual**

2 **15**

Rate Class	Customers / Connections	
	2021 Actual	**2022 Actual**
Residential	8,205	8,361
General Service < 50 kW	999	1,025
General Service 50 to 4,999 kW	43	46
Seasonal	2,925	2,849
Street Lights	1,141	1,146
Total	13,312	13,426
Variance	**Count**	**%**
Residential	156	1.9%
General Service < 50 kW	27	2.7%
General Service 50 to 4,999 kW	3	7.1%
Seasonal	(77)	-2.6%
Street Lights	5	0.4%
Total	114	0.9%

3

4 In 2022, API once again experienced customer growth in most rate classes, with the exception of

5 the Seasonal rate class. Customer growth in the General Service >50kW class increased at 7.1%,

6 however this only represents 3 additional customers. API notes that the net increase among

7 Residential (R1(i)) customers and Seasonal is a net increase of 80 or 0.7%, indicating API

8 experienced a high rate of customer conversions from Seasonal to Residential in 2022.

1 **Table 21 - 2023 Actual vs 2022 Actual**

2 **16**

Rate Class	Customers / Connections	
	2022 Actual	**2023 Actual**
Residential	8,361	8,485
General Service < 50 kW	1,025	1,055
General Service 50 to 4,999 kW	46	47
Seasonal	2,849	2,793
Street Lights	1,146	1,132
Total	13,426	13,512
Variance	**Count**	**%**
Residential	125	1.5%
General Service < 50 kW	30	2.9%
General Service 50 to 4,999 kW	2	3.3%
Seasonal	(56)	-1.9%
Street Lights	(15)	-1.3%
Total	86	0.6%

3

4   Customer growth in 2023 was more moderate than the prior years. API experienced modest

5   increases in the Residential and General Service classes. Consistent with the prior year, API's

6   seasonal class continued to decrease. The Street Lighting class also experienced a moderate

7   decrease.

1 **Table 22 -2023 Actual vs 2024 Bridge**

2 **17**

Rate Class	Customers / Connections	
	2023 Actual	**2024 Bridge**
Residential	8,485	8,553
General Service < 50 kW	1,055	1,054
General Service 50 to 4,999 kW	47	46
Seasonal	2,793	2,755
Street Lights	1,132	1,144
Total	13,512	13,551
Variance	**Count**	**%**
Residential	68	0.8%
General Service < 50 kW	(1)	-0.1%
General Service 50 to 4,999 kW	(1)	-1.9%
Seasonal	(38)	-1.4%
Street Lights	12	1.1%
Total	40	0.3%

3

4 API's forecasting methodology for the Bridge and Test Years, as outlined above, is based on the

5 2015 to 2019 geographic mean. Continued decreases are expected in the Seasonal Class, with a

6 0.8% increase in Residential Class. Immaterial decreases are forecasted in the General Service

7 classes.

1 **Table 23 – 2024 Bridge vs 2025 Test**

2 **18**

Rate Class	Customers / Connections	
	2024 Bridge	**2025 Test**
Residential	8,553	8,621
General Service < 50 kW	1,054	1,053
General Service 50 to 4,999 kW	46	45
Seasonal	2,755	2,717
Street Lights	1,144	1,156
Total	13,551	13,592
Variance	**Count**	**%**
Residential	68	0.8%
General Service < 50 kW	(1)	-0.1%
General Service 50 to 4,999 kW	(1)	-1.9%
Seasonal	(38)	-1.4%
Street Lights	12	1.1%
Total	41	0.3%

3

4 The same geometric mean growth rates were applied to the Bridge and Test years. Immaterial

5 fluctuations are forecasted in most classes, with the highest relative decrease occurring in the

6 Seasonal class.

1   **Table 24 – Historical Customer/Connection (Average)**

2   19

Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	Total
Number of Customers/Connections						
2014	7,398	956	43	3,255	1,019	12,670
2015	7,480	954	42	3,176	1,023	12,675
2016	7,544	951	42	3,140	1,066	12,743
2017	7,596	961	38	3,108	1,070	12,774
2018	7,640	961	40	3,076	1,067	12,784
2019	7,698	951	40	3,039	1,075	12,801
2020	7,925	969	41	2,990	1,105	13,028
2021	8,205	999	43	2,925	1,141	13,312
2022	8,361	1,025	46	2,849	1,146	13,426
2023	8,485	1,055	47	2,793	1,132	13,512

3

4

5   **Table 25 – Growth Rate in Customers/Connections**

6   20

Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
Growth Rate in Customers/Connections					
2014					
2015	1.1%	(0.1%)	(2.9%)	(2.4%)	0.4%
2016	0.9%	(0.3%)	(0.2%)	(1.1%)	4.3%
2017	0.7%	1.1%	(9.3%)	(1.0%)	0.3%
2018	0.6%	(0.0%)	4.1%	(1.0%)	(0.3%)
2019	0.8%	(1.0%)	(0.6%)	(1.2%)	0.7%
2020	2.9%	1.8%	2.5%	(1.6%)	2.8%
2021	3.5%	3.1%	4.9%	(2.2%)	3.3%
2022	1.9%	2.7%	7.1%	(2.6%)	0.4%
2023	1.5%	2.9%	3.3%	(1.9%)	(1.3%)
Geometric Mean ('15-'19)	0.8%	(0.1%)	(1.9%)	(1.4%)	1.1%

7

8   Residential R1(i) customers have shown steady but modest growth, with an average annual

9   increase of 1.5% over the 10-year period down above. Higher growth was experienced in 2020-

10   2023, with a spike in 2021 at 3.53%. Possible explanations for this increase include relocation of

11   residential customers to rural areas during the COVID-19 pandemic, as well as migration from the

12   Seasonal rate class (see accelerated decrease in seasonal customer numbers in 2021/2022). The

1 impact of the addition of DLI customers in 2020 also represented higher-than typical residential

2 growth affecting the residential customer.

3 For Residential R1(ii) (traditional "General Service <50kW") customers, there has been similar

4 limited growth, with an average growth rate of 1.56%. From 2014 to 2019, the average net

5 change was a modest 0.07%, while from 2020 to 2023, there was a more substantial growth of

6 2.3%.

7 R2 customers have experienced fluctuating growth over the past decade, with periods of both

8 decline and increase. Similar to Residential R1(ii) customers, positive growth has been consistent

9 over the last four years, culminating in the growth experienced in 2021/2022. API notes some of

10 the increases in Residential R1 (General Service >50 kW) is related to conversions from the

11 General Service <50 kW (Residential R1(ii)) class, due to changes in the customers' usage

12 profiles.

13 The number of seasonal customers has been decreasing, primarily due to conversions from

14 seasonal to Residential R1(i). By reviewing the net increase among both Seasonal and

15 Residential R1(i) customer classes, shows a modest level of year over year growth.

1   **Table 26 - Net Changes in R(i) to Seasonal**

2   **21**

Year	R1(i) Average	Seasonal Average	R1(i)+ Seasonal Total	Change in R(i)	Change in Seasonal	Net Difference	% Difference- Total
2013	7,301	3,331	10,632				
2014	7,398	3,255	10,652	97	- 77	20	0.2%
2015	7,480	3,176	10,655	82	- 79	3	0.0%
2016	7,544	3,140	10,684	64	- 36	28	0.3%
2017	7,596	3,108	10,705	53	- 32	21	0.2%
2018	7,640	3,076	10,716	43	- 32	12	0.1%
2019	7,698	3,039	10,736	58	- 38	20	0.2%
2020	7,925	2,990	10,914	227	- 49	178	1.7%
2021	8,205	2,925	11,130	280	- 65	216	2.0%
2022	8,361	2,849	11,209	156	- 77	80	0.7%
2023	8,485	2,793	11,278	125	- 56	69	0.6%
10-year average growth							**0.6%**

3

4   Streetlights, on the other hand, have generally been on the rise, with only two instances of

5   negative annual growth in the past decade. On average, streetlights have increased by 1.2%

6   annually.

3.3.3 VARIANCE ANALYSIS – CONSUMPTION AND DEMAND

The following tables outline the changes in consumption and demand (where applicable), by class each year since the 2020 OEB-Approved amounts. Consistent with the Filing Requirements, API has provided the analysis for the weather-normalized consumption for each year as well API is not aware of an accepted methodology to weather normalize kW demand, therefore API has adjusted the kW where applicable by a factor of "1". API has provided the statistics for Street Lighting kWh consumption rather than kW demand, as this is the billing unit applicable to distribution rates.

Table 27 - 2020 Actual vs. 2020 Board-Approved

22

Rate Class	Customers / Connections		Units	Volume		Volume (Wthr Nrml)		Annual Usage per Customer / Connection		Annual Usage per Customer / Connection (Wthr Nrml)	
	2020 Board Approved	2020 Actual		2020 Board Approved	2020 Actual	2020 Board Approved	2020 Actual	2020 Board Approved	2020 Actual	2020 Board Approved	2020 Actual
Residential	8,116	7,925	kWh	84,857,056	91,478,383	83,850,777	90,393,585	10,456	11,544	10,332	11,407
General Service < 50 kW	997	969	kWh	28,480,011	27,143,067	28,142,280	26,821,190	28,566	28,026	28,227	27,694
General Service 50 to 4,999 kW	37	41	kW	248,605	232,897	248,605	232,897	6,719	5,751	6,719	5,751
Seasonal	2,960	2,990	kWh	5,874,372	6,529,263	5,874,372	6,451,835	1,985	2,184	1,985	2,158
Street Lights	1,128	1,105	kWh	581,104	592,582	581,104	585,555	515	536	515	530
Total	13,238	13,028									
Variance	**Count**	**%**		**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
Residential	(192)	-2.4%	kWh	6,621,327	7.8%	6,542,808	7.8%	1,088	10.4%	1,075	10.4%
General Service < 50 kW	(29)	-2.9%	kWh	(1,336,944)	-4.7%	(1,321,090)	-4.7%	(540)	-1.9%	(533)	-1.9%
General Service 50 to 4,999 kW	4	9.5%	kW	(15,708)	-6.3%	(15,708)	-6.3%	(969)	-14.4%	(969)	-14.4%
Seasonal	30	1.0%	kWh	654,891	11.1%	577,463	9.8%	199	10.1%	174	8.7%
Street Lights	(23)	-2.0%	kWh	11,478	2.0%	4,451	0.8%	21	4.1%	15	2.9%
Total	(210)	-1.6%									

 Weather normal usage in 2020 increased significantly in the Seasonal and Residential classes, due to increases in usage per customer, and despite a decrease in the number of residential customers. API attributes this to the COVID-19 pandemic, during which customers spent more time in their homes due to stay home orders, business and school closures, as well as an increase in "working from home", increasing usage per customer significantly. These same factors contributed to decreases in the General Service usage per customer, which was particularly impactful to Residential R2/General Service>50kW demand per customer, which decreased 14.4% compared to 2020 OEB-Approved. R2/General Service>50kW demand saw an overall decrease, despite an increase in the number of customers. Weather patterns in 2020 were more extreme than forecasted (above-normal).

