

Town of Stowe Renewable Energy Potential: SOLAR Methodology This map shows areas of resource potential for renewable energy generation from solar, i.e. locations where renewable energy generation would likely be most feasible according to the natural conditions of an area. This map also considers various other conditions, such as ecological zones, that may impact the feasibility of renewable energy development. These conditions are referred to as constraints. **Prime Solar** Areas with high solar potential and no environmental constraints. Secondary Solar Areas with high solar potential and environmental constraints that may pose an obstacle to development. These areas are shown on the map and include the following constraints: Agricultural soils (local, prime and statewide classifications) Protected lands Act 250 agricultural soil mitigation areas Deer wintering yards Highest priority forest blocks Hydric soils No Solar Areas with low solar potential or envrionmental constraints likely to prohibit development. These areas have been removed and are not shown in any way on this map. These environmental FEMA floodways FEMA special flood hazard areas River corridors Federal wilderness areas Natural Communities and Rare, Threatened and Endangered Species Vernal pools Wetlands class 1 and 2 This map was created as part of a Regional Energy Planning Initiative being conducted by Vermont Regional Planning Commissions and the Vermont Public Service Department. Created: Lamoille County Planning Commission, April 2017. Key # Existing Solar Sites Substations - 3 Phase Power Lines --- Transmission Lines Lakes/Ponds Rivers/Streams Parcels Prime Solar Secondary Solar Ridgeline/Hillside Overlay District White No Solar

Town of Stowe Methodology Renewable Energy Potential: WIND Prime Wind Hydric soils No Wind constraints are:

This map shows areas of resource potential for renewable energy generation from wind, i.e. locations where renewable energy generation would likely be most feasible according to the natural conditions of an area. This map also considers various other conditions, such as ecological zones, that may impact the feasibility of renewable energy development. These conditions are referred to as constraints.

Areas with high wind potential and no environmental constraints.

Areas with high wind potential and environmental constraints that may pose an obstacle to development. These areas are shown on the map and include the following constraints:

Agricultural soils (local, prime and statewide classifications) FEMA special flood hazard areas Protected lands Act 250 agricultural soil mitigation areas Deer wintering yards Highest priority forest blocks

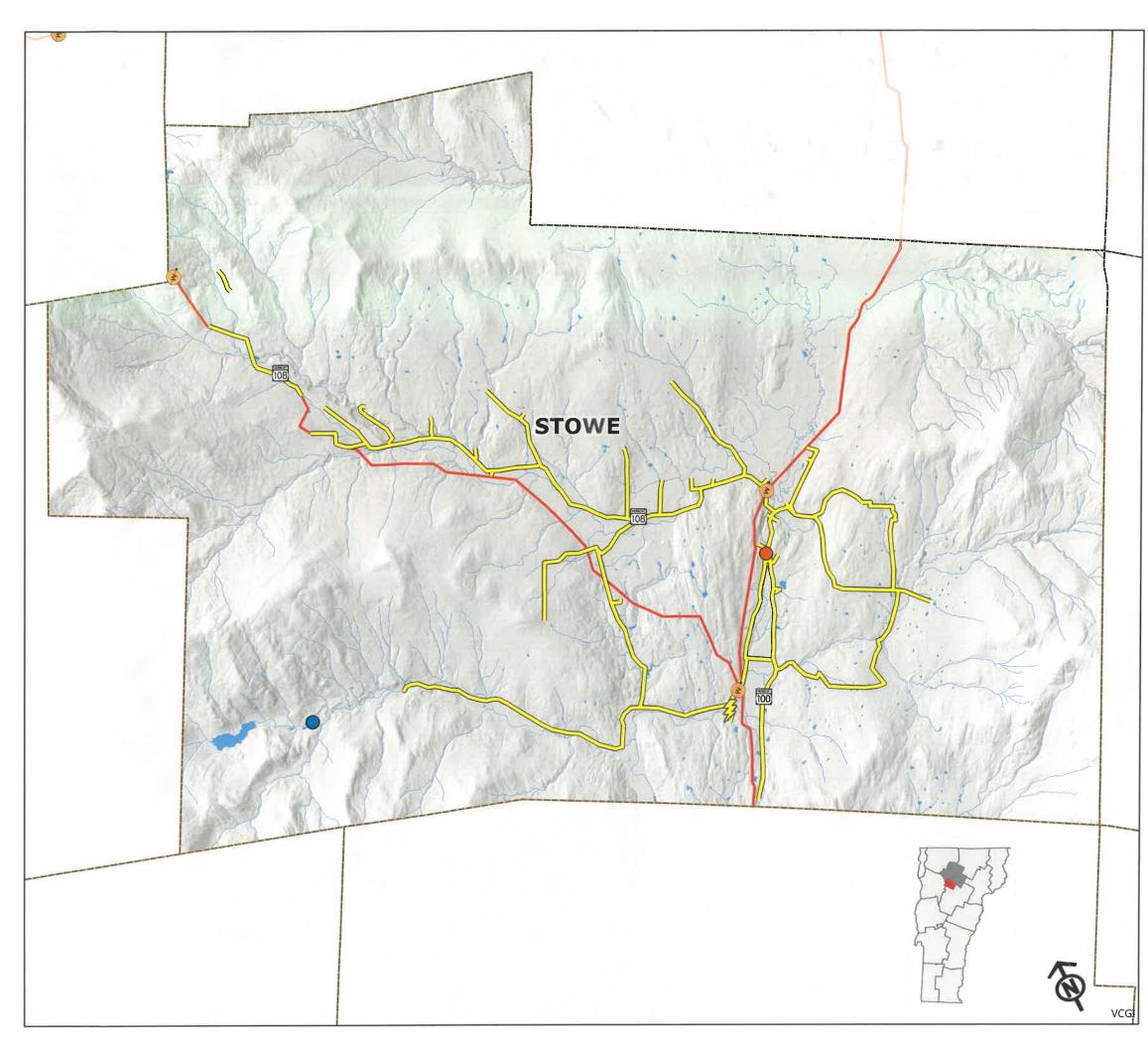
Areas with low solar potential or envrionmental constraints likely to prohibit development. These areas have been removed and are not shown in any way on this map. These environmental

