2026 Long-Term Forecast

Feb 18th, 2025

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Agenda

1. Forecast Status
2. Baseline Forecast
3. Heat Pump, Solar, and EV Forecast
4. System Forecast
5. Zone-level Forecast
6. Forecast Scenarios

Workplan and Schedule

Status – What has been completed

- **Baseline energy and peak forecast the at system and zonal level**
  - Baseline forecast includes the impact of economics, efficiency, and changes to historical data

- **Updated electric vehicle, heat pump, and solar forecasts based on input from prior subcommittee meeting completed**
  - Multiple EV hourly profiles to account for TOU and non-TOU rates
  - Small and large solar generation profiles
  - State level forecast of technologies are allocated to zones based on income and/or historical adoption trends

- **Adjusted energy and peak forecast at system and zonal level**
  - The baseline forecast is adjusted for the impact of solar, electric vehicles, and heat-pumps.

- **Comparison to the prior long-term load forecast**

Schedule: Feb-April 2026

- **Construct forecast scenarios**
  - Extreme weather conditions
  - Higher and lower technology adoption paths
  - Alternative EV charging profiles
  - Alternative battery storage and load control strategies

- **Presentation – Scenario results**

- **Complete project report**

Outstanding Items & Needs

- **Battery storage**
  - Data on hourly charging and discharging patterns
  - Data on Installed capacity, ideally by zone
  - What percentage storage is controlled by DUs

- **Hourly heat pump shape data**
  - Currently using a genetic heating profile not specific to heat pumps

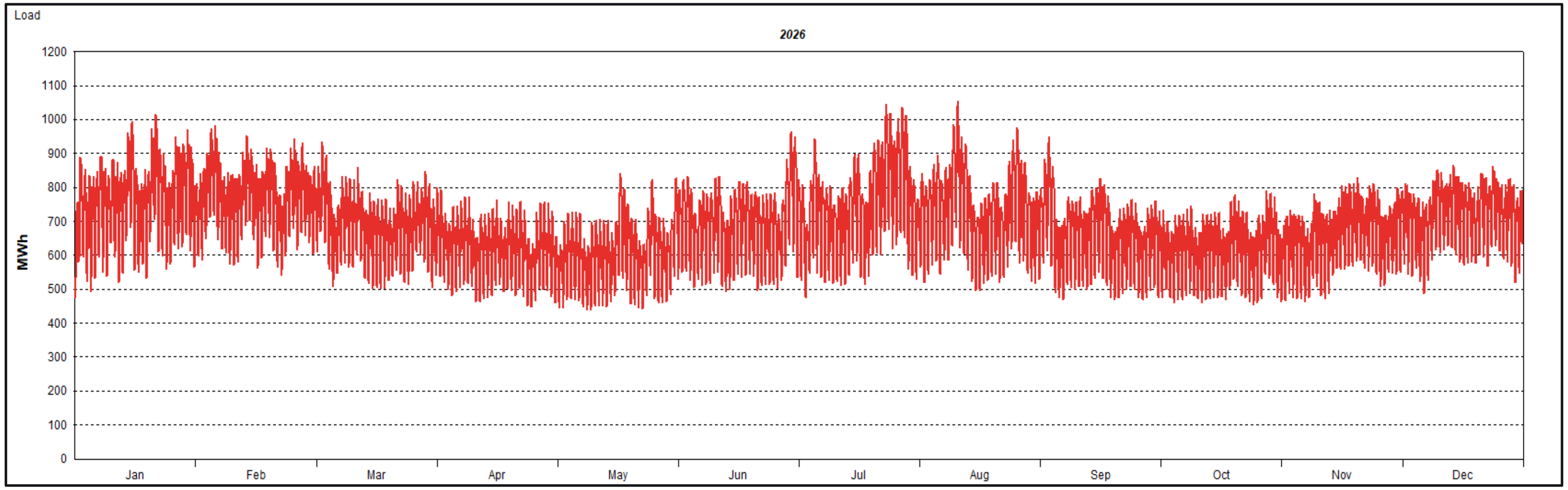
The Baseline Forecast

Baseline Gross Load Forecast 2026 and 2035

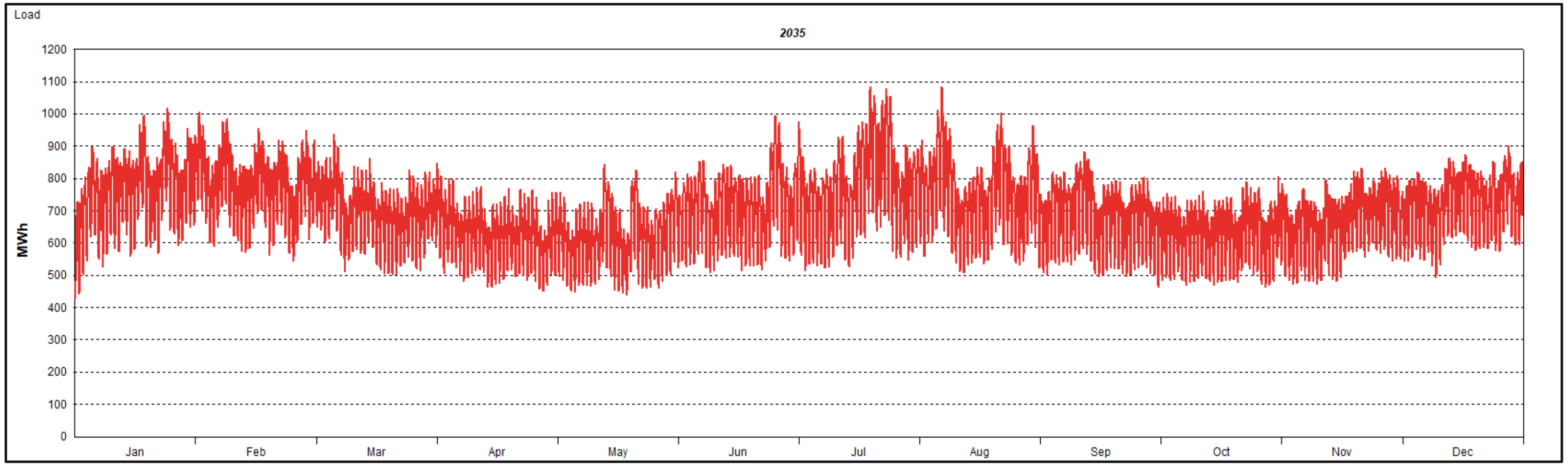
Year	MWh	Peak (MW)	Peak Time
2026	6,009,260	1,054.4	8/11/2026 14:00
2030	6,119,058	1,076.3	8/6/2030 14:00
2035	6,130,743	1,084.9	7/20/2035 13:00
2040	6,310,281	1,133.3	7/20/2040 13:00
2045	6,560,867	1,196.5	7/21/2045 13:00
2026 - 30	0.45%	0.51%	
2030 - 35	0.04%	0.16%	
2035 - 40	0.58%	0.88%	
2040 - 45	0.78%	1.09%	

- Measure of Vermont customer energy and demand requirements excluding the impact of future "new" technologies

- Driven by:
  - Household and economic growth
  - End-use efficiency trends
  - Increasing temperatures



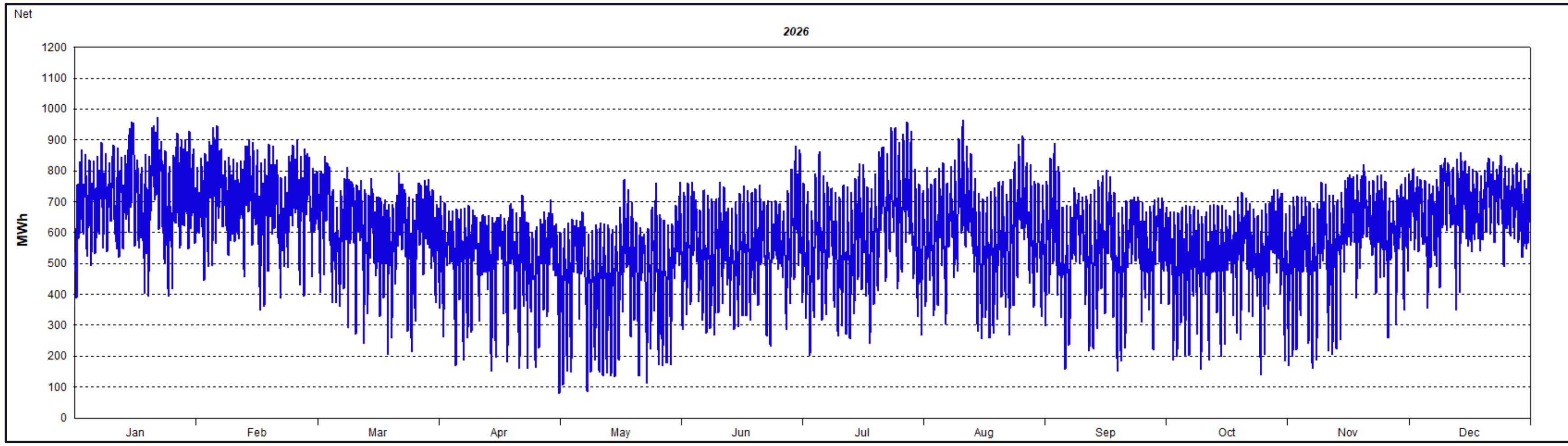
Summer Peaking, Afternoon (Excludes Solar Impact)

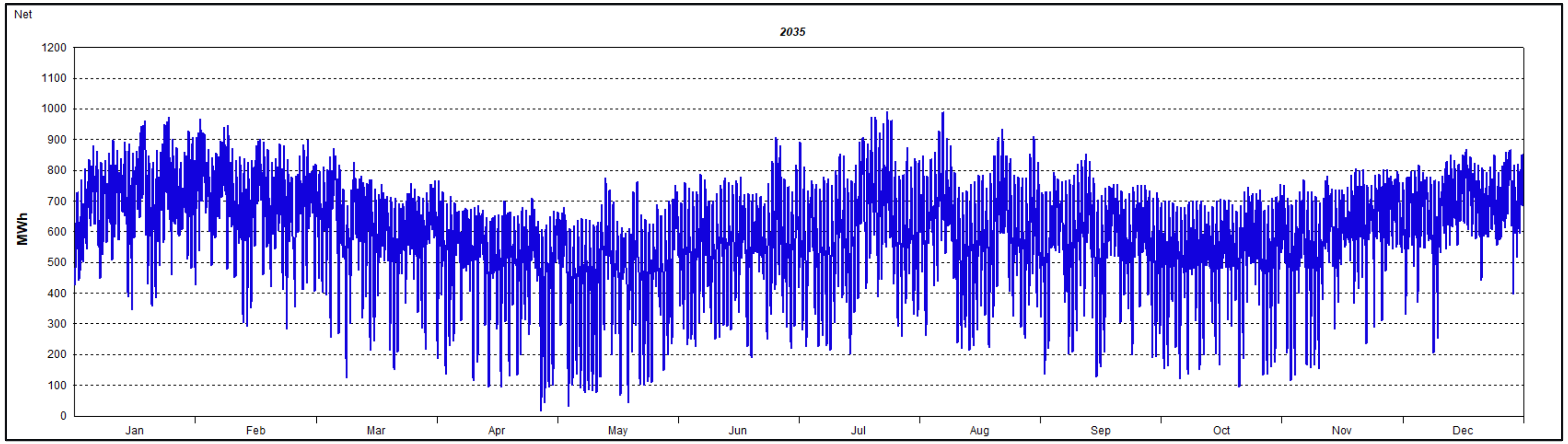


Baseline Net Load Forecast

Year	MWh	Peak (MW)	Peak Time
2026	5,136,970	971.4	1/21/2026 18:00
2030	5,186,456	982.0	8/6/2030 20:00
2035	5,146,412	991.0	7/24/2035 19:00
2040	5,278,827	1,034.6	7/24/2040 19:00
2045	5,513,140	1,093.2	7/25/2045 19:00
2026 - 30	0.24%	0.27%	
2030 - 35	-0.15%	0.18%	
2035 - 40	0.51%	0.86%	
2040 - 45	0.87%	1.11%	

- Adjusted for existing solar generation
- Baseline peak demand growth averages 0.23% over the next ten years.





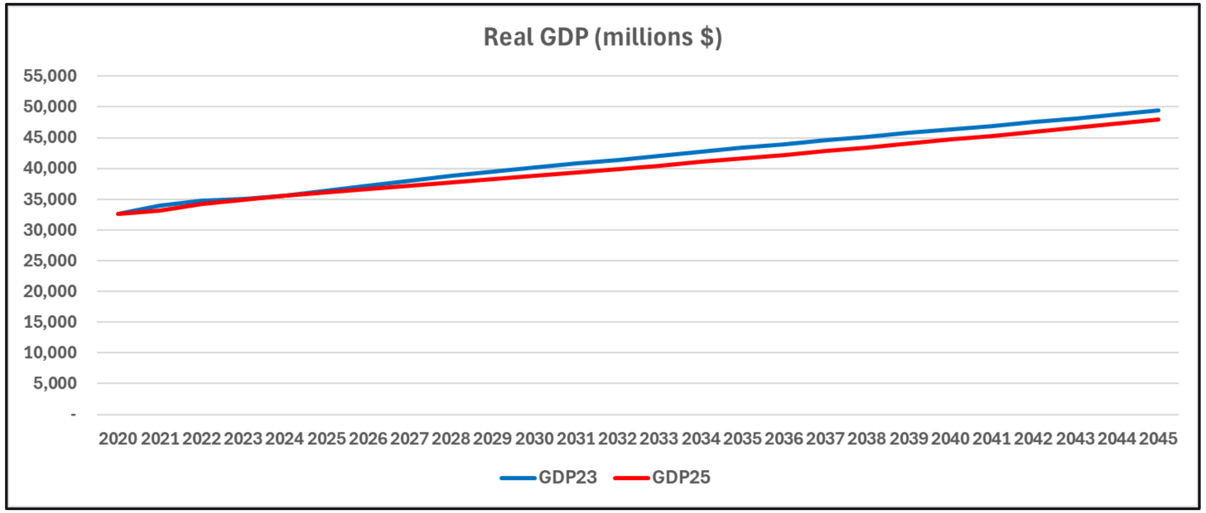
With Solar, System Peak Shifts to the Evenings

State Economic Outlook

- Forecast based on Wood & Poole state economic outlook
  - County-level forecast for zones

- Slow and steady population and economic growth
  - 1.42% long-term gross state product growth
  - In comparison, U.S. GDP growth over the next five years is1.8% to 2.2%

- W&P near-term GDP growth less than Moodys, but population, households, and employment growth is higher



Woods & Poole 2025

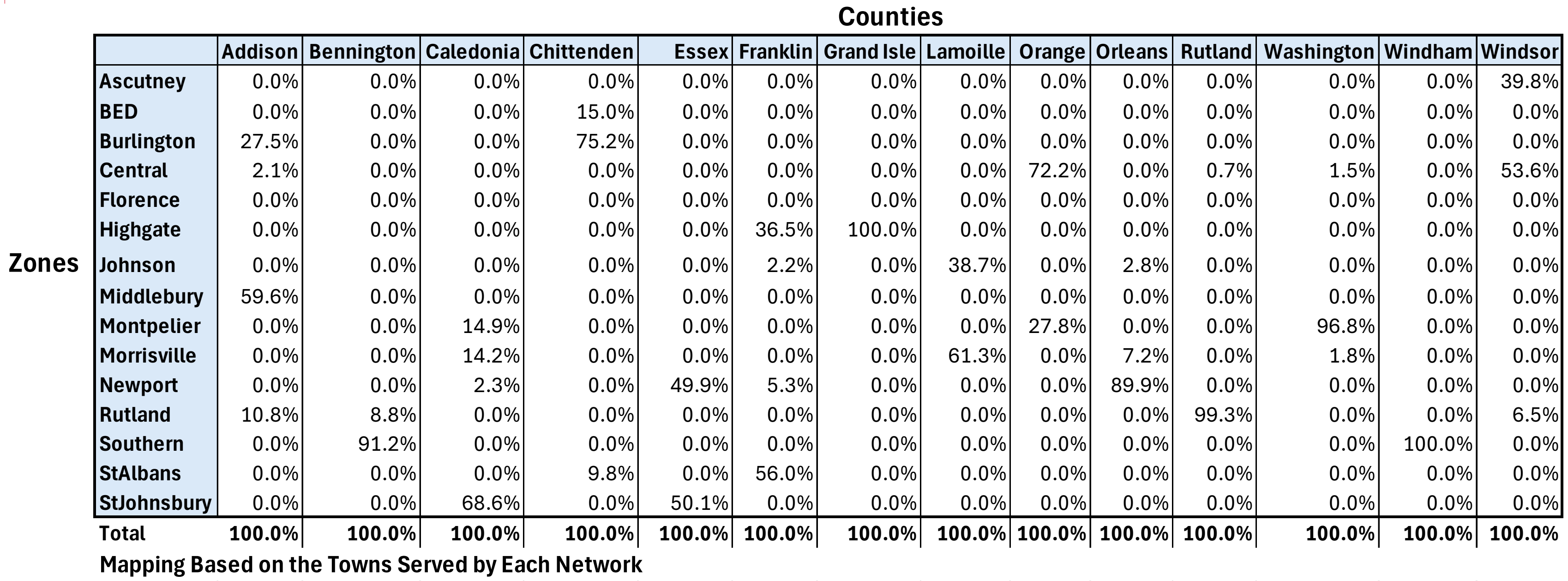
Year	Pop25	HH25	GDP25	Emp25
2020	653.1	277.5	32,673	427.1
2025	660.7	289.3	36,156	451.8
2030	668.1	296.3	38,798	468.4
2035	674.5	299.4	41,634	484.9
2020 - 25	0.23%	0.83%	2.05%	1.13%
2025 - 30	**0.22%**	**0.48%**	**1.42%**	**0.72%**
2030 - 35	0.19%	0.21%	1.42%	0.69%

Moodys 2023

Year	Pop23	HH23	GDP23	Emp23
2020	661.0	277.5	32,673	427.1
2025	665.3	279.4	36,384	444.8
2030	666.3	282.0	40,207	447.3
2035	667.2	265.5	43,367	447.4
2020 - 25	0.13%	0.13%	2.17%	0.82%
2025 - 30	**0.03%**	**0.18%**	**2.02%**	**0.11%**
2030 - 35	0.03%	-1.20%	1.52%	0.00%

Planning Zone Economics

- County economic activity allocated to zones based on county population within each planning zone.

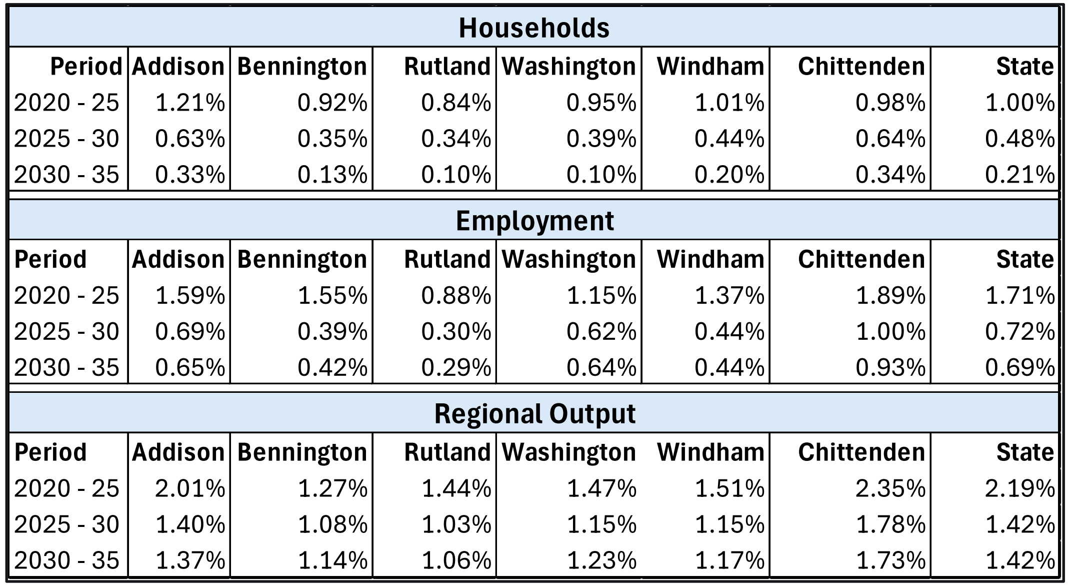


Zones	Addison	Bennington	Caledonia	Chittenden	Essex	Franklin	Grand Isle	Lamoille	Orange	Orleans	Rutland	Washington	Windham	Windsor
Ascutney	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	39.8%
BED	0.0%	0.0%	0.0%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Burlington	27.5%	0.0%	0.0%	75.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Central	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	72.2%	0.0%	0.7%	1.5%	0.0%	53.6%
Florence	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Highgate	0.0%	0.0%	0.0%	0.0%	0.0%	36.5%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Johnson	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	38.7%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%
Middlebury	59.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Montpelier	0.0%	0.0%	14.9%	0.0%	0.0%	0.0%	0.0%	0.0%	27.8%	0.0%	0.0%	96.8%	0.0%	0.0%
Morrisville	0.0%	0.0%	14.2%	0.0%	0.0%	0.0%	0.0%	61.3%	0.0%	7.2%	0.0%	1.8%	0.0%	0.0%
Newport	0.0%	0.0%	2.3%	0.0%	49.9%	5.3%	0.0%	0.0%	0.0%	89.9%	0.0%	0.0%	0.0%	0.0%
Rutland	10.8%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	99.3%	0.0%	0.0%	6.5%
Southern	0.0%	91.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
StAlbans	0.0%	0.0%	0.0%	9.8%	0.0%	56.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
StJohnsbury	0.0%	0.0%	68.6%	0.0%	50.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Counties

Mapping Based on the Towns Served by Each Network

- Moderate differences in household and economic growth across counties
  - Contributes to more variation in demand growth across zones



Households

Period	Addison	Bennington	Rutland	Washington	Windham	Chittenden	State
2020 - 25	1.21%	0.92%	0.84%	0.95%	1.01%	0.98%	1.00%
2025 - 30	0.63%	0.35%	0.34%	0.39%	0.44%	0.64%	0.48%
2030 - 35	0.33%	0.13%	0.10%	0.10%	0.20%	0.34%	0.21%

Employment

Period	Addison	Bennington	Rutland	Washington	Windham	Chittenden	State
2020 - 25	1.59%	1.55%	0.88%	1.15%	1.37%	1.89%	1.71%
2025 - 30	0.69%	0.39%	0.30%	0.62%	0.44%	1.00%	0.72%
2030 - 35	0.65%	0.42%	0.29%	0.64%	0.44%	0.93%	0.69%

Regional Output

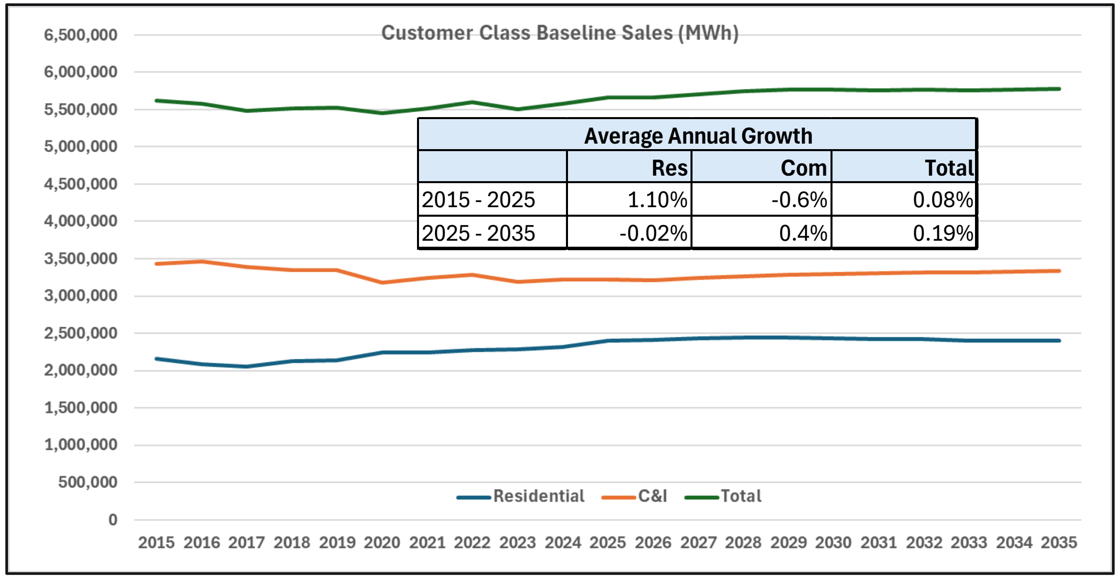
Period	Addison	Bennington	Rutland	Washington	Windham	Chittenden	State
2020 - 25	2.01%	1.27%	1.44%	1.47%	1.51%	2.35%	2.19%
2025 - 30	1.40%	1.08%	1.03%	1.15%	1.15%	1.78%	1.42%
2030 - 35	1.37%	1.14%	1.06%	1.23%	1.17%	1.73%	1.42%

What’s Underneath

» Residential

- 2015 – 2025, Positive sales growth since 2017
  - COVID bump in 2020, Strong heat pump sales

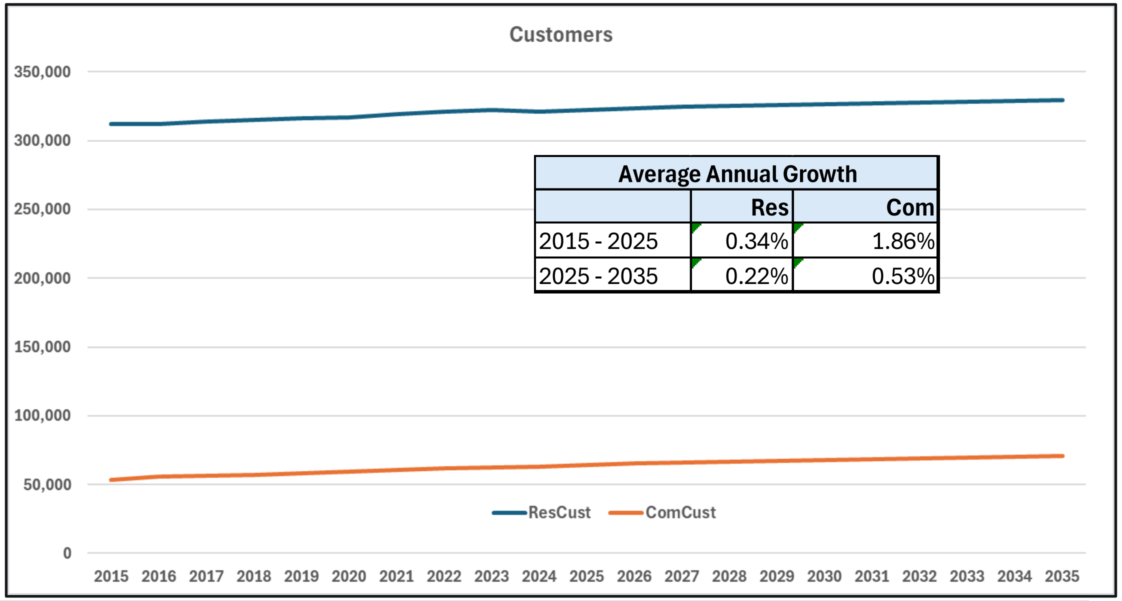
- 2025 – 2035, No baseline sales growth, 0.2% customer growth and 0.2% decline in average use
  - Efficiency gains (new standards kick in 2027) outweigh positive economic impact
  - Excludes impact of new solar, heat pump, and EV growth.