1

2 **Table 28 - 2021 Actual vs. 2020 Actual**

3 **23**

Rate Class	Customers / Connections		Units	Volume		Volume (Wthr Nrml)		Annual Usage per Customer / Connection		Annual Usage per Customer / Connection (Wthr Nrml)	
	2020 Actual	2021 Actual		2020 Actual	2021 Actual	2020 Actual	2021 Actual	2020 Actual	2021 Actual	2020 Actual	2021 Actual
Residential	7,925	8,205	kWh	91,478,383	92,005,690	90,393,585	92,319,997	11,544	11,214	11,407	11,252
General Service < 50 kW	969	999	kWh	27,143,067	27,745,373	26,821,190	27,840,156	28,026	27,787	27,694	27,882
General Service 50 to 4,999 kW	41	43	kW	232,897	251,732	232,897	251,732	5,751	5,923	5,751	5,923
Seasonal	2,990	2,925	kWh	6,529,263	6,424,168	6,529,263	6,446,114	2,184	2,196	2,184	2,204
Street Lights	1,105	1,141	kWh	592,582	594,156	585,555	596,186	536	521	530	523
Total	13,028	13,312									
Variance	Count	%		Volume	%	Volume	%	Volume	%	Volume	%
Residential	280	3.5%	kWh	527,307	0.6%	1,926,412	2.1%	(330)	-2.9%	(154)	-1.4%
General Service < 50 kW	30	3.1%	kWh	602,306	2.2%	1,018,966	3.8%	(239)	-0.9%	188	0.7%
General Service 50 to 4,999 kW	2	4.9%	kW	18,835	8.1%	18,835	8.1%	173	3.0%	173	3.0%
Seasonal	(65)	-2.2%	kWh	(105,095)	-1.6%	(83,149)	-1.3%	12	0.6%	20	0.9%
Street Lights	36	3.3%	kWh	1,574	0.3%	10,631	1.8%	(16)	-2.9%	(7)	-1.4%
Total	284	2.2%									

4

5

6 In 2021, weather-normalized usage generally increased compared to 2020, with the exception of

7 the Street Lighting class. Per customer usage decreased moderately in the Residential (R1(i))

8 class, likely due to moderate decreases in in lockdowns and other COVID-19 restrictions. General

9 Service >50 (R2) consumption per customer increased by 3.0%, also reflecting the loosened

10 restrictions on non-essential businesses. Weather patterns in 2021 were generally considered

11 below-normal (less extreme, causing a lower impact to consumption).

1   **Table 29 - 2022 Actual vs. 2021 Actual**

2   24

Rate Class	Customers / Connections		Units	Volume		Volume (Wthr Nrml)		Annual Usage per Customer / Connection		Annual Usage per Customer / Connection (Wthr Nrml)	
	2021 Actual	2022 Actual		2021 Actual	2022 Actual	2021 Actual	2022 Actual	2021 Actual	2022 Actual	2021 Actual	2022 Actual
Residential	8,205	8,361	kWh	92,005,690	99,292,265	92,319,997	97,531,680	11,214	11,876	11,252	11,666
General Service < 50 kW	999	1,025	kWh	27,745,373	29,567,137	27,840,156	29,042,872	27,787	28,846	27,882	28,335
General Service 50 to 4,999 kW	43	46	kW	251,732	260,826	251,732	260,826	5,923	5,732	5,923	5,732
Seasonal	2,925	2,849	kWh	6,424,168	6,540,797	6,446,114	6,424,820	2,196	2,296	2,204	2,256
Street Lights	1,141	1,146	kWh	594,156	592,975	596,186	582,461	521	517	523	508
Total	13,312	13,426									
Variance	**Count**	**%**		**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
Residential	156	1.9%	kWh	7,286,576	7.9%	5,211,684	5.6%	662	5.9%	413	3.7%
General Service < 50 kW	27	2.7%	kWh	1,821,764	6.6%	1,202,716	4.3%	1,059	3.8%	453	1.6%
General Service 50 to 4,999 kW	3	7.1%	kW	9,094	3.6%	9,094	3.6%	(191)	-3.2%	(191)	-3.2%
Seasonal	(77)	-2.6%	kWh	116,630	1.8%	(21,293)	-0.3%	100	4.5%	52	2.3%
Street Lights	5	0.4%	kWh	(1,181)	-0.2%	(13,725)	-2.3%	(3)	-0.6%	(14)	-2.7%
Total	114	0.9%									

3

4   In 2022, weather normal billing units generally increased over 2021 levels, with the exception of

5   the street lighting. Residential usage increased as a result of increased customers and increased

6   usage per customer. General Service >50/R2 demand increased moderately overall, influenced

7   by an increase in the number of customers, but offset by a decrease in the usage per customer.

8   Weather patterns in 2022 were above-normal.

9   **Table 30 - 2023 Actual vs. 2022 Actual**

10   25

Rate Class	Customers / Connections		Units	Volume		Volume (Wthr Nrml)		Annual Usage per Customer / Connection		Annual Usage per Customer / Connection (Wthr Nrml)	
	2022 Actual	2023 Actual		2022 Actual	2023 Actual	2022 Actual	2023 Actual	2022 Actual	2023 Actual	2022 Actual	2023 Actual
Residential	8,361	8,485	kWh	99,292,265	96,395,846	97,531,680	96,872,911	11,876	11,361	11,666	11,417
neral Service < 50 kW	1,025	1,055	kWh	29,567,137	28,496,501	29,042,872	28,637,531	28,846	27,011	28,335	27,145
ervice 50 to 4,999 kW	46	47	kW	260,826	278,055	260,826	278,055	5,732	5,916	5,732	5,916
Seasonal	2,849	2,793	kWh	6,540,797	6,123,988	6,424,820	6,154,296	2,296	2,193	2,256	2,203
Street Lights	1,146	1,132	kWh	592,975	537,366	582,461	540,025	517	475	508	477
Total	13,426	13,512									
Variance	**Count**	**%**		**Volume**	**%**	**Volume**	**%**	**Volume**	**%**	**Volume**	**%**
Residential	125	1.5%	kWh	(2,896,419)	-2.9%	(658,769)	-0.7%	(516)	-4.3%	(249)	-2.1%
neral Service < 50 kW	30	2.9%	kWh	(1,070,636)	-3.6%	(405,341)	-1.4%	(1,835)	-6.4%	(1,190)	-4.2%
ervice 50 to 4,999 kW	2	3.3%	kW	17,229	6.6%	17,229	6.6%	184	3.2%	184	3.2%
Seasonal	(56)	-1.9%	kWh	(416,809)	-6.4%	(270,525)	-4.2%	(104)	-4.5%	(52)	-2.3%
Street Lights	(15)	-1.3%	kWh	(55,609)	-9.4%	(42,435)	-7.3%	(43)	-8.2%	(31)	-6.1%
Total	86	0.6%									

11

12   Billing determinants generally decreased in 2023, aside from the R2/GS>50kW class. In The

13   Residential and Seasonal classes, this can be attributed to reduced usage per customer due to

14   the "return to normal" from COVID-19, where most school and business closures ended. In the

15   Residential R2/GS>50kW class, the number of customers and the usage per customer each

16   increased. Weather patterns in 2023 were below-normal.

1

Table 31 - 2024 Bridge Year vs. 2023 Actual

3 **26**

Rate Class	Customers / Connections		Units	Volume		Volume (Wthr Nrml)		Annual Usage per Customer / Connection		Annual Usage per Customer / Connection (Wthr Nrml)	
	2023 Actual	2024 Bridge		2023 Actual	2024 Bridge	2023 Actual	2024 Bridge	2023 Actual	2024 Bridge	2023 Actual	2024 Bridge
Residential	8,485	8,553	kWh	96,395,846	100,119,668	96,872,911	100,119,668	11,361	11,706	11,417	11,706
General Service < 50 kW	1,055	1,054	kWh	28,496,501	29,334,547	28,637,531	29,334,547	27,011	27,832	27,145	27,832
General Service 50 to 4,999 kW	47	46	kW	278,055	288,517	278,055	288,517	5,916	6,256	5,916	6,256
Seasonal	2,793	2,755	kWh	6,123,988	6,040,450	6,154,296	6,040,450	2,193	2,193	2,203	2,193
Street Lights	1,132	1,144	kWh	537,366	543,140	540,025	543,140	475	475	477	475
Total	13,512	13,551									
Variance	Count	%		Volume	%	Volume	%	Volume	%	Volume	%
Residential	68	0.8%	kWh	3,723,822	3.9%	3,246,756	3.4%	346	3.0%	289	2.5%
General Service < 50 kW	(1)	-0.1%	kWh	838,046	2.9%	697,016	2.4%	822	3.0%	688	2.5%
General Service 50 to 4,999 kW	(1)	-1.9%	kW	10,462	3.8%	10,462	3.8%	340	5.7%	340	5.7%
Seasonal	(38)	-1.4%	kWh	(83,538)	-1.4%	(113,845)	-1.8%	-	0.0%	(11)	-0.5%
Street Lights	12	1.1%	kWh	5,774	1.1%	3,115	0.6%	-	0.0%	(2)	-0.5%
Total	40	0.3%									

5 Billing units in the 2024 Bridge Year are forecast to increase compared to 2023, with the

6 exception of the seasonal class, based on the forecasting methodology outlined above.

7 Moderate increases in the number of customers are expected in the Residential and Street

8 Lighting classes, while moderate decreases are expected in the General Service classes (R1(ii)

9 and R2), as well as the seasonal class. Usage per customer is expected to be slightly higher in

10 most classes, due to the impacts of weather normalization/weather sensitivity.

1   **Table 32 - 2024 Bridge Year vs. 2025 Test Year**

2   **27**

Rate Class	Customers / Connections		Units	Volume (Wthr Nrml)		Annual Usage per Customer / Connection (Wthr Nrml)	
	2024 Bridge	2025 Test		2024 Bridge	2025 Test	2024 Bridge	2025 Test
Residential	8,553	8,621	kWh	100,119,668	102,025,758	11,706	11,835
General Service < 50 kW	1,054	1,053	kWh	29,334,547	29,627,607	27,832	28,138
General Service 50 to 4,999 kW	46	45	kW	288,517	372,457	6,256	8,230
Seasonal	2,755	2,717	kWh	6,040,450	5,958,052	2,193	2,193
Street Lights	1,144	1,156	kWh	543,140	548,977	475	475
Total	13,551	13,592					
Variance	**Count**	**%**		**Volume**	**%**	**Volume**	**%**
Residential	68	0.8%	kWh	1,906,091	1.9%	129	1.1%
General Service < 50 kW	(1)	-0.1%	kWh	293,060	1.0%	306	1.1%
General Service 50 to 4,999 kW	(1)	-1.9%	kW	83,940	29.1%	1,974	31.6%
Seasonal	(38)	-1.4%	kWh	(82,398)	-1.4%	-	0.0%
Street Lights	12	1.1%	kWh	5,837	1.1%	-	0.0%
Total	41	0.3%					

4   Billing units for the 2025 Test Year are expected to increase moderately, based on the impacts of

5   customer growth and the allocation of the power purchase forecast to weather-sensitive classes.

6   As outlined in the sections above, API has made a manual adjustment in 2025, related to an

7   increase in expected load in the R2 class.

