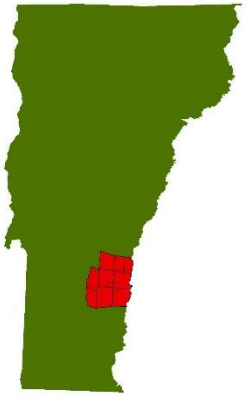
Appendix A: Energy Data

Southern Windsor County RPC



Population

Total Population[i] (2015):	24,988
Proj. Annual Avg. Growth Rate[ii]:	↓ 0.00288
Population Density:	72.5 persons/ square mile

Households

Owner-Occupied Units[iii]:	7,754
Renter- Occupied Units[iii]:	2,921
Total Households[iii]:	15,261
Avg. Household Size:	2.27 people/ household

Businesses[iv]

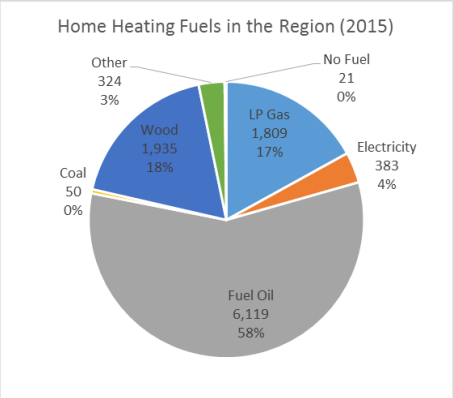
Total businesses in the region:	901
Employees working in the region:	9,785
Average wage[v]:	$42,313

Heating

Residential[i] (see figure)

Businesses[vi]:

Estimated avg. building space:	8,320 sq. ft.
Total energy use:	360.9 billion BTUs
Estimated total annual cost:	$8.6 million
Avg. annual cost per business:	$9,553

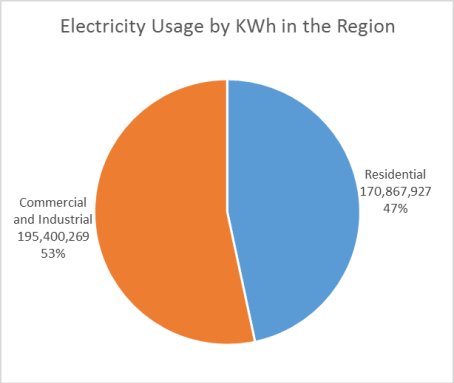


Transportation

Number of vehicles:	18,790
Estimated vehicle miles traveled:	283.3 million
Estimated gal. fuel used per year:	15.2 million
Estimated fuel cost per year:	$35.2 million

Electricity Use

Electricity Usage in 2015[vii]	(see figure)
Avg. Residential Usage:	6,535 KWh
Total Usage (2014-2016):	↓ 2.6 million KWh
	↓ 1.3%



Energy Generation

Existing Renewable Energy Generation

Solar	276 sites	6.6 MW	8,087 MWh
Wind	4 sites	0.02 MW	65 MWh
Hydro	6 sites	2.8 MW	9,790 MWh
Biomass	0	0	0

Renewable Energy Generation Targets[viii]

2015 (Baseline)	17,942 MWh
2025	48,653 MWh
2035	97,306 MWh
2050	194,612 MWh

Potential for Renewable Energy Generation[ix]

Rooftop Solar	19.46 MW	23,866 MWh
Ground-Mounted Solar	2,251.59 MW	2,761,350 MWh
Wind	8,283.36 MW	25,396,782 MWh
Hydro	1.6 MW	5,606 MWh

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Average wage as shown is for Windsor County (Vermont Department of Labor Statistics, 2015)
[vi] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vii] Efficiency Vermont (2017)
[viii] SWCRPC
[ix] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Andover

Population

Total Population[i] (2015):	550
Proj. Annual Avg. Growth Rate[ii]:	↑ 0.00106
Population Density:	19.12 persons/ square mile

Households

Owner-Occupied Units[iii]:	187
Renter- Occupied Units[iii]:	31
Total Households[iii]:	408
Avg. Household Size[iii]:	2.14 people/ household

Businesses[iv]

