Appendix C: Municipal Energy Data Analysis & Targets

The following Appendix provides towns in the Windham Region with energy consumption data and targets for the thermal, transportation, and electrical energy sectors.

Below, towns will find all of the information necessary to meet the "Analysis and Targets" section of the Public Service Department's (PSD) enhanced energy planning determination standards and meet the requirements of Act 174 (24 V.S.A. § 4352). Data is organized in tables that provide each estimate or target required for municipal enhanced energy planning.

Town energy data is intended to serve as a basis for informed energy planning and local decision-making. As Vermont transforms its energy landscape under the 90x50 framework (the state's commitment to obtaining 90% of its energy from renewable resources by 2050), it is critical that communities understand their energy needs, use patterns, challenges, and opportunities. This knowledge directly translates to community-driven goals and strategic policies and programs surrounding energy.

Estimates for current energy use were developed using PSD's Municipal Consumption Tool. The Municipal Consumption Tool uses data inputs from the American Community Survey (ACS), Vermont Agency of Transportation (VTrans), Vermont Department of Labor (DOL), and other sources to calculate estimates of energy consumption in the heating and transportation sectors. Efficiency Vermont (EVT) directly provided data on electrical energy consumption to the Windham Regional Commission (WRC).

Targets for energy efficiency, conservation, and fuel-switching in the heating and transportation sectors were derived from the Vermont Pathways Model created in the Low Emissions Analysis Platform (LEAP) software. Additional modifications were made following guidance from PSD's Analysis and Targets Tool. Electrical efficiency targets were developed using PSD's Energy Efficiency Utility (EEU) Market Potential Study. Renewable Generation Targets were developed using PSD's Generation Scenarios Tool.

Targets represent one possible pathway for communities to contribute to the 90x50 goal, but alternative approaches may be more reflective of a town's individual needs and energy profile. It should be noted that energy targets are not requirements– they are tools to support analysis, discussion, and decision-making.

To learn more about the methodologies used to derive the forthcoming analyses, refer to PSD's Guidance for Regional & Municipal Enhanced Energy Planning Standards or, consult Appendix B of the Energy Element of the 2025 Windham Regional Plan (WRP). Contact afedele@windhamregional.org with further questions.

Current Use Estimates: Thermal Sector

Town	Residential (MMBtu)		Commercial (MMBtu)	Total (MMBtu)
	Year-Round (MMBtu)	Seasonal (MMBtu)		
Athens	19,360	644	263	20,267
Brattleboro	555,830	6,732	799,159	1,361,721
Brookline	20,240	1,138	7,428	28,806
Dover	59,730	65,175	91,011	215,916
Dummerston	80,300	2,376	43,445	126,121
Grafton	30,470	2,954	17,917	51,341
Guilford	108,460	2,145	20,217	130,822
Halifax	28,490	3,911	2,980	35,381
Jamaica	44,880	18,095	11,207	74,182
Londonderry	90,750	16,858	87,893	195,501
Marlboro	38,830	2,607	34,763	76,200
Newfane	77,880	5,907	64,280	148,067
Putney	92,400	1,667	115,915	209,982
Readsboro	36,080	5,308	13,038	54,426
Rockingham	233,420	7,243	166,233	406,896
Searsburg	6,600	633	928	8,161
Somerset	0	0	0	0
Stratton	10,560	39,298	30,403	80,261
Townshend	66,000	3,927	44,019	113,946
Vernon	103,620	495	38,292	142,407
Wardsboro	38,830	13,860	9,898	62,588
Westminster	130,790	2,838	64,344	197,972
Weston	30,140	7,205	21,805	59,150
Whitingham	52,800	11,385	20,601	84,786
Wilmington	105,380	42,350	99,372	247,102
Windham	21,780	5,885	12,872	40,537
Winhall	30,690	37,758	31,241	99,689
REGIONAL TOTAL	2,114,310	308,394	1,849,524	4,272,228

Estimates for thermal energy consumption were determined using PSD's Municipal Consumption Tool and data from the 2023 American Community Survey (ACS 5-year data profile, table DP04). Information from the VT DOL was used to develop commercial thermal consumption estimates.