8   **Table 33 – Actual Billed Energy by Rate Class**

9   **28**

Billed Energy (GWh) - Actual						
Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	Total
2014	85.4	27.2	83.5	7.9	0.8	204.8
2015	80.9	26.1	86.5	6.9	0.7	201.1
2016	75.9	25.0	89.6	6.2	0.6	197.3
2017	76.3	25.6	94.5	6.0	0.6	203.1
2018	82.4	26.1	109.4	6.0	0.6	224.6
2019	86.6	26.7	115.6	6.3	0.6	235.8
2020	91.5	27.1	103.4	6.5	0.6	229.1
2021	92.0	27.7	117.5	6.4	0.6	244.3
2022	99.3	29.6	120.3	6.5	0.6	256.3
2023	96.4	28.5	128.2	6.1	0.5	

11   **Table 34 – Weather Normal Billed Energy**

1   **29**

Billed Energy (GWh) - Weather Normal						
Year	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	Total
2020 Approved	84.9	28.5	107.6	5.9	0.6	227.4
2014	83.8	26.7	81.9	7.8	0.8	200.8
2015	80.8	26.1	86.5	6.9	0.7	201.1
2016	78.0	25.7	92.0	6.4	0.6	202.6
2017	78.1	26.2	96.7	6.2	0.6	207.7
2018	81.8	25.9	108.5	6.0	0.6	222.8
2019	83.5	25.7	111.5	6.1	0.5	227.3
2020	90.4	26.8	102.2	6.5	0.6	226.4
2021	92.3	27.8	117.9	6.4	0.6	245.1
2022	97.5	29.0	118.2	6.4	0.6	251.7
2023	96.9	28.6	128.8	6.2	0.5	261.0

2

3

4   **Table 35 – Annual Usage by Rate Class**

5   **30**

Actual Annual Energy Usage per Customer/Connection (kWh per customer/connection)					
	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
2014	11,543	28,475	1,922,550	2,433	763
2015	10,813	27,383	2,052,071	2,163	726
2016	10,063	26,267	2,128,607	1,976	548
2017	10,047	26,639	2,476,301	1,944	544
2018	10,789	27,195	2,751,838	1,965	541
2019	11,254	28,071	2,927,389	2,066	527
2020	11,544	28,026	2,553,011	2,184	536
2021	11,214	27,787	2,765,764	2,196	521
2022	11,876	28,846	2,643,833	2,296	517
2023	11,361	27,011	2,727,420	2,193	475

6

1 **Table 36 - Normalized Usage by Rate Class**

2 **31**

Normalized Annual Energy Usage per Customer/Connection (kWh per customer/connection)					
	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
2020 Approved	10,456	28,566	2,909,329	1,985	515
2014	11,321	27,929	1,885,680	2,387	748
2015	10,809	27,374	2,051,351	2,162	726
2016	10,335	26,978	2,186,174	2,030	563
2017	10,279	27,254	2,533,434	1,989	557
2018	10,705	26,983	2,730,352	1,950	537
2019	10,850	27,063	2,822,198	1,992	508
2020	11,407	27,694	2,522,736	2,158	530
2021	11,252	27,882	2,775,212	2,204	523
2022	11,666	28,335	2,596,954	2,256	508
2023	11,417	27,145	2,740,918	2,203	477

4 Residential R1(i):

5 Weather variations and COVID-related policies have contributed to inconsistencies in kWh per

6 customer during the 2020-2023 period, as well as customer growth.

7 Residential R1(ii)/ General Service <50kW:

8 Variability in residential kWh per customer averages can be partly attributed to changes in the

9 local economy, especially during COVID, leading to reduced small commercial energy

10 consumption due to shifts in labor patterns and COVID-related closures. Weather-normalized

11 kWh saw consumption decrease from 2016-2017 and increase from 2018-2022, with another

12 decrease in 2023 coinciding with increased interest rates.

1   Residential R2/General Service >50kW:

2   Among all rate classes, R2 has shown the most consistent positive growth, with only two years

3   of negative growth between 2015-2023. The average growth in kWh per customer was 4.29%,

4   slightly lower than the total consumption growth of 5.13%. R2 customers also experienced a

5   significant decrease in average usage per customer in 2020 due to COVID, with the average

6   customer using 368,920 kWh less than in 2019. Changes in consumption remained fairly

7   consistent between weather-normalized and actual kWh for this rate class.

8

9   Seasonal:

10   Due to a decline in customers, total consumption for seasonal accounts has decreased at an

11   average rate of 2.65%. Weather variations and COVID-related factors, such as increased cottage

12   vacations, have led to variability in the annual change per customer, averaging at -0.98%.

13

14   Street Lighting:

15   Consumption per customer has been on the decline, largely due to implementation of LED

16   fixtures, which consume less electricity compared to older technologies. Average total

17   consumption decreased by 3.73%, while consumption per customer decreased by 4.80%.

18

19   Total:

20   Total kWh per customer has been on the rise over the past seven years, driven by overall

21   positive customer growth in the service area. However, individual rate classes have experienced

22   both decreases and increases in kWh per customer over the years.

23   Demand in the rate class R2 has been increasing with two outliers 2017 and 2020. In 2020 where

24   demand decreases due to covid restrictions on businesses.

1   **Table 37 - kW Consumption Actuals & Forecast**

2   32

3

	R2 GS>50 kW	Growth	Street Lights	Growth	Total	Total Growth
Actual 2014	196,688		2,227		198,915	
Actual 2015	208,261	5.88%	2,128	-4.45%	210,389	5.45%
Actual 2016	217,369	4.37%	1,623	-23.73%	218,992	3.93%
Actual 2017	210,836	-3.01%	1,619	-0.25%	212,455	-3.08%
Actual 2018	234,798	11.37%	1,581	-2.36%	236,379	10.12%
Actual 2019	243,010	3.50%	1,574	-0.43%	244,584	3.35%
Actual 2020	232,897	-4.16%	1,636	3.93%	234,533	-4.29%
Actual 2021	251,732	8.09%	1,593	-2.61%	253,325	7.42%
Actual 2022	260,826	3.61%	1,706	7.07%	262,532	3.51%
Actual 2023	278,055	6.61%	1,505	-11.78%	279,560	6.09%
Bridge 2024	288,517	3.76%	1,517	0.78%	290,034	3.61%
Test 2025	372,457	29.09%	1,533	1.07%	373,990	22.45%

4

1   API confirms the load forecast described in this Exhibit has been entered into the RRWF filed with

2   this Application. The following is an excerpt from Tab 10 of the RRWF. Since this tab feeds into

3   Tab 11, Cost allocation, the Residential R1(i) and R1(ii) classes are combined on the "Residential"

4   line. Consistent with the approach outlined in Exhibit 7, and consistent with past applications, API

5   has completed the allocation to the Residential R1 class as a whole.

6   **Table 38- RRWF Load Forecast (Cost Allocation)**

Stage in Process:	Initial Application		
Customer Class	**Initial Application**		
Input the name of each customer class.	**Customer / Connections**	**kWh**	**kW/kVA** [1]
	Test Year average or mid-year	Annual	Annual
Residential	9,674	131,653,365	
Residential R2	45	179,389,418	372,457
Seasonal	2,717	5,958,052	
Street Light	1,156	548,977	1,533
Total	**13592.26904**	**317,549,813**	**373,990**

7

8   In Tab 13 Rate Design of the RRWF, API has entered the detailed load forecast, which breaks out

9   the R1 class into its subclasses – please see excerpt from Tab 13 below. Consistent with past

10 applications and the process described in Exhibit 8, API completes a distinct rate design for the

11 Residential R1(i) sub-class and the Residential R1(ii) sub-class.

1

Table 39- RRWF Load Forecast (Rate Design)

Customer Class From sheet 10. Load Forecast	Volumetric Charge Determinant	Customers / Connections	kWh	kW or kVA
Customer and Load Forecast				
Residential R1(i)	kWh	8,621	102,025,758	-
Residential R1(ii)	kWh	1,053	29,627,607	-
Residential R2	kW	45	179,389,418	372,457
Seasonal	kWh	2,717	5,958,052	-
Street Light	kWh	1,156	548,977	1,533
RRRP	kWh	0	0	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		13,592	317,549,813	373,990

2

1   **Attachment 3-A: API 2025 Load Forecast (excel Model)**

2

Attachment 3A

API 2025 Load Forecast Model

Algoma Power Inc.
EB-2024-0007

	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actuals	Weather Normal
Actual kWh Purchases	222,844,848	216,436,884	211,050,246	217,280,995	241,087,151	255,923,211	252,540,603	265,226,888	279,572,890	281,399,999	
Predicted kWh Purchases	228,113,503	223,845,145	220,586,970	222,969,696	231,004,602	238,654,515	248,745,294	265,662,737	281,017,552	282,763,701	287,962,762
% Difference	2.4%	3.4%	4.5%	2.6%	-4.2%	-6.7%	-1.5%	0.2%	0.5%		
Total Billed	204,773,502	201,146,571	197,263,065	203,063,777	224,565,775	235,800,481	229,140,220	244,314,344	256,287,580	259,742,424	264,839,930

By Class

R1(i) Residential

	2014 Actual	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actuals	Weather Normal
Customers	7,398	7,480	7,544	7,596	7,640	7,698	7,925	8,205	8,361	8,485	8,553
kWh	85,393,126	80,876,150	75,910,136	76,321,856	82,424,404	86,629,136	91,478,383	92,005,690	99,292,265	96,395,846	100,119,668

R1(ii) GS < 50 kW

Customers	956	954	951	961	961	951	969	999	1,025	1,055	1,054
kWh	27,212,831	26,130,351	24,984,442	25,604,789	26,132,430	26,695,949	27,143,067	27,745,373	29,567,137	28,496,501	29,334,547

R2 GS>50 kW

Customers	43	42	42	38	40	40	41	43	46	47	46
kWh	83,470,708	86,528,984	89,578,886	94,512,143	109,385,574	115,631,849	103,396,925	117,544,957	120,294,405	128,188,723	128,802,125
kW	196,688	208,261	217,369	210,836	234,798	243,010	232,897	251,732	260,826	278,055	288,517

Seasonal

Connections	3,255	3,176	3,140	3,108	3,076	3,039	2,990	2,925	2,849	2,793	2,755
kWh	7,919,568	6,868,390	6,205,026	6,042,453	6,046,269	6,277,417	6,529,263	6,424,168	6,540,797	6,123,988	6,040,450

Street Lights

Connections	1,019	1,023	1,066	1,070	1,067	1,075	1,105	1,141	1,146	1,132	1,144
kWh	777,269	742,696	584,575	582,537	577,097	566,130	592,582	594,156	592,975	537,366	543,140
kW	2,227	2,128	1,623	1,619	1,581	1,574	1,636	1,593	1,706	1,505	1,517

Total

Customer/Connections	12,670	12,675	12,743	12,774	12,784	12,801	13,028	13,312	13,426	13,512	13,551
kWh	204,773,502	201,146,571	197,263,065	203,063,777	224,565,775	235,800,481	229,140,220	244,314,344	256,287,580	259,742,424	264,839,930
kW from applicable classes	198,915	210,389	218,992	212,455	236,379	244,584	234,533	253,325	262,532	279,560	290,034

