

Section 4.19 Small Wind Turbines*

(A) New or expanded small wind turbine installations, **that are not required to be permitted by the State of Vermont Public Service Board and are as such considered “off the grid”*, may be permitted in designated zoning districts [see Article 2 Zoning Districts and District Standards] subject to Conditional Use Review under Article 5 of the Warren Land Use and Development Regulations. In addition, they must also meet the following standards:

1. A ground-mounted wind turbine shall be set back from all property lines, street right-of-way lines, and overhead utility lines a minimum distance equal to 1.1 times the height of the wind turbine. Turbine setbacks shall be measured from the center of the wind turbine base. With respect to an overhead utility line that provides service only to a single building or a single parcel of land, the setback requirement shall be met if the turbine is placed so that no portion of a rotor blade extends closer than five (5) feet to the utility line.
2. In the *Warren Village Historic Residential District (WVR)* and the *Sugarbush Village Residential District (SVR)*, a wind turbine located in or adjacent to the district shall be set back from the lines of adjoining or nearby properties a minimum distance equal to two (2) times the height of the wind turbine. In the case of a wind turbine that does not exceed thirty-five (35) feet in height and is located in either of these two districts, the wind turbine shall be set back at least fifteen (15) feet from all property lines and no portion of a rotor blade shall extend closer than five (5) feet to any lot line.
3. The height of a ground-mounted wind turbine shall be limited by the setback requirements of this section. The height of a rooftop or other building-mounted wind turbine shall not exceed the maximum permitted building height for the property by more than twenty percent (20%). For a rooftop or other building-mounted wind turbine that exceeds the maximum permitted building height by more than 20%, the Development Review Board (DRB), after a public hearing, may approve a greater height if the DRB determines that the placement of the turbine and context of the turbine site will mitigate any significant negative visual or safety impacts on nearby properties.

[Consider: “For property sizes between ½ acre and one acre the tower height shall be limited to 80 ft. For property sizes of one acre or more, there is no limitation on tower height, except as imposed by FAA regulations.]”

4. Wind turbines shall not be illuminated except as required by the Federal Aviation Administration or other applicable authority. The Development Review Board (DRB) may, however, approve lighting in other instances if it determines that the proposed lighting will enhance the appearance of the wind turbine and will not result in nuisances or hazards on nearby properties or streets. If lighting is required, a design that minimizes disturbances to nearby residences shall be utilized.
5. The structural design of any small wind turbine shall be required to meet all applicable state and federal regulations.
6. Wind turbines shall be designed in a manner that makes them as visually unobtrusive as possible, while meeting safety requirements. With respect to color, wind turbines, shall be white or off-white or unpainted metal, unless other colors are required by federal regulations or unless another color is approved by the Development Review Board (DRB) as being more effective or more appropriate in a particular instance.
7. No signs shall be located on or around a wind turbine except for necessary warning signs or informational signs located at or near ground level. Such signs may include information of an educational nature or information identifying the manufacturer or installer of the wind turbine but shall not include any off-premise advertising or any advertising for businesses or other activities located on the premises. No more than two permitted signs shall be located on or around each wind turbine. The total area of such signs shall not exceed twenty (20) square feet, except that no sign shall exceed four (4) square feet if located on a property in *Warren Village Historic Residential Zoning District*. Free-standing signs shall not exceed a height of five (5) feet, and the setback of such signs shall be in accordance with the regulations for the zoning district in which the turbine is located.
8. Any wind turbine must conform to the Performance Standards for noise as stated under Article 3, Section 3.11 (A) of the Warren Land Use and Development Regulations.

(B) In addition to the application requirements stated under *Article 5 Development Review, Section 5.2 Conditional Use Review (B) Application* the following information shall be submitted with the application for ground-mounted wind turbines and accessory structures to demonstrate compliance with the provisions of this chapter.

1. A site plan of the subject property showing adjoining streets, the proposed turbine and any proposed and existing buildings, fencing, structures, landscaping, driveways, parking, and curb cuts on the subject property, including specifications for all proposed landscaping.

2. An elevation drawing showing the proposed wind turbine and all structures and landscaping shown on the required site plan, indicating the height, color and materials of the tower and all proposed fencing and other structures.
3. Where lighting of the wind turbine is proposed, a lighting plan for the proposed wind turbine, indicating the location, color and intensity of the lighting, both as it will appear in daylight and at night, and indicating any mechanisms to prevent glare on adjacent properties and streets and to shield the lighting from residences, to the maximum extent feasible.
4. For any wind turbine that will exceed the height limit for buildings on the subject property, a vicinity map showing the subject property and the proposed wind turbine and fencing in the context of all property located within a distance from the turbine equal to three times the height of the turbine, showing within this area, all streets and existing buildings and significant structures and indicating the residential use of any buildings and any property zoned in Residential or Landmarks Districts, such map being marked with topographic contours at five-foot intervals.
5. For any wind turbine that will exceed the height limit for buildings on the subject property, color photographs showing the current view of the wind turbine site from any adjoining public street or any other street within 200 feet of the proposed wind turbine and from the closest groupings of residential buildings located within an area from the proposed wind turbine equal to three (3) times the height of the proposed structure, plus a second set of color photographs showing the same views with the proposed wind turbine superimposed onto the photographs.
6. A statement by an engineer licensed in the State of Vermont certifying that the proposed wind turbine will meet the noise standard of this ordinance with respect to impacts on properties in nearby residential zoning districts.
7. A statement indicating the estimated construction cost of the wind turbine and a statement indicating the estimated cost for demolition and removal of the wind turbine.
8. A performance bond or equivalent financial instrument, if required, sufficient to cover the estimated demolition and removal of the wind turbine.

(C) In addition to the application requirements stated under *Article 5 Development Review, Section 5.2 Conditional Use Review (B) Application* the following information shall be submitted with the application for roof-top mounted wind turbines and accessory structures to demonstrate compliance with the provisions of this chapter.

1. An elevation drawing of the building or structure to which the proposed wind turbine will be attached, showing the placement of the wind turbine and indicating the color of the structure and in any enclosures in relation to the color of the surface to which it will be attached and showing the projection of the wind turbine from the structure, marked with all necessary dimensions.
 2. Color photographs of the building or structure to which the proposed wind turbine will be attached, with the proposed wind turbine superimposed onto such photographs, showing various perspectives from which the wind turbine will be viewed.
 3. A statement by an engineer licensed in the State of Vermont certifying that the proposed wind turbine will meet this noise standard of this ordinance with respect to impacts on properties in nearby Residential zoning districts.
- (D) All buildings, structures, fences, and property used in connection with a wind energy facility shall be maintained in good condition and in safe working order.
- (E) If use of a wind turbine has been discontinued for 180 consecutive days, the facility shall be deemed abandoned. Within ninety (90) days of abandonment, the permit holder or other responsible party shall remove the abandoned structures and shall restore the site to an attractive landscaped condition. If such actions are not taken, the Town may cause the removal of all structures at the expense of the permit holder or other responsible party.
- (F) A wind energy facility lawfully existing on the effective date of this chapter or any amendment thereto may be continued even if such facility does not conform to the provisions of this chapter, but such tower shall not be made more nonconforming unless the alteration is approved as a zoning variance by the Development Review Board