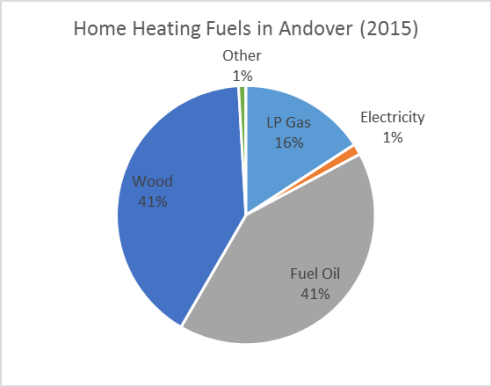
Total businesses in Andover:	12
Employees working in Andover:	36
Average wage:	$34,275

Heating

Residential[i] (see figure)

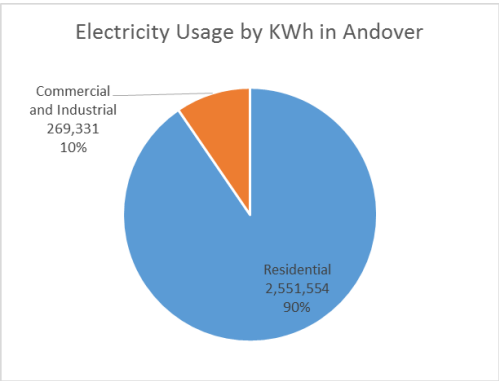
Businesses[v]:

Estimated avg. building space:	2,298 sq. ft.
Total energy use:	998.3 million BTUs
Estimated total annual cost:	$23,806
Avg. annual cost per business:	$1,984



Transportation

Number of vehicles:	323
Estimated vehicle miles traveled:	6.2 million
Estimated gal. fuel used per year:	288,848
Estimated fuel cost per year:	$989,306
Residents driving alone to work:	69%
Average commute time:	22 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	6,465 KWh
Total Usage (2014-2016):	↓ 229,958 KWh ↓ 7.5%

Energy Generation

Existing Renewable Energy Generation

Solar	11 sites	69 KW	84,376 KWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	84.4 MWh
2025	2,565 MWh
2035	5,131 MWh
2050	10,261 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	0.55 MW	672 MWh
Ground-Mounted Solar	285 MW	349,570 MWh
Wind	2,121 MW	6,502,220 MWh
Hydro	0	0

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Baltimore

Population

Total Population[i] (2015):	292
Proj. Annual Avg. Growth Rate[ii]:	↑ 0.002207
Population Density:	62.5 persons/ square mile

Households

Owner-Occupied Units[iii]:	78
Renter- Occupied Units[iii]:	12
Total Households[iii]:	100
Avg. Household Size[iii]:	2.71 people/ household

Businesses[iv]

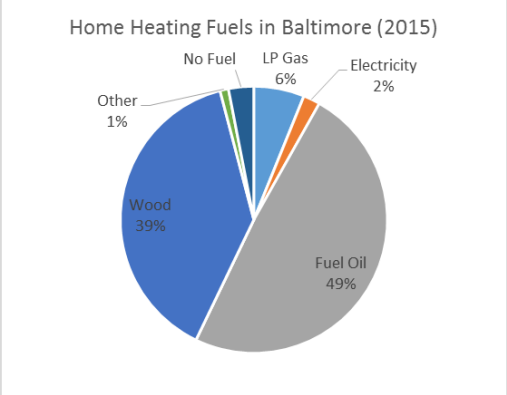
Total businesses in Baltimore:	6
Employees working in Baltimore:	11
Average wage:	$20,787

Heating

Residential[i] (see figure)

Businesses[v]:

Estimated avg. building space:	1,404 sq. ft.
Total energy use:	305 million BTUs
Estimated total annual cost:	$7,274
Avg. annual cost per business:	$1,212

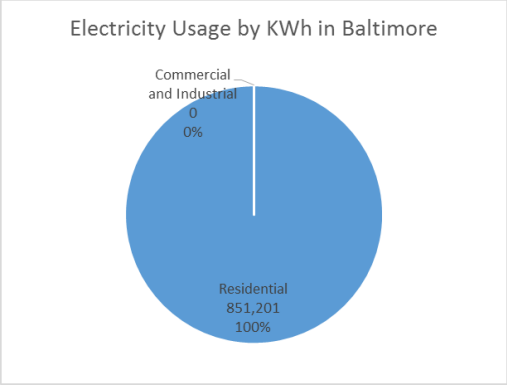


Transportation

Number of vehicles:	323
Estimated vehicle miles traveled:	6.2 million
Estimated gal. fuel used per year:	288,848
Estimated fuel cost per year:	$989,306
Residents driving alone to work:	69%
Average commute time:	22 minutes

Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	8,224 KWh
Total Usage (2014-2016):	↓ 24,732 KWh ↓ 2.8%



Energy Generation

Existing Renewable Energy Generation

Solar	3 sites	12.2 KW	14,962 KWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	14.9 MWh
2025	874 MWh
2035	1,748 MWh
2050	3,496 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	0.15 MW	184 MWh
Ground-Mounted Solar	4.7 MW	5,764 MWh
Wind	1.36 MW	4,170 MWh
Hydro	0	0

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Appendix A: Energy Data

Cavendish

Population

Total Population[i] (2015):	1,504
Proj. Annual Avg. Growth Rate[ii]:	↓ 0.00379
Population Density:	37.9 persons/ square mile

Households

Owner-Occupied Units[iii]:	491
Renter- Occupied Units[iii]:	107
Total Households[iii]:	965
Avg. Household Size[iii]:	2.26 people/ household

Businesses[iv]

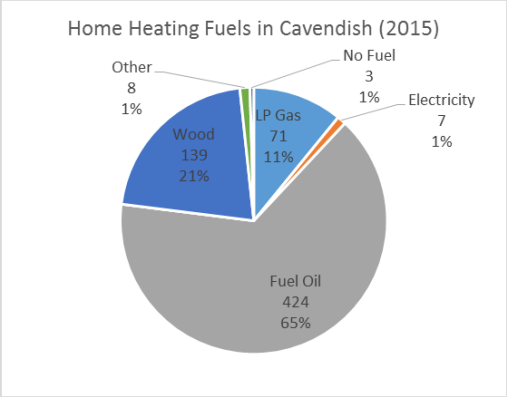
Total businesses in Cavendish:	46
Employees working in Cavendish:	335
Average wage:	$30,002

Heating

Residential[i] (see figure)

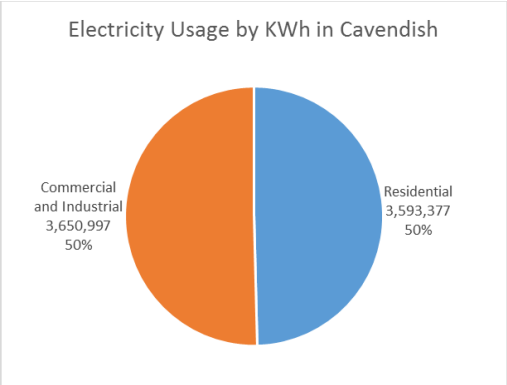
Businesses[v]:

Estimated avg. building space:	5,562 sq. ft.
Total energy use:	21.2 billion BTUs
Estimated total annual cost:	$504,572
Avg. annual cost per business:	$10,969



Transportation

Number of vehicles:	1211
Estimated vehicle miles traveled:	18.02 million
Estimated gal. fuel used per year:	968,582
Estimated fuel cost per year:	$2.2 million
Residents driving alone to work:	76%
Average commute time:	26 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	6,255 KWh
Total Usage (2014-2016):	↓ 1.05 million KWh ↓ 12.6%

Energy Generation

Existing Renewable Energy Generation

Solar	20 sites	261.3 KW	320,458 KWh
Wind	1	2 KW	6,132 KWh
Hydro	1	1,716 KW	6,013,000 KWh
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	6,339.6 MWh
2025	3,390 MWh
2035	6,779 MWh
2050	13,558 MWh

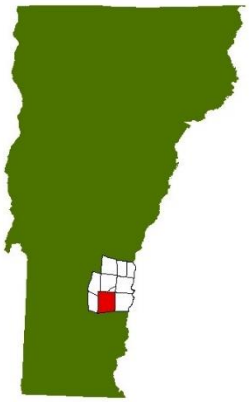
Potential for Renewable Energy Generation[viii]

Rooftop Solar	1.48 MW	1,815 MWh
Ground-Mounted Solar	300.3 MW	368,288 MWh
Wind	632.9 MW	1,940,471 MWh
Hydro	0.014 MW	49.1 MWh

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Appendix A: Energy Data

Chester



Population

Total Population[i] (2015):	3,110
Proj. Annual Avg. Growth Rate[ii]:	0.0
Population Density:	55.6 persons/ square mile

