EXHIBIT 3 – CUSTOMER AND LOAD FORECAST

CUSTOMER AND LOAD FORECAST

This Exhibit presents Alectra' Utilities' customer and load forecasts, by rate class, for Bridge Years 2025, 2026 and Test Years 2027 to 2031. This Exhibit and its attachments detail Alectra Utilities' approach to derive the forecast customer counts, consumption (MWh), and demand (MW) billing determinants which have been used in cost allocation and rate design for each rate class and to establish distribution rates for the 2027 Test Year.

Alectra Utilities engaged Itron Inc. (Itron) to develop 2025-2031 sales and customer forecast for each of Alectra Utilities' five rate zones - Brampton (BRZ), Enersource (ERZ), Guelph (GRZ), Horizon (HRZ), and PowerStream (PRZ). These forecasts are based on the June 2025 economic projections from the Conference Board of Canada for the Toronto, Hamilton Census Metropolitan Areas, and March 2025 economic projections for Guelph Census Metropolitan Area (collectively CMA). Itron's methodology incorporates historical data and statistical modeling to establish a baseline load forecast. In addition to Itron's projections, Alectra Utilities' customer and load forecasts incorporate adjustments related to the adoption of electric vehicles (EVs) and building electrification. Further adjustments are applied to account for factors such as rate class reclassification, standby load, and adjustments related to Large Use customers not captured in the underlying historical data.

Overall, the results of the load forecasts reflect a moderate growth trend over the 2027 to 2031 rate period. Total consumption is expected to increase at an average annual growth rate of 1.9% over the 2027–2031 rate period. Similarly, billed demand is projected to rise on average at 0.6% per year, driven primarily by the anticipated impacts of EV adoption and continued building electrification efforts. The number of customers and service connections is anticipated to grow at an average of 0.9% per year over the same period, broadly aligning with the CMA forecasted population growth across Alectra Utilities' service territory.

The forecast methodology is in accordance with Section 2.3 of the OEB's *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications* - 2025 Edition for 2026 Rate Applications, dated December 9, 2024 (updated May 7, 2025).

Alectra Utilities has completed the OEB's workbooks as required under Section 2.3 of OEB's Chapter 2 Filing Requirements. The following are Attachments to this Schedule:

- Attachment 3-1: OEB Appendix 2-IB - Load Forecast Analysis
- Attachment 3-2: 2026-2031 Sales and Customer Forecast Report (the Itron Report)

For the purpose of this Exhibit, customer and connection forecasts are presented on a Year-End basis. Table 3-1-1 below presents the billing determinants used for fixed rate design by each rate class.

Table 3-1-1: Fixed Rate Design Billing Units

Rate Class	Billing Unit
Residential	Customer
GS<50 kW	Customer
GS>50 kW, Regular	Customer
GS>50 kW, Intermediate	Customer
Large Use	Customer
Large Use with Dedicated Assets (LUDA)	Customer
Street Lighting	Device
Sentinel Lighting	Connection
Unmetered Scattered Load (USL)	Connection
Embedded Distributor	Customer

Effective 2027, the Street Lighting class transitions to a device-based billing unit for all rate zones as described in Exhibit 3, Tab 1, Schedule 4.3.4.

1. FORECAST METHODOLOGY

Alectra Utilities retained Itron to develop weather-normalized forecasts for its five rate zones using monthly linear regression modeling. This modeling approach was applied to historical data, including customer and connection counts, energy sales, and energy purchases, with data available through April 2025. Residential, GS<50 kW and GS>50 kW, Regular[1] rate classes forecasts are based on models that incorporate economics, weather, and a structural component that captures change in end-use saturation, end-use efficiency, and improvements in

[1] GS>50 kW, Regular includes BRZ GS 50-699 kW, ERZ GS 50-499 kW, GRZ 50-999 kW, HRZ GS>50 kW, PRZ GS>50 kW. GS>50 kW Intermediate includes BRZ GS 700-4,999 kW, ERZ GS 500-4,999 kW, GRZ 1,000-4,999 kW.

structural integrity. The GS>50 kW, Intermediate[2] rate class is modeled using a generalized regression model designed to capture recent sales and customer trends. Each Large Use customer is individually forecasted based on direct engagement and specific operational plans, ensuring the projections accurately capture customer-specific developments. Through the modelling, Itron identified statistically significant drivers of electricity consumption, enabling the creation of historical consumption profiles and forward-looking forecasts. Linear trend analysis models are used to forecast USL, Sentinel, and Street Lighting rate classes consumption. These forecasts form Alectra Utilities' baseline load projections for the forecast period from May 2025 through to the end of 2031. The forecast for the Embedded Distributor class is developed outside of regression-based statistical modeling, based on the actual load profile of the only customer in this rate class.

The second layer of Alectra Utilities' customer and load forecast accounts for anticipated impacts from EV adoption and building electrification. This component of the forecast reflects expected changes in electricity demand arising from the transition of buildings to electric end-uses and the increasing penetration of EVs. In alignment with Canada’s Electric Vehicle Availability Standard (EVAS), which mandates 100% of new light-duty vehicle (LDV) sales to be zero-emission by 2035 — with interim targets of 20% by 2026 and 60% by 2030—Alectra Utilities' EV adoption forecast has been developed to reflect these federal requirements. Additionally, building electrification is projected to be another contributing driver of load growth. To capture the associated impact, Alectra Utilities' System Planning Team developed Low, Medium, and High electrification uptake scenarios while Itron’s forecast incorporates the Medium uptake scenario.

The third component of Alectra Utilities' customer and load forecast consists of 'in-house' adjustments that account for specific changes based on operational experience and knowledge of customer activity. These additional adjustments include considerations for Rate Reclassification, Standby, Large Use customer additions, Street Lighting billing unit conversion in the BRZ, as well as Distributed Generation. These adjustments are applied to ensure the forecast accurately reflects known and anticipated developments within Alectra Utilities' service territory.

[2] GS>50 kW, Intermediate includes BRZ GS 700 - 4999 kW, ERZ GS 500 - 4999 kW, and GRZ GS 1000 - 4999 kW.

Attachment 3-1

OEB Appendix 2-IB

Please see live Excel version

Attachment 3-2

2026-2031 Sales and Customer Forecast Report

(the Itron Report)






Alectra Utilities
2026-2031 Sales and Customer Forecast

Prepared for:
Alectra Utilities

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October 1, 2025


TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1 OVERVIEW

Itron, Inc. has been working with the Alectra forecasting team to develop the 2027 rebasing sales and customer forecasts. Monthly sales and customer forecasts are estimated for the primary revenue classes that include residential, general service (small and medium commercial), large users, and street lighting for each of the five planning zones. Forecasts extend through 2031. The initial forecast was delivered in Fall 2024. The forecast has been updated to reflect customers and billed sales through April 2025 and a much more pessimistic economic outlook because of the new tariffs imposed by the United States.

Alectra serves 1.1 million customers; this includes nearly a million residential customers and 100,000 commercial customers within the Toronto, Hamilton, and Guelph Census Metropolitan Areas (CMA). The Toronto CMA is by far the largest with the Conference Board reporting over 7 million people living in the CMA. Since 2017 Toronto CMA population growth has averaged 2.0% per year, with similar growth in the Guelph CMA and averaging 1.3% annual growth in the Hamilton CMA. Over this same period, Alectra has seen 0.8% annual residential customer growth and 0.6% annual commercial customer growth. Customer growth has been slowing. Since 2022 residential customer growth slowed to a 0.6% annual rate with Alectra averaging roughly 5,400 new residential customers per year; in 2024 Alectra added just 4,200 customers. The commercial sector also saw slower customer growth with commercial customer growth dropping to a 0.4% annual rate with around 400 new customers per year. Through 2031, residential customer growth is projected to increase 0.4% aper year or roughly 4,300 new customers per year and commercial customer growth at a 0.5% average annual rate. Electric sales reached 27,316 GWh in 2024, averaging 0.8% annual growth between 2017 and 2024. Baseline sales (excluding EV charging and building electrification sales) are expected to reach 28,076 GWh by 2031 representing a 2.8% increase over 2024 sales. Adjusting for weather and the COVID impact, use per customer has been flat to slightly positive; sales have largely been driven by customer growth.

COVID-19 had a significant impact on customer usage. In 2020, residential sales jumped 13.1% while commercial sales fell 6.0% largely because of the “work at home” mandate. The net impact on sales though was relatively small with total sales for 2020 down just 0.4%. While class sales initially were trending towards pre-Covid levels, the trend appears to have stalled. Average residential use is still significantly higher than pre-COVID use, and commercial and industrial use is significantly lower.

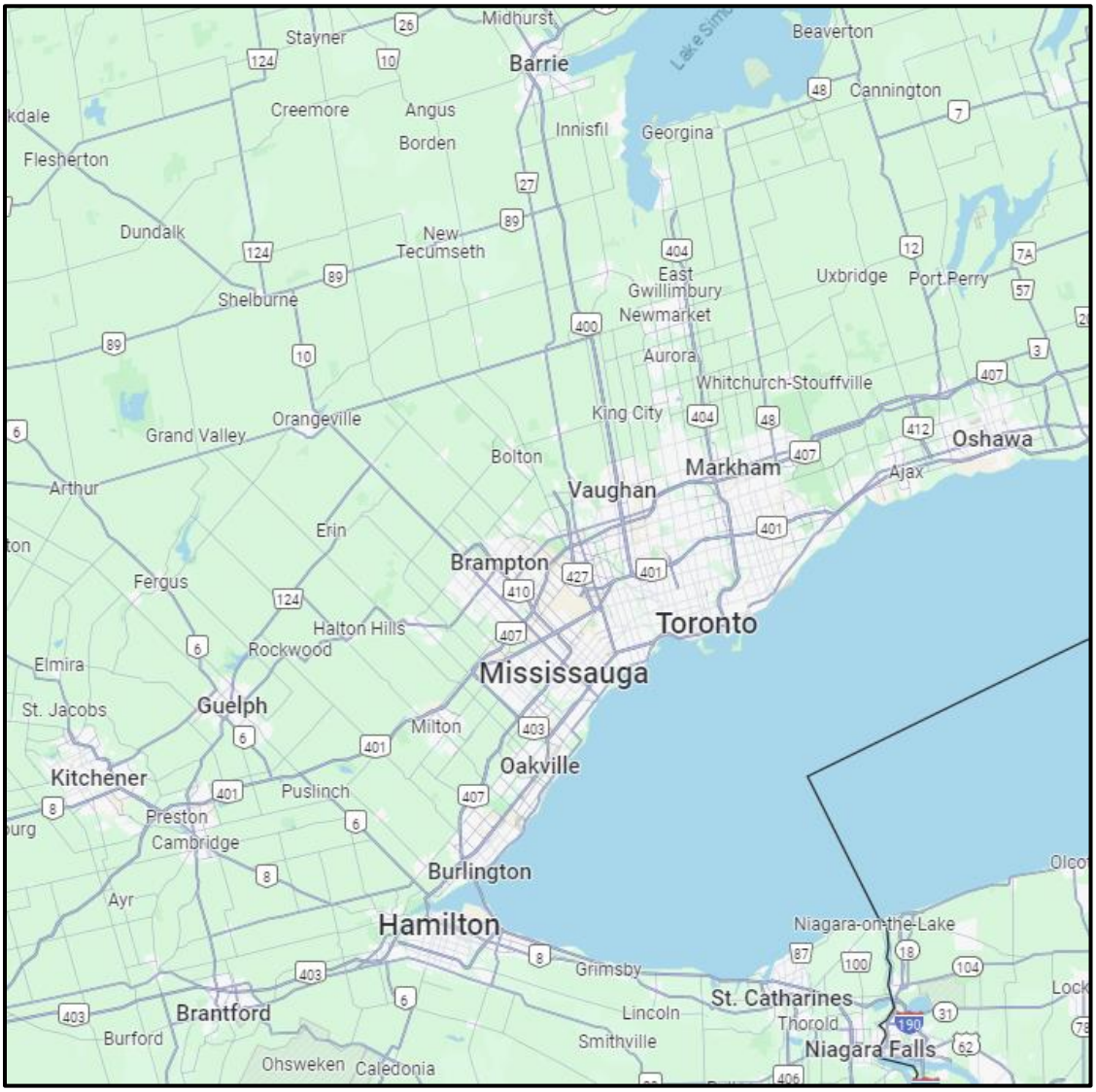
Alectra serves 17 communities that include Alliston, Aurora, Barrie, Beeton, Brampton, Bradford West Gwillimbury, Guelph, Hamilton, Markham, Mississauga, Penetanguishene,

Richmond Hill, Rockwood, St. Catharine's, Thornton, Tottenham, and Vaughan. These communities surround Toronto as illustrated in FIGURE 1.

The forecasts are developed for five rate zones that include:

- Brampton (BRZ)
- Enersource (ERZ)
- Guelph (GRZ)
- Horizon (HRZ)
- PowerStream (PRZ)

FIGURE 1: TORONTO CMA



The baseline sales forecasts for the rate zones apart from Guelph are based on the Conference Board's June 2025 economic outlook. The Guelph forecast is based on March 2025 outlook. TABLE 1 shows historical and projected population, GDP, and employment projections for the Toronto CMA.

TABLE 1: TORONTO CMA ECONOMIC OUTLOOK

Year	Population	Chg_Pop	Real GDP	Chg_GDP	Employment	Chg_Emp
	(1000's)		(millions)		(1000's)	
2017	6,256.23		384,035.52		3,187.37	
2018	6,372.55	1.9%	396,398.94	3.2%	3,253.90	2.1%
2019	6,466.90	1.5%	406,122.06	2.5%	3,360.19	3.3%
2020	6,478.77	0.2%	388,211.99	-4.4%	3,179.73	-5.4%
2021	6,514.17	0.5%	412,513.46	6.3%	3,359.48	5.7%
2022	6,700.23	2.9%	429,419.30	4.1%	3,518.95	4.7%
2023	6,967.60	4.0%	436,469.67	1.6%	3,619.05	2.8%
2024	7,203.16	3.4%	442,062.45	1.3%	3,670.66	1.4%
2025	7,245.88	0.6%	447,007.33	1.1%	3,724.32	1.5%
2026	7,235.80	-0.1%	457,117.64	2.3%	3,748.89	0.7%
2027	7,241.62	0.1%	468,967.24	2.6%	3,777.10	0.8%
2028	7,314.35	1.0%	481,507.43	2.7%	3,825.92	1.3%
2029	7,412.47	1.3%	494,377.31	2.7%	3,876.91	1.3%
2030	7,498.39	1.2%	507,583.98	2.7%	3,928.03	1.3%
2031	7,585.31	1.2%	521,143.45	2.7%	3,979.83	1.3%
Average Annual Growth						
2017 - 2024		2.0%		2.1%		2.1%
2024 - 2031		0.7%		2.4%		1.2%

The conference board projects a significant slowdown in population growth through 2027. Largely because of current immigration policy, the population is projected to decline in 2026 and barely increase in 2027. This has a significant impact on customer growth as customer growth is tied to population as well as economic activity reflected in the regional output (GDP). GDP, which slows through 2025, also contributes to the slower customer growth. Residential customers are based on a regression model that relates historical monthly customer counts to population and GDP growth. TABLE 2 shows the historical and projected number of customers.

TABLE 2: RESIDENTIAL CUSTOMERS (FORECAST BEGINS MAY 2025)

Year	Brampton	Enersource	Guelph	Horizon	PowerStream	Total	New Custs
2017	151,346	183,145	50,542	225,004	330,347	940,384	
2018	153,261	183,022	50,914	226,840	334,683	948,720	8,336
2019	154,324	183,622	51,442	228,581	337,466	955,435	6,715
2020	156,174	183,729	51,611	230,194	340,306	962,014	6,579
2021	157,598	184,774	52,137	231,805	342,946	969,260	7,246
2022	159,065	184,877	52,297	233,330	346,125	975,694	6,434
2023	160,311	184,976	52,439	234,551	348,998	981,275	5,581
2024	160,939	185,204	52,423	235,162	351,734	985,462	4,187
2025	161,307	185,397	52,876	236,130	354,195	989,905	4,443
2026	161,748	185,559	53,145	237,048	356,443	993,943	4,038
2027	162,373	185,728	53,477	237,904	358,570	998,052	4,109
2028	163,305	185,944	53,890	238,706	360,697	1,002,542	4,490
2029	164,178	186,177	54,311	239,445	362,806	1,006,917	4,375
2030	165,067	186,420	54,740	240,129	364,903	1,011,259	4,342
2031	165,972	186,671	55,176	240,762	366,995	1,015,576	4,317
Annual Change							
2018	1.3%	-0.1%	0.7%	0.8%	1.3%	0.9%	
2019	0.7%	0.3%	1.0%	0.8%	0.8%	0.7%	
2020	1.2%	0.1%	0.3%	0.7%	0.8%	0.7%	
2021	0.9%	0.6%	1.0%	0.7%	0.8%	0.8%	
2022	0.9%	0.1%	0.3%	0.7%	0.9%	0.7%	
2023	0.8%	0.1%	0.3%	0.5%	0.8%	0.6%	
2024	0.4%	0.1%	0.0%	0.3%	0.8%	0.4%	
2025	0.2%	0.1%	0.9%	0.4%	0.7%	0.5%	
2026	0.3%	0.1%	0.5%	0.4%	0.6%	0.4%	
2027	0.4%	0.1%	0.6%	0.4%	0.6%	0.4%	
2028	0.6%	0.1%	0.8%	0.3%	0.6%	0.4%	
2029	0.5%	0.1%	0.8%	0.3%	0.6%	0.4%	
2030	0.5%	0.1%	0.8%	0.3%	0.6%	0.4%	
2031	0.5%	0.1%	0.8%	0.3%	0.6%	0.4%	
2017 - 2024	**0.9%**	**0.2%**	**0.5%**	**0.6%**	**0.9%**	**0.7%**	**6,440**
2024 - 2031	**0.4%**	**0.1%**	**0.7%**	**0.3%**	**0.6%**	**0.4%**	**4,302**

Between 2017 and 2024, residential customer growth averaged 0.7% with the system adding roughly 6,400 customers per year. Customer growth has been slowing with the system adding just 4,200 new customers in 2024. Long-term, Alectra is expected to add 4,300 customers per year reflecting long-term population growth of 0.7% and annual economic growth of 2.4% in Toronto CMA (economic conditions in Hamilton and Guelph are generally slightly weaker). Growth varies significantly across the five zones with Guelph leading at 0.7% expected annual growth and Enersource virtually flat at 0.1% average annual growth.

Baseline sales growth is muted as continued improvements in energy efficiency captured in the end-use intensity projections counters sales growth from customer gains and business activity. TABLE 3 summarizes company-wide baseline sales growth for primary rate classes.

TABLE 3: ALECTRA BASELINE MWH SALES FORECAST (FORECAST BEGINS MAY 2025)

Year	Residential	General Service	Large Users	USL/Street Light/Sentinel	Total
2017	7,100,277	15,850,520	2,652,681	188,281	25,791,760
2018	7,702,403	16,355,307	2,716,353	172,539	26,946,602
2019	7,371,238	16,032,790	2,772,743	159,705	26,336,475
2020	8,340,437	15,064,122	2,674,634	156,763	26,235,956
2021	8,161,387	15,332,764	2,704,324	142,537	26,341,012
2022	8,175,489	15,907,991	2,772,014	142,027	26,997,521
2023	8,002,562	15,826,751	2,788,217	138,870	26,756,400
2024	8,358,537	16,008,675	2,806,416	141,915	27,315,542
2025	8,382,995	16,030,195	2,883,287	140,108	27,436,585
2026	8,338,398	16,000,550	2,979,095	142,402	27,460,445
2027	8,407,455	16,002,943	2,979,095	143,185	27,532,679
2028	8,488,351	16,101,651	2,979,316	143,689	27,713,007
2029	8,519,212	16,144,941	3,004,118	144,106	27,812,378
2030	8,568,113	16,193,914	3,061,395	144,494	27,967,916
2031	8,619,174	16,250,604	3,061,395	144,871	28,076,043
Annual Change					
2018	8.5%	3.2%	2.4%	-8.4%	4.5%
2019	-4.3%	-2.0%	2.1%	-7.4%	-2.3%
2020	13.1%	-6.0%	-3.5%	-1.8%	-0.4%
2021	-2.1%	1.8%	1.1%	-9.1%	0.4%
2022	0.2%	3.8%	2.5%	-0.4%	2.5%
2023	-2.1%	-0.5%	0.6%	-2.2%	-0.9%
2024	4.4%	1.1%	0.7%	2.2%	2.1%
2025	0.3%	0.1%	2.7%	-1.3%	0.4%
2026	-0.5%	-0.2%	3.3%	1.6%	0.1%
2027	0.8%	0.0%	0.0%	0.5%	0.3%
2028	1.0%	0.6%	0.0%	0.4%	0.7%
2029	0.4%	0.3%	0.8%	0.3%	0.4%
2030	0.6%	0.3%	1.9%	0.3%	0.6%
2031	0.6%	0.4%	0.0%	0.3%	0.4%
2017 - 2024	**2.5%**	**0.2%**	**0.8%**	**-3.9%**	**0.8%**
2024 - 2031	**0.4%**	**0.2%**	**1.3%**	**0.3%**	**0.4%**

Through 2031, baseline sales are projected to increase at a moderate 0.4% annual rate compared with 0.8% average rate between 2017 and 2024. The lower sales growth is attributable to slower population and economic growth. Sales growth varies by rate zone. TABLE 4 shows total sales growth for the five rate zones.

TABLE 4: BASELINE MWH SALES BY REGION (FORECAST BEGINS MAY 2025)

Year	Brampton	Enersource	Guelph	Horizon	PowerStream	Total
2017	3,845,509	7,066,603	1,562,040	5,132,234	8,185,374	25,791,760
2018	4,063,656	7,267,803	1,652,989	5,377,926	8,584,228	26,946,602
2019	3,978,346	7,148,345	1,600,892	5,184,457	8,424,434	26,336,475
2020	4,049,021	6,981,127	1,520,594	5,229,545	8,455,669	26,235,956
2021	4,119,675	6,909,442	1,561,955	5,244,161	8,505,779	26,341,012
2022	4,211,794	7,046,373	1,644,174	5,314,221	8,780,958	26,997,521
2023	4,201,665	6,940,812	1,660,781	5,159,828	8,793,314	26,756,400
2024	4,179,394	7,022,870	1,639,146	5,308,321	9,165,810	27,315,542
2025	4,203,077	7,089,669	1,658,945	5,219,816	9,265,078	27,436,585
2026	4,267,371	7,073,818	1,648,146	5,251,222	9,219,889	27,460,445
2027	4,266,034	7,085,175	1,651,525	5,270,108	9,259,836	27,532,679
2028	4,296,651	7,117,678	1,658,817	5,296,723	9,343,138	27,713,007
2029	4,337,000	7,130,851	1,662,296	5,298,882	9,383,348	27,812,378
2030	4,413,831	7,148,675	1,666,935	5,305,057	9,433,419	27,967,916
2031	4,435,068	7,168,556	1,671,944	5,312,546	9,487,928	28,076,043
Annual Change						
2018	5.7%	2.8%	5.8%	4.8%	4.9%	4.5%
2019	-2.1%	-1.6%	-3.2%	-3.6%	-1.9%	-2.3%
2020	1.8%	-2.3%	-5.0%	0.9%	0.4%	-0.4%
2021	1.7%	-1.0%	2.7%	0.3%	0.6%	0.4%
2022	2.2%	2.0%	5.3%	1.3%	3.2%	2.5%
2023	-0.2%	-1.5%	1.0%	-2.9%	0.1%	-0.9%
2024	-0.5%	1.2%	-1.3%	2.9%	4.2%	2.1%
2025	0.6%	1.0%	1.2%	-1.7%	1.1%	0.4%
2026	1.5%	-0.2%	-0.7%	0.6%	-0.5%	0.1%
2027	0.0%	0.2%	0.2%	0.4%	0.4%	0.3%
2028	0.7%	0.5%	0.4%	0.5%	0.9%	0.7%
2029	0.9%	0.2%	0.2%	0.0%	0.4%	0.4%
2030	1.8%	0.2%	0.3%	0.1%	0.5%	0.6%
2031	0.5%	0.3%	0.3%	0.1%	0.6%	0.4%
2017 - 2024	**1.2%**	**-0.1%**	**0.8%**	**0.5%**	**1.7%**	**0.8%**
2024 - 2031	**0.9%**	**0.3%**	**0.3%**	**0.0%**	**0.5%**	**0.4%**

Future growth will largely be driven by electric vehicle adoption (EV) and building electrification efforts (primarily space and water heating) designed to contribute to meeting federal greenhouse gas emission limits. Policies designed to encourage EV and building electrification coupled with financial incentives are expected to result in strong heat pump and electric vehicle market penetration. Electrification (EV plus building electrification) results in long-term average annual sales growth of 1.6%. FIGURE 2 compares the baseline and the adjusted sales forecast with electrification.

FIGURE 2: BASELINE AND ADJUSTED FORECAST COMPARISON

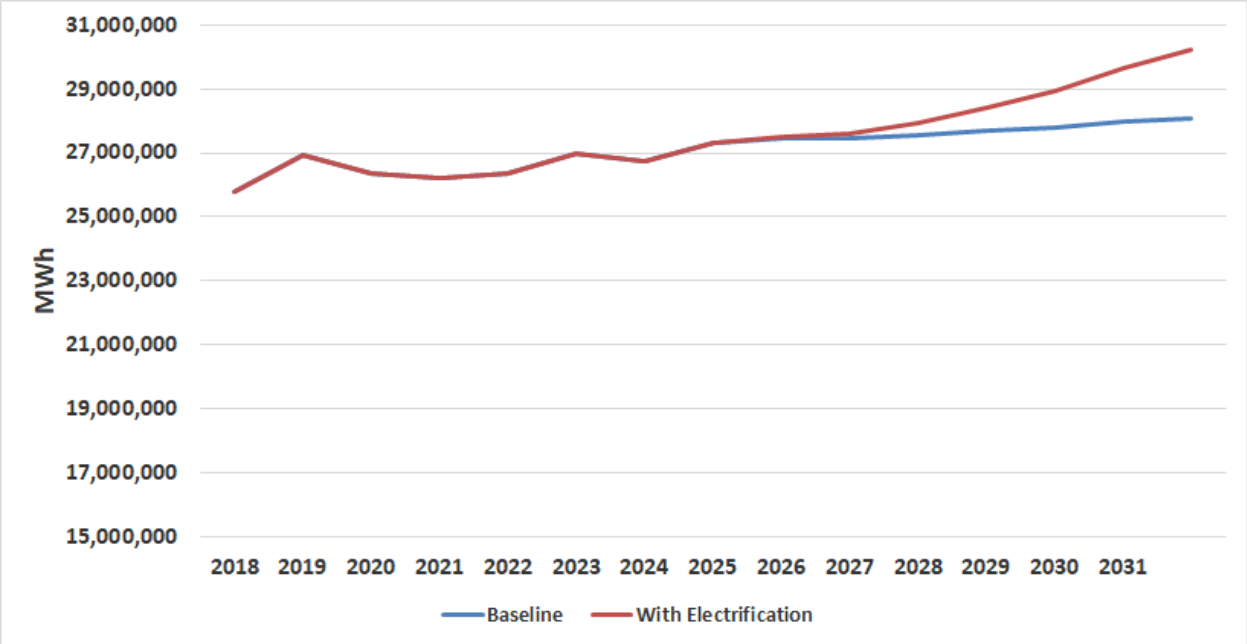


TABLE 5 shows the impact of electrification and Table 6 shows the adjusted sales forecast.

TABLE 5: BUILDING ELECTRIFICATION AND EVs (MWH)

Year	Building Electrification	Electric Vehicles	Total
2017	0	0	0
2018	0	0	0
2019	0	0	0
2020	0	0	0
2021	0	0	0
2022	0	0	0
2023	0	0	0
2024	0	0	0
2025	10,185	15,909	26,095
2026	56,441	94,638	151,079
2027	97,303	296,844	394,147
2028	159,306	565,784	725,090
2029	229,039	916,386	1,145,426
2030	317,971	1,349,630	1,667,601
2031	413,678	1,747,910	2,161,588

TABLE 6: ADJUSTED MWH SALES (FORECAST BEGINS MAY 2025)

Year	Residential	General Service	Large Users	USL/Street Light/Sentinel	Total
2017	7,100,277	15,850,520	2,652,681	188,281	25,791,760
2018	7,702,403	16,355,307	2,716,353	172,539	26,946,602
2019	7,371,238	16,032,790	2,772,743	159,705	26,336,475
2020	8,340,437	15,064,122	2,674,634	156,763	26,235,956
2021	8,161,387	15,332,764	2,704,324	142,537	26,341,012
2022	8,175,489	15,907,991	2,772,014	142,027	26,997,521
2023	8,002,562	15,826,751	2,788,217	138,870	26,756,400
2024	8,358,537	16,008,675	2,806,416	141,915	27,315,542
2025	8,401,194	16,037,812	2,883,565	140,108	27,462,680
2026	8,442,439	16,046,269	2,980,415	142,402	27,611,525
2027	8,679,569	16,120,699	2,983,373	143,185	27,926,826
2028	8,992,067	16,315,420	2,986,922	143,689	28,438,097
2029	9,320,409	16,477,748	3,015,540	144,106	28,957,803
2030	9,740,898	16,672,791	3,077,334	144,494	29,635,517
2031	10,134,768	16,875,707	3,082,285	144,871	30,237,631
Annual Change					
2018	8.5%	3.2%	2.4%	-8.4%	4.5%
2019	-4.3%	-2.0%	2.1%	-7.4%	-2.3%
2020	13.1%	-6.0%	-3.5%	-1.8%	-0.4%
2021	-2.1%	1.8%	1.1%	-9.1%	0.4%
2022	0.2%	3.8%	2.5%	-0.4%	2.5%
2023	-2.1%	-0.5%	0.6%	-2.2%	-0.9%
2024	4.4%	1.1%	0.7%	2.2%	2.1%
2025	0.5%	0.2%	2.7%	-1.3%	0.5%
2026	0.5%	0.1%	3.4%	1.6%	0.5%
2027	2.8%	0.5%	0.1%	0.5%	1.1%
2028	3.6%	1.2%	0.1%	0.4%	1.8%
2029	3.7%	1.0%	1.0%	0.3%	1.8%
2030	4.5%	1.2%	2.0%	0.3%	2.3%
2031	4.0%	1.2%	0.2%	0.3%	2.0%
2017 - 2024	**2.5%**	**0.2%**	**0.8%**	**-3.9%**	**0.8%**
2024 - 2032	**2.8%**	**0.8%**	**1.4%**	**0.3%**	**1.5%**

2 MODELING APPROACH

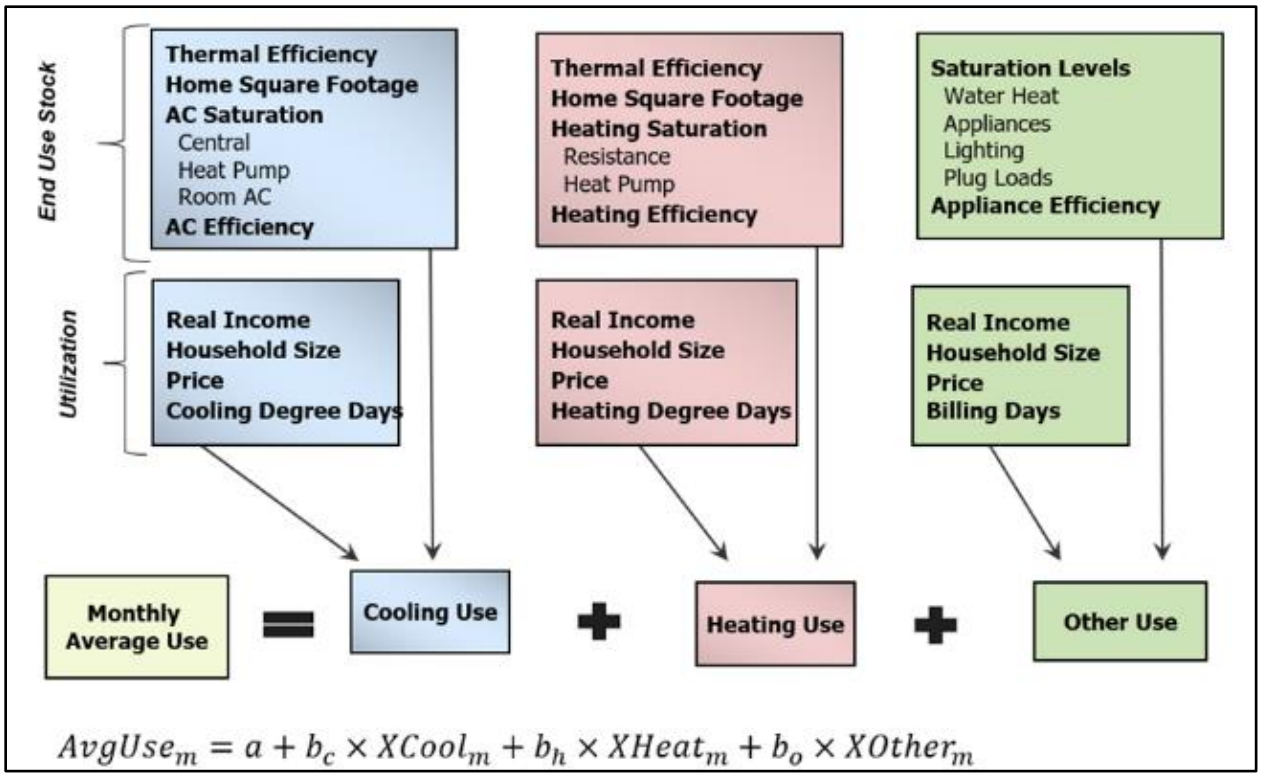
Baseline sales and customer forecasts (before electrification adjustments) are developed for each of the primary rate classes. The residential forecast is based on separate customer and average use models while commercial rate class sales are derived from total monthly sales models. Monthly models are estimated with linear regression and billed sales and customer data between January 2014 and April 2025. In the commercial sector, each rate zone has General Service Less Than 50 KW rate class (GSL50) and General Service Greater Than 50 KW (GSP50). Some zones have additional rate classes for the larger customers; Brampton has a commercial rate for customers over 700 MW (GSP700), Enersource a tariff for customers over 500 MW (GSP500), and Guelph a rate for customers with demand over a 1,000 MW (GSP1000). All rate zones have a Large User classification that includes the largest customers served. Each zone also has a street lighting tariff.

The residential, GSL50, and GSP50 rate classes are based on models that incorporate economics, weather, and a structural component that captures change in end-use saturation, end-use efficiency, and improvements in structural integrity. The larger rate classes (GSP500, GSP700, and GSP1000) are modeled using a generalized regression model designed to capture recent sales and customer trends. Trend models are used in capturing street light sales.

