

EXHIBIT 3 – LOAD AND CUSTOMER  
FORECAST  
2027 Cost of Service

Rideau St-Lawrence Distribution Inc.  
EB-2026-0069

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## 3.1 LOAD AND CUSTOMER FORECAST

### 3.1.1 Introduction

This section outlines RSL’s load forecast for the test year, including the methodology, key assumptions, and resulting billing determinants used to derive rates and rate riders. The forecast reflects expected customer growth and electricity consumption based on historical trends and available information and is consistent with the approach applied in RSL’s last Board-approved cost of service.

The following tables compare the proposed test year customer counts and consumption levels to those previously approved by the Ontario Energy Board, highlighting the overall growth underlying the forecast.

**Table 1 – Proposed Customer Count vs Previously Approved**

Class	2022 BOARD APPR.	2027	G R O W T H
<b>Residential</b>	5,126	5,376	250
<b>General Service &lt; 50 kW</b>	728	742	14
<b>General Service &gt; 50 to 4999 kW</b>	60	66	6
<b>Unmetered Scattered Load</b>	17	60	44
<b>Sentinel</b>	69	69	0
<b>Streetlights</b>	1,712	1,713	1
<b>Total</b>	7752	8027	275

**Table 2 – Proposed Consumption Count vs Previously Approved**

Class	BOARD APPR.	2027	G R O W T H
<b>Residential</b>	40,152,605	50,042,036	9,889,431
<b>General Service &lt; 50 kW</b>	18,422,393	22,686,577	4,264,184
<b>General Service &gt; 50 to 4999 kW</b>	35,686,579	44,638,220	8,951,641
<b>Unmetered Scattered Load</b>	643,596	638,257	-5,339
<b>Sentinel</b>	85,700	137,577	51,877
<b>Streetlights</b>	557,843	647,807	89,964
<b>Total</b>	95,548,716	<b>118,790,474</b>	23,241,758
<b>General Service &lt; 50 kW</b>	0 kW	0 kW	
<b>General Service &gt; 50 to 4999 kW</b>	105,774 kW	121,844 kW	16,070 kW
<b>Unmetered Scattered Load</b>	0 kW	0 kW	
<b>Sentinel</b>	238 kW	152 kW	-86 kW
<b>Streetlights</b>	1,746 kW	1,621 kW	-125 kW
<b>TOTAL Customer #</b>	7,712	8,027	315
<b>TOTAL kWh</b>	95,548,716	118,790,474	23,241,758
<b>TOTAL kW</b>	107,758	123,617	15,859

RSL notes that it is not proposing any changes to the below customer class composition.

**Table 3 – Customer Class Composition and billing determinants**

Customer Class Name	Existing/ Proposed	MSC Metric	Usage Metric
<b>Residential</b>	Existing	Customer	kWh
<b>GS&lt;50</b>	Existing	Customer	kWh
<b>GS 50-4999kW</b>	Existing	Connection	kW
<b>USL</b>	Existing	Customer	kWh
<b>Sentinel</b>	Existing	Customer	kW
<b>Street Lighting</b>	Existing	Connection	kW

To facilitate the understanding of the load forecast, RSL has completed the table below summarizing characteristics unique to the service area of Cooperative Hydro Embrun.

**Table 4 – Factors Influencing RSL’s Load**

#	Factor	Assessment for RSL
1	Customer growth or decline (residential)	Modest residential growth consistent with historical trends, supported by small-scale development (including a planned subdivision). No step-change growth is expected in the test year.
2	Customer growth or decline (business)	Commercial and industrial customer counts remain relatively stable, with no known major additions or closures that would materially impact load.
3	Increased / Reduced kW Demand	Demand levels are stable and driven primarily by existing customer usage patterns. No significant changes in load intensity or large new demand customers are anticipated.
4	Weather abnormality	No abnormal or structural changes in weather patterns have been observed. Historical weather variability is addressed through HDD and CDD in the regression model.
5	Infrastructure growth / decline	While the region continues to market industrial and commercial lands, no confirmed infrastructure or development projects are expected to materially impact load within the bridge or test years.
6	Change in Demographics	The service territory reflects a stable population base with modest growth and no significant demographic shifts that would materially influence electricity consumption.
7	Customer composition	Customer mix remains stable, with a predominantly residential base and no material reclassification or shifts in class composition.
8	Growth in net-metering, EVs, battery storage	Emerging technologies are present but remain limited in scale. Their impacts are currently embedded within historical consumption and are not material to the forecast.
9	Growth in energy conservation	Conservation impacts are reflected in historical consumption trends. No new distributor-driven CDM programs are expected to materially alter load in the test year.
10	EV Charging	EV charging exists within the service territory (both residential and public), but remains modest and largely behind-the-meter. No large-scale or separately metered EV load is forecast in the test year.

The utility doesn't believe there are any specific factors that would be unique to them or would have caused a significant change in how it determines its load forecast compared to the last board-approved cost of service.

### **Demographics and Socioeconomic Profile**

Rideau St-Lawrence Distribution Inc. (RSL) serves several small Eastern Ontario communities, including Gananoque, South Dundas, Cardinal, and parts of the Thousand Islands region. The combined population is roughly 20,000, with a mix of long-term residents, retirees, and young families.

The area has deep historical roots, with communities dating back to the early 1800s, and is shaped by a blend of rural traditions and waterfront towns along the St. Lawrence River. The economy is supported by tourism, agriculture, and small to mid-sized businesses, with many residents commuting to larger centres such as Brockville, Kingston, and Cornwall.

Housing remains relatively affordable, dominated by single-family homes and rural properties. The communities are close-knit and value reliability, accessibility, and local service—elements that align closely with RSL's role as a small, community-focused utility.

### **Causes, Assumptions, and Adjustments for the Volume Forecast**

RSL's load forecast reflects stable conditions within its service territory, with no material changes in economic activity, customer composition, or infrastructure expected over the bridge and test years.

Customer growth remains modest and concentrated in the residential class, while commercial and industrial activity is stable. No major customer additions, losses, or developments have been identified that would materially affect load.

No discrete adjustments have been applied. Consumption is expected to follow historical patterns, with variability driven by weather and incremental changes in customer count.

### **Electric Vehicle (EV) Consideration**

RSL has considered the impact of electric vehicle ("EV") adoption on electricity consumption within its service territory as part of the load forecasting process. While RSL does not own any EV charging infrastructure, a number of EV charging stations are present within the service area, including both public and privately owned facilities.

