Appendix 1: Fairfax Enhanced Energy Plan

Intent

The intent of this section is to meet the municipal determination standards for enhanced energy planning enabled in 24 V.S.A. 4352. The purpose of enhanced energy planning is to further regional and state energy goals, including the goal of having 90% of energy used in Vermont come from renewable sources by 2050 4the "90 x 50" goal), and the following:

A. Vermont's greenhouse gas reduction goals under 10 V.S.A. § 578(a);
B. Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. § 580;
C. Vermont's building efficiency goals under 10 V.S.A. § 581;
D. State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and
E. The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005.

A positive determination of compliance with the requirements of enhanced energy planning, as provided by the Regional Planning Commission, will enable Fairfax to achieve "substantial deference" instead of "due consideration" in Section 248 applications for energy generation facilities (e.g. wind facilities, solar facilities, hydro facilities, etc.) under Criteria (b)(1)-Orderly Development. This means that Fairfax will have a greater "say" in Certificate of Public Good proceedings before the Vermont Public Service Board about where these facilities should or should not be located in the community.

To receive a positive determination of energy compliance, an enhanced energy plan must be duly adopted, regionally approved, and must contain the following information:

A. An analysis of current energy resources, needs, scarcities, costs, and problems.
B. Targets for future energy use and generation.
C. "Pathways," or implementation actions, to help the municipality achieve the established targets.
D. Mapping to help guide the conversation about the siting of renewables.

This chapter will include the required analysis, targets, and mapping. The "pathways," or actions, have been included in the implementation section of the municipal plan.

Energy Resources, Needs, Scarcities, Costs and Problems

The following subsection reviews each energy sector of energy use (thermal, transportation, electricity) and generation in Fairfax.

Thermal Energy

An estimate of current residential thermal energy demand in Fairfax, based on data from the American Community Survey (ACS 2011-2015), is shown in Table A1.1. This data represents homes' primary fuel source for home heating and does not account for backup or secondary home heating fuel sources. The data shows that 49.2% of households in Fairfax depend on fuel oil as their primary fuel source for home heating. Fuel oil and wood sources are estimated to heat almost 70.2% of homes in Fairfax. There is no access to natural gas in Fairfax, so the 75 households that are reported to heat their households via natural gas is likely an error from ACS. These households are more likely to be heated through other sources like wood, fuel oil, or propane.

Table A1.1 - Current Fairfax Residential Thermal Energy Use				
Fuel Source	Fairfax Households (ACS 2011-2015)	Fairfax % of Households	Fairfax - Households Square Footage Heated	BTU (in Billions)
Natural Gas	75	4.3%	103,376	6
Propane	414	23.7%	729,824	44
Electricity	19	1.1%	36,176	2
Fuel Oil	859	49.2%	1,451,792	87
Coal	0	0.0%	0	0
Wood	367	21.0%	691,024	41
Solar	0	0.0%	0	0
Other	11	0.6%	20,944	1
No Fuel	0	0.0%	0	0
Total	**1745**	**100.0%**	**3,033,136**	**182**

Estimates for commercial and industrial thermal energy use are more difficult to calculate. An estimate of total commercial energy use (thermal and electricity) is provided in Table A1.2. Based on data from the Vermont Department of Labor (VT DOL) and the Vermont Department of Public Service (VT DPS). According to NRPC, it is assumed that the majority of this energy use, 48 billion BTU per year, is likely to be for thermal energy needs.

Table A1.2 - Current Fairfax Commercial Energy Use			
	Commercial Establishments in Fairfax (VT DOL)	**Estimated Thermal Energy BTUs per Commercial Establishment/year (in Billions) (VT DPS)**	**Estimated Thermal Energy BTUs by Commercial Establishments in Fairfax/year (in Billions)**
Municipal Commercial Energy Use	66	0.725	48

Fairfax does not have access to natural gas. The nearest natural gas distribution system is located in Georgia. It is not anticipated that this system will be extended to Fairfax.

Electricity Use

An estimate of current electricity use in Fairfax is shown in Table A1.3. This data is from 2016 and is available from Efficiency Vermont. Fairfax electricity use has decreased by about 400,000 kWh since 2014. The decreased use has come from commercial/industrial and residential sectors. Fairfax's average residential electricity usage in 2016 was 7,562 kWh per household which is a higher than the regional

average of 7,038 kWh per household in the region. Green Mountain Power is the electric utility that serves the majority of customers in Fairfax. It's service area is centered around VT Route 104 and VT Route 104a. Vermont Electric Coop is the electricity utility that serves the more rural portions of town, including the northeast part of town.