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-14	24,988,491	980	0	31	0	11,661	25,110,234	121,743	0.5%	0.5%	14,821,390,690		
Feb-14	22,046,480	912	0	28	0	11,654	22,280,981	234,501	1.1%	1.1%	54,990,657,996	112,758	12,714,306,998
Mar-14	23,041,535	895	0	31	1	11,654	23,334,710	293,175	1.3%	1.3%	85,951,415,591	58,674	3,442,620,511
Apr-14	18,510,176	511	0	30	1	11,646	18,576,988	66,812	0.4%	0.4%	4,463,901,976	-226,362	51,239,881,697
May-14	16,410,299	268	1	31	1	11,637	16,679,337	269,038	1.6%	1.6%	72,381,464,766	202,226	40,895,192,134
Jun-14	13,841,155	97	12	30	0	11,645	15,353,332	1,512,177	10.9%	10.9%	2,286,679,456,366	1,243,139	1,545,394,629,578
Jul-14	15,069,489	88	6	31	0	11,645	15,820,371	750,882	5.0%	5.0%	563,824,457,313	-761,295	579,569,477,343
Aug-14	15,429,842	63	14	31	0	11,655	15,796,408	366,566	2.4%	2.4%	134,370,300,231	-384,317	147,699,483,789
Sep-14	14,760,249	158	1	30	1	11,646	14,920,350	160,101	1.1%	1.1%	25,632,377,791	-206,464	42,627,547,788
Oct-14	17,103,906	341	0	31	1	11,659	17,578,230	474,324	2.8%	2.8%	224,982,916,840	314,222	98,735,774,999
Nov-14	19,716,721	616	0	30	0	11,657	20,586,317	869,596	4.4%	4.4%	756,198,017,834	395,273	156,240,607,714
Dec-14	21,926,505	691	0	31	0	11,659	22,076,245	149,740	0.7%	0.7%	22,421,926,399	-719,857	518,194,013,889
Jan-15	24,303,546	958	0	31	0	11,659	24,857,957	554,411	2.3%	2.3%	307,371,835,654	404,672	163,759,203,287
Feb-15	23,231,362	1,015	0	28	0	11,653	23,352,829	121,467	0.5%	0.5%	14,754,321,204	-432,944	187,440,407,168
Mar-15	21,902,978	787	0	31	1	11,642	22,117,931	214,953	1.0%	1.0%	46,204,667,875	93,485	8,739,509,535
Apr-15	17,767,380	474	0	30	1	11,632	18,095,801	328,421	1.8%	1.8%	107,860,554,279	113,469	12,875,122,115
May-15	15,576,646	243	1	31	1	11,648	16,501,587	924,941	5.9%	5.9%	855,516,179,017	596,520	355,835,955,197
Jun-15	14,364,571	142	0	30	0	11,644	15,546,858	1,182,287	8.2%	8.2%	1,397,801,444,673	257,345	66,226,632,468
Jul-15	15,194,721	53	29	31	0	11,652	16,026,517	831,796	5.5%	5.5%	691,884,046,340	-350,491	122,843,840,528
Aug-15	15,927,099	38	36	31	0	11,654	16,030,946	103,847	0.7%	0.7%	10,784,214,231	-727,949	529,909,170,752
Sep-15	15,311,739	76	31	30	1	11,658	14,834,807	-476,932	-3.1%	3.1%	227,463,833,713	-580,779	337,303,965,740
Oct-15	15,644,030	331	0	31	1	11,660	17,482,751	1,838,721	11.8%	11.8%	3,380,895,489,783	2,315,653	5,362,248,087,918
Nov-15	17,358,760	413	0	30	0	11,660	18,484,085	1,125,325	6.5%	6.5%	1,266,356,412,372	-713,396	508,934,039,523
Dec-15	19,854,052	541	0	31	0	11,660	20,513,075	659,023	3.3%	3.3%	434,311,396,462	-466,302	217,437,520,745
Jan-16	22,812,626	794	0	31	0	11,673	23,248,417	435,791	1.9%	1.9%	189,913,668,893	-223,232	49,832,618,524
Feb-16	20,613,292	731	0	29	0	11,668	21,177,335	564,043	2.7%	2.7%	318,144,931,292	128,253	16,448,709,555
Mar-16	19,595,000	589	0	31	1	11,670	20,245,278	650,278	3.3%	3.3%	422,861,891,544	86,235	7,436,465,116
Apr-16	17,806,355	500	0	30	1	11,669	18,618,059	811,704	4.6%	4.6%	658,863,157,101	161,426	26,058,205,592
May-16	15,620,269	241	4	31	1	11,671	16,699,687	1,079,418	6.9%	6.9%	1,165,143,939,431	267,714	71,671,039,252
Jun-16	15,053,727	117	9	30	0	11,665	15,621,892	568,165	3.8%	3.8%	322,811,190,901	-511,254	261,380,220,008
Jul-16	15,175,029	27	44	31	0	11,670	16,234,085	1,059,056	7.0%	7.0%	1,121,600,082,046	490,891	240,974,430,899
Aug-16	14,040,928	17	52	31	0	11,677	16,351,115	2,310,187	16.5%	16.5%	5,336,963,353,918	1,251,131	1,565,327,886,501
Sep-16	14,592,632	65	13	30	1	11,679	14,441,269	-151,363	-1.0%	1.0%	22,910,837,212	-2,461,550	6,059,229,032,700
Oct-16	16,660,127	277	0	31	1	11,680	17,059,686	399,559	2.4%	2.4%	159,647,377,218	550,922	303,515,315,432
Nov-16	17,571,648	392	0	30	0	11,694	18,496,211	924,563	5.3%	5.3%	854,816,811,991	525,004	275,629,263,028
Dec-16	21,508,613	690	0	31	0	11,707	22,393,936	885,323	4.1%	4.1%	783,796,905,530	-39,240	1,539,776,572

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-17	21,467,581	711	0	31	0	11,705	22,600,574	1,132,994	5.3%	5.3%	1,283,674,399,706	247,671	61,340,679,182
Feb-17	19,505,517	639	0	28	0	11,705	19,779,321	273,804	1.4%	1.4%	74,968,571,451	-859,190	738,206,879,510
Mar-17	21,065,920	706	0	31	1	11,705	21,716,382	650,462	3.1%	3.1%	423,100,673,173	376,658	141,871,248,853
Apr-17	17,169,201	392	0	30	1	11,706	17,751,028	581,827	3.4%	3.4%	338,522,327,757	-68,635	4,710,787,373
May-17	16,857,589	274	0	31	1	11,687	17,070,822	213,233	1.3%	1.3%	45,468,514,981	-368,593	135,860,977,297
Jun-17	15,263,333	104	4	30	0	11,681	15,482,390	219,057	1.4%	1.4%	47,986,023,539	5,824	33,914,883
Jul-17	15,899,251	42	14	31	0	11,698	15,879,236	-20,016	-0.1%	0.1%	400,622,051	-239,073	57,155,741,137
Aug-17	15,367,347	56	9	31	0	11,698	15,913,737	546,389	3.6%	3.6%	298,541,329,395	566,405	320,814,513,231
Sep-17	14,966,550	113	33	30	1	11,707	15,609,107	642,557	4.3%	4.3%	412,879,411,975	96,168	9,248,202,656
Oct-17	16,411,904	266	2	31	1	11,712	17,210,636	798,732	4.9%	4.9%	637,973,102,689	156,175	24,390,709,249
Nov-17	19,237,914	497	0	30	0	11,718	19,770,460	532,546	2.8%	2.8%	283,604,991,324	-266,186	70,855,210,218
Dec-17	24,068,888	850	0	31	0	11,724	24,186,003	117,116	0.5%	0.5%	13,716,117,593	-415,430	172,582,030,661
Jan-18	24,569,280	860	0	31	0	11,725	24,302,734	-266,546	-1.1%	1.1%	71,046,842,447	-383,662	147,196,503,770
Feb-18	21,339,234	769	0	28	0	11,725	21,280,770	-58,463	-0.3%	0.3%	3,417,957,515	208,083	43,298,466,262
Mar-18	21,499,910	738	0	31	1	11,721	22,157,144	657,234	3.1%	3.1%	431,955,983,193	715,697	512,222,029,795
Apr-18	19,888,071	586	0	30	1	11,721	19,881,448	-6,623	0.0%	0.0%	43,858,258	-663,856	440,704,974,910
May-18	16,896,990	214	6	31	1	11,697	16,645,167	-251,823	-1.5%	1.5%	63,414,751,572	-245,200	60,123,187,481
Jun-18	16,335,115	105	17	30	0	11,711	16,010,817	-324,298	-2.0%	2.0%	105,169,320,445	-72,475	5,252,674,802
Jul-18	17,644,004	20	60	31	0	11,710	16,790,275	-853,730	-4.8%	4.8%	728,854,093,896	-529,431	280,297,526,347
Aug-18	18,345,159	25	46	31	0	11,708	16,501,786	-1,843,374	-10.0%	10.0%	3,398,026,685,974	-989,644	979,395,649,649
Sep-18	17,579,532	135	23	30	1	11,719	15,675,495	-1,904,037	-10.8%	10.8%	3,625,356,562,258	-60,663	3,680,022,390
Oct-18	20,524,534	376	0	31	1	11,716	18,345,409	-2,179,124	-10.6%	10.6%	4,748,583,281,110	-275,088	75,673,142,520
Nov-18	22,392,942	604	0	30	0	11,726	20,941,599	-1,451,343	-6.5%	6.5%	2,106,395,871,386	727,782	529,666,126,799
Dec-18	24,072,380	687	0	31	0	11,723	22,471,957	-1,600,423	-6.6%	6.6%	2,561,352,630,535	-149,080	22,224,804,372
Jan-19	27,236,231	1,070	0	31	0	11,724	26,480,345	-755,886	-2.8%	2.8%	571,363,543,470	844,537	713,242,251,799
Feb-19	23,330,992	889	0	28	0	11,724	22,533,699	-797,293	-3.4%	3.4%	635,676,911,153	-41,408	1,714,585,891
Mar-19	23,887,898	805	0	31	1	11,725	22,885,407	-1,002,491	-4.2%	4.2%	1,004,988,777,016	-205,198	42,106,134,675
Apr-19	20,911,395	501	0	30	1	11,726	19,030,630	-1,880,765	-9.0%	9.0%	3,537,275,556,634	-878,273	771,364,050,889
May-19	20,082,531	377	0	31	1	11,726	18,427,859	-1,654,672	-8.2%	8.2%	2,737,940,536,018	226,092	51,117,721,458
Jun-19	17,847,356	172	0	30	0	11,727	16,432,599	-1,414,757	-7.9%	7.9%	2,001,536,384,294	239,916	57,559,534,935
Jul-19	18,330,977	82	4	31	0	11,728	16,274,832	-2,056,145	-11.2%	11.2%	4,227,734,086,092	-641,389	411,379,582,295
Aug-19	18,072,676	101	0	31	0	11,728	16,393,972	-1,678,704	-9.3%	9.3%	2,818,048,708,212	377,441	142,461,686,323
Sep-19	17,504,594	165	4	30	1	11,729	15,621,748	-1,882,846	-10.8%	10.8%	3,545,109,588,105	-204,142	41,673,820,269
Oct-19	20,050,972	379	0	31	1	11,730	18,463,636	-1,587,336	-7.9%	7.9%	2,519,635,744,933	295,510	87,326,211,747
Nov-19	22,892,474	701	0	30	0	11,730	21,986,853	-905,621	-4.0%	4.0%	820,148,914,675	681,715	464,735,775,444
Dec-19	25,775,115	839	0	31	0	11,731	24,122,936	-1,652,179	-6.4%	6.4%	2,729,693,913,964	-746,558	557,348,550,661