Households

Owner-Occupied Units[iii]:	1,040
Renter- Occupied Units[iii]:	362
Total Households[iii]:	1,793
Avg. Household Size[iii]:	2.25 people/ household

Businesses[iv]

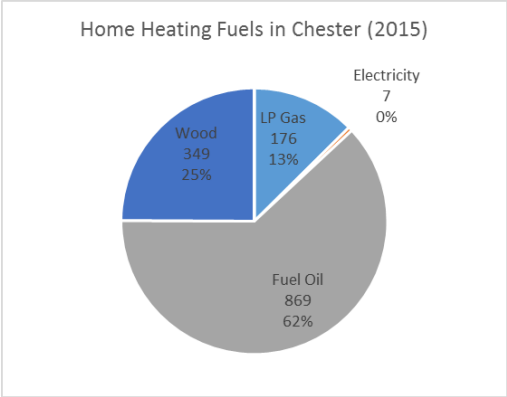
Total businesses in Chester:	129
Employees working in Chester:	909
Average wage:	$37,378

Heating

Residential[i] (see figure)

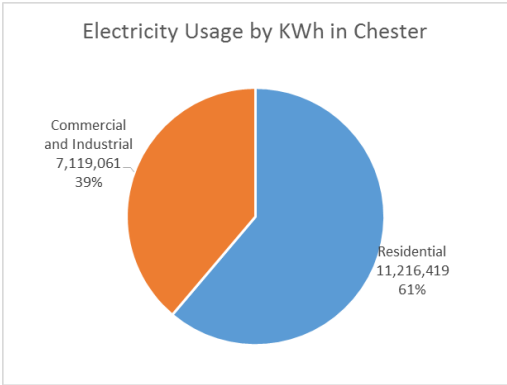
Businesses[v]:

Estimated avg. building space:	5,398 sq. ft.
Total energy use:	33.8 billion BTUs
Estimated total annual cost:	$806,005
Avg. annual cost per business:	$6,248



Transportation

Number of vehicles:	2,694
Estimated vehicle miles traveled:	35.5 million
Estimated gal. fuel used per year:	1.9 million
Estimated fuel cost per year:	$4.4 million
Residents driving alone to work:	71%
Average commute time:	21 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	6,689 KWh
Total Usage (2014-2016):	↑ 254,657 KWh ↑ 1.4%

Energy Generation

Existing Renewable Energy Generation

Solar	38 sites	2.17 MW	2,666.6 MWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	6,666.6 MWh
2025	6,004 MWh
2035	12,008 MWh
2050	24,015 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	3.1 MW	3,802 MWh
Ground-Mounted Solar	517.2 MW	634,306 MWh
Wind	854.6 MW	2,620,326 MWh
Hydro	0.016 MW	56 MWh

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Appendix A: Energy Data

Ludlow

Population

Total Population[i] (2015):	2,140
Proj. Annual Avg. Growth Rate[ii]:	↓ 0.01048
Population Density:	59.9 persons/ square mile

Households

Owner-Occupied Units[iii]:	611
Renter- Occupied Units[iii]:	319
Total Households[iii]:	3,285
Avg. Household Size[iii]:	2.06 people/ household

Businesses[iv]

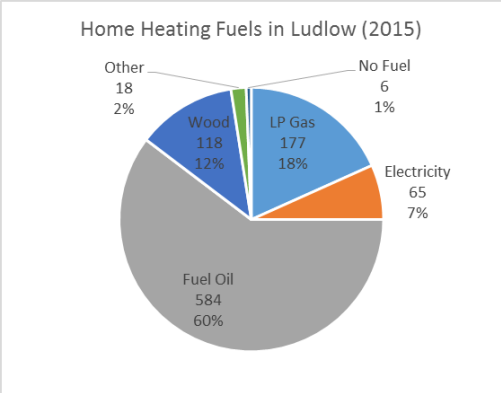
Total businesses in Ludlow:	144
Employees working in Ludlow:	1,925
Average wage:	$30,451

Heating

Residential[i] (see figure)

