

Town of Somerset, NY  
Monday, June 29, 2015

## Chapter 205. ZONING

### Article XIII. Supplemental Regulations

#### § 205-43.2. Commercial wind-energy conversion systems.

[Added 7-11-2006 by L.L. No. 1-2006]

- A. The placement, construction, and major modification of all commercial wind-energy conversion systems within the boundaries of the Town of Somerset shall be permitted only by special use permit, upon site plan approval issued by the Planning Board as provided herein, after SEQR review, with the Town of Somerset designated as lead agent, and upon issuance of a building permit, and subject to all provisions of this section.
- B. Applications under this section shall be made as follows:
- (1) Applicants for a special use permit to place, construct or modify wind-energy conversion systems within the Town of Somerset shall submit the following information to the Planning Board for its referral to a professional engineer or consultant for review and recommendation:
    - (a) Name and address of the applicant.
    - (b) Evidence that the applicant is the owner of the property involved or has the written permission of the owner to make such an application.
    - (c) Visual environmental assessment form (visual EAF), landscaping plan, and visual assessment report, including appropriate models and photography assessing the visibility from key viewpoints identified in the visual EAF (or by the Town of Somerset), existing tree lines and proposed elevations. The visual EAF shall include a detailed or photographic simulation showing the site fully developed with all proposed wind turbines and accessory structures.
    - (d) A site plan drawn in sufficient detail to show the following:
      - [1] Location of the tower(s) on the site and the tower height, including blades, rotor diameter and ground clearance.
      - [2] Utility lines, both above and below ground, within a radius equal to the proposed tower height including the blades.
      - [3] Property lot lines and the location and dimensions of all existing structures and uses on site within 675 feet of the wind-energy conversion systems.
      - [4] Surrounding land use and all structures within 675 feet of the wind-energy conversion systems.

- [5] Dimensional representation of the various structural components of the tower construction including the base and footing.
  - [6] Certification by a registered New York State professional engineer that the tower's design is sufficient to withstand wind loading requirements for structures as established by the New York State Uniform Construction Code.
  - [7] Existing topography.
  - [8] Proposed plan for grading and removal of natural vegetation.
  - [9] Proposed plan for restoration after construction according to NYS Agriculture and Markets and NYS Department of Environmental Conservation guidelines.
  - [10] Wind characteristics and dominant wind direction from which 50% or more of the energy contained in the wind flows.
  - [11] Plan for ingress and egress to the proposed project site, including:
    - [a] A description of the access route from the nearest state, county, and/or Town-maintained roads, to include:
      - [i] Road surface material stating the type and amount of surface cover.
      - [ii] Width and length of access route.
      - [iii] Dust control procedures.
    - [b] A road maintenance schedule or program.
    - [c] Review railroad accessibility for deliveries.
  - [12] Detailed construction plan, including but not limited to a construction schedule, hours of operation; designation of heavy haul routes; a list of material equipment and loads to be transported; identification of temporary facilities intended to be constructed and contact representative in the field with name and phone number.
  - [13] Tree removal. All groves of trees shall be located on the site plan at time of application. No grove or woodlots of trees shall be removed without approval of the Planning Board.
- (e) Turbine information. Specific information on the type, size, height, rotor material, rated power output, performance, safety, and noise characteristics of each commercial wind turbine model, tower, and electrical transmission equipment.
  - (f) Turbine drawings. Photographs or detailed drawings of each wind turbine model, including the tower and foundation.
  - (g) Noise report. A noise report shall be furnished which shall include the following:
    - [1] A description and map of the project's noise-producing features, including the range of noise levels expected, and the tonal and frequency characteristics expected. The noise report shall include low frequency, infrasound, pure tone, and repetitive/impulsive sound.
    - [2] A description and map of the noise-sensitive environment, including any sensitive noise receptors, i.e., residences, hospitals, libraries, schools, places of worship and other facilities where quiet is important within two miles of the proposed facilities.