Thermal Sector: Residential Heating Sources

Town	Bottled, tank, or LP gas	Electricity	Fuel oil, kerosene, etc.	Coal or coke	Wood	Solar energy	Other fuel	Total Occupied Units
Athens	20	8	81	4	67	0	2	184
Brattleboro	936	537	3,696	0	321	20	72	5,590
Brookline	40	5	52	0	88	0	4	189
Dover	156	90	247	0	117	0	23	633
Dummerston	124	223	416	0	186	0	2	951
Grafton	57	8	161	0	59	0	0	285
Guilford	288	60	355	16	305	15	0	1,046
Halifax	44	9	117	0	95	3	0	268
Jamaica	73	20	201	7	102	0	25	428
Londonderry	204	79	425	0	171	0	25	904
Marlboro	72	13	126	0	144	9	2	366
Newfane	151	41	307	0	195	0	55	749
Putney	172	37	388	17	237	12	12	877
Readsboro	98	34	123	6	87	0	96	362
Rockingham	180	71	1,612	0	260	0	59	2,235
Searsburg	25	2	21	0	12	0	2	62
Somerset	0	0	0	0	0	0	0	0
Stratton	53	9	37	0	6	0	0	105
Townshend	214	22	194	0	180	0	12	622
Vernon	75	5	658	0	199	0	5	947
Wardsboro	136	40	100	0	77	0	0	353
Westminster	217	48	615	0	292	10	55	1,237
Weston	0	92	14	134	0	36	12	288
Whitingham	66	0	284	0	121	0	9	480
Wilmington	391	42	414	0	112	4	16	1,000
Windham	60	13	65	0	73	0	0	211
Winhall	0	94	29	105	0	60	0	308
TOTAL	3,852	1,602	10,738	289	3,506	169	488	20,680

The above table provides data on the heating fuels used by households in the Region. This data comes from the 2023 ACS (ACS 5-year data profile, table DP04). Data is presented as the number of households that use each fuel source as a primary heating fuel.

Current Use Estimates: Transportation Sector

Town	Number of Internal Combustion Engine (ICE) Vehicles	Number of All-Electric Vehicles (AEVs)	Number of Plug-In Hybrid Electric Vehicles (PHEVs)	Fossil Fuels Consumed (gallons)	ICE Energy Consumption (MMBtu)	EV Energy Consumption (MMBtu)
Athens	361	4	1	197,853	25,649	51
Brattleboro	7,391	131	145	4,050,772	525,128	2,825
Brookline	357	3	2	195,660	25,365	51
Dover	1,077	21	12	590,269	76,520	338
Dummerston	1,728	24	30	947,062	122,774	563
Grafton	530	7	4	290,476	37,656	113
Guilford	1,968	33	30	1,078,598	139,826	645
Halifax	450	3	2	246,631	31,972	51
Jamaica	769	8	6	421,464	54,637	143
Londonderry	1,680	30	14	920,755	119,363	450
Marlboro	612	25	17	335,418	43,482	430
Newfane	1,335	19	20	731,671	94,851	399
Putney	1,588	44	51	870,332	112,827	972
Readsboro	544	3	4	298,149	38,651	41
Rockingham	3,672	26	25	2,012,506	260,894	522
Searsburg	115	0	1	63,028	8,171	10
Somerset	0	0	0	0	0	0
Stratton	240	4	3	131,536	17,052	72
Townshend	1,104	9	7	605,067	78,439	164
Vernon	1,743	9	11	955,283	123,839	205
Wardsboro	736	12	5	403,378	52,293	174
Westminster	2,258	12	9	1,237,538	160,430	215
Weston	558	15	7	224,270	29,073	225`
Whitingham	917	8	4	502,579	65,152	123
Wilmington	1,695	23	15	928,976	120,429	389
Windham	390	3	1	213,747	27,709	41
Winhall	606	20	10	332,129	43,056	307
TOTAL	34,424	496	436	18,785,147	2,435,239	9,519

Estimates for transportation energy use were developed using PSD's Municipal Consumption Tool. Estimates for the number of ICE vehicles were made using ACS data from 2023. Information on electric vehicle registrations was provided by Drive Electric Vermont, which sources data from multiple agencies, including the Vermont Department of Environmental Conservation, the Vermont Department of Motor Vehicles, the US Energy Information Administration, the US Department of Energy, and the U.S. Census.