Public EV charging infrastructure includes five locations owned by the Town of Prescott (Municipal Office, Community Centre Arena, Leo Boivin Recreation Centre, Shoppers Drug Mart, and the Marina), as well as additional municipal chargers in the Village of Westport (municipal parking lot) and South Dundas (Iroquois Plaza). Private EV charging locations are also present, including facilities such as the Morrisburg Tesla site and charging stations at commercial fuel retailers.

EV charging associated with residential and commercial customers is primarily behind the meter and is therefore embedded within historical consumption and reflected in the load forecast. RSL has also reviewed the presence of separately metered EV charging stations; however, these loads are not currently material to overall system demand and have not been forecast separately.

RSL notes that there is potential for additional EV infrastructure development within the service territory, including prospective high-capacity charging installations (e.g., approximately 1.5 MW). While these may represent a more material load in the future, they remain uncertain and have not been incorporated into the test year forecast.

On a best-efforts basis, RSL has considered the potential impact of incremental electrification by assessing a range of outcomes, including a scenario where additional EV charging infrastructure is introduced within the service territory. Under such a scenario, the incremental load would remain modest relative to total system demand and would not materially impact the overall load forecast or test year revenue requirement.

Accordingly, no explicit adjustment has been made to the forecast for electrification. This approach ensures that the forecast remains grounded in observable and measurable trends, while acknowledging the potential for future growth.

This approach aligns with the Ontario Energy Board's expectation that emerging drivers of electricity consumption, such as EV adoption, be considered where they are material and supported by available data. It is also consistent with broader provincial direction from the Ontario Ministry of Energy and planning by the Independent Electricity System Operator related to electrification. RSL will continue to monitor EV adoption in future applications.

### **Integrated Energy Planning Considerations**

RSL has considered the potential impact of broader economic and environmental factors on electricity demand on a best-efforts basis, consistent with the Ontario Energy Board's expectations for small distributors.

The service territory is characterized by stable population levels, modest residential development, and limited commercial and industrial expansion. No material changes in employment, population, or housing growth are anticipated over the bridge or test years. No separate economic forecast has therefore been incorporated.

The load forecast is based on a 10-year historical average of heating and cooling degree days, which is considered representative of normal weather conditions. No adjustments have been made for potential changes in average, minimum, or maximum temperatures.

### 3.1.2 Proposed Methodology

RSL's load forecast methodology reflects a regression-based approach that is commonly used and accepted in Ontario Energy Board cost of service applications. This approach is well suited to utilities such as RSL, where customer growth is moderate, load patterns are relatively stable, and emerging drivers such as electric vehicles and distributed energy resources are developing gradually rather than driving step changes in demand. Given these characteristics, the selected methodology is considered appropriate and fit for purpose.

The forecast is prepared in two phases. The first phase develops a billed energy forecast by customer class for the test year using a total purchase (wholesale) basis regression analysis. The model predicts wholesale electricity consumption based on historical monthly purchases and a set of explanatory variables.

Weather-related variables form a key component of the regression, specifically heating degree days (HDD) and cooling degree days (CDD). HDD measure how much, and for how long, temperatures fall below a base temperature (typically 18°C), while CDD measure how much, and for how long, temperatures exceed that base. Degree day data is based on daily observations reported for Ottawa.

Additional variables were tested to assess their relationship to wholesale purchases and their contribution to explaining variability in load. Statistical techniques, including analysis of variance (ANOVA), were used to support variable selection and ensure that only variables with meaningful explanatory power were included in the model. Further detail on the variables considered is provided in the sections that follow.

The utility did not apply the Normalized Average Consumption (NAC) method, as this approach is typically used where sufficient or reliable historical data is not available. Given the availability of robust historical data for RSL, a regression-based approach was determined to be more appropriate.

RSL has also considered the potential impact of emerging load drivers, including electric vehicle adoption and other forms of electrification. At this time, these impacts are either embedded within historical consumption or remain uncertain and not material to overall system demand. As such, no separate or incremental adjustments have been made to the forecast. This approach is consistent with the Ontario Energy Board's expectation that forecasts be grounded in evidence and supported by measurable and material trends, rather than speculative assumptions. RSL will continue to monitor these developments in future applications.

RSL did not use a NAC approach. NAC is typically used where data is limited or where a regression model isn't reliable. In this case, RSL has a strong historical dataset and the regression model performs well, so a regression-based approach was considered more appropriate.

RLS was satisfied with the results of the regression analysis therefore opted not to test other load forecasting methods such as NAC.

An Excel load forecast model is filed with this application and a completed Appendix 2-IB, forecast entered on RRWF Tab 10.

### 3.1.3 Historical Forecast vs. Actual

RSL purchases electricity from Hydro One. In preparing for the Cost-of-Service application, the utility proposes to use a 10-year historical regression.

The following table summarizes the annual wholesale purchases for the ten years 2016 to 2025 as reported to OEB in RRR annual filing "2.1.5 Supply & Delivery Information".

#### 3.1.3.1 Overview of Wholesale Purchases

RSL purchases electricity from Hydro One.