THE STATISTICALLY ADJUSTED END-USE MODEL

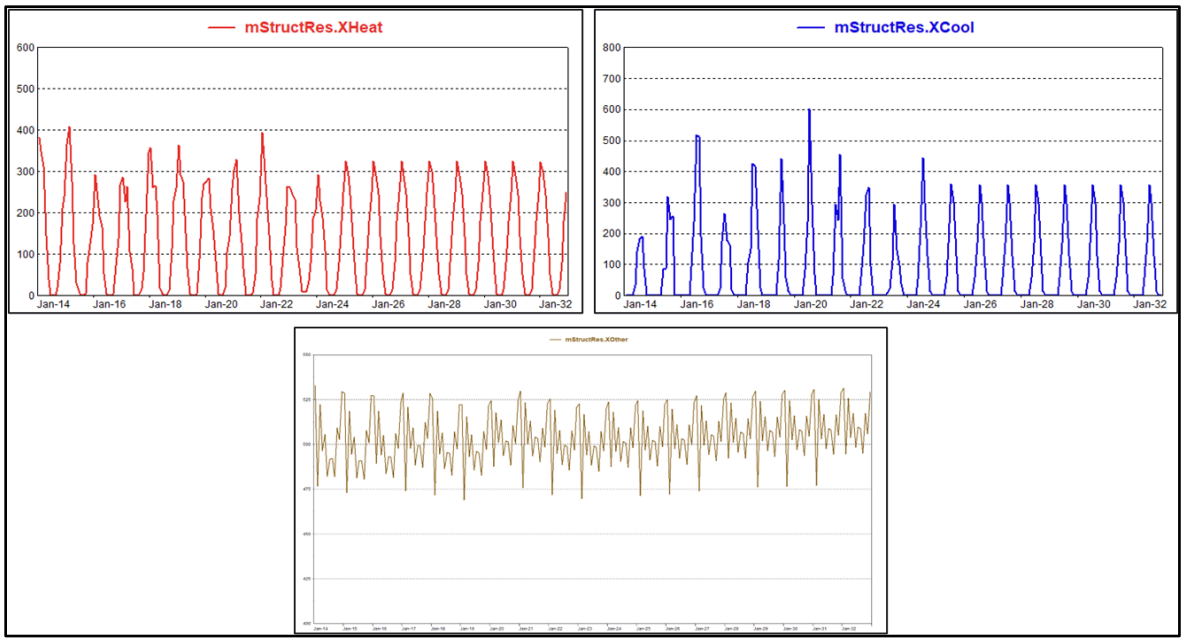
Residential average use, and GSL50 and GSP50 sales forecasts are estimated using an end-use framework that integrates economic, weather, and end-use intensity trends into a heating variable (***XHeat***), cooling variable (***XCool***), and a base-use variable (***XOther***). The model is known as a Statistically Adjusted End-Use (**SAE**) model as estimated coefficients for the constructed variables calibrate (statistically adjust) the model variables to actual customer use or sales**.** FIGURE 3 illustrates the general model specification.

FIGURE 3: RESIDENTIAL AVERAGE USE MODEL



The concept behind the SAE model is that customer energy use can be explained in terms of cooling requirements (XCool), heating requirements (XHeat), and other non-weather sensitive appliances or end-uses (XOther). Each of these variables incorporates a structural element that reflects end-use ownership (saturation), average stock efficiency, thermal shell integrity and utilization variables that determine how the end-uses are utilized across the months and over time. The utilization variables include heating degree-days, cooling degree-days, and household income. The model variables are on a use per household basis. Appendix A discusses how these model variables are constructed. FIGURE 4 shows the constructed residential model variables.

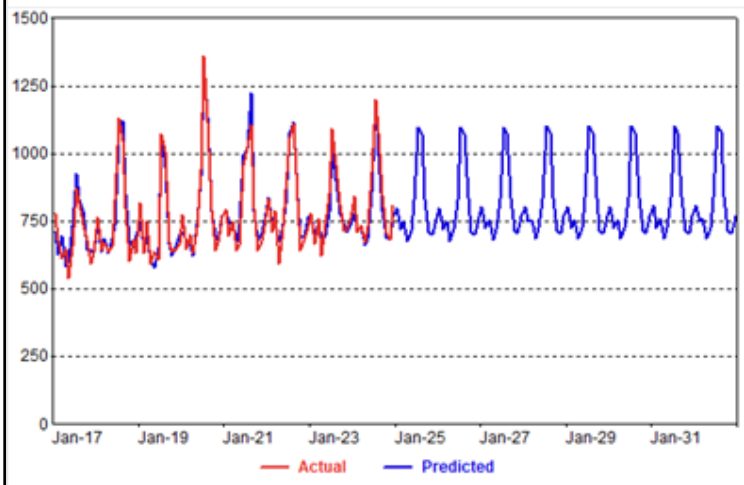
FIGURE 4: RESIDENTIAL SAE MODEL VARIABLES



The average use forecast is derived from a linear regression model that relates historical monthly average use with the constructed end-use variables - ***XCool***, ***XHeat***, and **XOther**. The estimated end-use model coefficients (b_c, b_h, and b_o) "statistically" adjust the end-use variables to actual usage. FIGURE 5 shows the estimated Brampton residential average use model.

FIGURE 5: BRAMPTON RESIDENTIAL SAE MODEL

Variable	Coefficier	StdErr	T-Stat	P-Value
mStructRes.XOther	1.09	0.028	39.396	0.00%
mStructRes.XHeat	0.532	0.06	8.872	0.00%
mStructRes.XCool	1.04	0.046	22.42	0.00%
mStructRes.XCoolLag	0.217	0.043	5.046	0.00%
mBin.AftMay20	71.212	9.566	7.444	0.00%
mBin.Dec17	-110.377	47.385	-2.329	2.20%
mBin.July24	117.096	47.416	2.47	1.53%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	93
R-Squared	0.92
Adjusted R-Squared	0.915
AIC	7.724
BIC	7.907
Log-Likelihood	-521.1
Model Sum of Squares	2,271,904.22
Sum of Squared Errors	196,683.44
Mean Squared Error	2,114.88
Std. Error of Regression	45.99
Mean Abs. Dev. (MAD)	36.04
Mean Abs. % Err. (MAPE)	4.79%
Durbin-Watson Statistic	1.861

The constructed model variables are highly statistically significant as measured by the T-Statistics and Probability Values. The base-use variable has a coefficient of 1.09, indicating that the initial estimate of residential base use for the province is slightly lower than Brampton base use; base-use is scaled up by 9.0%. The cooling variable has two coefficients, one for the current month and one for the prior month – the lagged coefficient indicates that reported monthly billed sales partly reflects consumption in the prior calendar month. The total cooling coefficient is the sum of the two coefficients (1.04+0.217) which equals 1.257 indicating that per customer cooling use is higher than our initial estimates. Similarly, the 0.532 coefficient on the heating variable calibrates the heating variable down.

CDM Impacts. Historical and future CDM impacts are captured in the sales data used to estimate the model and end-use intensity trends. Given the long history of CDM, it is nearly impossible to isolate the impact of efficiency programs from that of end-use standards such as lighting that effectively eliminated incandescent lighting. End-use efficiency is updated as part of the EIA annual forecast process with updates based on the most recent appliance shipments data. Improvements in stock efficiency reflect both new standards and energy efficiency programs that have encouraged the adoption of more efficient end-uses and thermal shell efficiency improvements. Efficiency improvements captured in the end-use intensity trends

combined with the sales trend that incorporates CDM activity, adequately capture future CDM savings.

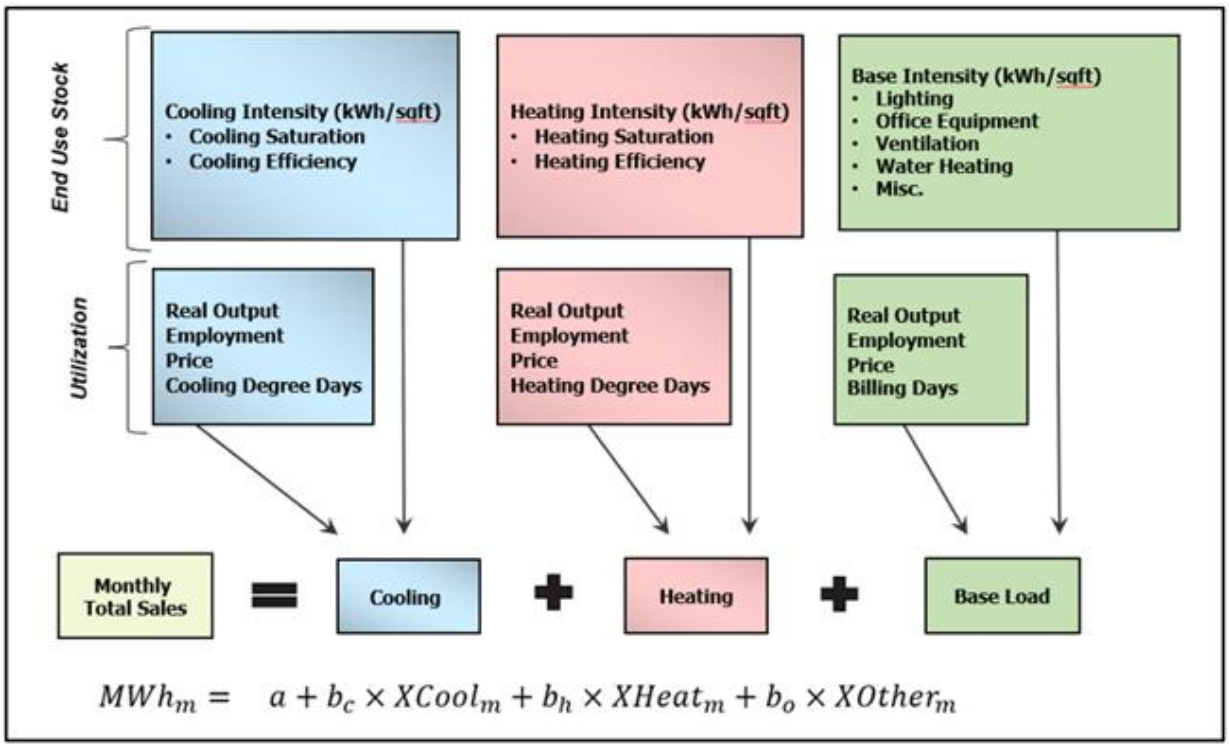
The SAE model is widely used by utilities across North America largely as it has proved to be a consistent modeling framework that has worked well to explain historical usage trends and present reasonable customer use forecasts.

COMMERCIAL SAE MODEL

The same modeling framework is used for forecasting the GSL50 and GSP50 sales. The primary differences are that commercial end-use intensities are on a use per unit of floor space basis that is converted to a MWh estimate, and the economic drivers include CMA output (GDP) and employment.

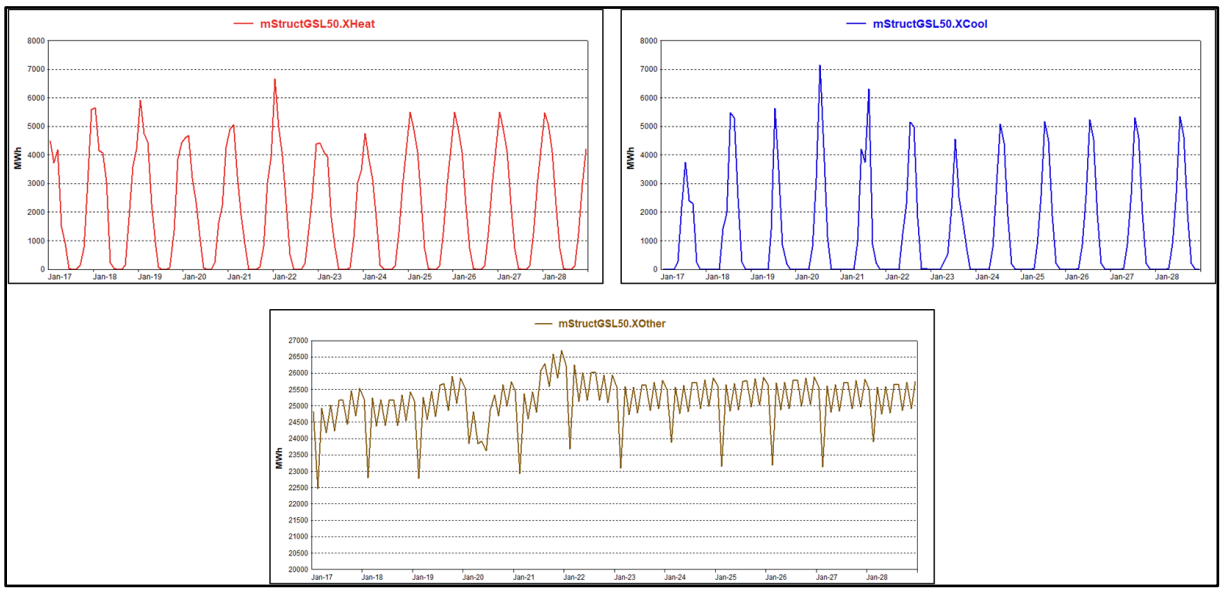
FIGURE 6 shows the commercial SAE model.

FIGURE 6: COMMERCIAL SALES MODEL



Annual cooling, heating, and other use intensities are combined with CDD, HDD, GDP and Employment. Construction of the commercial models is described in Appendix A**.** FIGURE 7 shows the Brampton GSL50 model variables.

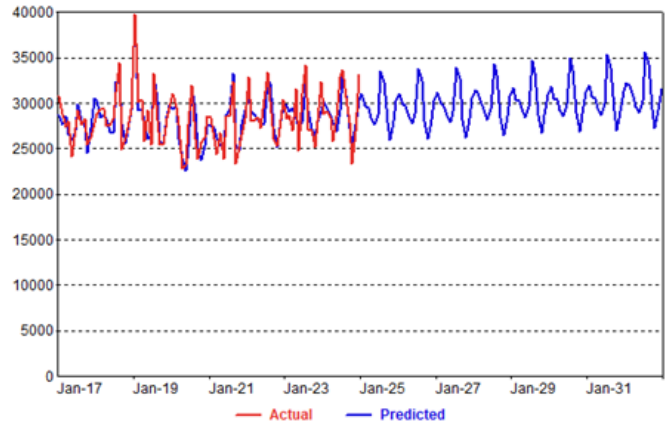
FIGURE 7: COMMERCIAL MODEL VARIABLES



The commercial model variables are used in estimating monthly sales regression models. FIGURE 8 shows the estimated Brampton GSL50 model.

FIGURE 8: BRAMPTON GSL50 SALES MODEL

Variable	Coefficier	StdErr	T-Stat	P-Value
mStructGSL50.XOther	0.23	0.016	14.592	0.00%
mStructGSL50.XHeat	0.134	0.018	7.629	0.00%
mStructGSL50.XCool	0.051	0.005	10.325	0.00%
GMRVariables.Peel_Retail_Rec	3096.441	1420.328	2.18	3.18%
mBin.Feb	1863.752	615.592	3.028	0.32%
mBin.Apr	1403.821	578.963	2.425	1.73%
mBin.Oct	-1312.1	638.876	-2.054	4.28%
mBin.Jan19	9144.555	1626.258	5.623	0.00%

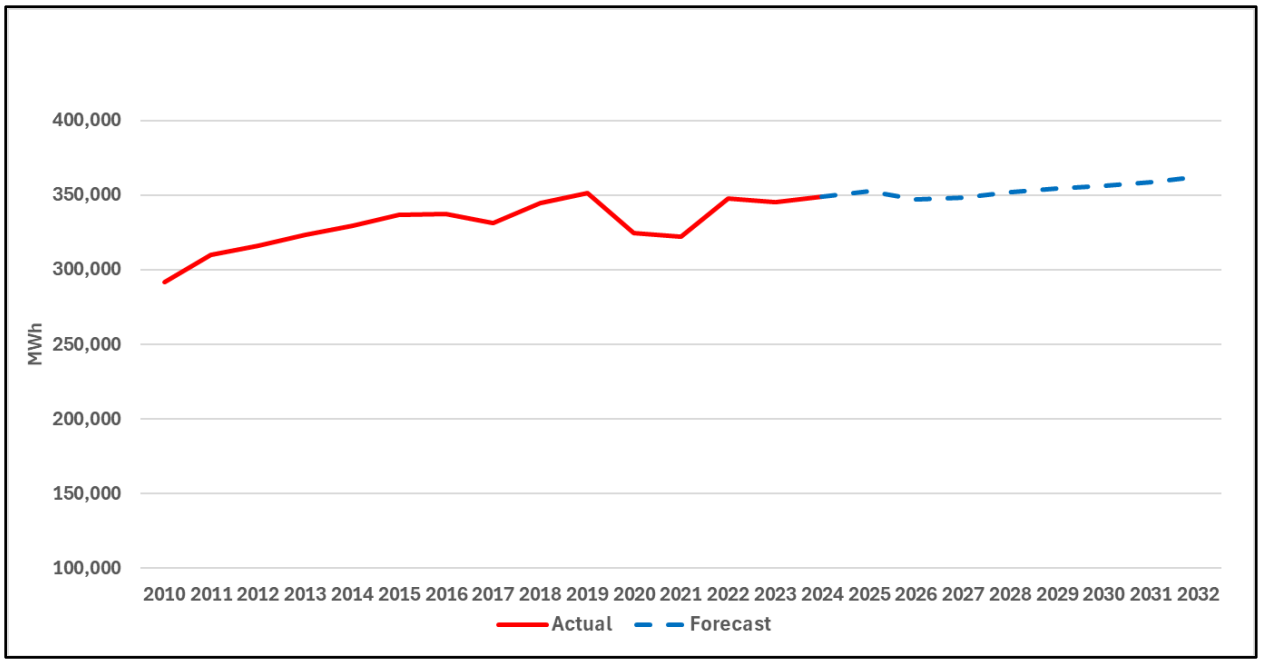


Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	92
R-Squared	0.73
Adjusted R-Squared	0.709
AIC	14.78
BIC	14.989
Log-Likelihood	-872.9
Model Sum of Squares	604,675,581.16
Sum of Squared Errors	223,605,005.33
Mean Squared Error	2,430,489.19
Std. Error of Regression	1,559.00
Mean Abs. Dev. (MAD)	1,205.13
Mean Abs. % Err. (MAPE)	4.28%
Durbin-Watson Statistic	2.339

The variable *Peel_Retail_Rec* captures the sharp drop in 2020 sales resulting from the COVID "work at home" mandate.

The commercial sales models tend to have relatively low Adjusted R-Squared statistics. The Adjusted R-Squared measures the overall monthly variance the model can explain. The large unexplained variance is largely due to the sales data used in estimating the models. Reported monthly sales are adjusted for the meter reading schedule and unbilled sales and then calibrated to calendar-month purchases. While there is a significant monthly variance in the sales data, the models sort through the noise and result in statistically strong coefficients for the primary forecast drivers – XOther, XHeat, and XCool. The combined forecasts of weather, economics, and end-use intensity trends result in forecasts consistent with forecast assumptions and historical sales trends. This is shown in FIGURE 9.

FIGURE 9: BRAMPTON GSL50 ACTUAL AND FORECASTED SALES



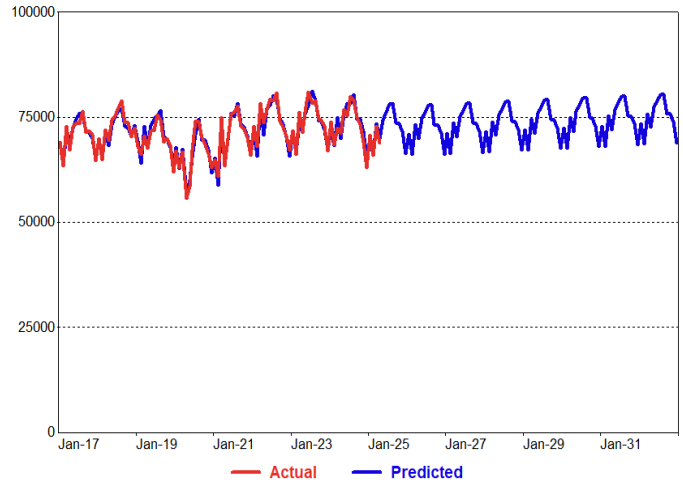
The GSL50 (small C&I less than 50 kW demand) and GSP50 (greater than 50 KW) models are generally based on an SAE specification. The largest rates, like Brampton's GSP700 (over 700 kW), are based on a generalized econometric model that relates monthly sales to an economic driver that captures employment and GDP projections. The largest customers tend not to be strongly weather sensitive, allowing us to capture seasonal variation with monthly binary variables. FIGURE 10 shows the Brampton GSP700 forecast model.

FIGURE 10: BRAMPTON GSP700 SALES MODEL (MWH)

BRZ GSP700 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	29669.023	8194.539	3.621	0.05%
mEcon.GSP50_Var	25053.427	8274.124	3.028	0.33%
LostLoadIndex.LL_BRZ_GSP700	-2855.877	396.346	-7.206	0.00%
GMRVariables.Peel_Workplace	8678.762	2368.678	3.664	0.04%
mBin.Jan	4840.761	460.462	10.513	0.00%
mBin.Mar	7015.954	576.378	12.172	0.00%
mBin.Apr	3682.873	705.647	5.219	0.00%
mBin.May	8307.016	802.341	10.353	0.00%
mBin.Jun	10195.917	840.584	12.13	0.00%
mBin.Jul	12239.989	848.918	14.418	0.00%
mBin.Aug	12698.644	839.761	15.122	0.00%
mBin.Sep	7714.962	804.28	9.592	0.00%
mBin.Oct	7222.685	737.494	9.794	0.00%
mBin.Nov	5064.273	600.459	8.434	0.00%
mBin.Dec18	7999.143	1351.783	5.917	0.00%
AR(1)	0.621	0.091	6.86	0.00%

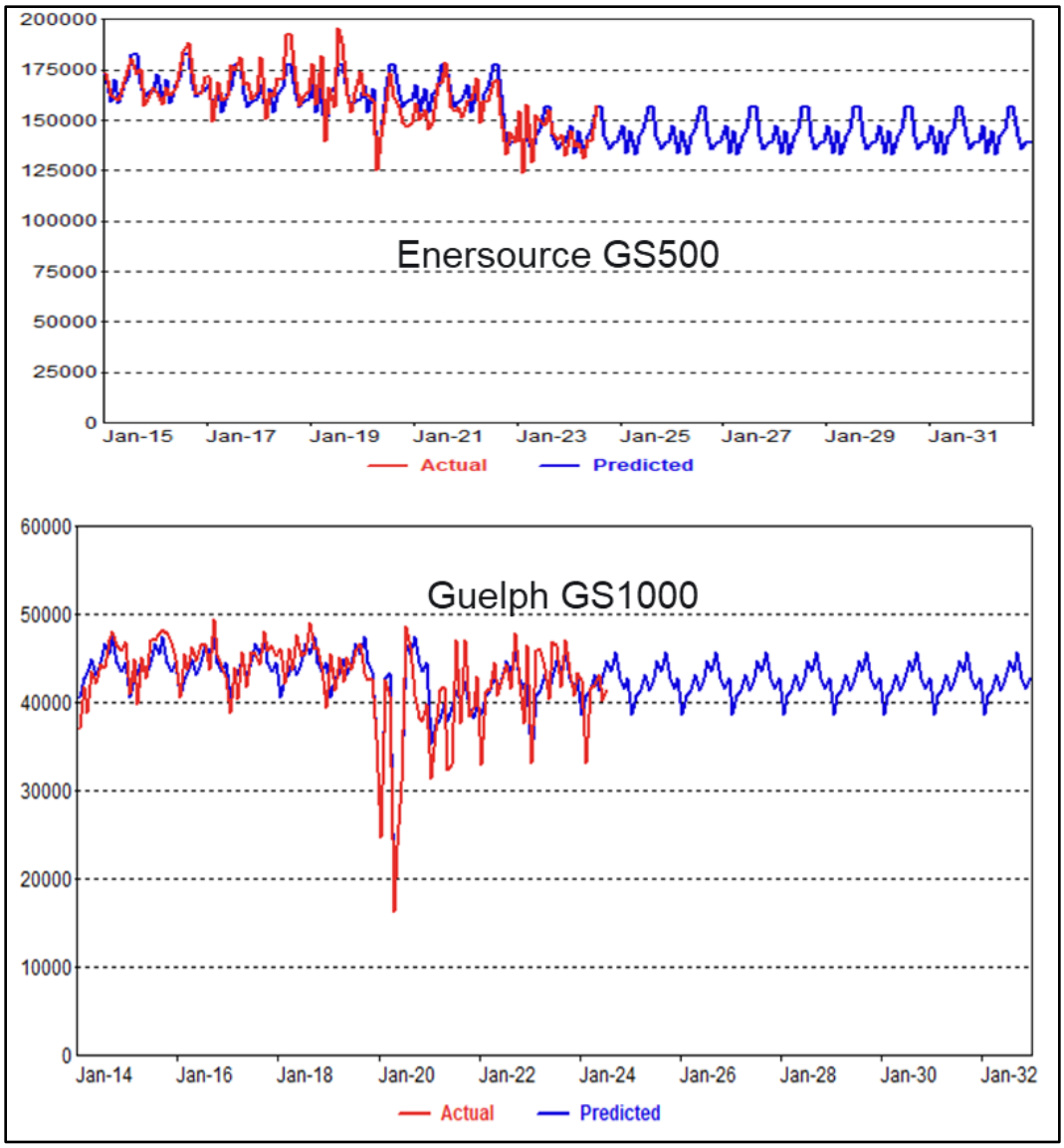
Model Statistics	
Iterations	14
Adjusted Observations	99
Deg. of Freedom for Error	83
R-Squared	0.922
Adjusted R-Squared	0.908
AIC	14.816
BIC	15.235
F-Statistic	65.366
Prob (F-Statistic)	0
Log-Likelihood	-857.84
Model Sum of Squares	2,301,009,157.76
Sum of Squared Errors	194,785,274.54
Mean Squared Error	2,346,810.54
Std. Error of Regression	1,531.93
Mean Abs. Dev. (MAD)	1,099.93
Mean Abs. % Err. (MAPE)	1.55%
Durbin-Watson Statistic	2.247



In addition to the economic driver (*GSP50_Var*), the model includes two variables (***LL_Brz_GSP700*** and ***Peel_Workplace***) that capture the drop in load due to COVID-19 and its recovery. The monthly binaries capture the variation in monthly use across the year.

For the other two large general service classes (GSP500, and GSP1000), there is no measurable relationship with the economic drivers. Forecasts are held at current levels. FIGURE 11 shows actual and predicted sales.

FIGURE 11: GS500 AND GS1000 SALES FORECAST (MWH)



Large Use customer class consists of 36 customers by 2031 across the rate zones. A separate forecast is generated for each customer. The forecast starts with a simple exponential smoothing model that captures the customer monthly usage pattern but does not presuppose any continued growth; sales are held at current levels. Sales are then adjusted for future growth (or loss) based on the Alectra Staff's consultation with the customers and internal analysis. This includes sales for new customers, customers that move from another rate class, and future expansion and contractions.

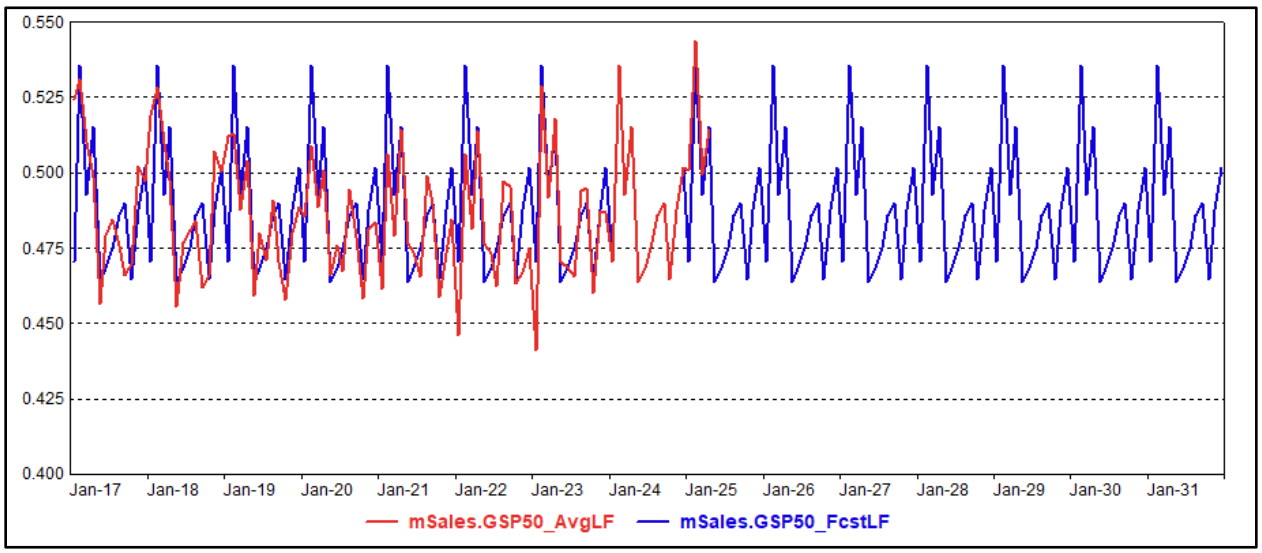
Street lighting and other outdoor lighting sales are small; sales are generally held at current levels over the forecast period.

LARGE C&I DEMAND FORECASTS

Baseline billing demand forecasts are calculated for rate schedules General Service greater than 50 kW (GSP50) and higher (those rates that have billing demands). The billing demand forecasts are based on a billing demand load factor which relates monthly billing demand to monthly sales. The billing demand factor is calculated as the ratio of monthly average hourly use to monthly billed demand. The forecast is based on an average of the historical monthly load factors (usually set as an average of the prior three years).

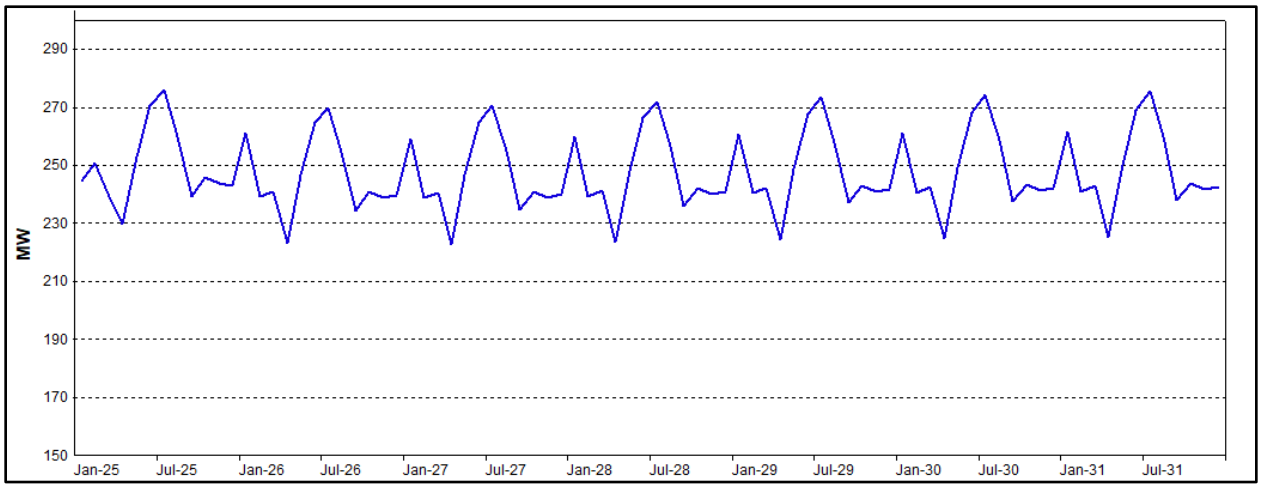
FIGURE 12 shows the historical and forecasted billing demand load factors for the Brampton GSP50 rate.

FIGURE 12: BRAMPTON GSP50 BILLING DEMAND LOAD FACTOR



The billing demand forecast is then derived by dividing the monthly average use forecast by the billing demand load factor. FIGURE 13 shows actual and forecasted billing demands for the Brampton GSP50 rate.

FIGURE 13: BRAMPTON GSP50 BILLING DEMAND FORECAST



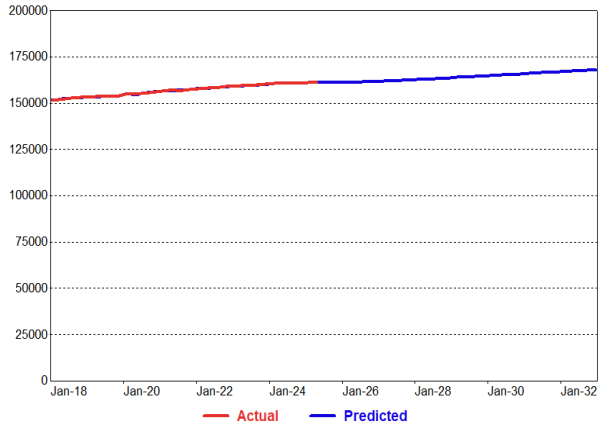
RESIDENTIAL CUSTOMER FORECASTS

The residential sales forecast is derived as the product of the average use forecast and customer forecast. The residential customer forecast is based on a weighted population and GDP driver (***Cust_Var***). Population captures the long-term customer growth trend and GDP helps capture customer variation and household formation associated with economic activity. Monthly customer models are estimated using linear regression. Models incorporate moving average adjustments (MA terms), and in some models lag customers address the inherent serial correlation generally found in residential customer models; serial correlation is when the predicted customers in one month partly depends on how many customers there were in the prior months; the lag and MA terms address this issue. Not surprisingly, there is a strong correlation between customer growth with population and GDP; the correlation between customers and *Cust_Var* is about 0.90. Given the high correlation, residential customer models explain customer trends well with strong model coefficients and high Adjusted R-Squared. FIGURE 14 shows the Brampton residential customer model.