Current Use Estimates: Electrical Sector

Town	Residential (kWh)	Average Residential Usage (kWh)	Commercial & Industrial (kWh)	Total (kWh)
Athens	1,664,108	7,634	65,586	1,729,694
Brattleboro	34,269,543	6,164	107,148,399	141,417,942
Brookline	2,287,032	7,573	194,533	2,481,565
Dover	20,244,696	6,374	20,932,701	41,177,397
Dummerston	7,612,628	7,930	3,062,048	10,674,676
Grafton	4,179,578	7,384	1,338,380	5,517,958
Guilford	8,548,314	7,857	1,438,156	9,986,470
Halifax	3,430,693	6,461	289,255	3,719,948
Jamaica	7,457,918	7,096	1,086,094	8,544,012
Londonderry	12,479,102	8,438	6,147,396	18,626,498
Marlboro	3,383,780	6,635	1,106,830	4,490,610
Newfane	7,180,608	6,781	1,576,443	8,757,051
Putney	8,706,919	7,137	25,851,238	34,558,157
Readsboro	3,050,942	5,959	562,106	3,613,048
Rockingham	16,581,539	6,872	16,584,863	33,166,402
Searsburg	534,103	6,069	561,114	1,095,217
Somerset	0	0	0	0
Stratton	8,967,581	6,851	16,784,129	25,751,710
Townshend	5,321,546	7,058	3,465,780	8,787,326
Vernon	7,922,560	8,932	7,860,344	15,782,904
Wardsboro	5,282,548	6,266	598,677	5,881,225
Westminster	11,291,449	8,370	5,752,006	17,043,455
Weston	4,171,889	7,463	1,294,032	5,465,921
Whitingham	6,143,136	6,494	1,652,043	7,795,179
Wilmington	19,283,722	7,212	10,958,423	30,242,145
Windham	2,573,934	6,263	145,355	2,719,289
Winhall	16,569,545	9,468	2,131,705	18,701,250
REGIONAL TOTAL	229,139,413	7,113	238,587,636	467,727,049

Data on electrical energy use comes from Efficiency Vermont, which provided the information in spreadsheet form via email in June 204. Electrical consumption data is for 2023.

Electrical Sector: Installed Generation Capacity

Town	Installed Generation Capacity of Renewable Technologies in the Windham Region (MW)			
	Solar	Wind	Biomass	Hydro
Athens	0.11	0	0	0
Brattleboro	11.09	0	1.89	0
Brookline	0.18	0	0	0
Dover	0.92	0	0	0
Dummerston	1.02	0	0.14	0
Grafton	0.51	0.00	0	0
Guilford	2.20	0	0	0
Halifax	0.22	0	0	0
Jamaica	0.68	0.01	0	2.41
Londonderry	1.48	0	0	0
Marlboro	0.33	0.00	0	0
Newfane	0.95	0	0	0
Putney	3.34	0	0	0
Readsboro	0.12	0	0	0
Rockingham	2.45	0.01	0	41.29
Searsburg	0.01	36.00	0	0
Somerset	0	0	0	0
Stratton	0.11	0	0	0
Townshend	0.88	0.01	0	0.96
Vernon	0.87	0	0	32.40
Wardsboro	0.11	0	0	0
Westminster	6.20	0	0.45	0
Weston	0.42	0	0	0
Whitingham	0.25	0.01	0	33.60
Wilmington	1.09	0.02	0	0
Windham	0.08	0	0	0
Winhall	4.61	0.00	0	0
REGIONAL TOTAL	40.2	36.1	2.5	110.7

Data on installed generation capacity was provided to WRC by PSD. Generation capacity data comes from ISO New England, which conducts a triannual survey of all utilities in New England and reports this information to Vermont's state agencies. The above data is from 2024.

Electrical Sector: Annual Electricity Production

Town	Annual Production of Renewable Technologies in the Windham Region (MWh)			
	Solar	Wind	Biomass	Hydro
Athens	150	0	0	0
Brattleboro	14,573	0	11,589	0
Brookline	240	0	0	0
Dover	1,203	0	0	0
Dummerston	1,345	0	871	0
Grafton	675	4	0	0
Guilford	2,889	0	0	0
Halifax	291	0	0	0
Jamaica	891	19	0	10,539
Londonderry	1,947	0	0	0
Marlboro	440	2	0	0
Newfane	1,245	0	0	0
Putney	4,387	0	0	0
Readsboro	154	0	0	0
Rockingham	3,217	17	0	180,828
Searsburg	18	70,956	0	0
Somerset	0	0	0	0
Stratton	140	0	0	0
Townshend	1,153	19	0	4,200
Vernon	1,142	0	0	141,912
Wardsboro	146	0	0	0
Westminster	8,147	0	2,759	0
Weston	553	0	0	0
Whitingham	322	13	0	147,168
Wilmington	1,434	44	0	0
Windham	104	0	0	0
Winhall	6,064	4	0	0
REGIONAL TOTAL	52,870	71,078	15,220	484,651