- [3] A survey and report prepared by a qualified engineer, that analyzes the preexisting ambient noise regime (including seasonal variation), including but not limited to separate measurements of low frequency and A-weighted noise levels across a range of wind speeds (including near cut-in), turbulence measurements, distance from the turbines, location of sensitive receptors relative to wind direction; and analyses at affected sensitive receptors located within two miles of the proposed project site.
  - [4] A description and map showing the potential noise impacts, including estimates of expected noise impacts upon construction and operation workers, and estimates of expected noise levels at sensitive receptor locations.
  - [5] A description and map of the cumulative noise impacts.
  - [6] A description of the project's proposed noise-control features, including specific measures proposed to protect workers and specific measures proposed to mitigate noise impacts for sensitive receptors consistent with levels in this section.
  - [7] Identification of any problem areas.
  - [8] Manufacturers' noise design and field testing data, both audible [dB(A)] and low frequency (deep bass vibration), for all proposed structures.
  - [9] A report that outlines issues and considerations for individuals that use hearing aids.
- (h) A geotechnical report shall be furnished which shall at a minimum include the following:
- [1] Soils engineering and engineering geologic characteristics of the site based on on-site sampling and testing.
  - [2] Foundation design criteria for all proposed structures.
  - [3] Slope stability analysis.
  - [4] Grading criteria for ground preparation, cuts and fills, soil compaction.
- (i) Ice throw calculations. A report from a New York State professional engineer that calculates the maximum distance that ice from the turbine blades could be thrown. (The basis of the calculation and all assumptions must be disclosed.)
- (j) Blade throw calculations. A report from a New York State professional engineer that calculates the maximum distance that pieces of the turbine blades could be thrown. (The basis of the calculation and all assumptions must be disclosed.)
- (k) Catastrophic tower failure. A report from the turbine manufacturer stating the wind speed and conditions that the turbine is designed to withstand (including all assumptions).
- (l) FAA notification. A copy of written notification to the Federal Aviation Administration.
- (m) Utility notification. Utility interconnection data and a copy of a written notification to the utility of the proposed interconnection.
- (n) Notification to microwave communications link operators. An application that includes any wind turbine which is located within two miles of any microwave communications link shall be accompanied by a copy of a written notification to the operator of the link.

- (o) Floodplain. An application that includes any wind turbine which is located within a one-hundred-year floodplain area, as such flood hazard areas are shown on the floodplain maps, shall be accompanied by a detailed report which shall address the potential for wind erosion, water erosion, sedimentation and flooding, and which shall propose mitigation measures for such impacts.
  - (p) Other information. Such additional information as may be reasonably requested by the Town Engineer or Planning Board.
- C. Special use permits issued for wind-energy conversion systems shall be subject to the following conditions:
- (1) Setbacks. The applicant shall adhere to the following setbacks.
    - (a) From zoning districts:
      - [1] Residential lot setback.
        - [a] No commercial wind-energy systems shall be allowed in any residential district (R, R-1, RLS).
        - [b] One thousand feet from any residential district boundary line (R-1, R-2, and RLS).
    - (b) From structures:
      - [1] A minimum 1.5 times the total WECS height from any building.
      - [2] A minimum of 1,500 feet from any dwelling.
    - (c) From property lines (excluding residential zones):
      - [1] A minimum 1.5 times the total WECS height from any property line excluding adjoining lot lines of project participants.
    - (d) From public road and highways:
      - [1] A minimum 1.5 times the total WECS height from any public road and highway.
      - [2] Where the lot line abuts a public right-of-way, the setbacks specified above shall be measured from the center line of such right-of-way.
    - (e) From aboveground transmission lines greater than 12 kilovolts:
      - [1] A minimum 1.5 times the total WECS height from any aboveground transmission line greater than 12 kilovolts, excluding where transmission lines are located within PUD Zones.
    - (f) Notwithstanding the provisions set forth in these subsections, such setbacks from lot lines do not apply if the application is accompanied by a legally enforceable agreement for a period of 25 years or the life of the permit, whichever is longer, that the adjacent landowner agrees to the elimination of the setback.
  - (2) Maximum overall height. The maximum overall height of any wind-energy conversion system shall be 450 feet. The maximum height shall be measured from the ground elevation to the top of the tip of the blade in the vertical position.
  - (3) Signage.

- (a) Signage limited. No advertising sign or logo shall be placed or painted on any commercial wind-energy facility.
- (4) Color and finish.
- (a) Color and finish. Wind turbines shall be painted a nonobtrusive (e.g., light environmental color such as white, gray, or beige) color that is nonreflective.
  - (b) Camouflage facilities. The design of commercial wind-energy facility buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the facility to the natural setting and the existing environment.
- (5) Lighting.
- (a) Lighting plan required. The applicant shall submit a commercial wind-energy facility lighting plan that describes all lighting that will be required, including any lighting that may be required by the FAA. Such plan shall include but is not limited to the planned number and location of lights, light color, whether any such lights will be flashing, and mitigation measures planned to control the light so that it does not spill over onto neighboring properties.
- (6) Compliance with regulatory agencies. The applicant is required to obtain all necessary regulatory approvals and permits from all federal, state, county, and local agencies having jurisdiction and approval related to the completion of the wind-energy conversion system.
- (7) Compliance with the Local Waterfront Revitalization Plan. The applicant is required to conform to all requirements of the Town of Somerset Local Waterfront Revitalization Plan.
- (8) Safety and security requirements. The applicant shall adhere to the following safety and security requirements.
- (a) Safety shutdown. Each wind turbine shall be equipped with both manual and automatic controls to limit the rotational speed of the blade within the design limits of the rotor. Manual electrical and/or overspeed shutdown disconnect switches shall be provided and clearly labeled on the wind turbine structure. No wind turbine shall be permitted that lacks an automatic braking, governing, or feathering system to prevent uncontrolled rotation, overspeeding and excessive pressure on the tower structure, rotor blades, and turbine components.
  - (b) Grounding. All structures which may be charged with lightning shall be grounded according to applicable electrical codes.
  - (c) Wiring. All wiring between the wind turbines and the wind-energy facility substation shall be underground. The applicant is required to provide a site plan showing the locations of all overhead and underground electric utility lines, including substations for the project.
  - (d) All transmission lines from wind-energy conversion systems to on-site substations shall be underground. The Planning Board shall have the authority to waive this requirement if the owner of the property upon which the transmission line will be sited consents to aboveground transmission lines or if the Planning Board has sufficient engineering data submitted by the applicant to demonstrate that underground transmission lines are unfeasible.
  - (e) Ground clearance. The blade tip of any wind turbine shall, at its lowest point, have ground clearance of not less than 50 feet.