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-20	25,237,277	840	0	31	0	11,732	24,136,194	-1,101,083	-4.4%	4.4%	1,212,382,853,450	551,096	303,706,749,696
Feb-20	24,410,849	828	0	29	0	11,764	22,850,789	-1,560,060	-6.4%	6.4%	2,433,788,407,359	-458,978	210,660,623,941
Mar-20	22,196,265	691	0	31	1	11,795	22,188,952	-7,313	0.0%	0.0%	53,484,767	1,552,747	2,411,023,425,378
Apr-20	17,675,708	558	0	30	1	11,827	20,327,628	2,651,920	15.0%	15.0%	7,032,677,485,438	2,659,233	7,071,519,685,962
May-20	20,080,301	332	4	31	1	11,859	18,963,593	-1,116,708	-5.6%	5.6%	1,247,037,530,032	-3,768,628	14,202,556,482,522
Jun-20	18,177,041	148	7	30	0	11,891	17,477,829	-699,212	-3.8%	3.8%	488,897,599,676	417,496	174,303,092,206
Jul-20	18,679,871	33	22	31	0	11,923	17,532,627	-1,147,244	-6.1%	6.1%	1,316,168,042,422	-448,032	200,732,264,386
Aug-20	18,377,276	70	12	31	0	11,955	17,904,716	-472,560	-2.6%	2.6%	223,312,857,486	674,684	455,198,194,180
Sep-20	18,090,098	223	0	30	1	11,987	17,934,274	-155,824	-0.9%	0.9%	24,280,988,731	316,736	100,321,894,018
Oct-20	21,983,764	484	0	31	1	12,019	21,583,394	-400,370	-1.8%	1.8%	160,296,353,160	-244,547	59,803,082,611
Nov-20	22,215,383	517	0	30	0	12,051	22,293,491	78,108	0.4%	0.4%	6,100,809,713	478,478	228,941,148,941
Dec-20	25,416,770	741	0	31	0	12,084	25,551,808	135,038	0.5%	0.5%	18,235,250,017	56,930	3,241,056,490
Jan-21	25,867,118	834	0	31	0	12,085	26,529,926	662,808	2.6%	2.6%	439,314,692,794	527,770	278,541,414,977
Feb-21	24,827,388	855	0	28	0	12,099	24,782,722	-44,666	-0.2%	0.2%	1,995,028,166	-707,474	500,519,354,836
Mar-21	24,583,551	665	0	31	1	12,113	24,132,042	-451,509	-1.8%	1.8%	203,860,510,144	-406,843	165,521,559,597
Apr-21	21,537,012	441	0	30	1	12,128	21,204,737	-332,275	-1.5%	1.5%	110,406,997,539	119,234	14,216,666,379
May-21	20,574,453	319	0	31	1	12,142	20,709,989	135,536	0.7%	0.7%	18,369,966,821	467,811	218,847,445,244
Jun-21	19,092,218	111	8	30	0	12,157	18,975,533	-116,685	-0.6%	0.6%	13,615,286,245	-252,220	63,615,134,923
Jul-21	19,443,490	52	4	31	0	12,171	19,057,113	-386,377	-2.0%	2.0%	149,287,148,005	-269,692	72,733,986,271
Aug-21	20,406,933	36	26	31	0	12,185	19,482,185	-924,748	-4.5%	4.5%	855,159,243,833	-538,371	289,843,608,182
Sep-21	19,210,633	171	3	30	1	12,200	18,955,924	-254,709	-1.3%	1.3%	64,876,488,723	670,040	448,953,026,277
Oct-21	20,195,668	268	1	31	1	12,214	20,695,489	499,821	2.5%	2.5%	249,820,542,081	754,529	569,314,230,388
Nov-21	23,051,852	562	0	30	0	12,229	24,000,744	948,892	4.1%	4.1%	900,396,008,089	449,071	201,665,193,989
Dec-21	26,436,572	786	0	31	0	12,243	27,136,333	699,761	2.6%	2.6%	489,665,193,190	-249,131	62,066,343,987
Jan-22	30,320,977	1,078	0	31	0	12,244	30,192,629	-128,348	-0.4%	0.4%	16,473,122,098	-828,108	685,763,642,169
Feb-22	26,652,765	937	0	28	0	12,250	26,692,625	39,860	0.1%	0.1%	1,588,792,411	168,207	28,293,702,500
Mar-22	25,914,442	746	0	31	1	12,256	25,975,217	60,775	0.2%	0.2%	3,693,626,577	20,916	437,460,423
Apr-22	22,945,031	521	0	30	1	12,262	22,967,497	22,466	0.1%	0.1%	504,718,772	-38,309	1,467,599,904
May-22	19,916,599	262	4	31	1	12,268	21,088,573	1,171,974	5.9%	5.9%	1,373,523,153,745	1,149,508	1,321,368,859,234
Jun-22	18,916,028	187	10	30	0	12,274	20,623,800	1,707,772	9.0%	9.0%	2,916,486,188,657	535,798	287,079,761,359
Jul-22	19,884,843	123	0	31	0	12,280	20,462,552	577,709	2.9%	2.9%	333,747,411,632	-1,130,064	1,277,043,577,484
Aug-22	20,536,450	59	6	31	0	12,286	19,972,264	-564,186	-2.7%	2.7%	318,305,602,004	-1,141,895	1,303,923,156,461
Sep-22	20,139,133	165	5	30	1	12,292	19,567,742	-571,391	-2.8%	2.8%	326,487,358,501	-7,205	51,911,108
Oct-22	22,313,356	327	0	31	1	12,298	21,886,381	-426,975	-1.9%	1.9%	182,307,995,599	144,415	20,855,784,412
Nov-22	23,932,631	521	0	30	0	12,304	24,102,299	169,668	0.7%	0.7%	28,787,268,047	596,644	355,983,484,511
Dec-22	28,100,635	775	0	31	0	12,310	27,485,973	-614,662	-2.2%	2.2%	377,809,907,934	-784,331	615,174,404,752

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-23	27,608,826	833	0	31	0	12,311	28,096,121	487,295	1.8%	1.8%	237,456,409,701	1,101,957	1,214,310,170,079
Feb-23	25,460,858	796	0	28	0	12,322	25,720,746	259,888	1.0%	1.0%	67,541,678,185	-227,407	51,714,022,797
Mar-23	26,814,114	766	0	31	1	12,334	26,727,016	-87,098	-0.3%	0.3%	7,586,106,495	-346,986	120,399,337,053
Apr-23	24,148,903	505	0	30	1	12,345	23,380,525	-768,378	-3.2%	3.2%	590,405,330,333	-681,280	464,142,601,032
May-23	21,453,893	289	1	31	1	12,357	21,912,822	458,929	2.1%	2.1%	210,616,077,849	1,227,308	1,506,284,068,517
Jun-23	20,524,157	87	7	30	0	12,368	20,167,242	-356,915	-1.7%	1.7%	127,388,545,723	-815,845	665,602,400,505
Jul-23	20,651,596	79	2	31	0	12,380	20,755,015	103,419	0.5%	0.5%	10,695,456,261	460,334	211,907,538,040
Aug-23	20,850,815	82	4	31	0	12,391	20,893,595	42,780	0.2%	0.2%	1,830,105,007	-60,639	3,677,101,955
Sep-23	19,577,977	113	10	30	1	12,403	19,925,406	347,429	1.8%	1.8%	120,707,163,600	304,650	92,811,402,131
Oct-23	21,816,697	344	4	31	1	12,415	22,962,921	1,146,223	5.3%	5.3%	1,313,827,853,715	798,794	638,071,750,915
Nov-23	25,527,564	586	0	30	0	12,426	25,634,886	107,322	0.4%	0.4%	11,518,012,121	-1,038,901	1,079,315,907,136
Dec-23	26,964,599	604	0	31	0	12,438	26,587,408	-377,191	-1.4%	1.4%	142,273,146,719	-484,513	234,752,972,764
Jan-24		896	0	31	0	12,449	29,718,605			3.6%	99,580,563,214,834		68,616,464,146,952
Feb-24		837	0	29	0	12,442	27,679,159						
Mar-24		739	0	31	1	12,436	27,147,199						
Apr-24		499	0	30	1	12,429	23,902,336						
May-24		282	2	31	1	12,422	22,319,650						
Jun-24		127	7	30	0	12,415	20,921,817						
Jul-24		60	19	31	0	12,408	21,122,652						
Aug-24		55	20	31	0	12,401	21,058,571						
Sep-24		113	10	30	1	12,394	19,863,798						
Oct-24		344	4	31	1	12,387	22,772,776						
Nov-24		586	0	30	0	12,380	25,316,155						
Dec-24		604	0	31	0	12,374	26,140,043						
Jan-25		896	0	31	0	12,367	29,142,558						
Feb-25		837	0	28	0	12,378	26,542,638						
Mar-25		739	0	31	1	12,390	26,827,921						
Apr-25		499	0	30	1	12,401	23,711,514						
May-25		282	2	31	1	12,413	22,257,332						
Jun-25		127	7	30	0	12,424	20,988,052						
Jul-25		60	19	31	0	12,436	21,317,489						
Aug-25		55	20	31	0	12,448	21,382,057						
Sep-25		113	10	30	1	12,459	20,315,982						
Oct-25		344	4	31	1	12,471	23,353,707						
Nov-25		586	0	30	0	12,482	26,025,881						
Dec-25		604	0	31	0	12,494	26,978,613						
		10-year average											
							3,020,170,221						

	Power Purchased						Variance	% Variance	Variance (Abs)	Weather Normal	er Normal Conversion	ctual Weather Normalized
2014	222,844,848					228,113,503	5,268,655	2.36%	2.36%	223,738,778	0.9808	218,571,163.93
2015	216,436,884	-2.9%				223,845,145	7,408,261	3.42%	3.42%	223,766,646	0.9996	216,360,982.97
2016	211,050,246	-2.5%				220,586,970	9,536,724	4.52%	4.52%	226,552,557	1.0270	216,757,920.07
2017	217,280,995	3.0%				222,969,696	5,688,701	2.62%	2.62%	228,114,076	1.0231	222,294,124.62
2018	241,087,151	11.0%				231,004,602	-10,082,549	-4.18%	4.18%	229,200,934	0.9922	239,204,759.33
2019	255,923,211	6.2%				238,654,515	-17,268,696	-6.75%	6.75%	230,078,859	0.9641	246,727,032.80
2020	252,540,603	-1.3%				248,745,294	-3,795,309	-1.50%	1.50%	245,795,544	0.9881	249,545,845.95
2021	265,226,888	5.0%	Average			265,662,737	435,849	0.16%	0.16%	266,570,286	1.0034	266,132,948.61
2022	279,572,890	5.4%	2.7%			281,017,552	1,444,662	0.52%	0.52%	276,034,734	0.9823	274,615,688.20

