

Town of Colchester: Designation of Renewable Energy “Preferred Sites”

Preferred Site Selection Overview

Vermont has a long history of both land use and energy planning. As Vermont experienced a growth in renewable energy generation, Act 174 of 2016 was established to create the framework for a new set of municipal and regional energy planning standards. In accordance with rules established by the Public Utility Commission, net-metering projects, other than hydroelectric facilities, that are large enough to produce more than 150 kilowatts, must be built on “preferred sites.”

What is a “Preferred Site”?

According to the Vermont Public Utility Commission, the entity that governs the terms upon which any electric company offers net-metering service within its service territory, a preferred site means one of the following:

- (1) A new or existing structure whose primary use is not the generation of electricity or providing support for the placement of equipment that generates electricity;
- (2) A parking lot canopy over a paved parking lot, provided that the location remains in use as a parking lot;
- (3) A tract previously developed for a use other than siting a plant on which a structure or impervious surface was lawfully in existence and use prior to July 1 of the year preceding the year in which an application for a certificate of public good under this Rule is filed. To qualify under this subdivision (3), the limits of disturbance of a proposed net-metering system must include either the existing structure or impervious surface and may not include any headwaters, streams, shorelines, floodways, rare and irreplaceable natural areas, necessary wildlife habitat, wetlands, endangered species, productive forestlands, or primary agricultural soils, all of which are as defined in 10 V.S.A. chapter 151;
- (4) Land certified by the Secretary of Natural Resources to be a brownfield site as defined under 10 V.S.A. § 6642;
- (5) A sanitary landfill as defined in 10 V.S.A. § 6602, provided that the Secretary of Natural Resources certifies that the land constitutes such a landfill and is suitable for the development of the plant;
- (6) The disturbed portion of a gravel pit, quarry, or similar site for the extraction of a mineral resource that was in lawful operation on January 1, 2017, provided that all activities pertaining to site reclamation required by applicable law or permit condition are completed prior to the installation of the plant;

(7) A specific location designated in a duly adopted municipal plan under 24 V.S.A. chapter 117 for the siting of a renewable energy plant or specific type or size of renewable energy plant, provided that the plant meets the siting criteria recommended in the plan for the location; or a specific location that is identified in a joint letter of support from the municipal legislative body and municipal and regional planning commissions in the community where the net-metering system will be located.

(8) A site listed on the National Priorities List (NPL) established under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. chapter 103, if the U.S. Environmental Protection Agency or the Agency of Natural Resources confirms each of the following that the site is listed on the NPL;

(9) On the same parcel as, or directly adjacent to, a customer that has been allocated more than 50 percent of the net-metering system's electrical output. The allocation to the host customer may not be less than 50 percent during each of the first 10 years of the net-metering system's operation.

Site Selection Criteria

Not only is selecting a suitable site a crucial component of developing a viable net-metering project, it is required by the State of Vermont. The Public Utilities Commission has given communities the ability to define what a preferred site may look like. For instance, what a preferred site looks like to a City such as Burlington may be completely different than the Town of Colchester. Overall, the process of determining preferred sites must evaluate the constraints and the impact on the site itself as well as the impact it has on the community and culture of the area. Since the State reviews the primary concerns noted in items 1 through 6 and 8 through 9 above, the remainder of this document evaluates the locally significant preferred site designation criteria under item 7. The objectives of this process are to prevent limitations to pre-identified sites for energy generation and to reduce any additional hurdles renewable projects may face in the planning process.

When renewable energy companies consider the economic benefit of selecting a site, care is taken to minimize physical constraints such as shading, optimal wind resources, nearby obstacles, topography, latitude, and pitch. Since these constraints are evaluated for practical and financial viability by the applicants themselves, the Town of Colchester will assess the following constraints:

- Environmental
- Natural Hazards
- Land Use
- Site Access
- Aesthetics
- Development Regulations
- Social Impact

Since Colchester is primarily flat compared to other communities and sites located near the lake are protected from such construction, the development of wind

turbines would not be preferred in Colchester. The scorecard application is primarily for solar siting and any requests for wind turbine projects should submit project site plans directly to the Town. After the Town reviews the wind turbine project, the application will be submitted to the Planning Commission for approval following a public hearing. This overview will review all net-metering constraints, with a focus solar module siting.