Table A1.3 - Current Fairfax Electricity Use, 2016

Use Sector	Electricity Use in kWh (Efficiency Vermont)	Electricity Use in Billion (BTUs)
Residential	13,379,211	48
Commercial and Industrial	5,956,929	15
Total	**19,336,140**	**63**

Table A1.4 - Current Fairfax Transportation Energy Use

Transportation Data	Fairfax Data
Total # of Passenger Vehicles (ACS 2011-2015)	3,641
Average Miles per Vehicle (VTrans)	11,356
Total Miles Traveled	41,347,196
Realized MPG (2013 - VTrans 2015 Energy Profile)	18.6
Total Gallons Use per Year	2,222,968
Transportation BTUs (Billion)	268
Average Cost per Gallon of Gasoline in 2016 (NRPC)	2.31
Gasoline Cost per Year	5,135,055

Transportation

Table A1.4 contains an estimate of transportation energy use in Fairfax. It's estimated that Fairfax residents drive approximately 41.3 million miles per year and spend about $5.1 million on transportation fuel expenses a year. This calculation does not include expense for commercially owned and operated vehicles.

As of January 2016, data from the Vermont Department of Motor Vehicles notes that there are between 5 and 19 electric vehicles within the Fairfax zip code (which includes parts of Cambridge, Fletcher, and Georgia, VT).

Generation

There is currently 4.03 MW of electricity generation capacity from renewable generation facilities in Fairfax. This capacity results in approximately 13,150 MWh of electricity generation per year. This is roughly equal to the annual electricity use of about 1,963 households in Vermont based on information available from the U.S. Energy Information Administration (558 kWh per VT household per month).

Table A1.5 organizes information about existing generation in Fairfax by type of facility. The **Existing Generation Facilities Map** shows the location of all electricity generators in Fairfax with a capacity greater than 15 kW.

The Town generally has good access to electricity transmission lines and three-phase distribution lines. These types of lines are used to transmit large quantities of electricity and are needed to serve large industrial users and commercial centers. Access to this type of infrastructure may make development of renewable energy facilities easier and more cost-effective in than in other surrounding communities with less existing grid infrastructure. The **Transmission & 3 Phase Power Infrastructure Map** shows the

electricity transmission and three-phase distribution infrastructure in Fairfax. Access to renewable generation resources, such as solar and wind, will be addressed below in the mapping section.

Table A1.5 – Existing Renewable Generation		
Generation Type	MW	MWh
Solar	0.43	527.35
Wind	0.003	9.20
Hydro	3.60	12,614.40
Biomass	0.00	0.00
Other	0.00	0.00
Total Existing Generation	**4.03**	**13,150.95**

Targets for Energy Use

Northwest Regional Planning Commission worked with the Vermont Energy Investment Corporation (VEIC) and the Vermont Department of Public Service in 2016 to develop regional targets for future energy use and generation to meet the State of Vermont's 90 x 50 goal. The targets represent only one scenario that would meet this goal. There may be many different ways that would also enable Vermont to achieve the 90 x 50 goal. For more information about the regional targets, please see the Northwest Regional Energy Plan (www.nrpcvt.com).

Tables A1.6, A1.7 and A1.8 show the targets for future energy use for Fairfax by sector (totals are cumulative). These municipal targets are based on regional targets that have been disaggregated.

The thermal targets for Fairfax in 2050 is to have 87.1% of structures be heated by renewable sources. Much of this transition is likely to come in the form of electric heat pumps as the primary heating source for single family homes as the technology becomes more readily available and affordable. The target also relies on wood heating being a continued source of residential heating. There are also high targets for the weatherization of residential households and commercial structures (78% and 73% respectively in 2050).

Table A1.6 - Thermal Targets			
Thermal Targets	**2025**	**2035**	**2050**
Percent of Total Heating Energy From Renewable Sources - Heating (BTUs)	45.7%	59.2%	87.1%
New Efficient Wood Heat Systems (in units)	0	0	4
New Heat Pumps (in units)	208	477	891
Percentage of municipal households to be weatherized	5%	16%	78%
Percentage of commercial establishments to be weatherized	25%	49%	73%

The transportation energy targets for Fairfax are similarly ambitious. By 2050, almost 90% of transportation energy will need to come from renewable sources. This will primarily be done through conversion to electric vehicles from fossil fuel vehicles for light-duty, passenger vehicles. However, it will also mean conversion of heavy-duty vehicles from diesel to biodiesel sources. The biodiesel technology and infrastructure will certainly need to advance and evolve in order to meet this target.