FIGURE 14: BRAMPTON RESIDENTIAL CUSTOMER MODEL

BRZ Res Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	110656.542	1054.229	104.964	0.00%
mEcon.Cust_Var	38963.727	972.342	40.072	0.00%
mBin.Dec19	725.467	163.224	4.445	0.00%
mBin.Jan20	-1511.541	214.455	-7.048	0.00%
mBin.Feb20	-805.605	161.374	-4.992	0.00%
mBin.Yr20Plus	3041.529	113.344	26.835	0.00%
MA(1)	0.986	0.095	10.357	0.00%
MA(2)	0.556	0.096	5.804	0.00%



Model Statistics	
Iterations	38
Adjusted Observations	88
Deg. of Freedom for Error	80
R-Squared	0.997
Adjusted R-Squared	0.997
AIC	10.223
BIC	10.449
F-Statistic	4314.98
Prob (F-Statistic)	0
Log-Likelihood	-566.7
Model Sum of Squares	762,982,805.80
Sum of Squared Errors	2,020,821.19
Mean Squared Error	25,260.26
Std. Error of Regression	158.93
Mean Abs. Dev. (MAD)	109.22
Mean Abs. % Err. (MAPE)	0.07%
Durbin-Watson Statistic	1.617

The residential forecast driver (***Cust_Var***) is highly statistically significant with a T-Statistic of 40.07. The moving average terms MA(1) and MA(2) help capture the variation around the predicted trend and calibrate the first months of the forecast into actual customer counts. The MA terms have little impact on the forecast. Similar customer models are estimated for each zone.

3 FORECAST DRIVERS

Through a set of linear regression models, residential average use and customers and commercial sales are related to weather, economic activity, population growth, and end-use energy intensity trends. The forecast is then adjusted for large customer load changes, EVs, and building electrification. The forecast drivers include:

- Conference Board of Canada's economic forecast.
- End-use saturation, efficiency and resulting energy intensities (end-use kWh per household in case of residential and unit of floor space in small commercial models)
- Normal weather conditions.
- Expected Large User load additions and losses.
- Electric vehicles and building electrification projections.

ECONOMIC FORECAST

The key economic drivers include population, household income, GDP, and employment (non-manufacturing and manufacturing). Forecasts are based on the Conference Board of Canada's June 2025 economic outlook (March 2025 for Guelph). Historical and projected economic data includes the Toronto CMA (used in modeling Brampton, Enersource, and PowerStream), Guelph CMA (used in modeling Guelph sales), and Hamilton CMA (used in the Horizon forecast models). The primary economic drivers for the Toronto CMA are shown in TABLE 1. The primary economic drivers for Guelph and Horizon are shown in TABLE 7 and TABLE 8.

TABLE 7: GUELPH CMA ECONOMIC FORECAST

Year	Population	Chg_Pop	Real GDP	Chg_GDP	Employment	Chg_Emp
	(1000's)		(millions)		(1000's)	
2017	162.36		10,490.57		94.35	
2018	165.61	2.0%	10,879.86	3.7%	92.40	-2.1%
2019	168.91	2.0%	11,050.14	1.6%	94.54	2.3%
2020	171.66	1.6%	10,437.45	-5.5%	88.09	-6.8%
2021	174.67	1.8%	11,053.79	5.9%	96.09	9.1%
2022	178.20	2.0%	11,442.06	3.5%	100.23	4.3%
2023	181.62	1.9%	11,517.66	0.7%	103.85	3.6%
2024	184.76	1.7%	11,467.25	-0.4%	103.05	-0.8%
2025	186.99	1.2%	11,644.88	1.5%	102.23	-0.8%
2026	188.05	0.6%	11,882.22	2.0%	103.08	0.8%
2027	189.43	0.7%	12,143.03	2.2%	103.62	0.5%
2028	191.71	1.2%	12,426.69	2.3%	104.84	1.2%
2029	194.46	1.4%	12,717.94	2.3%	106.10	1.2%
2030	197.22	1.4%	13,016.10	2.3%	107.37	1.2%
2031	200.02	1.4%	13,321.24	2.3%	108.66	1.2%
Average Annual Growth						
2017 - 2024		1.9%		1.3%		1.4%
2024 - 2032		1.1%		2.2%		0.8%

TABLE 8: HAMILTON ECONOMIC FORRECAST

Year	Population	Chg_Pop	Real GDP	Chg_GDP	Employment	Chg_Emp
	(1000's)		(millions)		(1000's)	
2017	783.89		35,896.99		421.43	
2018	793.75	1.3%	37,055.65	3.2%	418.67	-0.7%
2019	805.98	1.5%	37,651.94	1.6%	425.33	1.6%
2020	814.77	1.1%	35,629.41	-5.4%	395.15	-7.1%
2021	822.38	0.9%	37,256.89	4.6%	420.11	6.3%
2022	834.69	1.5%	38,118.64	2.3%	429.56	2.2%
2023	851.42	2.0%	38,140.13	0.1%	425.36	-1.0%
2024	868.86	2.0%	37,914.31	-0.6%	432.95	1.8%
2025	877.82	1.0%	38,119.80	0.5%	428.02	-1.1%
2026	879.34	0.2%	38,889.98	2.0%	432.36	1.0%
2027	881.28	0.2%	39,770.37	2.3%	436.86	1.0%
2028	886.55	0.6%	40,661.25	2.2%	441.62	1.1%
2029	893.66	0.8%	41,518.72	2.1%	445.26	0.8%
2030	900.64	0.8%	42,373.69	2.1%	448.89	0.8%
2031	907.68	0.8%	43,246.26	2.1%	452.55	0.8%
Average Annual Growth						
2017 - 2024		1.5%		0.8%		0.5%
2024 - 2032		0.6%		1.9%		0.6%

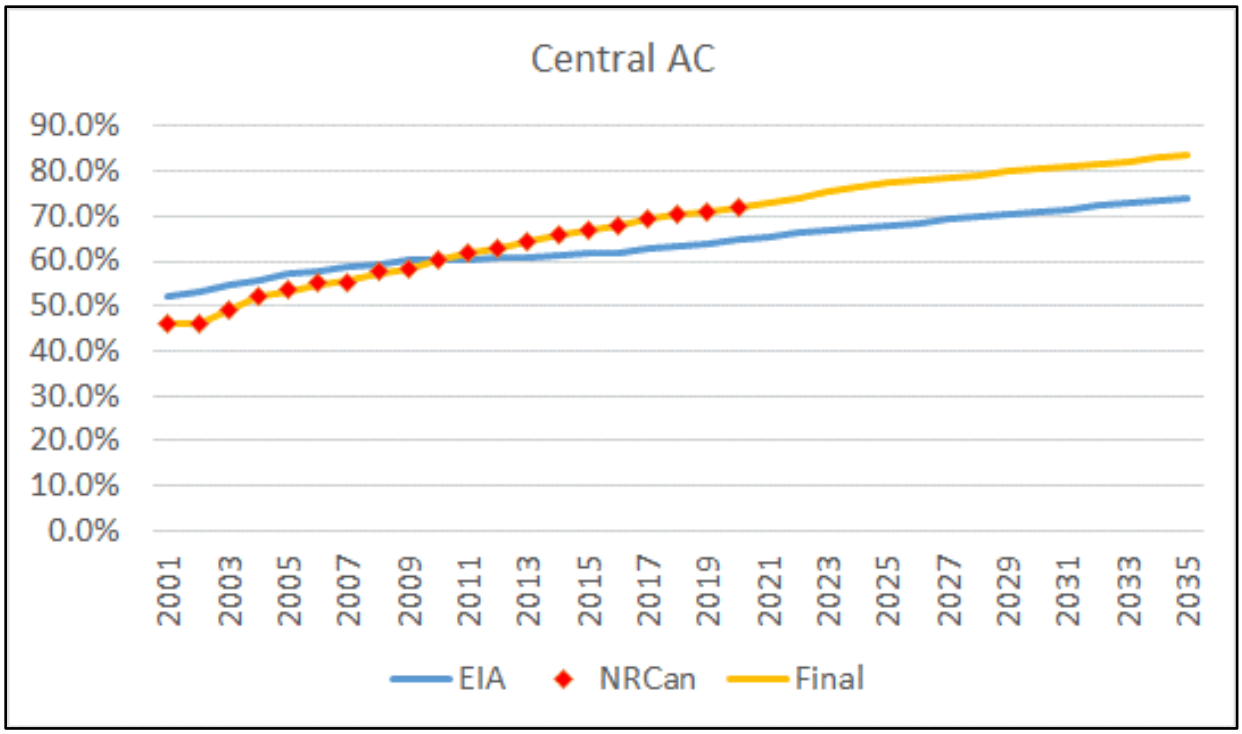
END-USE ENERGY INTENSITIES

Energy intensities used in constructing the SAE variables are derived by combining Natural Resource Canada (NRCan) residential saturation and unit energy consumption (UEC) and commercial base-year intensity with end-use data from the US Energy Information Administration (EIA) for the East North Central Census Division (ENC). ENC includes Ohio, Indiana, Illinois, Wisconsin, and Michigan; given its proximity to Ontario, the ENC saturation and stock efficiency projections provide a reasonable representation of trends in the Alectra service area. The end-use intensity forecast is based on the EIA 2023 Annual Energy Outlook (AEO). Each year EIA develops a long-term end-use forecast derived from the National Energy Modeling System (NEMS). NEMS generates detailed end-use data including the number of households, end-use energy, number of units or equipment, square footage, and heating and cooling thermal shell efficiency estimates for the residential sector. Forecasts are generated for 3 residential housing types and 10 commercial building types.

The EIA end-use forecast starts in 2015 and goes through 2050. EIA projections are calibrated to NRCan reported residential saturation and end-use consumption for both the residential and commercial sectors.

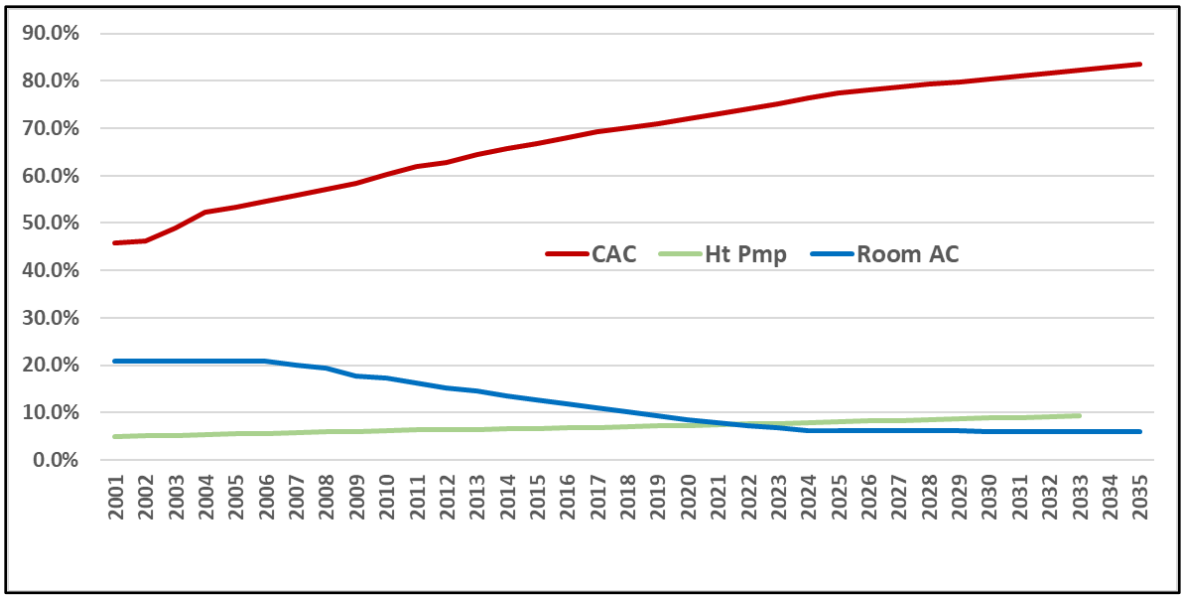
FIGURE 15 illustrates the calibration process for residential central air conditioning (CAC).

FIGURE 15: CENTRAL AIR CONDITIONING SATURATIONS



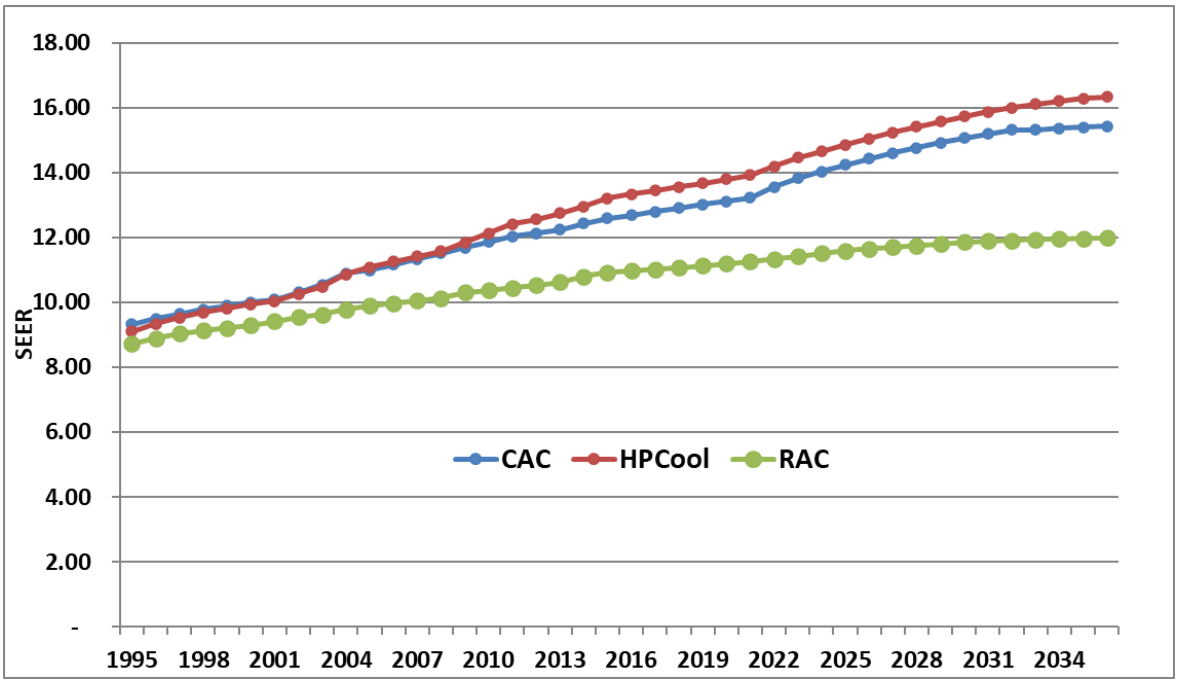
NRCan data shows CAC adoption has been increasing at a faster rate in Ontario than in the ENC Census Division. Stronger saturation growth translates into stronger growth in CAC electric sales and ultimately the CAC end-use energy intensity (CAC use per customer). We assume that CAC saturation continues to grow, but at a slower rate, following the AEO trend projected for the ENC. Room air conditioning (RAC) is declining as RAC is displaced with CAC. There is also a small increase in heat pump saturation which reflects expected growth in heat pumps before the impact of electrification programs. FIGURE 16 shows the calibrated saturation trends for all three technologies.

FIGURE 16: AIR CONDITIOING SATURATION TREND



In aggregate, air conditioning saturation has been increasing. This trend though slows over time as saturation is near 100%. End-use efficiency and thermal shell integrity are also increasing. For most end-uses, efficiency gains have outweighed saturation growth. FIGURE 17 shows the average stock efficiency trend for residential air conditioning.

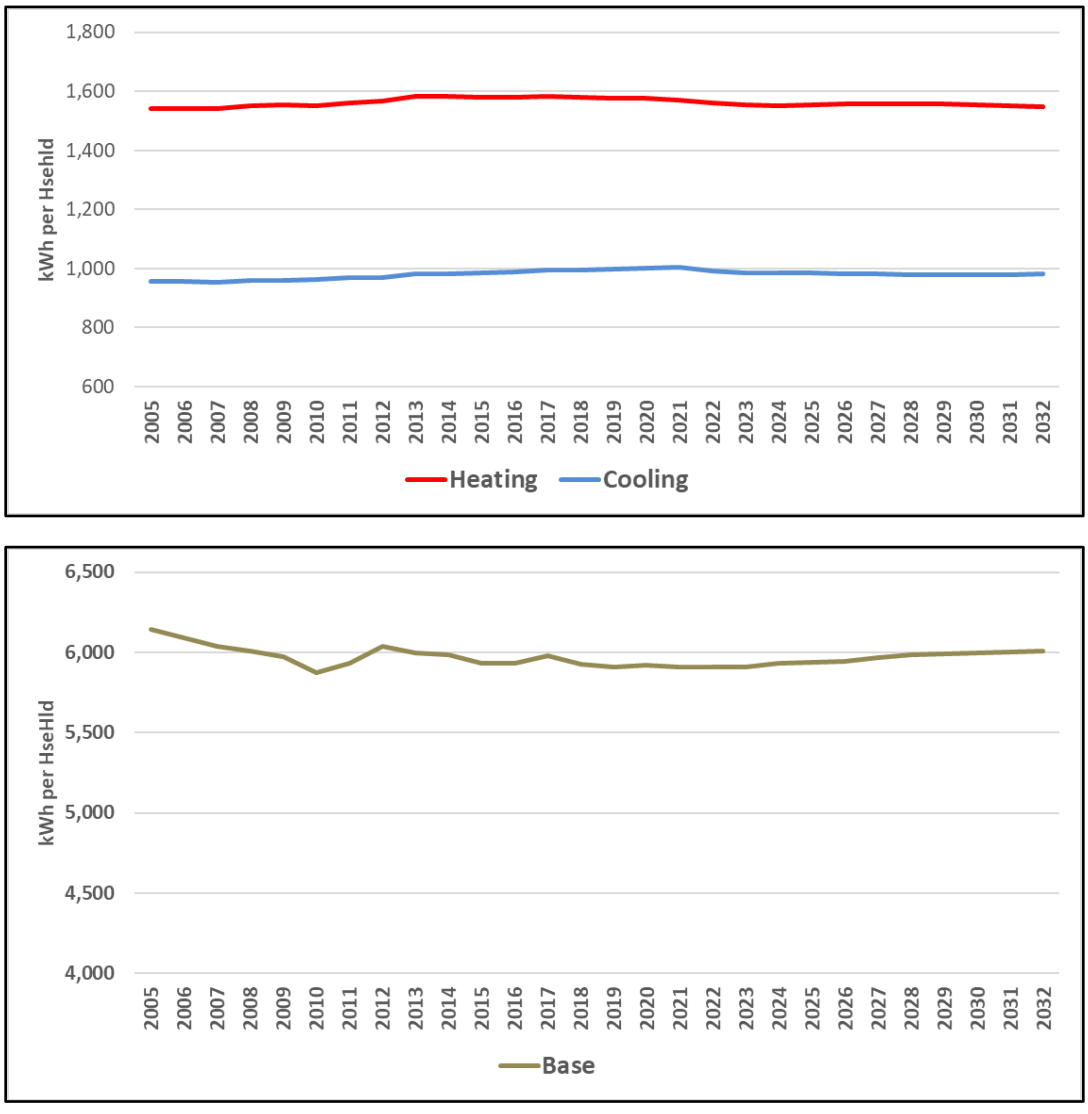
FIGURE 17: COOLING EFFICIENCY TREND



Air conditioning efficiency is measured in seasonal energy efficiency ratio (SEER). Increase in efficiency translates into lower electricity use per unit. While room air conditioner efficiency is increasing, CAC and Heat Pump efficiency is even higher. Displacing room air conditioning with CAC and Heat Pumps contributes to even stronger overall cooling efficiency gains. Air conditioning efficiency (like all end-uses) reflects new standards, and the impact efficiency programs have had on encouraging adoption of more efficient technology options.

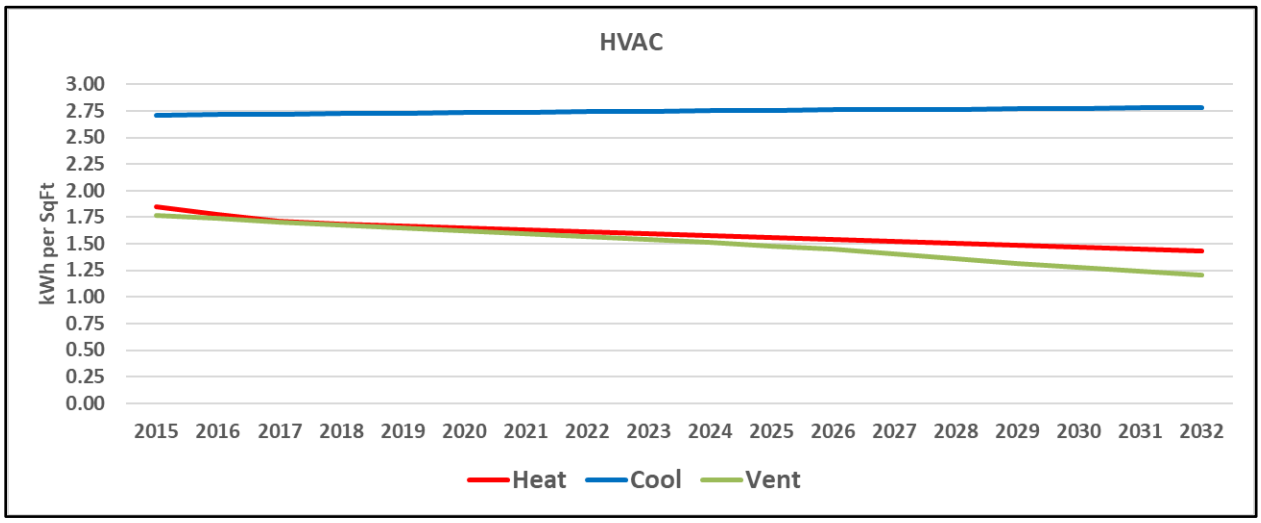
The end-use intensity (kWh per household) is constructed by combining the saturation projections, efficiency trends, and starting kWh annual use. End-use intensities are combined into heating, cooling, and other end-uses. FIGURE 18 shows resulting cooling, heating, and base use intensities.

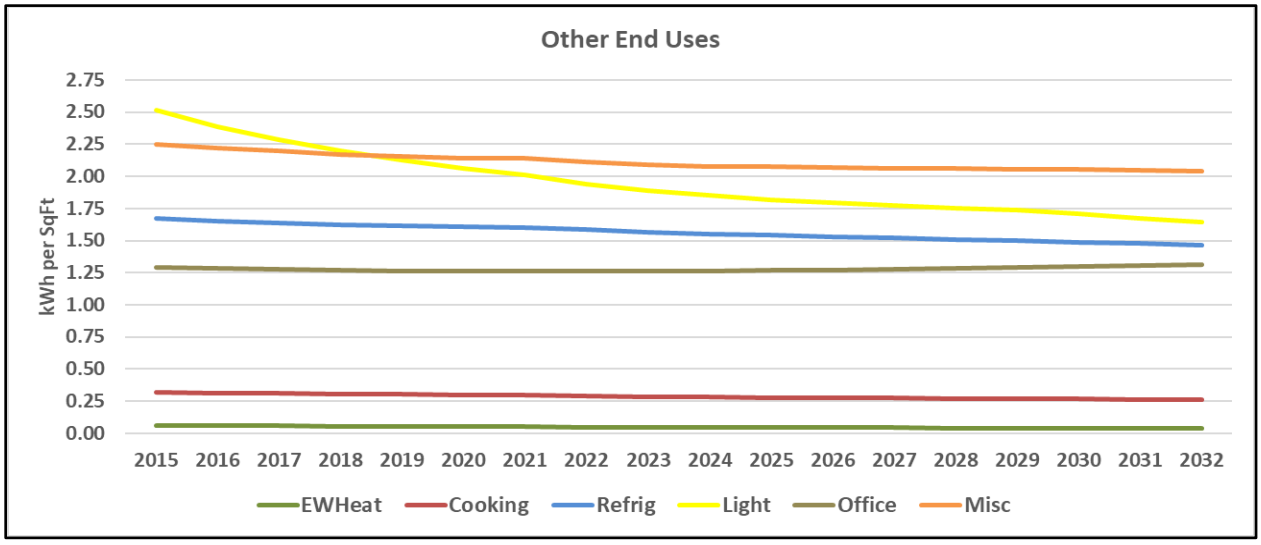
FIGURE 18: RESIDENTIAL ENERGY INTENSITIES



The commercial intensities are based on the EIA 2023 AEO. Commercial intensities (expressed as kWh per sqft) are calibrated to NRCan reported end-use consumption and floor space by building type for Ontario. Given the size of the Alectra service area, we assume that the overall commercial business mix and commercial end-use intensity trends in the Alectra service area are similar to those of the East North Central Census Division. Like residential, commercial end-use intensities are mapped to heating, cooling, and other uses. FIGURE 19 shows the projected HVAC and base-use intensity projections.

FIGURE 19: COMMERCIAL ENERGY INTENSITIES





Model variables (***XHeat***, ***XCool***, and ***XOther***) are derived by combining intensity trends with employment, GDP, and weather conditions. For modeling purposes, the end-use intensities are scaled from a kWh per square foot to MWh estimate; otherwise, the estimate model coefficients will be extremely large. In general, we have seen a strong decline in commercial usage where again most of this has been driven by efficiency improvements primarily in lighting with conversion from florescent lamps to LED lighting and in building ventilation. As in the residential model, efficiency improvements captured in the end-use intensity trends combined with the sales trend that incorporates CDM savings, adequately capture future CDM savings impact. The construction of the model variables is described in Appendix A.

WEATHER

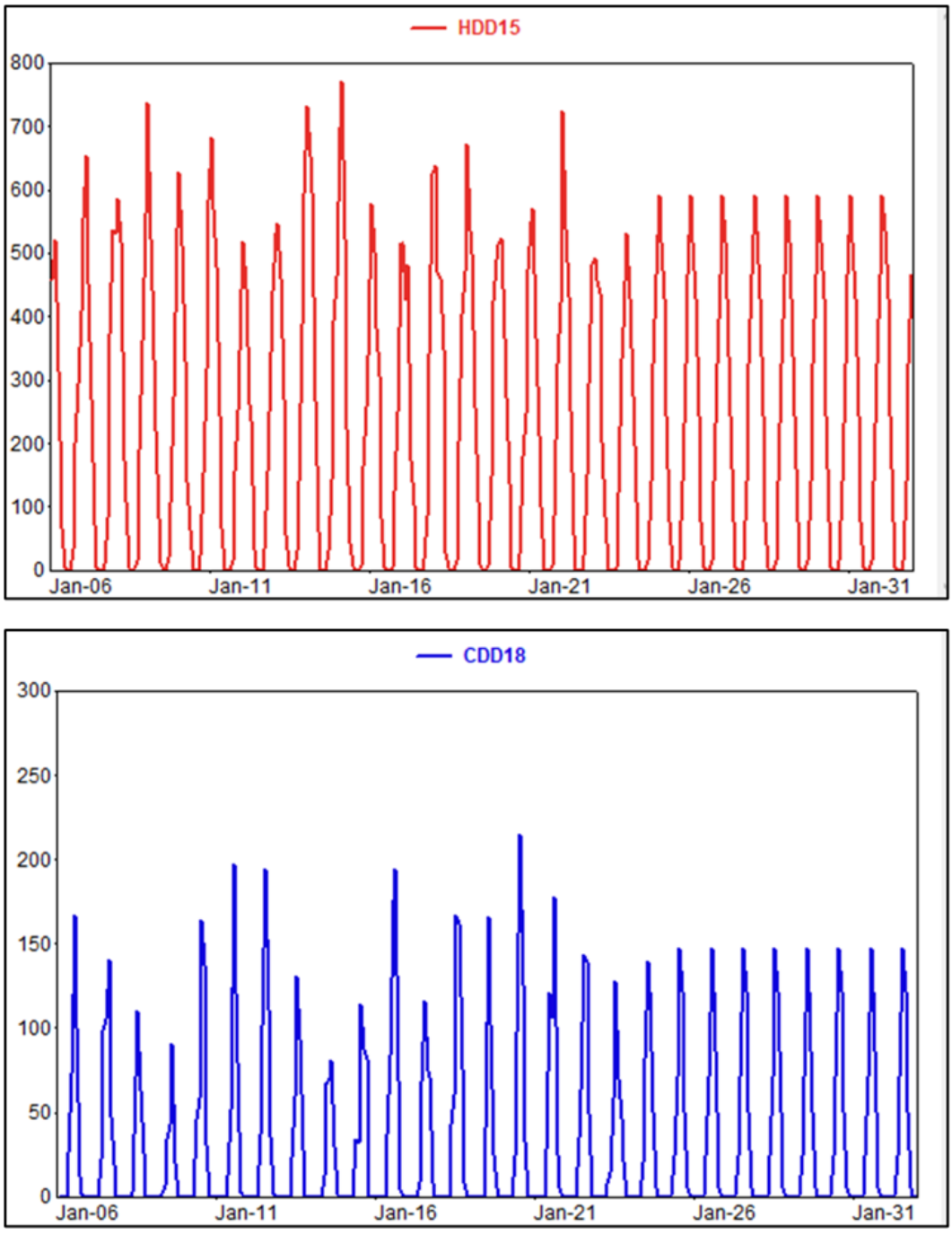
Most of the month-to-month sales variation can be attributed to changes in weather conditions that drive heating and cooling electricity use. Heating degree-days (HDD) are used in capturing heating and CDD to capture cooling loads. HDD and CDD are known as spline variables as they take on a value when the condition is true and is 0 otherwise. Based on monthly sales/weather relationship, the best overall breakpoints are 18 degrees for CDD and 15 degrees for HDD. Cooling loads are visible when temperatures are above 18 degrees and heating loads when temperatures are below 15 degrees. A day with an average temperature of 20 has 2 CDD (20-18) while a day with an average temperature of 16 has 0 CDD. Similarly on the heating side, a day with an average temperature of 10 degrees has an HDD of 5 (15 – 10), while a day with 16 degrees average temperature has an HDD value of 0. Monthly HDD and CDD are calculated by summing up the daily degree-days within the month. Daily degree-days are derived for Toronto and Hamilton.

The forecast is based on expected or *normal* HDD and CDD. Normal HDD and CDD reflect the most likely weather conditions for the forecast period. Normal HDD and CDD are calculated as average of the past HDD and CDD. Historically utilities would use thirty or twenty years of historical temperature data for calculating normal degree-days. To capture warming temperatures, Alectra uses a shorter, ten-year historical period.

The first task is to calculate daily normal degree-days. A daily normal data series is calculated for each month. January daily normal HDD, for example, is calculated by averaging all the January 1st HDD, then January 2nd HDD, …, through January 31st over the ten-year period. January calendar month normal HDD is then the sum of the January daily normal HDD. The same HDD and CDD calculations are done for each month. There are two weather stations – Toronto and Hamilton. Hamilton weather is used for the Horizon planning zone and Toronto is used for all the other zones. For modeling, normal HDD and CDD are concatenated to actual

HDD and CDD. Models are estimated with actual and forecasted with normal. FIGURE 20 shows actual and forecasted HDD and CDD.

FIGURE 20: TORONTO ACTUAL AND NORMAL DEGREE DAYS



4 EV AND ELECTRIFICATION

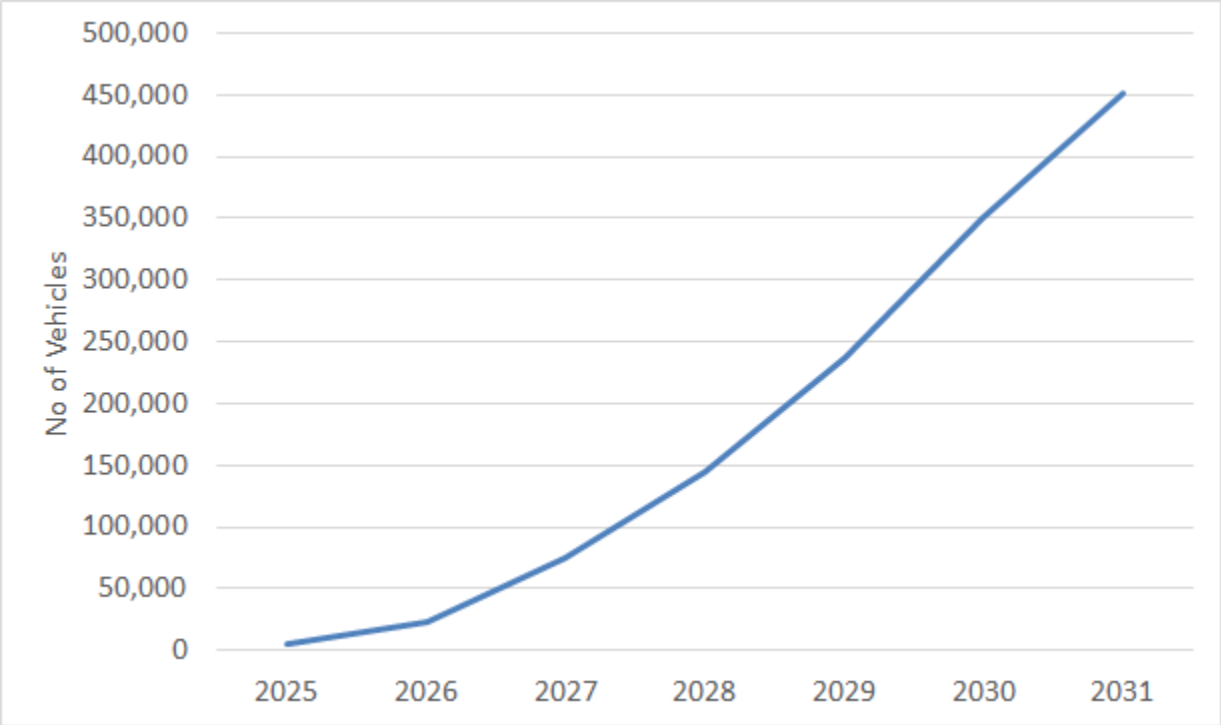
The 2030 Emissions Reduction Plan requires a 40% reduction in greenhouse gas emissions below 2005 levels by 2030 and net-zero emissions by 2050. Two of the largest sources of greenhouse gases are fossil fuel used in space and water heating and gasoline in motor vehicles.

Alectra has an aggressive plan to achieve greenhouse gas reduction through both building electrification and building infrastructure to support EV adoption. By 2031, Alectra expects to realize an additional 2,162 GWh based on achieving electrification targets and EV adoption mandates; this represents a nearly 8% increase over current electricity consumption.

