

Selected Energy Data—Bennington Region and Manchester

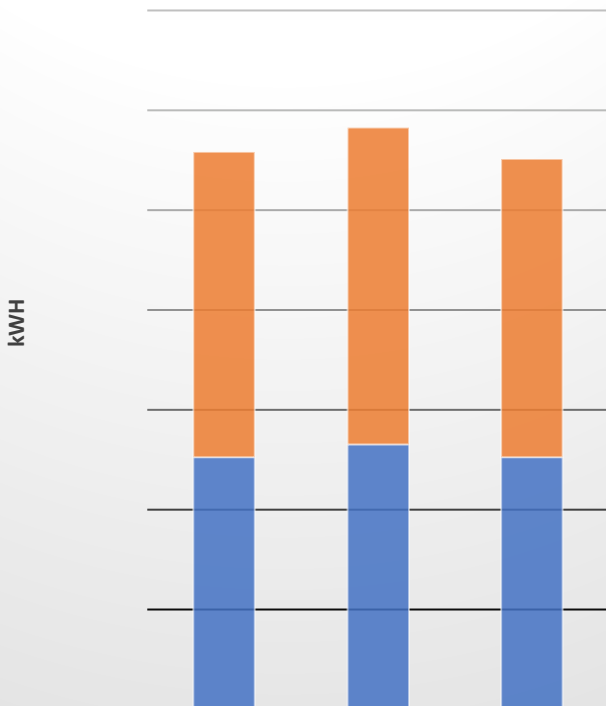
All data provided by Efficiency Vermont. Contact the BCRC for additional municipal energy data.

Efficiency Vermont has collected a variety of data that reflects energy demand at the local and regional level, as well as information on the number of households and businesses taking advantage of its energy efficiency incentives. Selected data from the past three years is presented below. Regional data includes total electricity consumption by sector as well as electric vehicle registrations. Town data also includes a summary of local uptake on a variety of efficiency programs; note that data for some programs was not collected for each of the three years.

The average electricity demand for a residential household in the region was 7,153 kWh (596 kWh/month) in 2017, increasing to 7,504 kWh (625 kWh/month) in 2018, and dropping back to 7,202 kWh (601 kWh/month) in 2019. Efficiency Vermont tracked a total of 53 home weatherization projects in the region in 2017, 82 in 2018, and 95 in 2019.

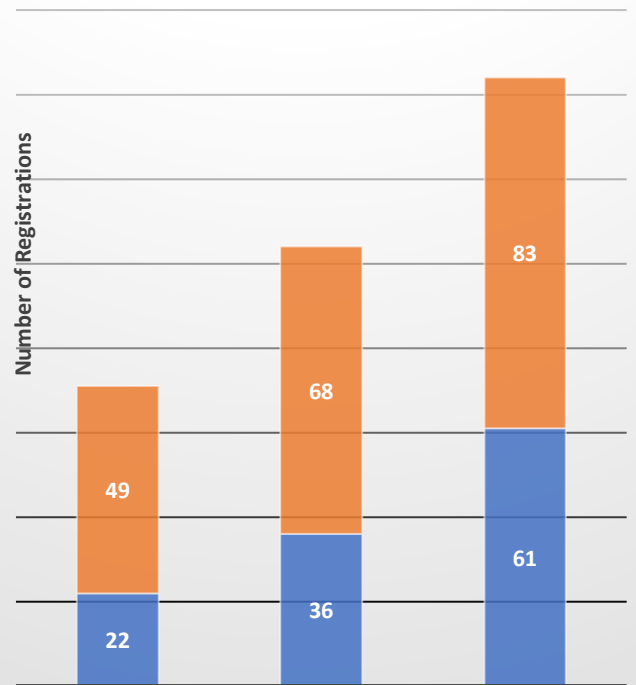
It is important to note that electrification in the thermal and transportation sectors improves overall energy efficiency and contributes to a reduction in greenhouse gas emissions (because of Vermont’s heavy reliance on electricity from renewable sources), even though electricity consumption is increased. For example, Efficiency Vermont reports installation of 241 cold climate heat pumps in the region in 2017, 174 in 2018, and 289 in 2019. If those units were used to fully heat each home (more likely most are used with a wood, propane, or oil backup), approximately 6.3 million kWh of additional electricity demand would be generated by this efficient heating source. Similarly, the 144 electric vehicle registrations in the region since 2017 would be expected to reduce gasoline use and emissions, but increase electricity demand by over 300,000 kWh per year (assuming 50% of plug-in hybrid range derived from electricity). Netting out demand from just these sources, the region’s electricity consumption from other sources in 2019 would be approximately 269 million kWh (versus the total of 275.6 million kWh reported in the chart below).