Site Selection Constraints

A. Environmental

Avoiding sensitive or critical habitats and species is critical in the approval process. Constructing and operation of solar sites may require the clearing of existing habitats and disturbing fauna and flora. Land disturbance activities are defined as activities that disturb or break topsoil, that result in the movement of earth on land. All siting, access roads, and transmission lines should be proposed away from ecologically sensitive areas. The Vermont Agency of Natural Resources, Fish and Wildlife Department, the Division of Historic Preservation, the Army Corps of Engineers, and the Agency of Agriculture Food and Markets all provide their own specifications that hold a project to high standards in the Public Utility Commission's review process. State known and reviewed ecologically sensitive areas include FEMA floodways, DEC river corridors, National Wilderness Areas, State-significant Natural Communities and rare, threatened, or endangered species, vernal pools (confirmed and unconfirmed), and Class I and II wetlands.

The constraints that will be reviewed during the preferred sites application process include FEMA Special Flood Hazard Areas and Floodways, Class III wetlands, and the Shoreland Overlay. Previously disturbed sites are ideal to reduce impact on the environment. See Maps 15 and 16 of the Colchester Town Plan for environmental site constraints.

B. Natural Hazards

In addition to the solar modules having adequate access to the sun, the proposed project shall not be placed on known high risk sites. The major natural hazard concern in Colchester is flooding.

After the Lake Champlain flood in 2011, Colchester faced major flood-related damages that cost millions of dollars in recovery efforts. Flooding may impact a solar site by damaging electrical equipment as well as displacing floodwaters. For these reasons, a site shall not be located in a mapped flood plain or floodway location. See Maps 15 and 16 of the Colchester Town Plan for natural hazard site constraints.

C. Land Use

Ideally, preferred sites for net-metering should be built on existing development or on low value land. The best locations for net-metering projects are typically on previously developed lands or brownfield sites because they may not have ideal residential or commercial use in the future and currently often have existing energy use nearby. Harvesting of more than 100 trees and/or effecting more than one (1)

acre of land for a project is reviewed as a silvicultural operation and is best avoided for net-metering projects.

It is likely that the preferred net-metering site selected will operate for 25 years or more. Due to long term operations, the future land use of the selected site must also be taken into account.

Additionally, any solar sites located near Camp Johnson or in the flight path of the Burlington International Airport may require special approval by these entities. Glare from the solar arrays may affect flight activities.

D. Site Access

The ability to access the net metering system is important for various reasons. All net metering sites require maintenance to guarantee efficiency or may require upgrades as technology advances. Additionally, fire truck access is important during emergency situations with access to water to prevent fires spreading. If a new road needs to be created, an applicant should review the Chapter Seven of the Colchester Code of Ordinances and conform to the greatest extent possible:

- (a) The length of a private driveway, for the purpose of this Code shall be the distance measured along the centerline of the driveway from the curb cut in the public road to the subject structure. If the private driveway does not extend to the structure, the length of a private driveway is measured along the centerline of the driveway from the curb cut in the public road to fifty (50) feet from the subject structure.
- (b) A private driveway shall be extended to, at minimum, within fifty (50) feet of the structure served.
- (c) All private driveways, excepting private driveways Type I, shall have at least six-foot wide zone on each side of the driveway clear of encumbrances such as trees, structure, and rocks for plowed snow storage area on each side. In driveways under fifty (50) feet and driveways serving commercial structures, designated snow storage areas shall be permissible in lieu of the six-foot wide zone.
- (d) Every private driveway in excess of one hundred fifty (150) feet in length shall be provided with approved provisions for the turning around (see Figure 3.5 and 3.6 of the Colchester Public Works Specifications and Standards for dimensional requirements for a turnaround).
- (e) A private driveway shall have a minimum of thirteen and one-half-foot height clearance.
- (f) All private driveways, excepting private driveways Type I, shall be constructed so as to support a forty-thousand-pound vehicle.
- (g) All private driveways shall meet the following dimensional requirements unless waived by the Authority Having Jurisdiction (AHJ):

Type	Minimum Width
Private driveway Type I	10 feet
Private driveway Type II > 50 feet but < 300 feet in length	15 feet
Private driveway Type II > 300 feet in length	20 feet
Private driveway Type III	20 feet
Private road	Per the requirement of Colchester Code of Ordinance 14, Public Works Specifications and Standards for roadway standards as amended from time to time

E. Aesthetics

Developing a net metering system can have a large impact on the aesthetics of an area. An applicant shall assess the potential visual impact and prioritize sites that avoid, minimize, or mitigate potential adverse visual impacts associated with the construction of a project on the surrounding visual environment.