ELECTRIC VEHICLES

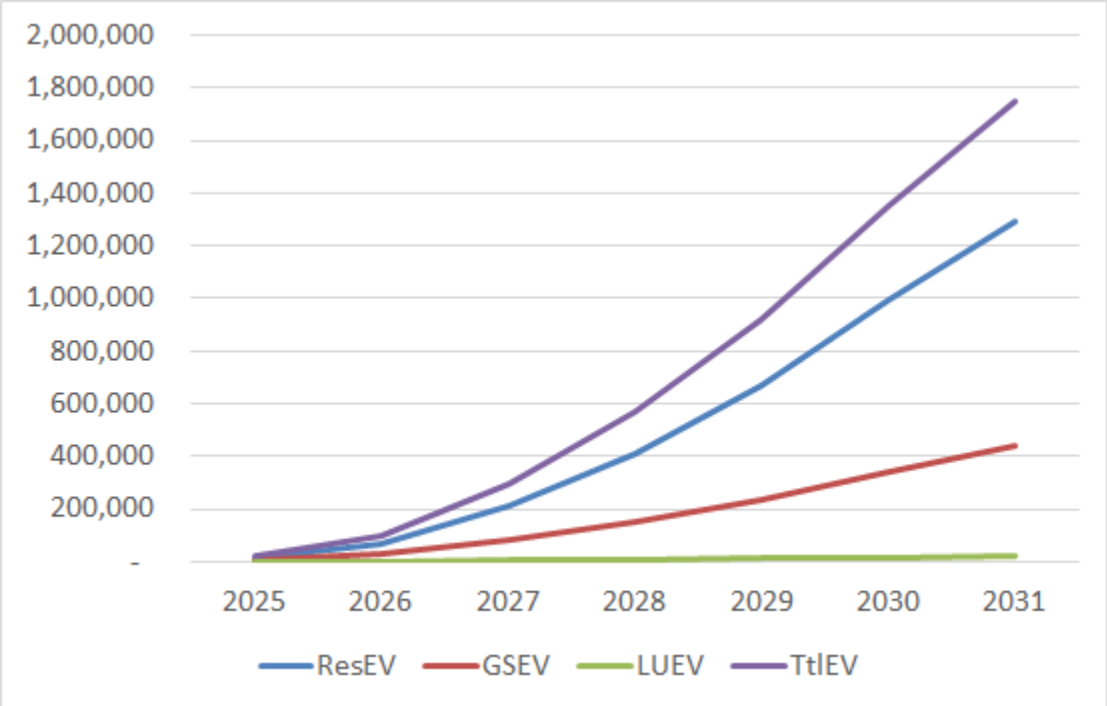
Canada's Electric Vehicle Availability Standard (EVAS) requires that all new light-duty vehicle (LDV) sales are zero-emission by 2035. This is predominantly expected to be electric vehicles. By 2026 the mandate requires that 20% of new vehicles are EVs, and by 2030 that percentage increases to 60%. Based on these mandates, there will be about additional 452,000 EV's in the service area by 2031. FIGURE 21 shows the projected number of EV's.

FIGURE 21: SERVICE AREA ADDITIONAL ELECTRIC VEHICLE PROJECTIONS



The translation of EVs to sales is based on average annual kilometers driven of 19,300 per year and average battery output of roughly 5.0 kilometers per kWh (km/kWh). Average mileage is from the EIA 2023 EV forecast, and vehicle efficiency is based on estimates from the Vermont Energy Investment Corporation (VEIC). FIGURE 22 shows the resulting EV energy forecast. Light duty vehicles are mostly mapped to the residential rate class with medium and heavy-duty vehicles mapped to the non-residential rate classes. Based on the Federal mandate, by 2031 EV new electric charging sales are expected to reach nearly 1,748 GWh.

FIGURE 22: ELECTRIC VEHCICLE CHARGING (MWH)

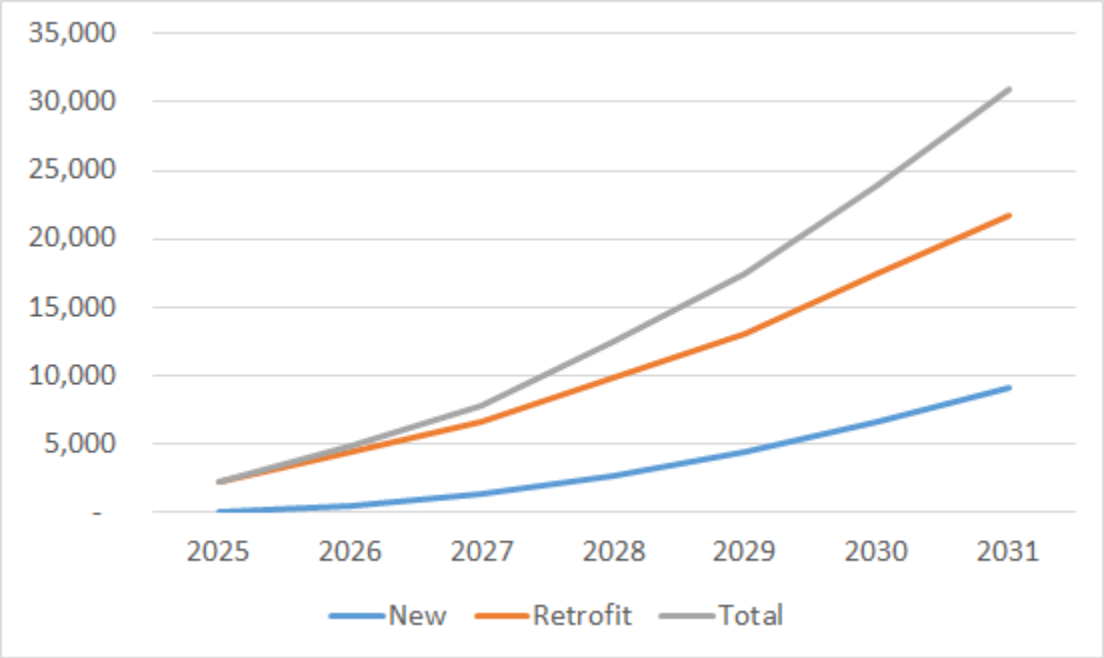


BUILDING ELECTRIFICATION

Building electrification is another contributor to sales growth. Alectra's system planning department has developed low, medium, and high case scenarios. The sales and revenue forecasts are based on the medium adoption scenario. In the medium case, the percentage of new residential customers that are all-electric homes start at 1% and ramp up to 100% by 2035; this results in roughly 9,100 new all-electric homes by 2031. In the medium case retrofit market, the number of homes that convert to electric heat and water increases from 1% of the housing stock to 3% by 2031. This translates into roughly 21,800 homes converting from fossil fuel heat

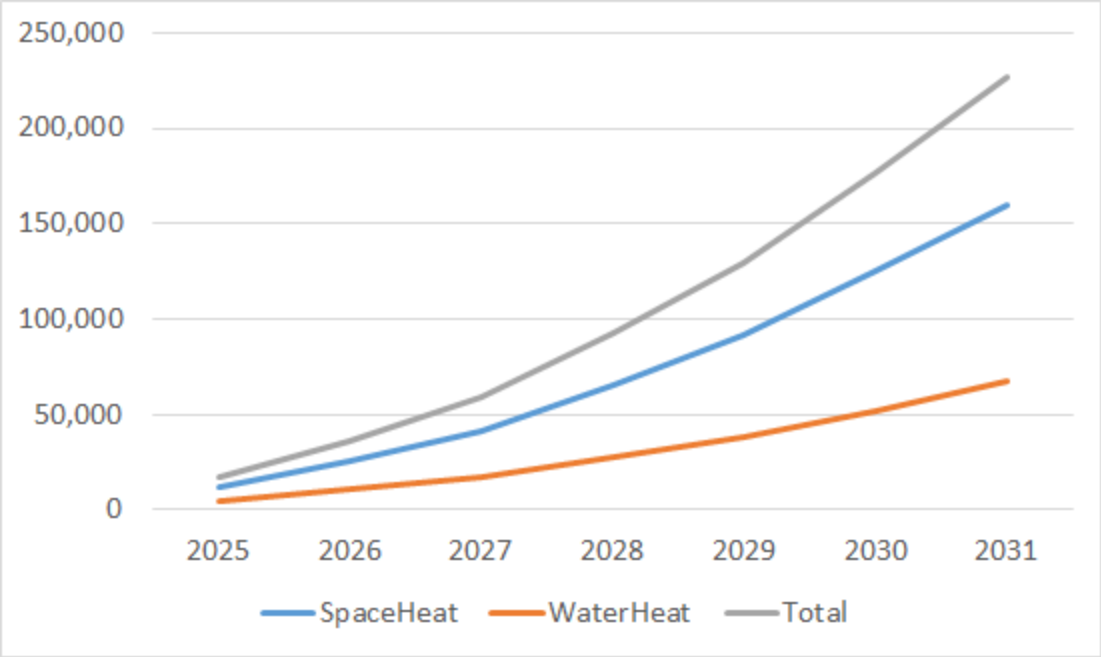
to electric heat by 2031. FIGURE 23 shows the number of additional all-electric homes (both new construction and retrofit).

FIGURE 23: RESIDENTIAL NEW ALL ELECTRIC CUSTOMERS



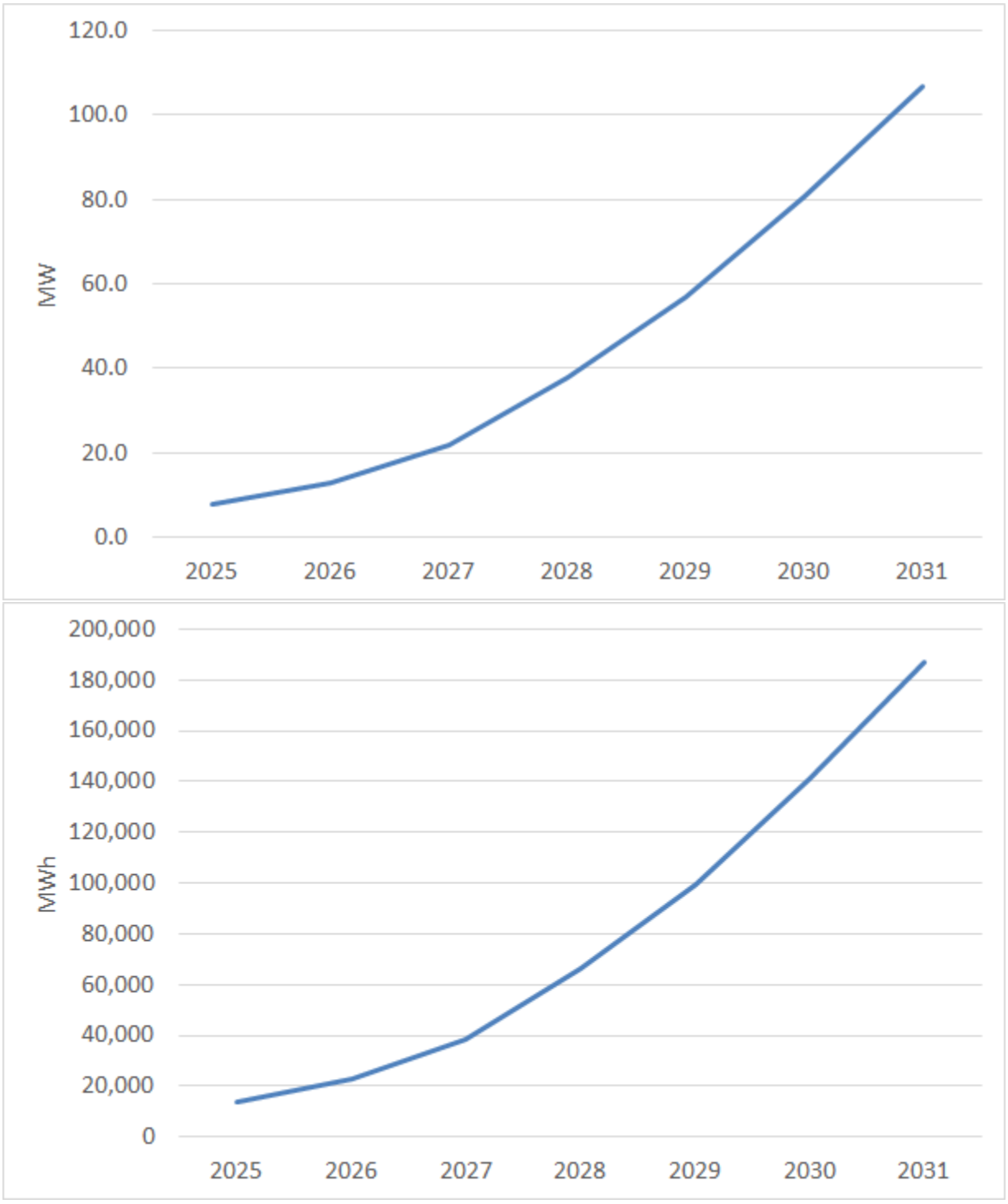
Additional electric space and water heating sales are derived by multiplying electric space and water heating kWh use with the all-electric customer forecast; this results in nearly 227,000 MWh of electric sales by 2031. FIGURE 24 shows projected residential building electrification sales.

FIGURE 24: RESIDENTIAL BUILDING ELECTRIFICATION



Commercial electrification sales are based on system planning's expected case. System planning provided MW estimates for both new construction and retrofit by rate zone. The MW forecast is translated to energy using an average annual load factor based on an estimated commercial electric heat load factor of 0.20. Commercial building simulation data for New York and the Pacific Northwest indicate that electric heat load factors vary between 0.10 and 0.15, but the simulations are based on warmer weather conditions. Reflecting colder temperatures in Toronto, the sales forecast is based on a 0.20 load factor. FIGURE 25 shows System Planning's commercial electrification demand forecast (MW) and translation to sales (MWh).

FIGURE 25: COMMERCIAL BUILDING ELECTRIFICATION FORECAST



Commercial electrification sales are allocated to zones based on the rate zone's relative share of commercial sales and residential electrification sales are allocated based on the zone's share of residential customers.

5 SUMMARY

Alectra, which is the integration of 5 municipal utilities, serves 1.1 million residential and commercial customers in the Toronto area. Overall, Alectra is expecting moderate customer growth, adding roughly 8,000 new residential customers by the end of 2026. With long-term customer growth of 0.4% per year, by 2031 Alectra is projected to have added nearly 30,000 residential customers.

Baseline sales, which exclude adjustments for EVs and building electrification, are fairly flat averaging 0.4% annual growth through 2031. Sales are expected to increase 0.4% in 2025 and -0.1% in 2026 largely as result of expected impacts of the U.S. tariffs on regional economic growth and current immigration policy limiting near-term population growth. Annual baseline sales average 0.4% annual growth after 2026. For 2026, baseline sales are 27,460 GWh increasing to 28,076 GWh by 2031. The baseline forecast is estimated with theoretically strong structured models that incorporate end-use intensity trends and thermal shell integrity improvements as well as population, expected economic growth, and weather conditions. Forecasts for the largest industrial customers reflect current usage trends and adjustments for customer-specific activity.

While the baseline forecast remains relatively flat over the 2025-2031 period, the total sales are expected to significantly increase by 2031. This will largely be attributable to expanded deployment of electric vehicles and accelerated building electrification initiatives targeting residential and commercial retrofit markets and new construction, both of which significantly increase electricity demand.

APPENDIX A: THE RESIDENTIAL STATISTICALLY ADJUSTED ENDI-USE MODEL

The traditional approach to forecasting monthly sales for a customer class is to develop an econometric model that relates monthly sales to weather, seasonal variables, and economic conditions. Econometric models are well suited to identifying historical trends and to projecting these trends into the future. In contrast, end-use models can identify and isolate the end-use factors that are driving energy use. By incorporating end-use structure into an econometric model, the statistically adjusted end-use (SAE) modeling framework exploits the strengths of both approaches.

There are several advantages to this approach.

- The equipment efficiency and saturation trends, dwelling square footage, and thermal integrity changes embodied in the long-run end-use forecasts are introduced explicitly into the short-term monthly sales forecast. This provides a strong bridge between the two forecasts.
- By explicitly incorporating trends in equipment saturations, equipment efficiency, dwelling square footage, and thermal integrity levels, it is easier to explain changes in usage levels and changes in weather-sensitivity over time.
- Data for short-term models are often not sufficiently robust to support estimation of a full set of economic and demographic effects. By bundling these factors with equipment-oriented drivers, a rich set of model variables can be incorporated into the final model.

The main source of the SAE spreadsheets is the 2023 Annual Energy Outlook (AEO) database provided by the Energy Information Administration (EIA).

STATISTICALLY ADJUSTED END-USE MODELING FRAMEWORK

The statistically adjusted end-use modeling framework begins by defining energy use ($USE_{y,m}$) in year (y) and month (m) as the sum of energy used by heating equipment ($Heat_{y,m}$), cooling equipment ($Cool_{y,m}$), and other equipment ($Other_{y,m}$). Formally,

$$\mathrm{USE}_{y,m} = \mathrm{Heat}_{y,m} + \mathrm{Cool}_{y,m} + \mathrm{Other}_{y,m} \qquad (1)$$

Although monthly sales are measured for individual customers, the end-use components are not. Substituting estimates for the end-use elements gives the following econometric equation.

$$USE_m = a + b_1 \times XHeat_m + b_2 \times XCool_m + b_3 \times XOther_m + \varepsilon_m \quad (2)$$

$XHeat_m$, $XCool_m$, and $XOther_m$ are explanatory variables constructed from end-use information, dwelling data, weather data, and market data. Natural Resource Canada (NRCan) reported saturations, appliance energy use are used in calibrating the EIA end-use intensity estimates used in constructing the end-use model variables. The constructed model variables are in kWh per household or customer form. The estimated model can then be thought of as a statistically adjusted end-use model as the estimated model coefficients calibrate our initial end-use estimate to actual usage.

XHeat

Heating energy use depends on the following information:

- Number of heating degree days (HDD)
- Heating equipment saturation levels (Sat)
- Heating equipment operating efficiencies (Eff)
- Average number of days in the billing cycle for each month (Days)
- Thermal integrity and footage of homes (StructuralIndex)
- Average household size, household income, and energy prices

The heating variable is represented as the product of an annual equipment index and a monthly usage multiplier:

$$XHeat_{y,m} = HeatIndex_{y,m} \times HeatUse_{y,m} \quad (3)$$

Where:

- $XHeat_{y,m}$ is estimated heating energy use in year (y) and month (m)
- $HeatIndex_{y,m}$ is the monthly index of heating equipment
- $HeatUse_{y,m}$ is the monthly usage multiplier

The heating equipment index is defined as a weighted average across equipment types of equipment saturation levels normalized by operating efficiency levels. Given a set of fixed weights, the index will change over time with changes in equipment saturations (*Sat*), operating efficiencies (*Eff*), building structural index (*StructuralIndex*), and energy prices. Formally, the equipment index is defined as:

$$HeatIndex_y = StructuralIndex_y \times \sum_{Type} Weight^{Type} \times \frac{\left(Sat_y^{Type} / Eff_y^{Type} \right)}{\left(Sat_{15}^{Type} / Eff_{15}^{Type} \right)} \quad (4)$$

The *StructuralIndex* is constructed by combining the EIA's building shell efficiency index trends with surface area estimates, and then it is indexed to the 2015 value:

$$StructuralIndex_y = \frac{BuildingShellEfficiencyIndex_y \times SurfaceArea_y}{BuildingShellEfficiencyIndex_{15} \times SurfaceArea_{15}} \quad (5)$$

The *StructuralIndex* is defined on the *StructuralVars* tab of the SAE spreadsheets. Surface area is derived to account for roof and wall area of a standard dwelling based on the regional average square footage data obtained from EIA. The relationship between the square footage and surface area is constructed assuming an aspect ratio of 0.75 and an average of 25% two-story and 75% single-story. Given these assumptions, the approximate linear relationship for surface area is:

$$SurfaceArea_y = 892 + 1.44 \times Footage_y \quad (6)$$

In Equation 4, 2015 is used as a base year for normalizing the index. As a result, the ratio on the right is equal to 1.0 in 2015. In other years, it will be greater than 1.0 if equipment saturation levels are above their 2015 level. This will be counteracted by higher efficiency levels, which will drive the index downward. The weights are defined as follows.

$$Weight^{Type} = \frac{Energy_{15}^{Type}}{HH_{15}} \times HeatShare_{15}^{Type} \quad (7)$$

In the SAE spreadsheets, these weights are referred to as *Intensities* and are defined on the *EIAData* tab. With these weights, the *HeatIndex* value in 2015 will be equal to estimated annual heating intensity per household in that year. Variations from this value in other years will be proportional to saturation and efficiency variations around their base values.

For electric heating equipment, the SAE spreadsheets contain two equipment types: electric resistance furnaces/room units and electric space heating heat pumps.

Data for the equipment saturation and efficiency trends are presented on the *Shares* and *Efficiencies* tabs of the SAE spreadsheets. The efficiency for electric space heating heat pumps is given in terms of Heating Seasonal Performance Factor [BTU/Wh], and the efficiencies for electric furnaces and room units are estimated as 100%, which is equivalent to 3.41 BTU/Wh.

Price Impacts. In the 2007 version of the SAE models and thereafter, the Heat Index has been extended to account for the long-run impact of electric and natural gas prices. Since the Heat Index represents changes in the stock of space heating equipment, the price impacts are modeled to play themselves out over a 10-year horizon. To introduce price effects, the Heat Index as defined by Equation 4 above is multiplied by a 10-year moving-average of electric and gas prices. The level of the price impact is guided by the long-term price elasticities:

$$HeatIndex_y = StructuralIndex_y \times \sum_{Type} Weight^{Type} \times \frac{\left(Sat_y^{Type} \Big/ Eff_y^{Type} \right)}{\left(Sat_{15}^{Type} \Big/ Eff_{15}^{Type} \right)} \times$$

$$\left(TenYearMovingAverageElectric\,\mathrm{Price}_{y,m} \right)^{\phi} \times \left(TenYearMovingAverageGas\,\mathrm{Price}_{y,m} \right)^{\gamma} \quad (8)$$

Since the trends in the Structural index (the equipment saturations and efficiency levels) are provided exogenously by the EIA, the price impacts are introduced in a multiplicative form. As a result, the long-run change in the Heat Index represents a combination of adjustments to the

structural integrity of new homes, saturations in equipment and efficiency levels relative to what was contained in the base EIA long-term forecast.

Heating system usage levels are impacted on a monthly basis by several factors, including weather, household size, income levels, prices, and billing days. The estimates for space heating equipment usage levels are computed as follows:

$$HeatUse_{y,m} = \left(\frac{WgtHDD_{y,m}}{HDD_{15}}\right) \times \left(\frac{HHSize_{y}}{HHSize_{15}}\right)^{0.25} \times \left(\frac{Income_{y}}{Income_{15}}\right)^{0.20} \times \left(\frac{Elec\,\mathrm{Pr}ice_{y,m}}{Elec\,\mathrm{Pr}ice_{15,7}}\right)^{\lambda} \times \left(\frac{Gas\,\mathrm{Pr}ice_{y,m}}{Gas\,\mathrm{Pr}ice_{15,7}}\right)^{\kappa} \quad (9)$$

Where:

- *WgtHDD* is the weighted number of heating degree days in year (*y*) and month (*m*). This is constructed as the weighted sum of the current month's HDD and the prior month's HDD. The weights are 75% on the current month and 25% on the prior month.
- *HDD* is the annual heating degree days for 2015
- *HHSize* is average household size in a year (*y*)
- *Income* is average real income per household in year (*y*)
- *ElecPrice* is the average real price of electricity in month (*m*) and year (*y*)
- *GasPrice* is the average real price of natural gas in month (*m*) and year (*y*)

By construction, the $HeatUse_{y,m}$ variable has an annual sum that is close to 1.0 in the base year (2015). The first two terms, which involve billing days and heating degree days, serve to allocate annual values to the months. The remaining terms average to 1.0 in the base year. In other years, the values will reflect changes in the economic drivers, as transformed through the end-use elasticity parameters. The price impacts captured by the Usage equation represent short-term price response.

XCool

The explanatory variable for cooling loads is constructed in a similar manner. The amount of energy used by cooling systems depends on the following types of variables.

- Cooling degree days
- Cooling equipment saturation levels
- Cooling equipment operating efficiencies
- Average number of days in the billing cycle for each month
- Thermal integrity and footage of homes
- Average household size, household income, and energy prices

The cooling variable is represented as the product of an equipment-based index and monthly usage multiplier. That is,

$$XCool_{y,m} = CoolIndex_{y} \times CoolUse_{y,m} \quad (10)$$

Where:

- $XCool_{y,m}$ is estimated cooling energy use in year (y) and month (m)
- $CoolIndex_{y}$ is an index of cooling equipment
- $CoolUse_{y,m}$ is the monthly usage multiplier

As with heating, the cooling equipment index is defined as a weighted average across equipment types of equipment saturation levels normalized by operating efficiency levels. Formally, the cooling equipment index is defined as:

$$CoolIndex_{y} = StructuralIndex_{y} \times \sum_{Type} Weight^{Type} \times \frac{\left(Sat_{y}^{Type} / Eff_{y}^{Type} \right)}{\left(Sat_{15}^{Type} / Eff_{15}^{Type} \right)} \quad (11)$$

Data values in 2015 are used as a base year for normalizing the index, and the ratio on the right is equal to 1.0 in 2015. In other years, it will be greater than 1.0 if equipment saturation levels are above their 2015 level. This will be counteracted by higher efficiency levels, which will drive the index downward. The weights are defined as follows.

$$Weight^{Type} = \frac{Energy_{15}^{Type}}{HH_{15}} \times CoolShare_{15}^{Type} \quad (12)$$

In the SAE spreadsheets, these weights are referred to as *Intensities* and are defined on the *EIAData* tab. With these weights, the *CoolIndex* value in 2015 will be equal to estimated annual cooling intensity per household in that year. Variations from this value in other years will be proportional to saturation and efficiency variations around their base values.

For cooling equipment, the SAE spreadsheets contain three equipment types: central air conditioning, space cooling heat pump, and room air conditioning.

The equipment saturation and efficiency trends data are presented on the *Shares* and *Efficiencies* tabs of the SAE spreadsheets. The efficiency for space cooling heat pumps and central air conditioning (A/C) units are given in terms of Seasonal Energy Efficiency Ratio [BTU/Wh], and room A/C units efficiencies are given in terms of Energy Efficiency Ratio [BTU/Wh].

Price Impacts. In the 2007 SAE models and thereafter, the Cool Index has been extended to account for changes in electric and natural gas prices. Since the Cool Index represents changes in the stock of space heating equipment, it is anticipated that the impact of prices will be long-term in nature. The Cool Index as defined in Equation 11 above is then multiplied by a 10-year moving average of electric and gas prices. The level of the price impact is guided by the long-term price elasticities.

$$CoolIndex_y = StructuralIndex_y \times \sum_{Type} Weight^{Type} \times \frac{\left(Sat_y^{Type} \Big/ Eff_y^{Type} \right)}{\left(Sat_{15}^{Type} \Big/ Eff_{15}^{Type} \right)} \times \left(TenYearMovingAverageElectric\,\mathrm{Price}_{y,m} \right)^{\phi} \times \left(TenYearMovingAverageGas\,\mathrm{Price}_{y,m} \right)^{\gamma} \quad (13)$$

Since the trends in the Structural index, equipment saturations and efficiency levels are provided exogenously by the EIA, price impacts are introduced in a multiplicative form. The long-run change in the Cool Index represents a combination of adjustments to the structural integrity of new homes, saturations in equipment and efficiency levels. Without a detailed end-use model, it is not possible to isolate the price impact on any one of these concepts.

Cooling system usage levels are impacted monthly by several factors, including weather, household size, income levels, and prices. The estimates of cooling equipment usage levels are computed as follows:

$$CoolUse_{y,m} = \left(\frac{WgtCDD_{y,m}}{CDD_{15}}\right) \times \left(\frac{HHSize_{y}}{HHSize_{15}}\right)^{0.25} \times \left(\frac{Income_{y}}{Income_{15}}\right)^{0.20} \times \left(\frac{Elec\,\mathrm{Price}_{y,m}}{Elec\,\mathrm{Price}_{15}}\right)^{\lambda} \times \left(\frac{Gas\,\mathrm{Price}_{y,m}}{Gas\,\mathrm{Price}_{15}}\right)^{\kappa} \quad (14)$$

Where:

- *WgtCDD* is the weighted number of cooling degree days in year (*y*) and month (*m*). This is constructed as the weighted sum of the current month's CDD and the prior month's CDD. The weights are 75% on the current month and 25% on the prior month.
- *CDD* is the annual cooling degree days for 2015.

By construction, the *CoolUse* variable has an annual sum that is close to 1.0 in the base year (2015). The first two terms, which involve billing days and cooling degree days, serve to allocate annual values to months of the year. The remaining terms average to 1.0 in the base year. In other years, the values will change to reflect changes in the economic driver changes.

XOther

Monthly estimates of non-weather sensitive sales can be derived in a similar fashion to space heating and cooling. Based on end-use concepts, other sales are driven by:

- Appliance and equipment saturation levels
- Appliance efficiency levels
- Average number of days in the billing cycle for each month
- Average household size, real income, and real prices

The explanatory variable for other uses is defined as follows:

$$XOther_{y,m} = OtherEqpIndex_{y,m} \times OtherUse_{y,m} \quad (15)$$

The first term on the right-hand side of this expression ($OtherEqpIndex_y$) embodies information about appliance saturation and efficiency levels and monthly usage multipliers. The second term (*OtherUse*) captures the impact of changes in prices, income, household size, and number of billing-days on appliance utilization.

End-use indices are constructed in the SAE models. A separate end-use index is constructed for each end-use equipment type using the following function form.

$$7\ ApplianceIndex_{y,m} = Weight^{Type} \times \frac{\left(Sat_{y}^{Type} \Big/ \frac{1}{UEC_{y}^{Type}} \right)}{\left(Sat_{15}^{Type} \Big/ \frac{1}{UEC_{15}^{Type}} \right)} \times MoMult_{m}^{Type} \times \left(TenYearMovingAverageElectric\ \mathrm{Price}\right)^{\lambda} \times \left(TenYearMovingAverageGas\ \mathrm{Price}\right)^{\kappa} \quad (16)$$

Where:

- *Weight* is the weight for each appliance type
- *Sat* represents the fraction of households, who own an appliance type
- $MoMult_m$ is a monthly multiplier for the appliance type in month (*m*)
- *Eff* is the average operating efficiency the appliance
- *UEC* is the unit energy consumption for appliances

This index combines information about trends in saturation levels and efficiency levels for the main appliance categories with monthly multipliers for lighting, water heating, and refrigeration.

The appliance saturation and efficiency trends data are presented on the Shares and Efficiencies tabs of the SAE spreadsheets.

Further monthly variation is introduced by multiplying by usage factors that cut across all end uses, constructed as follows:

$$ApplianceUse_{y,m} = \left(\frac{BDays_{y,m}}{30.44}\right) \times \left(\frac{HHSize_{y}}{HHSize_{15}}\right)^{0.46} \times \left(\frac{Income_{y}}{Income_{15}}\right)^{0.10} \times \left(\frac{Elec\,\mathrm{Price}_{y,m}}{Elec\,\mathrm{Price}_{15}}\right)^{\phi} \times \left(\frac{Gas\,\mathrm{Price}_{y,m}}{Gas\,\mathrm{Price}_{15}}\right)^{\lambda} \quad (17)$$

The index for other uses is derived then by summing across the appliances:

$$OtherEqpIndex_{y,m} = \sum_{k} ApplianceIndex_{y,m} \times ApplianceUse_{y,m} \quad (18)$$

APPENDIX B: COMMERCIAL STATISTICALLY ADJUSTED END-USE MODEL

The commercial SAE is like the residential model, other than generally these are total sales models instead of use per customer models. Also, commercial intensities are expressed in kWh per sq. ft. instead of kWh per household. There are 10 primary commercial end-use equipment categories across 10 building types. End-use intensities are weighed across building types and mapped to either heating, cooling, or base use. The source for the commercial SAE spreadsheets is the 2023 Annual Energy Outlook (AEO) database provided by the Energy Information Administration (EIA). The intensities based on the East North Central (ENC) service area are calibrated to Ontario based on NRCan reported end-use energy consumption for the primary end-uses.

STATISTICALLY ADJUSTED END-USE MODEL FRAMEWORK

The statistically adjusted end-use modeling framework begins by defining energy use ($USE_{y,m}$) in year (y) and month (m) as the sum of energy used by heating equipment ($Heat_{y,m}$), cooling equipment ($Cool_{y,m}$), and other equipment ($Other_{y,m}$). Formally,

$$USE_{y,m} = Heat_{y,m} + Cool_{y,m} + \text{Other}_{y,m} \quad (1)$$

Although monthly sales are measured for individual customers, the end-use components are not. Substituting estimates for the end-use elements gives the following econometric equation.

$$USE_m = a + b_1 \times XHeat_m + b_2 \times XCool_m + b_3 \times XOther_m + \varepsilon_m \quad (2)$$

$XHeat_m$, $XCool_m$, and $XOther_m$ are explanatory variables constructed from reported end-use sales, stock efficiency for some end-uses, and square footage. Other model variables include HDD, CDD, and economic data usually including regional economic output and employment. Commercial estimates of heating, cooling, and base use are then used to driver commercial sales. Estimated monthly regression models effectively calibrate the XHeat, XCool, and XOther variables to observed monthly sales.

XHeat

As represented in the Commercial SAE spreadsheets, energy use by space heating systems depends on the following types of variables.

- Heating degree days,
- Heating intensity,
- Commercial output and energy price.

The heating variable is represented as the product of an annual equipment index and a monthly usage multiplier. That is,

$$XHeat_{y,m} = HeatIndex_{y,m} \times HeatUse_{y,m} \quad (3)$$

Where:

- $XHeat_{y,m}$ is estimated heating energy use in year (y) and month (m)
- $HeatIndex_{y,m}$ is the annual index of heating equipment
- $HeatUse_{y,m}$ is the monthly usage multiplier

The heating equipment index is composed of electric space heating intensity. The index will change over time with changes in heating intensity. Formally, the equipment index is defined as:

$$HeatIndex_y = HeatSales_{13} \times \frac{(HeatIntensity_y)}{(HeatIntensity_{13})} \quad (4)$$

In this expression, 2013 is used as a base year for normalizing the index. The ratio on the right is equal to 1.0 in 2013. In other years, it will be greater than 1.0 if intensity levels are above their 2013 level.

$$HeatSales_{13} = \left(\frac{kWh}{Sqft}\right)_{Heating} \times \left(\frac{CommercialSales_{13}}{\sum_e {}^{kWh}/_{Sqft_e}}\right) \quad (5)$$

Here, base-year sales for space heating is the product of the average space heating intensity value and the ratio of total commercial sales in the base year over the sum of the end-use intensity values. In the Commercial SAE Spreadsheets, the space heating sales value is defined on the *BaseYrInput* tab. The resulting $HeatIndex_y$ value in 2013 will be equal to the estimated annual heating sales in that year. Variations from this value in other years will be proportional to saturation and efficiency variations around their base values.