Average Annual Growth			
	Res	Com	Total
2015 - 2025	1.10%	-0.6%	0.08%
2025 - 2035	-0.02%	0.4%	0.19%

» C&I

- 2015 - 2025
  - Large drop in 2020 sales. Slow, positive recovery, but still below 2019 consumption level
- 2025 - 2035
  - Strong increase in number of small customers
  - Lighting intensity decline mitigates some of the increase in computer related load growth. Much slower decline in ventilation intensity.
  - Moderate load growth tied to economic growth projections

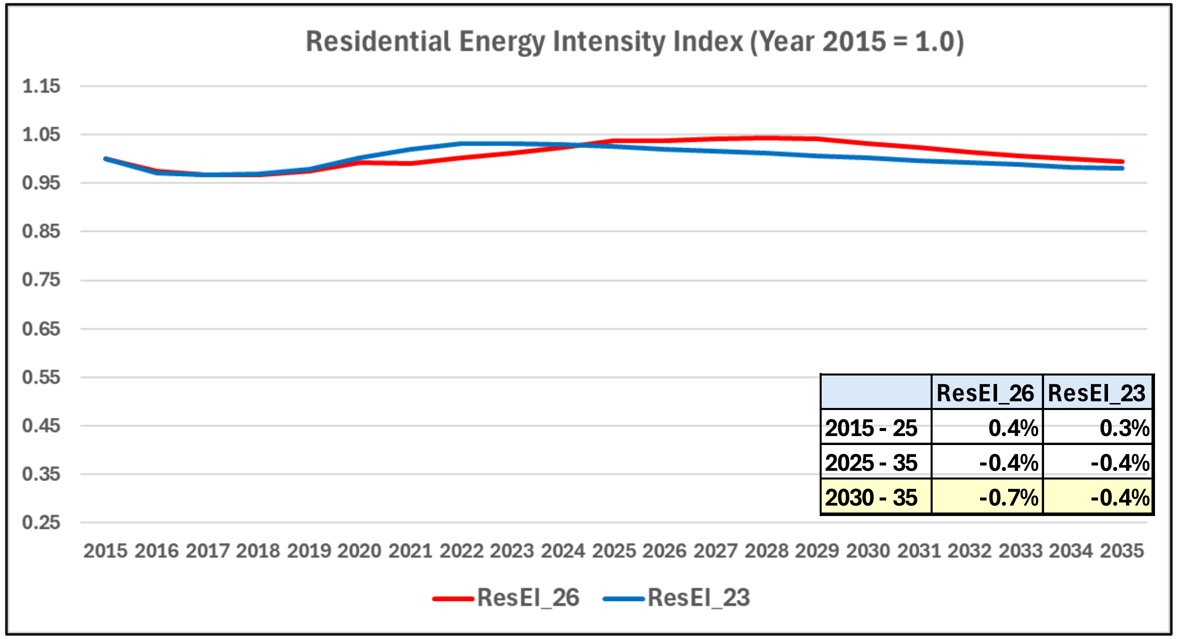


Average Annual Growth		
	Res	Com
2015 - 2025	0.34%	1.86%
2025 - 2035	0.22%	0.53%

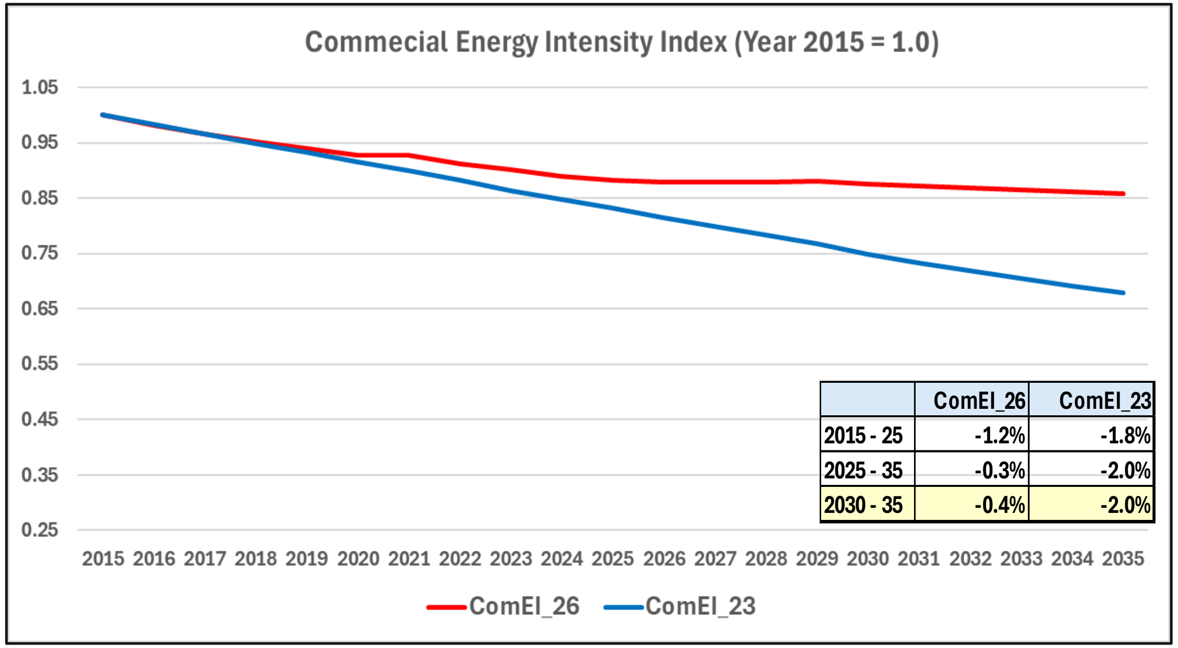
Energy Intensity Trends

- **Energy intensity trends reflect baseline saturation and efficiency trends**
  - Indexed to 2015 to allow for comparison
  - 2026 based on the AEO 2025 forecast
  - 2023 based on the AEO 2022 forecast

- **Significant changes in AEO 2025**
  - New residential end-use standards starting in 2027
  - Less extreme decline in commercial ventilation
  - Strong computer related load associated with data center and onsite computation

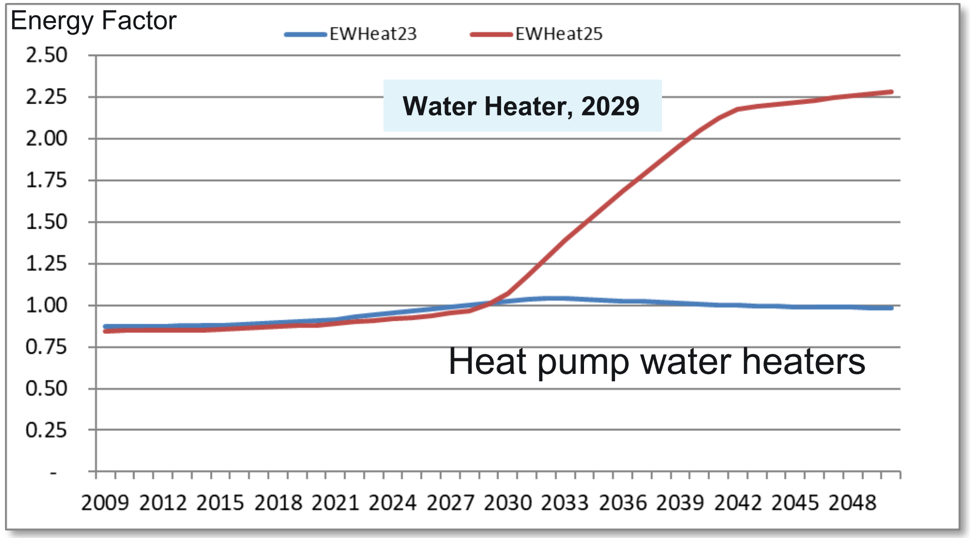


	ResEI_26	ResEI_23
2015 - 25	0.4%	0.3%
2025 - 35	-0.4%	-0.4%
2030 - 35	-0.7%	-0.4%



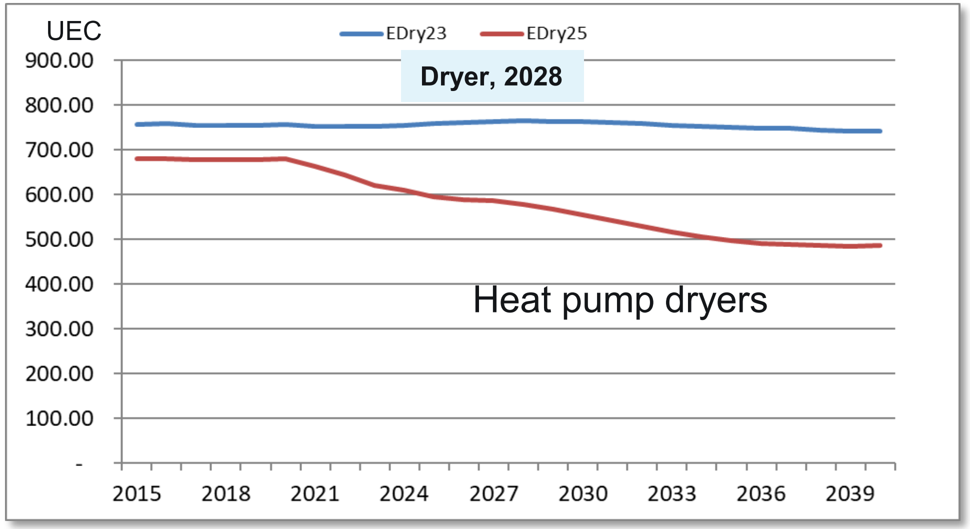
	ComEI_26	ComEI_23
2015 - 25	-1.2%	-1.8%
2025 - 35	-0.3%	-2.0%
2030 - 35	-0.4%	-2.0%

New Residential End-Use Standards – Impact on efficiency



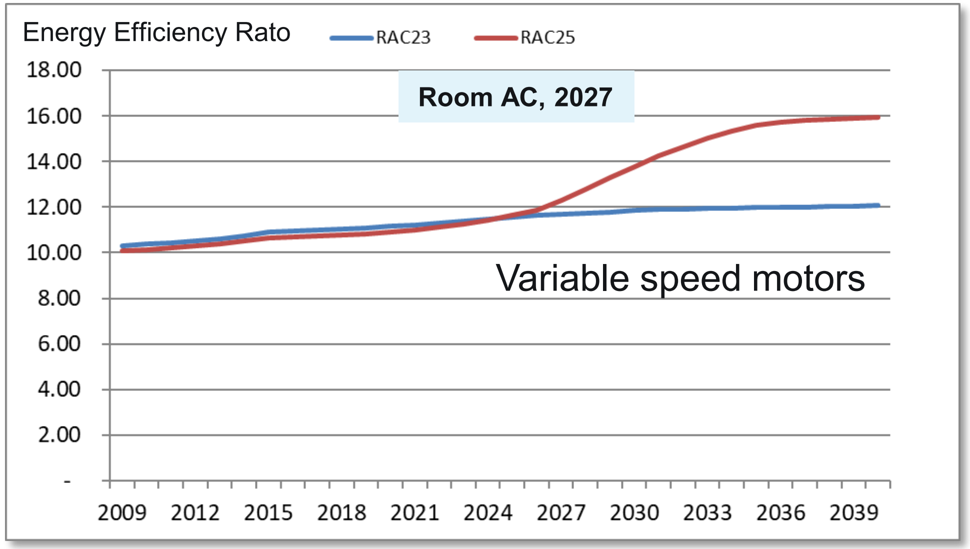
Water Heater, 2029

Heat pump water heaters



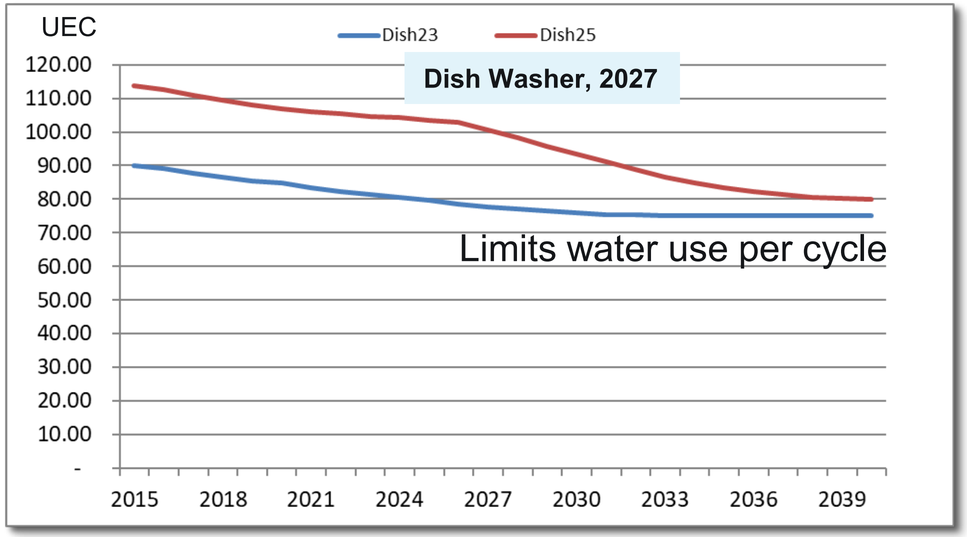
Dryer, 2028

Heat pump dryers



Room AC, 2027

Variable speed motors

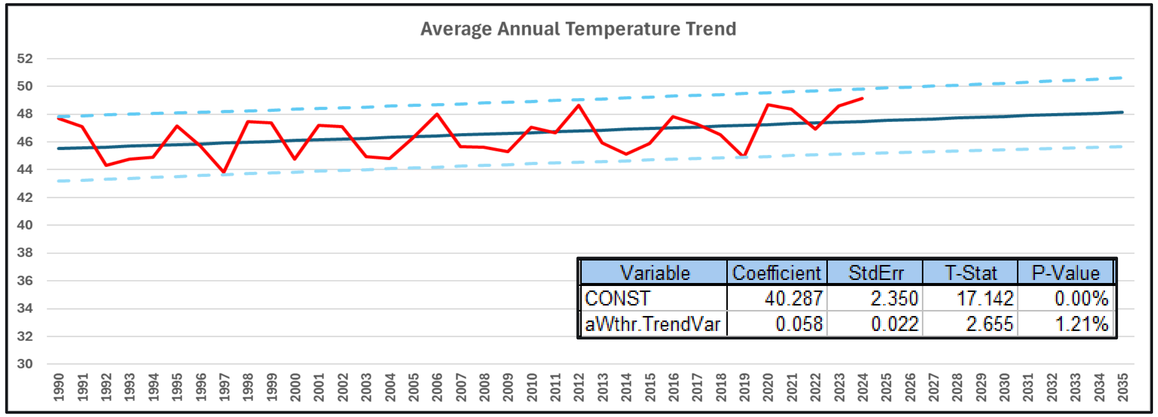


Dish Washer, 2027

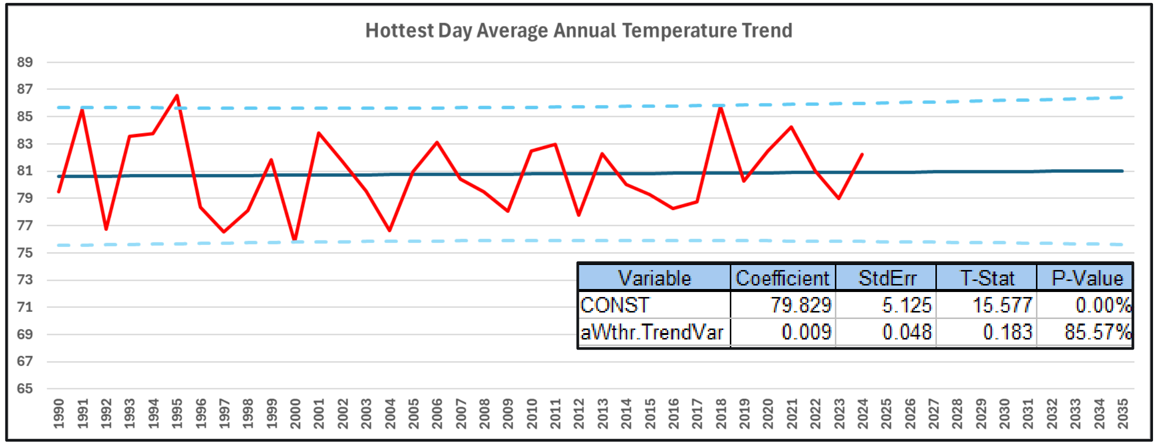
Limits water use per cycle

Temperature Trends – 1990 to 2024

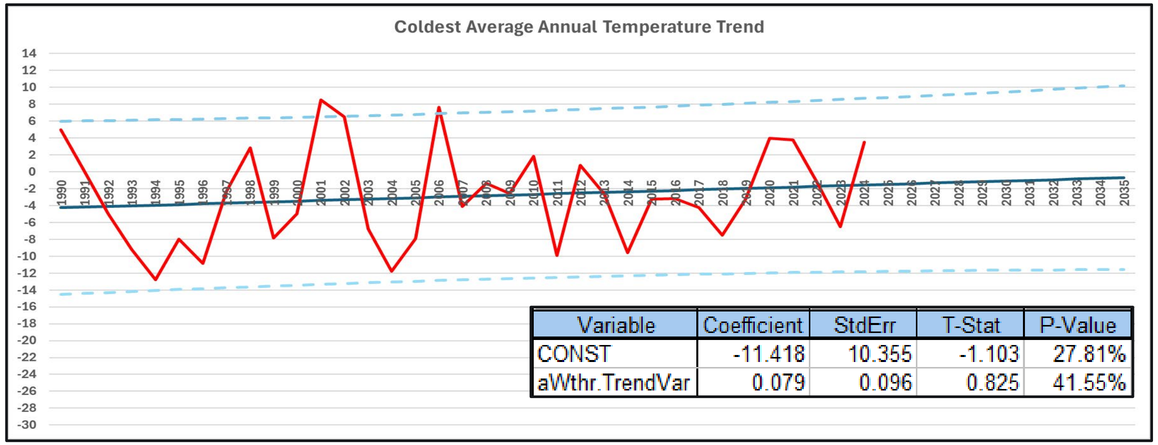
- » Average Annual Temperature
  - Increasing .058 degrees per year (0.58 degrees per decade)
- » Hottest Day Average Annual Temperature
  - Statistically insignificant trend – days are not getting hotter
  - But there are more of them
- » Coldest Day Average Annual Temperature
- » Increasing 0.079 degrees per year (0.79 degrees per decade)



Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	40.287	2.350	17.142	0.00%
aWthr.TrendVar	0.058	0.022	2.655	1.21%



Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	79.829	5.125	15.577	0.00%
aWthr.TrendVar	0.009	0.048	0.183	85.57%



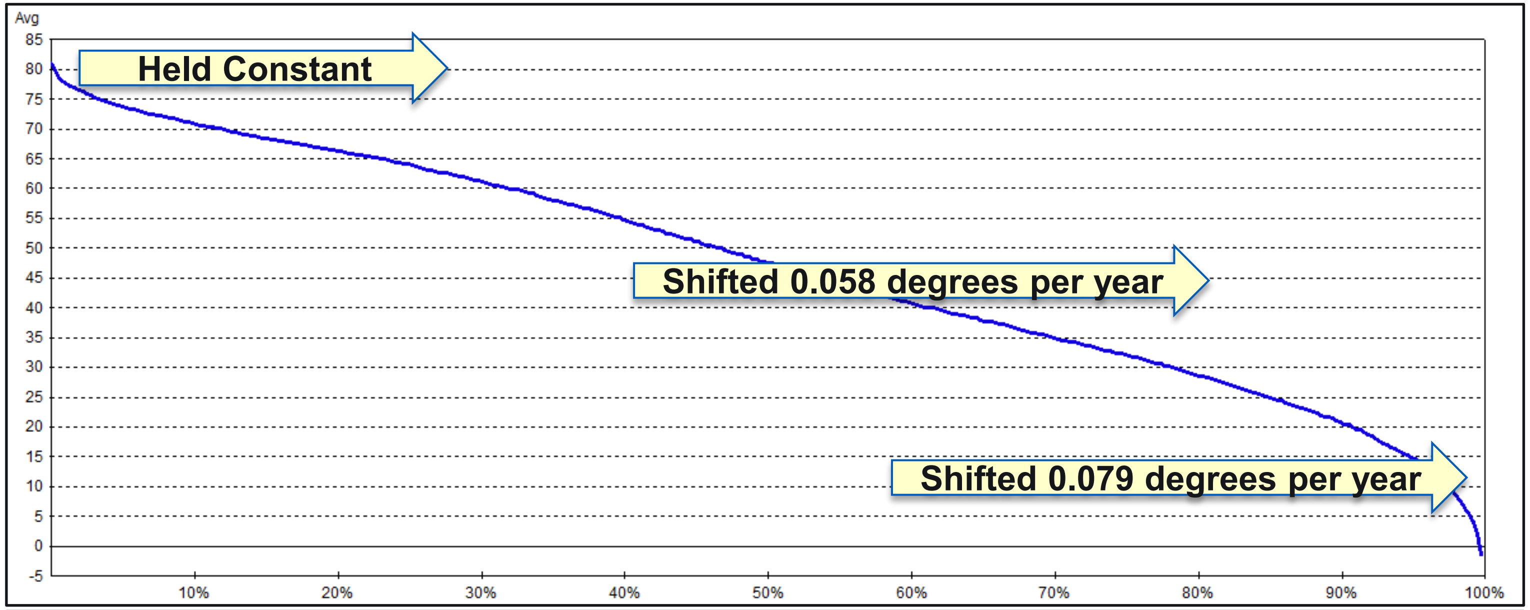
Variable	Coefficient	StdErr	T-Stat	P-Value
CONST	-11.418	10.355	-1.103	27.81%
aWthr.TrendVar	0.079	0.096	0.825	41.55%

Translation to HDD and CDD

- 20-year average
  - Represents 2015 average temperature profile

- Profile shifted out over time
  - Maximum is held constant
  - Minimum shifts out 0.079 degrees per year
  - Average shifts out 0.058 degrees per year