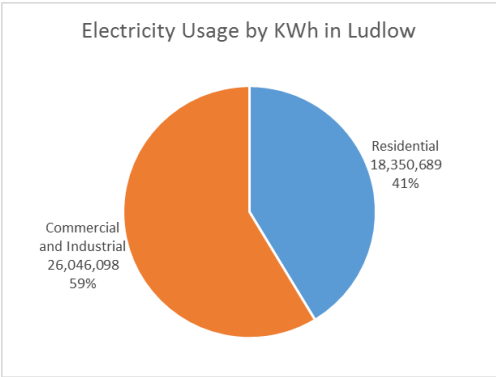
Businesses[v]:

Estimated avg. building space:	10,240 sq. ft.
Total energy use:	53.4 billion BTUs
Estimated total annual cost:	$1.3 million
Avg. annual cost per business:	$8,840



Transportation

Number of vehicles:	1,699
Estimated vehicle miles traveled:	35.5 million
Estimated gal. fuel used per year:	1.9 million
Estimated fuel cost per year:	$4.4 million
Residents driving alone to work:	77%
Average commute time:	19 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	5,491 KWh
Total Usage (2014-2016):	↓ 2.6 million KWh ↓ 5.5%

Energy Generation

Existing Renewable Energy Generation

Solar	18 sites	106.7 KW	130,857 KWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	130.9 MWh
2025	5,456 MWh
2035	10,913 MWh
2050	21,825 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	7.95 MW	9,750 MWh
Ground-Mounted Solar	197.4 MW	242,091 MWh
Wind	1,285.9 MW	3,942,569 MWh
Hydro	0.065 MW	228 MWh

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Reading

Population

Total Population[i] (2015):	708
Proj. Annual Avg. Growth Rate[ii]:	↓ 0.00246
Population Density:	16.9 persons/ square mile

Households

Owner-Occupied Units[iii]:	246
Renter- Occupied Units[iii]:	44
Total Households[iii]:	448
Avg. Household Size[iii]:	2.3 people/ household

Businesses[iv]

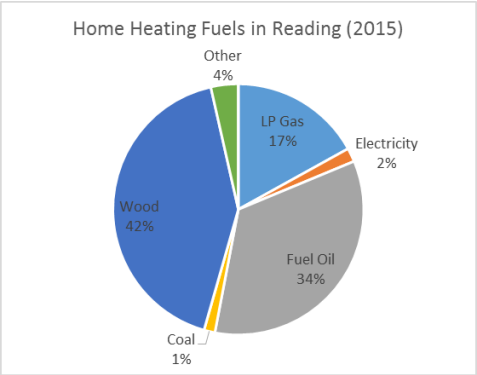
Total businesses in Reading:	17
Employees working in Reading:	85
Average wage:	$30,701

Heating

Residential (see figure)

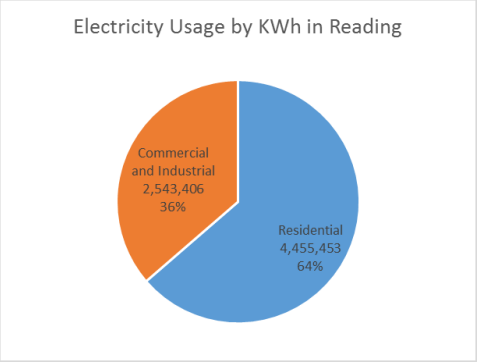
Businesses[v]:

Estimated avg. building space:	3,830 sq. ft.
Total energy use:	2.4 billion BTUs
Estimated total annual cost:	$56,209
Avg. annual cost per business:	$3,306



Transportation

Number of vehicles:	601
Estimated vehicle miles traveled[vi]:	8.4 million
Estimated gal. fuel used per year[vii]:	451,028
Estimated fuel cost per year[vii]:	$1.04 million
Residents driving alone to work:	77%
Average commute time:	27 minutes



Electricity Use

Electricity Usage in 2015[viii]	(see figure)
Avg. Residential Usage:	6,565 KWh
Total Usage (2014-2016):	↑ 46,529 KWh ↑ 0.7%

Energy Generation

Existing Renewable Energy Generation

Solar	11 sites	56.3 KW	69,046 KWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[ix]

2015 (Baseline)	69 MWh
2025	2,075 MWh
2035	4,149 MWh
2050	8,298 MWh

Potential for Renewable Energy Generation[x]

Rooftop Solar	0.81 MW	993 MWh
Ground-Mounted Solar	78.5 MW	96,272 MWh
Wind	2,793 MW	8,563,338 MWh
Hydro	0.001 MW	3.5 MWh

All data presented in this summary is from the U.S. Census Bureau, American Community Survey (ACS) 2011-2015, unless otherwise indicated.