Estimates for annual electricity production were determined using generation capacity data provided to WRC by PSD. Generation capacity data comes from ISO New England, which conducts a triannual survey of all utilities in New England, and reports this information to Vermont's state agencies. Annual production was then determined by multiplying the installed capacity of generation facilities in the Region by the number hours in a year (8,760) and a capacity factor, which measures the efficiency of different generation technologies throughout time. Estimates are for 2024.

Thermal Sector: Residential Weatherization Targets

Town	Number of Residential Weatherization Projects by LEAP Target Year			
	Total Weatherization Projects (2023)	2025	2035	2050
Athens	2	41	89	143
Brattleboro	121	1,177	2,544	4,116
Brookline	1	43	93	150
Dover	79	127	273	442
Dummerston	12	170	368	595
Grafton	6	65	139	226
Guilford	24	230	496	803
Halifax	3	60	130	211
Jamaica	14	95	205	332
Londonderry	32	192	415	672
Marlboro	11	82	178	288
Newfane	23	165	356	577
Putney	30	196	423	684
Readsboro	21	76	165	267
Rockingham	24	494	1,068	1,728
Searsburg	1	14	30	49
Somerset	0	0	0	0
Stratton	1	22	48	78
Townshend	17	140	302	489
Vernon	6	219	474	767
Wardsboro	12	82	178	288
Westminster	12	277	599	968
Weston	8	64	138	223
Whitingham	15	112	242	391
Wilmington	25	223	482	780
Windham	19	46	100	161
Winhall	19	65	140	227
REGIONAL TOTAL	519	4,478	9,678	15,656

Targets for residential weatherizations were developed using the CAP Mitigation Scenario of the Vermont Pathways Model and assumptions informed by PSD's Analysis and Targets Tool. Regional targets were disaggregated to municipalities based on each town's share of residential thermal energy consumption. Targets are presented as the total number of weatherizations for each target year Data on the number of home weatherization projects were provided to WRC by EVT via email (June 2024). EVT tracks residential weatherization projects conducted through the Home Performance with ENERGY STAR® program up to 2023. This data does not capture weatherizations conducted outside of the ENERGY STAR® program.

Residential Cold Climate Heat Pump (CCHP) Targets

Town	Number of Households w/ Heat Pump Systems by LEAP Target Year			
	CCHP Installations (2023)[1]	2025	2035	2050
Athens	14	44	117	173
Brattleboro	419	1,251	3,364	4,958
Brookline	29	46	122	181
Dover	139	134	361	533
Dummerston	120	181	486	716
Grafton	61	69	184	272
Guilford	107	244	656	967
Halifax	34	64	172	254
Jamaica	49	101	272	400
Londonderry	197	204	549	809
Marlboro	54	87	235	346
Newfane	113	175	471	695
Putney	171	208	559	824
Readsboro	25	81	218	322
Rockingham	138	525	1,413	2,082
Searsburg	2	15	40	59
Somerset	0	0	0	0
Stratton	96	24	64	94
Townshend	109	149	399	589
Vernon	58	233	627	924
Wardsboro	24	87	235	346
Westminster	150	294	792	1,167
Weston	74	68	182	269
Whitingham	38	53	143	210
Wilmington	141	237	638	940
Windham	35	49	132	194
Winhall	217	69	186	274
REGIONAL TOTAL	2,614	4,760	12,796	18,858

Targets for residential CCHPs were developed using the CAP Mitigation Scenario of the Vermont Pathways Model and assumptions informed by PSD's Analysis and Targets Tool. Regional targets were disaggregated to municipalities based on each town's share of residential thermal energy consumption. Targets are presented as the total number of CCHPs by each target year. Data on CCHP project counts was provided by EVT (June 2024), and tracks the total number of residential CCHP installations as of 2023.