Bennington Region kWh Usage by Year



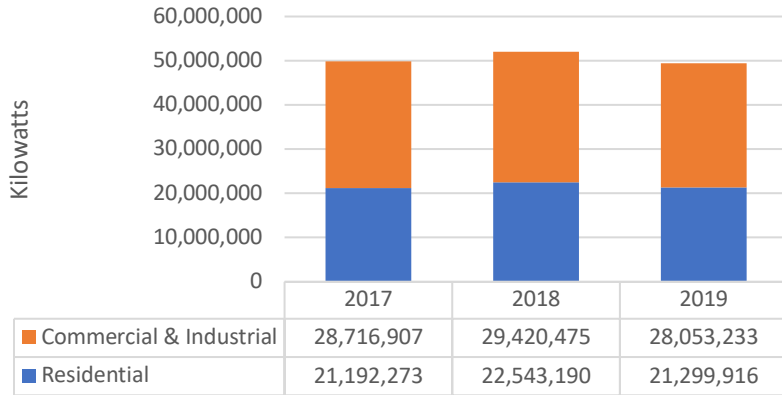
Commercial & Industrial	152,919,706	158,721,307	149,304,426
Residential	126,262,769	132,689,223	126,311,684

Bennington Region Electric Vehicle Registrations by Year



■ All Electric ■ Plug In Hybrid

Manchester kWh Usage by Year

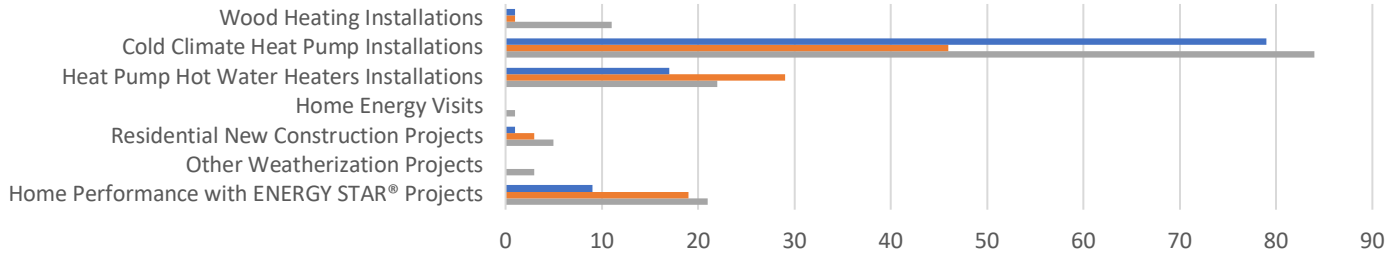


Commercial and industrial electricity demand in Manchester is slightly more than the residential demand; likely a result of the many retail stores.

Average household electricity demand ranged from 8,227 kWh (686 kWh/month) in 2017 to 8,734 kWh (728 kWh/month) in 2018, slightly more than the regional averages.

Electricity consumption is likely being affected by the significant number of recent heat pumps used for space and water heating.

Residential Projects in Manchester by Year



	Home Performance with ENERGY STAR® Projects	Other Weatherization Projects	Residential New Construction Projects	Home Energy Visits	Heat Pump Hot Water Heaters Installations	Cold Climate Heat Pump Installations	Wood Heating Installations
2017	9	0	1	0	17	79	1
2018	19	0	3	0	29	46	1
2019	21	3	5	1	22	84	11

Manchester households appear to have responded favorably to information campaigns and Efficiency Vermont incentives for heat pump products. Tracking of new wood heating systems—benefiting from Efficiency Vermont incentives—has just been initiated and is expected to continue to increase.

The limited number of home energy visits and various weatherization program offerings suggests that these offerings will require additional outreach going forward. Building weatherization is highly cost-effective and improves the performance of alternative heating systems.

Plug-in electric vehicles are available with either fully-electric motors or with hybrid drivetrains that provide sufficient electric range for local trips, switching to gasoline after the battery is depleted.

With Vermont’s transportation sector being the largest contributor to greenhouse gas emissions and with limited progress toward achieving local and state energy goals, greater utilization of electric vehicles is essential. Strong purchase incentives, expanding driving ranges, low operating and maintenance costs, and a wider variety of available vehicles should support this transition.

Manchester Electric Vehicle Registrations by Year