**Table 5 – Historical Monthly Wholesale (2014-2023)**

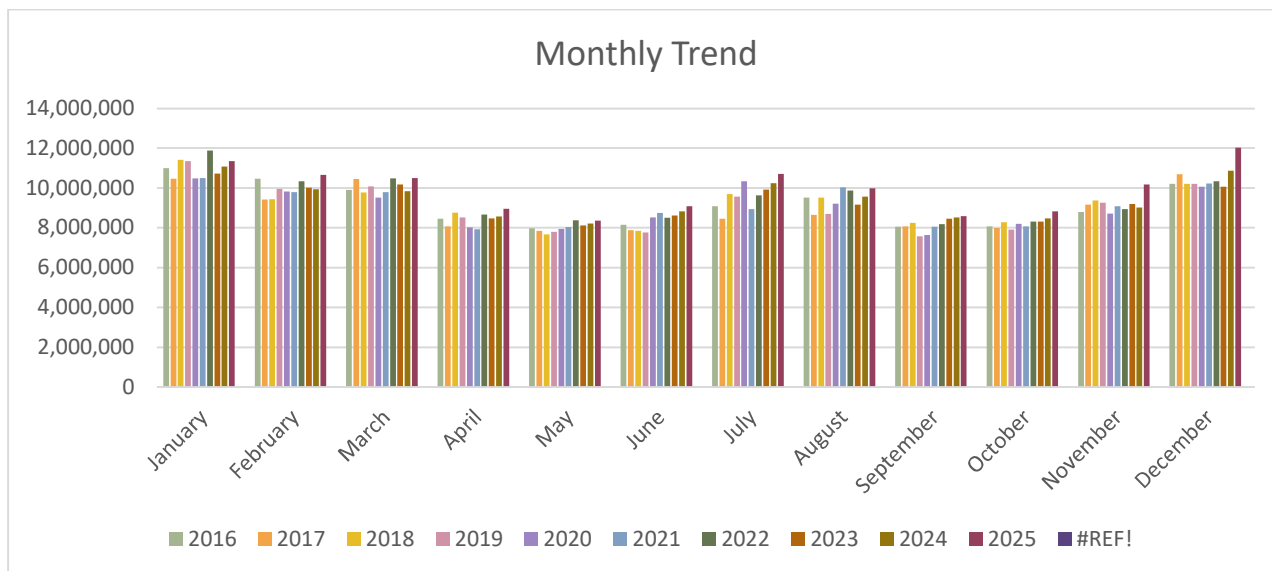
	2016	2017	2018	2019	2020
<b>January</b>	10,989,034	10,464,420	11,412,898	11,356,602	10,475,746
<b>February</b>	10,461,168	9,412,266	9,438,920	9,954,781	9,817,627
<b>March</b>	9,905,017	10,449,490	9,778,013	10,085,138	9,509,806
<b>April</b>	8,448,753	8,073,164	8,757,348	8,524,502	8,024,763
<b>May</b>	7,971,052	7,836,699	7,670,323	7,801,649	7,939,253
<b>June</b>	8,152,771	7,883,609	7,836,187	7,764,971	8,515,025
<b>July</b>	9,080,665	8,447,553	9,698,694	9,557,985	10,333,884
<b>August</b>	9,517,733	8,640,906	9,512,830	8,688,391	9,206,403
<b>September</b>	8,054,076	8,076,439	8,248,876	7,563,722	7,627,587
<b>October</b>	8,074,621	7,983,759	8,273,205	7,908,177	8,195,562
<b>November</b>	8,792,790	9,161,805	9,371,732	9,264,874	8,711,857
<b>December</b>	10,206,407	10,688,479	10,215,218	10,207,018	10,055,028
<b>Total</b>	<b>109,654,087</b>	<b>107,118,589</b>	<b>110,214,244</b>	<b>108,677,810</b>	<b>108,412,541</b>

	2021	2022	2023	2024	2025
<b>January</b>	10,499,396	11,881,999	10,715,912	11,069,790	11,352,460
<b>February</b>	9,792,629	10,331,690	10,011,127	9,933,265	10,660,170
<b>March</b>	9,788,308	10,474,433	10,175,939	9,844,333	10,493,874
<b>April</b>	7,927,584	8,660,849	8,467,145	8,563,615	8,945,853
<b>May</b>	8,042,340	8,371,167	8,117,557	8,212,443	8,365,024
<b>June</b>	8,737,900	8,501,867	8,611,149	8,827,125	9,083,014
<b>July</b>	8,943,567	9,634,859	9,912,477	10,244,422	10,707,430
<b>August</b>	10,027,304	9,874,706	9,166,356	9,562,430	9,981,547
<b>September</b>	8,054,742	8,176,359	8,452,338	8,514,902	8,576,052
<b>October</b>	8,075,869	8,309,019	8,306,105	8,472,949	8,819,455
<b>November</b>	9,085,639	8,944,138	9,189,968	9,017,604	10,182,138
<b>December</b>	10,218,754	10,328,304	10,068,806	10,867,007	12,019,804
<b>Total</b>	<b>109,194,032</b>	<b>113,489,389</b>	<b>111,194,879</b>	<b>113,129,885</b>	<b>119,186,821</b>

*Note: Wholesale purchases reflect net system load delivered to RSL. Embedded generation (e.g., MicroFIT) is not included in wholesale purchases and reduces the amount of energy required from the host distributor. Electric vehicle charging, which occurs behind the meter, is included within customer consumption and therefore reflected in wholesale purchases.*

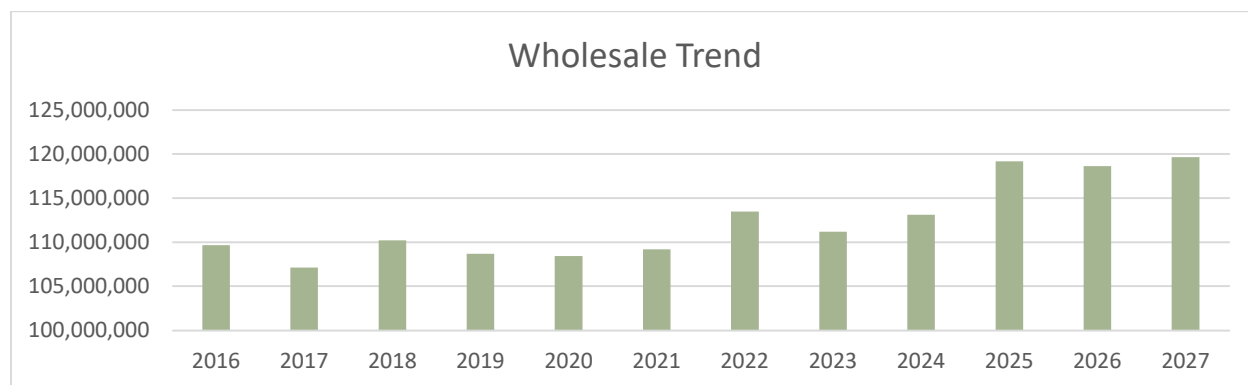
**Table 6 – Trend in Historical Monthly Wholesale (2016-2025)**



The wholesale values show an overall downward trend from 2016 to 2025, with periodic fluctuations.

**Table 7 – Trend in Historical Yearly Wholesale Purchases**

Year	Wholesale	year over year
2016	109,654,087	
2017	107,118,589	1.98
2018	110,214,244	2.03
2019	108,677,810	1.99
2020	108,412,541	2.00
2021	109,194,032	2.01
2022	113,489,389	2.04
2023	111,194,879	1.98
2024	113,129,885	2.02
2025	119,186,821	2.05
2026	118,650,753	2.00
2027	119,642,008	2.01



### 3.1.3.2 Overview of Variable Used

#### Heating and Cooling:

Monthly weather observations detailing the amount of heating or cooling required during the month are required to establish the correlation between observed weather and energy use.