Key issues to be evaluated are whether a project has the potential to adversely impact the existing visual character or quality of the neighboring properties and/or the physical or natural surroundings. The Public Utilities Commission defines an adjoining landowner as a person who owns land in fee simple that: (1) Shares a property boundary with the tract of land on which a net-metering system is located; or (2) Is adjacent to that tract of land and the two properties are separated only by a river, stream, railroad line, or public highway. Potential visual effects from adjacent residences and other public vantage points should be recognized in the applicant’s selection process. Screening plans are recommended. The incorporated screening shall break up visible area of the project to mitigate the visibility of the project year round. If a ground mounted solar array project fills more than 25% of the field of vision of a human eye (24 mm focal length), a screening plan is advised.

Properties within the GD4OS (zoning overlay district detailed in the Development Regulations) areas designated as restricted open space with covenants to keep space open in perpetuity are protected from any development, including net metering projects. This overlay protects the aesthetics of these natural areas within Colchester.

F. Development Regulations

Development regulations in Colchester may limit the ability to add solar arrays in Town. Limitations will vary based on development regulations and constraints from neighborhood to neighborhood.

Below is a list of Town Districts that would not be acceptable at all for net-metering:

- Water Protection Overlay District
- Shoreland Overlay District

- Floodplain District

It is important to contact Colchester's Department of Planning and Zoning for advisory purposes on understanding the regulatory constraints before proceeding with additional analysis for any site in question.

G. Social Impact

Colchester is a diverse community rich in historic resources and a variety of cultural amenities. These amenities help to define the Town's community and create a sense of place. Sites should be selected as to avoid close proximity of cultural heritage sites such as historical structures, heavily trafficked properties, cemeteries, and so forth.

The 2019 Town Plan outlines specific neighborhoods that would allow for appropriate locations of solar siting. These areas include Exit 17, Exit 16, Malletts Bay Ave, Fort Ethan Allen, Severance Corner, Blakely / Poor Farm Road, Severance / Mill Pond Road, Northeast Quadrant, Clay Point, Colchester Village, Inner Bay, the Bay, and Marble Island. Although these are all designated areas, some possess constraints such as conflicting with existing uses, rural character, historically significant areas, and scenic lake views. Additionally, sites like Severance Corner may only use roof mounted solar and areas such as Colchester Village, Inner Bay, the Bay, and Marble Island may only allow for small scale solar sites. To learn more about the specific neighborhoods, review the "Lands of Colchester" Chapter of the 2019 Town Plan.

Site Selection Scorecard

After assessing all the possible constraints of a specific site and reviewing the Town Plan, parcel maps, CCRPC maps, development regulations, and site history, an applicant may decide to move forward with the project.

The Preferred Site Designation Scorecard is made up of 6 questions on areas that need to be addressed from topography to cultural impact. An applicant is required to complete the questions and tally the score from each question. If none of the options in a question relate to the site, that question receives a "0." If score card exceeds 6, the applicant should submit the scorecard application the Town of Colchester for review.

If the score exceeds 15 points, the Town of Colchester may designate the site as preferred. If the score is in the marginal bracket between 6 and 14 points, the Town will review the scorecard application and will submit the application to the Planning Commission and Chittenden County Regional Planning for approval following a public hearing. The Selectboard has given delegation to the Planning Commission to approve or deny the applications on their behalf. It is important that each applicant checks the ColchesterVT.gov website or receives a physical copy of these documents from the Planning and Zoning Department to confirm that the scorecard application completed has the most recent and relevant criteria.