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
2023	281,399,999	0.7%					282,763,701	1,363,702	0.48%	0.48%	284,163,105	1.0049	282,792,653.68
2024					Average	1.8%	287,962,762				287,962,762		
2025					1.1%	0.3%	288,843,744				288,843,744		
Total	2,443,363,715						2,443,363,715	0	ck - must be zero				
							3,020,170,221	0					

		SUMMARY OUTPUT							
Jan-14									
Feb-14		*Regression Statistics*							
Mar-14		Multiple R	0.97						
Apr-14		R Square	0.94						
May-14		Adjusted R Square	0.94						
Jun-14		Standard Error	934,619.55						
Jul-14		Observations	120.00						
Aug-14									
Sep-14		ANOVA							
Oct-14			*df*	*SS*	*MS*	*F*	*Significance F*		
Nov-14		Regression	5	#########	#########	348.71	0.00		
Dec-14		Residual	114	#########	#########				
Jan-15		Total	119	#########					
Feb-15									
Mar-15			*Coefficients*	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Apr-15		Intercept	(87,733,913.50)	5,029,212.71	(17.44)	0.00	(97,696,745.14)	(77,771,081.86)	(97,696,745.14)	(77,771,081.86)
May-15		Heating Degree Days	10,453.64	347.84	30.05	0.00	9,764.57	11,142.71	9,764.57	11,142.71
Jun-15		Cooling Degree Days	23,178.95	9,672.31	2.40	0.02	4,018.18	42,339.72	4,018.18	42,339.72
Jul-15		Days in Month	688,833.56	107,844.39	6.39	0.00	475,194.66	902,472.47	475,194.66	902,472.47
Aug-15		Spring Fall Flag	(835,060.00)	182,822.94	(4.57)	0.00	(1,197,230.84)	(472,889.16)	(1,197,230.84)	(472,889.16)
Sep-15		Number of Customers	6,967.04	323.29	21.55	0.00	6,326.61	7,607.47	6,326.61	7,607.47
Oct-15									
Nov-15									
Dec-15									
Jan-16		Sum of Squared Difference of Residuals	68,616,464,146,952						
Feb-16		Sum of Squared Residuals	99,580,563,214,834						
Mar-16									
Apr-16		Durbin-Watson Calculation	0.6891						
May-16									
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	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-14	24,988,491	896	0	31	0	11,661	24,225,857	-762,634	-3.1%	3.1%	581,611,277,322		
Feb-14	22,046,480	837	0	28	0	11,654	21,496,958	-549,522	-2.5%	2.5%	301,974,335,479	213,113	45,416,944,867
Mar-14	23,041,535	739	0	31	1	11,654	21,701,956	-1,339,579	-5.8%	5.8%	1,794,471,785,874	-790,057	624,190,131,282
Apr-14	18,510,176	499	0	30	1	11,646	18,449,454	-60,722	-0.3%	0.3%	3,687,156,385	1,278,857	1,635,475,223,302
May-14	16,410,299	282	2	31	1	11,637	16,852,135	441,836	2.7%	2.7%	195,218,802,634	502,558	252,564,220,439
Jun-14	13,841,155	127	7	30	0	11,645	15,558,082	1,716,927	12.4%	12.4%	2,947,838,076,253	1,275,091	1,625,857,591,246
Jul-14	15,069,489	60	19	31	0	11,645	15,806,935	737,446	4.9%	4.9%	543,826,554,954	-979,481	959,382,952,111
Aug-14	15,429,842	55	20	31	0	11,655	15,860,514	430,672	2.8%	2.8%	185,478,715,649	-306,774	94,110,022,041
Sep-14	14,760,249	113	10	30	1	11,646	14,651,002	-109,247	-0.7%	0.7%	11,934,833,620	-539,919	291,512,595,201
Oct-14	17,103,906	344	4	31	1	11,659	17,698,489	594,583	3.5%	3.5%	353,528,665,630	703,829	495,375,866,700
Nov-14	19,716,721	586	0	30	0	11,657	20,275,845	559,124	2.8%	2.8%	312,619,295,647	-35,459	1,257,346,393
Dec-14	21,926,505	604	0	31	0	11,659	21,161,551	-764,954	-3.5%	3.5%	585,154,654,072	-1,324,078	1,753,181,772,458
Jan-15	24,303,546	896	0	31	0	11,659	24,211,922	-91,624	-0.4%	0.4%	8,394,866,524	673,331	453,373,984,683
Feb-15	23,231,362	837	0	28	0	11,653	21,489,991	-1,741,371	-7.5%	7.5%	3,032,372,790,157	-1,649,747	2,721,666,639,285
Mar-15	21,902,978	739	0	31	1	11,642	21,618,352	-284,626	-1.3%	1.3%	81,012,181,854	1,456,745	2,122,104,717,139
Apr-15	17,767,380	499	0	30	1	11,632	18,351,916	584,536	3.3%	3.3%	341,681,793,904	869,162	755,442,455,087
May-15	15,576,646	282	2	31	1	11,648	16,928,772	1,352,126	8.7%	8.7%	1,828,245,029,812	767,591	589,195,294,983
Jun-15	14,364,571	127	7	30	0	11,644	15,551,115	1,186,544	8.3%	8.3%	1,407,886,407,850	-165,582	27,417,472,416
Jul-15	15,194,721	60	19	31	0	11,652	15,855,704	660,983	4.4%	4.4%	436,898,816,061	-525,561	276,214,020,889
Aug-15	15,927,099	55	20	31	0	11,654	15,853,547	-73,552	-0.5%	0.5%	5,409,843,233	-734,535	539,541,454,246
Sep-15	15,311,739	113	10	30	1	11,658	14,734,607	-577,132	-3.8%	3.8%	333,081,613,905	-503,581	253,593,416,760
Oct-15	15,644,030	344	4	31	1	11,660	17,705,456	2,061,426	13.2%	13.2%	4,249,476,337,003	2,638,558	6,961,988,501,759
Nov-15	17,358,760	586	0	30	0	11,660	20,296,746	2,937,986	16.9%	16.9%	8,631,760,521,886	876,560	768,357,418,486
Dec-15	19,854,052	604	0	31	0	11,660	21,168,518	1,314,466	6.6%	6.6%	1,727,820,904,780	-1,623,520	2,635,816,470,436
Jan-16	22,812,626	896	0	31	0	11,673	24,309,461	1,496,835	6.6%	6.6%	2,240,515,014,886	182,369	33,258,446,379
Feb-16	20,613,292	837	0	29	0	11,668	22,283,330	1,670,038	8.1%	8.1%	2,789,027,425,625	173,203	29,999,331,769
Mar-16	19,595,000	739	0	31	1	11,670	21,813,429	2,218,429	11.3%	11.3%	4,921,425,528,368	548,390	300,732,103,168
Apr-16	17,806,355	499	0	30	1	11,669	18,609,696	803,341	4.5%	4.5%	645,356,549,244	-1,415,088	2,002,473,338,824
May-16	15,620,269	282	2	31	1	11,671	17,089,014	1,468,745	9.4%	9.4%	2,157,211,703,707	665,404	442,762,582,059
Jun-16	15,053,727	127	7	30	0	11,665	15,697,423	643,696	4.3%	4.3%	414,344,086,272	-825,049	680,706,338,259
Jul-16	15,175,029	60	19	31	0	11,670	15,981,111	806,082	5.3%	5.3%	649,767,975,449	162,386	26,369,284,196
Aug-16	14,040,928	55	20	31	0	11,677	16,013,789	1,972,861	14.1%	14.1%	3,892,181,277,220	1,166,779	1,361,373,991,129
Sep-16	14,592,632	113	10	30	1	11,679	14,880,915	288,283	2.0%	2.0%	83,106,812,808	-1,684,579	2,837,805,288,716
Oct-16	16,660,127	344	4	31	1	11,680	17,844,797	1,184,670	7.1%	7.1%	1,403,441,874,351	896,387	803,509,651,266
Nov-16	17,571,648	586	0	30	0	11,694	20,533,625	2,961,977	16.9%	16.9%	8,773,307,843,110	1,777,307	3,158,821,931,114
Dec-16	21,508,613	604	0	31	0	11,707	21,495,969	-12,644	-0.1%	0.1%	159,878,192	-2,974,621	8,848,371,942,650