The number of degrees Celsius that the mean temperature falls below 18°C on a given day is known as the heating degree-days. The number of Celsius degrees on a given day with a mean temperature above 18°C is known as the cooling degree-day. The HDD and CDD reported monthly at Ottawa International Airport were used for RSL. Environment Canada publishes monthly observations on heating degree days (HDD) and cooling degree days (CDD) for selected weather stations across Canada.

RSL has adopted the ten-year average from 2016 to 2025 as the definition of weather normal. The following table outlines the monthly weather data used in the regression analysis.

On their own, these two variables account for an Adjusted R-Square of 82.64%, indicating that heating and cooling degree days are highly significant predictors of the dependent variable.

#### Days per month:

RSL evaluated and included a "Days per month" variable. Although the variables did not yield particularly significant results, they did slightly improve the R-Square, (82.64% to 84.49%) and therefore RSL opted to keep it as a variable.

#### Spring and Fall Flag:

RSL tested and included a spring and fall flag to identify the spring and fall months. In RSLs case, April, May, September, October, and November are set at "1". Summer and winter months are set at "0". The results without RSLs variable increases from 84.49% to 87.82% therefore, the utility opted to include the variable in its regression analysis.

### Customer Count:

RSL tested and included a "Customer Count" variable. The rationale for testing RSLs particular variable is that load is expected to grow due to more customers being added to the distribution system. In RSL's case, the variable significantly improved the regression analysis results to 87.82% to 93.74%; therefore, the utility opted to keep it.

### Covid Flag:

RSL tested the inclusion of a COVID-19 flag variable to account for temporary and atypical consumption patterns observed during the pandemic period. These impacts are not fully explained by traditional drivers such as weather or customer growth and, if unaddressed, may distort the underlying relationship captured in the regression model.

The COVID-19 flag assigns values between 0 and 1 to reflect the relative severity of public health restrictions in each month, with higher values corresponding to periods of more significant economic and social disruption. This approach allows the model to isolate abnormal consumption patterns during the pandemic without influencing the long-term trend.

In RSL's case, inclusion of the COVID-19 variable materially improved the regression results, increasing the adjusted R-squared to 93.79%. As such, the variable has been retained in the model.

As COVID-19 restrictions have largely subsided, the use of the flag is limited to the historical period to normalize anomalous data. The forecast itself does not assume any future pandemic-related impacts. To the extent that any lasting behavioural or consumption changes persist, these are inherently reflected in the historical data and underlying trend.

Month	Index	Reason
Jan-20	0	No COVID impact
Feb-20	0	No restrictions
Mar-20	0.5	Shutdown begins Mar 17, schools closed
Apr-20	1	Full provincial lockdown
May-20	0.75	Restrictions easing but still severe
Jun-20	0.5	Stage 2 reopenings
Jul-20	0.25	Stage 3 reopenings
Aug-20	0.25	"Almost" normal summer
Sep-20	0.25	Schools open with restrictions
Oct-20	0.5	Wave 2 begins
Nov-20	0.75	Ottawa in Red/Lockdown
Dec-20	1	Province-wide lockdown Dec 26
Jan-21	1	Stay-at-home order
Feb-21	0.75	Gradual reopening
Mar-21	0.5	Restrictions remain
Apr-21	1	Third Wave + stay-at-home order
May-21	0.75	Province still heavily restricted
Jun-21	0.5	Step 1 re-opening
Jul-21	0.25	Step 3 re-opening

<b>Aug-21</b>	0.25	Delta variant but still open
<b>Sep-21</b>	0.25	Vaccine certificate introduced
<b>Oct-21</b>	0.25	Stable but controlled
<b>Nov-21</b>	0.25	Mild restrictions
<b>Dec-21</b>	0.5	Omicron wave begins
<b>Jan-22</b>	0.75	Schools closed + restrictions
<b>Feb-22</b>	0.5	Step-by-step reopening
<b>Mar-22</b>	0.25	Most restrictions lifted
<b>Apr-22</b>	0.25	Masks remain in select settings
<b>May-22</b>	0	Restrictions essentially gone
<b>Jun-Dec 2022</b>	0	No mandated restrictions
<b>Jan-Dec 2025</b>	0	No restrictions; normal conditions

### Origin of variables

- HDD: Stats Canada (Ottawa International)
- CDD: Stats Canada (Ottawa International)
- Days per month Computed by the utility
- Customer Count Computed by the utility
- Spring Fall Flag Computed by the utility
- Covid Flag Computed by the utility

### Variable Selection Approach.

The regression results align with expectations overall, although a few coefficients may appear non-intuitive at first glance.

The negative intercept does not have a direct practical interpretation and reflects the interaction of multiple variables within the model. This is a common outcome in multivariate regression and does not affect the reliability of the forecast.

The negative coefficient for the spring/fall variable reflects lower consumption during shoulder seasons, when neither heating nor cooling drives electricity use. This is consistent with observed usage patterns.

The COVID-19 variable is not statistically significant at the 95% confidence level; however, it was retained as it helps isolate the abnormal consumption patterns observed during the pandemic period and slightly improves overall model fit.

Overall, the model behaves as expected, and the results are consistent with how load responds to weather and customer activity.

**Table 8 – Results without individual variables**

<b>Customer Class Name</b>	<b>Proposed Adjusted R-Square</b>
<b>HDD</b>	<b>0.8264</b>
<b>CDD</b>	<b>0.8264</b>
<b>+</b>	
<b>Days per Month</b>	<b>0.8449</b>
<b>+</b>	
<b>Spring Fall</b>	<b>0.8782</b>
<b>+</b>	
<b>Customer Count</b>	<b>0.9374</b>
<b>+</b>	<b>+</b>
<b>Covid</b>	<b>0.9379</b>

### 3.1.3.3 Regression Results

The table below displays the R-squared for the multiple regression equation. The table also shows the equation's standard error margin and tests the analysis for statistical significance at a 95% confidence interval. In simple terms, 93.79% of the change in wholesale can be explained by the difference in 5 independent variables.

**Table 9 – Equation Parameters**

<b>R Squared</b>	<b>0.9411</b>
<b>Adjusted R Squared</b>	<b>0.9379</b>
<b>Standard Error</b>	<b>263095.47</b>
<b>F - Statistic</b>	<b>300.76</b>

Table 10 below provides the overall statistics for the regression model. The R squared and adjusted R squared values show how much of the variation in wholesale purchases is explained by the model. In this case, the adjusted R squared of 0.9379 indicates that close to 90 percent of the variation in monthly wholesale kWh is accounted for by the main drivers included in the model. The F statistic confirms that the model as a whole is statistically meaningful.



