

# Appendix D: Energy Targets

## TRORC Region

The following is an explanation of the information displayed in the Municipal Summary Worksheet for the TRORC Region.

The intent of the Municipal Summary is to provide your municipality with energy data that meets PSD’s analysis and target standards to ensure your municipality’s compliance with the requirements of Act 174 and “Enhanced Energy Planning” (24 V.S.A. § 4352). The worksheet contains data that estimates current energy use and provides targets for future energy use across all sectors (transportation, heating, and electricity). It also sets a target for renewable energy generation within the municipality.

This data is meant to be a starting point for your municipality to begin planning its energy future and to talk about the changes that may need to occur within the municipality to ensure that local, regional, and state energy goals are met. This includes the goal that 90% of all energy demand be met by renewable sources by 2050 (90x50 goal).

Estimates of current energy use and targets for future energy use are reliant upon the Vermont Pathways Model created in the LEAP software model for the region completed for PSD. To estimate the current energy use of your Town, TRORC used PSD’s Municipal Consumption.

This tool uses inputs of data from the American Community Survey (ACS), the Vermont Agency of Transportation (VTrans), and the Vermont Department of Labor (DoL).

Targets for both future energy use and energy generation have been generally developed using a “bottom up” method of disaggregating regional data into the municipal level using PSD’s Analysis and Targets Aid. PSD also makes certain assumptions within these tools based on statewide averages for energy consumption.

The targets established here show the direction in which change needs to occur to meet local, regional, and state energy goals. It is important to remember that the targets established by LEAP represent only one way to achieve energy goals. There may be other similar pathways your municipality may choose to meet your 90x50 goal. Please keep this in mind when reviewing the worksheet.

For those towns interested in learning more about how these estimates and targets were created, or about creating their own estimates and targets, please see PSD’s Guidance for Regional & Municipal Enhanced Energy Planning Standards. Additionally, please refer to our Generation Scenarios Tool spreadsheet used to derive regional and municipality generation targets.<sup>1</sup>

## Data Sources

- American Community Survey (ACS)
- Vermont Department of Labor (DoL)
- Vermont Department of Public Service (PSD)
- Energy Information Administration (EIA)
- Efficiency Vermont (EVT)
- Low Emissions Analysis Platform (LEAP)
- Vermont Energy Investment Corporation (VEIC)
- Vermont Agency of Transportation (VTRANS)

1. Generation Scenarios Tool: [https://www.trorc.org/wp-content/uploads/2024/12/Generation-Scenarios-Tool-April-2024\\_FINAL.xlsx](https://www.trorc.org/wp-content/uploads/2024/12/Generation-Scenarios-Tool-April-2024_FINAL.xlsx)



# Municipal Summary Worksheet

The Municipal Summary worksheet summarizes all data that is required to be in the Municipal Plan if the plan is to meet the “determination” standards established by PSD.

## 4A. Current Transportation Energy Use in Region

### 2022 Transportation Data

Total Number of Internal Combustion Engine (ICE) Vehicles <sup>1</sup>	43,292
Total Number of Electric Vehicles (EVs) <sup>2</sup>	937
Total Number of ICE Vehicles and EVs	44,244
Average Yearly Miles Driven per Vehicle <sup>3</sup>	12,500
Total Miles Driven per ICE Vehicle	541,337,500
Total Miles Driven per EV	11,712,500
Total Miles Driven per ICE Vehicle and EV	552,862,500
Average Fuel Economy of ICE Vehicles (Miles per Gallon) <sup>4</sup>	22
Average Fuel Economy of EVs (Miles per Kilowatt Hour) <sup>4</sup>	3
Total Gallons Consumed by ICE Vehicles per Year	22,383,932
Total Number of Kilowatt Hours Consumed by EVs per Year	3,904,167
Transportation Energy Consumed by ICE Vehicles (mmBtus) <sup>4</sup>	2,901,773
Transportation Energy Consumed by EVs (mmBtus) <sup>4</sup>	13,321
Transportation Energy Consumed by ICE Vehicles and EVs (mmBtus)	2,915,094

This table calculates the energy use and energy cost of your residents’ light-duty passenger vehicles. This does not include the energy use or energy cost of medium-duty vehicles, heavy-duty vehicles, mass transit, rail, commercial vehicles, or other modes of transportation. The Average Miles per Vehicle and Realized Miles per Gallon are 2021 statewide averages for light-duty passenger vehicles in Vermont as reported in the LEAP model. The Transportation Energy Used is calculated in Million British Thermal Units (mmBtus) using PSD’s LEAP Municipal Consumption Template.

Data Sources: 1. ACS 2022 5-year Estimates. 2. Efficiency Vermont. 3. VTrans, 2021. 4. LEAP Municipal Consumption Template.



## 4A. Current Residential Heating Energy Use in Region

Fuel Source <sup>1</sup>	Number of Households <sup>1</sup>	Percentage of Households	Square Footage Heated <sup>2</sup> (mmBtus)
Gas from Bottle or Tank (propane, butane, liquified petroleum gas)	7,304	29.4%	803,440
Electricity	1,326	5.3%	145,860
Fuel Oil, Kerosene, etc.	9,890	39.9%	1,087,900
Coal or Coke	36	0.1%	3,960
Wood	5,446	22.0%	599,060
Solar Energy	171	0.7%	18,810
Other Fuel	573	2.3%	63,030
No Fuel Used	58	0.2%	6,380
<b>Total</b>	<b>24,804</b>	<b>100.0%</b>	<b>2,728,440</b>

This table displays 2022 ACS 5-year Estimates for the sources of fuel for occupied residences within the TRORC Region. The square footage heated figure is calculated in the PSD Municipal Consumption Template based on a statewide average annual heating load for residences, measured in Million British Thermal Units (mmBtus).