Heating system usage levels are impacted monthly by several factors, including weather, commercial level economic activity, and prices. Estimates for space heating equipment usage levels are computed as follows:

$$HeatUse_{y,m} = \left(\frac{WgtHDD_{y,m}}{HDD_{13}}\right) \times \left(\frac{Output_y}{Output_{13}}\right) \times \left(\frac{Price_{y,m}}{Price_{13}}\right)^{-0.18} \quad (6)$$

Where:

- *WgtHDD* is the weighted number of heating degree days in year *y* and month *m*. This is constructed as the weighted sum of the current month's HDD and the prior month's HDD. The weights are 75% on the current month and 25% on the prior month
- *HDD* is the annual heating degree days for 2013,
- *Output* is a real commercial output driver in year *y*,
- *Price* is the average real price of electricity in month *m* and year *y*,

By construction, the $HeatUse_{y,m}$ variable has an annual sum that is close to 1.0 in the base year (2013). The first terms, which involve heating degree days, serves to allocate annual values to months of the year. The remaining terms average to 1.0 in the base year. In other years, the values will reflect changes in commercial output and prices, as transformed through the end-use elasticity parameters. For example, if the real price of electricity goes up 10% relative to the base year value, the price term will contribute a multiplier of about .98 (computed as 1.10 to the -0.18 power).

XCool

The explanatory variable for cooling loads is constructed in a similar manner. The amount of energy used by cooling systems depends on the following types of variables.

- Cooling degree days,
- Cooling intensity,
- Commercial output and energy price.

The cooling variable is represented as the product of an equipment-based index and monthly usage multiplier. That is,

$$XCool_{y,m} = CoolIndex_y \times CoolUse_{y,m} \quad (7)$$

Where:

- $XCool_{y,m}$ is estimated cooling energy use in year y and month m,
- $CoolIndex_y$ is an index of cooling equipment, and
- $CoolUse_{y,m}$ is the monthly usage multiplier.

As with heating, the cooling equipment index depends on equipment saturation levels (*CoolShare*) normalized by operating efficiency levels (Eff). Formally, the cooling equipment index is defined as:

$$CoolIndex_y = CoolSales_{13} \times \frac{\left({CoolShare_y}/{Eff_y}\right)}{\left({CoolShare_{13}}/{Eff_{13}}\right)} \quad (8)$$

Data values in 2013 are used as a base year for normalizing the index, and the ratio on the right is equal to 1.0 in 2013. In other years, it will be greater than 1.0 if equipment saturation levels are above their 2013 level. This will be counteracted by higher efficiency levels, which will drive the index downward. Estimates of base year cooling sales are defined as follows.

$$CoolSales_{13} = \left(\frac{kWh}{Sqft}\right)_{Cooling} \times \left(\frac{CommercialSales_{13}}{\sum_e {kWh}/{Sqft_e}}\right) \quad (9)$$

Here, base-year sales for space cooling is the product of the average space cooling intensity value and the ratio of total commercial sales in the base year over the sum of the end-use intensity values. In the Commercial SAE Spreadsheets, the space cooling sales value is defined on the *BaseYrInput* tab. The resulting *CoolIndex* value in 2013 will be equal to the estimated

annual cooling sales in that year. Variations from this value in other years will be proportional to saturation and efficiency variations around their base values.

Cooling system usage levels are impacted on a monthly basis by several factors, including weather, economic activity levels and prices. Using the COMMEND default parameters, the estimates of cooling equipment usage levels are computed as follows:

$$CoolUse_{y,m} = \left(\frac{WgtCDD_{y,m}}{CDD_{13}}\right) \times \left(\frac{Output_y}{Output_{13}}\right) \times \left(\frac{Price_{y,m}}{Price_{13}}\right)^{-0.18} \quad (10)$$

Where:

- *WgtCDD* is the weighted number of cooling degree days in year (*y*) and month (*m*). This is constructed as the weighted sum of the current month's CDD and the prior month's CDD. The weights are 75% on the current month and 25% on the prior month.
- *CDD* is the annual cooling degree days for 2013.

By construction, the *CoolUse* variable has an annual sum that is close to 1.0 in the base year (2013). The first two terms, which involve billing days and cooling degree days, serve to allocate annual values to months of the year. The remaining terms average to 1.0 in the base year. In other years, the values will change to reflect changes in commercial output and prices.

XOther

Monthly estimates of non-weather sensitive sales can be derived in a similar fashion to space heating and cooling. Based on end-use concepts, other sales are driven by:

- Equipment intensities,
- Average number of days in the billing cycle for each month, and
- Real commercial output and real prices.

The explanatory variable for other uses is defined as follows:

$$XOther_{y,m} = OtherIndex_{y,m} \times OtherUse_{y,m} \quad (11)$$

The second term on the right-hand side of this expression embodies information about equipment saturation levels and efficiency levels. The equipment index for other uses is defined as follows:

$$OtherIndex_{y,m} = \sum_{Type} Weight_{13}^{Type} \times \left(\frac{Share_y^{Type} / Eff_y^{Type}}{Share_{13}^{Type} / Eff_{13}^{Type}} \right) \quad (12)$$

Where:

- Weight is the weight for each equipment type,
- Share represents the fraction of floor stock with an equipment type, and
- Eff is the average operating efficiency.

This index combines information about trends in saturation levels and efficiency levels for the main equipment categories. The weights are defined as follows.

$$Weight_{13}^{Type} = \left(\frac{kWh}{Sqft}\right)_{Type} \times \left(\frac{CommercialSales_{13}}{\sum_e {kWh}/{Sqft_e}} \right) \quad (13)$$

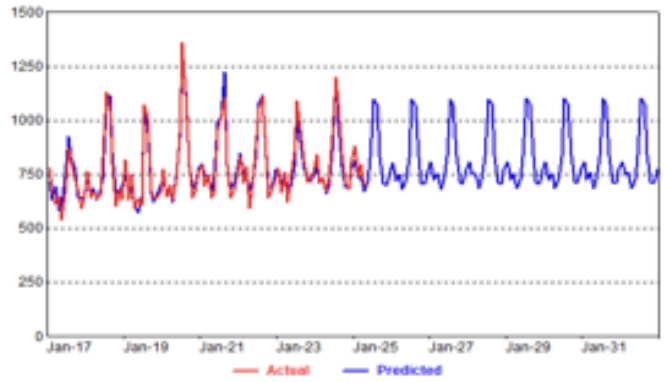
Further monthly variation is introduced by multiplying by usage factors that cut across all end-uses, constructed as follows:

$$OtherUse_{y,m} = \left(\frac{BDays_{y,m}}{30.44}\right) \times \left(\frac{Output_y}{Output_{13}}\right) \times \left(\frac{Price_{y.m}}{Price_{13}}\right)^{-0.18} \quad (14)$$

APPENDIX C: MODEL STATISTICS

BRZ Res Average Use

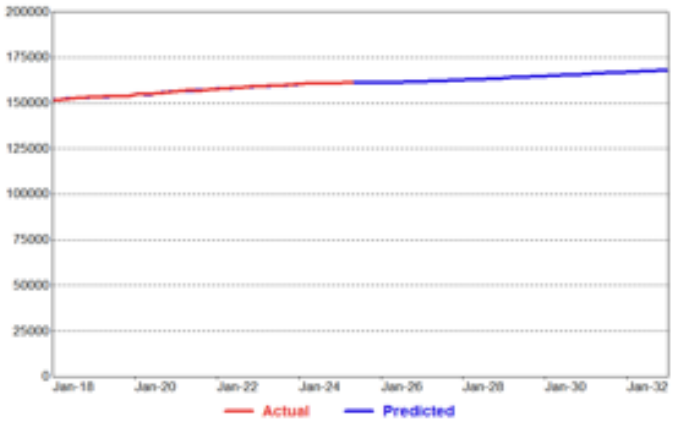
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructRes.XOther	1.09	0.028	39.396	0.00%
mStructRes.XHeat	0.532	0.06	8.872	0.00%
mStructRes.XCool	1.04	0.046	22.42	0.00%
mStructRes.XCoolLag	0.217	0.043	5.046	0.00%
mBin.AftMay20	71.212	9.566	7.444	0.00%
mBin.Dec17	-110.377	47.385	-2.329	2.20%
mBin.July24	117.096	47.416	2.47	1.53%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	93
R-Squared	0.92
Adjusted R-Squared	0.915
AIC	7.724
BIC	7.907
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-521.1
Model Sum of Squares	2,271,904.22
Sum of Squared Errors	196,683.44
Mean Squared Error	2,114.88
Std. Error of Regression	45.99
Mean Abs. Dev. (MAD)	36.04
Mean Abs. % Err. (MAPE)	4.79%
Durbin-Watson Statistic	1.861

BRZ Res Customers

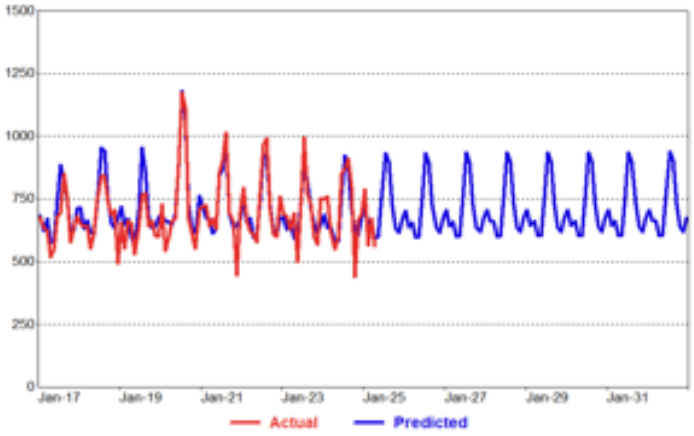
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	110656.542	1054.229	104.964	0.00%
mEcon.Cust_Var	38963.727	972.342	40.072	0.00%
mBin.Dec19	725.467	163.224	4.445	0.00%
mBin.Jan20	-1511.541	214.455	-7.048	0.00%
mBin.Feb20	-805.605	161.374	-4.992	0.00%
mBin.Yr20Plus	3041.529	113.344	26.835	0.00%
MA(1)	0.986	0.095	10.357	0.00%
MA(2)	0.556	0.096	5.804	0.00%



Model Statistics	
Iterations	38
Adjusted Observations	88
Deg. of Freedom for Error	80
R-Squared	0.997
Adjusted R-Squared	0.997
AIC	10.223
BIC	10.449
F-Statistic	4314.98
Prob (F-Statistic)	0
Log-Likelihood	-566.7
Model Sum of Squares	762,982,805.80
Sum of Squared Errors	2,020,821.19
Mean Squared Error	25,260.26
Std. Error of Regression	158.93
Mean Abs. Dev. (MAD)	109.22
Mean Abs. % Err. (MAPE)	0.07%
Durbin-Watson Statistic	1.617

ERZ Res Average use

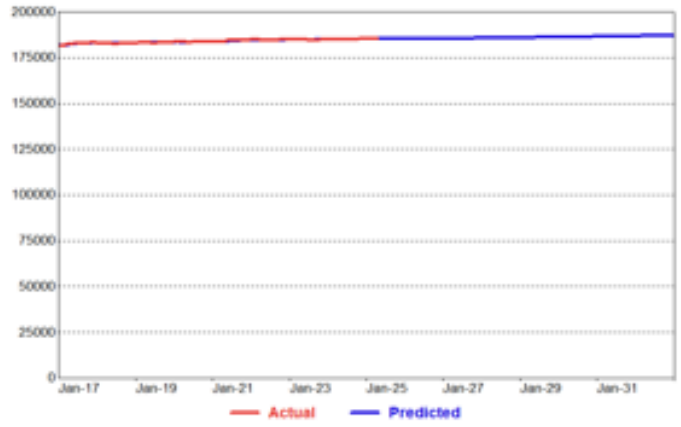
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructRes.XOther	0.78	0.194	4.018	0.01%
mStructRes.XHeat	0.474	0.086	5.531	0.00%
mStructRes.XCool	0.497	0.12	4.147	0.01%
GMRVariables.Peel_Res	150.321	92.138	1.631	10.67%
LoadLoadIndex.LL_ERZ_Res	3.283	0.924	3.552	0.06%
mBin.Jun	120.943	32.812	3.686	0.04%
mBin.Jul	184.535	53.72	3.435	0.09%
mBin.Aug	179.835	43.702	4.115	0.01%
mBin.Sep	118.19	28.08	4.209	0.01%
mBin.Oct	47.28	25.934	1.823	7.20%



Model Statistics	
Iterations	1
Adjusted Observations	91
Deg. of Freedom for Error	81
R-Squared	0.833
Adjusted R-Squared	0.815
AIC	8.108
BIC	8.384
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-488.04
Model Sum of Squares	1,213,938.35
Sum of Squared Errors	242,582.49
Mean Squared Error	2,994.85
Std. Error of Regression	54.73
Mean Abs. Dev. (MAD)	42.09
Mean Abs. % Err. (MAPE)	6.04%
Durbin-Watson Statistic	1.492

ERZ Res Customers

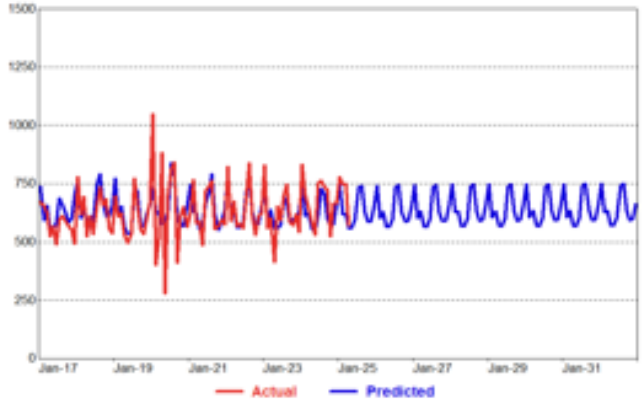
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	81459.383	10475.945	7.776	0.00%
mEcon.Cust_Var	5293.684	1667.357	3.175	0.20%
ResCust.LagDep(12)	0.526	0.066	7.983	0.00%
MA(1)	1.278	0.087	14.705	0.00%
MA(2)	0.981	0.122	8.065	0.00%
MA(3)	0.551	0.087	6.306	0.00%



Model Statistics	
Iterations	39
Adjusted Observations	100
Deg. of Freedom for Error	94
R-Squared	0.981
Adjusted R-Squared	0.98
AIC	9.852
BIC	10.008
F-Statistic	955.589
Prob (F-Statistic)	0
Log-Likelihood	-628.49
Model Sum of Squares	85,638,948.78
Sum of Squared Errors	1,684,837.33
Mean Squared Error	17,923.80
Std. Error of Regression	133.88
Mean Abs. Dev. (MAD)	99.02
Mean Abs. % Err. (MAPE)	0.05%
Durbin-Watson Statistic	1.521

GRZ Res Average Use

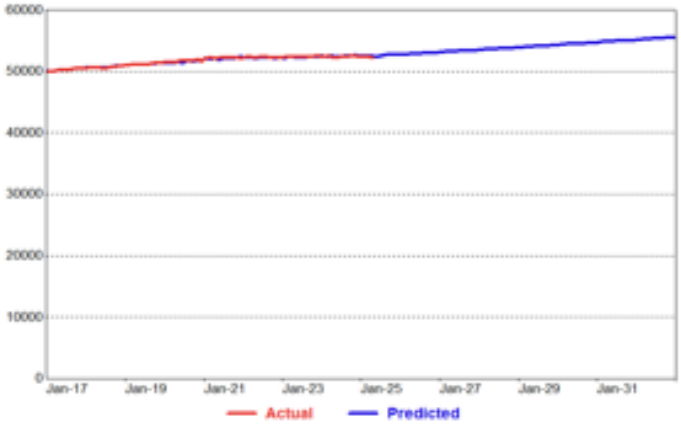
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructRes.XOther	1.013	0.035	28.579	0.00%
mStructRes.XHeat	0.524	0.096	5.474	0.00%
mStructRes.XCool	0.449	0.064	7.034	0.00%
mStructRes.XCoolLag	0.185	0.06	3.072	0.28%
mBin.Jan	64.07	27.242	2.352	2.09%



Model Statistics	
Iterations	1
Adjusted Observations	93
Deg. of Freedom for Error	88
R-Squared	0.557
Adjusted R-Squared	0.537
AIC	8.309
BIC	8.445
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-513.32
Model Sum of Squares	426,328.24
Sum of Squared Errors	339,061.98
Mean Squared Error	3,852.98
Std. Error of Regression	62.07
Mean Abs. Dev. (MAD)	49.12
Mean Abs. % Err. (MAPE)	7.72%
Durbin-Watson Statistic	1.824

GRZ Res Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	26709.253	1092.319	24.452	0.00%
mEcon.Cust_Var	18582.66	865.654	21.467	0.00%
GMR.Wel_Res	3850.018	496.656	7.752	0.00%
mBin.Dec20	-575.499	83.026	-6.932	0.00%
mBin.May20	722.512	95.487	7.567	0.00%
mBin.Jun20	348.178	93.465	3.725	0.03%
mBin.Yr23Plus	-218.904	83.799	-2.612	1.05%
MA(1)	0.989	0.109	9.055	0.00%
MA(2)	0.724	0.129	5.626	0.00%
MA(3)	0.412	0.109	3.768	0.03%

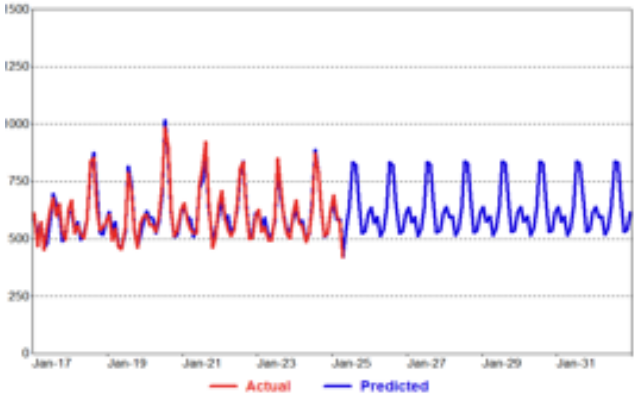


Model Statistics	
Iterations	49
Adjusted Observations	100
Deg. of Freedom for Error	90
R-Squared	0.984
Adjusted R-Squared	0.982
AIC	9.416
BIC	9.676
F-Statistic	608.781
Prob (F-Statistic)	0
Log-Likelihood	-602.67
Model Sum of Squares	61,200,473.74
Sum of Squared Errors	1,005,295.08
Mean Squared Error	11,169.95
Std. Error of Regression	105.69
Mean Abs. Dev. (MAD)	73.84
Mean Abs. % Err. (MAPE)	0.14%
Durbin-Watson Statistic	1.709

HRZ Res Average Use

Variable	Coefficient	StdErr	T-Stat	P-Value
mStructRes.XOther	0.907	0.026	34.273	0.00%
mStructRes.XHeat	0.41	0.048	8.534	0.00%
mStructRes.XCool	0.783	0.038	20.536	0.00%
mStructRes.XCoolLag	0.257	0.034	7.573	0.00%
mBin.Jul23	105.258	30.192	3.486	0.08%
mBin.Apr25	-84.825	31.179	-2.721	0.78%
mBin.Yr20Plus	39.005	6.164	6.328	0.00%
mBin.Apr	-28.852	12.196	-2.366	2.02%
mBin.May	-21.854	13.684	-1.597	11.38%
mBin.Oct	-48.247	12.639	-3.817	0.03%
mBin.Nov	-28.157	11.476	-2.454	1.61%

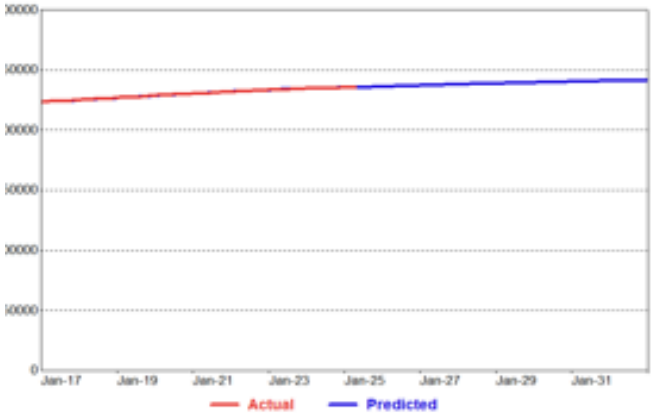
Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	89
R-Squared	0.942
Adjusted R-Squared	0.935
AIC	6.859
BIC	7.146
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-473.87
Model Sum of Squares	1,239,393.47
Sum of Squared Errors	76,466.08
Mean Squared Error	859.17
Std. Error of Regression	29.31
Mean Abs. Dev. (MAD)	22.36
Mean Abs. % Err. (MAPE)	3.73%
Durbin-Watson Statistic	1.756



HRZ Res Customers

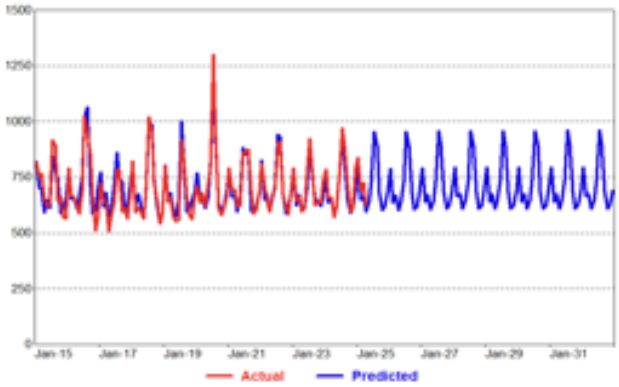
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	241688.092	8025.197	30.116	0.00%
mEcon.Cust_Var	4311.595	2523.31	1.709	9.07%
AR(1)	0.993	0.003	313.723	0.00%

Model Statistics	
Iterations	9
Adjusted Observations	99
Deg. of Freedom for Error	96
R-Squared	0.999
Adjusted R-Squared	0.999
AIC	9.479
BIC	9.558
F-Statistic	52256.448
Prob (F-Statistic)	0
Log-Likelihood	-606.68
Model Sum of Squares	1,326,984,627.97
Sum of Squared Errors	1,218,897.67
Mean Squared Error	12,696.85
Std. Error of Regression	112.68
Mean Abs. Dev. (MAD)	80.75
Mean Abs. % Err. (MAPE)	0.04%
Durbin-Watson Statistic	2.038



PRZ Res Average Use

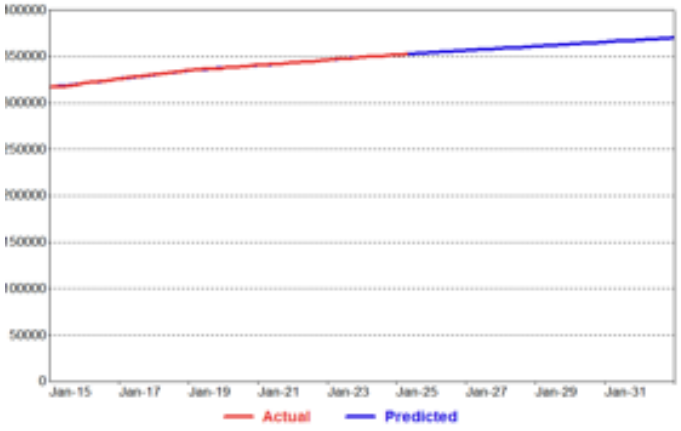
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructRes.XOther	1.094	0.023	46.941	0.00%
mStructRes.XHeat	0.476	0.063	7.513	0.00%
mStructRes.XCool	0.97	0.043	22.343	0.00%
mBin.Nov18	-95.306	52.341	-1.821	7.12%
mBin.May18	-110.758	52.414	-2.113	3.67%
mBin.Dec18	-98.985	52.52	-1.885	6.20%
mBin.Aug21	-175.575	54.069	-3.247	0.15%
mBin.Jan	71.341	19.256	3.705	0.03%



Model Statistics	
Iterations	1
Adjusted Observations	124
Deg. of Freedom for Error	116
R-Squared	0.845
Adjusted R-Squared	0.836
AIC	7.96
BIC	8.142
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-661.47
Model Sum of Squares	1,700,919.46
Sum of Squared Errors	312,166.32
Mean Squared Error	2,691.09
Std. Error of Regression	51.88
Mean Abs. Dev. (MAD)	37.17
Mean Abs. % Err. (MAPE)	5.35%
Durbin-Watson Statistic	1.721

PRZ Res Customers

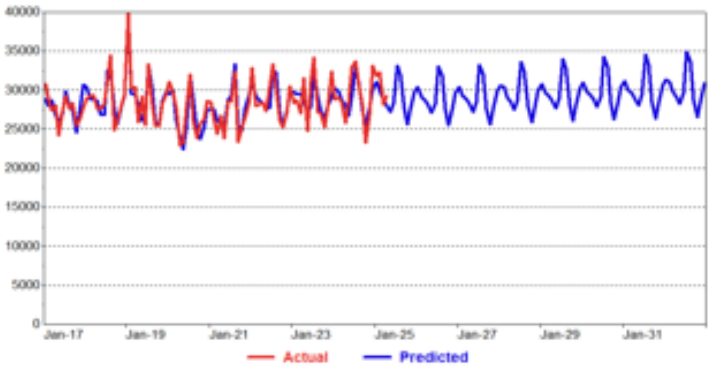
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	38163.38	2471.318	15.443	0.00%
mEconVars.ResCust_Var	13086.279	2701.807	4.844	0.00%
ResCust.LagDep(12)	0.853	0.015	55.647	0.00%
MA(1)	1.142	0.082	13.853	0.00%
MA(2)	0.451	0.083	5.463	0.00%



Model Statistics	
Iterations	37
Adjusted Observations	124
Deg. of Freedom for Error	119
R-Squared	0.999
Adjusted R-Squared	0.999
AIC	11.106
BIC	11.22
F-Statistic	50695.524
Prob (F-Statistic)	0
Log-Likelihood	-859.54
Model Sum of Squares	12,981,486,329.86
Sum of Squared Errors	7,618,014.11
Mean Squared Error	64,016.93
Std. Error of Regression	253.02
Mean Abs. Dev. (MAD)	190.57
Mean Abs. % Err. (MAPE)	0.06%
Durbin-Watson Statistic	1.656

BRZ GSL50 Sales

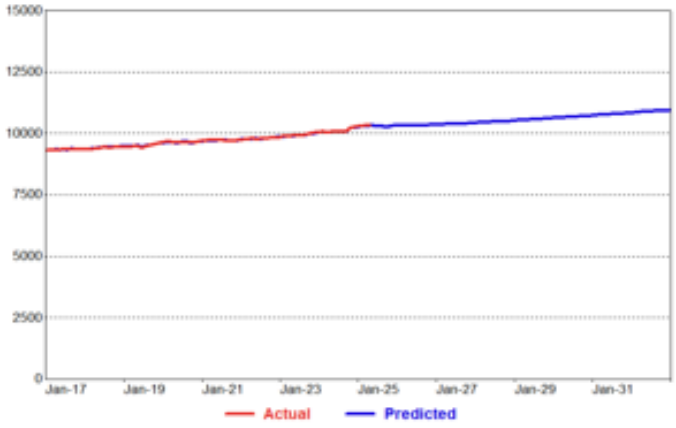
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSL50.XOther	0.23	0.016	14.592	0.00%
mStructGSL50.XHeat	0.134	0.018	7.629	0.00%
mStructGSL50.XCool	0.051	0.005	10.325	0.00%
GMRVariables.Peel_Retail_Rec	3096.441	1420.328	2.18	3.18%
mBin.Feb	1863.752	615.592	3.028	0.32%
mBin.Apr	1403.821	578.963	2.425	1.73%
mBin.Oct	-1312.104	638.876	-2.054	4.28%
mBin.Jan19	9144.555	1626.258	5.623	0.00%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	92
R-Squared	0.73
Adjusted R-Squared	0.709
AIC	14.78
BIC	14.989
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-872.9
Model Sum of Squares	604,675,581.16
Sum of Squared Errors	223,605,005.33
Mean Squared Error	2,430,489.19
Std. Error of Regression	1,559.00
Mean Abs. Dev. (MAD)	1,205.13
Mean Abs. % Err. (MAPE)	4.28%
Durbin-Watson Statistic	2.339

BRZ GSL50 Customers

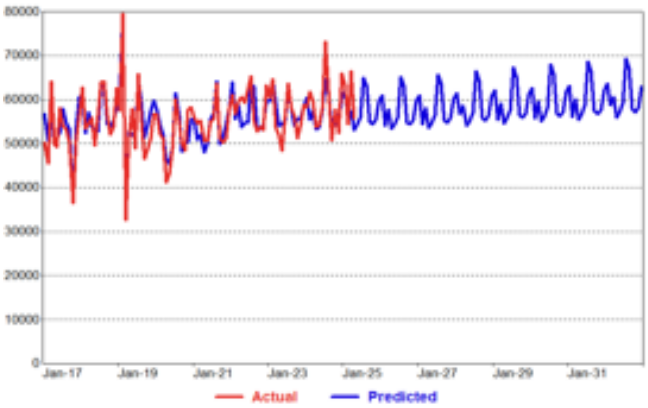
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	3634.652	323.907	11.221	0.00%
mEcon.Cust_Var	2712.339	349.423	7.762	0.00%
GSL50Cust.LagDep(12)	0.317	0.061	5.197	0.00%
mBin.Oct24Plus	119.933	19.437	6.17	0.00%
mBin.Jun19	-68.603	12.935	-5.304	0.00%
MA(1)	1.249	0.105	11.894	0.00%
MA(2)	1.313	0.157	8.373	0.00%
MA(3)	1.231	0.19	6.466	0.00%
MA(4)	0.893	0.191	4.688	0.00%
MA(5)	0.664	0.158	4.201	0.01%
MA(6)	0.241	0.107	2.263	2.61%



Model Statistics	
Iterations	57
Adjusted Observations	100
Deg. of Freedom for Error	89
R-Squared	0.995
Adjusted R-Squared	0.994
AIC	6.212
BIC	6.498
F-Statistic	1671.08
Prob (F-Statistic)	0
Log-Likelihood	-441.47
Model Sum of Squares	7,511,393.20
Sum of Squared Errors	40,004.91
Mean Squared Error	449.49
Std. Error of Regression	21.2
Mean Abs. Dev. (MAD)	15.91
Mean Abs. % Err. (MAPE)	0.16%
Durbin-Watson Statistic	1.859

ERZ GSL50 Sales

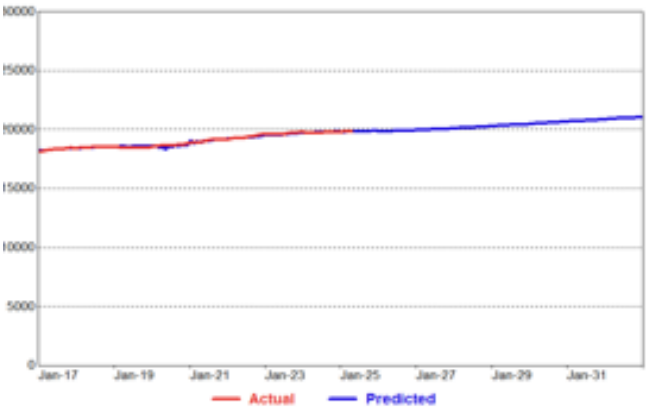
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSL50.XOther	0.521	0.01	53.741	0.00%
mStructGSL50.XHeat	0.257	0.034	7.469	0.00%
mStructGSL50.XCool	0.089	0.01	8.895	0.00%
mBin.Yrs20_21	-1236.284	847.54	-1.459	14.81%
mBin.Oct17	-14853.741	3700.019	-4.015	0.01%
mBin.Feb19	25601.207	3697.898	6.923	0.00%
mBin.Mar19	-25555.552	3684.496	-6.936	0.00%
mBin.Feb23	10519.24	3679.683	2.859	0.53%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	92
R-Squared	0.73
Adjusted R-Squared	0.71
AIC	16.472
BIC	16.68
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-957.49
Model Sum of Squares	3,283,458,686.05
Sum of Squared Errors	1,213,807,716.81
Mean Squared Error	13,193,562.14
Std. Error of Regression	3,632.29
Mean Abs. Dev. (MAD)	2,699.34
Mean Abs. % Err. (MAPE)	4.89%
Durbin-Watson Statistic	1.752

ERZ GSL50 Customers

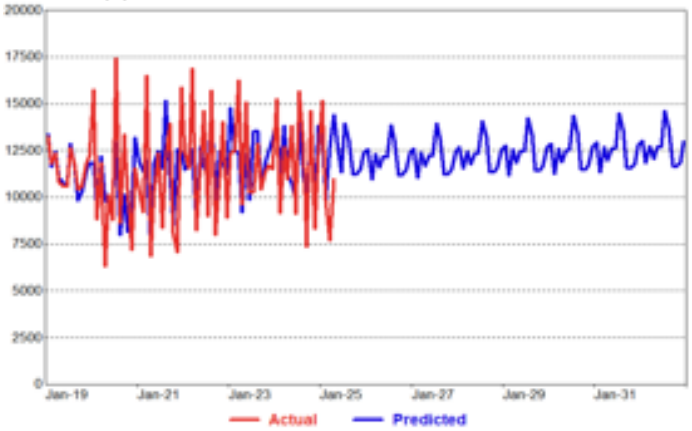
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	10973.924	394.84	27.793	0.00%
mEcon.Cust_Var	7012.343	366.345	19.141	0.00%
mBin.Yr21Plus	341.79	39.532	8.646	0.00%
MA(1)	0.815	0.06	13.587	0.00%



Model Statistics	
Iterations	17
Adjusted Observations	100
Deg. of Freedom for Error	96
R-Squared	0.983
Adjusted R-Squared	0.982
AIC	8.63
BIC	8.73
F-Statistic	1843.352
Prob (F-Statistic)	0
Log-Likelihood	-569.28
Model Sum of Squares	29,698,012.13
Sum of Squared Errors	515,547.98
Mean Squared Error	5,370.29
Std. Error of Regression	73.28
Mean Abs. Dev. (MAD)	51.15
Mean Abs. % Err. (MAPE)	0.27%
Durbin-Watson Statistic	1.116