Table 13 presents the Durbin-Watson statistic, which checks whether the regression residuals are independent from one month to the next. A value close to 2 suggests there is no autocorrelation. The calculated value falls within the acceptable range, which supports the validity of the model assumptions.

**Table 13 – Trend in Historical Yearly Wholesale Purchases**

kWh Purchased VS kWh Adjusted					
Year	Wholesale	year over year	Adjusted	year over year	Wholesale VS Adj.
2016	109,654,087		109,161,809		-492,278
2017	107,118,589	1.98	107,647,028	1.99	528,439
2018	110,214,244	2.03	111,379,521	2.03	1,165,277
2019	108,677,810	1.99	110,088,378	1.99	1,410,568
2020	108,412,541	2.00	109,179,817	1.99	767,276
2021	109,194,032	2.01	108,466,564	1.99	-727,468
2022	113,489,389	2.04	112,046,959	2.03	-1,442,430
2023	111,194,879	1.98	113,359,271	2.01	2,164,392
2024	113,129,885	2.02	110,279,023	1.97	-2,850,863
2025	119,186,821	2.05	118,663,908	2.08	-522,913
2026	118,650,753	2.00	118,650,753	2.00	0
2027	119,642,008	2.01	119,642,008	2.01	0

After completing the regression, the coefficients are applied to the historical wholesale purchases to produce weather-normalized values.

Period						
t	At	Ft	At -Ft	At -Ft	( At -Ft)^2	(At -Ft)/At
1	109,654,087	109,161,809	492,278	492,278	242,337,525,356	0.00449
2	107,118,589	107,647,028	-528,439	528,439	279,248,083,220	0.00493
3	110,214,244	111,379,521	-1,165,277	1,165,277	1,357,869,499,319	0.01057
4	108,677,810	110,088,378	-1,410,568	1,410,568	1,989,702,869,050	0.01298
5	108,412,541	109,179,817	-767,276	767,276	588,711,973,184	0.00708
6	109,194,032	108,466,564	727,468	727,468	529,209,668,406	0.00666
7	113,489,389	112,046,959	1,442,430	1,442,430	2,080,605,514,230	0.01271
8	111,194,879	113,359,271	-2,164,392	2,164,392	4,684,594,690,393	0.01946
9	113,129,885	110,279,023	2,850,863	2,850,863	8,127,418,083,978	0.02520
10	119,186,821	118,663,908	522,913	522,913	273,438,410,555	0.00439
11	118,650,753	118,650,753	0	0	0	0.00000
12	119,642,008	119,642,008	0	0	0	0.00000
MAPE						0.01085

#### **3.1.3.4 Determination of Weather Normalized Forecast**

For the weather-sensitive classes (Residential, GS<50, and GS>50-4999, USL), the forecast approach follows the same methodology previously accepted by the OEB and is consistent with the guidance in Section 2.3 of the Chapter 2 Filing Requirements. Historical wholesale kWh is first weather-normalized, as required for weather-sensitive load. These volumes are then allocated to each customer class using the class shares of actual retail kWh, excluding losses. This reflects the instruction in Section 2.3.3 to base class allocation on established consumption patterns supported by billing data.

To develop the forecast for 2026 and 2027, the utility applies the ten-year average of these historical allocation percentages. This provides a stable basis for distributing the weather-normalized energy forecast across the weather-sensitive classes. Once the kWh forecast is established, the utility converts energy to demand for the classes billed on kW using the historical relationship between kWh and kW, in line with Section 2.3.4, which asks utilities to clearly show how energy forecasts translate into billing determinants. The average kW per customer used in this step reflects a multi-year historical average.

Overall, this method stays consistent with the approach approved in the utility's previous application, relies on long-term data, and aligns with the expectations set out in Chapter 2 for weather-sensitive load forecasting.

**Table 14 – Residential Forecast**

<b>Residential</b>					
<b>Year</b>	<b>Residential Actual kWh</b>	<b>Total Actual Wholesale</b>	<b>Ratio%</b>	<b>Predicted Wholesale</b>	<b>Residential Weather Normal</b>
<b>2016</b>	44,987,762	109,654,087	41.03%	109,161,809	44,785,795
<b>2017</b>	43,072,131	107,118,589	40.21%	107,647,028	43,284,615
<b>2018</b>	45,964,868	110,214,244	41.71%	111,379,521	46,450,847
<b>2019</b>	45,802,374	108,677,810	42.15%	110,088,378	46,396,859
<b>2020</b>	46,867,868	108,412,541	43.23%	109,179,817	47,199,569
<b>2021</b>	47,371,200	109,194,032	43.38%	108,466,564	47,055,606
<b>2022</b>	47,305,071	113,489,389	41.68%	112,046,959	46,703,832
<b>2023</b>	46,366,246	111,194,879	41.70%	113,359,271	47,268,758
<b>2024</b>	47,417,572	113,129,885	41.91%	110,279,023	46,222,654
<b>2025</b>	49,187,731	119,186,821	41.27%	118,663,908	48,971,928
<b>2026</b>		(10 Yr Avg)	41.27%	118,650,753	48,966,499
<b>2027</b>		(10 Yr Avg)	41.83%	119,642,008	50,042,036

**Table 15 – GS < 50kW Forecast.**

<b>General Service &lt; 50 kW</b>					
<b>Year</b>	<b>Actual kWh</b>	<b>Total Wholesale</b>	<b>Ratio%</b>	<b>Predicted Wholesale</b>	<b>Weather Normal</b>
<b>2016</b>	21,726,966	109,654,087	19.81%	109,161,809	21,629,426
<b>2017</b>	21,268,954	107,118,589	19.86%	107,647,028	21,373,878
<b>2018</b>	21,662,128	110,214,244	19.65%	111,379,521	21,891,158
<b>2019</b>	21,303,230	108,677,810	19.60%	110,088,378	21,579,732
<b>2020</b>	20,017,067	108,412,541	18.46%	109,179,817	20,158,735
<b>2021</b>	19,174,594	109,194,032	17.56%	108,466,564	19,046,850
<b>2022</b>	20,125,754	113,489,389	17.73%	112,046,959	19,869,959
<b>2023</b>	21,318,646	111,194,879	19.17%	113,359,271	21,733,610
<b>2024</b>	21,897,687	113,129,885	19.36%	110,279,023	21,345,867
<b>2025</b>	21,939,982	119,186,821	18.41%	118,663,908	21,843,724
<b>2026</b>		(10 Yr Avg)	18.96%	118,650,753	22,498,615
<b>2027</b>		(10 Yr Avg)	18.96%	119,642,008	22,686,577