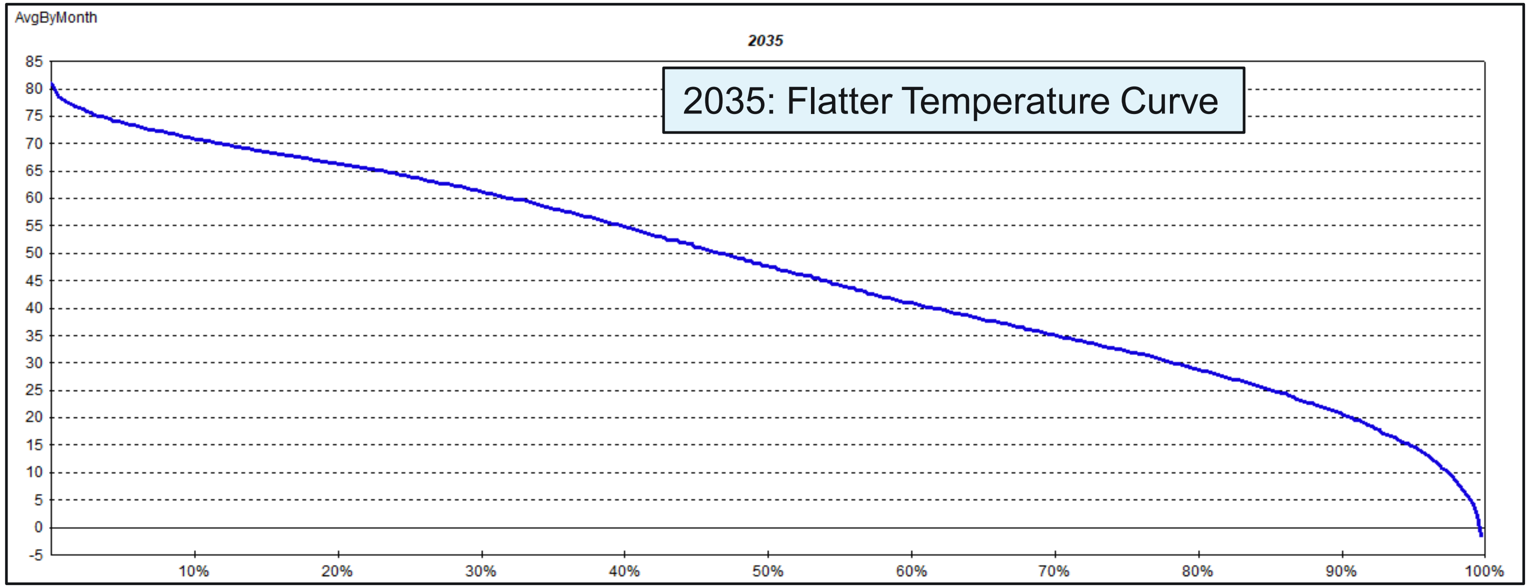
- Results in a flatter temperature curve with fewer HDD and more CDD



Held Constant

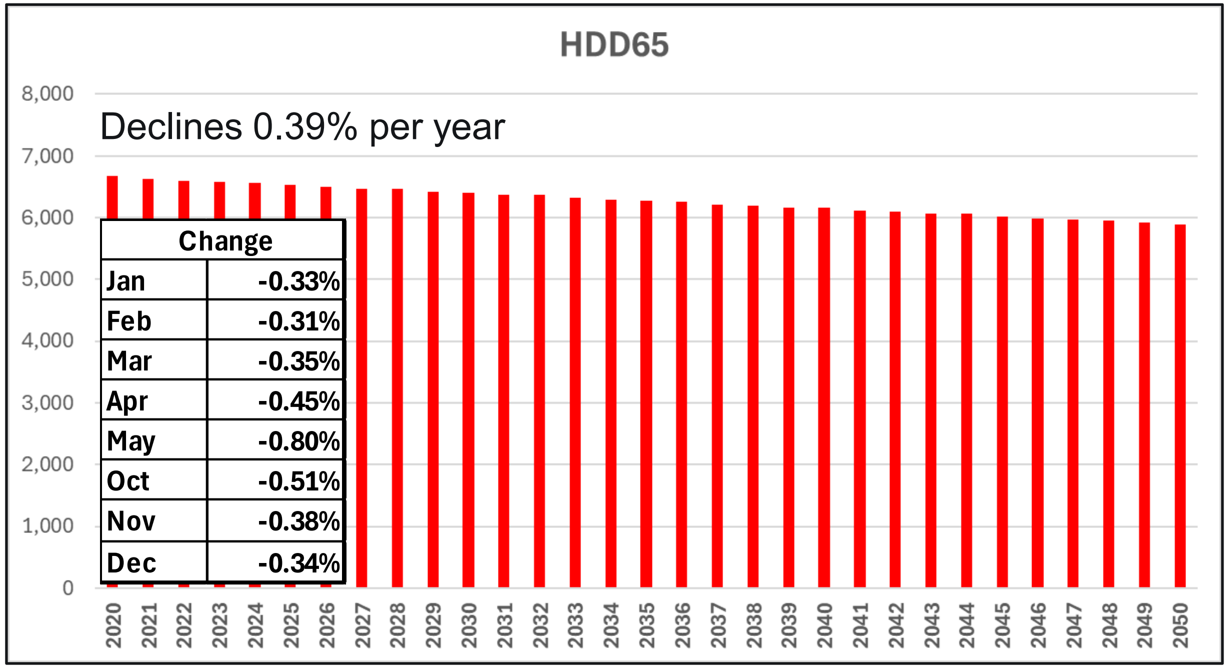
Shifted 0.058 degrees per year

Shifted 0.079 degrees per year



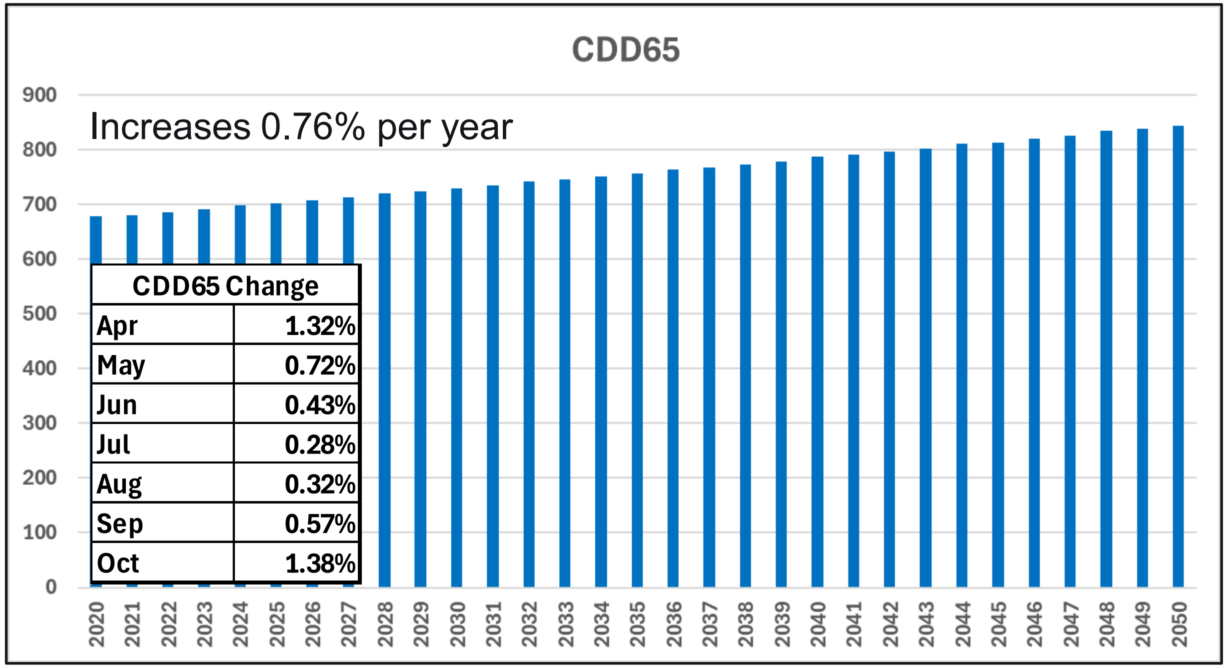
2035: Flatter Temperature Curve

Trended Degree Days



Declines 0.39% per year

Change	
Jan	-0.33%
Feb	-0.31%
Mar	-0.35%
Apr	-0.45%
May	-0.80%
Oct	-0.51%
Nov	-0.38%
Dec	-0.34%

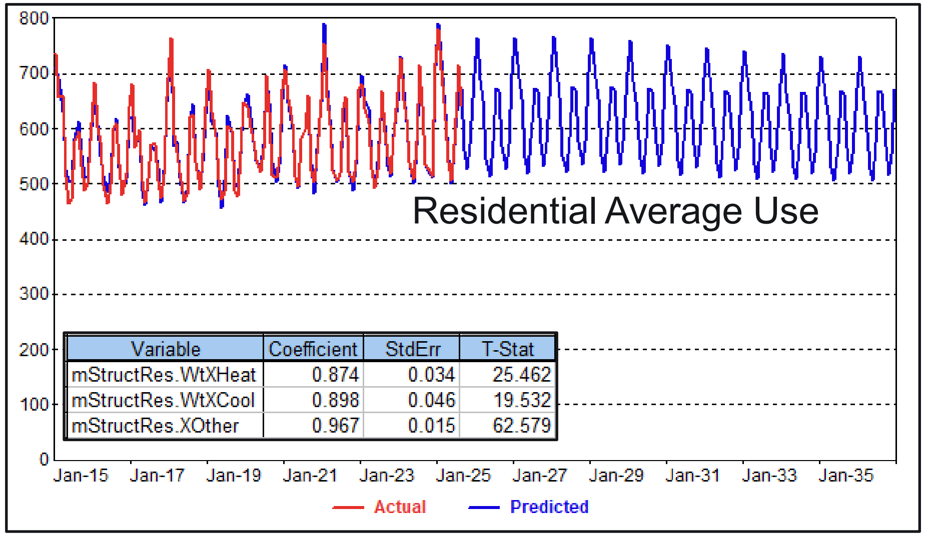


Increases 0.76% per year

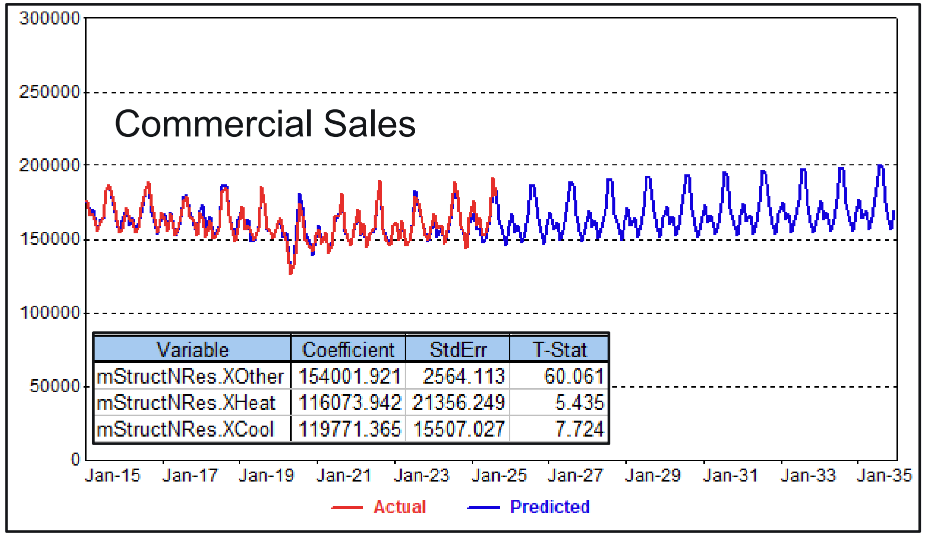
CDD65 Change	
Apr	1.32%
May	0.72%
Jun	0.43%
Jul	0.28%
Aug	0.32%
Sep	0.57%
Oct	1.38%

- Fastest decline in HDD and increase in CDD are in the shoulder months.

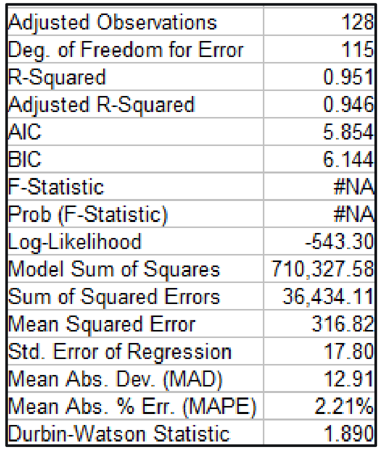
Income, End-Use Intensities, and Weather Combined to Drive Residential Average Use and Commercial Sales Forecast



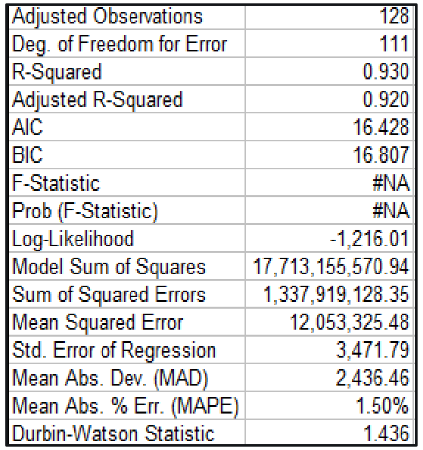
Variable	Coefficient	StdErr	T-Stat
mStructRes.WtXHeat	0.874	0.034	25.462
mStructRes.WtXCool	0.898	0.046	19.532
mStructRes.XOther	0.967	0.015	62.579



Variable	Coefficient	StdErr	T-Stat
mStructNRes.XOther	154001.921	2564.113	60.061
mStructNRes.XHeat	116073.942	21356.249	5.435
mStructNRes.XCool	119771.365	15507.027	7.724



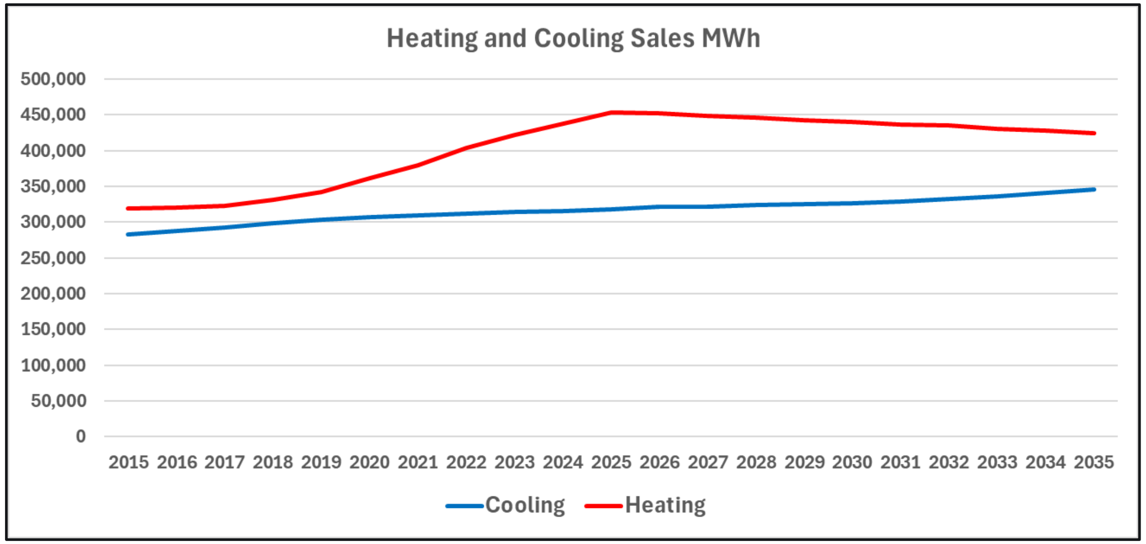
Adjusted Observations	128
Deg. of Freedom for Error	115
R-Squared	0.951
Adjusted R-Squared	0.946
AIC	5.854
BIC	6.144
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-543.30
Model Sum of Squares	710,327.58
Sum of Squared Errors	36,434.11
Mean Squared Error	316.82
Std. Error of Regression	17.80
Mean Abs. Dev. (MAD)	12.91
Mean Abs. % Err. (MAPE)	2.21%
Durbin-Watson Statistic	1.890

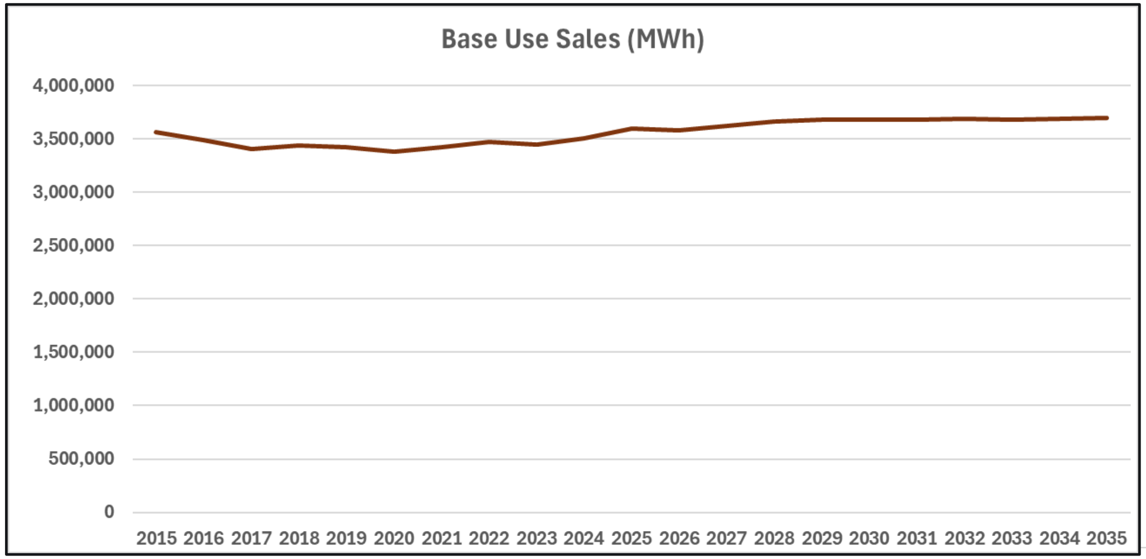


Adjusted Observations	128
Deg. of Freedom for Error	111
R-Squared	0.930
Adjusted R-Squared	0.920
AIC	16.428
BIC	16.807
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,216.01
Model Sum of Squares	17,713,155,570.94
Sum of Squared Errors	1,337,919,128.35
Mean Squared Error	12,053,325.48
Std. Error of Regression	3,471.79
Mean Abs. Dev. (MAD)	2,436.46
Mean Abs. % Err. (MAPE)	1.50%
Durbin-Watson Statistic	1.436

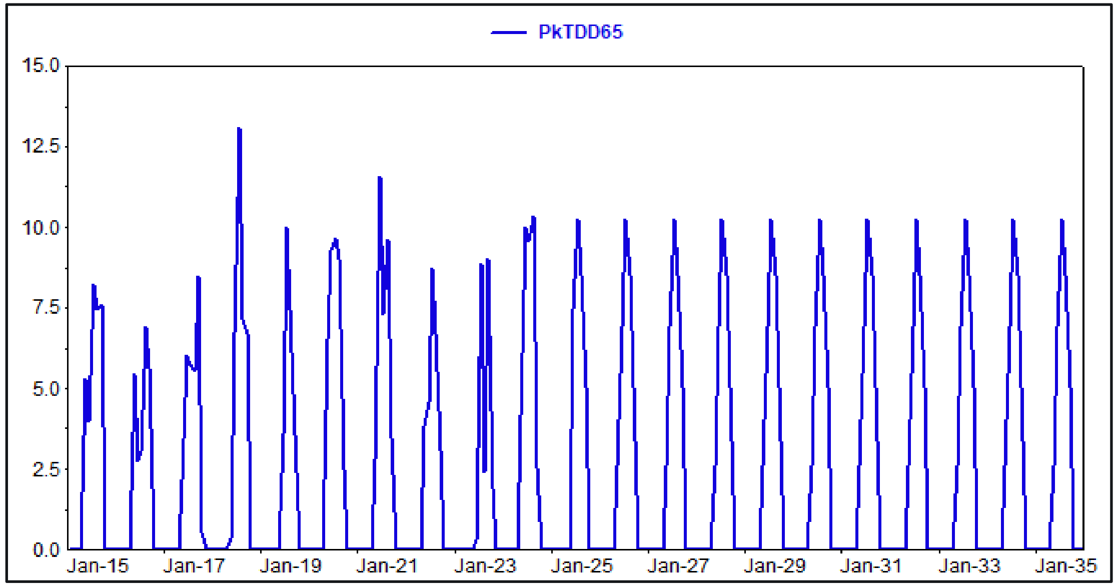
Baseline Gross Peak Forecast

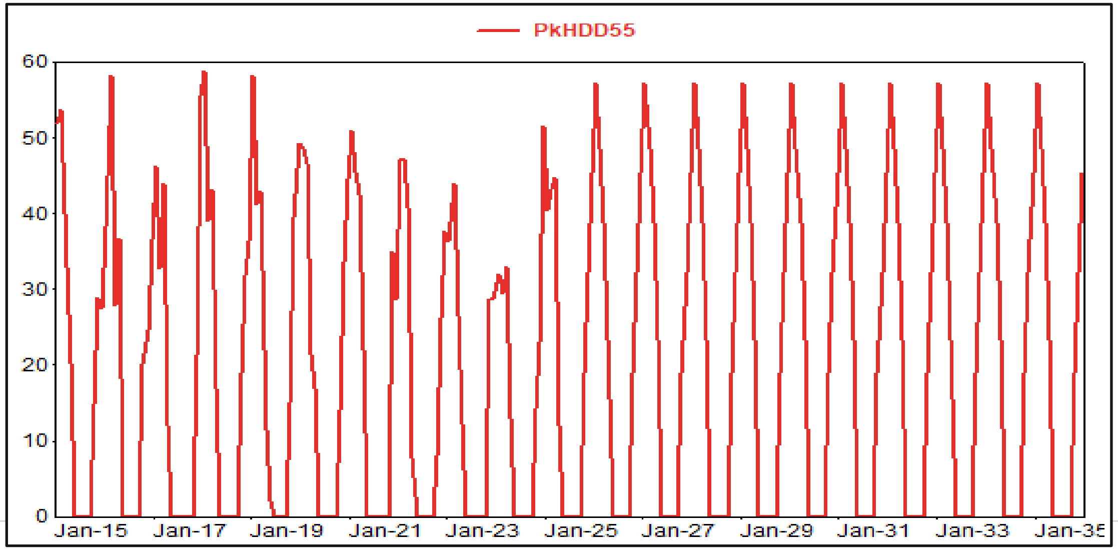
Driven by end-use energy derived from baseline sales models


Heating and Cooling Sales MWh

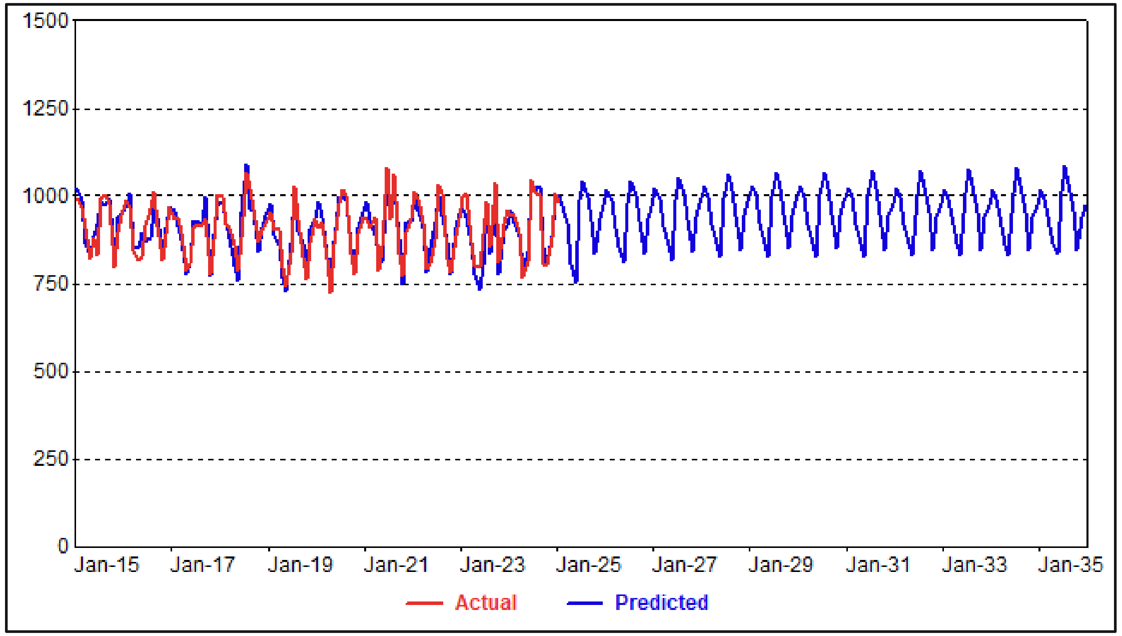

Base Use Sales (MWh)