Data Source: 1. ACS 2022 5-year Estimates. 2. PSD Municipal Consumption Template.

## 4A. Current Commercial Heating Energy Use in Region

Number of Commercial Establishments <sup>1</sup>	Total Thermal Energy Consumed by Commercial Establishments <sup>2</sup> (mmBtus)	Average Thermal Energy Consumed by Commercial Establishments <sup>2</sup> (mmBtus)
2,039	1,811,275	888

This table displays the number of commercial establishments in 2022 for the TRORC Region as recorded by the Vermont DoL. The thermal energy estimate is calculated in the PSD Municipal Consumption Template based on a statewide average annual heating load for select commercial establishments, measured in Million British Thermal Units (mmBtus).

Data Sources: 1. VT DoL 2022. 2. PSD Municipal Consumption Template.

## 4A. Current Electricity Use in Region

Use Sector	Current Electricity Use
Residential (MWh)	185,994
Commercial & Industrial (MWh)	220,432
<b>Total (MWh)</b>	<b>406,426</b>

This table displays 2022 data from EVT for the commercial & industrial sector and residential sector in the TRORC Region.

Data Source: EVT 2022.



### 4B. Residential Thermal Efficiency Targets

	2025	2035	2050
Weatherized for Increased Efficiency and Conservation	49%	57%	83%

This table displays targets for the cumulative percentage of residences that will be weatherized by the target year, thereby achieving increased thermal efficiency and energy conservation. These targets were developed using the PSD Analysis & Target Municipal Aid in the CAP Central Mitigation Scenario. To be counted, each weatherized residence will have to achieve a 25% reduction in heat energy.

Data Sources: PSD Analysis & Target Aid. ACS 2022 5-year Estimates.

### 4B. Commercial Thermal Efficiency Targets

	2025	2035	2050
Weatherized for Increased Efficiency and Conservation	44%	32%	54%

This table displays targets for the cumulative percentage of commercial establishments that will be weatherized by the target year, thereby achieving increased thermal efficiency and energy conservation. These targets were developed using the PSD Analysis & Target Aid in the CAP Central Mitigation Scenario. To be counted, each weatherized commercial establishment will have to achieve a 25% reduction in heat energy.

Data Sources: PSD Analysis & Target Aid. VT DoL.

### 4B. Thermal Fuel Switching Targets – Heat Pumps

	2025	2035	2050
Heat Pumps – Residences	7,720	20,755	30,587
Heat Pumps – Commercial Establishments	1,198	3,623	4,633
<b>Total</b>	<b>8,918</b>	<b>24,378</b>	<b>35,220</b>

This table displays targets for the cumulative percentage of commercial establishments that will be weatherized by the target year, thereby achieving increased thermal efficiency and energy conservation. These targets were developed using the PSD Analysis & Target Aid in the CAP Central Mitigation Scenario. To be counted, each weatherized commercial establishment will have to achieve a 25% reduction in heat energy.

Data Sources: PSD Analysis & Target Aid. VT DoL.



### 4C. Use of Renewables - Transportation

	2025	2035	2050
Light Duty Electric Vehicles	5%	52%	100%

This table shows the percentage of light duty vehicles that are electric vehicles in the target years for the TRORC Region in the CAP Central Mitigation Scenario.

Data Source: LEAP Analysis & Target Aid. EVT 2022.

### 4C. Transportation Fuel Switching Target – Electric Vehicles

	2025	2035	2050
Battery Electric Vehicles	2,024	24,962	53,894
Plug In Hybrid Vehicles	291	287	69
<b>Total</b>	<b>2,315</b>	<b>25,249</b>	<b>53,962</b>

This table shows the count of light duty vehicles that are electric vehicles in the target years for the TRORC Region in the CAP Central Mitigation Scenario.

Data Source: PSD Analysis & Target Aid. EVT 2022.



### 4D. Electric Efficiency Targets

	2025	2035	2050
Cumulative Electricity Conserved – Residential (MWh)	3,910	22,438	41,392

This table shows the megawatt hours (MWh) of electricity cumulatively conserved by residences within the TRORC Region by 2025, 2035, and 2050 based on modelling completed by EVT’s 2022 Energy Efficiency Market Potential Study and PSD.

Data Source: EVT 2022 Energy Efficiency Market Potential Study, PSD Potential Study Data for RPCs Tool.

### 4D. Renewable Energy Generation Targets

	2025	2035	2050
Total Renewable Energy Generation (MWh)	253,584	259,484	338,533
Incremental Renewable Energy Generation (MWh)	1,504	7,403	86,453

This table shows targets for electric generation from renewable resources in megawatt hours (MWh) for the TRORC Region. This table also reports the incremental generation of new renewable energy needed by each target year. This figure shows the increase in generation needed from the region’s 2022 renewable energy generation levels.

The figures for 2035 and 2050 were developed using Vermont Pathways CAP Mitigation scenario. The figures for 2025 were developed by TRORC equating to a 0.3% increase from 2022 generation figures.