**Table 16 – GS 50-4999kW Forecast (kWh)**

<b>General Service &gt; 50 to 4999 kW</b>					
<b>Year</b>	<b>Actual kWh</b>	<b>Total Wholesale</b>	<b>Ratio%</b>	<b>Predicted Wholesale</b>	<b>Weather Normal</b>
<b>2016</b>	42,377,951	109,654,087	38.65%	109,161,809	42,187,701
<b>2017</b>	41,229,870	107,118,589	38.49%	107,647,028	41,433,266
<b>2018</b>	40,354,309	110,214,244	36.61%	111,379,521	40,780,968
<b>2019</b>	39,929,663	108,677,810	36.74%	110,088,378	40,447,924
<b>2020</b>	39,076,317	108,412,541	36.04%	109,179,817	39,352,875
<b>2021</b>	40,874,963	109,194,032	37.43%	108,466,564	40,602,648
<b>2022</b>	43,424,310	113,489,389	38.26%	112,046,959	42,872,395
<b>2023</b>	41,433,788	111,194,879	37.26%	113,359,271	42,240,291
<b>2024</b>	41,771,128	113,129,885	36.92%	110,279,023	40,718,499
<b>2025</b>	43,717,520	119,186,821	36.68%	118,663,908	43,525,717
<b>2026</b>		(10 Yr Avg)	37.31%	118,650,753	44,268,385
<b>2027</b>		(10 Yr Avg)	37.31%	119,642,008	44,638,220

**Table 17 – USL Forecast**

<b>Unmetered Scattered Load</b>					
<b>Year</b>	<b>Actual kWh</b>	<b>Total Wholesale</b>	<b>Ratio%</b>	<b>Predicted Wholesale</b>	<b>Weather Normal</b>
<b>2016</b>	585,713	109,654,087	0.53%	109,161,809	583,084
<b>2017</b>	584,238	107,118,589	0.55%	107,647,028	587,120
<b>2018</b>	584,377	110,214,244	0.53%	111,379,521	590,556
<b>2019</b>	582,285	108,677,810	0.54%	110,088,378	589,843
<b>2020</b>	572,924	108,412,541	0.53%	109,179,817	576,979
<b>2021</b>	587,169	109,194,032	0.54%	108,466,564	583,257
<b>2022</b>	581,138	113,489,389	0.51%	112,046,959	573,752
<b>2023</b>	591,853	111,194,879	0.53%	113,359,271	603,373
<b>2024</b>	621,551	113,129,885	0.55%	110,279,023	605,888
<b>2025</b>	630,754	119,186,821	0.53%	118,663,908	627,987
<b>2026</b>		(10 Yr Avg)	0.53%	118,650,753	632,969
<b>2027</b>		(10 Yr Avg)	0.53%	119,642,008	638,257

### 3.1.3.5 Determination of Non-Weather Sensitive Forecast

The demand forecast for this class is based on a long-term average intensity method, which is appropriate given the small, non-weather-sensitive, and highly stable nature of the customer group. A 10-year average kW-per-customer value is used to represent the class’s typical demand intensity, and the forecast customer count is based on the geometric mean of historical customers to avoid overstating year-to-year fluctuations in this very small population. Forecast demand for 2026–2027 is calculated by multiplying the forecast customer count by the 10-year average kW/customer.

Because this class does not exhibit meaningful weather or economic sensitivity, a regression model—while used for kWh forecasting in larger classes—would not produce statistically reliable results here. Using long-term averages is a recognized and commonly accepted approach for small, stable load groups such as Sentinel or unmetered classes, and provides a reasonable, evidence-based estimate of future demand.

**Table 18 – GS 50-4999kW Forecast (kW)**

<b>General Service &gt; 50 to 4999 kW</b>					
<b>Year</b>	<b>Demand (kW)</b>	<b>Consumption (kWh)</b>	<b>Ratio%</b>	<b>Cust/Conn</b>	<b>Demand/Cust</b>
<b>2016</b>	113,671	42,377,951	0.27%	64	1,776.11
<b>2017</b>	110,383	41,229,870	0.27%	63	1,752.11
<b>2018</b>	110,809	40,354,309	0.27%	65	1,704.76
<b>2019</b>	109,453	39,929,663	0.27%	62	1,765.37
<b>2020</b>	108,559	39,076,317	0.28%	61	1,779.65
<b>2021</b>	110,610	40,874,963	0.27%	61	1,813.28
<b>2022</b>	116,000	43,424,310	0.27%	59	1,966.10
<b>2023</b>	112,621	41,433,788	0.27%	61	1,846.24
<b>2024</b>	119,072	41,771,128	0.29%	62	1,917.95
<b>2025</b>	119,132	43,717,520	0.27%	66	1,816.50
<b>2026</b>	120,834	44,268,385	0.27%	66	1,813.81
<b>2027</b>	121,844	44,638,220	0.27%	66	1,817.58

**Table 19 – Sentinel Forecast**

<b>Sentinel</b>					
<b>Year</b>	<b>Demand (kW)</b>	<b>Consumption (kWh)</b>	<b>Ratio%</b>	<b>Cust/Conn</b>	<b>kW/cust</b>
2016	297	325,622	0.09%	73	4.07
2017	273	317,786	0.09%	71	3.84
2018	266	315,713	0.08%	72	3.69
2019	271	306,580	0.09%	74	3.67
2020	268	295,437	0.09%	73	3.67
2021	246	285,298	0.09%	70	3.51
2022	242	283,185	0.09%	70	3.46
2023	241	278,615	0.09%	70	3.45
2024	240	184,171	0.13%	70	3.43
2025	252	90,421	0.28%	70	3.60
2026	175	157,685	0.11%	70	3.64
2027	152	137,577	0.11%	69	3.60

**Table 20 – Streetlighting Forecast**

<b>Streetlights</b>					
<b>Year</b>	<b>Demand (kW)</b>	<b>Consumption (kWh)</b>	<b>Ratio%</b>	<b>Cust/Conn</b>	
2016	2,038	831,237	0.25%	1711	1.19
2017	1,922	771,054	0.25%	1711	1.12
2018	1,910	748,634	0.26%	1711	1.12
2019	1,882	748,634	0.25%	1711	1.10
2020	1,735	697,551	0.25%	1712	1.01
2021	1,742	696,298	0.25%	1712	1.02
2022	1,736	696,019	0.25%	1712	1.01
2023	1,742	698,496	0.25%	1713	1.02
2024	1,743	700,230	0.25%	1713	1.02
2025	1,752	702,629	0.25%	1713	1.02
2026	1,649	660,311	0.25%	1713	1.06
2027	1,621	647,807	0.25%	1713	1.05

### 3.1.3.5 Final Load Forecast

The table 22 below shows the final forecast.