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-17	21,467,581	896	0	31	0	11,705	24,532,406	3,064,826	14.3%	14.3%	9,393,155,896,645	3,077,470	9,470,820,891,568
Feb-17	19,505,517	837	0	28	0	11,705	21,852,277	2,346,760	12.0%	12.0%	5,507,283,194,859	-718,065	515,617,978,083
Mar-17	21,065,920	739	0	31	1	11,705	22,057,275	991,355	4.7%	4.7%	982,784,489,182	-1,355,405	1,837,123,454,227
Apr-17	17,169,201	499	0	30	1	11,706	18,867,476	1,698,275	9.9%	9.9%	2,884,138,647,827	706,920	499,736,342,229
May-17	16,857,589	282	2	31	1	11,687	17,200,487	342,898	2.0%	2.0%	117,578,984,593	-1,355,377	1,837,047,561,306
Jun-17	15,263,333	127	7	30	0	11,681	15,808,895	545,562	3.6%	3.6%	297,637,810,162	202,664	41,072,696,871
Jul-17	15,899,251	60	19	31	0	11,698	16,176,188	276,936	1.7%	1.7%	76,693,773,312	-268,626	72,159,667,230
Aug-17	15,367,347	55	20	31	0	11,698	16,160,097	792,749	5.2%	5.2%	628,451,703,788	515,813	266,063,104,382
Sep-17	14,966,550	113	10	30	1	11,707	15,075,992	109,441	0.7%	0.7%	11,977,354,241	-683,308	466,910,313,453
Oct-17	16,411,904	344	4	31	1	11,712	18,067,742	1,655,838	10.1%	10.1%	2,741,800,018,265	1,546,397	2,391,343,874,729
Nov-17	19,237,914	586	0	30	0	11,718	20,700,834	1,462,920	7.6%	7.6%	2,140,133,694,603	-192,919	37,217,579,614
Dec-17	24,068,888	604	0	31	0	11,724	21,614,408	-2,454,479	-10.2%	10.2%	6,024,468,569,138	-3,917,399	15,346,013,873,416
Jan-18	24,569,280	896	0	31	0	11,725	24,671,747	102,467	0.4%	0.4%	10,499,500,253	2,556,946	6,537,974,666,814
Feb-18	21,339,234	837	0	28	0	11,725	21,991,618	652,384	3.1%	3.1%	425,605,010,994	549,917	302,408,738,383
Mar-18	21,499,910	739	0	31	1	11,721	22,168,747	668,837	3.1%	3.1%	447,342,906,958	16,453	270,697,363
Apr-18	19,888,071	499	0	30	1	11,721	18,971,982	-916,089	-4.6%	4.6%	839,219,500,591	-1,584,926	2,511,991,134,110
May-18	16,896,990	282	2	31	1	11,697	17,270,157	373,167	2.2%	2.2%	139,253,510,347	1,289,256	1,662,181,315,435
Jun-18	16,335,115	127	7	30	0	11,711	16,017,906	-317,209	-1.9%	1.9%	100,621,307,731	-690,375	476,618,310,637
Jul-18	17,644,004	60	19	31	0	11,710	16,259,792	-1,384,212	-7.8%	7.8%	1,916,042,930,575	-1,067,003	1,138,496,269,537
Aug-18	18,345,159	55	20	31	0	11,708	16,229,767	-2,115,392	-11.5%	11.5%	4,474,884,010,454	-731,180	534,624,396,463
Sep-18	17,579,532	113	10	30	1	11,719	15,159,596	-2,419,936	-13.8%	13.8%	5,856,091,401,165	-304,544	92,747,093,237
Oct-18	20,524,534	344	4	31	1	11,716	18,095,610	-2,428,924	-11.8%	11.8%	5,899,671,867,263	-8,988	80,780,104
Nov-18	22,392,942	586	0	30	0	11,726	20,756,570	-1,636,372	-7.3%	7.3%	2,677,713,038,736	792,552	628,138,832,758
Dec-18	24,072,380	604	0	31	0	11,723	21,607,441	-2,464,938	-10.2%	10.2%	6,075,920,425,851	-828,566	686,522,123,686
Jan-19	27,236,231	896	0	31	0	11,724	24,662,458	-2,573,773	-9.4%	9.4%	6,624,309,868,459	-108,835	11,845,111,485
Feb-19	23,330,992	837	0	28	0	11,724	21,986,973	-1,344,019	-5.8%	5.8%	1,806,386,271,124	1,229,755	1,512,296,786,537
Mar-19	23,887,898	739	0	31	1	11,725	22,196,617	-1,691,281	-7.1%	7.1%	2,860,433,053,493	-347,263	120,591,438,864
Apr-19	20,911,395	499	0	30	1	11,726	19,004,496	-1,906,899	-9.1%	9.1%	3,636,262,536,377	-215,617	46,490,771,345
May-19	20,082,531	282	2	31	1	11,726	17,474,526	-2,608,005	-13.0%	13.0%	6,801,689,436,411	-701,106	491,549,913,411
Jun-19	17,847,356	127	7	30	0	11,727	16,129,383	-1,717,973	-9.6%	9.6%	2,951,430,886,466	890,032	792,156,918,695
Jul-19	18,330,977	60	19	31	0	11,728	16,382,882	-1,948,095	-10.6%	10.6%	3,795,072,343,918	-230,122	52,955,969,861
Aug-19	18,072,676	55	20	31	0	11,728	16,371,438	-1,701,238	-9.4%	9.4%	2,894,210,345,121	246,857	60,938,208,477
Sep-19	17,504,594	113	10	30	1	11,729	15,229,276	-2,275,318	-13.0%	13.0%	5,177,070,992,875	-574,080	329,567,722,780
Oct-19	20,050,972	344	4	31	1	11,730	18,190,838	-1,860,134	-9.3%	9.3%	3,460,097,396,517	415,184	172,377,815,720
Nov-19	22,892,474	586	0	30	0	11,730	20,786,776	-2,105,698	-9.2%	9.2%	4,433,965,484,016	-245,565	60,301,988,729
Dec-19	25,775,115	604	0	31	0	11,731	21,663,196	-4,111,919	-16.0%	16.0%	16,907,881,762,881	-2,006,221	4,024,923,253,943

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-20	25,237,277	896	0	31	0	11,732	24,720,553	-516,724	-2.0%	2.0%	267,003,885,357	3,595,195	12,925,429,154,121
Feb-20	24,410,849	837	0	29	0	11,764	22,949,053	-1,461,796	-6.0%	6.0%	2,136,847,994,777	-945,072	893,161,022,251
Mar-20	22,196,265	739	0	31	1	11,795	22,685,604	489,339	2.2%	2.2%	239,452,641,106	1,951,135	3,806,928,324,683
Apr-20	17,675,708	499	0	30	1	11,827	19,709,818	2,034,110	11.5%	11.5%	4,137,602,046,671	1,544,771	2,386,316,394,661
May-20	20,080,301	282	2	31	1	11,859	18,396,775	-1,683,526	-8.4%	8.4%	2,834,258,964,105	-3,717,635	13,820,812,957,075
Jun-20	18,177,041	127	7	30	0	11,891	17,269,156	-907,885	-5.0%	5.0%	824,255,919,631	775,640	601,617,941,456
Jul-20	18,679,871	60	19	31	0	11,923	17,740,775	-939,096	-5.0%	5.0%	881,900,405,816	-31,210	974,071,236
Aug-20	18,377,276	55	20	31	0	11,955	17,948,050	-429,226	-2.3%	2.3%	184,234,594,722	509,870	259,967,365,736
Sep-20	18,090,098	113	10	30	1	11,987	17,025,208	-1,064,890	-5.9%	5.9%	1,133,990,277,649	-635,664	404,069,001,152
Oct-20	21,983,764	344	4	31	1	12,019	20,206,692	-1,777,072	-8.1%	8.1%	3,157,985,094,664	-712,182	507,203,572,424
Nov-20	22,215,383	586	0	30	0	12,051	23,023,155	807,772	3.6%	3.6%	652,494,938,477	2,584,844	6,681,416,667,798
Dec-20	25,416,770	604	0	31	0	12,084	24,120,705	-1,296,065	-5.1%	5.1%	1,679,784,578,305	-2,103,837	4,426,128,541,976
Jan-21	25,867,118	896	0	31	0	12,085	27,178,052	1,310,934	5.1%	5.1%	1,718,547,355,191	2,606,999	6,796,442,787,685
Feb-21	24,827,388	837	0	28	0	12,099	24,597,693	-229,695	-0.9%	0.9%	52,759,832,649	-1,540,629	2,373,537,279,610
Mar-21	24,583,551	739	0	31	1	12,113	24,902,579	319,028	1.3%	1.3%	101,779,165,249	548,724	301,097,542,181
Apr-21	21,537,012	499	0	30	1	12,128	21,805,821	268,809	1.2%	1.2%	72,258,130,638	-50,220	2,522,022,879
May-21	20,574,453	282	2	31	1	12,142	20,371,330	-203,123	-1.0%	1.0%	41,258,870,779	-471,932	222,719,361,733
Jun-21	19,092,218	127	7	30	0	12,157	19,121,785	29,567	0.2%	0.2%	874,222,125	232,690	54,144,656,950
Jul-21	19,443,490	60	19	31	0	12,171	19,471,001	27,511	0.1%	0.1%	756,866,079	-2,056	4,227,335
Aug-21	20,406,933	55	20	31	0	12,185	19,555,392	-851,541	-4.2%	4.2%	725,121,881,808	-879,052	772,732,569,748
Sep-21	19,210,633	113	10	30	1	12,200	18,509,184	-701,449	-3.7%	3.7%	492,030,299,135	150,092	22,527,660,158
Oct-21	20,195,668	344	4	31	1	12,214	21,566,819	1,371,151	6.8%	6.8%	1,880,056,084,279	2,072,600	4,295,671,117,746
Nov-21	23,051,852	586	0	30	0	12,229	24,258,949	1,207,097	5.2%	5.2%	1,457,082,780,139	-164,055	26,913,889,527
Dec-21	26,436,572	604	0	31	0	12,243	25,231,680	-1,204,892	-4.6%	4.6%	1,451,764,654,592	-2,411,989	5,817,690,008,003
Jan-22	30,320,977	896	0	31	0	12,244	28,289,022	-2,031,955	-6.7%	6.7%	4,128,841,226,365	-827,063	684,033,301,342
Feb-22	26,652,765	837	0	28	0	12,250	25,650,397	-1,002,368	-3.8%	3.8%	1,004,741,559,834	1,029,587	1,060,049,492,320
Mar-22	25,914,442	739	0	31	1	12,256	25,896,919	-17,523	-0.1%	0.1%	307,039,592	984,845	969,920,523,013
Apr-22	22,945,031	499	0	30	1	12,262	22,741,698	-203,333	-0.9%	0.9%	41,344,138,732	-185,810	34,525,369,606
May-22	19,916,599	282	2	31	1	12,268	21,248,647	1,332,048	6.7%	6.7%	1,774,352,702,685	1,535,381	2,357,394,485,120
Jun-22	18,916,028	127	7	30	0	12,274	19,940,443	1,024,415	5.4%	5.4%	1,049,426,799,516	-307,633	94,638,041,601
Jul-22	19,884,843	60	19	31	0	12,280	20,230,902	346,059	1.7%	1.7%	119,756,644,776	-678,357	460,167,697,081
Aug-22	20,536,450	55	20	31	0	12,286	20,256,436	-280,014	-1.4%	1.4%	78,407,621,403	-626,072	391,966,574,361
Sep-22	20,139,133	113	10	30	1	12,292	19,151,273	-987,860	-4.9%	4.9%	975,866,409,240	-707,846	501,045,817,496
Oct-22	22,313,356	344	4	31	1	12,298	22,149,855	-163,501	-0.7%	0.7%	26,732,722,075	824,358	679,566,219,678
Nov-22	23,932,631	586	0	30	0	12,304	24,782,831	850,200	3.6%	3.6%	722,839,907,936	1,013,701	1,027,590,459,391
Dec-22	28,100,635	604	0	31	0	12,310	25,696,310	-2,404,325	-8.6%	8.6%	5,780,779,664,650	-3,254,525	10,591,933,768,237
Jan-23	27,608,826	896	0	31	0	12,311	28,753,655	1,144,829	4.1%	4.1%	1,310,633,099,399	3,549,154	12,596,494,477,820
Feb-23	25,460,858	837	0	28	0	12,322	26,153,526	692,668	2.7%	2.7%	479,789,589,057	-452,160	204,449,023,901
Mar-23	26,814,114	739	0	31	1	12,334	26,438,600	-375,514	-1.4%	1.4%	141,010,864,208	-1,068,183	1,141,014,042,440
Apr-23	24,148,903	499	0	30	1	12,345	23,321,984	-826,919	-3.4%	3.4%	683,794,541,743	-451,405	203,766,085,870
May-23	21,453,893	282	2	31	1	12,357	21,867,593	413,700	1.9%	1.9%	171,147,856,523	1,240,619	1,539,135,266,166
Jun-23	20,524,157	127	7	30	0	12,368	20,598,104	73,947	0.4%	0.4%	5,468,137,079	-339,753	115,432,337,605
Jul-23	20,651,596	60	19	31	0	12,380	20,927,332	275,736	1.3%	1.3%	76,030,077,631	201,789	40,718,666,570
Aug-23	20,850,815	55	20	31	0	12,391	20,991,690	140,875	0.7%	0.7%	19,845,819,218	-134,860	18,187,308,863
Sep-23	19,577,977	113	10	30	1	12,403	19,925,406	347,429	1.8%	1.8%	120,707,163,600	206,554	42,664,627,083
Oct-23	21,816,697	344	4	31	1	12,415	22,962,921	1,146,223	5.3%	5.3%	1,313,827,853,715	798,794	638,071,750,915
Nov-23	25,527,564	586	0	30	0	12,426	25,634,886	107,322	0.4%	0.4%	11,518,012,121	-1,038,901	1,079,315,907,136
Dec-23	26,964,599	604	0	31	0	12,438	26,587,408	-377,191	-1.4%	1.4%	142,273,146,719	-484,513	234,752,972,764