Data Source: LEAP Generation Scenarios Tool.

### 4D. Use of Renewables - Heating

	2025	2035	2050
Residences	30%	76%	100%
Commercial	25%	65%	69%

The figures for 2035 and 2050 were developed using PSD’s Generation Scenario Tool. The 2025 model uses 10% in-state generation, 2035 uses 20% in-state generation, and 2050 uses 25% in-state generation.

Data Source: EVT 2022 Energy Efficiency Market Potential Study, PSD Potential Study Data for RPCs Tool.



## 9A. Existing Renewable Generation

Renewable Type	MW	MWh
Solar	57.0	74,906
Wind	0.1	118
Hydro	39.8	174,233
Biomass	0.5	2,833
Other	0.0	0
<b>Total</b>	<b>97.3</b>	<b>252,080</b>

This table shows existing renewable generation in the TRORC Region for 2022, in both megawatt (MW) and megawatt hours (MWh), based on TRORC's calculation using Generation Scenario Tool and figures provided by PSD.

Data Source: PSD.

## 9B. Renewable Generation Potential

Renewable Type	MW	MWh
Ground-mounted solar	2,376	3,121,876
Rooftop Solar	463	607,973
Wind	393	516,106
Hydro	0	607
Biomass & Methane	40	52,267
Other	0	0
<b>Total</b>	<b>3,272</b>	<b>4,298,829</b>

Renewable generation potential is based on mapping completed by TRORC that is based on the Municipal Determination Standards and associated guidance documents developed by PSD. The renewable generation potential is expressed in MW and MWh by the type of renewable resource (solar, commercial wind, hydro, etc.).

Data Sources: PSD. TRORC.



### 9C. Sufficient Land

Renewable	Land Available	Acreage Needed to Meet 2025 Target		Acreage Needed to Meet 2035 Target		Acreage Needed to Meet 2050 Target	
	Acres	Acres	%	Acres	%	Acres	%
Solar	16,631	400	2.4%	437	2.6%	826	5.0%
Wind	15,711	9	0.1%	5	0.0%	90	0.6%
Biomass	3	3	100.0%	3	100.0%	3	100.0%
Hydro	40	40	100.0%	40	100.0%	40	100.0%
<b>Total</b>	<b>32,385</b>	<b>452</b>	<b>1.4%</b>	<b>485</b>	<b>1.5%</b>	<b>959</b>	<b>3.0%</b>

This table shows there is sufficient land in the TRORC Region to meet the renewable generation targets based on the renewable generation potential. The 'land available' category in this table only includes prime areas for wind and lands for solar generation that have no constraints and are not part of a priority forest block.

Data Source: EVT 2022 Energy Efficiency Market Potential Study. PSD Potential Study Data for RPCs Tool.



# Town Targets



## **Renewable Energy Generation**

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# Renewable Energy Generation Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)
Barnard	539	2	541	137	676	881	1,420
Bethel	2,862	9	2,871	312	3,174	3,948	6,811
Bradford	2,893	9	2,902	208	3,101	2,545	5,438
Braintree	466	1	467	98	564	742	1,208
Bridgewater	366	1	367	109	475	759	1,125
Brookfield	839	3	841	127	965	857	1,696
Chelsea	281	1	282	108	389	770	1,051
Corinth	585	2	586	105	690	807	1,392
Fairlee	2,035	6	2,041	108	2,143	1,278	3,314
Granville	175	1	175	69	244	230	404
Hancock	116	0	116	37	153	235	351
Hartford	172,370	517	172,887	2,588	174,958	37,967	210,337
Hartland	18,505	56	18,560	412	18,916	4,881	23,386
Newbury	7,080	21	7,101	279	7,359	2,537	9,618
Norwich	4,578	14	4,592	257	4,835	2,944	7,522
Pittsfield	236	1	237	54	291	495	731
Plymouth	383	1	384	117	500	779	1,162
Pomfret	806	2	808	97	903	811	1,617
Randolph	8,403	25	8,428	541	8,943	6,721	15,123
Rochester	679	2	681	137	816	911	1,590
Royalton	5,805	17	5,823	221	6,026	2,739	8,544
Sharon	5,575	17	5,592	153	5,728	1,786	7,361
Stockbridge	307	1	308	90	396	525	832
Strafford	7,713	23	7,736	179	7,893	1,799	9,512
Thetford	4,089	12	4,102	227	4,316	2,534	6,623
Topsham	117	0	117	105	222	623	740
Tunbridge	713	2	715	106	819	855	1,568
Vershire	444	1	446	92	536	424	868
West Fairlee	141	0	142	47	188	383	524
Woodstock	2,980	756	3,736	283	3,263	3,688	6,668
<b>Total</b>	<b>252,080</b>	<b>1,504</b>	<b>253,584</b>	<b>7,403</b>	<b>259,484</b>	<b>86,453</b>	<b>338,533</b>

\* Targets for 2025 were calculated by multiplying each town's 2022 renewable energy generation by 0.3%. Targets for 2035 and 2050 were calculated using PSD's Scenario Generation Tool.