GRZ GSL50 Sales

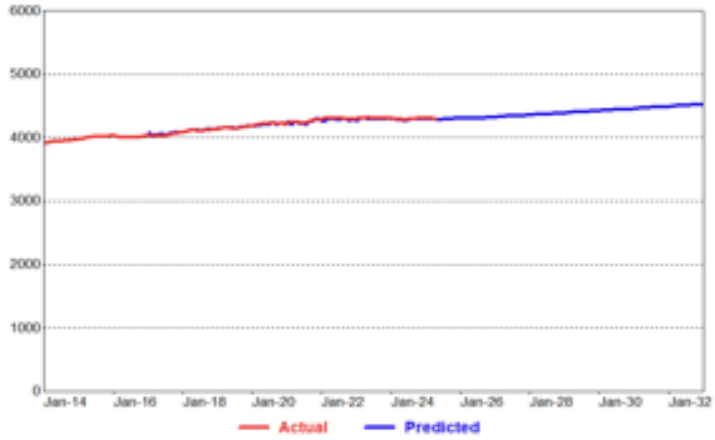
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSL50.XOther	0.148	0.024	6.269	0.00%
mStructGSL50.XHeat	0.078	0.023	3.384	0.12%
mStructGSL50.XCool	0.02	0.007	2.808	0.65%
GSL50Sales.LagDep(1)	-0.308	0.195	-1.582	11.84%
MA(1)	-0.196	0.233	-0.838	40.50%
MA(2)	-0.176	0.168	-1.043	30.05%



Model Statistics	
Iterations	99
Adjusted Observations	73
Deg. of Freedom for Error	67
R-Squared	0.331
Adjusted R-Squared	0.281
AIC	15.408
BIC	15.596
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-659.97
Model Sum of Squares	150,641,065.02
Sum of Squared Errors	304,415,099.45
Mean Squared Error	4,543,508.95
Std. Error of Regression	2,131.55
Mean Abs. Dev. (MAD)	1,577.06
Mean Abs. % Err. (MAPE)	13.78%
Durbin-Watson Statistic	1.962

GRZ GSL50 Customers

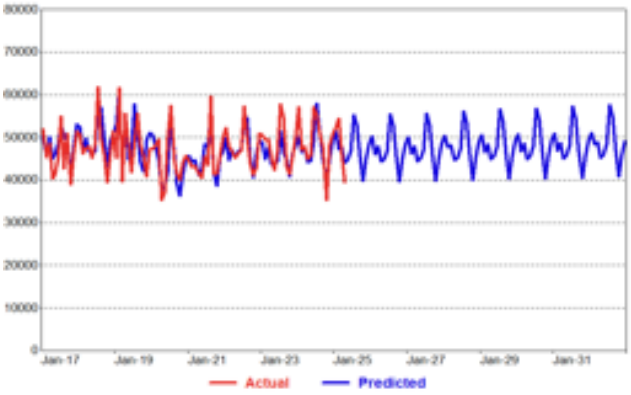
Variable	Coefficient	StdErr	T-Stat	P-Value
ResCust.Predicted	0.081	0	936.405	0.00%
MA(1)	1.032	0.075	13.839	0.00%
MA(2)	0.898	0.083	10.782	0.00%
MA(3)	0.954	0.084	11.306	0.00%
MA(4)	0.536	0.076	7.077	0.00%



Model Statistics	
Iterations	30
Adjusted Observations	100
Deg. of Freedom for Error	95
R-Squared	0.981
Adjusted R-Squared	0.98
AIC	5.17
BIC	5.3
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-395.36
Model Sum of Squares	805,506.01
Sum of Squared Errors	15,905.65
Mean Squared Error	167.43
Std. Error of Regression	12.94
Mean Abs. Dev. (MAD)	9.43
Mean Abs. % Err. (MAPE)	0.22%
Durbin-Watson Statistic	1.755

HRZ GSL50 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSL50.XOther	0.344	0.034	10.181	0.00%
mStructGSL50.XHeat	0.219	0.036	5.997	0.00%
mStructGSL50.XCool	0.101	0.013	8.015	0.00%
GMR.Ham_Workplace	10349.049	3062.665	3.379	0.11%
mBin.Oct	-4397.825	1487.827	-2.956	0.40%
mBin.Feb19	13730.06	3822.899	3.592	0.05%
mBin.Mar19	-10932.069	3789.172	-2.885	0.49%
mBin.Apr19	9498.127	3777.941	2.514	1.37%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	92
R-Squared	0.571
Adjusted R-Squared	0.538
AIC	16.529
BIC	16.738
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-960.35
Model Sum of Squares	1,710,003,619.42
Sum of Squared Errors	1,285,381,533.78
Mean Squared Error	13,971,538.41
Std. Error of Regression	3,737.85
Mean Abs. Dev. (MAD)	2,786.47
Mean Abs. % Err. (MAPE)	5.91%
Durbin-Watson Statistic	1.75

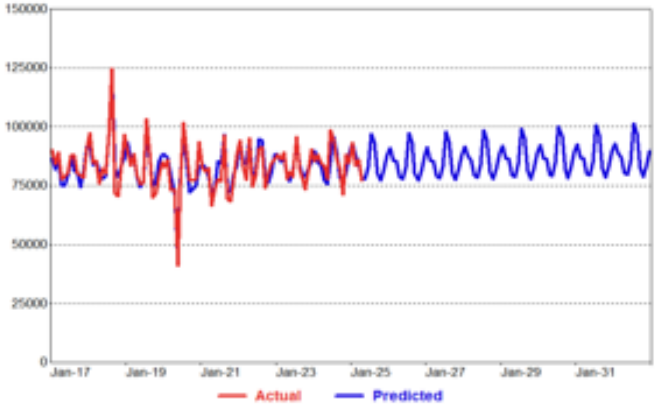
HRZ GSL50 Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	8310.276	560.924	14.815	0.00%
ResCust.Predicted	0.047	0.002	19.311	0.00%
mBin.Feb18	-1337.579	46.14	-28.99	0.00%
mBin.Aug18	548.218	46.278	11.846	0.00%
mBin.Jan18	229.326	46.711	4.909	0.00%
mBin.Sept18	-361.169	46.172	-7.822	0.00%
MA(1)	-0.427	0.061	-7.006	0.00%
MA(2)	0.805	0.061	13.139	0.00%

Model Statistics	
Iterations	36
Adjusted Observations	99
Deg. of Freedom for Error	91
R-Squared	0.931
Adjusted R-Squared	0.926
AIC	8.648
BIC	8.857
F-Statistic	176.666
Prob (F-Statistic)	0
Log-Likelihood	-560.53
Model Sum of Squares	6,519,912.26
Sum of Squared Errors	479,769.82
Mean Squared Error	5,272.20
Std. Error of Regression	72.61
Mean Abs. Dev. (MAD)	49.95
Mean Abs. % Err. (MAPE)	0.26%
Durbin-Watson Statistic	2.208

PRZ GSL50 Sales

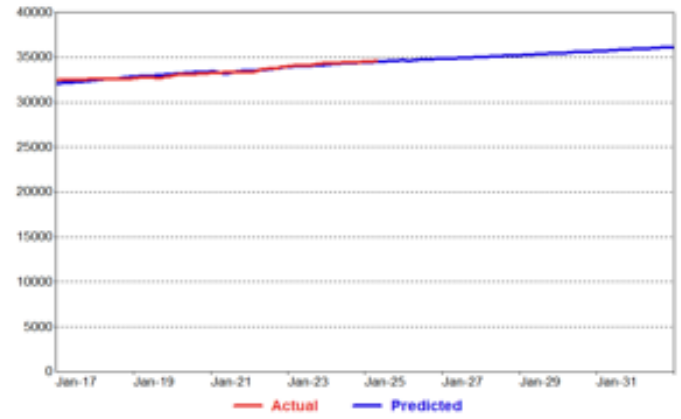
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	44785.95	11023.438	4.063	0.01%
mStructGSL50.XOther	0.186	0.127	1.459	14.80%
mStructGSL50.XHeat	0.5	0.042	11.952	0.00%
mStructGSL50.XCool	0.164	0.013	12.875	0.00%
mBin.Aug18	29123.565	4669.226	6.237	0.00%
mBin.May20	-30794.631	4737.537	-6.5	0.00%
mBin.Apr22	15906.65	4531.373	3.51	0.07%
GMR.York_Workplace	8146.753	3140.878	2.594	1.10%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	92
R-Squared	0.803
Adjusted R-Squared	0.788
AIC	16.894
BIC	17.103
F-Statistic	53.444
Prob (F-Statistic)	0
Log-Likelihood	-978.6
Model Sum of Squares	7,529,411,461.50
Sum of Squared Errors	1,851,621,811.01
Mean Squared Error	20,126,324.03
Std. Error of Regression	4,486.24
Mean Abs. Dev. (MAD)	3,369.04
Mean Abs. % Err. (MAPE)	4.11%
Durbin-Watson Statistic	1.741

PRZ GSL50 Customers

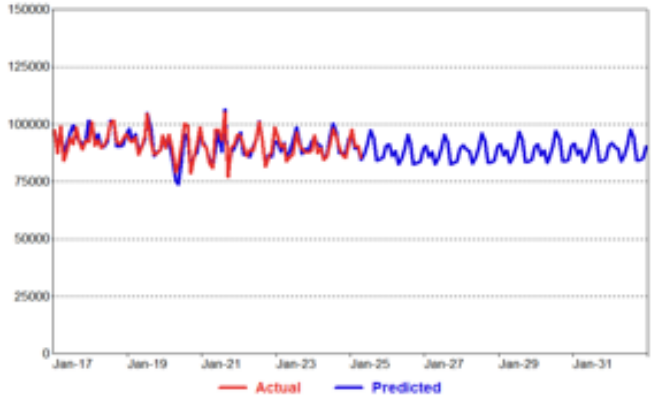
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	5431.537	1121.678	4.842	0.00%
ResCust.Predicted	0.075	0.005	15.785	0.00%
GSL50Cust.LagCusts_12	2253.803	533.965	4.221	0.01%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	97
R-Squared	0.946
Adjusted R-Squared	0.944
AIC	10.27
BIC	10.35
F-Statistic	841.443
Prob (F-Statistic)	0
Log-Likelihood	-652.43
Model Sum of Squares	47,173,826.33
Sum of Squared Errors	2,719,056.18
Mean Squared Error	28,031.51
Std. Error of Regression	167.43
Mean Abs. Dev. (MAD)	140.81
Mean Abs. % Err. (MAPE)	0.43%
Durbin-Watson Statistic	0.081

BRZ GSP50 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSP50.XOther	0.954	0.01	94.798	0.00%
mStructGSP50.XHeat	0.282	0.034	8.224	0.00%
mStructGSP50.XCool	0.116	0.01	12.088	0.00%
LostLoadIndex.LL_BRZ_GSP50	-2154.585	532.715	-4.045	0.01%
mBin.Yr21Plus	-2298.811	645.485	-3.561	0.06%
mBin.Feb	4472.66	1209.812	3.697	0.04%
mBin.Jun	3626.263	1233.296	2.94	0.42%
mBin.Aug22	-8659.483	3296.563	-2.627	1.01%
mBin.Sep22	-6270.951	3223.443	-1.945	5.48%

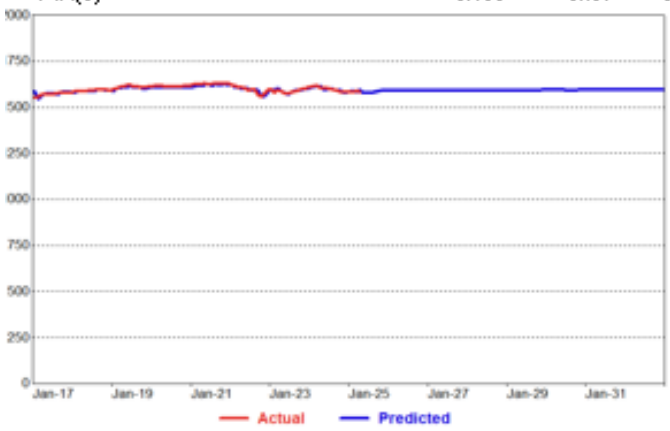


Model Statistics

Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	91
R-Squared	0.697
Adjusted R-Squared	0.67
AIC	16.206
BIC	16.441
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-943.2
Model Sum of Squares	2,096,443,614.29
Sum of Squared Errors	912,099,566.35
Mean Squared Error	10,023,072.16
Std. Error of Regression	3,165.92
Mean Abs. Dev. (MAD)	2,262.86
Mean Abs. % Err. (MAPE)	2.47%
Durbin-Watson Statistic	1.52

BRZ GSP50 Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	1514.064	64.738	23.387	0.00%
mEcon.GSP50_Cust	68.12	60.486	1.126	26.30%
mBin.Feb23	-19.9	4.713	-4.222	0.01%
MA(1)	1.278	0.101	12.607	0.00%
MA(2)	1.173	0.148	7.954	0.00%
MA(3)	1.056	0.16	6.59	0.00%
MA(4)	0.816	0.151	5.402	0.00%
MA(5)	0.408	0.107	3.813	0.03%



Model Statistics

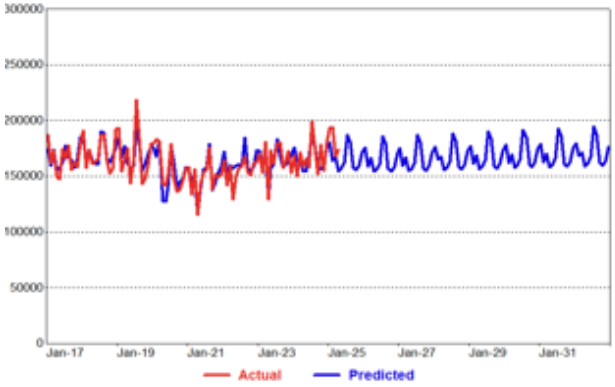
Iterations	26
Adjusted Observations	100
Deg. of Freedom for Error	92
R-Squared	0.842
Adjusted R-Squared	0.83
AIC	4.154
BIC	4.362
F-Statistic	70.047
Prob (F-Statistic)	0
Log-Likelihood	-341.58
Model Sum of Squares	28,916.41
Sum of Squared Errors	5,425.59
Mean Squared Error	58.97
Std. Error of Regression	7.68
Mean Abs. Dev. (MAD)	5.66
Mean Abs. % Err. (MAPE)	0.35%
Durbin-Watson Statistic	1.626

ERZ GSP50 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSP50.XOther	1.263	0.082	15.373	0.00%
mStructGSP50.XHeat	0.783	0.095	8.267	0.00%
mStructGSP50.XCool	0.27	0.029	9.307	0.00%
GMRVariables.Peel_Workplace	32520.592	7258.513	4.48	0.00%
mBin.Apr21	-19169.983	10356.928	-1.851	6.74%
mBin.Jul22	-27566.436	10441.53	-2.64	0.97%
mBin.Mar20	25909.183	10204.213	2.539	1.28%
mBin.Yr21Plus	-5528.417	2109.081	-2.621	1.03%
mBin.Apr23	-26852.604	10170.015	-2.64	0.97%

Model Statistics

Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	91
R-Squared	0.686
Adjusted R-Squared	0.659
AIC	18.508
BIC	18.743
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,058.32
Model Sum of Squares	19,954,274,515.06
Sum of Squared Errors	9,119,355,875.47
Mean Squared Error	100,212,701.93
Std. Error of Regression	10,010.63
Mean Abs. Dev. (MAD)	7,470.19
Mean Abs. % Err. (MAPE)	4.57%
Durbin-Watson Statistic	1.95

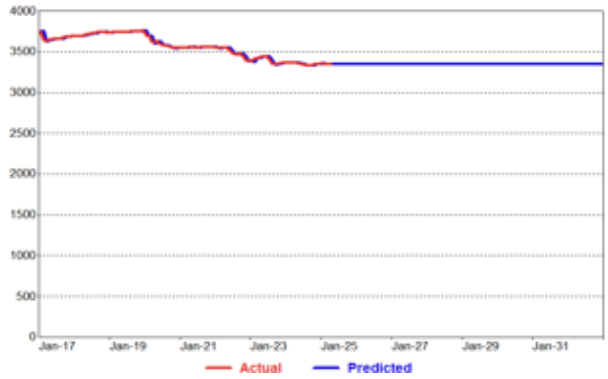


ERZ GSP50 Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
Simple	1.151	0.099	11.576	0

Model Statistics

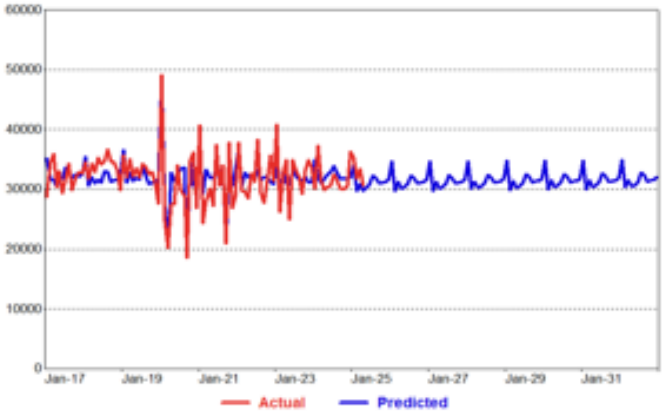
Iterations	9
Adjusted Observations	100
Deg. of Freedom for Error	99
R-Squared	0.982
Adjusted R-Squared	0.982
AIC	5.946
BIC	5.972
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-438.2
Model Sum of Squares	2,041,368
Sum of Squared Errors	37,469
Mean Squared Error	378.47
Std. Error of Regression	19.45
Mean Abs. Dev. (MAD)	10.45
Mean Abs. % Err. (MAPE)	0.30%
Durbin-Watson Statistic	1.966



GRZ GSP50 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	24895.954	7052.428	3.53	0.07%
mStructGSP50.XOther	0.144	0.072	2.006	4.79%
mStructGSP50.XHeat	0.026	0.036	0.727	46.92%
mStructGSP50.XCool	0.015	0.009	1.665	9.93%
mBin.Jan	2996.641	1333.78	2.247	2.71%
mBin.Jan20	14027.868	3235.206	4.336	0.00%
mBin.Mar20	-11764.143	3127.009	-3.762	0.03%
mBin.Sep20	-13534.045	3038.174	-4.455	0.00%
mBin.Sep21	-10059.929	3064.811	-3.282	0.15%
GSP50Sales.LagDep(1)	-0.209	0.077	-2.703	0.82%

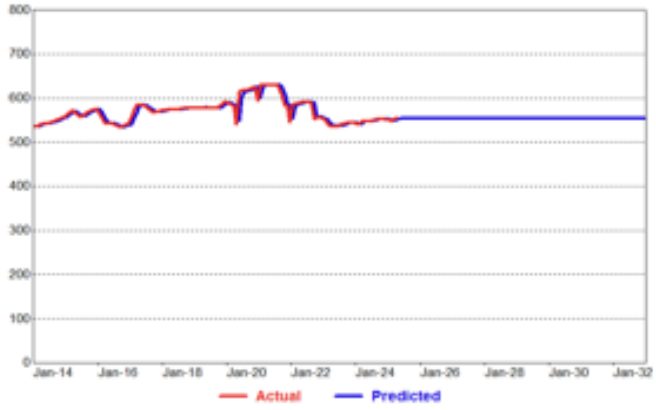
Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	90
R-Squared	0.547
Adjusted R-Squared	0.502
AIC	16.1
BIC	16.36
F-Statistic	12.099
Prob (F-Statistic)	0
Log-Likelihood	-936.89
Model Sum of Squares	972,750,496.28
Sum of Squared Errors	804,003,180.43
Mean Squared Error	8,933,368.67
Std. Error of Regression	2,988.87
Mean Abs. Dev. (MAD)	2,248.25
Mean Abs. % Err. (MAPE)	7.12%
Durbin-Watson Statistic	1.941



GRZ GSP50 Customers

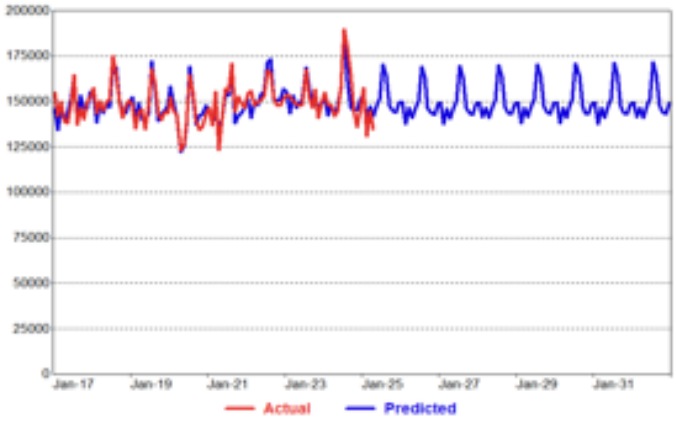
Variable	Coefficient	StdErr	T-Stat	P-Value
Simple	0.791	0.084	9.394	0

Model Statistics	
Iterations	6
Adjusted Observations	136
Deg. of Freedom for Error	135
R-Squared	0.827
Adjusted R-Squared	0.827
AIC	4.762
BIC	4.783
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-515.78
Model Sum of Squares	74,909
Sum of Squared Errors	15,673
Mean Squared Error	116.1
Std. Error of Regression	10.77
Mean Abs. Dev. (MAD)	5.41
Mean Abs. % Err. (MAPE)	0.94%
Durbin-Watson Statistic	2.021



HRZ GSP50 Sales

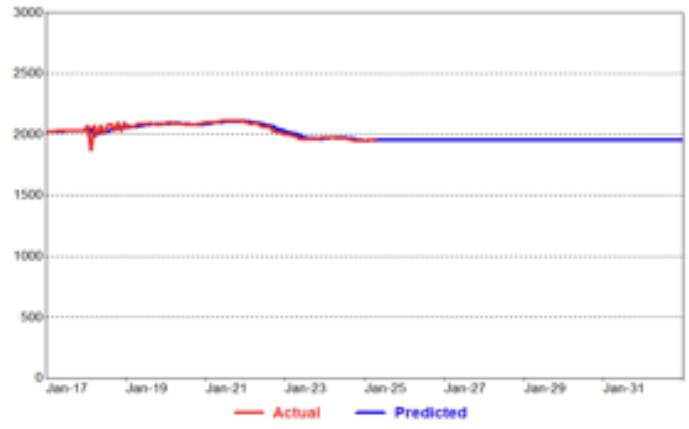
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSP50.XOther	1.158	0.054	21.455	0.00%
mStructGSP50.XHeat	0.312	0.053	5.927	0.00%
mStructGSP50.XCool	0.239	0.019	12.515	0.00%
GMR.Ham_Workplace	29770.352	4603.629	6.467	0.00%
mBin.Yr20Plus	13253.435	1124.43	11.787	0.00%
mBin.Aug17	-20205.152	5688.057	-3.552	0.06%
mBin.Jul24	13314.61	5922.95	2.248	2.69%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	93
R-Squared	0.755
Adjusted R-Squared	0.739
AIC	17.309
BIC	17.491
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,000.34
Model Sum of Squares	8,826,723,983.20
Sum of Squared Errors	2,860,193,707.94
Mean Squared Error	30,754,771.05
Std. Error of Regression	5,545.70
Mean Abs. Dev. (MAD)	4,068.03
Mean Abs. % Err. (MAPE)	2.73%
Durbin-Watson Statistic	1.588

HRZ GSP50 Cust

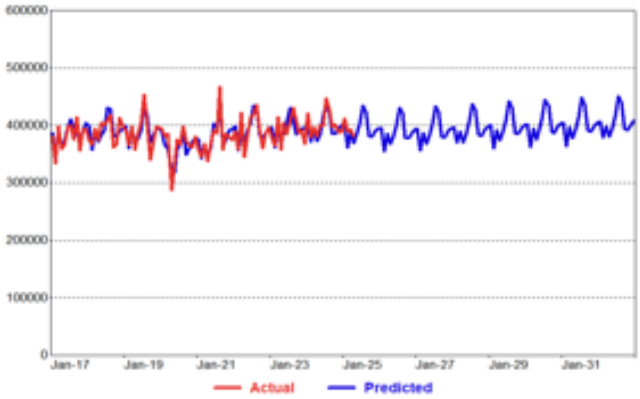
Variable	Coefficient	StdErr	T-Stat	P-Value
Simple	0.357	0.077	4.638	0



Model Statistics	
Iterations	11
Adjusted Observations	100
Deg. of Freedom for Error	99
R-Squared	0.783
Adjusted R-Squared	0.783
AIC	6.575
BIC	6.601
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-469.66
Model Sum of Squares	253,340
Sum of Squared Errors	70,299
Mean Squared Error	710.09
Std. Error of Regression	26.65
Mean Abs. Dev. (MAD)	14.77
Mean Abs. % Err. (MAPE)	0.73%
Durbin-Watson Statistic	2.632

PRZ GSP50 Sales

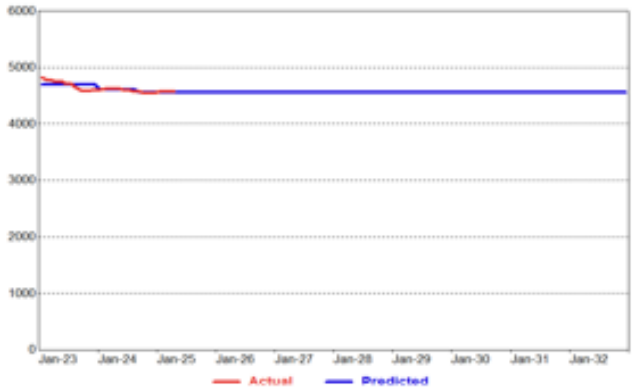
Variable	Coefficient	StdErr	T-Stat	P-Value
mStructGSP50.XOther	3.738	0.115	32.371	0.00%
mStructGSP50.XHeat	0.735	0.154	4.778	0.00%
mStructGSP50.XCool	0.438	0.048	9.166	0.00%
GMR.York_Workplace	17560.447	10694.058	1.642	10.40%
mBin.Jun	14017.152	6162.472	2.275	2.52%
mBin.Nov	14128.74	5964.025	2.369	1.99%
mBin.Jul20	-38731.901	17286.366	-2.241	2.74%



Model Statistics	
Iterations	1
Adjusted Observations	100
Deg. of Freedom for Error	93
R-Squared	0.666
Adjusted R-Squared	0.644
AIC	19.41
BIC	19.593
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,105.41
Model Sum of Squares	46,585,929,322.82
Sum of Squared Errors	23,386,161,004.44
Mean Squared Error	251,464,096.82
Std. Error of Regression	15,857.62
Mean Abs. Dev. (MAD)	12,467.28
Mean Abs. % Err. (MAPE)	3.25%
Durbin-Watson Statistic	2.167

PRZ GSP50 Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	4693.25	16.784	279.618	0.00%
mBin.Yr24Plus	-84.625	26.539	-3.189	0.38%
mBin.Sept24Plus	-45.875	29.072	-1.578	12.71%



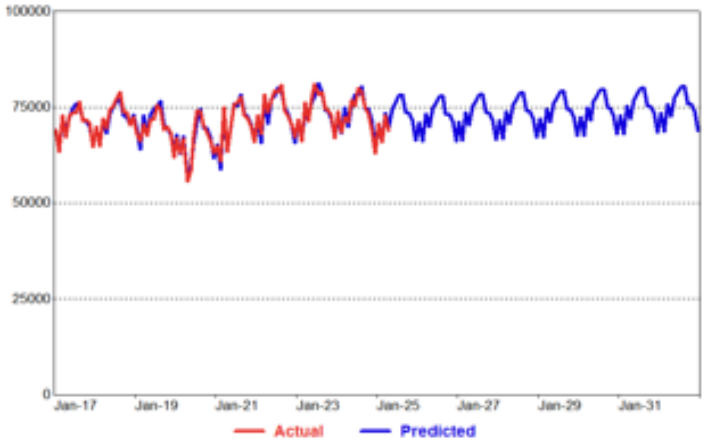
Model Statistics	
Iterations	1
Adjusted Observations	28
Deg. of Freedom for Error	25
R-Squared	0.509
Adjusted R-Squared	0.47
AIC	8.227
BIC	8.37
F-Statistic	12.979
Prob (F-Statistic)	0.0004
Log-Likelihood	-151.91
Model Sum of Squares	87,753.09
Sum of Squared Errors	84,515.63
Mean Squared Error	3,380.63
Std. Error of Regression	58.14
Mean Abs. Dev. (MAD)	39.5
Mean Abs. % Err. (MAPE)	0.85%
Durbin-Watson Statistic	0.292

BRZ GSP700 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	29669.023	8194.539	3.621	0.05%
mEcon.GSP50_Var	25053.427	8274.124	3.028	0.33%
LostLoadIndex.LL_BRZ_GSP700	-2855.877	396.346	-7.206	0.00%
GMRVariables.Peel_Workplace	8678.762	2368.678	3.664	0.04%
mBin.Jan	4840.761	460.462	10.513	0.00%
mBin.Mar	7015.954	576.378	12.172	0.00%
mBin.Apr	3682.873	705.647	5.219	0.00%
mBin.May	8307.016	802.341	10.353	0.00%
mBin.Jun	10195.917	840.584	12.13	0.00%
mBin.Jul	12239.989	848.918	14.418	0.00%
mBin.Aug	12698.644	839.761	15.122	0.00%
mBin.Sep	7714.962	804.28	9.592	0.00%
mBin.Oct	7222.685	737.494	9.794	0.00%
mBin.Nov	5064.273	600.459	8.434	0.00%
mBin.Dec18	7999.143	1351.783	5.917	0.00%
AR(1)	0.621	0.091	6.86	0.00%

Model Statistics

Iterations	14
Adjusted Observations	99
Deg. of Freedom for Error	83
R-Squared	0.922
Adjusted R-Squared	0.908
AIC	14.816
BIC	15.235
F-Statistic	65.366
Prob (F-Statistic)	0
Log-Likelihood	-857.84
Model Sum of Squares	2,301,009,157.76
Sum of Squared Errors	194,785,274.54
Mean Squared Error	2,346,810.54
Std. Error of Regression	1,531.93
Mean Abs. Dev. (MAD)	1,099.93
Mean Abs. % Err. (MAPE)	1.55%
Durbin-Watson Statistic	2.247

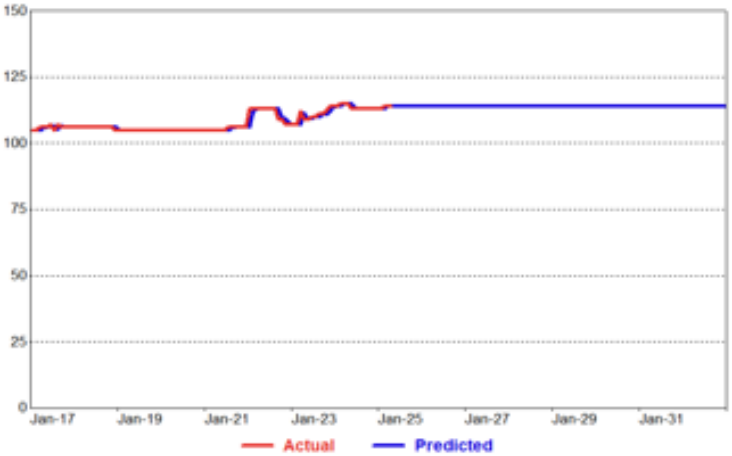


BRZ GSP700 Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
Simple	0.86	0.1	8.643	0

Model Statistics

Iterations	12
Adjusted Observations	100
Deg. of Freedom for Error	99
R-Squared	0.9
Adjusted R-Squared	0.9
AIC	0.252
BIC	0.278
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-153.47
Model Sum of Squares	1,131
Sum of Squared Errors	126
Mean Squared Error	1.27
Std. Error of Regression	1.13
Mean Abs. Dev. (MAD)	0.42
Mean Abs. % Err. (MAPE)	0.38%
Durbin-Watson Statistic	2.027

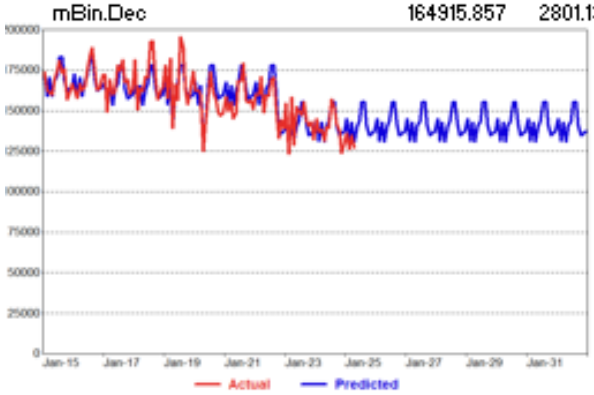


ERZ GSP500 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
mBin.Yr17_Plus	-4982.607	1830.093	-2.723	0.76%
mBin.Oct22_Plus	-22702.972	1680.254	-13.512	0.00%
mBin.Apr19	-14362.224	8122.223	-1.768	7.99%
mBin.May20	-21693.043	8108.739	-2.675	0.86%
mBin.Apr20	-28578.806	8122.223	-3.519	0.06%
mBin.Jan	172475.363	2719.65	63.418	0.00%
mBin.Feb	159139.106	2719.65	58.515	0.00%
mBin.Mar	170247.866	2719.65	62.599	0.00%
mBin.Apr	158801.849	2899.538	54.768	0.00%
mBin.May	168295.908	2896.398	58.105	0.00%
mBin.Jun	171462.04	2801.726	61.199	0.00%
mBin.Jul	182821.481	2801.726	65.253	0.00%
mBin.Aug	182798.771	2801.726	65.245	0.00%
mBin.Sep	168565.845	2801.726	60.165	0.00%
mBin.Oct	162296.149	2801.134	57.939	0.00%
mBin.Nov	163486.88	2801.134	58.365	0.00%
mBin.Dec	164915.857	2801.134	58.875	0.00%

Model Statistics

Iterations	1
Adjusted Observations	124
Deg. of Freedom for Error	107
R-Squared	0.792
Adjusted R-Squared	0.76
AIC	18.017
BIC	18.403
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,275.99
Model Sum of Squares	23,915,161,194.86
Sum of Squared Errors	6,293,941,046.70
Mean Squared Error	58,821,878.94
Std. Error of Regression	7,669.54
Mean Abs. Dev. (MAD)	5,760.36
Mean Abs. % Err. (MAPE)	3.62%
Durbin-Watson Statistic	1.491



ERZ GSP500 Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
Simple	1.264	0.097	13.043	0

Model Statistics

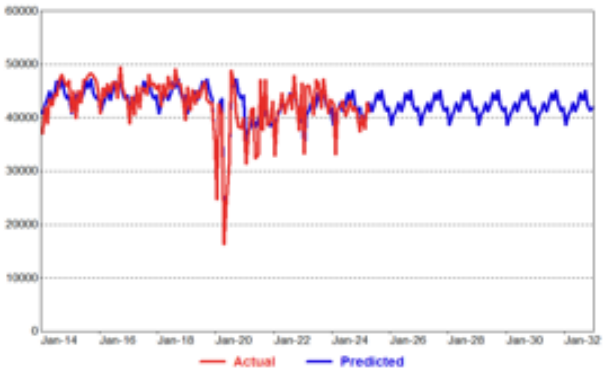
Iterations	10
Adjusted Observations	100
Deg. of Freedom for Error	99
R-Squared	0.983
Adjusted R-Squared	0.983
AIC	4.169
BIC	4.196
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-349.37
Model Sum of Squares	364,443
Sum of Squared Errors	6,340
Mean Squared Error	64.04
Std. Error of Regression	8
Mean Abs. Dev. (MAD)	3.5
Mean Abs. % Err. (MAPE)	0.82%
Durbin-Watson Statistic	1.961

GRZ GSP1000 Sales

Variable	Coefficient	StdErr	T-Stat	P-Value
mBin.Yr21	-5196.603	896.792	-5.795	0.00%
mBin.Yr21Plus	2211.419	567.513	3.897	0.02%
mBin.Jan	38661.623	994.187	38.888	0.00%
mBin.Feb	40422.32	913.662	44.242	0.00%
mBin.Mar	41380.098	913.662	45.29	0.00%
mBin.Apr	42768.998	941.316	45.435	0.00%
mBin.May	41124.228	994.187	41.365	0.00%
mBin.Jun	42589.452	994.187	42.838	0.00%
mBin.Jul	44608.349	961.376	46.401	0.00%
mBin.Aug	43360.687	961.376	45.103	0.00%
mBin.Sep	45039.026	961.376	46.848	0.00%
mBin.Oct	42458.472	961.376	44.164	0.00%
mBin.Nov	41346.842	961.376	43.008	0.00%
mBin.Dec	41970	994.187	42.215	0.00%
mBin.Dec19	-8287.09	3042.234	-2.724	0.74%
mBin.Jan20	-16186.568	3042.234	-5.321	0.00%
mBin.Apr20	-28703.88	3031.817	-9.468	0.00%
mBin.May20	-19571.315	3042.234	-6.433	0.00%
mBin.Jun20	-13666.652	3042.234	-4.492	0.00%
mBin.Jan23	-5403.202	3059.862	-1.766	8.01%

Model Statistics

Iterations	1
Adjusted Observations	136
Deg. of Freedom for Error	116
R-Squared	0.712
Adjusted R-Squared	0.665
AIC	16.076
BIC	16.504
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,266.13
Model Sum of Squares	2,403,891,025.63
Sum of Squared Errors	971,424,258.03
Mean Squared Error	8,374,347.05
Std. Error of Regression	2,893.85
Mean Abs. Dev. (MAD)	2,048.97
Mean Abs. % Err. (MAPE)	4.90%
Durbin-Watson Statistic	1.951

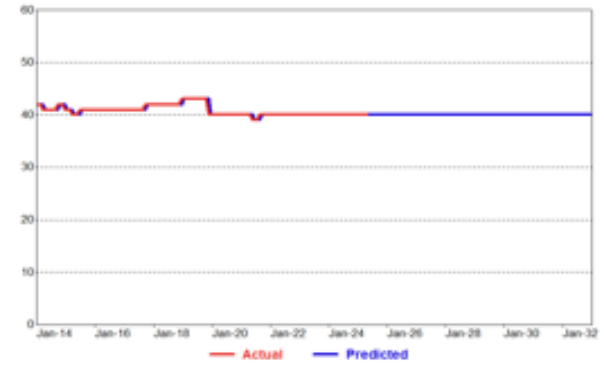


GRZ GSP1000 Customers

Variable	Coefficient	StdErr	T-Stat	P-Value
Simple	1	0.086	11.619	0

Model Statistics

Iterations	5
Adjusted Observations	136
Deg. of Freedom for Error	135
R-Squared	0.867
Adjusted R-Squared	0.867
AIC	-2.008
BIC	-1.986
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-55.46
Model Sum of Squares	117
Sum of Squared Errors	18
Mean Squared Error	0.13
Std. Error of Regression	0.37
Mean Abs. Dev. (MAD)	0.09
Mean Abs. % Err. (MAPE)	0.22%
Durbin-Watson Statistic	2



Attachment 3-3

Customer and Load Forecast Input Data

Please see live Excel version

2. PROPOSED LOAD FORECAST

Tables 3-1-2 and 3-1-3 present the consumption and billed demand forecast including the baseline forecast, EVs and building electrification, and 'in-house' adjustments. These assumptions are further explained in this Schedule, as well as in the Itron Report. (Attachment 3-2).