**Table 21 – Final Load and Customer Forecast**

Class	CUSTOMER FORECAST					Geomean	Geomean
Customer Class	BOARD APPR.	2022	2023	2024	2025	2026	2027
Residential	5126	5,113	5,107	5,136	5,214	5,348	5,376
General Service < 50 kW	728	735	731	730	731	741	742
General Service > 50 to 4999 kW	60	62	61	61	59	66	66
Unmetered Scattered Load	17	57	57	57	57	60	60
Sentinel	69	74	73	70	70	70	69
Streetlights	1712	1,711	1,712	1,712	1,712	1,713	1,713
<b>T O T A L</b>	<b>7712</b>	<b>7,752</b>	<b>7,741</b>	<b>7,766</b>	<b>7,843</b>	<b>7,998</b>	<b>8,027</b>

Class	CONSUMPTION FORECAST					10YRegr.	10YRegr.
Customer Class	BOARD APPR.	2022	2023	2024	2025	2026	2027
Residential	40,152,605	45,802,374	46,867,868	47,371,200	47,305,071	48,966,499	50,042,036
General Service < 50 kW	18,422,393	21,303,230	20,017,067	19,174,594	20,125,754	22,498,615	22,686,577
General Service > 50 to 4999 kW	35,686,579	39,929,663	39,076,317	40,874,963	43,424,310	44,268,385	44,638,220
Unmetered Scattered Load	643,596	582,285	572,924	587,169	581,138	632,969	638,257
Sentinel	85,700	106,134	104,583	95,863	94,991	157,685	137,577
Streetlights	557,843	748,634	697,551	696,298	696,019	660,311	647,807
<b>T O T A L</b>	<b>95,548,716</b>	<b>108,472,320</b>	<b>107,336,310</b>	<b>108,800,087</b>	<b>112,227,283</b>	<b>117,184,463</b>	<b>118,790,474</b>

Class	DEMAND FORECAST					10YRegr.	10YRegr.
Customer Class	BOARD APPR.	2022	2023	2024	2025	2026	2027
Residential	0					0	0
General Service < 50 kW	0					0	0
General Service > 50 to 4999 kW	105,774	109,453	108,559	110,610	116,000	120,834	121,844
Unmetered Scattered Load	0	0	0	0	0	0	0
Sentinel	238	271	268	246	242	175	152
Streetlights	1,746	1,882	1,735	1,742	1,736	1,649	1,621
<b>T O T A L</b>	<b>107,758</b>	<b>111,606</b>	<b>110,561</b>	<b>112,598</b>	<b>117,979</b>	<b>122,658</b>	<b>123,617</b>

### 3.1.4 Accuracy of Load Forecast

**Table 22 – Regression vs Trend Formula**

Class	Geomean	Geomean	Excel Trend	Excel Trend
<b>Customer Class</b>	<b>2026</b>	<b>2027</b>	<b>2026</b>	<b>2027</b>
Residential	5,348	5,376	5,226	5,259
General Service < 50 kW	741	742	729	727
General Service > 50 to 4999 kW	66	66	59	58
Unmetered Scattered Load	60	60	57	57
Sentinel	70	69	68	67
Streetlights	1,713	1,713	1,713	1,713
<b>T O T A L</b>	<b>7,998</b>	<b>8,027</b>	<b>7,850</b>	<b>7,880</b>

Class	10YRegr.	10YRegr.	Excel Trend	Excel Trend
<b>Customer Class</b>	<b>2026</b>	<b>2027</b>	<b>2026</b>	<b>2027</b>
Residential	48,966,499	50,042,036	48,089,484	48,590,626
General Service < 50 kW	22,498,615	22,686,577	19,061,436	18,623,946
General Service > 50 to 4999 kW	44,268,385	44,638,220	43,896,960	45,125,219
Unmetered Scattered Load	632,969	638,257	583,580	584,660
Sentinel	157,685	137,577	89,856	85,641
Streetlights	660,311	647,807	669,851	653,941
<b>T O T A L</b>	<b>117,184,463</b>	<b>118,790,474</b>	<b>112,391,167</b>	<b>113,664,033</b>

Class	10YRegr.	10YRegr.	Excel Trend	Excel Trend
<b>Customer Class</b>	<b>2026</b>	<b>2027</b>	<b>2026</b>	<b>2027</b>
Residential	0	0	0	0
General Service < 50 kW	0	0	0	0
General Service > 50 to 4999 kW	120,834	121,844	116,579	118,748
Unmetered Scattered Load	0	0	0	0
Sentinel	175	152	229	219
Streetlights	1,649	1,621	1,667	1,624
<b>T O T A L</b>	<b>122,658</b>	<b>123,617</b>	<b>118,475</b>	<b>120,590</b>

Note:

**METHOD 1) 10YRegr.**

Wholesale kWh

= Intercept

(coefficients × each explanatory variable)

error term. Variables include HDD, CDD, days in the month, seasonal flag, customer count, and Covid flag.

**METHOD 2) Trend**

=FORECAST (2027, Class2022 to Class2026)

To assess the accuracy of the customer and load forecast, the utility compared the results of the 10-year regression-based forecast with a statistical trend calculation using Excel’s TREND function. For the weather-sensitive kWh forecast, both approaches produced similar totals and no abnormal changes. This supports the reasonableness of the long-term average method. Class shares in the forecast are also in line with historical experience, and the class-level results reconcile to the weather-normalized wholesale forecast, which further supports the consistency of the forecast.

On the demand side, the difference between the two methods is slightly larger. This is expected because demand is generally more stable and customer-driven rather than weather-driven. Small differences between the 10-year allocation and a statistical trend occur when individual customer characteristics or equipment profiles influence the demand series. These variations are normal and do not indicate any issue with the forecast. The 10-year allocation method remains the primary approach, as it is tied to the weather-normalized energy forecast and reflects the class characteristics more accurately than a pure trend calculation. The trend test is used only as a reasonableness check.