To meet the goals set by the Vermont Comprehensive Energy Plan, other changes will also be required in the transportation sector. This includes maintaining or decreasing the current level of vehicles miles

traveled per person per year. This can be done through more compact development in Fairfax, most notably in the village. More compact development allows for greater numbers of people to walk instead of use vehicles. Compact development also more easily supports public transportation routes, another strategy that can result in decreased vehicles miles traveled.

Table A1.7 - Transportation Targets

Transportation Targets	2025	2035	2050
Percent of Total Transportation Energy from Renewable Sources - Transportation (BTUs)	8.2%	28.9%	89.4%
Electric Vehicles	319	2386	5675
Biodiesel Vehicles	437	867	1665

Targets for electricity use are more complex to interpret. Electricity use is targeted to double by 2050 (Table A1.8). At the same time, total energy use is expected to become more efficient due to the increased use of electricity as an energy source. The increase in total electricity use will likely be driven by conversions to electric heat pumps and electric vehicles. At the same time, total energy use (energy, not electricity) will become more efficient and therefore decrease. This is because electric cars and electric heating sources are more efficient (i.e. use less BTUs) than using other energy sources, such as fossil fuels. So while the doubling of electricity use is the target, then intent is to continue to work towards electricity conservation while becoming more reliant on electricity for transportation and heating. To truly assess whether or not Fairfax has achieved this target, it will need to assess both parts of the targets, conservation and conversion, in the future.

Table A1.8 - Electricity Targets

Electricity Targets	2025	2035	2050
Increased Electricity Use (Efficiency and Conservation in BTUs)	25.2%	48.3%	100.7%

Targets for Energy Generation

Table A1.9 shows the electricity generation targets for Fairfax in 2025, 2035, and 2050. All new wind, solar, hydro, and biomass electricity generation sites will further progress towards achieving the generation targets (in MWh). Given the difficulty of developing additional hydro generation, and the constraints upon wind development, it is likely that solar generation will need to be a substantial component of meeting these generation targets. Meeting the generation targets will take considerable effort over the next 30 to 35 years. The 2050 generation target (24,034.77 MWh) is about 1.5 times the current generation capacity (13,150.94 MWh) within the Town of Fairfax.

Table A1.9 – Generation Targets

Renewable Generation Targets	2025	2035	2050
Total Renewable Generation Target (in MWh)	7,931.47	15,862.95	24,034.77

Fairfax has sufficient land to meet the above generation targets based on mapping completed by NRPC. Based on mapping and calculations completed by NRPC, Fairfax has access to the generation capacity outlined in Table A1.10. This generation capacity was calculated using the "base" layers for solar and wind. For an explanation of what constitutes a "base" layer, please see the mapping subsection below.

Table A1.10 - Renewable Generation Potential

Resource	MW	MWh
Rooftop Solar	2	1,841
Ground-mounted Solar	750	920,187
Wind	254	778,319
Hydro	0.012	42
Other	0	0
Total Renewable Generation Potential	1,006	1,700,389

Table A1.9 provides the generation targets for Fairfax but does not prescribe how the Town meets these targets. As a reference for what it would take to meet these targets, Figure A1.1 shows the total land area that would be needed to provide 17.19 MW of ground-mounted solar, or 88% of the 2050 target, in relation to the total land area of the Town.

Fairfax supports NRPC's position regarding "commercial" and "industrial" wind facilities. The NRPC Regional Plan finds that the construction of new "industrial" or "commercial" wind facilities within the region does not conform to the Regional Plan (NRPC considers any wind facility with a tower height (excluding blades) in excess of 100 feet tall to be considered an "industrial" or "commercial" wind facility).

Energy potential from biomass and methane sources is not estimated. This is due to a variety of factors including insufficient information on which to create estimates. Fairfax encourages the use of these sources for electricity and thermal generation, especially on farms.