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[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Energy Profile (VTrans, 2015)
[vii] Estimated based on data from VTrans and U.S. Department of Energy
[viii] Efficiency Vermont (2017)
[ix] SWCRPC
[x] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Appendix A: Energy Data

Springfield

Population

Total Population[i] (2015):	9,258
Proj. Annual Avg. Growth Rate[ii]:	↓ 0.00269
Population Density:	187 persons/ square mile

Households

Owner-Occupied Units[iii]:	2,657
Renter- Occupied Units[iii]:	1,246
Total Households[iii]:	4,324
Avg. Household Size[iii]:	2.28 people/ household

Businesses[iv]

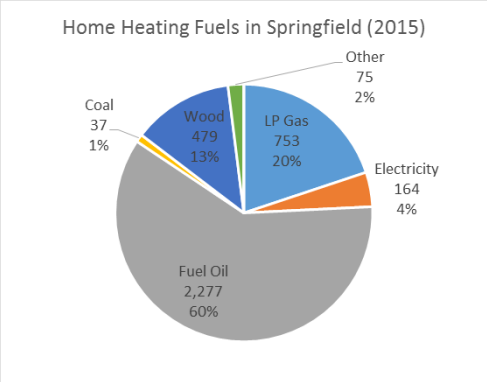
Total businesses in Springfield:	301
Employees working in Springfield:	4,328
Average wage:	$43,899

Heating

Residential[i] (see figure)

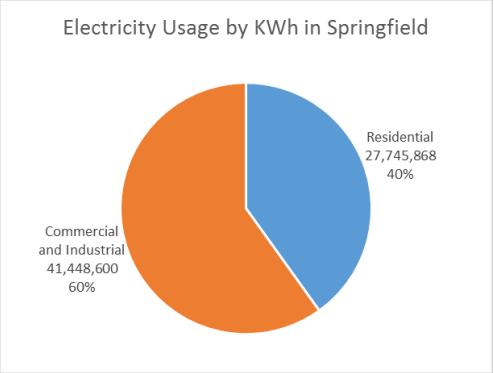
Businesses[v]:

Estimated avg. building space:	11,017 sq. ft.
Total energy use:	167.7 billion BTUs
Estimated total annual cost:	$4 million
Avg. annual cost per business:	$13,290



Transportation

Number of vehicles:	6,245
Estimated vehicle miles traveled:	105.6 million
Estimated gal. fuel used per year:	5.7 million
Estimated fuel cost per year:	$13.1 million
Residents driving alone to work:	81%
Average commute time:	21 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	6,921 KWh
Total Usage (2014-2016):	↑ 136,355 KWh ↑ 0.2%

Energy Generation

Existing Renewable Energy Generation

Solar	59 sites	3.6 MW	4,415 MWh
Wind	1 site	0.001 MW	3 MWh
Hydro	5 sites	1.3 MW	4,555 MWh
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	8,973 MWh
2025	15,596.5 MWh
2035	31,193 MWh
2050	62,386 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	7.18 MW	8,806 MWh
Ground-Mounted Solar	369.05 MW	452,603 MWh
Wind	34 MW	104,244 MWh
Hydro	0.01 MW	35 MWh

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Appendix A: Energy Data

Weathersfield

Population

Total Population[i] (2015):	2,794
Proj. Annual Avg. Growth Rate[ii]:	↓ 0.00162
Population Density:	63.2 persons/ square mile

Households

Owner-Occupied Units[iii]:	1,104
Renter- Occupied Units[iii]:	149
Total Households[iii]:	1,427
Avg. Household Size[iii]:	2.25 people/ household

Businesses[iv]

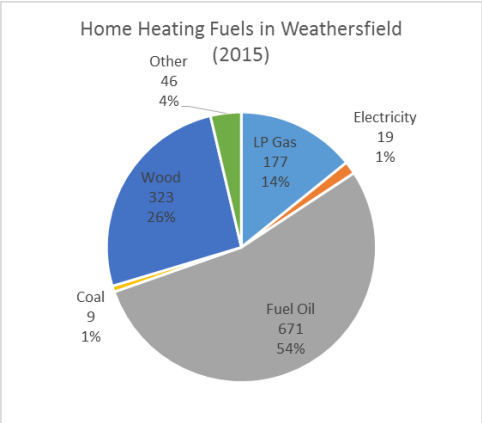
Total businesses in Weathersfield:	76
Employees working in Weathersfield:	363
Average wage:	$39,427