Commercial Cold Climate Heat Pump (CCHP) Target

Town	Number of Heat Pumps in Commercial Buildings by LEAP Target Year			
	CCHP Installations (2023)[2]	2025	2035	2050
Athens	2	1	3	4
Brattleboro	124	3,479	10,522	13,457
Brookline	6	32	98	125
Dover	12	396	1,198	1,533
Dummerston	2	189	572	732
Grafton	2	78	236	302
Guilford	2	88	266	340
Halifax	0	13	39	50
Jamaica	10	148	189	148
Londonderry	18	383	1,157	1,480
Marlboro	2	151	458	585
Newfane	2	280	846	1,082
Putney	16	505	1,526	1,952
Readsboro	1	57	172	220
Rockingham	10	724	2,189	2,799
Searsburg	0	4	12	16
Somerset	0	0	0	0
Stratton	2	132	400	512
Townshend	10	192	580	741
Vernon	5	167	504	645
Wardsboro	3	43	130	167
Westminster	12	280	847	1,083
Weston	12	95	287	367
Whitingham	2	90	271	347
Wilmington	26	433	1,308	1,673
Windham	0	56	169	217
Winhall	12	136	411	526
REGIONAL TOTAL		8,052	24,352	31,144

Targets for commercial CCHPs were developed using the CAP Mitigation Scenario of the Vermont Pathways Model and assumptions informed by PSD's Analysis and Targets Tool. Regional targets were disaggregated to municipalities based on each town's share of commercial thermal energy consumption. Targets are presented as the total number of CCHPs by each target year. Data on CCHP project counts was provided by EVT (June 2024), and tracks the total number of commercial CCHP installations as of 2023.

All-Electric Vehicle (AEV) Targets

Town	Number of AEVs by LEAP Target Year			
	Total Number of AEVs (2024)	2025	2035	2050
Athens	4	9	88	208
Brattleboro	131	176	1,815	4,275
Brookline	3	8	87	206
Dover	21	26	264	622
Dummerston	24	41	424	999
Grafton	7	13	130	306
Guilford	33	47	483	1,137
Halifax	3	11	110	259
Jamaica	8	18	188	444
Londonderry	30	40	412	970
Marlboro	25	15	151	356
Newfane	19	32	327	771
Putney	44	38	391	921
Readsboro	3	13	133	313
Rockingham	26	87	899	2,117
Searsburg	0	3	28	66
Somerset	0	0	0	0
Stratton	4	6	59	139
Townshend	9	26	270	636
Vernon	9	41	426	1,004
Wardsboro	12	17	180	425
Westminster	12	54	552	1,301
Weston	15	10	101	237
Whitingham	8	22	224	528
Wilmington	23	40	415	978
Windham	3	9	95	225
Winhall	20	14	149	351
REGIONAL TOTAL	496	816	8,401	19,794

Targets for transportation fuel-switching and AEVs were developed using the CAP Mitigation Scenario of the Vermont Pathways Model. Regional targets were disaggregated to municipalities based on each town's share of transportation energy consumption. Targets are presented as the total number of AEVs by each target year. Data on the total number of AEVs is from Drive Electric Vermont (2024).

Plug-In Hybrid Vehicle (PHEV) Targets

Town	Number of PHEVs by LEAP Target Year			
	Total Number of PHEVs (2024)	2025	2035	2050
Athens	1	2	1	0
Brattleboro	145	33	26	6
Brookline	2	2	1	0
Dover	12	5	4	1
Dummerston	30	8	6	1
Grafton	4	2	2	0
Guilford	30	9	7	2
Halifax	2	2	2	0
Jamaica	6	3	3	1
Londonderry	14	8	6	1
Marlboro	17	3	2	0
Newfane	20	6	5	1
Putney	51	7	6	1
Readsboro	4	2	2	0
Rockingham	25	17	13	3
Searsburg	1	1	0	0
Somerset	0	0	0	0
Stratton	3	1	1	0
Townshend	7	5	4	1
Vernon	11	8	6	1
Wardsboro	5	3	3	1
Westminster	9	10	8	2
Weston	7	2	1	0
Whitingham	4	4	3	1
Wilmington	15	8	6	1
Windham	1	2	1	0
Winhall	10	3	2	0
REGIONAL TOTAL	436	155	119	27

Targets for transportation fuel-switching and PHEVs were developed using the CAP Mitigation Scenario of the Vermont Pathways Model. Regional targets were disaggregated to municipalities based on each town's share of transportation energy consumption. Targets are presented as the total number of PHEVs by each target year. Data on the total number of PHEVs is from Drive Electric Vermont (2024).