	Power Purchased	Heating Degree Days	Cooling Degree Days	Days in Month	Spring Fall Flag	Number of Customers	Predicted Purchases	Residual (kWh)	% Residual	% Residual (Abs)	Residual Squared	Difference of Residuals	Difference of Residuals Squared
Jan-24		896	0	31	0	12,449	29,718,605			5.5%	225,192,555,236,671		205,545,260,691,722
Feb-24		837	0	29	0	12,442	27,679,159						
Mar-24		739	0	31	1	12,436	27,147,199						
Apr-24		499	0	30	1	12,429	23,902,336						
May-24		282	2	31	1	12,422	22,319,650						
Jun-24		127	7	30	0	12,415	20,921,817						
Jul-24		60	19	31	0	12,408	21,122,652						
Aug-24		55	20	31	0	12,401	21,058,571						
Sep-24		113	10	30	1	12,394	19,863,798						
Oct-24		344	4	31	1	12,387	22,772,776						
Nov-24		586	0	30	0	12,380	25,316,155						
Dec-24		604	0	31	0	12,374	26,140,043						
Jan-25		896	0	31	0	12,367	29,142,558						
Feb-25		837	0	28	0	12,378	26,542,638						
Mar-25		739	0	31	1	12,390	26,827,921						
Apr-25		499	0	30	1	12,401	23,711,514						
May-25		282	2	31	1	12,413	22,257,332						
Jun-25		127	7	30	0	12,424	20,988,052						
Jul-25		60	19	31	0	12,436	21,317,489						
Aug-25		55	20	31	0	12,448	21,382,057						
Sep-25		113	10	30	1	12,459	20,315,982						
Oct-25		344	4	31	1	12,471	23,353,707						
Nov-25		586	0	30	0	12,482	26,025,881						
Dec-25		604	0	31	0	12,494	26,978,613						
		10-year average											
							3,010,822,024						
2014	222,844,848						223,738,778						
2015	216,436,884	-2.9%					223,766,646						
2016	211,050,246	-2.5%					226,552,557						
2017	217,280,995	3.0%					228,114,076						
2018	241,087,151	11.0%					229,200,934						
2019	255,923,211	6.2%					230,078,859						
2020	252,540,603	-1.3%					245,795,544						
2021	265,226,888	5.0%	Average				266,570,286						
2022	279,572,890	5.4%	2.7%				276,034,734						
2023	281,399,999	0.7%					284,163,105						
2024					Average	1.3%	287,962,762						
2025					0.8%	0.3%	288,843,744						
Total	2,443,363,715						2,434,015,518	-9,348,197	ck - must be zero				
							3,010,822,024	0					

		SUMMARY OUTPUT							
Jan-14									
Feb-14		*Regression Statistics*							
Mar-14	Multiple R	96.88%							
Apr-14	R Square	93.86%							
May-14	Adjusted R Square	93.59%							
Jun-14	Standard Error	934,620							
Jul-14	Observations	120							
Aug-14									
Sep-14	ANOVA								
Oct-14		*df*	*SS*	*MS*	*F*	*Significance F*			
Nov-14	Regression	5	1.52303E+15	3.04606E+14	348.71	2.4976E-67			
Dec-14	Residual	114	9.95806E+13	8.73514E+11					
Jan-15	Total	119	1.62261E+15						
Feb-15									
Mar-15		*Coefficients*	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	Lower 95.0%	Upper 95.0%
Apr-15	Intercept	(87,733,913)	5,029,213	(17.44)	0.00	(97,696,745)	(77,771,082)	-97696745.14	-77771081.86
May-15	Heating Degree Days	10,454	348	30.05	0.00	9,765	11,143	9764.56611	11142.70919
Jun-15	Cooling Degree Days	23,179	9,672	2.40	0.02	4,018	42,340	4018.183286	42339.71959
Jul-15	Days in Month	688,834	107,844	6.39	0.00	475,195	902,472	475194.6595	902472.4663
Aug-15	Spring Fall Flag	(835,060)	182,823	(4.57)	0.00	(1,197,231)	(472,889)	-1197230.841	-472889.1588
Sep-15	Number of Customers	6,967	323	21.55	0.00	6,327	7,607	6326.605216	7607.466703
Oct-15									
Nov-15									
Dec-15									
Jan-16									
Feb-16									
Mar-16									
Apr-16									
May-16									
Jun-16									
Jul-16									
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Oct-16									
Nov-16									
Dec-16									

		SUMMARY OUTPUT								
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		SUMMARY OUTPUT								
Jan-24										
Feb-24										
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2022										
2023										
2024										
2025										
Total										

	Purchases	Modeled Purchases	Difference	% Difference	Loss Factor	Total Billed	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights		
2014	222,844,848	228,113,503	5,268,655	2.4%	1.0883	204,773,502	85,393,126	27,212,831	83,470,708	7,919,568	777,269		
2015	216,436,884	223,845,145	7,408,261	3.4%	1.0760	201,146,571	80,876,150	26,130,351	86,528,984	6,868,390	742,696		
2016	211,050,246	220,586,970	9,536,724	4.5%	1.0699	197,263,065	75,910,136	24,984,442	89,578,886	6,205,026	584,575		
2017	217,280,995	222,969,696	5,688,701	2.6%	1.0700	203,063,777	76,321,856	25,604,789	94,512,143	6,042,453	582,537		
2018	241,087,151	231,004,602	(10,082,549)	-4.2%	1.0736	224,565,775	82,424,404	26,132,430	109,385,574	6,046,269	577,097	224,565,775	0
2019	255,923,211	238,654,515	(17,268,696)	-6.7%	1.0853	235,800,481	86,629,136	26,695,949	115,631,849	6,277,417	566,130	235,800,481	0
2020	252,540,603	248,745,294	(3,795,309)	-1.5%	1.1021	229,140,220	91,478,383	27,143,067	103,396,925	6,529,263	592,582	229,140,220	0
2021	265,226,888	265,662,737	435,849	0.2%	1.0856	244,314,344	92,005,690	27,745,373	117,544,957	6,424,168	594,156	244,314,344	0
2022	279,572,890	281,017,552	1,444,662	0.5%	1.0909	256,287,580	99,292,265	29,567,137	120,294,405	6,540,797	592,975	256,287,580	0
2023	281,399,999	282,763,701	1,363,702	0.5%	1.0834	259,742,424	96,395,846	28,496,501	128,188,723	6,123,988	537,366	259,742,424	0
2024		287,962,762				264,839,930							
2025		288,843,744				265,650,171							

Average   proposed LF per APP 2-   1.0873

Usage Per Customer

							R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
2023							11,361	27,011	2,727,420	2,193	475
2024							11,361	27,011	2,727,420	2,193	475
2025							11,361	27,011	2,727,420	2,193	475

Non Weather Corrected Forecast

						Total Billed	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
2024						258,004,060	97,164,221	28,468,616	125,787,633	6,040,450	543,140
2025						256,318,025	97,938,720	28,440,758	123,431,518	5,958,052	548,977

Weather Corrected Forecast

						Total Billed	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights		
2024						264,839,930	100,119,668	29,334,547	128,802,125	6,040,450	543,140	264,839,930	0
2025						265,650,171	102,025,758	29,627,607	179,389,418	5,958,052	548,977	317,549,813	51,899,642

% Weather Sensitive

							R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	
							83%	83%	65.00%	0%	0%	
2024						6,835,870	80,160,482	23,486,608	81,761,961	0	0	185,409,052
2025						9,332,146	80,799,444	23,463,625	80,230,486	0	0	184,493,556

Allocation of Weather Sensitive Amount

							R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights
2024						6,835,870	2,955,447	865,931	3,014,492	0	0
2025						9,332,146	4,087,038	1,186,849	4,058,259	0	0

Manual Incremental kWh

									R2 GS>50 kW		
2025									51,899,642		

	Average Number of Customer/Connections							Total Customers	
	R1(i) Residential	R1(ii) GS < 50 kW	R2 GS>50 kW	Seasonal	Street Lights	Total			
2014	7,398	956	43	3,255	1,019	12,670		11,608	11,652
2015	7,480	954	42	3,176	1,023	12,675		11,610	11,652
2016	7,544	951	42	3,140	1,066	12,743		11,635	11,677
2017	7,596	961	38	3,108	1,070	12,774		11,666	11,704
2018	7,640	961	40	3,076	1,067	12,784		11,677	11,717
2019	7,698	951	40	3,039	1,075	12,801		11,687	11,727
2020	7,925	969	41	2,990	1,105	13,028		11,883	11,923
2021	8,205	999	43	2,925	1,141	13,312		12,128	12,171
2022	8,361	1,025	46	2,849	1,146	13,426		12,234	12,280
2023	8,485	1,055	47	2,793	1,132	13,512		12,333	12,380
2024	8,553	1,054	46	2,755	1,144	13,551		12,362	12,408
2025	8,621	1,053	45	2,717	1,156	13,592		12,391	12,436

Growth Rate in Customer Numbers

2014					
2015	1.0110	0.9985	0.9712	0.9759	1.0040
2016	1.0086	0.9968	0.9980	0.9887	1.0427
2017	1.0070	1.0105	0.9069	0.9899	1.0034
2018	1.0057	0.9997	1.0415	0.9898	0.9973
2019	1.0076	0.9897	0.9937	0.9877	1.0070
2020	1.0295	1.0184	1.0253	0.9839	1.0284
2021	1.0353	1.0310	1.0494	0.9784	1.0326
2022	1.0190	1.0265	1.0706	0.9738	1.0044
2023	1.0149	1.0293	1.0330	0.9805	0.9873

Used	1.0080	0.9990	0.9813	0.9864	1.0107
Geomean	1.0154	1.0110	1.0089	0.9832	1.0117
Geomean	1.0080	0.9990	0.9813	0.9864	1.0107

	R2 GS>50 kW	Street Lights	Total
2014	196,688	2,227	198,915
2015	208,261	2,128	210,389
2016	217,369	1,623	218,992
2017	210,836	1,619	212,455
2018	234,798	1,581	236,379
2019	243,010	1,574	244,584
2020	232,897	1,636	234,533
2021	251,732	1,593	253,325
2022	260,826	1,706	262,532
2023	278,055	1,505	279,560
2024	288,517	1,517	290,034
2025	372,457	1,533	373,990

2025- excl M 285,577

kW/kWh

2014	0.2356%	0.2865%
2015	0.2407%	0.2865%
2016	0.2427%	0.2776%
2017	0.2231%	0.2779%
2018	0.2147%	0.2739%
2019	0.2102%	0.2780%
2020	0.2252%	0.2761%
2021	0.2142%	0.2682%
2022	0.2168%	0.2877%
2023	0.2169%	0.2801%

Used	0.2240%	0.2793%
Average	0.2240%	0.2793%