# Solar Generation Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)
Barnard	539.1	1.6	540.7	119.8	658.9	828.1	1,367.2
Bethel	990.9	3.0	993.9	316.9	1,307.8	3,632.6	4,623.5
Bradford	2,893.2	8.7	2,901.9	203.2	3,096.3	2,392.1	5,285.3
Braintree	466.0	1.4	467.4	68.2	534.3	697.2	1,163.3
Bridgewater	366.0	1.1	367.1	80.5	446.5	713.7	1,079.7
Brookfield	831.6	2.5	834.1	209.8	1,041.4	805.9	1,637.5
Chelsea	280.7	0.8	281.5	174.4	455.1	724.0	1,004.7
Corinth	584.6	1.8	586.4	87.8	672.4	758.5	1,343.1
Fairlee	2,035.3	6.1	2,041.4	89.9	2,125.2	1,201.8	3,237.0
Granville	164.3	0.5	164.8	30.1	194.4	215.8	380.1
Hancock	116.0	0.3	116.4	17.2	133.2	220.8	336.9
Hartford	16,432.5	49.3	16,481.8	2,490.4	18,922.9	34,929.4	51,361.9
Hartland	5,154.4	15.5	5,169.8	404.3	5,558.7	4,490.5	9,644.9
Newbury	3,996.6	12.0	4,008.6	217.8	4,214.5	2,334.4	6,331.0
Norwich	4,577.9	13.7	4,591.7	232.8	4,810.7	2,767.1	7,345.0
Pittsfield	236.4	0.7	237.1	38.0	274.4	465.1	701.5
Plymouth	382.6	1.1	383.7	80.4	463.0	732.4	1,115.0
Pomfret	806.0	2.4	808.4	103.1	909.1	762.0	1,568.0
Randolph	5,986.6	18.0	6,004.6	509.0	6,495.6	6,250.3	12,236.9
Rochester	675.9	2.0	678.0	94.5	770.4	856.5	1,532.5
Royalton	5,805.1	17.4	5,822.5	232.4	6,037.5	2,574.2	8,379.3
Sharon	5,575.1	16.7	5,591.8	143.0	5,718.1	1,679.0	7,254.1
Stockbridge	306.6	0.9	307.6	43.6	350.2	493.4	800.1
Strafford	7,684.0	23.1	7,707.1	209.4	7,893.5	1,690.8	9,374.8
Thetford	3,672.4	11.0	3,683.4	187.8	3,860.2	2,356.2	6,028.5
Topsham	117.1	0.4	117.5	103.2	220.4	585.8	702.9
Tunbridge	713.2	2.1	715.3	145.6	858.8	803.6	1,516.8
Vershire	444.3	1.3	445.6	79.3	523.6	398.4	842.8
West Fairlee	141.3	0.4	141.7	27.5	168.8	359.8	501.2
Woodstock	2,930.4	8.8	2,939.2	361.6	3,291.9	3,466.6	6,397.0
<b>Total</b>	<b>74,906.1</b>	<b>224.7</b>	<b>75,130.8</b>	<b>7,101.8</b>	<b>82,007.8</b>	<b>80,186.3</b>	<b>155,092.4</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Wind Generation Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)
Barnard	-	-	-	2.5	2.5	44.0	44.0
Bethel	9.7	0.0	9.7	6.7	16.3	197.4	207.1
Bradford	-	-	-	4.2	4.2	127.2	127.2
Braintree	-	-	-	1.4	1.4	37.1	37.1
Bridgewater	-	-	-	1.7	1.7	38.0	38.0
Brookfield	6.9	0.0	6.9	4.3	11.2	42.9	49.8
Chelsea	-	-	-	3.6	3.6	38.5	38.5
Corinth	-	-	-	1.8	1.8	40.3	40.3
Fairlee	-	-	-	1.9	1.9	63.9	63.9
Granville	10.5	0.0	10.6	0.6	11.1	11.5	22.0
Hancock	-	-	-	0.4	0.4	11.7	11.7
Hartford	9.5	0.0	9.5	52.4	61.9	1,898.3	1,907.8
Hartland	-	-	-	8.5	8.5	244.0	244.0
Newbury	-	-	-	4.6	4.6	126.9	126.9
Norwich	-	-	-	4.8	4.8	147.2	147.2
Pittsfield	-	-	-	0.8	0.8	24.7	24.7
Plymouth	-	-	-	1.7	1.7	39.0	39.0
Pomfret	-	-	-	2.1	2.1	40.5	40.5
Randolph	-	-	-	10.6	10.6	336.0	336.0
Rochester	2.8	0.0	2.8	1.9	4.7	45.6	48.3
Royalton	-	-	-	4.8	4.8	136.9	136.9
Sharon	-	-	-	2.9	2.9	89.3	89.3
Stockbridge	-	-	-	0.9	0.9	26.2	26.2
Strafford	29.2	0.1	29.3	4.3	33.5	89.9	119.1
Thetford	-	-	-	3.9	3.9	126.7	126.7
Topsham	-	-	-	2.1	2.1	31.2	31.2
Tunbridge	-	-	-	3.0	3.0	42.7	42.7
Vershire	-	-	-	1.6	1.6	21.2	21.2
West Fairlee	-	-	-	0.6	0.6	19.1	19.1
Woodstock	49.4	0.1	49.6	7.5	56.9	184.4	233.8
<b>Total</b>	<b>117.9</b>	<b>0.4</b>	<b>118.3</b>	<b>148.1</b>	<b>266.0</b>	<b>4,322.6</b>	<b>4,440.6</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Biomass Generation Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)
Barnard	-	-	-	-	-	-	-
Bethel	-	-	-	-	-	-	-