Figure A1.1 – Ground Mounted Solar Potential

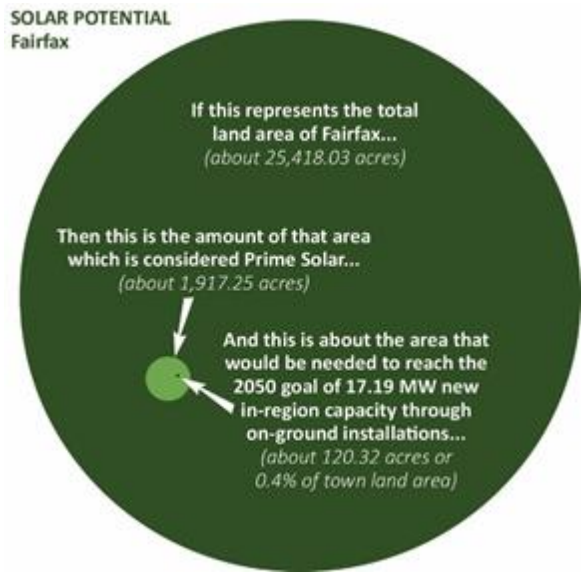

Figure A1.2 – Rooftop Solar Potential

Rooftop solar was estimated by using methods suggested by the Vermont Department of Public Service. The methodology estimates that 25% of residential and commercial structures in Fairfax could be suitable for rooftop solar generation. This results in 436 residential structures and 17 commercial structures in Fairfax. It is then estimated that the average residential rooftop system is 4 kW in size and the average commercial rooftop system is 20 kW in size. The resulting estimated generation capacity is 2.08 MW of solar generation.

Mapping Energy Resources and Constraints

Fairfax has incorporated maps provided by NRPC. These maps show data as required by the Department of Public Service Determination Standards, including access to energy resources and constraints to renewable development, and are a required element of enhanced energy planning. All maps may be found at the end of Appendix 1.

The intent of the maps is to generally show those areas that may be good locations, or may be inappropriate locations, for future renewable generation facilities. However, it is important to note that the maps are a planning tool and do not precisely indicate locations where siting a facility is necessarily acceptable. When a generation facility is proposed, it is the applicant's responsibility to verity the presence of all constraints on site as a part of the application.

Mapping Methodology

Spatial data showing the location of energy resources formed the basis of the maps developed by NRPC. This is the data that shows where there is solar, wind, hydro, and biomass "potential."

"Known" and "possible" constraints were subsequently identified on the maps. Known constraints are conservation resources that shall be protected from all future development of renewable generation facilities. Possible constraints are conservation resources that shall be protected, to some extent, from the development of renewable generation facilities. The presence of possible constraints on land does not necessarily impede the siting of renewable generation facilities on a site. Siting in these locations could occur if impacts to the affected possible constraints are mitigated, preferably on-site.

A full list of known and possible constraints included on the maps is located in Table A1.11. The known constraints and possible constraints used to create the maps include constraints that are required per the State Determination Standards from the Department of Public Service and regional constraints that were selected by NRPC.

Solar and Wind

The solar and wind maps show both "base" and "prime" areas. Base areas are areas with generation potential, which may contain possible constraints. Prime areas are areas that have generation potential that do not contain known or possible constraints. Areas that do not contain generation potential, and areas that contain a known constraint, are shown as white space on the map.

The solar map indicates a general concentration of base and prime solar areas around the northern portion of VT Route 104, near the southern portion of Buck Hollow Road, and in the vicinity of Commette Road. Fairfax has identified the following preferred locations for solar generation facilities: rooftops, parking lots, landfills and net-metering facilities located on farms (as defined by the Vermont Required Agricultural Practices). Brownfield sites located outside of the village are also considered preferred locations.

It is Fairfax's preference that solar facilities located in town be no larger than 5 MW in size. Facilities this large should not be colocated with facilities of a similar size. The intent is to limit the aesthetic impact of solar facilities on the rural areas of Fairfax. This limit has the same intent of Fairfax Solar Screening Ordinance.

Wind resources are concentrated in the vicinity of Brick Church Road in the northern part of Fairfax.

Hydro and Biomass

The biomass map is somewhat similar to the solar and wind maps. The biomass map also displays "base" and "prime" areas. However, these categories are not necessarily indicative of generation. They instead indicate areas of contiguous forest that may be used for the harvesting of woody biomass for use in either thermal or electric generation.

The hydro map is unique from the other types of generation maps. It shows existing dam sites used for electricity generation. It also shows existing dam sites that are not used for electricity generation, but could be retrofitted to provide generation capacity. Data about these dams comes from a study commissioned by the Vermont Agency of Natural Resources. The hydro map also shows some known and possible constraints that could impact the redevelopment of some dam sites.

Fairfax has three existing dam sites. One dam, owned by Green Mountain Power, is located on the Lamoille River and currently generates electricity. The two other dams are located in the northwest part of Fairfax and create the St. Albans Reservoir. These dams do not generate electricity, but could potentially be retrofitted to produce electricity.

Conclusion

Achieving the 90 x 50 goal, and the other energy goals in state statute, will be difficult. Fairfax is committed to playing its part in working towards accomplishing these goals and in creating a more sustainable, less costly, and more secure energy future.