Electrical Generation Targets (MWh)

Town	2025	2035	2050
Athens	1,290.5	1,911.0	2,493.2
Brattleboro	18,260.2	27,040.5	35,278.1
Brookline	1,384.0	2,049.5	2,673.8
Dover	6,108.7	9,046.0	11,801.8
Dummerston	3,567.3	5,282.6	6,891.9
Grafton	3,126.1	4,629.3	6,039.6
Guilford	4,622.7	6,845.4	8,930.8
Halifax	4,410.4	6,531.2	8,520.8
Jamaica	4,989.4	7,388.5	9,639.3
Londonderry	5,158.4	7,638.7	9,965.8
Marlboro	6,821.0	10,100.8	13,177.9
Newfane	4,315.6	6,390.7	8,337.5
Putney	4,677.4	6,926.5	9,036.6
Readsboro	4,528.4	6,705.8	8,748.7
Rockingham	7,925.9	11,737.0	15,312.5
Searsburg	2,136.9	3,164.5	4,128.5
Somerset	2,938.2	4,351.0	5,676.5
Stratton	5,889.8	8,721.8	11,378.9
Townshend	3,908.0	5,787.1	7,550.1
Vernon	3,508.6	5,195.7	6,778.6
Wardsboro	3,853.8	5,706.8	7,445.4
Westminster	6,039.3	8,943.3	11,667.8
Weston	3,794.1	5,618.4	7,330.0
Whitingham	6,214.1	9,202.1	12,005.4
Wilmington	8,039.7	11,905.5	15,532.4
Windham	2,973.1	4,402.7	5,743.9
Winhall	5,527.0	8,184.7	10,678.1
REGIONAL TOTAL	136,008	201,407	262,764

Targets for electrical generation were developed using PSD's Generation Scenarios Tool, which pulls data from the CAP Mitigation Scenario of the Vermont Pathways Model, the Census, and ISO New England, among other sources. Generation targets were disaggregated to municipalities based on an equal proportion of town land area and population. It should be noted that the Windham Region exceeds its 2025, 2035, and 2050 generation targets (see above table, Electrical Sector: Annual Electricity Production).

Electrical Capacity Generation Targets (MW)

Town	2025	2035	2050
Athens	0.9	1.4	1.8
Brattleboro	13.0	19.3	25.2
Brookline	1.0	1.5	1.9
Dover	4.5	6.6	8.6
Dummerston	2.6	3.8	5.0
Grafton	2.3	3.4	4.4
Guilford	3.3	4.9	6.5
Halifax	3.2	4.8	6.3
Jamaica	3.7	5.4	7.1
Londonderry	3.7	5.6	7.2
Marlboro	5.0	7.4	9.6
Newfane	3.1	4.6	6.1
Putney	3.4	5.0	6.5
Readsboro	3.3	4.9	6.4
Rockingham	5.7	8.4	11.0
Searsburg	1.6	2.3	3.1
Somerset	0.0	0.0	0.0
Stratton	4.4	6.5	8.4
Townshend	2.8	4.2	5.5
Vernon	2.5	3.7	4.8
Wardsboro	2.8	4.2	5.5
Westminster	4.4	6.4	8.4
Weston	2.8	4.1	5.4
Whitingham	4.6	6.8	8.8
Wilmington	5.9	8.7	11.4
Windham	2.2	3.2	4.2
Winhall	4.1	6.0	7.8
REGIONAL TOTAL	96.7	143.3	186.9

Targets for electrical generation were developed using PSD's Generation Scenarios Tool, which pulls data from the CAP Mitigation Scenario of the Vermont Pathways Model, the Census, and ISO New England, among other sources. Generation targets were disaggregated to municipalities based on an equal proportion of town land area and population. It should be noted that the Windham Region exceeds its 2025, 2035, and 2050 generation capacity targets (see above table, Electrical Sector: Installed Generation Capacity).