Heating

Residential[i] (see figure)

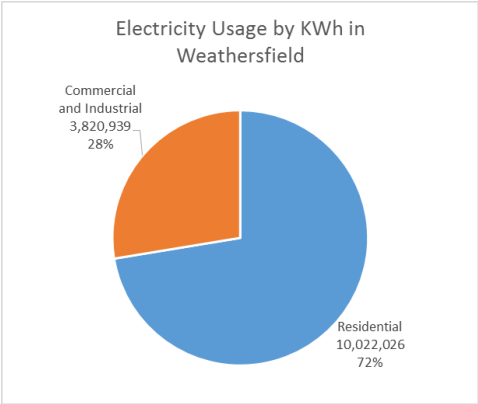
Businesses[v]:

Estimated avg. building space:	3,659 sq. ft.
Total energy use:	10.1 billion BTUs
Estimated total annual cost:	$240,047
Avg. annual cost per business:	$3,159



Transportation

Number of vehicles:	2,633
Estimated vehicle miles traveled:	31.9 million
Estimated gal. fuel used per year:	1.7 million
Estimated fuel cost per year:	$3.9 million
Residents driving alone to work:	81%
Average commute time:	24 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	7,211 KWh
Total Usage (2014-2016):	↑ 35,048 KWh ↑ 0.25%

Energy Generation

Existing Renewable Energy Generation

Solar	39 sites	137.2 KW	168,238 MWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	168.2 MWh
2025	5,453 MWh
2035	10,906 MWh
2050	21,811 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	2.11 MW	2,588 MWh
Ground-Mounted Solar	349.4 MW	428,504 MWh
Wind	107.9 MW	330,821 MWh
Hydro	0.207 MW	725 MWh

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Appendix A: Energy Data

West Windsor

Population

Total Population[i] (2015):	1,136
Proj. Annual Avg. Growth Rate[ii]:	↑ 0.001303
Population Density:	46 persons/ square mile

Households

Owner-Occupied Units[iii]:	420
Renter- Occupied Units[iii]:	79
Total Households[iii]:	799
Avg. Household Size[iii]:	2.2 people/ household

Businesses[iv]

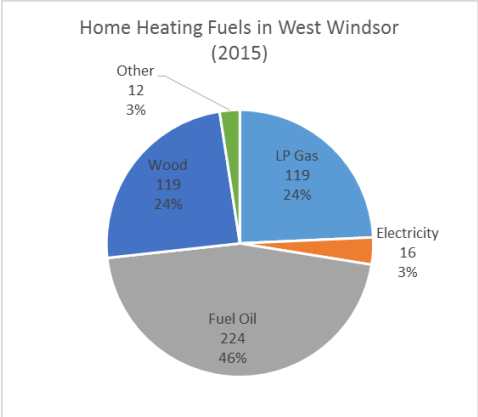
Total businesses in West Windsor:	28
Employees working in West Windsor:	121
Average wage:	$35,678

Heating

Residential[i] (see figure)

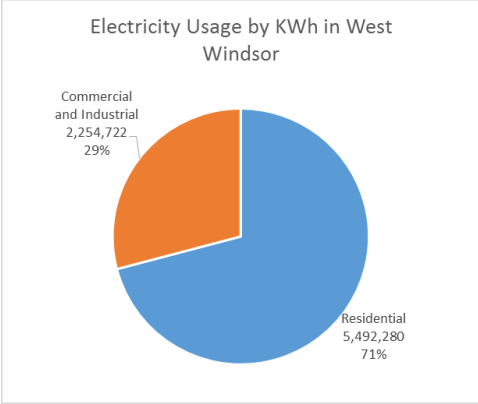
Businesses[v]:

Estimated avg. building space:	3,338 sq. ft.
Total energy use:	5.4 billion BTUs
Estimated total annual cost:	$127,961
Avg. annual cost per business:	$4,570