Table 3-1-2 below provides Alectra Utilities' total consumption forecast by rate class for 2027-2031.

Table 3-1-2: 2027-2031 Total Consumption Forecast by Rate Class (MWh)

	2027	2028	2029	2030	2031
Residential	8,833,994	9,184,006	9,550,659	10,000,906	10,421,040
GS<50 kW	2,873,274	2,956,719	3,045,931	3,154,197	3,257,990
GS>50 kW, Regular	13,256,046	13,367,322	13,440,438	13,525,775	13,624,898
Large Use	2,129,485	2,135,914	2,164,532	2,227,767	2,232,718
LUDA	855,838	855,838	855,838	855,838	855,838
Street Lighting	95,130	95,262	95,308	95,324	95,330
Sentinel Lighting	574	557	541	524	508
USL	47,482	47,870	48,258	48,646	49,034
Embedded Distributor	17,012	17,012	17,012	17,012	17,012
Total Consumption (MWh)	**28,108,835**	**28,660,499**	**29,218,516**	**29,925,989**	**30,554,366**

Table 3-1-3 below provides Alectra Utilities' billed demand forecast by rate class for 2027-2031.

Table 3-1-3: 2027-2031 Total Billed Demand Forecast by Rate Class (MW)

	2027	2028	2029	2030	2031
GS>50 kW, Regular	34,359	34,468	34,673	34,769	34,966
Large Use	4,034	4,151	4,245	4,492	4,501
LUDA	1,620	1,616	1,620	1,620	1,620
Street Lighting	266	265	266	266	266
Sentinel Lighting	2	1	1	1	1
Embedded Distributor	40	40	40	40	40
Total Billed Demand (MW)	**40,321**	**40,543**	**40,846**	**41,188**	**41,394**

3. PROPOSED CUSTOMER AND CONNECTION FORECAST

Tables 3-1-4 and 3-1-5 below present Alectra Utilities' proposed total (year-end) customer and device/connection forecast for period of 2027-2031, as applicable. This forecast includes a baseline forecast and "in-house" adjustments.

Table 3-1-4: 2027-2031 Total Customer Count Forecast by Rate Class (at Year-End)

	2027	2028	2029	2030	2031
Residential	998,052	1,002,542	1,006,917	1,011,259	1,015,576
GS<50 kW	90,652	91,361	92,050	92,716	93,367
GS>50 kW, Regular	11,818	11,630	11,466	11,323	11,200
Large Use	32	34	35	36	36
LUDA	6	6	6	6	6
Embedded Distributor	1	1	1	1	1
Total Customers	**1,100,561**	**1,105,574**	**1,110,475**	**1,115,341**	**1,120,186**

Table 3-1-5: 2027-2031 Total Device / Connection Count Forecast by Rate Class (Year-End)

	2027	2028	2029	2030	2031
Street Lighting (Devices)	273,870	274,744	275,618	276,492	277,367
Sentinel Lighting (Connections)	400	389	378	367	357
USL (Connections)	11,531	11,571	11,611	11,650	11,689
Total Devices / Connections	**285,801**	**286,704**	**287,607**	**288,509**	**289,413**

4. COMPONENTS OF LOAD AND CUSTOMER FORECAST

4.1. BASELINE REVENUE FORECAST

As previously noted, Alectra Utilities' baseline forecast methodology employs statistical models to establish load and customer forecasts. These models leverage historical monthly data, such as energy consumption, weather conditions, and economic indicators, to identify key trends and to predict future energy consumption patterns.

Alectra Utilities' weather normalization methodology incorporates climatological data from geographically relevant and reliable measurement stations. Specifically, the Toronto International Airport station is used for the BRZ, GRZ, ERZ and PRZ, while the Hamilton A station is used exclusively for the HRZ. Monthly heating degree days (HDD) and cooling degree days (CDD) are calculated by aggregating daily values from these stations. In accordance with the Chapter 2 Filing Requirements, normal weather conditions are based on a 10-year historical average from May 2015 to April 2025.

The current forecasts are grounded in the latest economic outlooks prepared by the Conference Board of Canada for the Toronto, Hamilton, and Guelph Census Metropolitan Areas. The economic projections for Toronto and Hamilton were released in June 2025, while those for Guelph were issued in March 2025. These up-to-date outlooks reflect the anticipated impacts of recently announced U.S.-imposed tariffs, which have contributed to a downward revision of overall economic growth expectations, particularly for the Bridge Years 2025 and 2026.

For more details regarding the model inputs, economic assumptions and forecasts, forecast methodology and weather normalization factors used to complete the baseline load and customer forecast, refer to the Itron Report (Attachment 3-2), Chapter 2 Modelling Approach, and Chapter 3 Forecast Drivers.

Models' statistics are presented in Appendix C of the Itron Report.

Table 3-1-6 provides Alectra’s baseline consumption forecast by rate class for Bridge Years 2025, 2026 and Test Years 2027 to 2031. Table 3-1-7 provides Alectra’s baseline billed demand forecast by rate class for Bridge Years 2025, 2026 and Test Years 2027 to 2031.

Table 3-1-6: 2025-2031 Baseline Consumption Forecast by Rate Class (MWh)

	2025	2026	2027	2028	2029	2030	2031
Residential	8,382,995	8,338,398	8,407,455	8,488,351	8,519,212	8,568,113	8,619,174
GS<50 kW	2,793,633	2,790,949	2,797,935	2,819,256	2,829,405	2,840,969	2,853,980
GS>50 kW, Regular	10,187,759	10,122,950	10,129,113	10,202,250	10,230,958	10,263,899	10,303,054
GS>50 kW, Intermediate	3,048,802	3,086,651	3,075,895	3,080,146	3,084,578	3,089,046	3,093,570
Large Use	2,030,811	2,123,767	2,123,767	2,123,989	2,148,791	2,206,067	2,206,067
LUDA	852,476	855,328	855,328	855,328	855,328	855,328	855,328
Street Lighting	93,208	94,717	95,130	95,262	95,308	95,324	95,330
Sentinel Lighting	629	590	574	557	541	524	508
USL	46,271	47,095	47,482	47,870	48,258	48,646	49,034
Total Baseline Consumption (MWh)	**27,436,585**	**27,460,445**	**27,532,679**	**27,713,007**	**27,812,378**	**27,967,916**	**28,076,043**

Table 3-1-7: 2025-2031 Baseline Billed Demand Forecast by Rate Class (MW)

	2025	2026	2027	2028	2029	2030	2031
GS>50 kW, Regular	27,155	27,257	27,273	27,394	27,546	27,635	27,740
GS>50 kW, Intermediate	6,838	6,914	6,890	6,882	6,910	6,920	6,930
Large Use	3,813	3,966	3,966	3,958	4,044	4,223	4,223
LUDA	1,623	1,599	1,599	1,595	1,599	1,599	1,599
Street Lighting	261	265	266	265	266	266	266
Sentinel Lighting	2	2	2	1	1	1	1
Total Baseline Billed Demand (MW)	**39,692**	**40,002**	**39,996**	**40,095**	**40,367**	**40,644**	**40,759**

4.2. EVS AND BUILDING ELECTRIFICATION¶

The following sections detail the impacts of EV adoption and building electrification on Alectra Utilities' load and customer forecasts. These impacts represent an additional forecast layer applied to the baseline projections. Table 3-1-8 and 3-1-9 present the consumption and billed demand impact by rate class for Bridge Years 2025, 2026 and Test Years 2027 to 2031. EV adoption and building electrification has no impact on the customer / connection count forecast.

Table 3-1-8: 2025-2031 EV and Building Electrification Consumption Forecast by Rate Class (MWh)

	2025	2026	2027	2028	2029	2030	2031
Residential	54,552	218,184	426,539	695,655	1,031,447	1,432,793	1,801,866
GS<50 kW	6,198	35,673	68,197	128,054	205,110	300,069	389,339
GS>50 kW, Regular	10,887	61,665	37,674	65,103	96,984	135,835	179,211
GS>50 kW, Intermediate	3,016	17,097	11,885	20,611	30,713	42,973	56,553
Large Use	278	1,320	4,278	7,605	11,421	15,940	20,891
Total EV and Building Electrification Consumption (MWh)	**74,931**	**333,938**	**548,573**	**917,029**	**1,375,676**	**1,927,610**	**2,447,860**

Table 3-1-9: 2025-2031 EV and Building Electrification Billed Demand Forecast by Rate Class (MW)

	2025	2026	2027	2028	2029	2030	2031
GS>50 kW, Regular	29	163	100	171	257	359	474
GS>50 kW, Intermediate	7	38	27	46	69	96	126
Large Use	1	2	8	14	21	29	38
LUDA							
Street Lighting							
Sentinel Lighting							
Total EV and Building Electrification Billed Demand (MW)	**37**	**204**	**134**	**231**	**346**	**484**	**638**

4.2.1. EV ADOPTION

Canada's Electric Vehicle Availability Standard (EVAS) requires that 100% of new light-duty vehicle (LDV) sales be zero-emission by 2035, with interim targets of 20% by 2026 and 60% by 2030. Electric vehicle (EV) adoption forecast has been developed by Alectra Utilities' System Planning team to reflect this federal mandate.

Electric Vehicle Population Forecast

Alectra Utilities' EV population forecast integrates both historical data and forward-looking assumptions. The base EV adoption trajectory for Ontario's LDV segment through 2030 is derived from the Guidehouse Insights provincial forecast. Medium- and heavy-duty vehicle (M/HDV) EV adoption in Ontario was developed using Guidehouse's North America-wide forecast, scaled to reflect Ontario's share of the LDV EV population.

In developing the base forecast, Alectra Utilities applied a stock-and-flow methodology to project the annual LDV population within its service territory. This approach accounts for cumulative vehicle stock from prior years, annual vehicle retirements, and new vehicle sales. The initial estimate of the EV population for 2020 was derived by proportionally scaling provincial EV counts published by Statistics Canada, using Alectra Utilities share of the provincial population as determined by the Hansen Report.

Annual vehicle retirements were incorporated using a 7% retirement rate, based on Statistics Canada's analysis of LDV stock and sales data for the 2015–2019 period. This retirement rate was applied uniformly to both internal combustion engine (ICE) vehicles and EVs.

From 2025 to 2035, the share of battery electric vehicle (BEV) LDV sales is assumed to increase from 7% to 100%, consistent with the federal EV Availability Standard (EVAS) targets, while the share of plug-in hybrid electric vehicle (PHEV) LDV sales is projected to decline from 5% to 0%. The total projected vehicle sales within Alectra Utilities' service territory are then multiplied by these annual BEV and PHEV percentages to calculate the corresponding annual EV sales figures.

While the EV sales projections are aligned with stated federal policy targets, Alectra Utilities has applied conservative adjustments to reflect near-term market risks and implementation barriers.

These include potential constraints in battery production capacity, limitations in automaker transition timelines, and ongoing supply chain challenges. The actual EV population for 2024 was utilized as the base year population, with subsequent annual increases in units derived from the System Planning year-over-year forecast. Furthermore, in recognition of macroeconomic uncertainty and trade-related impacts—particularly those arising from U.S.-imposed tariffs—Alectra has conservatively reduced the incremental EV population growth for the 2025–2026 Bridge Years by 50%. This downward adjustment is substantiated by recent market performance data, which indicates a notable deceleration in Canada's EV market. Specifically, the Q1 2025 Zero-Emission Vehicle (ZEV) market share declined to just under 10%, compared to 12.5% in Q1 2024 and 18.9% in Q4 2024[3], signaling a slowdown in EV adoption momentum.

Table 3-1-10 presents the EV population forecast by Duty Type and Powertrain for Bridge Years 2025, 2026 and Test Years 2027 to 2031.

Table 3-1-10: 2025-2031 EV Population Forecast

	2025	2026	2027	2028	2029	2030	2031
LDV-BEV	40,749	55,413	96,431	153,695	231,338	329,727	424,859
LDV-PHEV	23,244	25,716	35,839	47,757	61,367	76,891	81,719
MDV-BEV	845	980	1,384	1,826	2,312	2,848	3,508
MDV-PHEV	94	109	154	203	257	316	390
HDV	176	201	283	377	487	618	763
Total EV Population	**65,108**	**82,418**	**134,090**	**203,859**	**295,760**	**410,401**	**511,239**

Electric Vehicle Energy Sales Forecast

The translation of EV population to sales is based on assumed average annual kilometers driven of 19,300 per year and average battery output of approximately 5.0 kilometers per kWh. These values are based on the EIA[4] 2023 EV forecast and Vermont Energy Investment Corporation (VEIC) efficiency projections.

[3] "Electric Autonomy Canada. (2025, June 15). Canadian EV sales take a hit in Q1 2025: S&P Global. https://electricautonomy.ca/data-trackers/ev-sales-data/2025-06-15/s-p-q1-2025-canada-ev-sales
[4] EIA: The U.S. Energy Information Administration.

For Bridge and Test Years, Alectra apportioned the estimated EV energy sales to different rate classes. Light duty vehicles sales are mapped to the residential rate class (80%) and GS<50 kW rate class (20%). Medium duty vehicles sales are mapped to the GS<50 kW rate class (50%) and GS>50 kW rate class (50% with an equal breakdown between GS>50 kW Regular and Intermediate legacy rate classes at 25% each). Heavy duty vehicles sales are mapped to GS>50 kW, Intermediate (70%) and Large Use (30%) rate classes.

4.2.2. BUILDING ELECTRIFICATION

Building electrification is another contributor to sales growth. Alectra Utilities System Planning Team has developed Low, Medium, and High adoption scenarios. This load and customer forecast is based on the Medium scenario.

Under the Medium scenario, the percentage of new residential customers with all-electric homes start at 3% and ramp up to 100% by 2030; this results in roughly 26,000 new all-electric homes by 2031. Under the Medium scenario retrofit market, the number of homes that convert to electric heat and water increases from 1% of the housing stock to 6% by 2030. This translates into roughly 51,000 homes converting from fossil fuel heat to electric heat by 2031.

Commercial electrification sales are based on System Planning's load estimates for both new construction and retrofit, by rate zone. The load forecast is translated to a sales forecast using an average annual load factor based on an estimated commercial electric heat load factor of 0.20. Commercial building simulation data for New York and the Pacific Northwest indicate that electric heat load factors vary between 0.10 and 0.15, but the simulations are based on much warmer weather conditions. Reflecting colder temperatures in Alectra Utilities' service territory, the sales forecast is based on a 0.20 load factor.

For details regarding forecast methodology and assumptions for EV adoption and building electrification, refer to the Itron Report, Chapter 4 EVs and Electrification.

4.3. ADDITIONAL LOAD AND CUSTOMER ADJUSTMENTS

The following sections detail the impacts of additional 'in-house' adjustments on Alectra Utilities' load and customer forecasts. Additional adjustments include Rate Reclassification, Standby, Large Use, BRZ Street Lighting, and Distributed Generation.

Table 3-1-11 through 3-1-13 below present the combined impact of these adjustments on consumption, billed demand, and customer forecast by rate class for Bridge Years 2025, 2026 and Test Years 2027 to 2031.

Table 3-1-11: 2025-2031 Additional Adjustments to Consumption Forecast by Rate Class (MWh)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	1,090	4,316	7,142	9,409	11,415	13,160	14,671
GS>50 kW, Regular	-218	-530	8,988	8,854	8,696	6,993	6,657
GS>50 kW, Intermediate	-828	-3,720	-7,509	-9,642	-11,490	-12,971	-14,146
Large Use	-681	-1,022	1,440	4,320	4,320	5,760	5,760
LUDA	—	—	510	510	510	510	510
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Additional Adjustments Consumption (MWh)	**-637**	**-956**	**10,571**	**13,451**	**13,451**	**13,451**	**13,451**

Table 3-1-12: 2025-2031 Additional Adjustments to Billed Demand Forecast by Rate Class (MW)

	2025	2026	2027	2028	2029	2030	2031
GS>50 kW, Regular	-4	-14	383	377	370	299	285
GS>50 kW, Intermediate	-34	-155	-313	-402	-479	-540	-589
Large Use	-28	-43	60	180	180	240	240
LUDA	—	—	21	21	21	21	21
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
Total Additional Adjustments Billed Demand (MW)	**-67**	**-212**	**151**	**177**	**93**	**20**	**-43**

Table 3-1-13: 2025-2031 Additional Adjustments to Customer / Device / Connection Count Forecast by Rate Class (Year-End)

	2025	2026	2027	2028	2029	2030	2031
Residential - Customers	—	—	—	—	—	—	—
GS<50 kW - Customer	664	900	1,242	1,431	1,596	1,739	1,863
GS>50 kW, Regular - Customers	-211	-423	-612	-781	-929	-1,059	-1,171
GS>50 kW, Intermediate - Customers	-27	-51	-74	-94	-111	-125	-137
Large Use - Customers	—	—	1	3	3	4	4
LUDA- Customers	—	—	—	—	—	—	—
Street Lighting - Devices	—	—	30,474	30,623	30,774	30,927	31,082
Sentinel Lighting - Connections	—	—	—	—	—	—	—
USL - Connections	—	—	—	—	—	—	—
Total	**426**	**426**	**31,031**	**31,182**	**31,333**	**31,486**	**31,641**

4.3.1. RATE RECLASSIFICATION

Alectra Utilities adjusted its customer count forecast to reflect the estimated number of customer reclassifications among the General Service rate classes. The estimated reclassifications from 2025 to 2031 are based on actual activity in 2024.

In 2024, Alectra Utilities reclassified 282 customers from the GS>50 kW, Regular to the GS<50 kW rate class, and 2 customers from the GS>50 kW, Intermediate to the GS<50 rate class. Additionally, 48 customers were reclassified from the GS<50 kW to the GS>50 kW, Regular rate class, 26 customers from the GS>50 kW, Intermediate to the GS>50 kW, Regular rate class, and 4 customers from the GS>50 kW, Regular to the GS>50 kW, Intermediate rate class. These reclassifications were driven by customers' average demand over the prior 12 months falling outside the applicable thresholds for their existing rate class at the time of the reclassification assessment. It is assumed that the same number of reclassifications will occur in 2025 and

2026, and gradually decrease each year from 2027 to 2031, as illustrated in Table 3-1-14. The figures presented in this table reflect the cumulative number of rate reclassifications over that period.

Table 3-1-14: 2025-2031 Rate Reclassification Customer Count Forecast Adjustment by Rate Class (Year-End)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	238	474	685	874	1,039	1,182	1,306
GS>50 kW, Regular	-211	-423	-612	-781	-929	-1,058	-1,170
GS>50 kW, Intermediate	-27	-51	-73	-93	-110	-124	-136
Large Use	—	—	—	—	—	—	—
LUDA	—	—	—	—	—	—	—
Total Customers	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Alectra Utilities has also adjusted its load forecast based on an estimation of the demand and consumption related to the forecast of customer count rate reclassifications. When determining whether a customer should be reclassified, Alectra Utilities reviews whether the customer's average consumption or demand (as applicable) for the past 12 months is outside a 10% upper or lower limit. Therefore, to estimate the demand change associated related to the forecast of customer count rate reclassifications, Alectra Utilities has assumed that the customers subject to the rate reclassification adjustments, will have, on average, surpassed the threshold of the new rate class by 15% (i.e., a moderately larger amount than the 10% upper or lower limit). A half-year rule is also applied to the first year in which the group of customers are forecasted to be reclassed, as it is assumed that the average reclassification will occur at the half year-point of the year. For example, demand for each customer in the BRZ that is forecasted to be reclassed from the GS>50 kW, Regular rate class to the GS>50 kW, Intermediate rate class, is based on the 700 kW lower threshold of the GS>50 kW, Intermediate rate class. Alectra Utilities then further prorated this reclassification to exclude the four (4) months of 2025 actual data available at the time of producing the base load forecast (January to April 2025). Therefore, the first-year demand is estimated to be 3,220 kW (700 kW x 115% x 50% x 8 months), and all subsequent years' demand for these same customers will be 9,660 kW (700 kW x 115% x 12 months).

An increase in one rate class is typically coupled with a corresponding decrease to another class, except in the case that a customer is reclassed downwards to GS<50 kW, wherein the estimated demand billing determinant associated with the customer's previous rate class is removed from the load forecast, as the GS<50 kW rate class is not billed on demand. Therefore, the total forecasted demand will be effectively reduced by the demand associated with the reclassed customers from the GS>50 kW to the GS<50 kW rate class. Tables 3-1-15 and 3-1-16 below illustrate the load forecast adjustments that were made to the consumption and demand, respectively, as a result of rate reclassifications.

Table 3-1-15: 2025-2031 Rate Reclassification Consumption Forecast Adjustment by Rate Class (MWh)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	894	4,022	6,555	8,821	10,828	12,572	14,083
GS>50 kW, Regular	-68	-305	-481	-615	-774	-1,037	-1,373
GS>50 kW, Intermediate	-826	-3,717	-6,073	-8,206	-10,054	-11,535	-12,710
Large Use	—	—	—	—	—	—	—
LUDA	—	—	—	—	—	—	—
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Consumption (MWh)	**—**	**—**	**—**	**—**	**—**	**—**	**—**

Table 3-1-16: 2025-2031 Rate Reclassification Billed Demand Forecast Adjustment by Rate Class (MW)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	—	—	—	—	—	—	—
GS>50 kW, Regular	-3	-13	-20	-26	-32	-43	-57
GS>50 kW, Intermediate	-34	-155	-253	-342	-419	-481	-530
Large Use	—	—	—	—	—	—	—
LUDA	—	—	—	—	—	—	—
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Billed Demand (MW)	**-37**	**-168**	**-273**	**-368**	**-451**	**-524**	**-587**

4.3.2. STANDBY POWER ADJUSTMENT

Alectra Utilities has adjusted its load forecast to include demand and consumption due to standby power for rate design purposes beginning in 2027. For information on the standby power rate design and its inclusion in the load forecast, refer to Exhibit 8, Tab 2, Schedule 2.

A 3-year average of billed demand data was utilized for the inclusion of standby demand data in the load forecast. Standby customers that are billed on gross load were already included in the base load forecast. Other types of Standby customers (not gross load billed) were excluded from the baseline forecast, with the exception of the GRZ's standby customers, who are by default included in the baseline forecast due to billing system configuration, where the data is sourced from.

Tables 3-1-17 and 3-1-18 illustrate the adjustments that were made to the consumption and billed demand forecasts, respectively, as a result of standby power.[5] No adjustments are necessary to the customer count, as Alectra Utilities applies a monthly fixed charge at a prevailing General Service rate class to standby customers.

[5] Adjustments were made to the consumption and billed demand forecasts for 2025 and 2026 to remove standby power related to the GRZ.

Table 3-1-17: 2025-2031 Standby Consumption Forecast Adjustment by Rate Class (MWh)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	—	—	—	—	—	—	—
GS>50 kW, Regular	-6	-8	9,687	9,687	9,687	9,687	9,687
GS>50 kW, Intermediate	-2	-2	4	4	4	4	4
Large Use	-681	-1,022	—	—	—	—	—
LUDA	—	—	510	510	510	510	510
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Consumption (MWh)	**-688**	**-1,032**	**10,201**	**10,201**	**10,201**	**10,201**	**10,201**

Table 3-1-18: 2025-2031 Standby Billed Demand Forecast Adjustment by Rate Class (MW)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	—	—	—	—	—	—	—
GS>50 kW, Regular	-0.2	-0.4	403.6	403.6	403.6	403.6	403.6
GS>50 kW, Intermediate	-0.1	-0.1	0.2	0.2	0.2	0.2	0.2
Large Use	-28.4	-42.6	—	—	—	—	—
LUDA	—	—	21.3	21.3	21.3	21.3	21.3
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Billed Demand (MW)	**-28.7**	**-43.0**	**425.0**	**425.0**	**425.0**	**425.0**	**425.0**

4.3.3. ADDITIONAL LARGE USE CUSTOMERS

Alectra Utilities has adjusted its load forecast to include additional Large Use customers. These customers include new customers and existing GS>50 kW customers who are likely to increase their demand to Large Use thresholds (5 MW) by 2031.

Alectra Utilities reviewed project-specific information, in order to determine whether the customer is likely to be a Large Use customer over the rate period. Information reviewed included whether the customer is an existing customer, if a temporary connection with Alectra is already established, if the project is currently under construction, and whether an Offer to Connect has been executed. If the project was deemed likely to be operational by 2031, a load of 5 MW (60 MW annually), has been added to the year in which the customer is likely to be operational. Correspondingly, Large Use energy sales were adjusted as well.

Tables 3-1-19 through 3-1-21 illustrate the forecast adjustments that were made to the customer count, consumption, and billed demand, respectively, as a result of the forecast for Large Use customers.

Table 3-1-19: 2025-2031 Large Use Customer Count Forecast Adjustment (Year-End)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	—	—	—	—	—	—	—
GS>50 kW, Regular	—	—	—	—	—	-1	-1
GS>50 kW, Intermediate	—	—	-1	-1	-1	-1	-1
Large Use	—	—	1	3	3	4	4
LUDA	—	—	—	—	—	—	—
Total Customers	**—**	**—**	**—**	**2**	**2**	**2**	**2**

Table 3-1-20: 2025-2031 Large Use Consumption Forecast Adjustment (MWh)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	—	—	—	—	—	—	—
GS>50 kW, Regular	—	—	—	—	—	-1,440	-1,440
GS>50 kW, Intermediate	—	—	-1,440	-1,440	-1,440	-1,440	-1,440
Large Use	—	—	1,440	4,320	4,320	5,760	5,760
LUDA	—	—	—	—	—	—	—
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Consumption (MWh)	**—**	**—**	**—**	**2,880**	**2,880**	**2,880**	**2,880**

Table 3-1-21: 2025-2031 Large Use Billed Demand Forecast Adjustment (MW)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	—	—	—	—	—	—	—
GS>50 kW, Regular	—	—	—	—	—	-60	-60
GS>50 kW, Intermediate	—	—	-60	-60	-60	-60	-60
Large Use	—	—	60	180	180	240	240
LUDA	—	—	—	—	—	—	—
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Billed Demand (MW)	**—**	**—**	**—**	**120**	**120**	**120**	**120**

4.3.4. STREET LIGHTING (BRZ)

As described in Exhibit 8, Tab 2, Schedule 2, Alectra Utilities converted BRZ's Street Lighting connections to devices, in order to develop harmonized Alectra Utilities Street Lighting distribution rates. The load forecast was adjusted with this conversion, beginning in 2027. Table 3-1-22 illustrates the load forecast adjustment that was made to the number of connections as a

result of the BRZ Streetlight billing unit conversion; i.e., the difference between the number of devices less the number of connections included in the base load forecast. No adjustments are necessary to the consumption and billed demand.

Table 3-1-22: 2025-2031 BRZ Street Lighting Connection to Device Forecast Adjustment (Year-End)

	2025	2026	2027	2028	2029	2030	2031
Street Lighting - Devices	—	—	30,474	30,623	30,774	30,927	31,082
Total	**—**	**—**	**30,474**	**30,623**	**30,774**	**30,927**	**31,082**

4.3.5. DISTRIBUTED GENERATION

As proposed in Exhibit 8, Tab 2, Schedule 2, Alectra Utilities determined it appropriate to eliminate BRZ's Distributed Generation rate class and transition the 131 customers to the GS<50 kW rate class. The number of customers, and their annual average consumption and demand (based on a recent year of billed data) was added to the GS<50 kW rate class, and was included in the load forecast, beginning in 2027. In addition, Alectra Utilities conducted a review of its FIT customers and has determined that current ERZ and GRZ customers in the GS>50 kW rate class require reclassification to the GS<50 kW rate class, as their consumption due to inverter load is below 50 kW. Therefore, Alectra Utilities has made load forecast adjustments to the consumption and demand in relation to these planned reclassifications to the General Service rate classes. Annual average consumption and demand was based on a recent year of billed data. The baseline load forecast did not include the number of FIT customers, so an adjustment was also made to include the number of FIT customers from all rate zones into the load forecast.

Tables 3-1-23 through 3-1-25 illustrate the load forecast adjustment that was made to the customer count, consumption, and billed demand, respectively, as a result of above.

Table 3-1-23: 2025-2031 General Service Customer Count Forecast Adjustment (Year-End)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	426	426	557	557	557	557	557
GS>50 kW, Regular	—	—	—	—	—	—	—
GS>50 kW, Intermediate	—	—	—	—	—	—	—
Large Use	—	—	—	—	—	—	—
LUDA	—	—	—	—	—	—	—
Total Customers	**426**	**426**	**557**	**557**	**557**	**557**	**557**

Table 3-1-24: 2025-2031 General Service Consumption Forecast Adjustment (MWh)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	196	294	588	588	588	588	588
GS>50 kW, Regular	-145	-217	-217	-217	-217	-217	-217
GS>50 kW, Intermediate	—	—	—	—	—	—	—
Large Use	—	—	—	—	—	—	—
LUDA	—	—	—	—	—	—	—
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Consumption (MWh)	**51**	**76**	**370**	**370**	**370**	**370**	**370**

Table 3-1-25: 2025-2031 General Service Billed Demand Forecast Adjustment (MW)

	2025	2026	2027	2028	2029	2030	2031
Residential	—	—	—	—	—	—	—
GS<50 kW	—	—	—	—	—	—	—
GS>50 kW, Regular	-1	-1	-1	-1	-1	-1	-1
GS>50 kW, Intermediate	—	—	—	—	—	—	—
Large Use	—	—	—	—	—	—	—
LUDA	—	—	—	—	—	—	—
Street Lighting	—	—	—	—	—	—	—
Sentinel Lighting	—	—	—	—	—	—	—
USL	—	—	—	—	—	—	—
Total Billed Demand (MW)	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**	**-1**

5. CDM AND NWS IMPACT IN THE LOAD FORECAST

Given the long-standing and widespread implementation of Conservation and Demand Management (CDM) and Non-Wires Solutions (NWS) initiatives across Ontario, including within Alectra Utilities' service territory, the historical effects of these initiatives are inherently reflected in the historical load and customer data that form the basis of Itron's regression models and forecasting methodologies.

Accordingly, Alectra Utilities and Itron have collectively determined that no separate or explicit CDM/NWS model variable or adjustment is required in the load and customer forecast. The influence of CDM/NWS is considered to be sufficiently captured through the historical trends embedded in the regression model inputs. This approach assumes that the historical reductions in electricity consumption and demand, resulting from provincial CDM/NWS programs, are implicitly integrated into the historical load data used to estimate future outcomes.

While Alectra Utilities is not applying a standalone CDM/NWS variable or adjustment, this methodology remains consistent with the OEB's Filing Requirements. Specifically, it meets the condition allowing distributors to omit explicit CDM/NWS variables where the effects of CDM/NWS are demonstrably addressed through correlated variables in the forecast model or embedded within historical trends.