Enhanced Energy Plan Goals, Policies, and Implementation Actions

Goal: Plan for increased electric demand with the support of Green Mountain Power, Vermont Electric Coop, and Efficiency Vermont.

Policy: Fairfax supports the development and siting of renewable energy resources in the Town that are in conformance with the goals, strategies, and mapping outlined in the Fairfax Enhanced Energy Plan. Development of generation in identified preferred locations shall be favored over the development of other sites.

Action: Investigate the installation of a municipal net-metering facility to off-set municipal electric use.

Action: Investigate installation of a community-based renewable energy project.

Action: Ensure firefighters receive proper training to handle structures that have roof-mounted solar.

Action: Review and maintain the Building Inspection, Code Enforcement, and Fire Safety Ordinance to incorporate any changes to national rooftop solar installation methods and standards.

Goal: Reduce annual fuel needs and fuel costs for heating structures, to foster the transition from non-renewable fuel sources to renewable fuel sources, and to maximize the weatherization of residential households and commercial establishments.

Policy: Fairfax supports energy conservation efforts and the efficient use of energy across all sectors.

Action: Coordinate with Efficiency Vermont and state low-income weatherization programs to encourage residents to participate in weatherization programs available to Fairfax residents.

Action: Promote the use of the residential and commercial building energy standards by distributing code information to permit applicants.

Action: Create an Energy Committee and/or appoint an Energy Coordinator to coordinate energy-related planning and projects in Fairfax.

Action: Evaluate the remaining improvements identified in the 2012 energy audit of Fairfax Fire Station and incorporate the recommendations into the municipal capital budget.

Action: Implement recommendations from the 2012 NRPC evaluation of street lighting in Town.

Policy: Fairfax supports patterns and densities of concentrated development that result in the conservation of energy.

Policy: To support public transit connections from Fairfax to other parts of the region if economically feasible in the future.

Action: Review local policies and ordinances to limit water and sewer services to those areas of town where additional development will not contribute to sprawl.

Policy: Fairfax supports the conversion of fossil fuel heating to advanced wood heating systems or electric heat pumps.

Goal: Hold vehicle miles traveled per capita to 2011 levels through reducing the amount of single occupancy vehicle (SOV) commute trips, increasing the amount of pedestrian and bicycle commute trips, and increasing public transit ridership.

Policy: Fairfax supports the reduction of transportation energy demand, reduction of single-occupancy vehicle use, and the transition to renewable and lower-emission energy sources for transportation.

Action: Study potential need for a park and ride in Fairfax with a particular focus south of the village.

Action: Promote and provide information about the GoVermont website which provides information to citizens about ride share, vanpool, and park-and-ride options.

Action: Plan for and install electric vehicle charging infrastructure on municipal property.

Action: Aid in locating an EV charging infrastructure on public or private property.

Table A1.11 – Mapping Constraints

Solar, Wind and Biomass Maps - Known Constraints

Constraint	Description	Source
Confirmed and unconfirmed vernal pools	There is a 600-foot buffer around confirmed or unconfirmed vernal pools.	ANR
State Significant Natural Communities and Rare, Threatened, and Endangered Species	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI
River corridors	Only mapped River Corridors were mapped. Does not include 50 foot buffer for streams with a drainage area less than 2 square miles.	VCGI
National wilderness areas		VCGI
FEMA Floodways		VCGI/NRPC
Class 1 and Class 2 Wetlands		VCGI
Designated Downtowns, Designated Growth Centers, and Designated Village Centers	These areas are the center of dense, traditional development in the region. This constraint does not apply to roof-mounted solar within such designated areas. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
FEMA Flood Insurance Rate Map (FIRM) special flood hazard areas	Special flood hazard areas as digitized by the NRPC were used (just the 100-year flood plain -500-year floodplain not mapped). The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	NRPC
Ground and surface waters drinking protection areas	Buffered Source Protection Areas (SPAs) are designated by the Vermont Department of Environmental Conservation (DEC). SPA boundaries are approximate but are conservative enough to capture the areas most susceptible to contamination. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR

Vermont Conservation Design Highest Priority Forest Blocks	The lands and waters identified here are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan. (Source: ANR)	ANR
Public water sources	A 200-foot buffer is used around public drinking water wellheads. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
National Natural Landmark – e.g. Chazy Fossil Reef	The Chazy Fossil Reef in Isle La Motte has been designated a National Natural Landmark by the US Department of Interior.	NRPC
Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that strongly deters or prohibits development have been included as a regional known constraint. The inclusion of this resource as a regional constraint is consistent with the goals and policies of the Northwest Regional Plan. Specific municipal land use districts included are outlined in Section D. No land use districts in Fairfax are included in this category.	NRPC
Solar, Wind and Biomass Maps - Possible Constraints		
Constraint	**Description**	**Source**
Protected lands	This constraint includes public lands held by agencies with conservation or natural resource oriented missions, municipal natural resource holdings (ex. Town forests), public boating and fishing access areas, public and private educational institution holdings with natural resource uses and protections, publicly owned rights on private lands, parcels owned in fee by non-profit organizations dedicated to conserving land or resources, and private parcels with conservation easements held by non-profit organizations.	VCGI
Deer wintering areas	Deer wintering habitat as identified by the Vermont Agency of Natural Resources.	ANR

Hydric soils	Hydric soils as identified by the US Department of Agriculture.	VCGI
Agricultural soils	Local, statewide, and prime agricultural soils are considered.	VCGI
Act 250 Agricultural Soil Mitigation Areas	Sites conserved as a condition of an Act 250 permit.	VCGI
Class 3 wetlands	Class 3 wetlands in the region have been identified have been included as a Regional Possible Constraint. The inclusion of this resource as a regional constraint is consistent with goals and policies of the Northwest Regional Plan.	ANR
Municipal Conservation Land Use Areas	Conservation Land Use Districts, as designated in municipal plans, that include strict language that deters, but does not prohibit development, have been included as a regional possible constraint. Specific municipal land use districts included are outlined in Section D. The Fairfax Conservation District was included in this category.	NRPC
Hydro Map - Known Constraints		
Constraint	**Description**	**Source**
National scenic and recreational rivers	The Upper Missisquoi and Trout Rivers are designated as a National Wide and Scenic River System.	BCRC/NRPC
Hydro Map - Possible Constraints		
Constraint	**Description**	**Source**
"303d" list of stressed waters		ANR
Impaired waters		ANR
State Significant Natural Communities and Rare, Threatened, and Endangered Species	Rankings S1 through S3 were used as constraints. These include all of the rare and uncommon rankings within the file. For more information on the specific rankings, explore the methodology for the shapefile.	VCGI

The date in Table A1.12 displays the 103 facilities that have a Certificate of Public Good from the Vermont Utilities Commission to generate electricity. The Town of Fairfax recognizes that some of the data in the

table may be out of date or incorrect. The Town of Fairfax also recognizes that some identified facilities may no longer generate electricity.

Table A1.12 - Fairfax Electricity Generators, As of 3/27/18

Sub Category: GM- Ground-mounted, RM – Roof-mounted, PV – Photovoltaic
Utility: GMP – Green Mountain Power, VEC – Vermont Electric Coop
Electricity Type: NM – Net metered
All facilities are residential unless denoted with a (1) for Business or (2) for Municipality

Category	Sub Category	Name	Address	CPG Number	Electricity Type	Utility	Capacity kW
Hydro	Hydro	Fairfax Falls (1)			Grid	GMP	4200
Solar	GM PV	Harold Vance III	1139 Main St	3406	NM	GMP	3.3
Solar	GM PV	Jeffery & Linda Corey	86 Sam Webb Rd	3798	NM	GMP	6.4
Solar	GM PV	John Quinn	5 Benny Rd	4043	NM	GMP	7
Solar	GM PV	Karen Slowinski & Debra Warner	83 Ledge Rd	2801	NM	VEC	7.5
Solar	GM PV	Madeline Mann	399 Buck Hollow Rd	3111	NM	GMP	9.8
Solar	GM PV	Marti Sterin	73 SAM WEBB RD	1560	NM	GMP	4.4
Solar	GM PV	Paul Gamm	89 Evergreen Road	772	NM	VEC	3.2
Solar	GM PV	Joseph Ducharme	6 Bailey Road	16-0489	NM	GMP	5
Solar	GM PV	Donald Fleming	77 Fletcher Rd		NM	GMP	5
Solar	GM PV	Fairfax Fire Department (2)	15 Goodall St		NM	GMP	15
Solar	GM PV	Tom Snyder	16 Bellows St		NM	GMP	15
Solar	GM PV: Tracker	Keith & Sally Billado	86 W Street Rd	2997	NM	GMP	6
Solar	GM PV: Tracker	Fairfax Family Physical Therapy PC (1)	1282 Main Street	7001	NM	GMP	7
Solar	RM PV	Barbara & William Duval	758 Fletcher Rd	3497	NM	GMP	5.6
Solar	RM PV	Carol Roberts	6 Alexzis Rd	3804	NM	VEC	5
Solar	RM PV	Christen & Thomas Bessette	2371 Main St	2792	NM	GMP	8.9
Solar	RM PV	David Vallett	287 Buck Hollow Rd	5749	NM	GMP	5
Solar	RM PV	Dayon And Heather Brown	68 Upper Meadow Rd	3815	NM	GMP	5
Solar	RM PV	Douglas & Evangeline Lantagne	82 WINDTOP RD	2661	NM	GMP	5.6
Category	**Sub Category**	**Name**	**Address**	**CPG Number**	**Electricity Type**	**Utility**	**Capacity kW**