Transportation

Number of vehicles:	962
Estimated vehicle miles traveled:	12.4 million
Estimated gal. fuel used per year:	667,693
Estimated fuel cost per year:	$1.5 million
Residents driving alone to work:	79%
Average commute time:	28 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	7,315 KWh
Total Usage (2014-2016):	↓ 485,779KWh
	↓ 5.9%

Energy Generation

Existing Renewable Energy Generation

Solar	27 sites	124.5 KW	152,687 KWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	152.7 MWh
2025	2,471 MWh
2035	4,942 MWh
2050	9,884 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	1.11 MW	1,361 MWh
Ground-Mounted Solar	157.5 MW	193,158 MWh
Wind	338.9 MW	1,039,067 MWh
Hydro	0	0

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)

Appendix A: Energy Data

Windsor

Population

Total Population[i] (2015):	3,496
Proj. Annual Avg. Growth Rate[ii]:	↓ 0.00513
Population Density:	176.5 persons/ square mile

Households

Owner-Occupied Units[iii]:	920
Renter- Occupied Units[iii]:	572
Total Households[iii]:	1,712
Avg. Household Size[iii]:	2.25 people/ household

Businesses[iv]

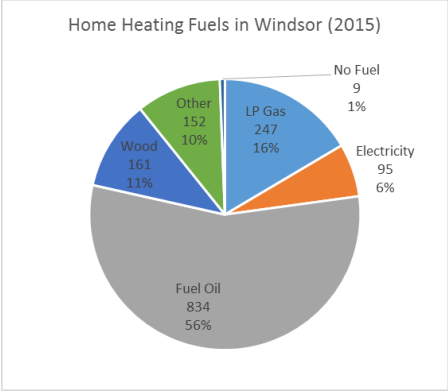
Total businesses in Windsor:	142
Employees working in Windsor:	1,672
Average wage:	$42,367

Heating

Residential[i] (see figure)

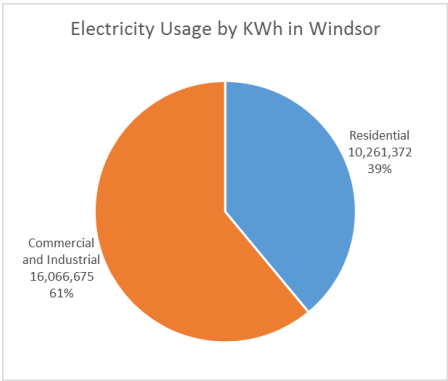
Businesses[v]:

Estimated avg. building space:	9,019 sq. ft.
Total energy use:	65.7 billion BTUs
Estimated total annual cost:	$1.6 million
Avg. annual cost per business:	$11,042



Transportation

Number of vehicles:	2,238
Estimated vehicle miles traveled:	39.8 million
Estimated gal. fuel used per year:	2.1 million
Estimated fuel cost per year:	$4.9 million
Residents driving alone to work:	73%
Average commute time:	22 minutes



Electricity Use

Electricity Usage in 2015[vi]	(see figure)
Avg. Residential Usage:	7,315 KWh
Total Usage (2014-2016):	↓ 485,779KWh ↓ 5.9%

Energy Generation

Existing Renewable Energy Generation

Solar	37 sites	486 KW	596,030 KWh
Wind	0	0	0
Hydro	0	0	0
Biomass	0	0	0

Renewable Energy Generation Targets[vii]

2015 (Baseline)	596 MWh
2025	4,770 MWh
2035	9,539 MWh
2050	19,078 MWh

Potential for Renewable Energy Generation[viii]

Rooftop Solar	4.3 MW	5,274 MWh
Ground-Mounted Solar	193.3 MW	237,063 MWh
Wind	79.4 MW	243,440 MWh
Hydro	0.232 MW	813 MWh

[i] U.S. Census Bureau, American Community Survey (ACS) 2011-2015
[ii] Based on Scenario B population projections for 2030 (VT ACCD, 2013)
[iii] U.S. Census Bureau, Decennial Census (2010)
[iv] Vermont Department of Labor Statistics (2015)
[v] Estimated based on number of units, estimated floor space, heating fuel types and average fuel costs for 2015. Floor space was estimated from average commercial/manufacturing floor space per employee from the U.S. Energy Information Administration.
[vi] Efficiency Vermont (2017)
[vii] SWCRPC
[viii] Based upon an analysis of GIS data mapping data (i.e. land area shown on the solar and wind potential maps)