Combined with Peak-Day Weather





Baseline Gross Peak Demand

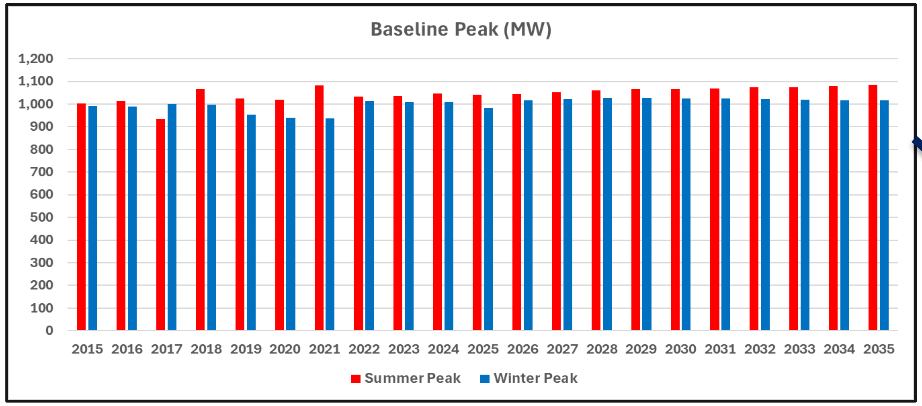


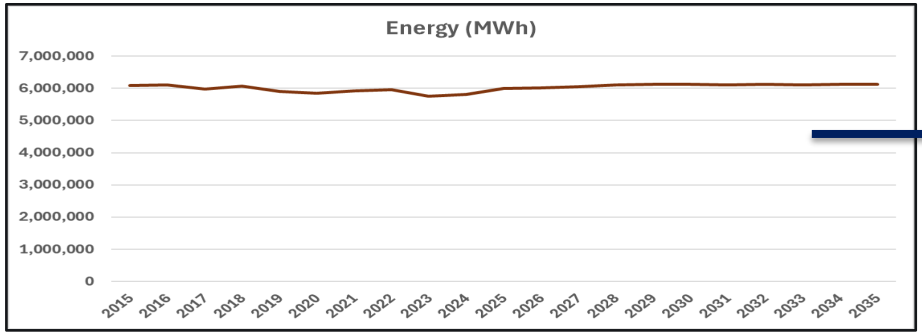
Model Statistics	
Iterations	1
Adjusted Observations	120
Deg. of Freedom for Error	113
R-Squared	0.826
Adjusted R-Squared	0.817
AIC	7.167
BIC	7.329
Log-Likelihood	-593.28
Model Sum of Squares	657,201.74
Sum of Squared Errors	138,356.02
Mean Squared Error	1,224.39
Std. Error of Regression	34.99
Mean Abs. Dev. (MAD)	27.41
Mean Abs. % Err. (MAPE)	3.05%
Durbin-Watson Statistic	1.666

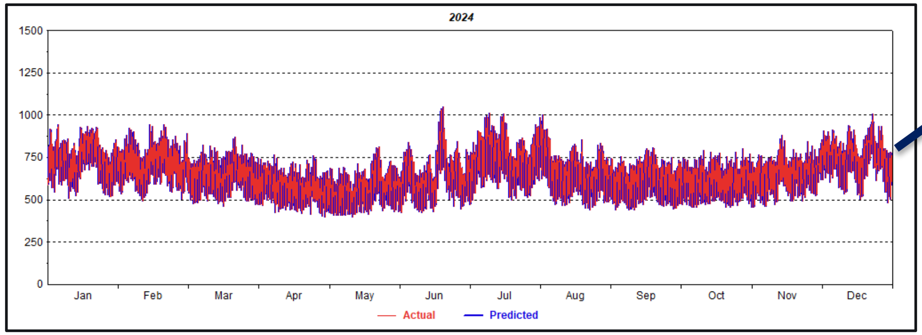
Variable	Coefficient	StdErr	T-Stat
HeatVar55	3.351	0.473	7.078
HeatVar30	-1.786	0.761	-2.346
CoolVar65	20.435	1.439	14.204
BaseVar	1.466	0.02	72.333

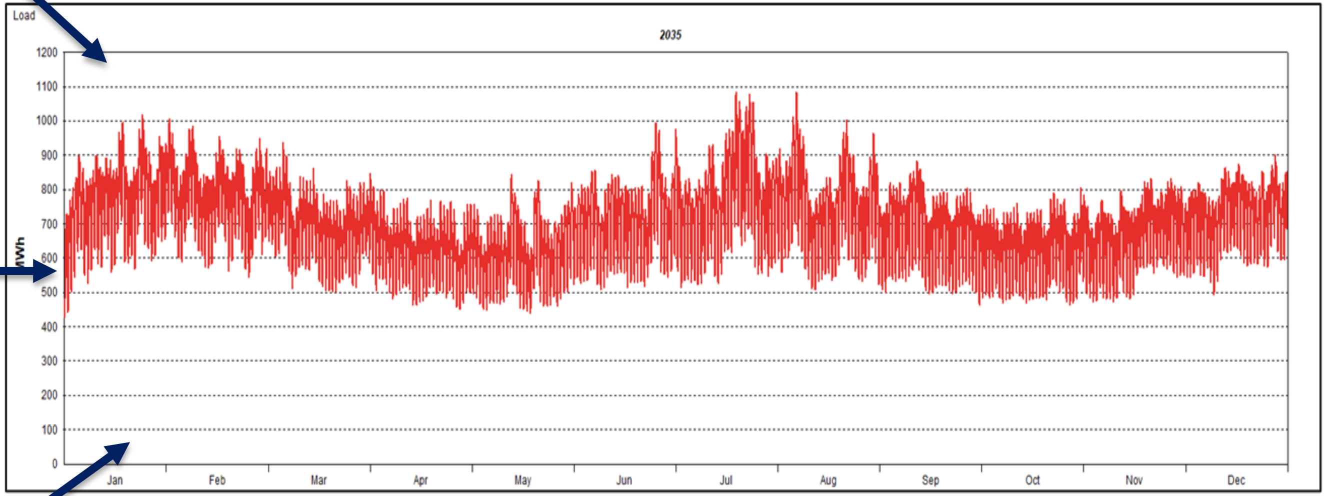
Baseline Gross Hourly Load Forecast

» Calculated by Combining Baseline Energy, Peak, and Baseline Hourly Load Profile









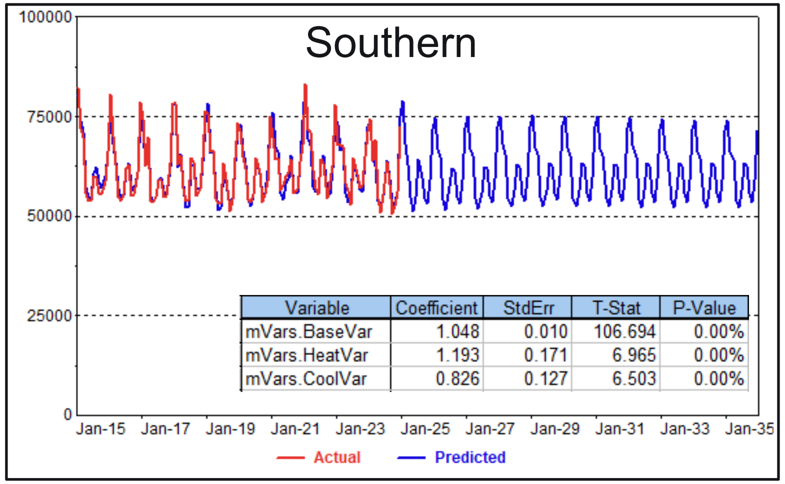
Baseline Zone Energy Models

» Driven by county economic forecast, but tied to the system forecast

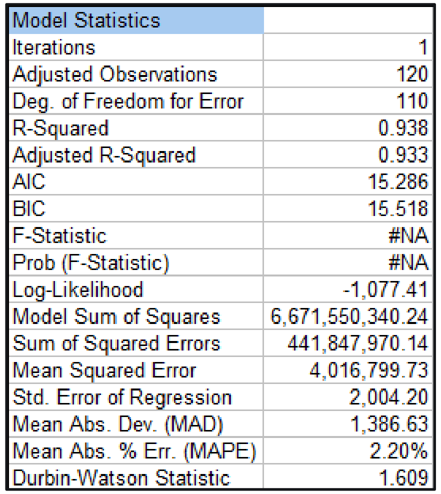
- Zone residential sales = system res average use * zone household forecast
- Zone C&I sales = use per employee * zone employee forecast
- Zone residential and C&I sales used in calibrating system heating, cooling, and base-use energy forecast to the zone

» Separate weighted heating and cooling variables for each zone based on weather weights estimated with ANN models (An AI application)

Zone energy forecast capture differences regional household and economic growth, changing mix of residential and commercial custom over time, and differences (if any) in weather response

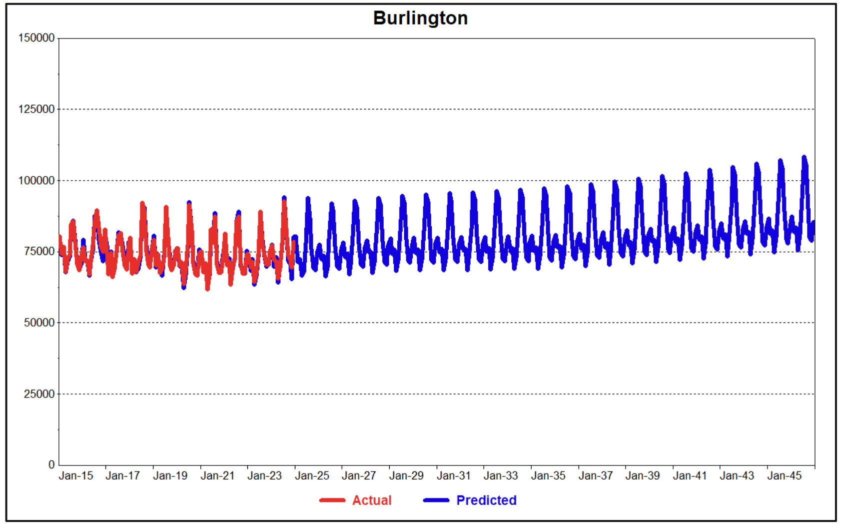


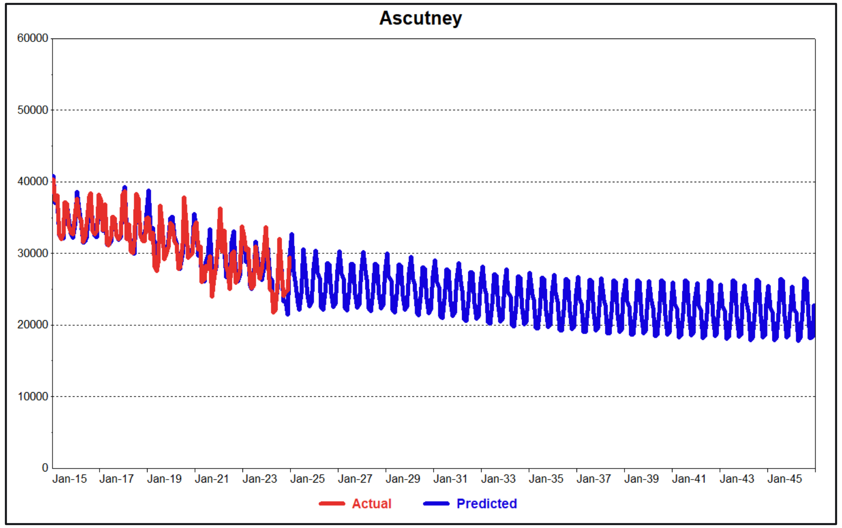
Variable	Coefficient	StdErr	T-Stat	P-Value
mVars.BaseVar	1.048	0.010	106.694	0.00%
mVars.HeatVar	1.193	0.171	6.965	0.00%
mVars.CoolVar	0.826	0.127	6.503	0.00%

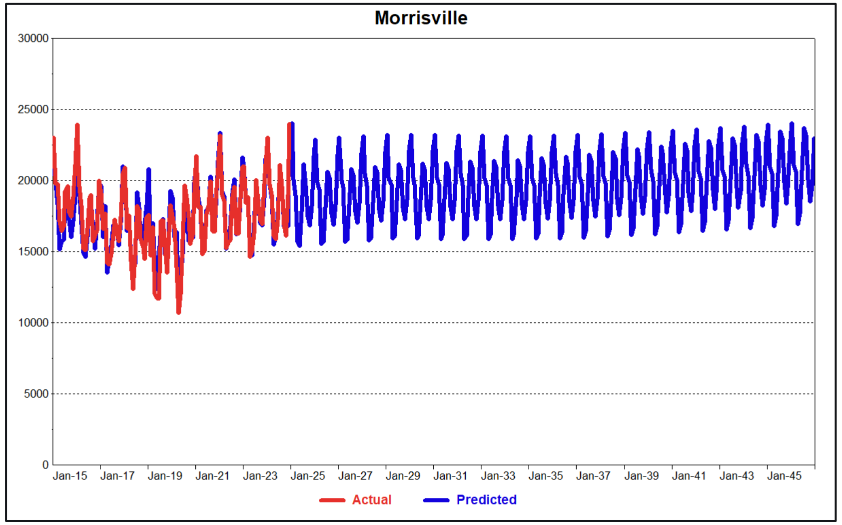


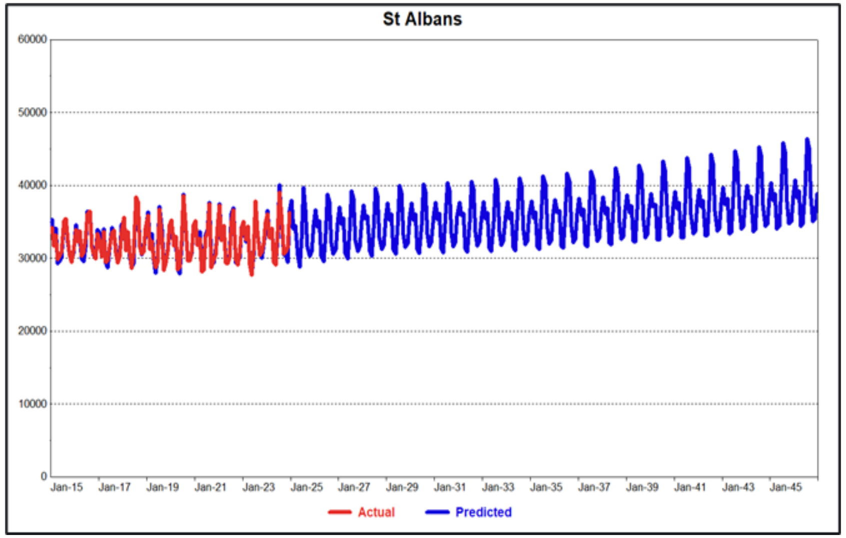
Model Statistics	
Iterations	1
Adjusted Observations	120
Deg. of Freedom for Error	110
R-Squared	0.938
Adjusted R-Squared	0.933
AIC	15.286
BIC	15.518
F-Statistic	#NA
Prob (F-Statistic)	#NA
Log-Likelihood	-1,077.41
Model Sum of Squares	6,671,550,340.24
Sum of Squared Errors	441,847,970.14
Mean Squared Error	4,016,799.73
Std. Error of Regression	2,004.20
Mean Abs. Dev. (MAD)	1,386.63
Mean Abs. % Err. (MAPE)	2.20%
Durbin-Watson Statistic	1.609

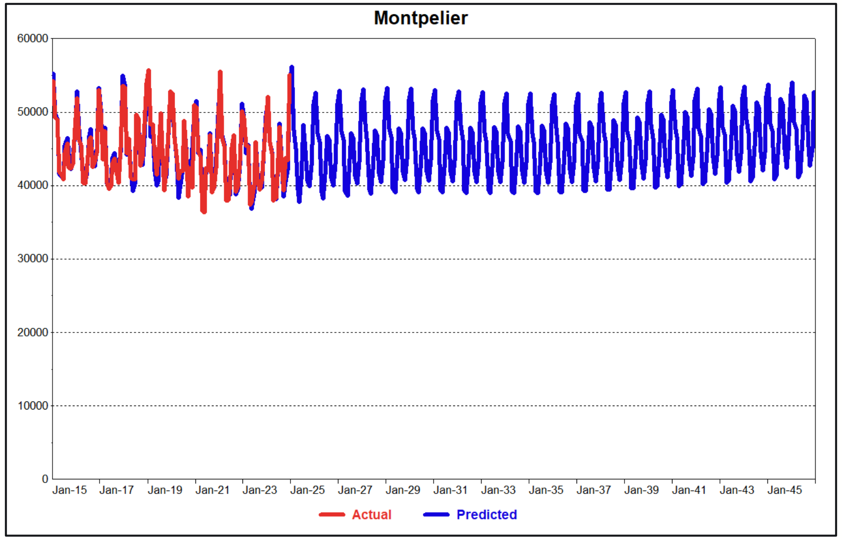
Zonal Baseline Energy Forecast

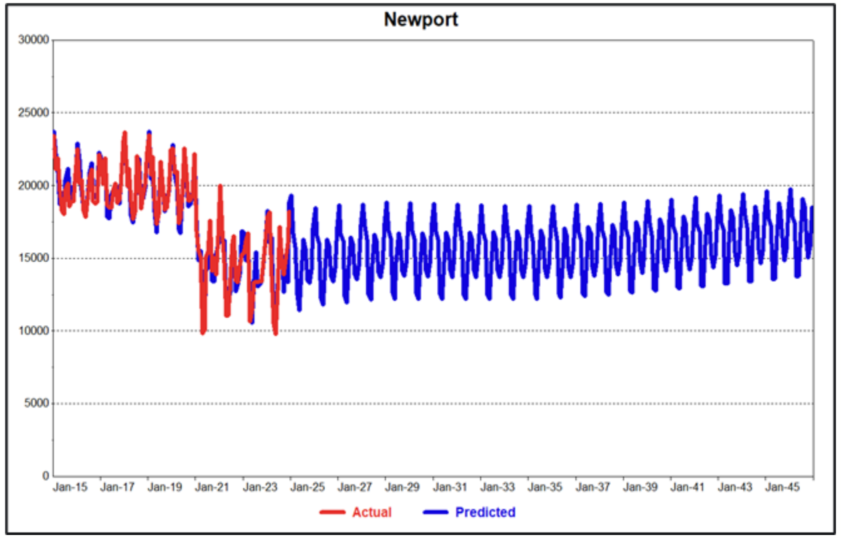






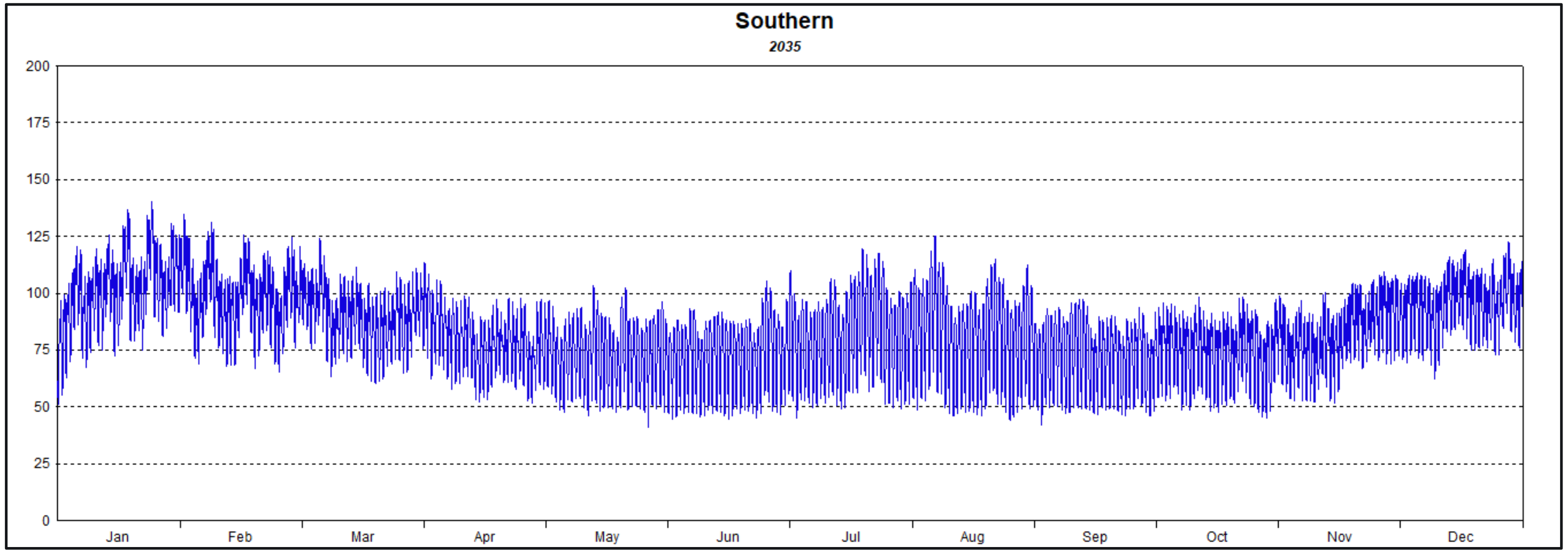




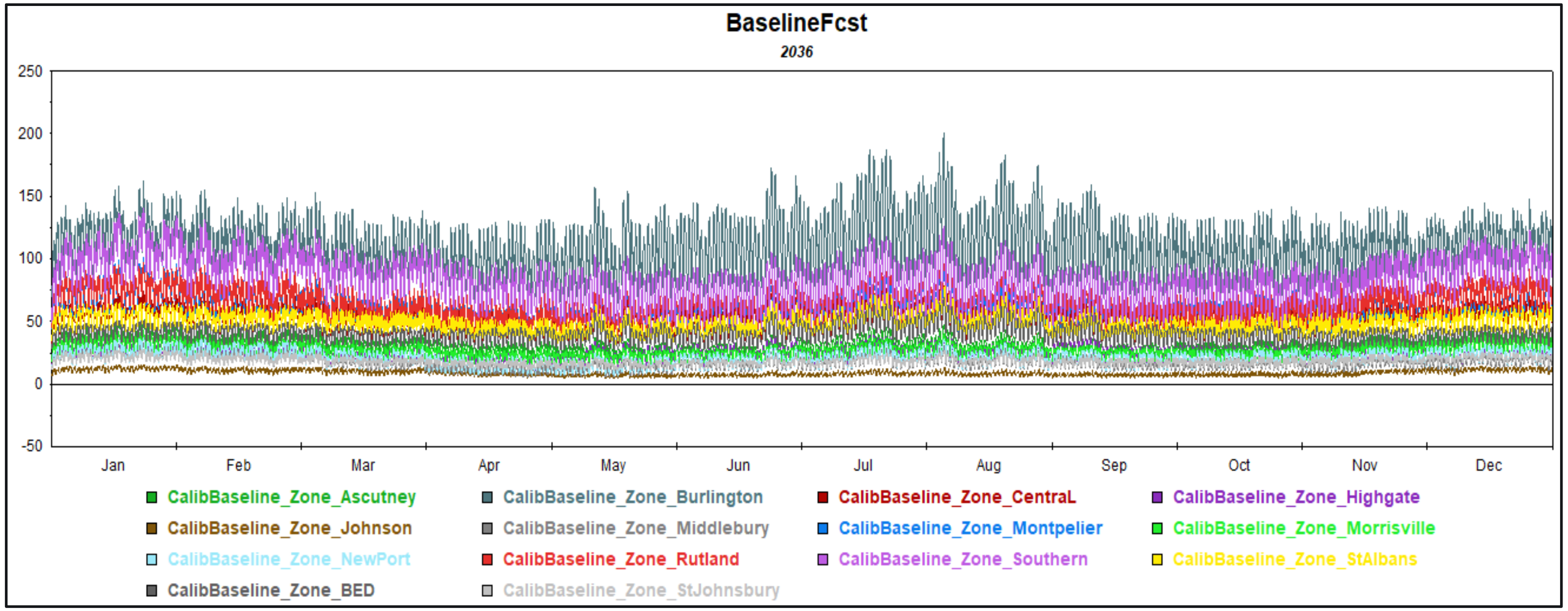


Zone Baseline Hourly Load Forecast

- Zone energy forecasts combined with zone hourly load profile

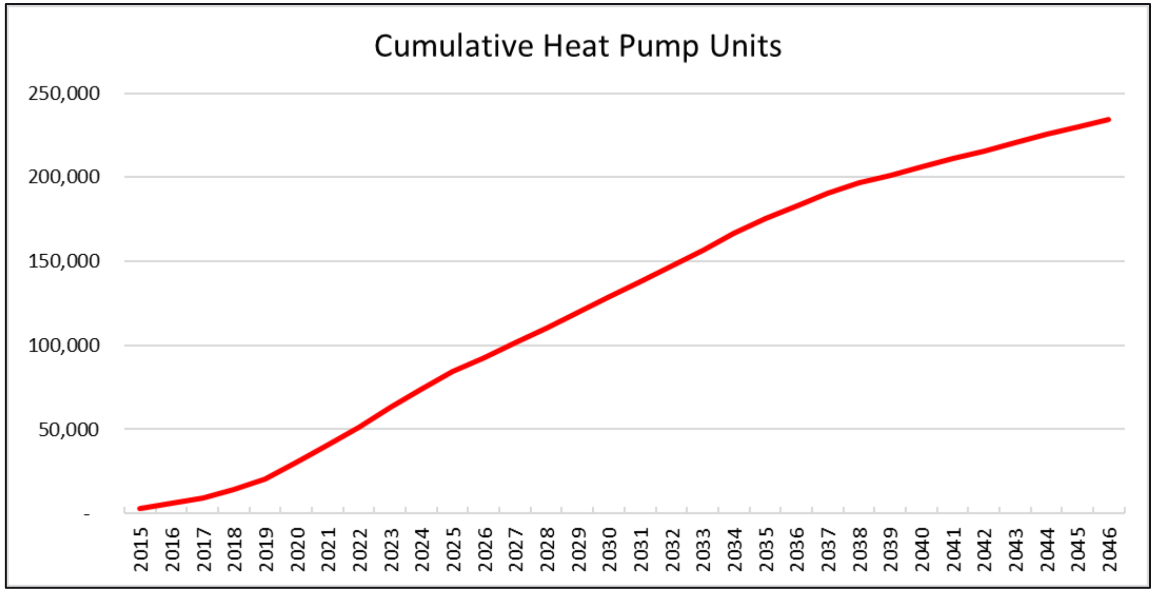


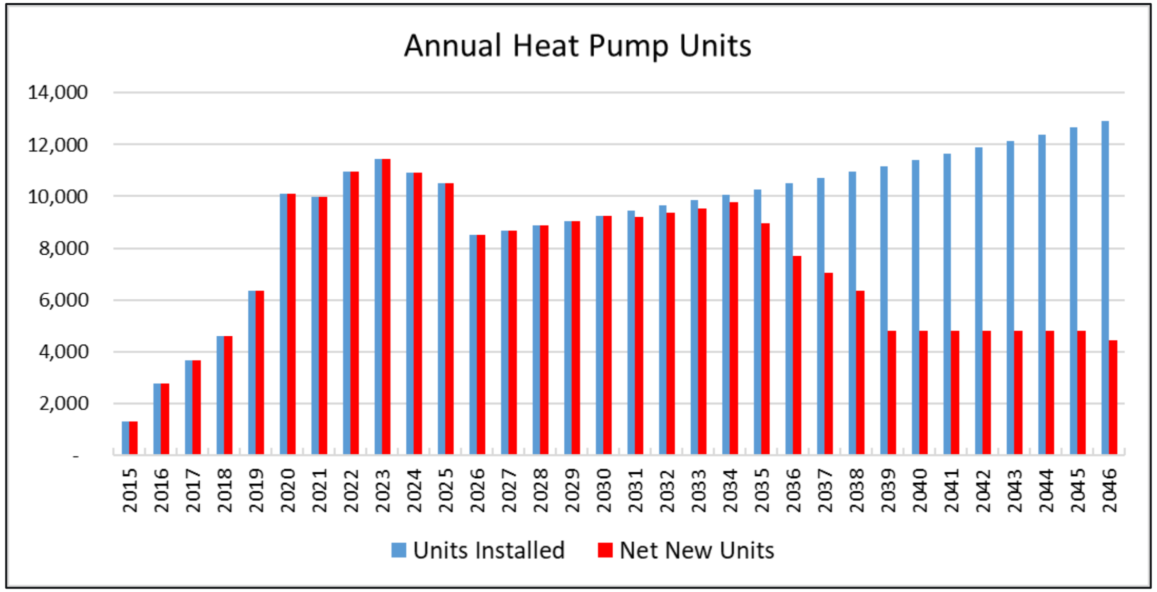
- and calibrated to baseline system hourly load