Solar	RM PV	Douglas Reaves	2227 Main St	2653	NM	GMP	3.7
Solar	RM PV	Elaine Barkyoumb	102 Huntville Rd	3512	NM	GMP	7.5
Solar	RM PV	Scott Picucci	15 Cherrierville Rd	3748	NM	VEC	5
Solar	RM PV	Elizabeth Wagner	13 Snowcrest Rd	2622	NM	GMP	2.3
Solar	RM PV	Eric Foreman	1789 Main St	5311	NM	GMP	10
Solar	RM PV	Eric Torraca	1235 Main St	2638	NM	GMP	4.7
Solar	RM PV	Genevieve & Joseph Gallagher	9 Fletcher Rd	6061	NM	GMP	6
Solar	RM PV	Glen Twilley	137 West Street Rd	2716	NM	VEC	3.7
Solar	RM PV	Gregory Martin	41 Maple Hill Rd	3538	NM	GMP	9.9
Solar	RM PV	Hannah Mason Hauser	184 Mead Rd	3698	NM	VEC	4.6
Solar	RM PV	Harald and Rebecca Aksdal	296 Woodward Road		NM	VEC	5
Solar	RM PV	James Naylor	178 Wilkins Rd	4002	NM	VEC	8
Solar	RM PV	Jason Elledge	14 Hawley Rd	3939	NM	GMP	7.7
Solar	RM PV	Jennifer Osgood	17 Michelle Rd	3671	NM	GMP	4.6
Solar	RM PV	John & Kathryn Connell	20 Delorme Road	5954	NM	GMP	3.8
Solar	RM PV	Joseph Jacobson	20 Summit View St	2863	NM	GMP	5.6
Solar	RM PV	Kevin Jarvis	16 King Road	3272	NM	GMP	5.3
Solar	RM PV	Kris Hoyt	2855 Main Street	3496	NM	GMP	4.3
Solar	RM PV	Lisa Atherton	32 Audelin Woods Rd	3605	NM	GMP	4.6
Solar	RM PV	Matthew Roth	281 River Rd	6065	NM	GMP	3
Solar	RM PV	Michael Cain	2757 Main St	4156	NM	GMP	5
Solar	RM PV	Pauline Paquin and Steve Marsh	34 Windtop Rd	5294	NM	GMP	7.6
Solar	RM PV	Peter Lynch	78 Rood Mill Road	4244	NM	VEC	6
Solar	RM PV	Richard Jarmusz	26 Richards Rd	2804	NM	GMP	3.7
Solar	RM PV	Sarah Hodgson	34 Dewey Rd	5614	NM	VEC	3.8
Solar	RM PV	Sarah Jones and Jesse Jones	26 Summit View St	3508	NM	GMP	8
Solar	RM PV	Steve Rainville	272 Wilkins Rd	3771	NM	VEC	5
Solar	RM PV	Steven Dumas	23 Summit View St	3645	NM	GMP	6.8
Solar	RM PV	Wayne Thompson	47 Browns River Rd	4217	NM	GMP	5.7
Solar	RM PV	Winfred & Aleta Decker	67 White Pine Rd	43	NM	VEC	3.8
Category	**Sub Category**	**Name**	**Address**	**CPG Number**	**Electricity Type**	**Utility**	**Capacity kW**