Bradford	-	-	-	-	-	-	-
Braintree	-	-	-	-	-	-	-
Bridgewater	-	-	-	-	-	-	-
Brookfield	-	-	-	-	-	-	-
Chelsea	-	-	-	-	-	-	-
Corinth	-	-	-	-	-	-	-
Fairlee	-	-	-	-	-	-	-
Granville	-	-	-	-	-	-	-
Hancock	-	-	-	-	-	-	-
Hartford	-	-	-	-	-	-	-
Hartland	-	-	-	-	-	-	-
Newbury	-	-	-	-	-	-	-
Norwich	-	-	-	-	-	-	-
Pittsfield	-	-	-	-	-	-	-
Plymouth	-	-	-	-	-	-	-
Pomfret	-	-	-	-	-	-	-
Randolph	2,416.0	7.2	2,423.3	5.3	2,421.3	67.2	2,483.2
Rochester	-	-	-	-	-	-	-
Royalton	-	-	-	-	-	-	-
Sharon	-	-	-	-	-	-	-
Stockbridge	-	-	-	-	-	-	-
Strafford	-	-	-	-	-	-	-
Thetford	417.0	1.3	418.2	2.0	418.9	25.3	442.3
Topsham	-	-	-	-	-	-	-
Tunbridge	-	-	-	-	-	-	-
Vershire	-	-	-	-	-	-	-
West Fairlee	-	-	-	-	-	-	-
Woodstock	-	-	-	-	-	-	-
<b>Total</b>	<b>2,833.0</b>	<b>8.5</b>	<b>2,841.5</b>	<b>7.3</b>	<b>2,840.2</b>	<b>92.5</b>	<b>2,925.5</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Hydro Generation Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)	Incremental Generation (MWh)	Generation Target (MWh)
Barnard	-	-	-	-	-	-	-
Bethel	1,861.5	5.6	1,867.1	6.7	1,868.2	79.0	1,940.5
Bradford	-	-	-	-	-	-	-
Braintree	-	-	-	-	-	-	-
Bridgewater	-	-	-	-	-	-	-
Brookfield	-	-	-	-	-	-	-
Chelsea	-	-	-	-	-	-	-
Corinth	-	-	-	-	-	-	-
Fairlee	-	-	-	-	-	-	-
Granville	-	-	-	-	-	-	-
Hancock	-	-	-	-	-	-	-
Hartford	155,928.0	467.8	156,395.8	52.4	155,980.4	759.3	156,687.3
Hartland	13,350.2	40.1	13,390.3	8.5	13,358.8	97.6	13,447.9
Newbury	3,083.5	9.3	3,092.8	4.6	3,088.1	50.7	3,134.3
Norwich	-	-	-	-	-	-	-
Pittsfield	-	-	-	-	-	-	-
Plymouth	-	-	-	-	-	-	-
Pomfret	-	-	-	-	-	-	-
Randolph	-	-	-	-	-	-	-
Rochester	-	-	-	-	-	-	-
Royalton	-	-	-	-	-	-	-
Sharon	-	-	-	-	-	-	-
Stockbridge	-	-	-	-	-	-	-
Strafford	-	-	-	-	-	-	-
Thetford	-	-	-	-	-	-	-
Topsham	-	-	-	-	-	-	-
Tunbridge	-	-	-	-	-	-	-
Vershire	-	-	-	-	-	-	-
West Fairlee	-	-	-	-	-	-	-
Woodstock	-	-	-	-	-	-	-
<b>Total</b>	<b>174,223.3</b>	<b>522.7</b>	<b>174,745.9</b>	<b>72.2</b>	<b>174,295.5</b>	<b>986.7</b>	<b>175,209.9</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Energy Capacity Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)
Barnard	0.4	0.0	0.4	0.1	0.5	0.7	1.1
Bethel	1.2	0.0	1.2	0.2	1.4	2.9	4.1
Bradford	2.2	0.0	2.2	0.2	2.4	1.9	4.1
Braintree	0.4	0.0	0.4	0.1	0.4	0.5	0.9
Bridgewater	0.3	0.0	0.3	0.1	0.3	0.6	0.8
Brookfield	0.6	0.0	0.6	0.2	0.8	0.6	1.3
Chelsea	0.2	0.0	0.2	0.1	0.3	0.6	0.8
Corinth	0.4	0.0	0.4	0.1	0.5	0.6	1.0
Fairlee	1.5	0.0	1.6	0.1	1.6	0.9	2.5
Granville	0.1	0.0	0.1	0.0	0.2	0.2	0.3
Hancock	0.1	0.0	0.1	0.0	0.1	0.2	0.3
Hartford	48.1	0.1	48.3	1.9	50.0	27.7	75.8
Hartland	7.0	0.0	7.0	0.3	7.3	3.6	10.5
Newbury	3.7	0.0	3.8	0.2	3.9	1.9	5.6
Norwich	3.5	0.0	3.5	0.2	3.7	2.2	5.7
Pittsfield	0.2	0.0	0.2	0.0	0.2	0.4	0.5
Plymouth	0.3	0.0	0.3	0.1	0.4	0.6	0.9
Pomfret	0.6	0.0	0.6	0.1	0.7	0.6	1.2
Randolph	5.0	0.0	5.0	0.4	5.3	4.9	9.9
Rochester	0.5	0.0	0.5	0.1	0.6	0.7	1.2
Royalton	4.4	0.0	4.4	0.2	4.6	2.0	6.4
Sharon	4.2	0.0	4.3	0.1	4.4	1.3	5.6
Stockbridge	0.2	0.0	0.2	0.0	0.3	0.4	0.6
Strafford	5.9	0.0	5.9	0.2	6.0	1.3	7.2
Thetford	2.9	0.0	2.9	0.1	3.0	1.9	4.7
Topsham	0.1	0.0	0.1	0.1	0.2	0.5	0.6
Tunbridge	0.5	0.0	0.5	0.1	0.7	0.6	1.2
Vershire	0.3	0.0	0.3	0.1	0.4	0.3	0.7
West Fairlee	0.1	0.0	0.1	0.0	0.1	0.3	0.4
Woodstock	2.3	0.0	2.3	0.3	2.5	2.7	5.0
<b>Total</b>	<b>97.3</b>	<b>0.3</b>	<b>97.6</b>	<b>5.5</b>	<b>102.8</b>	<b>63.5</b>	<b>160.8</b>