Heat Pumps

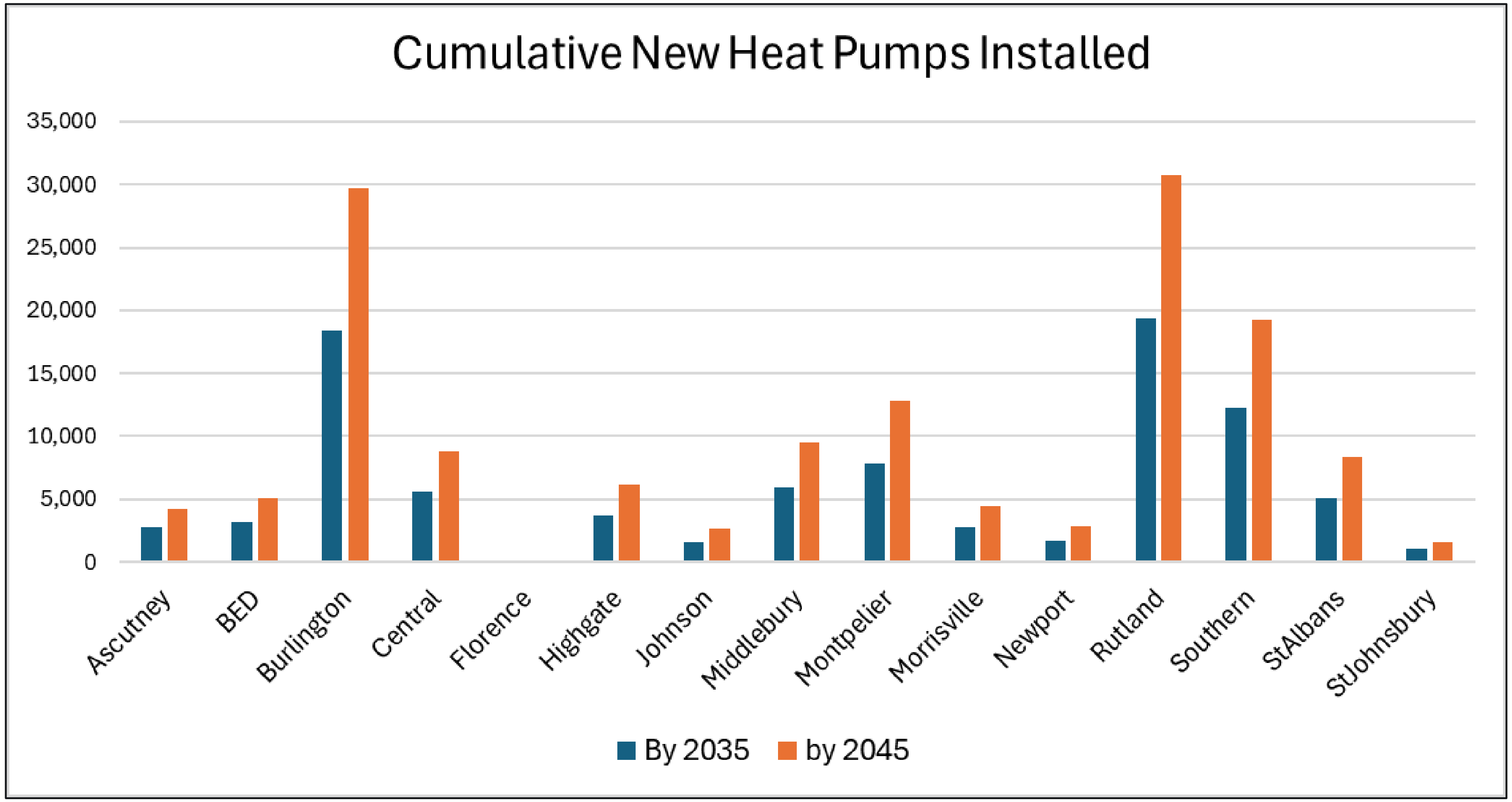
Heat Pump Forecast: Units and Saturations





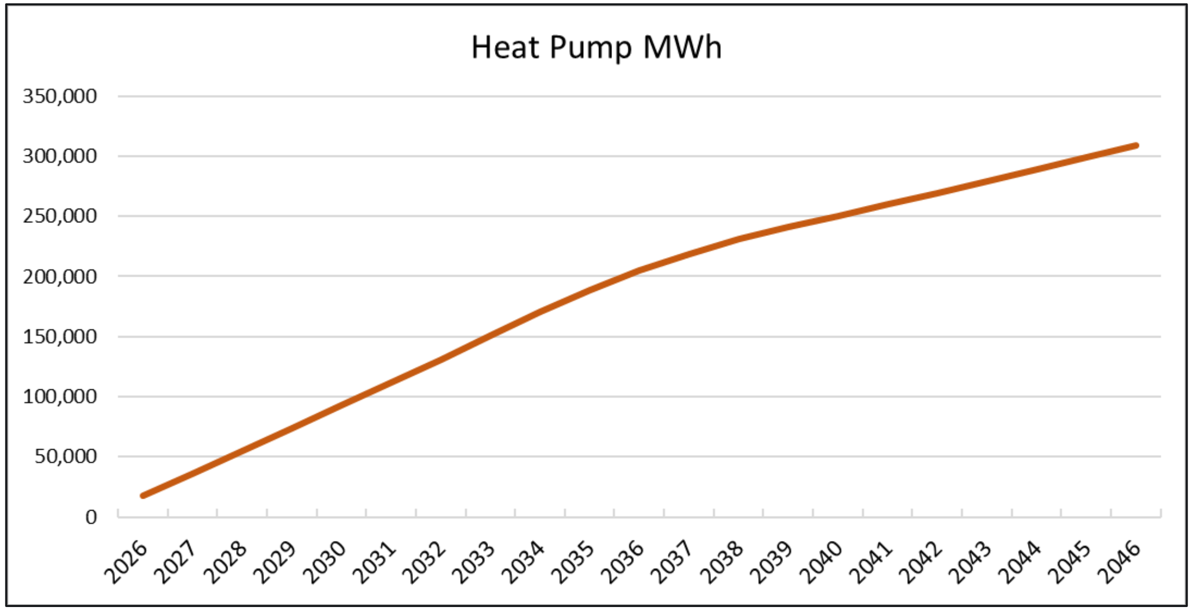
- Assume 8,500 units per year starting in 2026, growing at the same rate as residential customers
- Assumes a 15-year life cycle, in the outer years most units are replacing existing units and not adding to net new heat pumps.
- By 2046 50% of Vermont residential customers have a heat pump

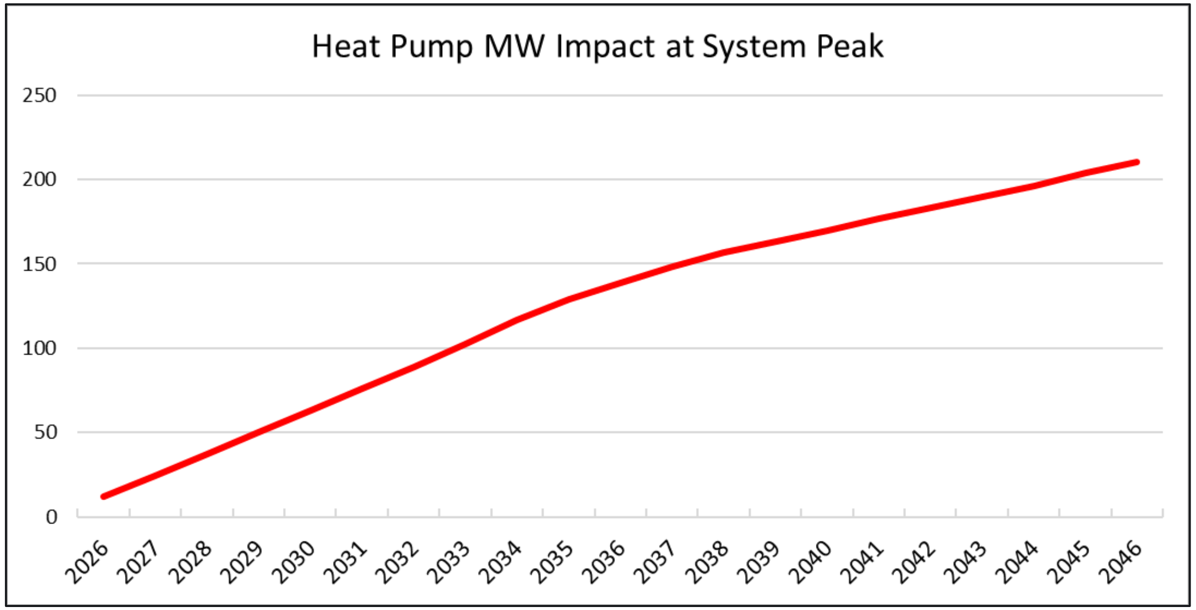
Heat Pump Forecast by Zone



- State total heat pumps are allocated to zones based on relative income growth rates by county.

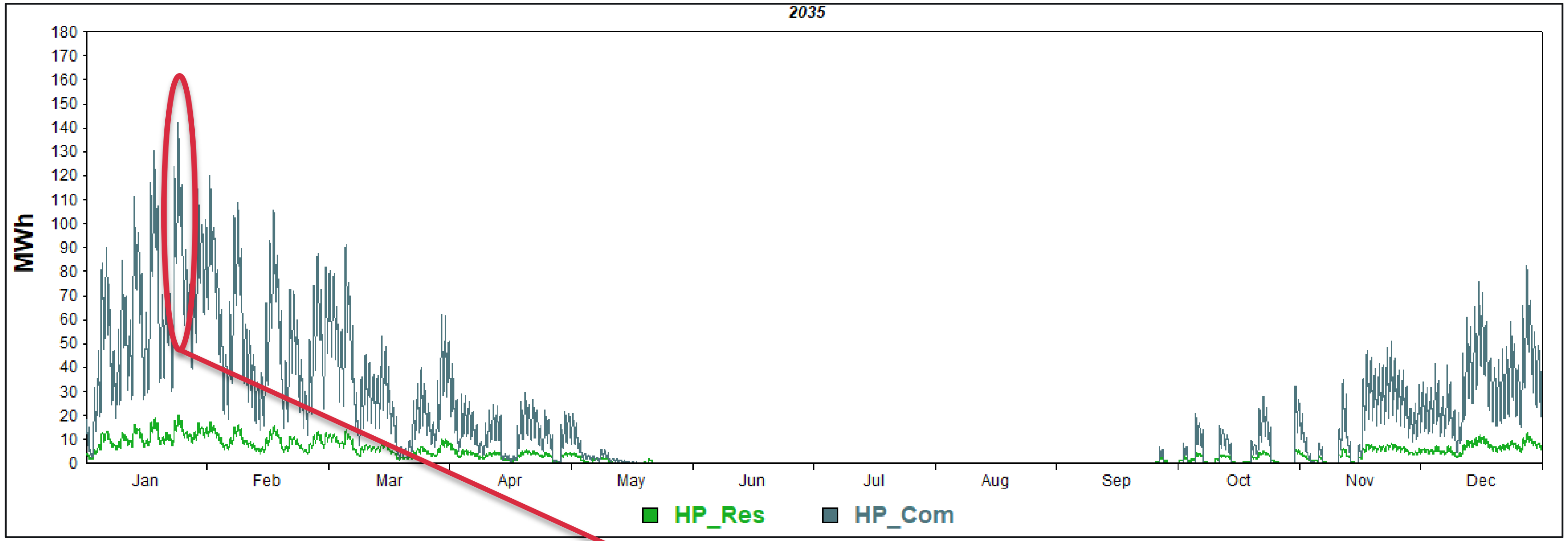
Heat Pump Forecast: MWh and Impact on Demand

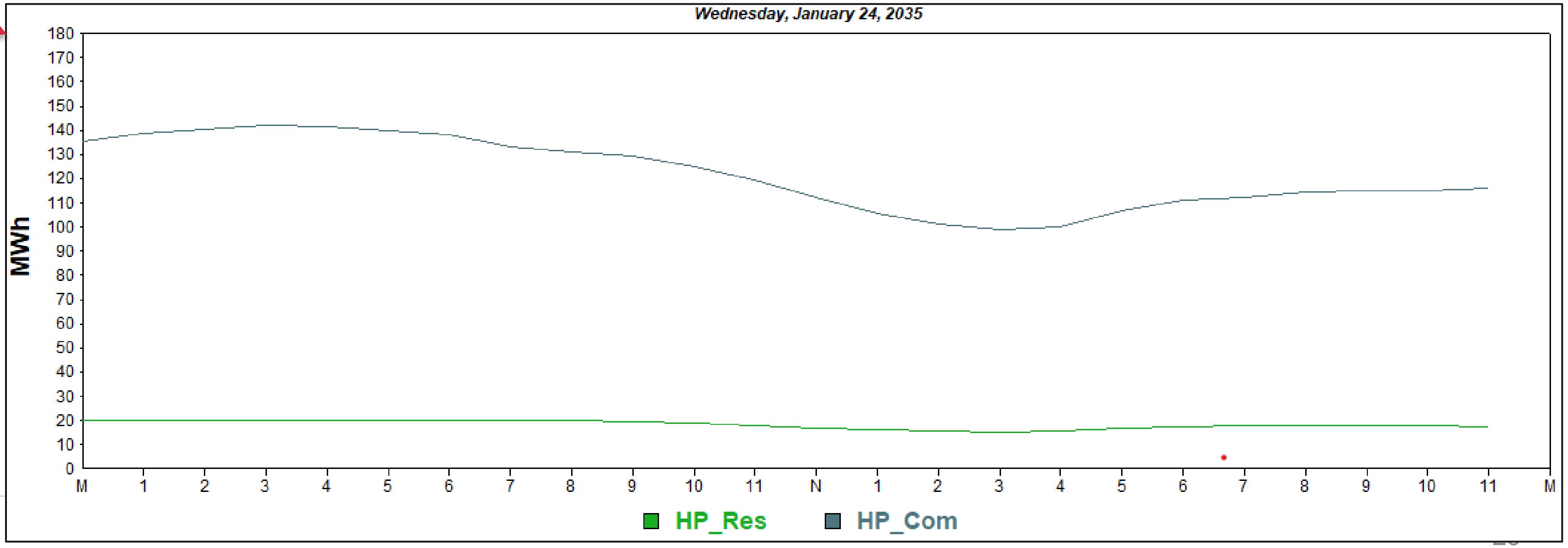




- The forecast is adjusted for cumulative incremental new heat pumps, the impact of existing heat pump is embedded in the historical load data
- We assume 2,087 kWh per heat pump for all zones except Addison, Chittenden, and Frankline.
  - Based on the 2024 Vermont heat pump study the average UEC for customers in areas with access to natural gas is 989 kWh. For these zones we use a weighted average ranging from 1,353 kWh to 1,981 kWh.
- Demand impact is based on hourly heating profile and coincident with system and zonal peaks.

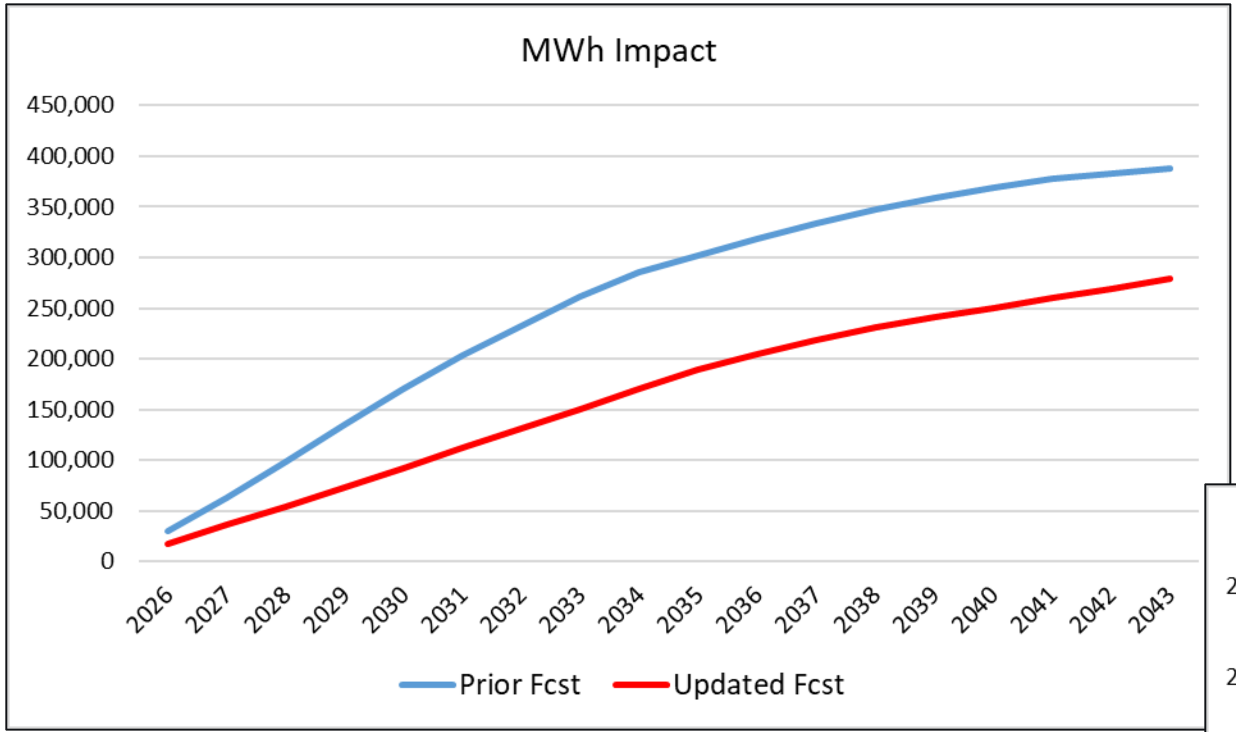
Hourly HP Profile





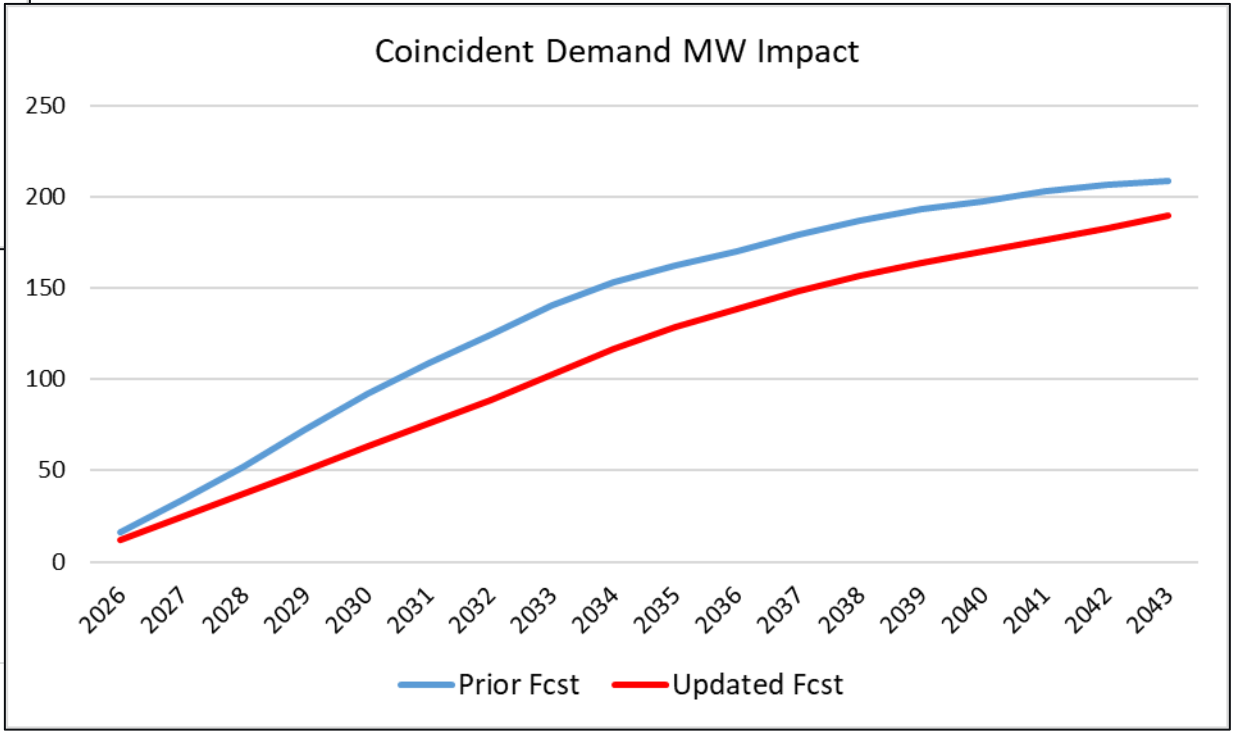
- The profiles are derived from total hourly residential and commercial AMI for GMP.
- Heating loads are estimated based zeroing out the impact of heating degrees from the total class loads

Comparison to prior HP forecast



- Fewer units and lower kWh per unit drive down MWh impact

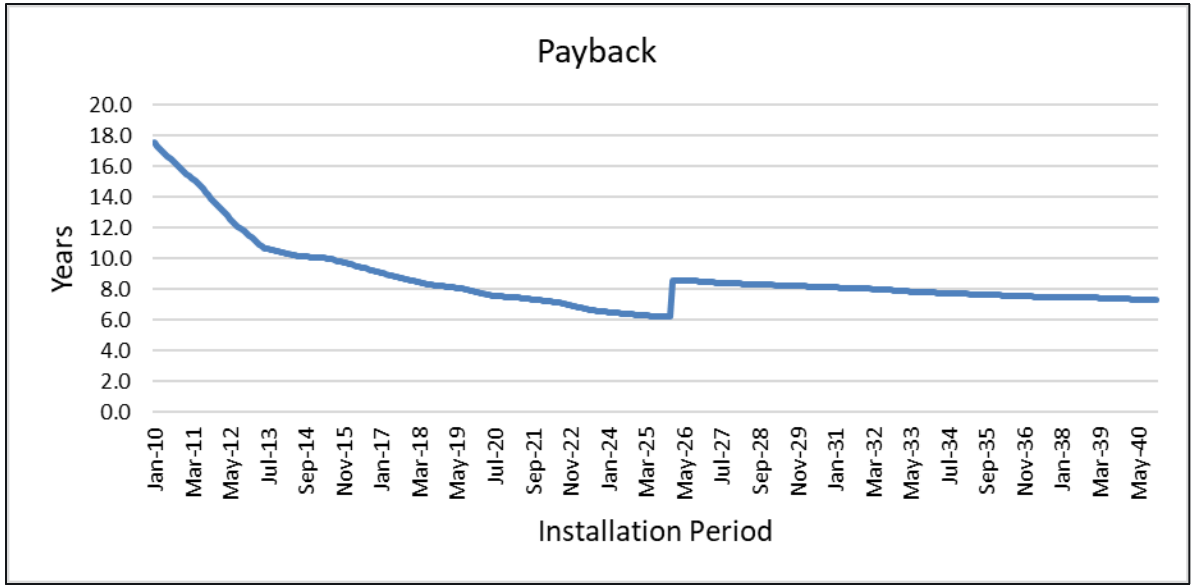
- MW impact driven by lower MWh and timing of total system peak. Total system peak timing is driven by heat pumps, electric vehicles, and solar.