FEMA floodways FEMA special flood hazard areas River corridors Federal wilderness areas Natural Communities and Rare, Threatened and Endangered Species Vernal pools Wetlands class 1 and 2

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Created: Lamoille County Planning Commission, April 2017.





Stowe **Renewable Energy Potential: Hydroelectric**

This map illustrates potential for energy development but not necessarily suitability

Hydroelectric Facilities

Operational Facilities

Energy Infrastructure Substations



Transmission Lines

Potential sites



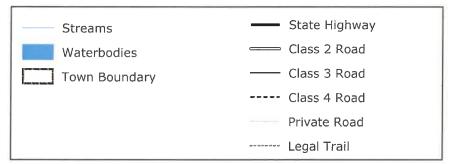
< 50 kW Capacity</p>

> 50 kW Capacity

3 Phase power line data for areas served by Morrisville Water and Light was not available.

Hydroelectric Likely Unsuitable

Areas with low hydroelectric potential or environmental constraints have been removed and are not shown in any way on this map.



Methodology

This map shows areas of resource potential for renewable energy generation from hydroelectric, i.e. dams that could be converted into hydroelectric facilities as well as active hydroelectric sites. Existing hydroelectric dam information was extracted from the Vermont Dam Inventory, while potential hydroelectric sites were derived from a study conducted by Community Hydro 2007. Based on estimates conducted within the report, this map categorizes dams based on their potential hydroelectric generation capacity, and the downstream hazard risk that would be involved in hydroelectric production at each site.

Data Sources:

POTENTIAL HYDROELECTRIC SITES: VCGI, 2017 SUBSTATIONS: VCGI, 2017

3 PHASE POWER LINES: Data from town utilities and GreenMountain Power POLITICAL BOUNDARIES: 1:24000 USGS Quadrangles, VCGI, 1991.

ROADS: 1:5000 VTrans Road Data, 2017.

SURFACE WATER: On-screen digitized from 1:5000 digital orthophotos using USGS 7 1/2' quadrangles and 1:20000 color infrared aerial photography as additional source material, VCGI for VHD-USGS, 2001.