### Load Variance Analysis

**Table 23 – Year over Year Variance of Consumption and Demand**

Year	Total kWh	YoY Variance	Year	Total kW	YoY Variance
2022	95,548,716	–	2022	107,758	–
2023	108,472,320	+12,923,604	2023	111,606	+3,848
2024	107,336,310	-1,136,010	2024	110,561	-1,045
2025	108,800,087	+1,463,777	2025	112,598	+2,037
2026	117,184,463	+8,384,376	2026	117,979	+5,381
2027	118,790,474	+1,606,011	2027	122,658	+4,679

Year-over-year consumption (kWh) remains generally stable over the historical period. The increase observed between 2022 and 2023 reflects normal variation in weather-sensitive load, including differences in heating and cooling requirements, and does not represent a structural change in consumption patterns.

The regression model demonstrates a strong relationship between load and weather, as evidenced by the high R-squared. Accordingly, variations in consumption, including the increase in 2023 and the forecast levels in the bridge year, are primarily driven by weather conditions and the application of the regression model.

Consumption in subsequent years remains consistent with underlying historical trends, with increases in the bridge and test years reflecting modest customer growth and normalization to recent historical experience.

Variations in smaller classes, including Unmetered Scattered Load, Sentinel, and Streetlighting, are limited and do not materially impact total system consumption.

Demand (kW) follows a similar pattern. Changes in the GS > 50 to 4999 kW class are consistent with consumption trends, while variations in Sentinel and Streetlighting demand are modest and reflect the small size of these classes.

Overall, year-over-year changes in consumption and demand are consistent with historical trends and do not indicate any material changes in load characteristics.

### 3.1.5 Determination of Customer Forecast

RSL has applied a geometric mean approach to determine forecasted customer counts for 2026 and 2027. This method is appropriate where growth occurs at a relatively steady rate, as it captures the compounding nature of percentage-based changes over time. While the approach is relatively straightforward, it provides a reasonable and stable representation of expected customer growth within RSL’s service territory.

The forecast reflects modest and consistent growth, aligned with historical trends and known development activity, including a planned subdivision associated with the new 2026 substation. As noted, this development is expected to be phased in and will not be fully connected by the end of the test year.

Historical and projected customer counts are presented in Table 24 below, covering the period 2014 to 2027. A variance analysis of customer counts and projections is provided in the subsequent table.

For the purposes of both the bridge and test year, RSL has used a 12-month average to determine annual customer and connection counts. This approach smooths intra-year fluctuations and provides a more representative basis for forecasting.

**Table 24 – Customer Count Forecast**

CUSTOMER FORECAST SUMMARY												
Residential			General Service < 50 kW		General Service > 50 to 4999 kW		Unmetered Scattered Load		Sentinel		StreetLights	
Date	Cust#	Growth Rate	Cust#	Growth Rate	Cust#	Growth Rate	Cust#	Growth Rate	Cust#	Growth Rate	Cust#	Growth Rate
2016	5,071		740		64		58		73		1,711	
2017	5,089	1.0035	741	1.0014	63	0.9844	57	0.9828	71	0.9726	1,711	1.0000
2018	5,105	1.0031	739	0.9973	65	1.0317	57	1.0000	72	1.0141	1,711	1.0000
2019	5,113	1.0016	735	0.9946	62	0.9538	57	1.0000	74	1.0278	1,711	1.0000
2020	5,107	0.9988	731	0.9946	61	0.9839	57	1.0000	73	0.9865	1,712	1.0006
2021	5,136	1.0057	730	0.9986	61	1.0000	57	1.0000	70	0.9589	1,712	1.0000
2022	5,214	1.0152	731	1.0014	59	0.9672	57	1.0000	70	1.0000	1,712	1.0000
2023	5,260	1.0088	732	1.0014	61	1.0339	57	1.0000	70	1.0000	1,713	1.0006
2024	5,178	0.9844	735	1.0041	62	1.0178	57	1.0000	70	1.0000	1,713	1.0000
2025	5,319	1.0273	741	1.0086	66	1.0564	60	1.0526	70	1.0000	1,713	1.0000
Geomean		1.0053		1.0002		1.0027		1.0038		0.9953		1.0001
2026	5,348		741		66		60		70		1,713	
2027	5,376		742		66		60		69		1,713	

### 3.1.6 Accuracy of Customer Count

The customer count has been consistent over the past three cost of service applications which is correlated with the proposed customer count in 2027 Cost of Service.

To come up with the best Adjusted R-Square, RSL did an in-depth analysis of its wholesale to better understand the trend in its monthly load as it relates to the variables selected for the regression analysis.

The table below summarizes the year over year variance in each category.

**Table 25 – Year over Year load variance**

Customer Class	2023 vs 2022	2024 vs 2023	2025 vs 2024	2026 vs 2025	2027 vs 2026
<b>Residential</b>	-6	+29	+78	+134	+28
<b>GS &lt; 50 kW</b>	-4	-1	+1	+10	+1
<b>GS 50–4999 kW</b>	-1	0	-2	+7	0
<b>Unmetered Scattered Load</b>	0	0	0	+3	0
<b>Sentinel</b>	-1	-3	0	0	-1
<b>Streetlights</b>	+1	0	0	+1	0
<b>Total</b>	<b>-11</b>	<b>+25</b>	<b>+77</b>	<b>+155</b>	<b>+29</b>

#### Customer Count Variance Analysis

Customer and connection counts are presented on a 12-month average basis for the bridge and test years.

Customer growth remains modest and stable over the historical period and is consistent with expectations for a small, stable LDC. Residential customers increase from 5,126 Board-approved to 5,376 in 2027, reflecting incremental development. General Service classes show limited growth, consistent with stable commercial activity. The increase in Unmetered Scattered Load reflects updates to customer records rather than a material change in underlying load. Sentinel and Streetlighting customers remain largely unchanged.

No material changes have been made to the definition or composition of customer classes. The bridge and test year forecasts are consistent with historical trends.

## **3.2 CDM ADJUSTMENT TO LOAD FORECAST**

### **3.2.1 CDM and NWS Considerations**

RSL's persisting CDM impacts are reflected in historical wholesale purchases and are therefore embedded in the load forecast. As a result, no separate adjustment has been made.

RSL has not been responsible for delivering CDM programs since April 2019 and is not planning or aware of any distributor-initiated CDM activities during the test year. While provincial programs such as Save on Energy (Stream 1 and Stream 2) continue to operate, these initiatives are administered by the IESO and are not forecasted at the distributor level at this time.

RSL has also considered the potential role of Non-Wires Solutions ("NWS"), as outlined in its Distribution System Plan. While NWS is evaluated as part of system planning, no initiatives have been identified that would materially impact load during the bridge or test years.

Given the uncertainty related to the magnitude and timing of centrally delivered CDM programs, and the absence of identified NWS impacts within the test period, no explicit adjustments have been applied to the load forecast.