Solar Load

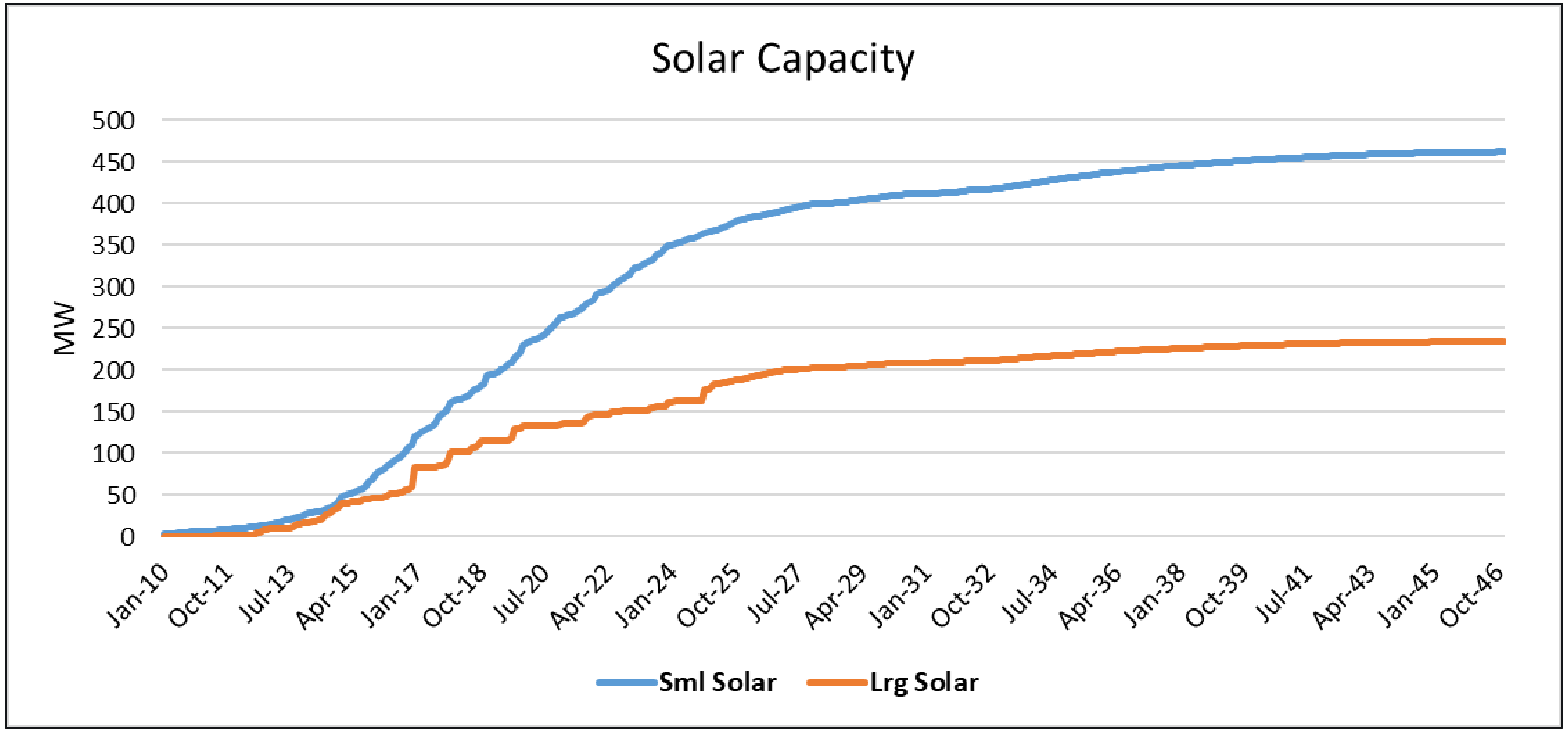
Solar Capacity Forecasting Approach

- Capacity (excluding utility scale) modeled as a function of simple payback.
  - Payback incorporates:
    - system costs, incentives (expiring tax credits), electric rates, and payments for excess generation.
  - Cubic model specification used to impose S-shaped adoption curve.



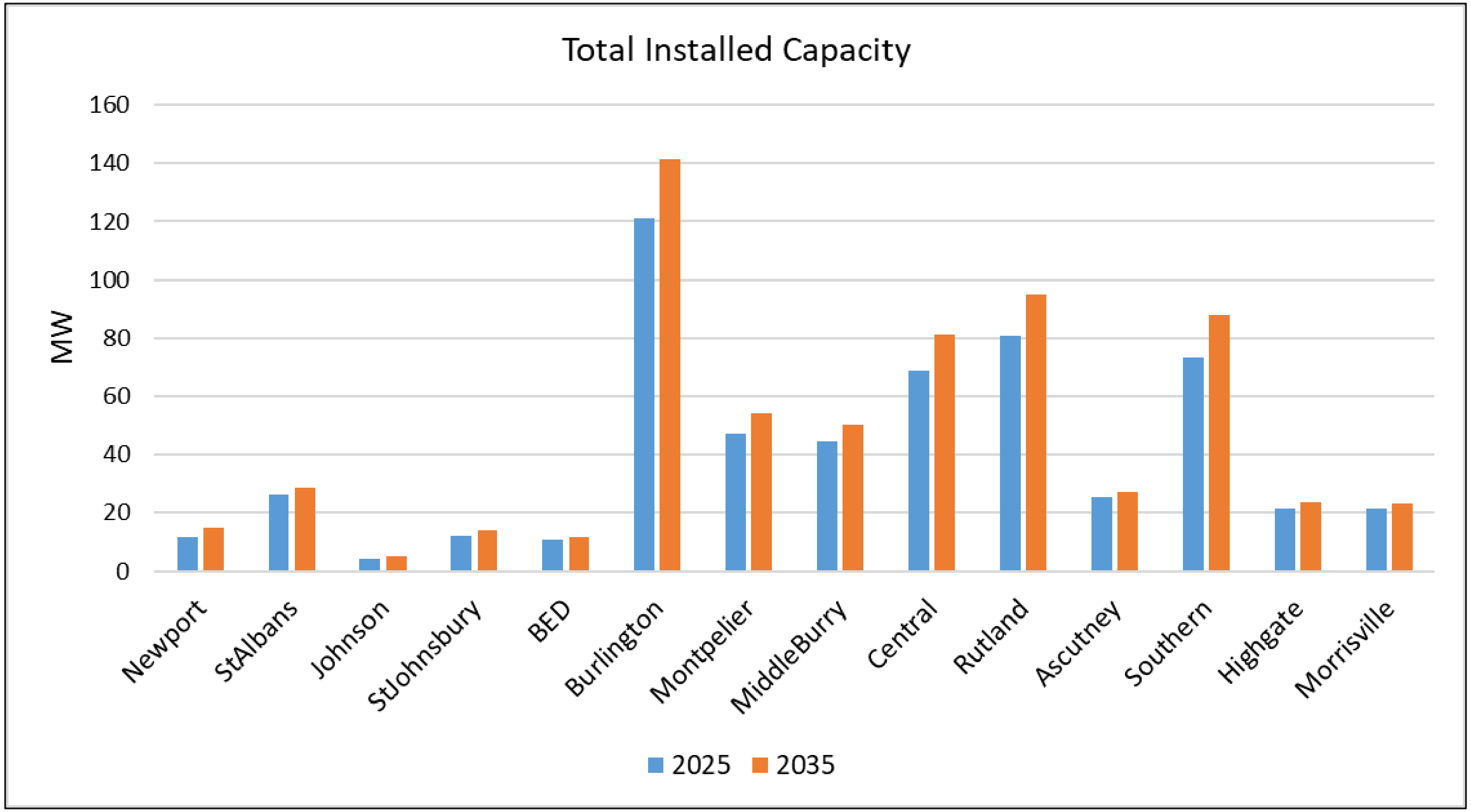
- Expiration of federal tax credits increases the payback from 6 to 8 years. Adoption is 2026 and 2027 is assumed to be 50% lower. Beginning in 2028, adopting begins to increase.

Solar Capacity Forecast

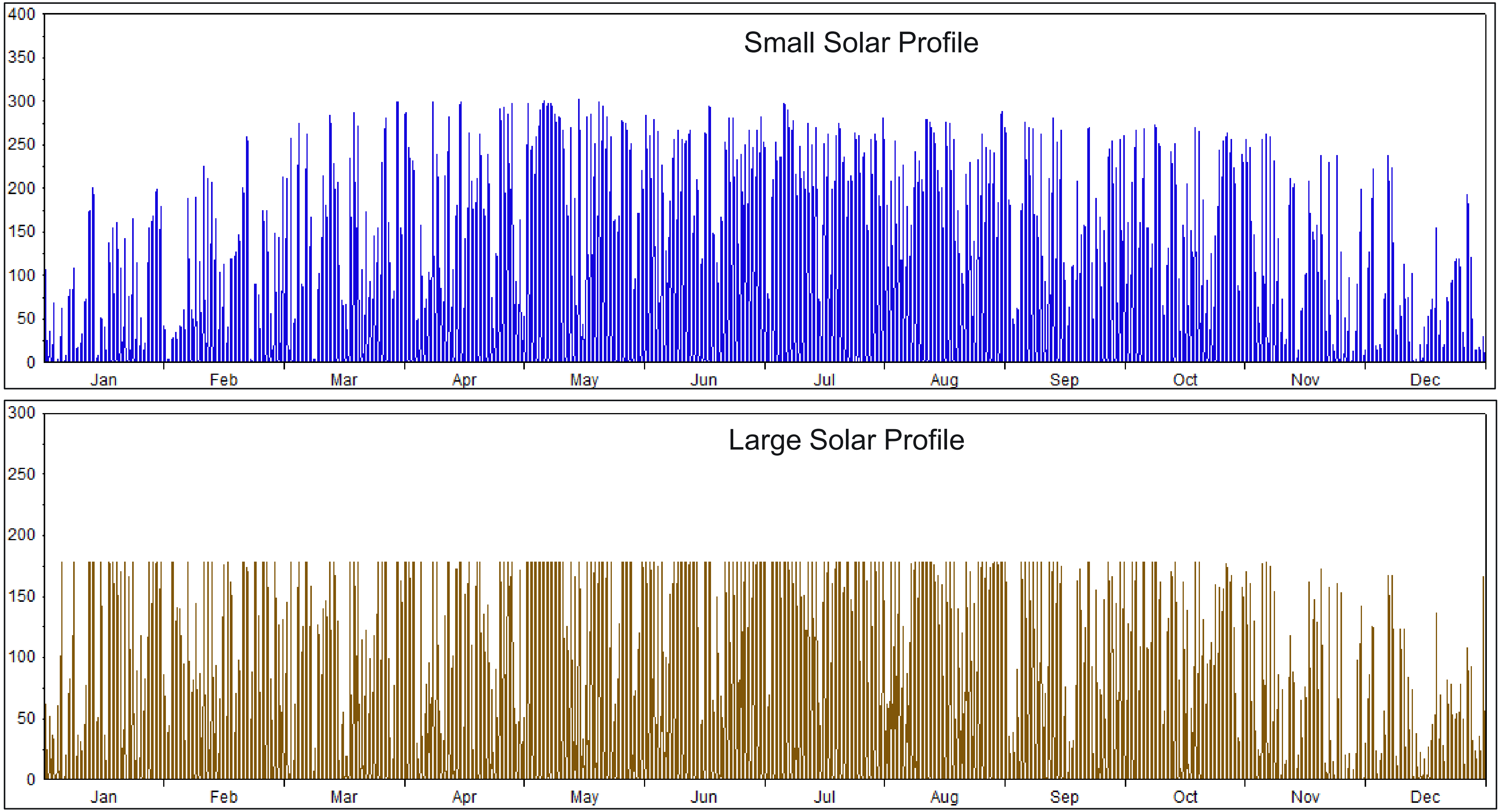


- A unique small and large solar capacity forecast is generated. Specific load factors and shape are used to determine solar generation and hourly impacts.
- Small systems are defined as systems less than 1000 kW
- Through 2035 this forecast is approximately 20 MW lower than the prior solar forecast.

Zonal Capacity Forecast

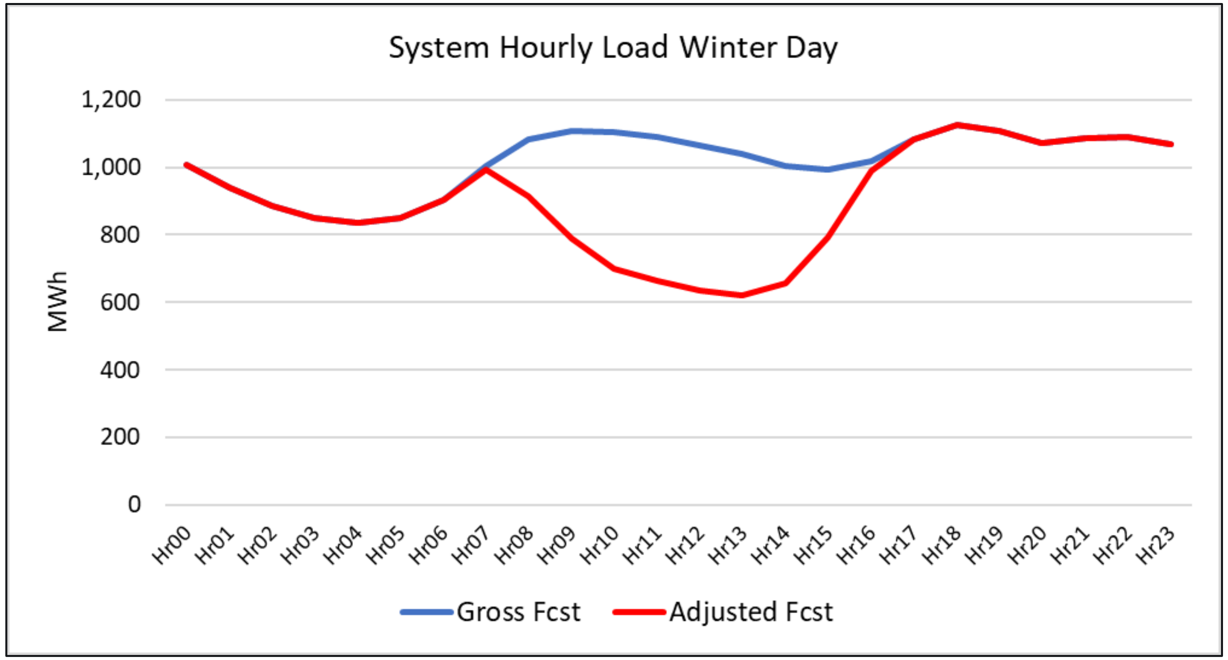


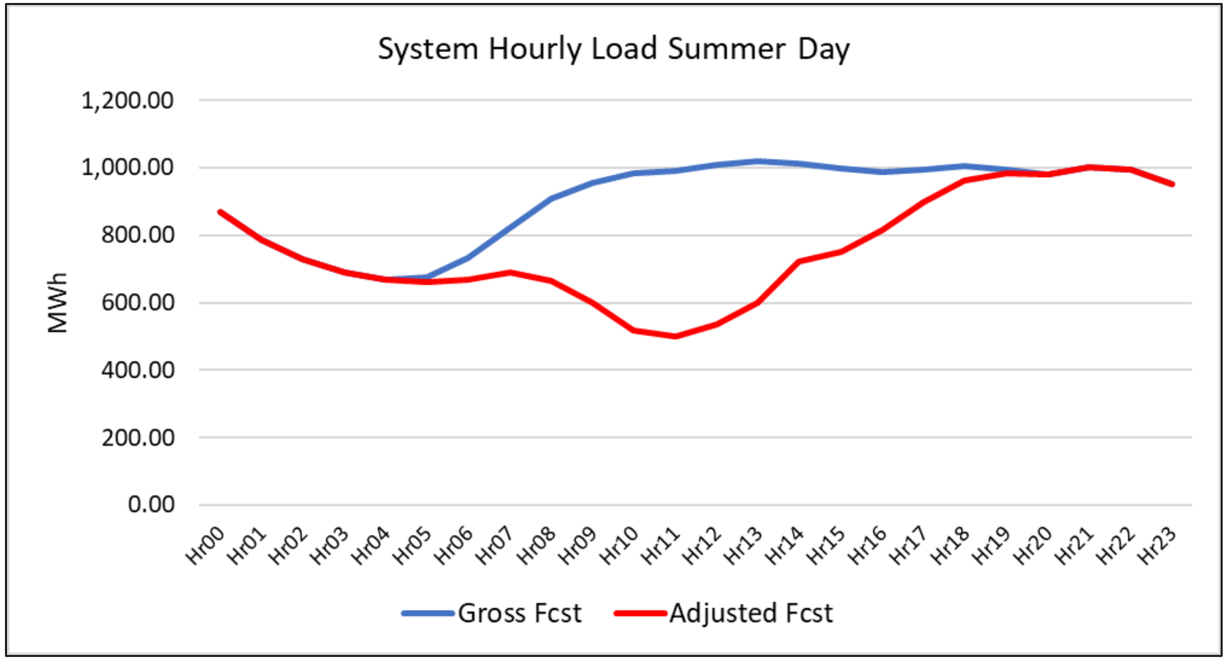
Large and Small Solar Generation Profiles



Solar Load Factors		
Month	Small	Large
Jan	0.06	0.14
Feb	0.08	0.19
Mar	0.14	0.24
Apr	0.18	0.26
May	0.21	0.29
Jun	0.23	0.28
Jul	0.22	0.29
Aug	0.20	0.28
Sep	0.18	0.25
Oct	0.13	0.17
Nov	0.09	0.12
Dec	0.06	0.11

Impact on Peak





» The incremental impact on peaks is small in the summer months and zero in the winter months due to the timing of the system peak.

Electric Vehicles

Current Electric Vehicle Market Information: Vermont

- As of January 2026, there were approximately 20,967 registered electric vehicles in the state, comprised of all electric (BEV) and plug-in hybrid electric (PHEV).
  - 62% BEV and 38% PHEV

- 3,028 additional EV were added over the past year, a 17% increase, this is down from previous years.
  - 7.8% of light duty vehicle sales in the 4th quarter of 2025, 9.9% of light duty vehicle sales in the 3rd quarter of 2025, 12.4% of light-duty sales in the 4th quarter, 2024.

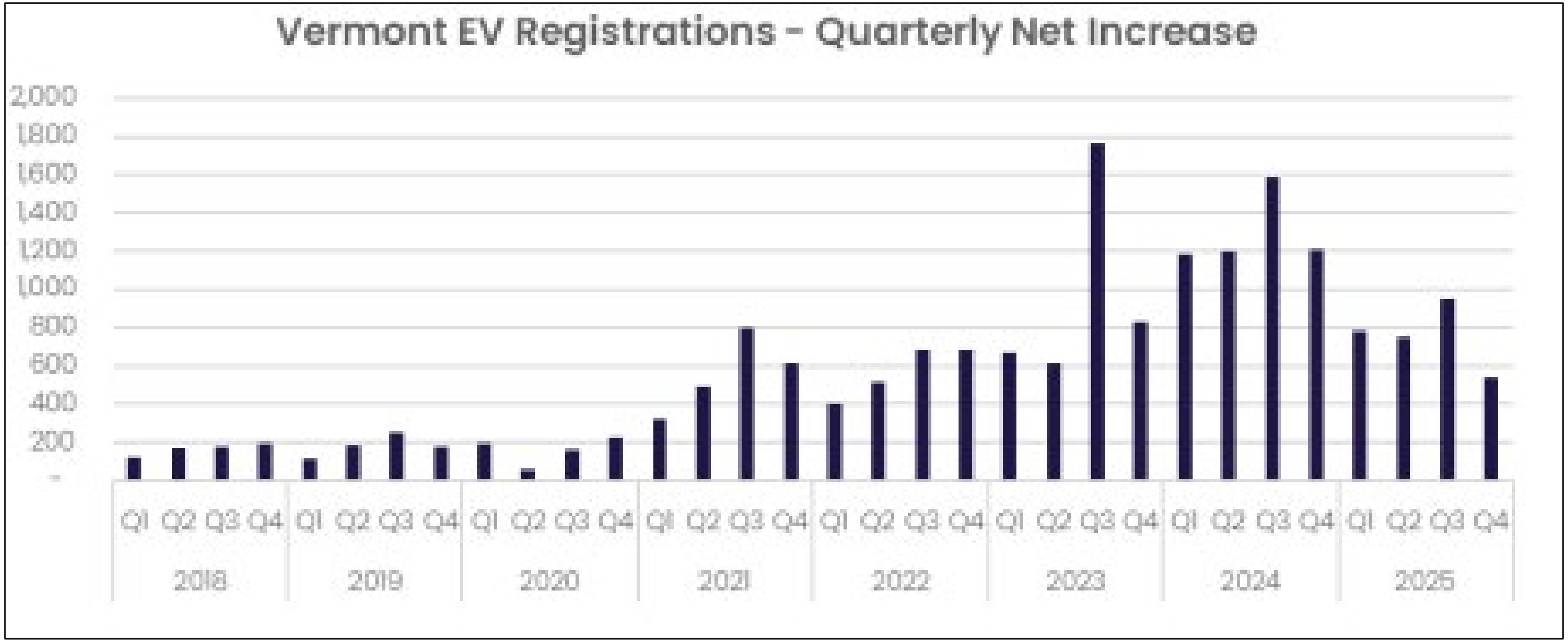
- Top 5 most popular models sold in the 4th quarter of 2025 were the Hyundai Ioniq 5, Tesla Model Y, Toyota RAV4 Prime, Volkswagen ID.4, Chevrolet Equinox EV.

- Federal tax credits expired on Sept 30th, 2025.

- US: 4th quarter 2025 EV sales dropped to 234,000 units, a 46% decline from Q3 and 36% lower year-over-year. Some of this drop is due to seasonal patterns and not solely a drop in demand.

Source: Drive Electric Vermont and Cox Automotive

Quarterly Change in EV Registrations



- Q3 2025 uptick likely driven by rush to take advantage of expiring federal tax credits. Q4 is lowest quarter since Q2 2022.