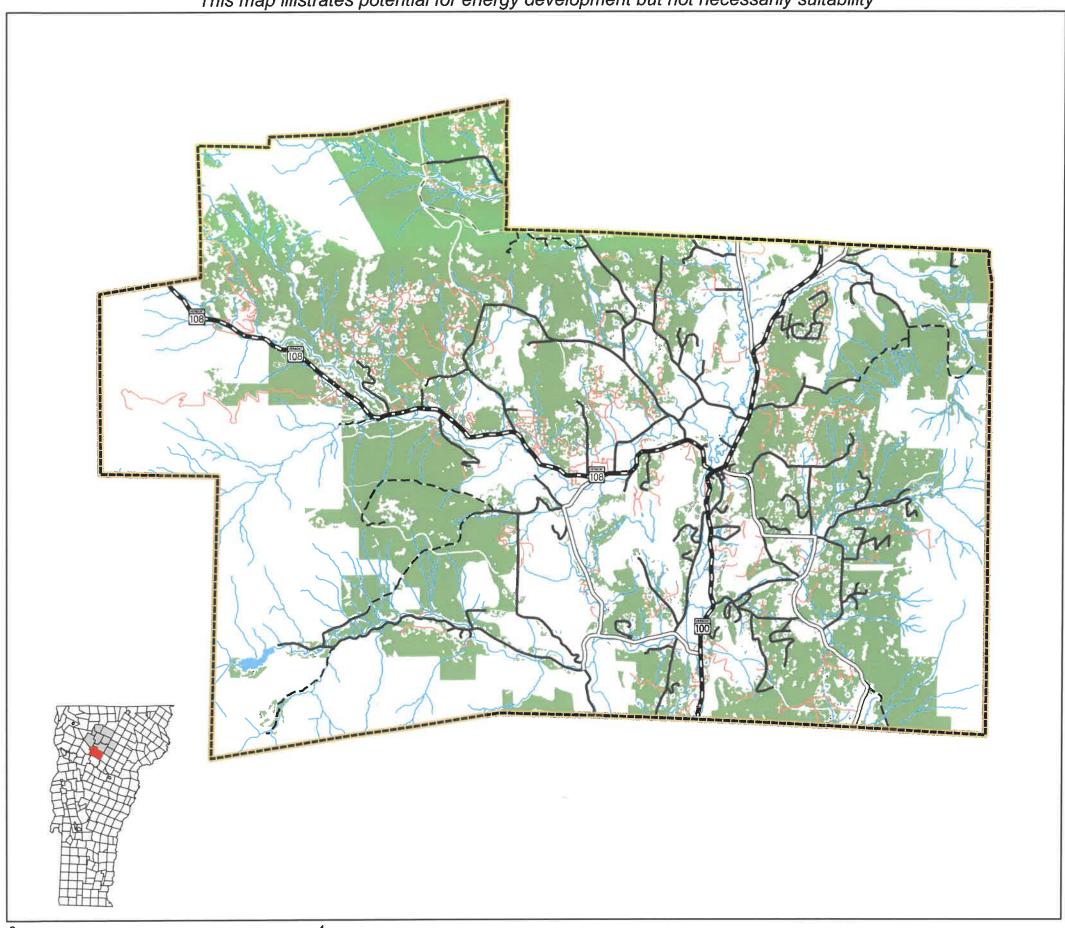
Map created by LCPC, 2018

Data has not been field verified and is subject to change.

Use for planning purposes only.

Forest Area With Biomass Potential: Stowe, Vermont

This map illistrates potential for energy development but not necessarily suitability





This map shows areas of potential for woody biomass

harvest and potential locations for combined heat and power facilities fed by woody biomass. The map also illustrates conditions that may limit the feasibility of extensive harvesting of wood for energy use. These conditions are referred to as constraints. Physical features (primary constraints) that make extensive harvesting infeasible which have been extracted from the biomass potential layer in this map include: FEMA floodways, River Corridors, Class 1 and 2 Wetlands, Vernal Pools, State-significant Natural Communities, Rare, Threatened, and Endangered Species, and Wilderness Areas. Secondary constraints not currently shown on this map may also pose limitations to biomass potential in these areas. Secondary constraints include: Agricultural soils (local, prime and statewide classifications) FEMA special flood hazard areas Protected lands Act 250 agricultural soil mitigation areas Deer wintering yards **Highest priority forest blocks** Hydric soils Secondary constraints should be evaluated on a case by case basis for all energy projects.

Data has not been field verified and is subject to change. Use for planning purposes only.

DATA SOURCES:

VT POTENTIAL WOODY BIOMASS AREA: VCGI, 2017 POLITICAL BOUNDARIES: 1:24000 USGS Quadrangles, VCGI, 1991.

ROADS: 1:5000 VTrans Road Data, 2017.

SURFACE WATER: On-screen digitized from 1:5000 digital orthophotos using USGS 7 1/2' quadrangles and 1:20000 color infrared aerial photography as additional source material, VCGI for VHD-USGS, 2001.

Map created by LCPC, May 2018