\* Targets were calculated by multiplying each town's Energy Capacity targets by a capacity factor given in PSD's Generation Scenario Tool.

# Solar Capacity Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)
Barnard	0.4	0.0	0.4	0.1	0.5	0.6	1.0
Bethel	0.8	0.0	0.8	0.2	1.0	2.8	3.5
Bradford	2.2	0.0	2.2	0.2	2.4	1.8	4.0
Braintree	0.4	0.0	0.4	0.1	0.4	0.5	0.9
Bridgewater	0.3	0.0	0.3	0.1	0.3	0.5	0.8
Brookfield	0.6	0.0	0.6	0.2	0.8	0.6	1.2
Chelsea	0.2	0.0	0.2	0.1	0.3	0.6	0.8
Corinth	0.4	0.0	0.4	0.1	0.5	0.6	1.0
Fairlee	1.5	0.0	1.6	0.1	1.6	0.9	2.5
Granville	0.1	0.0	0.1	0.0	0.1	0.2	0.3
Hancock	0.1	0.0	0.1	0.0	0.1	0.2	0.3
Hartford	12.5	0.0	12.5	1.9	14.4	26.6	39.1
Hartland	3.9	0.0	3.9	0.3	4.2	3.4	7.3
Newbury	3.0	0.0	3.1	0.2	3.2	1.8	4.8
Norwich	3.5	0.0	3.5	0.2	3.7	2.1	5.6
Pittsfield	0.2	0.0	0.2	0.0	0.2	0.4	0.5
Plymouth	0.3	0.0	0.3	0.1	0.4	0.6	0.8
Pomfret	0.6	0.0	0.6	0.1	0.7	0.6	1.2
Randolph	4.6	0.0	4.6	0.4	4.9	4.8	9.3
Rochester	0.5	0.0	0.5	0.1	0.6	0.7	1.2
Royalton	4.4	0.0	4.4	0.2	4.6	2.0	6.4
Sharon	4.2	0.0	4.3	0.1	4.4	1.3	5.5
Stockbridge	0.2	0.0	0.2	0.0	0.3	0.4	0.6
Strafford	5.8	0.0	5.9	0.2	6.0	1.3	7.1
Thetford	2.8	0.0	2.8	0.1	2.9	1.8	4.6
Topsham	0.1	0.0	0.1	0.1	0.2	0.4	0.5
Tunbridge	0.5	0.0	0.5	0.1	0.7	0.6	1.2
Vershire	0.3	0.0	0.3	0.1	0.4	0.3	0.6
West Fairlee	0.1	0.0	0.1	0.0	0.1	0.3	0.4
Woodstock	2.2	0.0	2.2	0.3	2.5	2.6	4.9
<b>Total</b>	<b>57.0</b>	<b>0.2</b>	<b>57.2</b>	<b>5.4</b>	<b>62.4</b>	<b>61.0</b>	<b>118.0</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Wind Capacity Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)
Barnard	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bethel	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Bradford	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Braintree	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bridgewater	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brookfield	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chelsea	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Corinth	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fairlee	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Granville	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hancock	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hartford	0.0	0.0	0.0	0.0	0.0	1.0	1.4
Hartland	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Newbury	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Norwich	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Pittsfield	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plymouth	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pomfret	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Randolph	0.0	0.0	0.0	0.0	0.0	0.2	0.3
Rochester	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Royalton	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Sharon	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stockbridge	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Strafford	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Thetford	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Topsham	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tunbridge	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vershire	0.0	0.0	0.0	0.0	0.0	0.0	0.0
West Fairlee	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Woodstock	0.0	0.0	0.0	0.0	0.0	0.1	0.2
<b>Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>	<b>2.2</b>	<b>3.3</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Biomass Capacity Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)
Barnard	-	-	-	-	-	-	-
Bethel	-	-	-	-	-	-	-
Bradford	-	-	-	-	-	-	-
Braintree	-	-	-	-	-	-	-
Bridgewater	-	-	-	-	-	-	-
Brookfield	-	-	-	-	-	-	-
Chelsea	-	-	-	-	-	-	-
Corinth	-	-	-	-	-	-	-
Fairlee	-	-	-	-	-	-	-
Granville	-	-	-	-	-	-	-
Hancock	-	-	-	-	-	-	-
Hartford	-	-	-	-	-	-	-
Hartland	-	-	-	-	-	-	-
Newbury	-	-	-	-	-	-	-
Norwich	-	-	-	-	-	-	-
Pittsfield	-	-	-	-	-	-	-
Plymouth	-	-	-	-	-	-	-
Pomfret	-	-	-	-	-	-	-
Randolph	0.4	0.0	0.4	0.0	0.4	0.0	0.4
Rochester	-	-	-	-	-	-	-
Royalton	-	-	-	-	-	-	-
Sharon	-	-	-	-	-	-	-
Stockbridge	-	-	-	-	-	-	-
Strafford	-	-	-	-	-	-	-
Thetford	0.1	0.0	0.1	0.0	0.1	0.0	0.1
Topsham	-	-	-	-	-	-	-
Tunbridge	-	-	-	-	-	-	-
Vershire	-	-	-	-	-	-	-
West Fairlee	-	-	-	-	-	-	-
Woodstock	-	-	-	-	-	-	-
<b>Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Hydro Capacity Targets