COLCHESTER

PREFERRED SITE DESIGNATION SCORECARD

The undersigned hereby applies for preferred site review to determine if site can be deemed eligible to receive “preferred site designation” by the Town of Colchester as described below. **Please submit in PDF format to pzinfo@colchestervt.gov.**

Applicant _____

Project Street Address _____

Tax Map & Parcel No. _____

Existing Uses on Property _____

Proposed Solar Design on Property _____

Before getting started

Review the preferred sites overview & Town Plan

Check parcel maps & CCRPC maps

Review Development Regulations

Examine history of site

Objective

The Preferred Site Designation Scorecard is made up of 6 questions on areas that need to be addressed, including aesthetics and environmental concerns. Complete the questions and tally your scores from each question. If none of the options in a question relate to your site, that question receives a “0.” If your score card exceeds **5**, submit this application for Town of Colchester review.

A. How much of the site is visible from adjacent residences?

- Site is completely screened from adjacent residences 5
- Site fills less than 25% of the field of vision of a human eye (24 mm focal length) or will do so with proposed screening..... 4
- Site fills 25-49% of the field of vision of a human eye (24 mm focal length) or will so with proposed screening 3
- Site fills greater than 50% of the field of vision of a human eye (24 mm focal length) or will do so with proposed screening 2
- Site fills greater than 50% of the field of vision of a human eye (24 mm focal length) and no screening proposed 1

B. How does the site land use look?

Solar modules will be on existing building, brownfield, or existing impervious service	Automatic Preferred Site
Solar project will have less than 10,000 sq. ft. of disturbance.....	4
Solar project will have between 10,000 sq. ft. to a half acre of disturbance and average accessibility	3
Solar project will have half-acre to an acre of disturbance, and/or with challenging upgrades for accessibility.....	2
Site land use would require more than an acre of disturbance.....	1
Solar project will require more than 100 trees or an acre of trees, whichever is less, to be removed.....	1

C. If the site is located in one of the neighborhoods designated in the Town Plan, add or subtract the amount of points pertaining to the location.

Exit 17.....	5
Exit 16.....	5
Malletts Bay Ave	5
Blakely / Poor Farm Rd	5
Severance / Mill Pond Rd.....	5
Northeast Quadrant	5
Clay Point	5
Fort Ethan Allen (outside of NR Historic District).....	5
Fort Ethan Allen (within NR Historic District).....	-5
Severance Corner	-5
Colchester Village	-5
Inner Bay	-5
The Bay	-5
Marble Island	-5

D. Zoning regulations must be reviewed. If the site is located in any of the below areas, select which answer applies.

Water Protection Overlay District.....	Automatic Not Preferred Site
Shoreland Overlay District.....	Automatic Not Preferred Site
Floodplain District.....	Automatic Not Preferred Site
GD4 Open Space Overlay District.....	-5

E. An environmental review is necessary during the site selection process. If any of these apply to your site, deduct 5 points per selected.

- FEMA Special Flood Hazard Areas or Floodway..... **Automatic Not Preferred Site**
- Prominently visible from Lake Champlain..... -5
- Class III Wetlands..... -5

F. Site access must be considered during the development of renewable energy generation facilities. Please designate the current or prospective road condition:

- Access road to facility already exists within 150 feet of project..... 5
- Access road to facility already exists within 300 to 1,000 ft. of project..... 3
- Access road to facility greater than 1,000 feet from project..... 0

G. Additional Considerations

- Revegetation with native species representation of existing on-site species.....1

Score: _____

Scoring	Preferred Site Designation Consideration
15-19	Internal review necessary to score for preferred site designation
6-14	Requires review by the Colchester Planning Commission to determine designation
0-5	Not preferred site

Additional Information: A site plan shall be submitted with a complete description of the proposed project including but not limited to accurate site data such as derived from the Vermont Natural Resource Atlas, plans showing the location of all proposed improvements, photographs of the site, specifications on the equipment proposed and other information necessary to describe the nature of the project. The applicant must also list all the current and proposed uses taking place on the property. Data and plans shall be attached to the Preferred Site Designation Scorecard form.

I hereby certify that all the information requested as part of this application has been submitted and is accurate to the best of my knowledge.

Email address _____

Signature of Authorized Agent

Address & Telephone # of the Authorized Agent

Signature of Landowner or Building owner

Address & Telephone # of the Land or Building owner

By the land owner signature, the land owner is authorizing the applicant to act on their behalf.

THE FOLLOWING SECTION IS FOR PLANNING & ZONING ONLY

Request Incomplete _____ Request Denied _____ Request Approved _____

Planning & Zoning Coordinator

Director of Planning & Zoning

Letter Issued Date

Stipulations