Residential Electrical Efficiency Targets (kWh)

Town	2025	2035	2050
Athens	17,925	102,862	189,756
Brattleboro	1,465,497	8,409,905	15,514,257
Brookline	25,716	147,575	272,240
Dover	426,716	2,448,756	4,517,367
Dummerston	110,620	634,806	1,171,065
Grafton	57,182	328,144	605,348
Guilford	103,489	593,880	1,095,566
Halifax	38,549	221,220	408,097
Jamaica	88,541	508,099	937,321
Londonderry	193,024	1,107,689	2,043,420
Marlboro	46,536	267,050	492,642
Newfane	90,748	520,768	960,692
Putney	358,122	2,055,120	3,791,203
Readsboro	37,442	214,862	396,369
Rockingham	343,699	1,972,354	3,638,520
Searsburg	11,350	65,131	120,151
Somerset	0	0	0
Stratton	266,862	1,531,414	2,825,092
Townshend	91,062	522,569	964,014
Vernon	163,556	938,585	1,731,464
Wardsboro	60,946	349,747	645,200
Westminster	176,619	1,013,548	1,869,752
Weston	56,643	325,050	599,639
Whitingham	80,781	463,567	855,170
Wilmington	313,396	1,798,453	3,317,715
Windham	28,180	161,712	298,320
Winhall	193,799	1,112,134	2,051,621
REGIONAL TOTAL	4,847,000	16,519,000	27,815,000

Targets for residential electrical efficiency were determined using data from PSD's 2022 EEU Market Potential Study. Regional targets were disaggregated to the municipal-level based on each town's share of residential electrical energy consumption. Targets are presented as the total amount of electrical energy to be saved (in kWh) by each target year.

Commercial Electrical Efficiency Targets (kWh)

Town	2025	2035	2050
Athens	32,229	161,869	145,963
Brattleboro	2,634,993	13,234,224	11,933,811
Brookline	46,238	232,231	209,411
Dover	767,245	3,853,478	3,474,830
Dummerston	198,898	998,961	900,802
Grafton	102,814	516,384	465,643
Guilford	186,075	934,557	842,726
Halifax	69,313	348,122	313,915
Jamaica	159,198	799,569	721,002
Londonderry	347,061	1,743,112	1,571,831
Marlboro	83,672	420,242	378,948
Newfane	163,167	819,505	738,980
Putney	643,910	3,234,034	2,916,253
Readsboro	67,321	338,118	304,894
Rockingham	617,978	3,103,790	2,798,807
Searsburg	20,407	102,493	92,422
Somerset	0	0	0
Stratton	479,823	2,409,906	2,173,105
Townshend	163,731	822,339	741,535
Vernon	294,078	1,477,001	1,331,869
Wardsboro	109,583	550,379	496,298
Westminster	317,565	1,594,967	1,438,243
Weston	101,845	511,514	461,252
Whitingham	145,245	729,491	657,810
Wilmington	563,492	2,830,131	2,552,039
Windham	50,668	254,477	229,472
Winhall	348,454	1,750,107	1,578,139
REGIONAL TOTAL	4,847,000	27,815,000	51,312,000

Targets for commercial electrical efficiency were determined using data from PSD's 2022 EEU Market Potential Study. Regional targets were disaggregated to the municipal-level based on each town's share of commercial electrical energy consumption. Targets are presented as the total amount of electrical energy to be saved (in kWh) by each target year.

Land & Rooftop Area Available for Solar

Town	Prime/Primary Acreage	Secondary Acreage	Prime & Secondary Acreage	Rooftop Area Available (sqm)
Athens	158.78	1,165.66	1,324.44	9,359
Brattleboro	1,509.49	3,089.78	4,599.27	658,972
Brookline	164.68	1,676.06	1,840.74	14,923
Dover	2,924.93	5,438.71	8,363.64	183,292
Dummerston	1,175.24	3,491.48	4,666.72	79,707
Grafton	521.55	3,242.16	3,763.71	41,663
Guilford	773.58	4,009.44	4,783.02	71,577
Halifax	3,014.07	5,209.87	8,223.94	36,604
Jamaica	2,113.99	8,953.48	11,067.47	45,761
Londonderry	4,026.43	8,867.60	12,894.03	109,498
Marlboro	4,005.29	5,361.32	9,366.61	42,421
Newfane	886.04	5,476.23	6,362.27	48,043
Putney	1,179.13	3,863.80	5,042.93	98,627
Readsboro	1,046.97	4,953.73	6,000.70	34,874
Rockingham	998.71	3,901.59	4,900.30	190,816
Searsburg	81.43	3,123.01	3,204.44	6,332
Somerset	93.08	7,876.07	7,969.15	501
Stratton	1,192.50	11,005.65	12,198.15	82,088
Townshend	509.56	4,025.52	4,535.08	52,871
Vernon	412.35	2,105.15	2,517.50	110,131
Wardsboro	1,711.84	4,314.00	6,025.84	33,309
Westminster	1,741.78	4,954.09	6,695.87	157,806
Weston	3,464.23	7,787.17	11,251.40	43,313
Whitingham	4,719.59	6,044.86	10,764.45	70,513
Wilmington	5,420.99	6,173.97	11,594.96	157,100
Windham	503.13	3,237.16	3,740.29	19,076
Winhall	1,467.57	7,622.72	9,090.29	108,827
REGIONAL TOTAL	45,816.93	136,970.28	182,787.21	2,508,004