		2025 Target		2035 Target		2050 Target	
Town	2022 Existing Generation (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)	Incremental Capacity (MWh)	Installed Capacity (MWh)
Barnard	-	-	-	-	-	-	-
Bethel	0.4	0.0	0.4	0.0	0.4	0.0	0.4
Bradford	-	-	-	-	-	-	-
Braintree	-	-	-	-	-	-	-
Bridgewater	-	-	-	-	-	-	-
Brookfield	-	-	-	-	-	-	-
Chelsea	-	-	-	-	-	-	-
Corinth	-	-	-	-	-	-	-
Fairlee	-	-	-	-	-	-	-
Granville	-	-	-	-	-	-	-
Hancock	-	-	-	-	-	-	-
Hartford	35.6	0.1	35.7	0.0	35.6	0.2	35.8
Hartland	3.0	0.0	3.1	0.0	3.0	0.0	3.1
Newbury	0.7	0.0	0.7	0.0	0.7	0.0	0.7
Norwich	-	-	-	-	-	-	-
Pittsfield	-	-	-	-	-	-	-
Plymouth	-	-	-	-	-	-	-
Pomfret	-	-	-	-	-	-	-
Randolph	-	-	-	-	-	-	-
Rochester	-	-	-	-	-	-	-
Royalton	-	-	-	-	-	-	-
Sharon	-	-	-	-	-	-	-
Stockbridge	-	-	-	-	-	-	-
Strafford	-	-	-	-	-	-	-
Thetford	-	-	-	-	-	-	-
Topsham	-	-	-	-	-	-	-
Tunbridge	-	-	-	-	-	-	-
Vershire	-	-	-	-	-	-	-
West Fairlee	-	-	-	-	-	-	-
Woodstock	-	-	-	-	-	-	-
<b>Total</b>	<b>39.8</b>	<b>0.1</b>	<b>39.9</b>	<b>0.0</b>	<b>39.8</b>	<b>0.2</b>	<b>40.0</b>

\*2035 and 2050 MWh calculated in Generation Scenario Tool - April 2024\_12-13-2024.

# Weatherization

	<i>Residential</i>			<i>Commercial</i>		
<i>Town</i>	<i>2025</i>	<i>2035</i>	<i>2050</i>	<i>2025</i>	<i>2035</i>	<i>2050</i>
Barnard	212	267	432	11	11	24
Bethel	355	310	182	25	19	34
Bradford	593	734	1,154	37	26	42
Braintree	203	162	99	4	3	6
Bridgewater	285	459	974	12	11	24
Brookfield	356	550	1,122	9	10	23
Chelsea	250	256	278	12	9	16
Corinth	398	621	1,280	10	10	22
Fairlee	279	396	742	18	12	17
Granville	77	98	160	3	3	5
Hancock	94	128	230	5	4	8
Hartford	2,278	2,795	4,342	234	209	437
Hartland	802	1,061	1,833	26	24	51
Newbury	463	523	706	15	10	12
Norwich	599	610	651	76	72	157
Pittsfield	91	95	107	11	9	19
Plymouth	124	159	266	4	1	1
Pomfret	194	224	316	15	14	29
Randolph	1,045	1,453	2,665	66	47	74
Rochester	331	500	999	20	19	41
Royalton	536	537	546	34	30	64
Sharon	279	301	367	11	10	19
Stockbridge	189	274	526	7	6	11
Strafford	254	327	545	9	5	5
Thetford	636	876	1,587	34	30	64
Topsham	193	193	197	4	3	3
Tunbridge	277	352	574	9	9	21
Vershire	187	281	562	4	3	5
West Fairlee	211	325	663	2	1	2
Woodstock	680	833	1,293	117	99	197
<b>Total</b>	<b>12,468</b>	<b>15,700</b>	<b>25,397</b>	<b>848</b>	<b>720</b>	<b>1,432</b>

\*All units are number of residences or commercial establishments to be weatherized. Targets were calculated using PSD's Analysis & Target.