Solar	RM PV	Bethany Dukette	36 Craftsfield Rd	16-0261	NM	GMP	5
Solar	RM PV	Bethany Hayden	769 Goose Pond Rd	6446	NM	GMP	6
Solar	RM PV	Bob Bessette	1979 Main Street	6834	NM	GMP	4
Solar	RM PV	Brendan Conray	42 Crystal Dr		NM	GMP	3.6
Solar	RM PV	Bruce Alvarez	147 Nichols Rd	7031	Group NM	GMP	8
Solar	RM PV	Candace Johnson	37 Lochmoor Rd	5253	NM	GMP	6
Solar	RM PV	David Gardell	51 Richards Road	7069	NM	GMP	5
Solar	RM PV	Gennette Carr	416 Carroll Hill Rd	6708	NM	VEC	4
Solar	RM PV	Ian Duckett	45 Lochmoor Rd	16-0333	NM	GMP	5
Solar	RM PV	John Young	351 Buck Hollow Road	16-0129	NM	GMP	7.6
Solar	RM PV	Joshua Silman	161 Bessette Road	6396	NM	GMP	11
Solar	RM PV	Karen Carlin	1209 Main St	16-0389	NM	GMP	5
Solar	RM PV	Kevin Tobey	352 Sam Webb Road	7266	NM		7.6
Solar	RM PV	Lara Scott	28 Old Academy Street	16-0674	NM	GMP	3.8
Solar	RM PV	Mary Lewis	6 School St		NM	GMP	3.6
Solar	RM PV	Matthew Garrett	58 Upper Meadow Road		NM	GMP	3.8
Solar	RM PV	Raquel Urbina	11 Michelle Rd	16-0686	NM	GMP	4.2
Solar	RM PV	Shannon Arnzen	183 Tabor Hill Road	7265			5
Solar	RM PV	Thom & Brenda Smith	464 Nichols Road	7216	NM	VEC	11.4
Solar	RM PV	Timothy Hathaway	10 Nichols Rd		NM	GMP	12
Solar	RM PV	Tom Bochanski	244 Sam Webb Road	7209	NM	VEC	7
Solar	RM PV	Vincent Redding	28 Rowland Rd	16-0321	NM	GMP	5
Solar	RM PV	Zachary Sprague	3 Hillcrest Road		NM	GMP	11.4
Solar	RM PV	Brannon Soter		6800	NM	GMP	4.2
Solar	RM PV	Curtis Lantagne	74 Windtop Rd	16-1104	NM	GMP	4.95
Solar	RM PV	Jennifer Prim	33 Windtop Rd	16-1447	NM	GMP	8.4
Solar	RM PV	Amy Gray	15 Andbron Rd	16-1178	NM	GMP	6
Solar	RM PV	Brenda Turner	110 Buck Hollow Rd	16-1549	NM	GMP	3.6
Solar	RM PV	Elizabeth Brunell	31 Hardwood Hill Rd	16-1506	NM	GMP	5
Solar	RM PV	Jeff Iszak	60 Village View Road	16-1495	NM	GMP	3
Category	**Sub Category**	**Name**	**Address**	**CPG Number**	**Electricity Type**	**Utility**	**Capacity kW**

Solar	RM PV	Josh Rollet	48 Leach Rd	16-1273	NM	GMP	6
Solar	RM PV	Kevin Quinlan	12 Meadows Road	16-1409	NM	GMP	4.2
Solar	RM PV	Robert Goboury	402 Buck Hollow Road		NM	GMP	3
Solar	RM PV	San Kong	12 Bentley Rd	16-0852	NM	GMP	3.6
Solar	RM PV	Terri Cote	6 King Road	16-1661	NM	GMP	3.6
Solar	RM PV	Tyler Burns	33 Bovat Road	16-1667	NM	GMP	8.2
Solar	RM PV	Stanley Moody	20 Craftsfield Rd		NM	GMP	3.6
Solar	RM PV	Roger Fisher	57 Allen Irish Road		NM	GMP	5
Solar	RM PV	Donald Tedford	375 Swamp Road		NM	GMP	16
Solar	RM PV	Aaron and Rebecca Wilson	4 Quincy Road		NM	GMP	3.8
Solar	RM PV	Kelly Lyford and Amy Larow	219 Sam Webb Rd		NM	VEC	11.4
Solar	RM PV	Joyce A Hunt	233 Nichols Rd		NM	VEC	6.6
Solar	RM PV	Erin Cain	43 Outback Rd		NM	VEC	3.6
Solar	RM PV	Bertrand Bolduc	27 Wiggins Rd		NM	-	5.2
Solar	RM PV	Deanna Farnham	28 Rock View Rd		NM	GMP	3.8
Solar	RM PV	Beverly Pascavage	4 Meadow Rd		NM	GMP	6.6
Solar	RM PV	Heidi Meunier	183 Brick Church Rd		NM	VEC	10
Solar	RM PV	Brian Duprat	52 Snowcrest Rd		NM	GMP	7.6
Solar	RM PV	John Kjos	20 Rock View Rd		NM	GMP	3
Solar	RM PV	Rob Green	216 Huntville Rd	16-2534	NM	GMP	5.2
Solar	Solar Canopy	Ricky Wood	272 Carroll Hill Rd		NM	VEC	7.6
Wind	Small Wind	Sam Nelson	108 Bessette Road	119	NM	GMP	3