The above acreage availability for ground mounted and rooftop solar generation was determined through the Act 174 mapping exercise using data layers created by the Vermont Center for Geographic Information (VCGI). WRC excluded highest priority and priority forest block mapped by the Vermont Agency of Natural Resources from the above analysis.

Land Available for Wind

Town	Prime/Primary Acreage	Secondary Acreage	Prime & Secondary Acreage
Athens	143.89	3,519.25	3,663.14
Brattleboro	1,429.41	1,639.71	3,069.12
Brookline	44.35	2,240.90	2,285.25
Dover	5,048.78	10,169.39	15,218.17
Dummerston	394.87	1,200.30	1,595.17
Grafton	1,121.03	9,733.36	10,854.39
Guilford	423.39	5,652.34	6,075.73
Halifax	4,213.27	9,473.52	13,686.79
Jamaica	984.11	11,509.70	12,493.81
Londonderry	681.25	2,653.74	3,334.99
Marlboro	7,639.13	11,999.91	19,639.04
Newfane	459.15	6,402.17	6,861.32
Putney	134.24	1,452.10	1,586.34
Readsboro	3,319.65	14,003.52	17,323.17
Rockingham	352.82	2,308.49	2,661.31
Searsburg	313.62	9,383.91	9,697.53
Somerset	69.21	11,245.48	11,314.69
Stratton	2,610.83	19,880.19	22,491.02
Townshend	546.53	8,722.56	9,269.09
Vernon	5.79	329.40	335.19
Wardsboro	4,540.85	6,777.24	11,318.09
Westminster	2,105.95	3,097.60	5,203.55
Weston	1,287.50	6,678.13	7,965.63
Whitingham	7,931.07	9,794.47	17,725.54
Wilmington	9,578.07	10,910.82	20,488.89
Windham	1,135.40	10,548.01	11,683.41
Winhall	2,812.90	13,549.22	16,362.12
REGIONAL TOTAL	59,327.06	204,875.43	264,202.49

The above acreage availability for wind generation was determined through the Act 174 mapping exercise using data layers created by the Vermont Center for Geographic Information (VCGI). WRC excluded highest priority and priority forest block mapped by the Vermont Agency of Natural Resources from the above analysis.

Renewable Generation Potential

Town	Rooftop Solar (MWh)	Ground-Mounted Solar (MWh)	Wind (MWh)
Athens	1,316	51,608	288,802
Brattleboro	95,338	315,600	241,969
Brookline	2,071	63,754	180,169
Dover	27,052	599,528	1,199,801
Dummerston	11,239	269,497	125,763
Grafton	5,938	156,668	855,760
Guilford	10,035	214,867	479,011
Halifax	5,338	609,157	1,079,067
Jamaica	6,444	543,304	985,012
Londonderry	15,707	855,542	262,931
Marlboro	6,150	775,282	1,548,342
Newfane	6,698	265,462	540,946
Putney	13,966	278,289	125,067
Readsboro	5,121	280,452	1,365,759
Rockingham	27,015	249,483	209,818
Searsburg	958	81,769	764,553
Somerset	71	187,774	892,050
Stratton	12,321	436,892	1,773,192
Townshend	7,548	171,854	730,775
Vernon	15,713	113,831	26,426
Wardsboro	4,702	375,646	892,318
Westminster	22,592	394,582	410,248
Weston	6,255	739,539	628,010
Whitingham	10,320	907,575	1,397,482
Wilmington	23,048	1,025,608	1,615,344
Windham	2,728	153,533	921,120
Winhall	15,695	407,986	1,289,990
REGIONAL TOTAL	361,379	10,525,080	20,829,724

Generation potential was determined using data from the Act 174 mapping exercise. The Region's acreage availability for solar and wind was divided by a generic estimate of the amount of land required of each generation technology. For a full description of the methodological approach used to arrive at the above estimates, refer to Appendix B of the Energy Element of the 2025 WRP.