# Heat Pumps

	<i>Residential</i>			<i>Commercial</i>		
<i>Town</i>	<i>2025</i>	<i>2035</i>	<i>2050</i>	<i>2025</i>	<i>2035</i>	<i>2050</i>
Barnard	171	459	676	16	54	77
Bethel	286	532	285	35	97	110
Bradford	477	1,261	1,807	52	133	137
Braintree	163	279	154	6	16	20
Bridgewater	230	789	1,525	17	56	76
Brookfield	287	945	1,756	13	49	74
Chelsea	201	440	435	17	47	51
Corinth	320	1,067	2,005	15	50	71
Fairlee	225	680	1,162	26	60	54
Granville	62	168	251	4	13	17
Hancock	76	221	359	7	21	26
Hartford	1,834	4,805	6,799	331	1,051	1,413
Hartland	646	1,824	2,870	37	120	164
Newbury	373	900	1,105	22	49	39
Norwich	482	1,049	1,019	108	361	509
Pittsfield	73	163	168	15	47	61
Plymouth	100	274	416	5	6	2
Pomfret	156	385	495	21	69	95
Randolph	841	2,498	4,173	94	237	239
Rochester	267	859	1,565	29	95	133
Royalton	431	922	855	47	152	207
Sharon	225	517	575	16	48	60
Stockbridge	152	470	823	10	29	36
Strafford	204	562	854	13	27	16
Thetford	512	1,505	2,486	48	153	208
Topsham	155	332	308	6	13	10
Tunbridge	223	605	898	13	46	67
Vershire	150	483	879	6	16	18
West Fairlee	169	558	1,037	3	7	8
Woodstock	547	1,433	2,025	165	499	637
<b>Total</b>	<b>10,039</b>	<b>26,987</b>	<b>39,767</b>	<b>1,198</b>	<b>3,623</b>	<b>4,633</b>

\*Targets were calculated using PSD's Analysis & Target Aid.

# Electric Vehicles Targets

	Battery Electric			Plug-In Hybrid			Total E.Vs		
Town	2025	2035	2050	2025	2035	2050	2025	2035	2050
Barnard	34	392	760	5	5	1	39	397	761
Bethel	64	649	966	9	7	1	73	656	967
Bradford	97	1,217	2,675	14	14	3	111	1,231	2,678
Braintree	33	234	119	5	3	-	38	237	119
Bridgewater	44	682	1,919	6	8	2	50	690	1,921
Brookfield	55	757	1,869	8	9	2	63	766	1,871
Chelsea	42	428	644	6	5	1	48	433	645
Corinth	67	992	2,665	10	11	3	77	1,003	2,668
Fairlee	45	619	1,529	6	7	2	51	626	1,531
Granville	13	158	331	2	2	-	15	160	331
Hancock	22	375	1,118	3	4	1	25	379	1,119
Hartford	327	3,933	8,117	47	45	10	374	3,978	8,127
Hartland	139	1,812	4,211	20	21	5	159	1,833	4,216
Newbury	73	811	1,454	11	9	2	84	820	1,456
Norwich	105	1,090	1,681	15	13	2	120	1,103	1,683
Pittsfield	13	101	119	2	1	-	15	102	119
Plymouth	19	214	398	3	2	1	22	216	399
Pomfret	34	366	628	5	4	1	39	370	629
Randolph	155	2,037	4,771	22	23	6	177	2,060	4,777
Rochester	53	795	2,153	8	9	3	61	804	2,156
Royalton	91	982	1,685	13	11	2	104	993	1,687
Sharon	49	521	851	7	6	1	56	527	852
Stockbridge	30	402	982	4	5	1	34	407	983
Strafford	48	624	1,425	7	7	2	55	631	1,427
Thetford	117	1,609	3,987	17	19	5	134	1,628	3,992
Topsham	30	231	119	4	3	-	34	234	119
Tunbridge	48	571	1,181	7	7	2	55	578	1,183
Vershire	35	539	1,496	5	6	2	40	545	1,498
West Fairlee	33	493	1,323	5	6	2	38	499	1,325
Woodstock	111	1,328	2,716	16	15	3	127	1,343	2,719
<b>Total</b>	<b>2,026</b>	<b>24,962</b>	<b>53,892</b>	<b>292</b>	<b>287</b>	<b>66</b>	<b>2,318</b>	<b>25,249</b>	<b>53,958</b>

\* Targets were calculated using PSD's Analysis & Target Aid.

# Prime Solar and Wind

<i>Town</i>	<i>Prime Solar</i>	<i>Prime Wind</i>
Barnard	368	842
Bethel	1,023	338
Bradford	728	127
Braintree	361	78
Bridgewater	280	347
Brookfield	1,145	1,763
Chelsea	596	1,763
Corinth	476	258
Fairlee	125	51
Granville	252	46
Hancock	31	24
Hartford	1,747	439
Hartland	1,080	901
Newbury	980	213
Norwich	884	102
Pittsfield	94	43
Plymouth	215	371
Pomfret	321	659
Randolph	1,243	470
Rochester	546	167
Royalton	637	531
Sharon	267	328
Stockbridge	123	94
Strafford	372	1,403
Thetford	610	21
Topsham	426	799
Tunbridge	577	1,158
Vershire	210	782
West Fairlee	64	21
Woodstock	850	1,572
<b>Total</b>	<b>16,631</b>	<b>15,711</b>

\* These prime areas for wind and solar generation were calculated by the Vermont Center for Geographic Information. TRORC excluded the acres of priority forest blocks mapped by the Vermont Agency of Natural Resources.