6. SYSTEM PLANNING LOAD FORECAST

Alectra Utilities System Planning peak demand load forecast and this load and customer forecast for revenue purposes share a common foundation. Both are developed using the same set of planning assumptions, input factors, and methodological considerations. Doing so ensures consistency across different planning and regulatory applications. While the revenue forecast focuses on customer growth and energy consumption trends for rate-setting purposes, and the capacity forecast is intended to assess system infrastructure needs to ensure the reliability and adequacy of the grid in meeting future demand, both forecasts are fundamentally aligned in their approach.

For further details on the peak demand load forecast, refer to Chapter 5.3.1.2 C Load Forecast of the DSP.

ACCURACY OF LOAD FORECAST AND VARIANCE ANALYSIS

Alectra Utilities has completed Attachment 3-1: Appendix 2-IB - Load Forecast Analysis with the following inputs.

- 2017-2024 Historical actual consumption, billed demand, year-end customer and connection counts.;
- 2017-2024 Historical weather-normalized consumption and billed demand.;
- 2025-2026 Bridge Year forecasted consumption, billed demand and year-end customer and connection counts;
- 2027-2031 Proposed Test Year forecasted consumption, billed demand and year-end customer and connection counts.

For the purpose of this variance analysis, GS>50 Regular and Intermediate rate classes are presented separately. As Alectra Utilities proposes to harmonize these two classes into a single GS>50, Regular class starting January 1, 2027, the class-level billing determinants are aggregated for rate design purposes, and are therefore presented on an aggregated basis in Exhibit 3, Tab 1 and Exhibit 8.

1. CUSTOMER / DEVICE / CONNECTION FORECASTS

The following sections detail the year-over-year trends in customer / device / connection counts by rate class. Tables 3-2-1 through 3-2-3 present the 2017-2031 year-end counts of customer / device / connection by class and the year over year change in absolute numbers and percentage.

Table 3-2-1: 2017-2031 Customer / Device / Connection Count (Year-End)

	Historical Actuals							Bridge Years			Test Years				
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Residential	940,384	948,720	955,435	962,014	969,260	975,694	981,275	985,462	989,905	993,943	998,052	1,002,542	1,006,917	1,011,259	1,015,576
GS<50 kW	83,247	84,093	84,306	85,094	85,764	87,002	87,707	88,209	89,263	89,880	90,652	91,361	92,050	92,716	93,367
GS>50 kW, Regular	12,980	13,205	13,270	13,099	13,059	12,376	12,086	11,982	11,797	11,585	11,397	11,229	11,082	10,953	10,842
GS>50 kW, Intermediate	619	626	633	655	647	563	508	487	469	445	421	401	384	370	358
Large Use	26	25	26	27	24	25	27	30	31	31	32	34	35	36	36
LUDA	7	7	7	5	5	5	5	6	6	6	6	6	6	6	6
Embedded Distributor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total Customers	**1,037,264**	**1,046,677**	**1,053,678**	**1,060,895**	**1,068,760**	**1,075,666**	**1,081,609**	**1,086,177**	**1,091,472**	**1,095,891**	**1,100,561**	**1,105,574**	**1,110,475**	**1,115,341**	**1,120,186**
Street Lighting[6]	227,625	229,961	230,685	231,795	234,891	235,451	236,505	241,236	241,932	242,666	273,870	274,744	275,618	276,492	277,367
Sentinel Lighting	557	552	505	489	470	462	442	422	422	411	400	389	378	367	357
USL	11,156	11,315	11,276	11,160	11,251	11,255	11,352	11,265	11,439	11,489	11,531	11,571	11,611	11,650	11,689
Total Devices / Connections	**239,338**	**241,828**	**242,466**	**243,444**	**246,612**	**247,168**	**248,299**	**252,923**	**253,793**	**254,566**	**285,801**	**286,704**	**287,607**	**288,509**	**289,413**

Table 3-2-2: 2017-2031 Customer / Device / Connection Count Year-Over-Year Change (Year-End)

	Historical Actuals						Bridge Years			Test Years				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Residential	8,336	6,715	6,579	7,246	6,434	5,581	4,187	4,443	4,038	4,109	4,490	4,375	4,342	4,317
GS<50 kW	846	213	788	670	1,238	705	502	1,054	617	772	709	689	666	651
GS>50 kW, Regular	225	65	-171	-40	-683	-290	-104	-185	-212	-188	-168	-147	-129	-111
GS>50 kW, Intermediate	7	7	22	-8	-84	-55	-21	-18	-24	-24	-20	-17	-14	-12
Large Use	-1	1	1	-3	1	2	3	1	—	1	2	1	1	—
LUDA	—	—	-2	—	—	—	1	—	—	—	—	—	—	—
Embedded Distributor	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Customers	**9,413**	**7,001**	**7,217**	**7,865**	**6,906**	**5,943**	**4,568**	**5,295**	**4,419**	**4,670**	**5,013**	**4,901**	**4,866**	**4,845**
Street Lighting	2,336	724	1,110	3,096	560	1,054	4,731	696	734	31,204	874	874	874	875
Sentinel Lighting	-5	-47	-16	-19	-8	-20	-20	—	-11	-11	-11	-11	-11	-10
USL	159	-39	-116	91	4	97	-87	174	50	42	40	40	39	39
Total Devices / Connections	**2,490**	**638**	**978**	**3,168**	**556**	**1,131**	**4,624**	**870**	**773**	**31,235**	**903**	**903**	**902**	**904**

[6] For BRZ Street Lighting class, forecasts are based on the number of connections from the historical period through the end of 2026. Effective 2027, the Street Lighting class transitions to a device-based.

Table 3-2-3: 2017-2031 Customer / Device / Connection Count Year-Over-Year Change Rate (%)

	Historical Actuals						Bridge Years			Test Years				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Residential	0.9%	0.7%	0.7%	0.8%	0.7%	0.6%	0.4%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
GS<50 kW	1.0%	0.3%	0.9%	0.8%	1.4%	0.8%	0.6%	1.2%	0.7%	0.9%	0.8%	0.8%	0.7%	0.7%
GS>50 kW, Regular	1.7%	0.5%	-1.3%	-0.3%	-5.2%	-2.3%	-0.9%	-1.5%	-1.8%	-1.6%	-1.5%	-1.3%	-1.2%	-1.0%
GS>50 kW, Intermediate	1.1%	1.1%	3.5%	-1.2%	-13.0%	-9.8%	-4.1%	-3.7%	-5.1%	-5.4%	-4.8%	-4.2%	-3.6%	-3.2%
Large Use	-3.8%	4.0%	3.8%	-11.1%	4.2%	8.0%	11.1%	3.3%	—%	3.2%	6.3%	2.9%	2.9%	—%
LUDA	—%	—%	-28.6%	—%	—%	—%	20.0%	—%	—%	—%	—%	—%	—%	—%
Embedded Distributor	—%	—%	—%	—%	—%	—%	—%	—%	—%	—%	—%	—%	—%	—%
Total Customers	**0.9%**	**0.7%**	**0.7%**	**0.7%**	**0.6%**	**0.6%**	**0.4%**	**0.5%**	**0.4%**	**0.4%**	**0.5%**	**0.4%**	**0.4%**	**0.4%**
Street Lighting	1.0%	0.3%	0.5%	1.3%	0.2%	0.4%	2.0%	0.3%	0.3%	12.9%	0.3%	0.3%	0.3%	0.3%
Sentinel Lighting	-0.9%	-8.5%	-3.2%	-3.9%	-1.7%	-4.3%	-4.5%	—%	-2.6%	-2.7%	-2.8%	-2.8%	-2.9%	-2.7%
USL	1.4%	-0.3%	-1.0%	0.8%	—%	0.9%	-0.8%	1.5%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%
Total Devices / Connections	**1.0%**	**0.3%**	**0.4%**	**1.3%**	**0.2%**	**0.5%**	**1.9%**	**0.3%**	**0.3%**	**12.3%**	**0.3%**	**0.3%**	**0.3%**	**0.3%**

Residential Class

A detailed analysis of the residential class customer data from 2020 to 2031 reveals a modest year-over-year growth trend, with customer counts increasing gradually across both historical and forecast periods. The historical data from 2020 to 2024 demonstrates consistent growth, establishing a solid baseline for evaluating the Bridge and Test Year forecasts.

The Bridge Year forecasts (2025–2026) reflect a slight moderation in growth rates relative to the historical trend. This is reasonable given the economic uncertainty associated with U.S. tariffs, which have contributed to delays in development activity. Despite these factors, customer growth remains positive.

Similarly, the Test Year forecast maintains 0.4% annual growth projection, resulting in a gradual and stable increase in customer count. This projection reflects a continuation of the tempered growth outlook in the Bridge Years.

General Service < 50 KW

A review of the GS<50 kW customer data from 2020 through 2031 reveals a moderate growth trend, with customer counts increasing steadily across the Historical, Bridge, and Test Year periods. Historical actuals from 2020 to 2024 show an average year-over-year growth rate of 0.9%, providing a stable reference point for assessing the reasonableness of the forecasts.

The Bridge Year projections for 2025 and 2026 continue this trend, with growth rates of 1.2% and 0.7%, respectively. These estimates appear reasonable given a gradual recovery in business formation and service demand following the impacts of the COVID-19 shutdown.

For the Test Years (2027–2031), the forecast projects steady growth in the range of 0.7% to 0.9% annually, which is consistent with historical performance. Additionally, the frequent customer transitions between General Service rate classes — particularly as businesses scale down — contribute to year-over-year fluctuations within the GS<50 kW class.

General service >50 kW, Regular

An analysis of the GS>50 kW, Regular class customer data from 2020 to 2031 indicates a consistent declining trend in customer count across the Historical, Bridge, and Test Year periods. The Bridge Year forecasts (2025–2026) continue this trend, with customer counts projected to decline by 1.5% and 1.8%, respectively. These reductions are consistent with broader economic conditions, including reduced GDP growth projections driven by U.S. tariff uncertainty and economic slowdown. The lasting effects of the COVID-19 pandemic also continue to impact the commercial sector, contributing to business closures and load reclassifications. Test Year forecasts (2027–2031) show a sustained decline of approximately 1.6% to 1.0% annually. This ongoing reduction also reflects customer migration to other General Service classes, specifically down to the GS <50 kW rate class due to reduced consumption.

General service >50 kW, Intermediate

The GS>50 kW, Intermediate class customer data from 2020 through 2031 demonstrates a sustained year-over-year decline in customer count, beginning with a 13.0% drop in 2022 and continuing at a gradually moderating pace through 2026. This downward trend is consistent with the broader economic context, including the lasting impacts of the COVID-19 pandemic and reduced GDP growth expectations during the Bridge Years (2025–2026) due to uncertainty from U.S. tariffs and halted development activity. The Test Year forecasts (2027–2031) project continued annual declines ranging from 4.8% to 3.2%. These reductions reflect both, the economic environment and structural shifts within Alectra Utilities' customer base, including frequent reclassification among the three General Service categories. Customers exiting the Intermediate class could be downsizing into the GS >50 kW, Regular or GS <50 kW rate classes.

As recognized in historical actual data, customer migration and reclassification among the three General Service classes - GS<50 kW, GS>50 kW, Regular; and GS>50 kW, Intermediate - is common. As GS>50 kW, Regular and GS >50 kW, Intermediate rate classes decline, a portion of these customers are being reclassified to the GS<50 kW rate class, contributing to its observed and forecasted growth. This inter-class fluidity underscores the importance of viewing these forecasts collectively. Despite this movement, the combined customer base across all

three classes remains relatively stable, with forecasted trends capturing the net effect of customer reclassification. The overall forecasting approach preserves continuity with historical data and ensures class-level integrity.

Large Use Classes

The Large Use rate class remains stable with an average of 27 customers during the historical actual period, increasing to 31 in the Bridge Years and 36 customers by 2031. Further details on the anticipated additional Large Use customers are described in Exhibit 3, Tab 1, Schedule 4. The primary source of variance within the Large Use rate class is attributable to customer rate reclassifications, which can significantly affect class composition and associated demand levels. This class consists of major industrial users who, although comprising a small share of the total customer base, have a substantial impact on system load.

The Large Use with Dedicated Assets class remains minimal and constant across all periods, averaging 5–6 customers, reflecting its specialized nature.

Embedded Distributor

Number of Embedded Distributor class remains constant, with 1 customer through the historical, Bridge, and Test Year periods.

Street Lighting Class

The street lighting connection counts from 2020 to 2024 show a steady growth trend, forming a sound basis for forecasting. The Bridge Years (2025–2026) reflect a moderate growth rate. The Test Years (2027–2031) include a significant structural adjustment in 2027 in the BRZ Street Lighting rate class as described in Exhibit 3, Tab 1, Schedule 4. This one-time increase is due to the conversion from connection-based to device-based billing units for street lighting in the BRZ. Following this one-time adjustment, annual growth rates from 2028 to 2031 return to a stable and modest pace of 0.3% annually, which closely aligns with historical norms.

Sentinel Lighting Class

Historical data from 2020 to 2024 shows a consistent decline in Sentinel Lighting connections. This trend reflects declining demand for this class, due to modernization and conversion to alternate lighting solutions. The Bridge Year forecast (2025–2026) anticipates a slower rate of decline. The Test Year forecast (2027–2031) returns to a steady annual decrease, closely aligned with historical rates.

Unmetered Scattered Load

The historical actual data for Unmetered Scattered Load connections from 2020 to 2024 shows relatively flat growth. The Bridge Year forecast (2025–2026) projects a modest increase in connection counts. For the Test Years (2027–2031), the forecast reverts to a gradual and consistent growth trajectory, in line with long-term trends.

2. CONSUMPTION

The following sections detail the year-over-year trends in consumption by rate class with both historical actual values and historical weather-normalized actual values. Tables 3-2-4 and 3-2-5 present the 2017-2031 Consumption with Historical Actual Values by class and the year-over-year change rate in percentage.

Table 3-2-4: 2017-2031 Consumption with Historical Actual Values (MWh)

	Historical Actuals							Bridge Years			Test Years				
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Residential	7,100,278	7,702,403	7,371,238	8,340,437	8,161,387	8,175,489	8,002,562	8,358,537	8,437,547	8,556,582	8,833,994	9,184,006	9,550,659	10,000,906	10,421,040
GS<50 kW	2,647,033	2,803,803	2,711,839	2,566,343	2,587,014	2,774,846	2,744,667	2,812,814	2,800,921	2,830,938	2,873,274	2,956,719	3,045,931	3,154,197	3,257,990
GS>50 kW, Regular	9,817,658	10,099,472	9,946,725	9,425,434	9,538,245	9,869,980	9,944,399	10,156,193	10,198,428	10,184,084	10,175,775	10,276,208	10,336,638	10,406,727	10,488,921
GS>50 kW, Intermediate	3,385,829	3,452,031	3,374,226	3,072,345	3,207,504	3,263,165	3,137,686	3,039,667	3,050,990	3,100,028	3,080,270	3,091,115	3,103,801	3,119,048	3,135,977
Large Use	1,604,810	1,621,609	1,681,693	1,684,707	1,724,380	1,784,436	1,883,046	1,941,696	2,030,408	2,124,065	2,129,485	2,135,914	2,164,532	2,227,767	2,232,718
LUDA	1,047,871	1,094,744	1,091,050	989,927	979,944	987,579	905,171	864,720	852,476	855,328	855,838	855,838	855,838	855,838	855,838
Street Lighting	143,164	127,392	114,455	110,866	96,997	96,189	93,313	93,691	93,208	94,717	95,130	95,262	95,308	95,324	95,330
Sentinel Lighting	755	783	689	699	664	661	632	587	629	590	574	557	541	524	508
USL	44,363	44,364	44,561	45,199	44,876	45,177	44,925	47,636	46,271	47,095	47,482	47,870	48,258	48,646	49,034
Total Consumption (MWh)	**25,791,760**	**26,946,602**	**26,336,475**	**26,235,956**	**26,341,012**	**26,997,521**	**26,756,400**	**27,315,542**	**27,510,879**	**27,793,427**	**28,091,823**	**28,643,487**	**29,201,504**	**29,908,977**	**30,537,354**

Table 3-2-5: 2017-2031 Consumption with Historical Actual Values Year-Over-Year Change Rate (%)

	Historical Actuals						Bridge Years			Test Years				
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Residential	8.5%	-4.3%	13.1%	-2.1%	0.2%	-2.1%	4.4%	0.9%	1.4%	3.2%	4.0%	4.0%	4.7%	4.2%
GS<50 kW	5.9%	-3.3%	-5.4%	0.8%	7.3%	-1.1%	2.5%	-0.4%	1.1%	1.5%	2.9%	3.0%	3.6%	3.3%
GS>50 kW, Regular	2.9%	-1.5%	-5.2%	1.2%	3.5%	0.8%	2.1%	0.4%	-0.1%	-0.1%	1.0%	0.6%	0.7%	0.8%
GS>50 kW, Intermediate	2.0%	-2.3%	-8.9%	4.4%	1.7%	-3.8%	-3.1%	0.4%	1.6%	-0.6%	0.4%	0.4%	0.5%	0.5%
Large Use	1.0%	3.7%	0.2%	2.4%	3.5%	5.5%	3.1%	4.6%	4.6%	0.3%	0.3%	1.3%	2.9%	0.2%
LUDA	4.5%	-0.3%	-9.3%	-1.0%	0.8%	-8.3%	-4.5%	-1.4%	0.3%	0.1%	—%	—%	—%	—%
Street Lighting	-11.0%	-10.2%	-3.1%	-12.5%	-0.8%	-3.0%	0.4%	-0.5%	1.6%	0.4%	0.1%	—%	—%	—%
Sentinel Lighting	3.7%	-12.0%	1.4%	-4.9%	-0.4%	-4.5%	-7.0%	7.1%	-6.2%	-2.8%	-2.9%	-3.0%	-3.1%	-3.2%
USL	—%	0.4%	1.4%	-0.7%	0.7%	-0.6%	6.0%	-2.9%	1.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Total Consumption (%)	**4.5%**	**-2.3%**	**-0.4%**	**0.4%**	**2.5%**	**-0.9%**	**2.1%**	**0.7%**	**1.0%**	**1.1%**	**2.0%**	**1.9%**	**2.4%**	**2.1%**

Tables 3-2-6 and 3-2-7 present the 2017-2031 consumption with historical weather-normalized actual values by class and the year over year change rate in percentage.

Table 3-2-6: 2017-2031 Consumption with Historical Weather-Normalized Actual Values (MWh)

	Historical WN Actuals							Bridge Years			Test Years				
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Residential	7,295,018	7,406,593	7,485,787	8,169,172	8,108,384	8,124,262	8,284,488	8,511,337	8,420,148	8,556,582	8,833,994	9,184,006	9,550,659	10,000,906	10,421,040
GS<50 kW	2,541,190	2,603,499	2,713,678	2,544,016	2,583,255	2,757,496	2,800,928	2,854,840	2,794,906	2,830,938	2,873,274	2,956,719	3,045,931	3,154,197	3,257,990
GS>50 kW, Regular	9,893,481	9,969,074	9,975,559	9,369,056	9,521,979	9,839,232	10,069,505	10,237,327	10,188,310	10,184,084	10,175,775	10,276,208	10,336,638	10,406,727	10,488,921
GS>50 kW, Intermediate	3,385,829	3,452,031	3,374,226	3,072,345	3,207,504	3,263,165	3,137,686	3,039,667	3,050,990	3,100,028	3,080,270	3,091,115	3,103,801	3,119,048	3,135,977
Large Use	1,604,810	1,621,609	1,681,693	1,684,707	1,724,380	1,784,436	1,883,046	1,941,696	2,030,408	2,124,065	2,129,485	2,135,914	2,164,532	2,227,767	2,232,718
LUDA	1,047,871	1,094,744	1,091,050	989,927	979,944	987,579	905,171	864,720	852,476	855,328	855,838	855,838	855,838	855,838	855,838
Street Lighting	143,164	127,392	114,455	110,866	96,997	96,189	93,313	93,691	93,208	94,717	95,130	95,262	95,308	95,324	95,330
Sentinel Lighting	755	783	689	699	664	661	632	587	629	590	574	557	541	524	508
USL	44,363	44,364	44,561	45,199	44,876	45,177	44,925	47,636	46,271	47,095	47,482	47,870	48,258	48,646	49,034
Total Consumption (MWh)	**25,956,481**	**26,320,090**	**26,481,699**	**25,985,987**	**26,267,984**	**26,898,195**	**27,219,693**	**27,591,502**	**27,477,346**	**27,793,427**	**28,091,823**	**28,643,487**	**29,201,504**	**29,908,977**	**30,537,354**

Table 3-2-7: 2017-2031 Consumption with Historical Wealth-Normalized Actual Values Year-Over-Year Change Rate (%)

	Historical WN Actuals						Bridge Years			Test Years				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Residential	1.5%	1.1%	9.1%	-0.7%	0.2%	2.0%	2.7%	-1.1%	1.6%	3.2%	4.0%	4.0%	4.7%	4.2%
GS<50 kW	2.5%	4.2%	-6.3%	1.5%	6.7%	1.6%	1.9%	-2.1%	1.3%	1.5%	2.9%	3.0%	3.6%	3.3%
GS>50 kW, Regular	0.8%	0.1%	-6.1%	1.6%	3.3%	2.3%	1.7%	-0.5%	—%	-0.1%	1.0%	0.6%	0.7%	0.8%
GS>50 kW, Intermediate	2.0%	-2.3%	-8.9%	4.4%	1.7%	-3.8%	-3.1%	0.4%	1.6%	-0.6%	0.4%	0.4%	0.5%	0.5%
Large Use	1.0%	3.7%	0.2%	2.4%	3.5%	5.5%	3.1%	4.6%	4.6%	0.3%	0.3%	1.3%	2.9%	0.2%
LUDA	4.5%	-0.3%	-9.3%	-1.0%	0.8%	-8.3%	-4.5%	-1.4%	0.3%	0.1%	—%	—%	—%	—%
Street Lighting	-11.0%	-10.2%	-3.1%	-12.5%	-0.8%	-3.0%	0.4%	-0.5%	1.6%	0.4%	0.1%	—%	—%	—%
Sentinel Lighting	3.7%	-12.0%	1.4%	-4.9%	-0.4%	-4.5%	-7.0%	7.1%	-6.2%	-2.8%	-2.9%	-3.0%	-3.1%	-3.2%
USL	—%	0.4%	1.4%	-0.7%	0.7%	-0.6%	6.0%	-2.9%	1.8%	0.8%	0.8%	0.8%	0.8%	0.8%
Total Consumption (%)	**1.4%**	**0.6%**	**-1.9%**	**1.1%**	**2.4%**	**1.2%**	**1.4%**	**-0.4%**	**1.1%**	**1.1%**	**2.0%**	**1.9%**	**2.4%**	**2.1%**

2.1. TOTAL SYSTEM CONSUMPTION

A review of historical weather-normalized consumption data and forecasted values for the Bridge Years (2025–2026) and Test Years (2027–2031) indicates an overall reasonable trend in electricity consumption. The historical period shows steady recovery following the COVID-19 pandemic, with modest year-over-year growth. During the Bridge Years, consumption levels flatten slightly, reflecting reduced GDP growth projection tied to economic uncertainty and delayed development activity resulting from U.S. tariffs. This short-term stagnation is consistent with broader macroeconomic conditions. Beginning in the Test Years, consumption resumes a stronger growth trajectory, driven by an increasing customer base and the accelerating impact of electrification, particularly from electric vehicles and building electrification.

Residential Class

From 2019 to 2024, weather-normal consumption for the residential rate class increased at an average annual rate of 2.7%. This period reflects the effects of COVID-19, which contributed to work-from-home arrangements. The Bridge Year 2025 shows a slowdown in total consumption growth, primarily due to reduced GDP growth projection tied to economic uncertainty and U.S. tariffs. Despite this, the total consumption remains stable, supported by early-stage electrification. A strong upward trend resumes in the Test Years, with weather-normal total consumption growing at an average rate of 4.0% annually. This acceleration is directly attributable to the ramp-up of electric vehicle and building electrification consumption.

General Service < 50 kW

An analysis of historical weather-normalized consumption data and forecasted values for the General Service < 50 kW rate class reveals a generally consistent trend over the planning horizon. From 2020 to 2024, consumption shows steady growth, reflecting a post-COVID-19 recovery coupled by structural drivers such as customer reclassification from higher service classes. During the Bridge Years (2025–2026), consumption declines slightly. This temporary dip is primarily attributed to reduced GDP growth projection stemming from macroeconomic uncertainty, including the impact of U.S. tariffs and paused development activity. Forecasts for the Test Years (2027–2031) show a return to stronger growth, supported by gradual economic stabilization, and the growing adoption of electric vehicles and building electrification.

Unmetered Scattered Load

The forecast for the Unmetered Scattered Load (USL) rate class aligns with historical trends. The increase in consumption and connections in recent years has been largely driven by the addition of new USL services. The Test Years forecast shows a gradual growth, consistent with historical trends.

3. BILLED DEMAND

The following sections detail the year-over-year trends in billed demand with both historical actual values and historical weather-normalized actual values. Tables 3-2-8 and 3-2-9 present the 2017-2031 billed demand with historical actual values by class and the year-over-year change rate in percentage.

Table 3-2-8: 2017-2031 Billed Demand with Historical Actual Values (MW)

	Historical Actuals							Bridge Years			Test Years				
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
GS>50 kW, Regular	26,709	26,908	27,022	26,173	25,982	26,679	26,846	26,735	27,181	27,406	27,755	27,942	28,173	28,294	28,500
GS>50 kW, Intermediate	7,608	7,641	7,503	7,232	7,204	7,403	7,019	6,805	6,811	6,797	6,604	6,526	6,499	6,475	6,466
Large Use	3,029	3,090	3,130	3,090	3,206	3,329	3,492	3,625	3,785	3,926	4,034	4,151	4,245	4,492	4,501
LUDA	1,883	1,934	1,935	1,793	1,890	1,798	1,646	1,602	1,623	1,599	1,620	1,616	1,620	1,620	1,620
Street Lighting	402	341	335	301	273	268	262	259	261	265	266	265	266	266	266
Sentinel Lighting	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
Total Billed Demand (MW)	**39,633**	**39,916**	**39,927**	**38,590**	**38,557**	**39,479**	**39,268**	**39,028**	**39,662**	**39,994**	**40,281**	**40,503**	**40,806**	**41,148**	**41,354**

Table 3-2-9: 2017-2031 Billed Demand with Historical Actual Values Year-Over-Year Change Rate (%)

	Historical Actuals						Bridge Years			Test Years				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
GS>50 kW, Regular	0.7%	0.4%	-3.1%	-0.7%	2.7%	0.6%	-0.4%	1.7%	0.8%	1.3%	0.7%	0.8%	0.4%	0.7%
GS>50 kW, Intermediate	0.4%	-1.8%	-3.6%	-0.4%	2.8%	-5.2%	-3.0%	0.1%	-0.2%	-2.8%	-1.2%	-0.4%	-0.4%	-0.1%
Large Use	2.0%	1.3%	-1.3%	3.8%	3.8%	4.9%	3.8%	4.4%	3.7%	2.8%	2.9%	2.3%	5.8%	0.2%
LUDA	2.7%	—%	-7.4%	5.4%	-4.9%	-8.4%	-2.7%	1.3%	-1.5%	1.3%	-0.2%	0.2%	—%	—%
Street Lighting	-15.1%	-1.8%	-10.0%	-9.5%	-1.6%	-2.3%	-1.3%	1.0%	1.2%	0.5%	-0.1%	0.3%	—%	—%
Sentinel Lighting	19.1%	-11.5%	-9.3%	2.0%	-4.3%	1.8%	-2.3%	-4.7%	-0.6%	-2.5%	-5.1%	-3.4%	-3.5%	-1.4%
Total Billed Demand (%)	**0.7%**	**—%**	**-3.3%**	**-0.1%**	**2.4%**	**-0.5%**	**-0.6%**	**1.6%**	**0.8%**	**0.7%**	**0.6%**	**0.7%**	**0.8%**	**0.5%**

Tables 3-2-10 and 3-2-11 present the 2017-2031 billed demand with historical weather-normalized actual values by class and the year-over-year change rate percentage.

Table 3-2-10: 2017-2031 Billed Demand with Historical Weather-Normalized Actual Values (MW)

	Historical WN Actuals							Bridge Years		Test Years				
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
GS>50 kW, Regular	26,655	26,857	26,880	25,132	25,613	26,472	27,097	27,470	27,435	27,406	27,755	27,942	28,173	28,294	28,500
GS>50 kW, Intermediate	7,597	7,748	7,574	6,883	7,199	7,315	7,026	6,794	6,804	6,797	6,604	6,526	6,499	6,475	6,466
Large Use	3,232	3,261	3,341	3,331	3,498	3,686	3,841	3,857	3,799	3,926	4,034	4,151	4,245	4,492	4,501
LUDA	2,021	2,098	2,080	1,880	1,802	1,834	1,676	1,590	1,593	1,599	1,620	1,616	1,620	1,620	1,620
Street Lighting	400	360	331	308	272	269	261	260	260	265	266	265	266	266	266
Sentinel Lighting	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1
Total Billed Demand (MW)	**39,907**	**40,327**	**40,208**	**37,536**	**38,386**	**39,577**	**39,903**	**39,972**	**39,894**	**39,994**	**40,281**	**40,503**	**40,806**	**41,148**	**41,354**

Table 3-2-11: 2017-2031 Billed Demand with Historical Weather-Normalized Actual Values Year-Over-Year Change Rate (%)

	Historical WN Actuals						Bridge Years		Test Years				
	2018	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
GS>50 kW, Regular	0.8%	0.1%	-6.5%	1.9%	3.4%	2.4%	1.4%	-0.1%	-0.1%	1.3%	0.7%	0.8%	0.4%	0.7%
GS>50 kW, Intermediate	2.0%	-2.2%	-9.1%	4.6%	1.6%	-3.9%	-3.3%	0.2%	-0.1%	-2.8%	-1.2%	-0.4%	-0.4%	-0.1%
Large Use	0.9%	2.4%	-0.3%	5.0%	5.4%	4.2%	0.4%	-1.5%	3.3%	2.8%	2.9%	2.3%	5.8%	0.2%
LUDA	3.8%	-0.9%	-9.6%	-4.2%	1.8%	-8.6%	-5.1%	0.2%	0.3%	1.3%	-0.2%	0.2%	—%	—%
Street Lighting	-10.0%	-7.9%	-7.1%	-11.7%	-1.1%	-3.0%	-0.2%	—%	1.6%	0.5%	-0.1%	0.3%	—%	—%
Sentinel Lighting	4.9%	-12.7%	2.2%	-5.0%	-0.4%	-5.6%	-7.1%	8.9%	-6.4%	-2.5%	-5.1%	-3.4%	-3.5%	-1.4%
Total Billed Demand (%)	**1.1%**	**-0.3%**	**-6.6%**	**2.3%**	**3.1%**	**0.8%**	**0.2%**	**-0.2%**	**0.3%**	**0.7%**	**0.6%**	**0.7%**	**0.8%**	**0.5%**

General Service >50 kW, Regular

A review of weather-normalized billed demand data for the GS>50 kW, Regular rate class shows a consistent upward trend over the historical, Bridge, and Test Year periods. From 2020 to 2024, billed demand increased steadily, reflecting ongoing recovery from COVID-19 impacts and the continued reclassification of customers into this class from the higher-tier Intermediate class. In the Bridge Years (2025–2026), billed demand growth slows down, with a marginal increase in 2025 followed by a slight decline in 2026. These shifts align with reduced GDP growth projection driven by economic uncertainty, including the impact of U.S. tariffs and paused development activity. During the Test Years (2027–2031), billed demand resumes a stable growth trajectory, averaging around 0.8% annually. This growth is supported by the accelerating electrification impacts from EVs and buildings electrification.

General Service >50 kW, Intermediate

The billed demand forecast for the GS>50 kW, Intermediate rate class is supported by historical trends and clearly reflects external economic and structural influences. From 2022 to 2024, total and weather-normal billed demand declined notably, largely due to business shutdowns and customer reclassification to smaller service classes during the COVID-19 period. The Bridge Year forecast (2025–2026) reflects modest recovery consistent with reduced GDP growth expectations tied to U.S. tariffs. The Test Year period (2027–2031) shows a gradual and steady increase in billed demand, supported by economic stabilization and the growing adoption of electric vehicles and building electrification.

Large Use Classes

The billed demand forecast for the Large Use rate class is grounded in historical trends and informed by detailed, customer-specific planning. From 2020 to 2024, the class experienced consistent growth, though the rate of increase slowed in 2024, indicating a stabilization of operations following the post-COVID recovery phase. During the Bridge Years (2025–2026), billed demand is forecasted to fluctuate slightly, with a modest decline in 2025 followed by a rebound in 2026. The temporary dip in 2025 aligns with broader macroeconomic uncertainty, including reduced GDP growth projection and development delays associated with U.S. tariffs.

Additionally, some downward impact on billed demand is attributed to customer reclassification out of the class.

Beginning in 2026, billed demand is projected to recover and continue growing through the Test Years (2027–2031), supported by increasing electrification—particularly from electric vehicles and building electrification initiatives. The forecasts reflect a gradual acceleration in billed demand growth.

The Large Use with Dedicated Assets rate class consists of a stable group of 5 to 6 customers with unique consumption profiles. Forecasts are also developed on a customer-by-customer basis.

Street Lighting

The Street Lighting rate class billed demand forecast aligns with historical trends and known system changes. During the historical period, actual billed demand steadily declined due to widespread LED conversions across municipalities, which improved efficiency and reduced energy use. The Bridge Years forecast reflects a transitional period, with billed demand stabilizing as most conversions near completion. In the Test Years, billed demand levels off, showing minimal year-over-year growth. A structural shift occurs in 2027 with an increase in unit count due to the BRZ rate conversion from connection-based to device-based. This shift does not materially impact billed demand.

Sentinel Lighting

The billed demand forecast for the Sentinel Lighting rate class is generally consistent with historical trends. Historically, billed demand has been declining as the Sentinel Lighting is being phased out, as customers increasingly removing legacy units once they are no longer operational or needed. The forecast shows a declining trend in the Test Years, aligning with the expected continued phase-out of these services.

Consumption and Billed Demand Conversion

Billed demand forecasts are calculated for rate classes GS>50 kW, Regular and higher. The billed demand forecasts are based on a billed demand load factor which relates monthly billed

demand to monthly consumption. The billed demand factor is calculated as the ratio of monthly average hourly use to monthly billed demand. The forecast is based on an average of the historical monthly load factors (usually set as an average of the prior three years).

For more details regarding the kWh to kW conversion, refer to the Itron Report , Chapter 2 Modelling Approach.