Source: Drive Electric Vermont

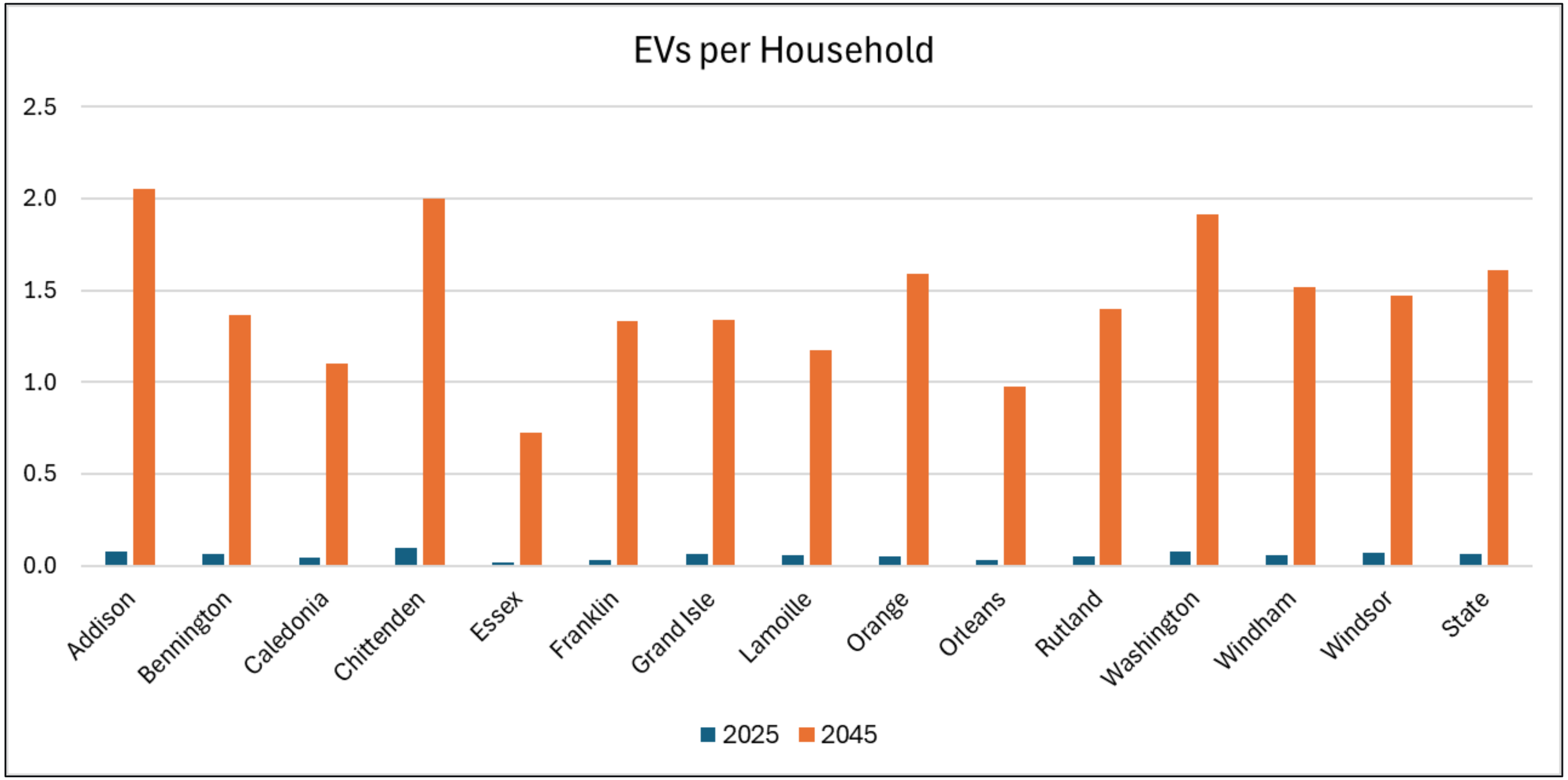
Electric Vehicle Forecast Model

1. Develop a state-level EV forecast using a stock accounting model based on EV sales targets.
   I. Starting with the most recent EV sales and EV registrations
   II. EV sales targets based on state mandates; ~~35% by 2026~~, 68% by 2030, 100% by 2035
   III. Assumptions regarding BEV/PHEV splits, annual miles, kWh per mile, average vehicle life

2. Forecast county EV registrations as a function of county household income.
   i. Calibrate county EV forecast to state EV forecast
   ii. Validate reasonableness of county allocation

3. Combine EV MWh forecast with hourly charging profiles
   i. Home charging versus public charging
   ii. Uncontrolled home charging versus controlled or TOU rates

County EV Forecast (100% new car purchases are electric by 2035)



- Addison, Chittenden, and Washington county have rates of 2 EVs per household, which is slightly higher than the state average of 1.7 total vehicle per household. Reasonable given these are more populated and higher income counties.

Hourly EV Charging Assumption

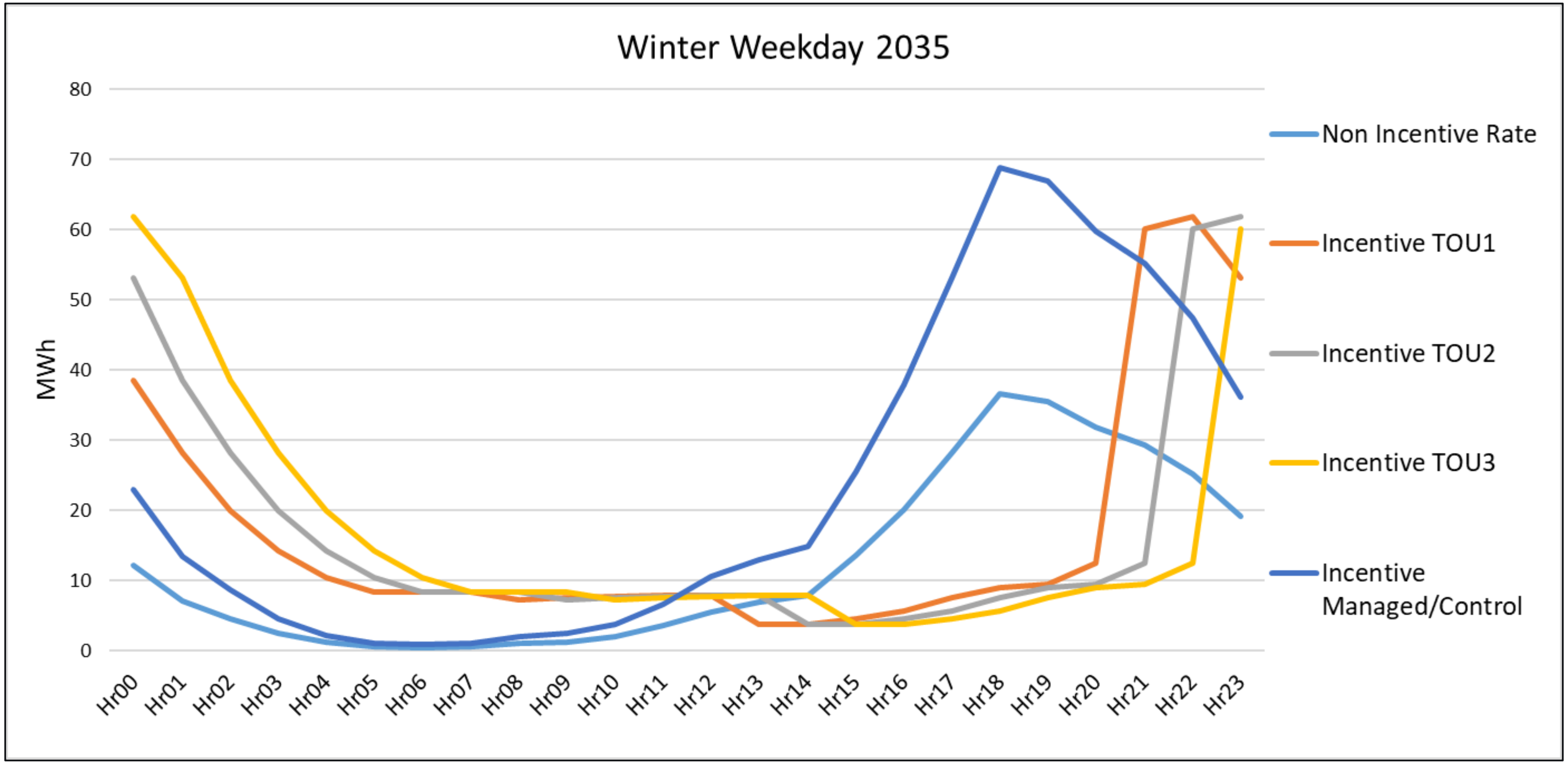
- Forecast assumes that 80% of charging occurs at home and 20% away from home at public or workplace chargers. Home charging is allocated to one of three charging strategies.

- **No incentivized rate**: We assume 25% of EV owners are not signed up for any rate, this declines to 10% by 2046.

- **Incentivized TOU Rate**: 2/3 of customers on an incentivized rate are on the TOU rate. We have created 3 staggered start TOU rates, with the incentive rate beginning at 9pm, 10pm, and 11pm. The customers are evenly distributed across the three start times.

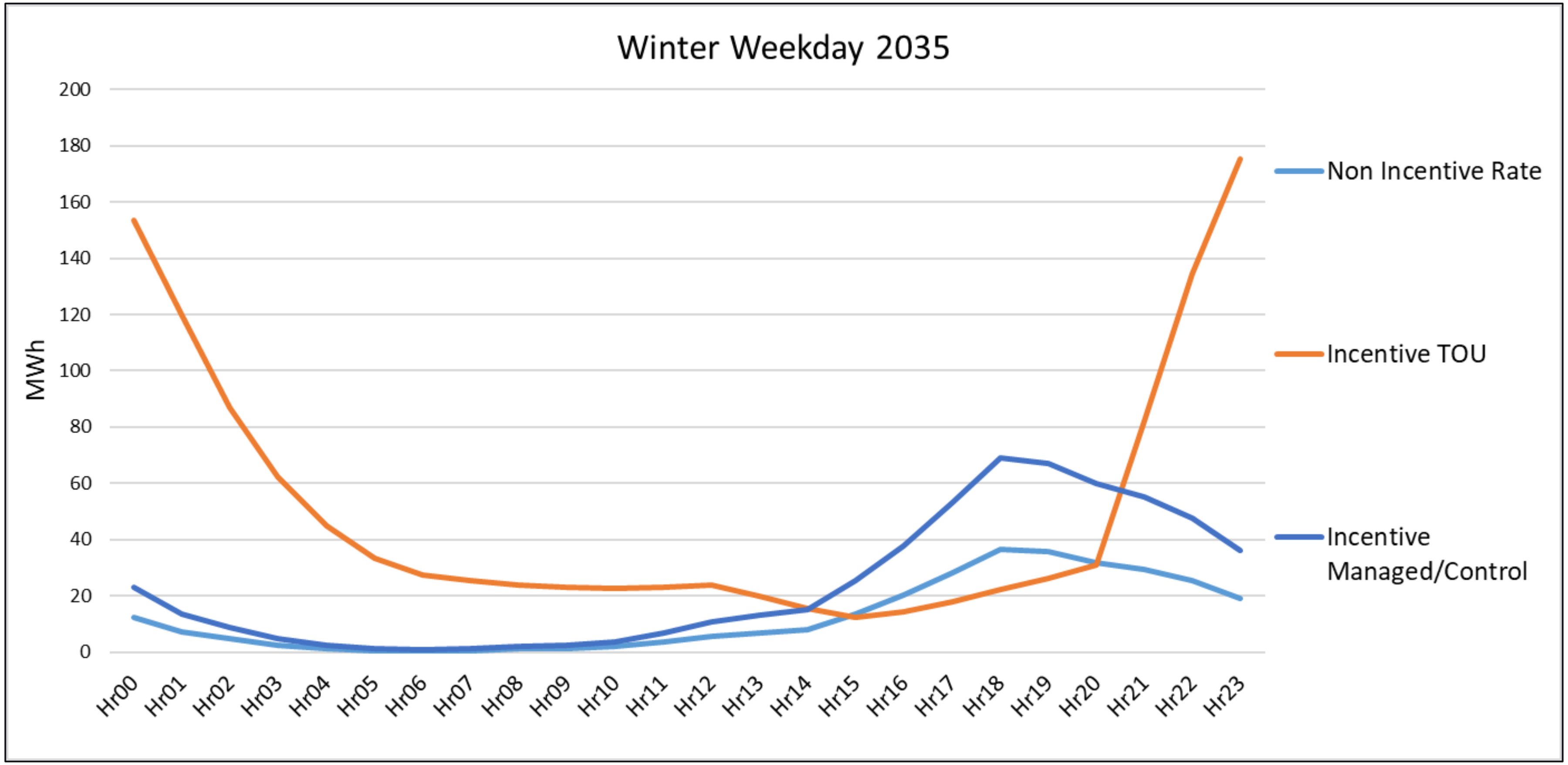
- **Incentivized Managed/Controllable Rate**: 1/3 customers on an incentivized rate are on managed/control rate. Their hourly charging pattern is the same as the non incentivized rate customers; the impact of control is not embedded in the forecast.
  - We can quantify the demand impact of control events and provide these estimates for sensitivity analysis or forecast scenarios

Hourly EV Profiles



- All zones use the same non incentive/incentive allocation factors. Except for BED, which we know has its own EV incentive rate

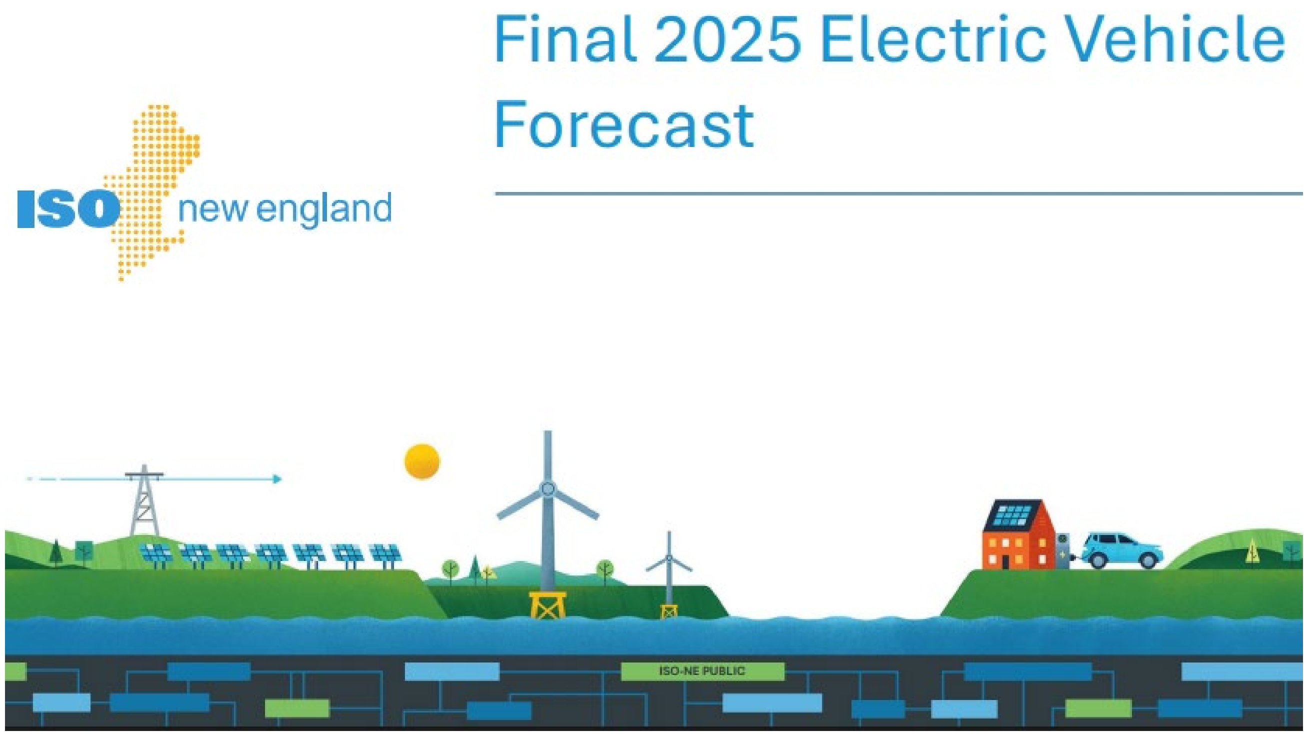
Hourly EV Profiles



- All zones use the same non incentive/incentive allocation factors. Except for BED, which we know has its own EV incentive rate

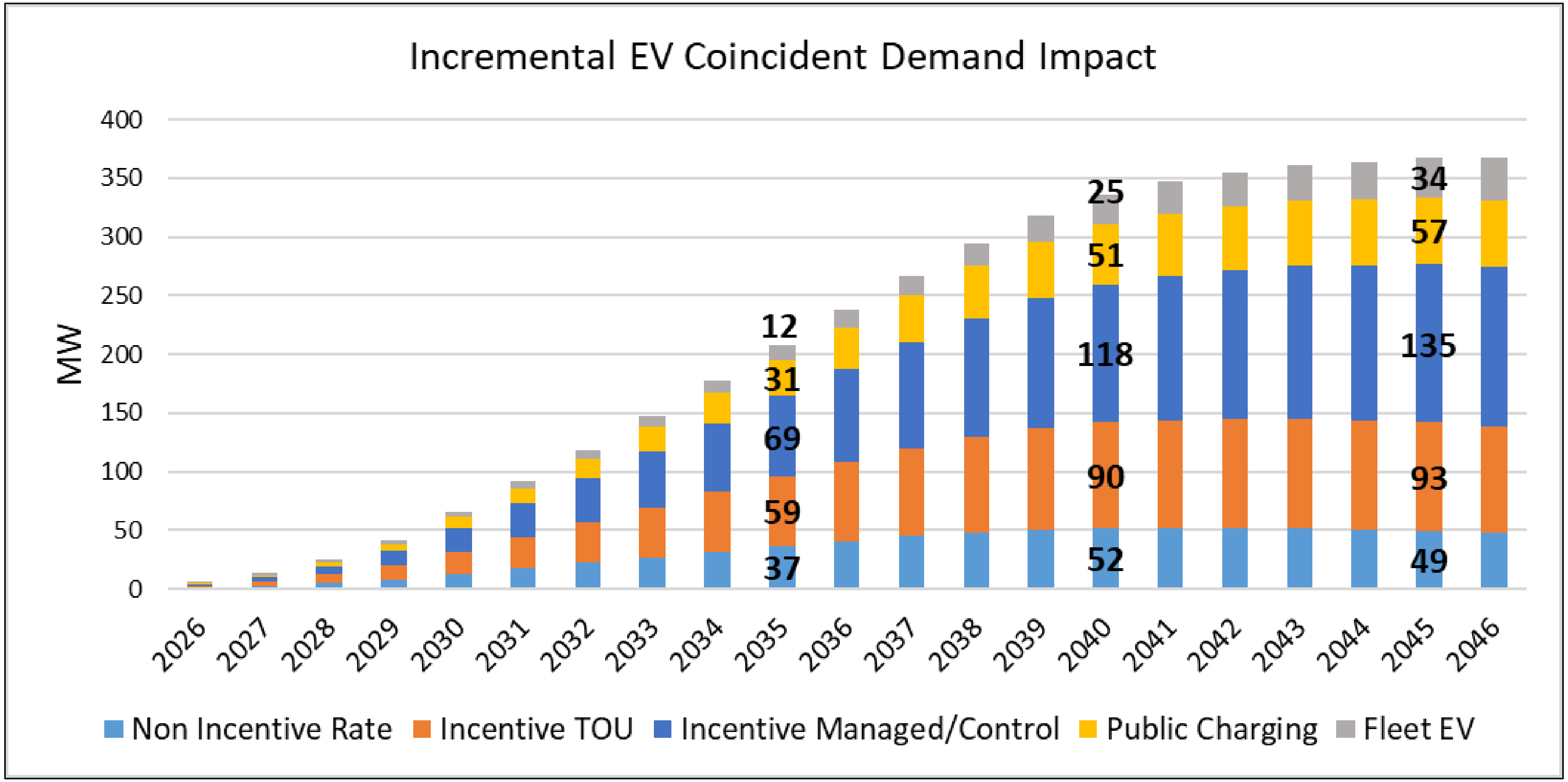
Fleet/Commercial EV Forecast

- Based on ISO New England’s 2025 Transportation Electrification Forecast for Vermont, May 2025
- State-level forecast of light-duty fleet, medium-duty fleet, school bus, and transit bus

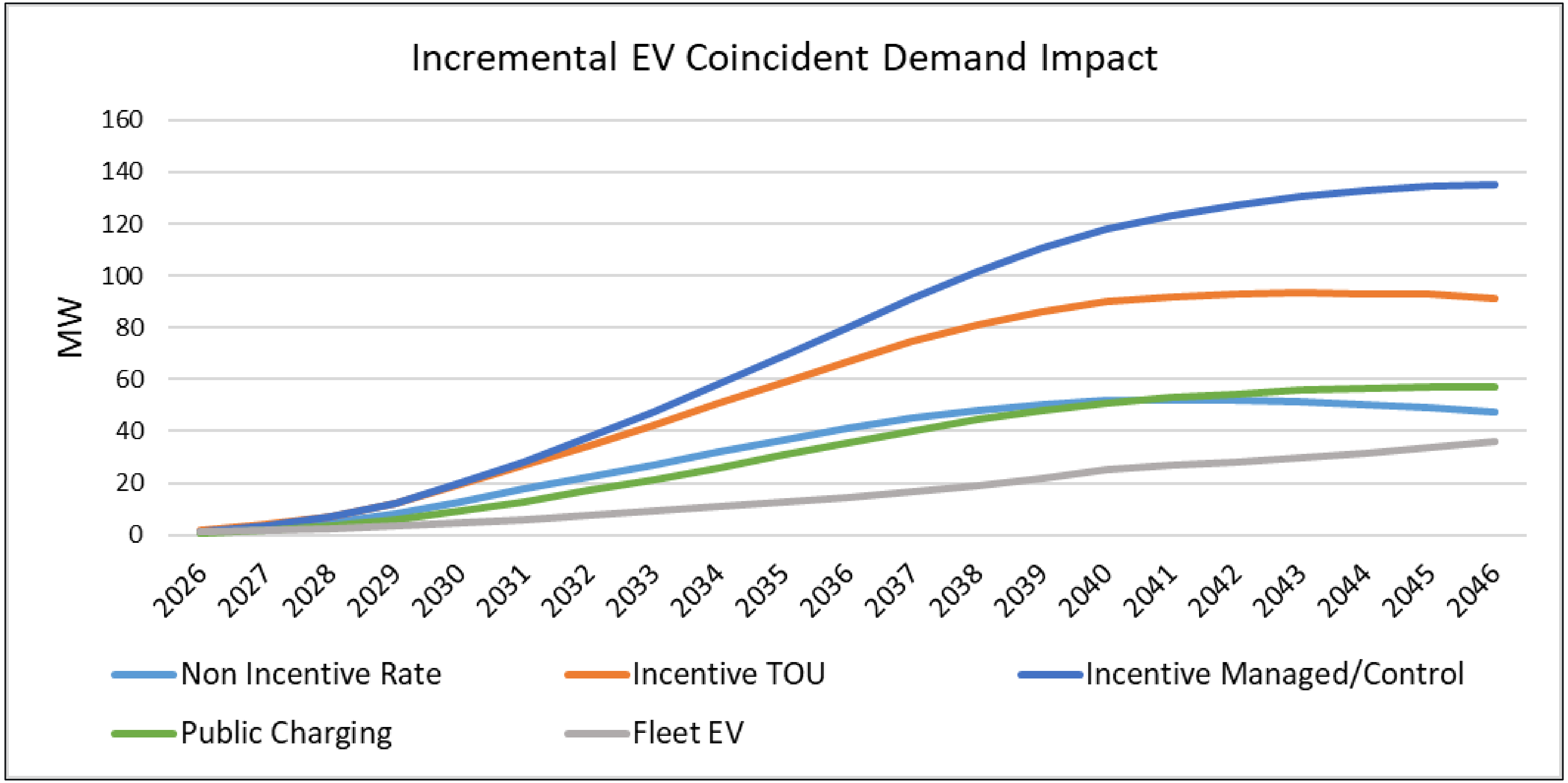


Final 2025 Electric Vehicle Forecast

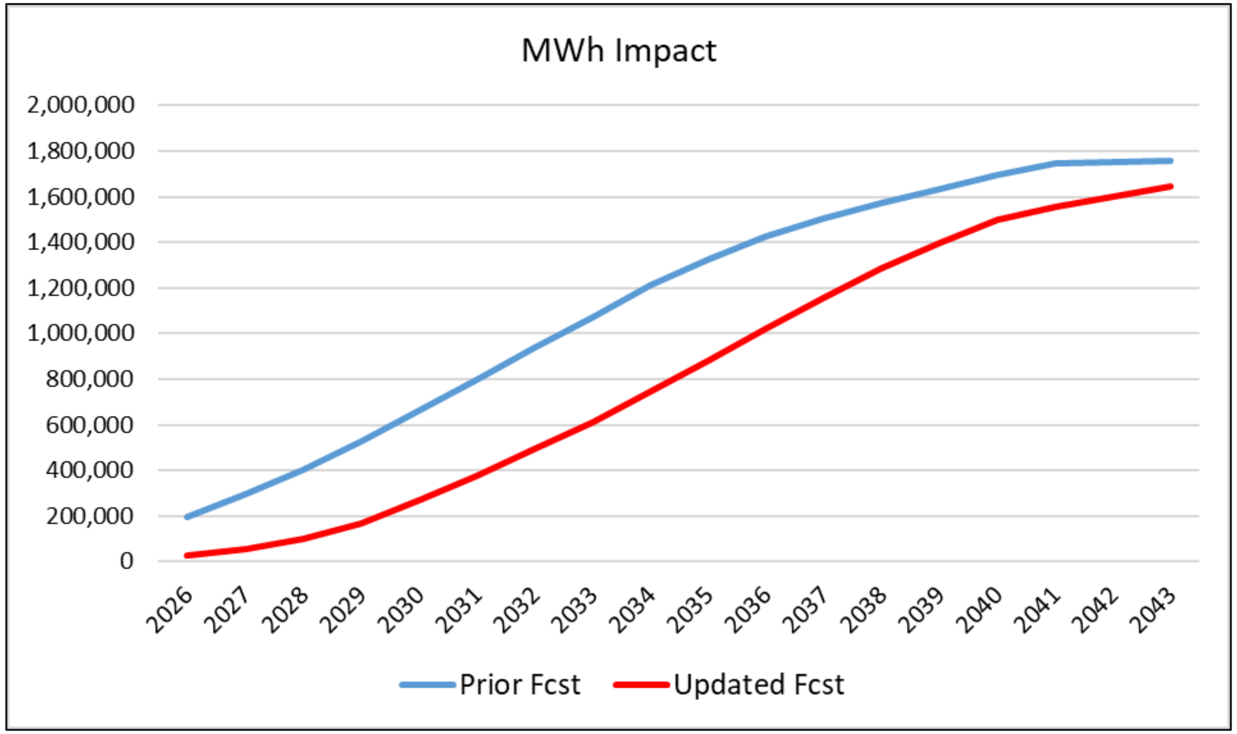
EV Demand Impact



EV Demand Impact

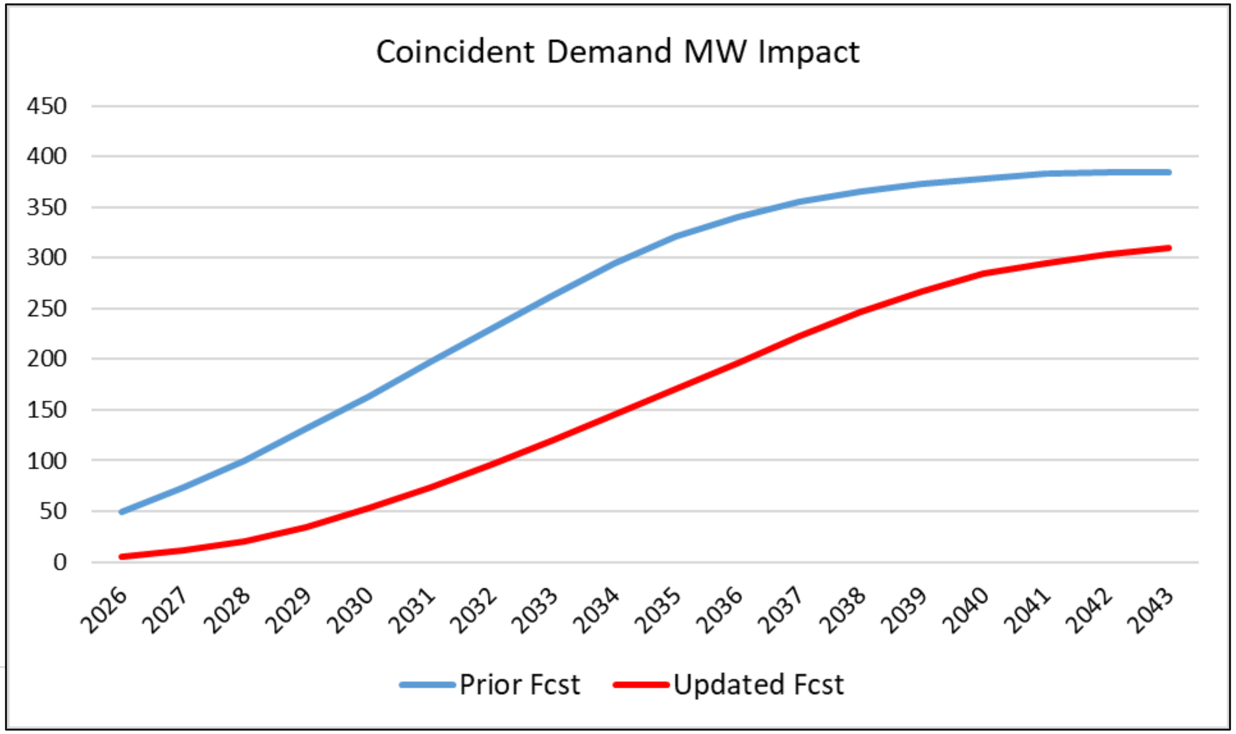


Comparison to prior EV forecast



- Slower initial adoption of EVs but ultimately reaching similar numbers in the outer years.

- Significant change in hourly charging assumptions



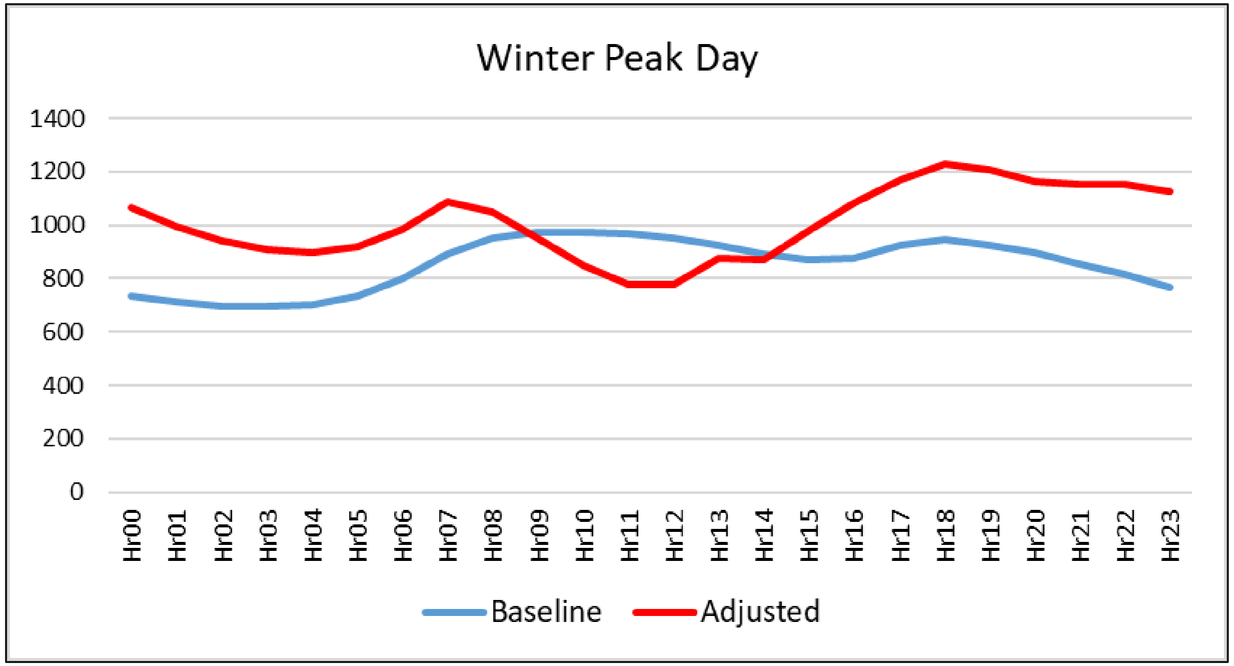
Forecast Comparison

System Peak Forecast

Winter MW					
Year	Base	HP	EV	PV	Total
2026	971.4	12.1	4.9	0.0	988.4
2027	978.1	24.4	11.1	0.0	1,013.6
2028	984.6	37.0	20.2	0.0	1,041.8
2029	983.4	50.0	33.6	0.0	1,067.1
2030	981.2	63.0	52.9	0.0	1,097.1
2031	979.0	75.8	73.8	0.0	1,128.6
2032	978.4	88.8	96.3	0.0	1,163.5
2033	977.3	102.2	119.9	0.0	1,199.4
2034	973.3	116.3	145.5	0.0	1,235.1
2035	973.2	128.7	170.8	0.0	1,272.6
2036	975.5	138.6	196.5	0.0	1,310.7
2037	976.4	148.3	222.3	0.0	1,347.0
2038	980.7	157.0	245.9	0.0	1,383.6
2039	986.2	163.4	267.1	0.0	1,416.7
2040	988.9	169.7	283.9	0.0	1,442.4
2041	991.3	176.6	294.6	0.0	1,462.5
2042	996.0	182.9	302.8	0.0	1,481.7
2043	1,001.4	189.5	309.6	0.0	1,500.5
2044	1,008.8	196.0	313.8	0.0	1,518.5
2045	1,012.0	204.0	318.1	0.0	1,534.1
2046	1,018.1	210.1	319.5	0.0	1,547.7

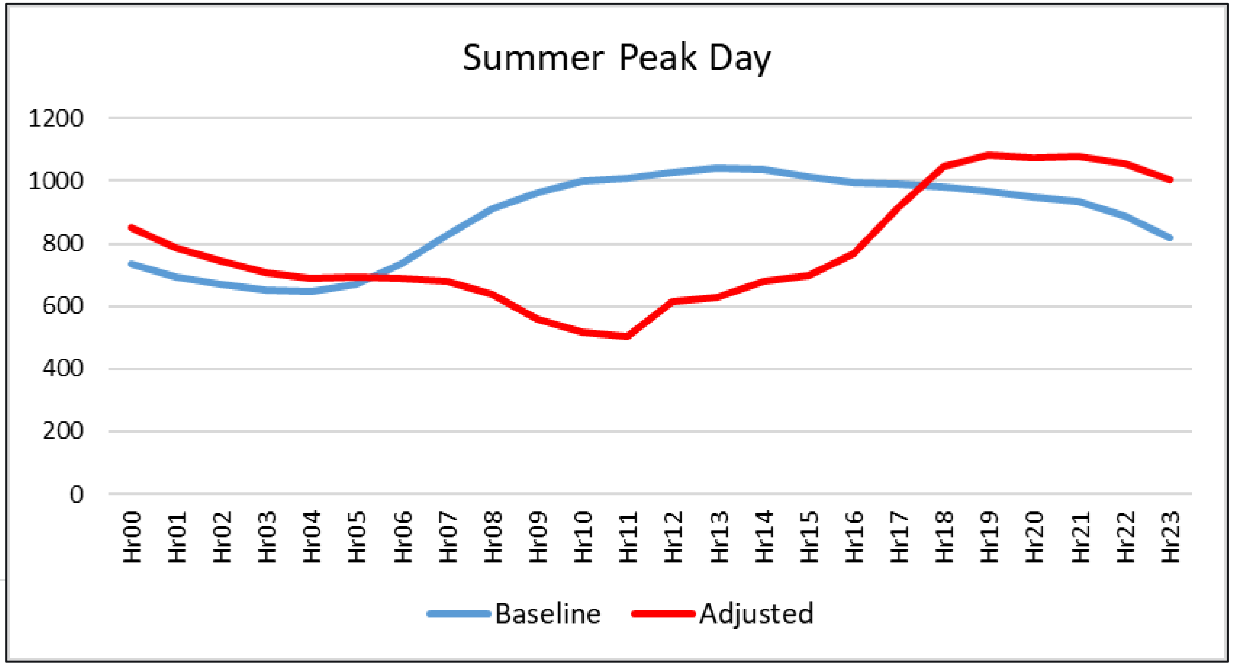
Summer MW					
Year	Base	HP	EV	PV	Total
2026	966.2	0.0	3.7	-8.7	961.2
2027	972.9	0.0	8.6	-8.9	972.7
2028	979.7	0.0	15.8	-9.0	986.5
2029	983.3	0.0	26.4	-9.1	1,000.6
2030	983.7	0.0	41.6	-9.2	1,016.2
2031	985.1	0.0	58.1	-9.2	1,034.0
2032	992.8	0.0	75.8	-9.3	1,059.2
2033	994.2	0.0	94.3	-9.4	1,079.1
2034	997.0	0.0	114.4	-9.6	1,101.8
2035	1,000.7	0.0	134.2	-9.7	1,125.1
2036	1,007.0	0.0	154.3	-9.9	1,151.4
2037	1,003.4	0.0	196.9	-17.8	1,182.5
2038	1,012.5	0.0	218.1	-18.0	1,212.6
2039	1,021.2	0.0	237.2	-18.1	1,240.3
2040	1,030.7	0.0	252.2	-18.2	1,264.8
2041	1,039.2	0.0	262.1	-18.3	1,283.0
2042	1,049.6	0.0	269.8	-18.3	1,301.0
2043	1,064.6	0.0	276.1	-18.4	1,322.3
2044	1,077.9	0.0	280.0	-18.5	1,339.4
2045	1,088.8	0.0	284.1	-18.5	1,354.4
2046	1,099.6	0.0	285.5	-18.5	1,366.5

Hourly System Profile

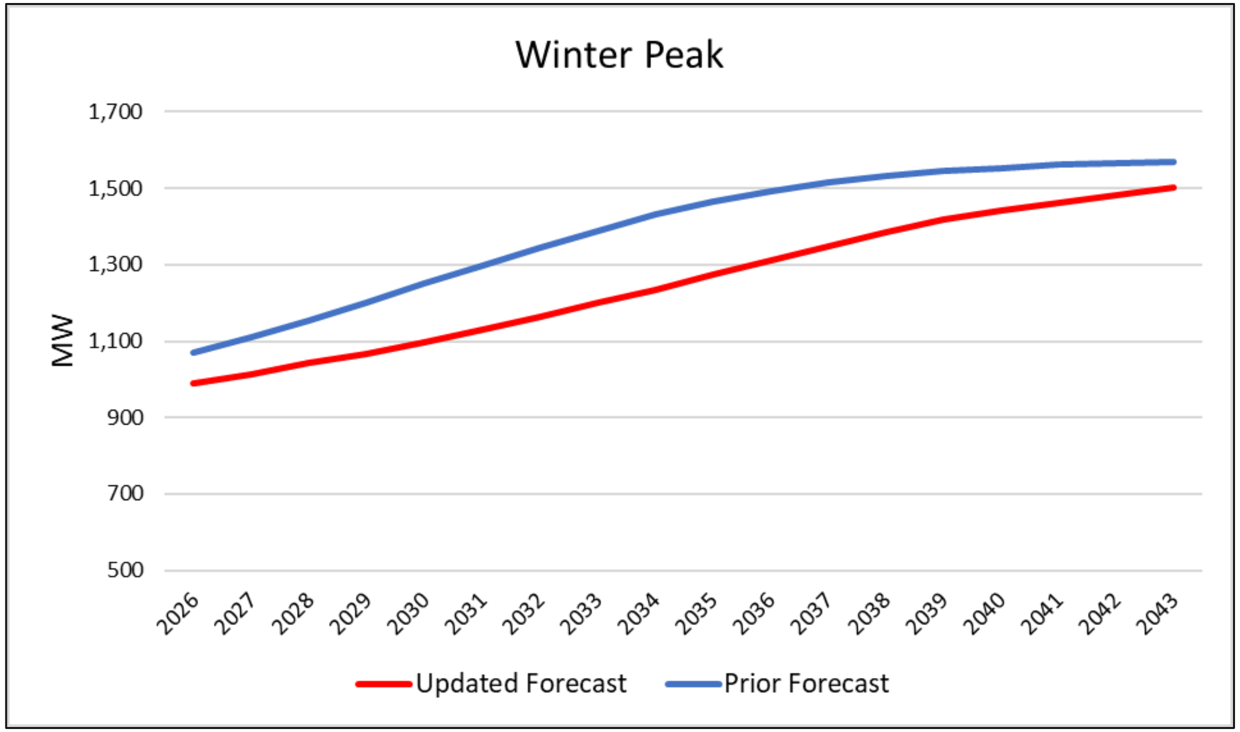


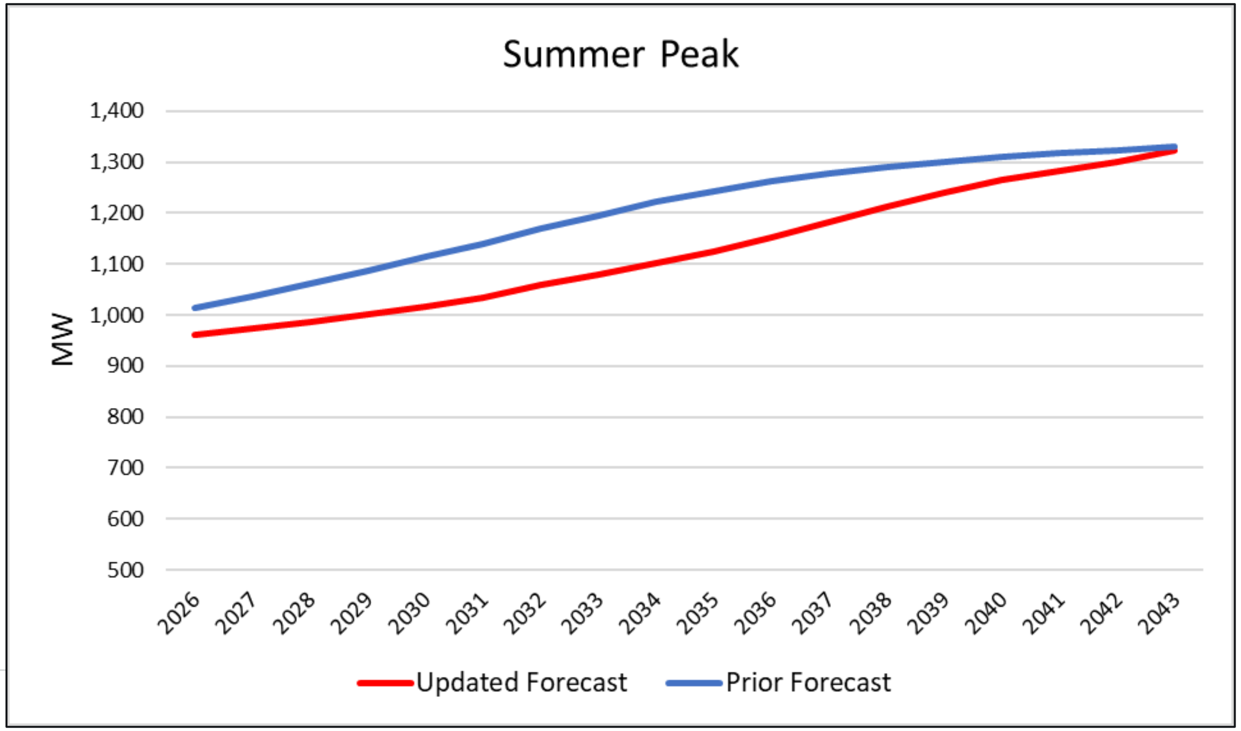
- The baseline forecast is reconstituted for historical solar
- The adjusted forecast subtracts all solar generation and adds the incremental impact of EV and heat pumps.

- The adjusted forecast becomes winter peaking driven by heat pump and EV charging profiles



Comparison Against Prior Forecast

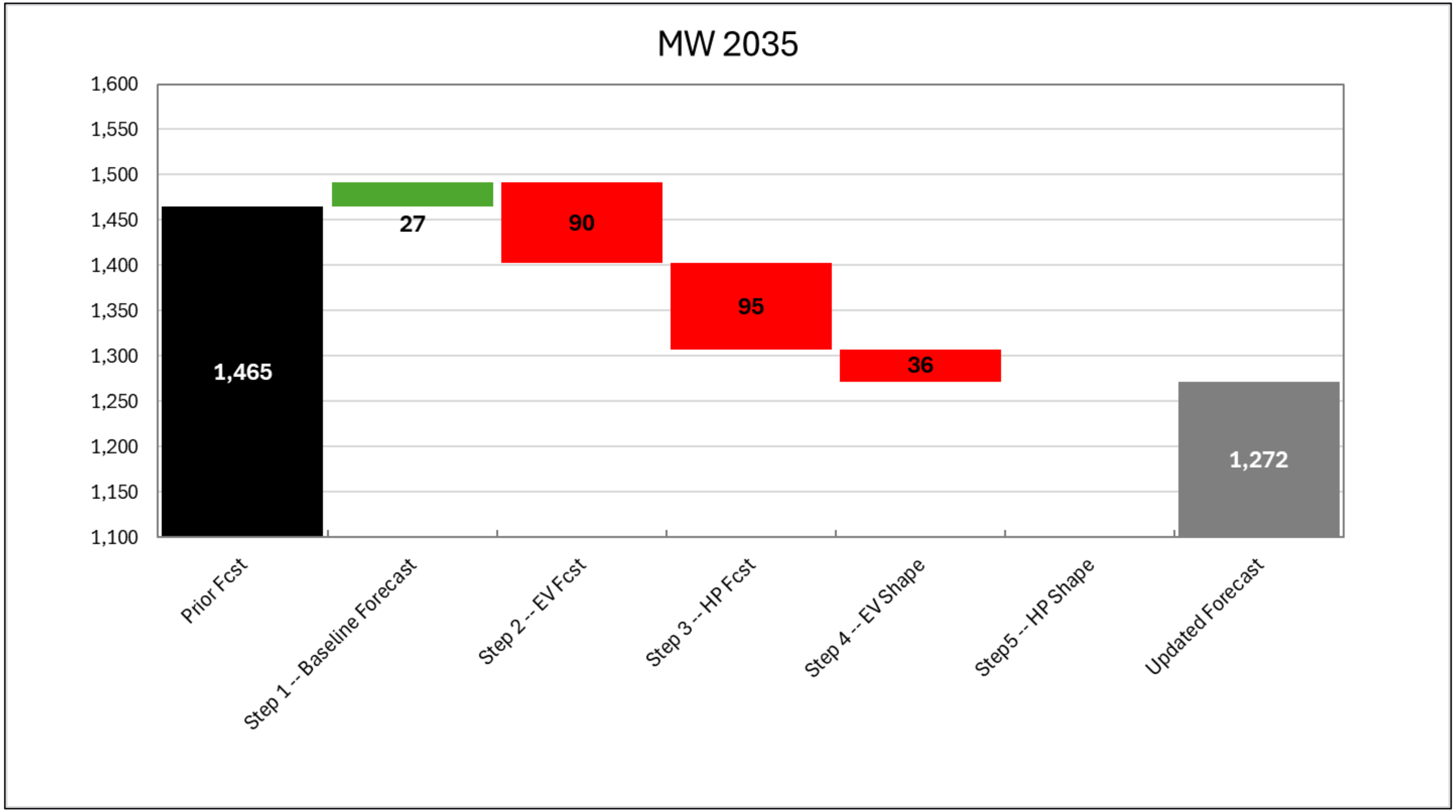




- Updated winter peak is 192 MW lower in 2035 and 109 MW lower in 2040.

- Updated summer peak is 119 MW lower in 2035 and 45 MW lower in 2040

Comparison to Prior Long-term Load Forecast: Year 2035



Possible Forecast Scenarios

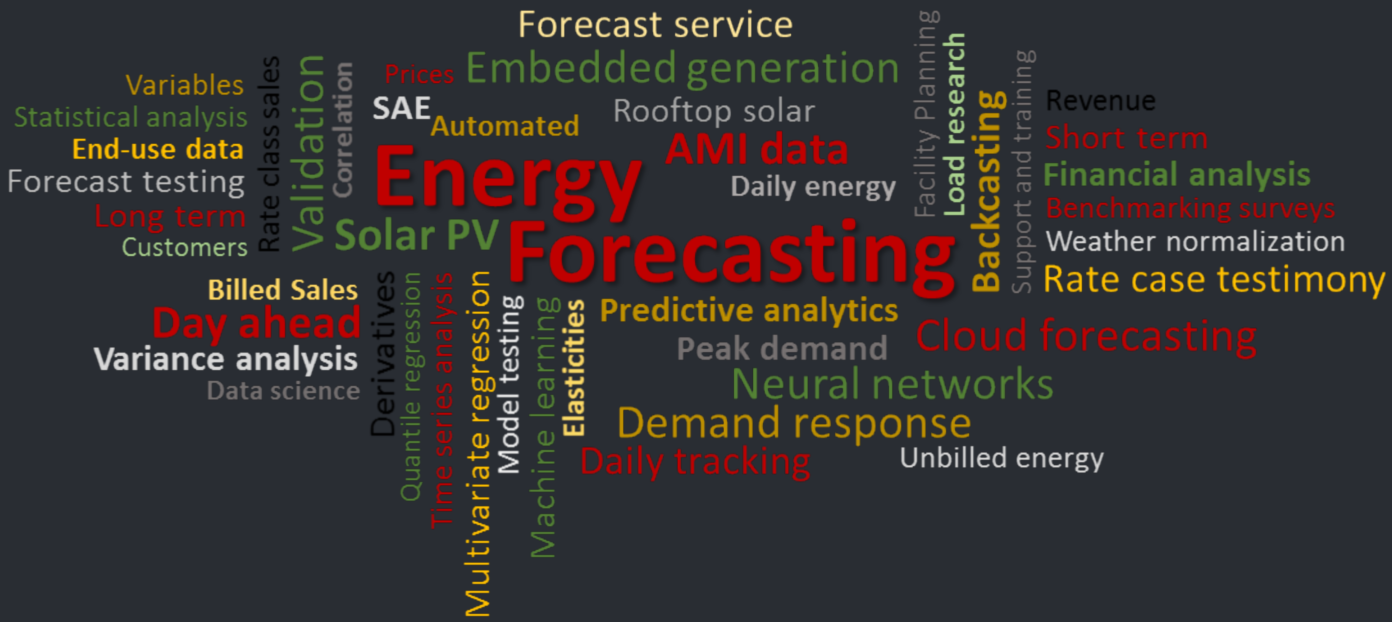
- **Weather based scenarios**
  - Extreme weather, multiple hot/cold days, increased/decreased temperature trends

- **Slower adoption of EV**

- **Impact of EV control rate**

- **Battery Storage**

- **Stronger/Weaker economic growth**



Thank You

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