- (f) Climability. Wind turbine towers shall not be climbable up to 15 feet above ground level.
  - (g) Access doors locked. All access doors to wind turbine towers and electrical equipment shall be lockable and shall remain locked at all times when operator personnel are not present.
  - (h) Self-supporting structures. All structures shall be of monopole construction (single pole). No lattice structures or guy-wire-supported structures shall be permitted.
  - (i) Signage. Appropriate warning signage shall be placed on wind turbine towers, electrical equipment, and wind-energy facility entrances. Signage shall also include two twenty-four-hour emergency contact numbers to the owner of the wind turbine in accordance with local, state, and federal codes.
  - (j) Ice throw. Permit shall determine the acceptable ice throw range based on the activities in the area, location and calculations of the ice throw.
- (9) Noise requirements. The applicant shall adhere to the following noise requirements.
- (a) Compliance with noise regulations required. A commercial wind-energy facility permit shall not be granted unless the applicant demonstrates that the proposed project complies with all noise regulations.
  - (b) Noise study required. The applicant shall submit a noise study based on the requirements set out in Subsection B of this section. The Planning Board shall determine the adequacy of the noise study and, if necessary, may require further submissions. The noise study shall consider the following:
    - [1] Low-frequency noise.
    - [2] Infrasound noise.
    - [3] Pure tone.
    - [4] Repetitive/impulsive sound.
  - (c) Noise setbacks. The Planning Board may impose a noise setback that exceeds the other setbacks set out in this section if it deems that such greater setbacks are necessary to protect the public health, safety and welfare of the community.
  - (d) Audible noise standard. The audible noise standard due to wind turbine operations shall not be created which causes the noise level at the boundary of the proposed project site to exceed 45 dB(A) for more than five minutes out of any one-hour time period or to exceed 50 dB(A) for any time period.
  - (e) Operations, low-frequency noise. A commercial wind-energy facility shall not be operated so that impulsive sound below 20 Hz adversely affects the habitability or use of any dwelling unit, hospital, school, library, nursing home, or other sensitive noise receptor.
  - (f) Noise complaint and investigation process required. The applicant shall submit a noise complaint and investigation process. The Planning Board shall determine the adequacy of the noise complaint and investigation process.
- (10) Fire hazard protection. The applicant shall submit a fire control and prevention program that is appropriate and adequate for the proposed facility. The proposed program may include, but is not limited to, the following:

- (a) Fireproof or fire-resistant building materials.
  - (b) Buffers or fire-retardant landscaping.
  - (c) Availability of water.
  - (d) An automatic fire-extinguishing system for all buildings or equipment enclosures of substantial size containing control panels, switching equipment, or transmission equipment-without regular human occupancy.
  - (e) Provision of training and firefighting equipment for local fire protection personnel.
- (11) Impact on wildlife species and habitat. The applicant shall adhere to the following regarding the impact on wildlife species and habitat.
- (a) Endangered or threatened species. Development and operation of a commercial wind-energy facility shall not have a significant adverse impact on endangered or threatened fish, wildlife, or plant species or their critical habitats, or other significant habitats identified in the Town of Somerset Comprehensive Plan and/or the studies and plans of the regional planning commissions based on criteria established by the federal or state regulatory agencies.
  - (b) Migratory birds. Development and operation of a commercial wind-energy facility shall be evaluated based on SEQRA findings.
- (12) Unsafe and inoperable wind-energy facilities; site reclamation. The applicant shall adhere to the following.
- (a) Removal and site restoration. Unsafe commercial wind-energy facilities, inoperable commercial wind-energy facilities, and commercial wind-energy facilities for which the permit has expired shall be removed by the owner. All safety hazards created by the installation and operation of the commercial wind-energy facility shall be eliminated, and the site shall be restored to its natural condition as per Subsection C(12)(b) of this section. A bond or other appropriate form of security shall be required to cover the cost of the removal and site restoration.
  - (b) Removal and site restoration plan required. The applicant shall submit a removal and site restoration plan and removal and site restoration plan cost estimate to the Town Planning Board for its review and approval. The restoration plan shall identify the specific properties it applies to and shall indicate removal of all buildings, structures, wind turbines, access roads and/or driveways and foundations to four feet below finish grade; road repair costs, if any; and all regarding and revegetation necessary to return the subject property to the condition existing prior to establishment of the commercial wind-energy facility. The restoration shall reflect the site-specific character, including topography, vegetation, drainage, and any unique environmental features. The plan shall include a certified estimate of the total cost (by element) of implementing the removal and site restoration plan.
  - (c) Public nuisance. Every unsafe commercial wind-energy facility and every inoperable commercial wind-energy facility is hereby declared a public nuisance which shall be subject to abatement by repair, rehabilitation, demolition, or removal. An inoperable commercial wind-energy facility shall not be considered a public nuisance, provided that the owner can demonstrate that modernization, rebuilding or repairs are in progress or planned and will be completed within no more than six months.
  - (d) "Inoperable" defined. A commercial wind-energy facility shall be deemed inoperable if it has not generated power within the preceding six months.

- (13) Interference with residential television, microwave and radio reception. The applicant must submit information that the proposed construction of the wind-energy conversion system will not cause interference with microwave transmissions, cellular transmissions, residential television interference or radio reception of domestic or foreign signals. The applicant shall include specific measures proposed to prevent interference, a complaint procedure, and specific measures proposed to mitigate interference impacts.
- (14) Interference with aviation navigational systems. The applicant shall adhere to the following:
- (a) No interference with aviation facilities. No commercial wind-energy facility shall be installed or operated in a manner that causes interference with the operation of any aviation facility.
  - (b) Compliance with FAA regulations. All commercial wind-energy siting shall comply with Federal Aviation Administration (FAA) regulations.
  - (c) Locking mechanisms to limit radar interference required. All commercial wind-energy facilities shall include a locking mechanism which prevents the blades from rotating when not producing power, in order to limit airport radar interference or clutter. This provision does not apply while the WECS is freewheeling during startup and shutdown. The Planning Board may modify or eliminate the requirement for a locking mechanism if sufficient evidence is presented that no significant airport radar interference or clutter will be caused by the commercial wind-energy facility.
- (15) Erosion control. The applicant shall adhere to the following.
- (a) Erosion control plan required. Before the Town of Somerset shall issue a grading or building permit for the commercial wind-energy facility, the applicant shall submit an erosion control plan to the Planning Board for its review and approval. The plan shall minimize the potential adverse impacts on wetlands and Class I and II streams and the banks and vegetation along those streams and wetlands and to minimize erosion or sedimentation.
  - (b) If the proposed project disturbs over one acre, the applicant must comply with the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-02-01). A copy of the notice of intent (NOI) and stormwater pollution prevention plan (SWPPP) as required by the general permit must be filed with the Town of Somerset prior to construction. Per the general permit, construction cannot begin until the required time period for NYS DEC review has passed.
- (16) Certification. The applicant shall provide the following certifications:
- (a) Certification of structural components. The foundation, tower and compatibility of the tower with the rotor and rotor-related equipment shall be certified in writing by a structural engineer registered in New York. The engineer shall certify compliance with good engineering practices and compliance with the appropriate provisions of the Uniform Construction Code that have been adopted in New York State.
  - (b) Certification of postconstruction. After completion of the wind-energy conversion system, the applicant shall provide a postconstruction certification from a licensed professional engineer registered in the State of New York that the project complies with applicable codes and industry practices and has been completed according to the design plans.
  - (c)



Certification of electrical system. The electrical system shall be certified in writing by an electrical engineer registered in New York. The engineer shall certify compliance with good engineering practices and with the appropriate provisions of the electric code that have been adopted by New York State.

- (d) Certification of rotor overspeed control. The rotor overspeed control system shall be certified in writing by a mechanical engineer registered in New York State. The engineer shall certify compliance with good engineering practices.
- (e) Certification of project. Certificate of completion must be supplied by the applicant and approved by the Town of Somerset Code Enforcement Officer.

D. Monitoring requirements for wind-energy conversion systems:

- (1) Right to enter premises for monitoring. Upon reasonable notice, Town of Somerset officials or their designated representatives may enter a lot on which a commercial wind-energy facility permit has been granted for the purpose of compliance with any permit requirements. Twenty-four hours' advance notice by telephone to the owner/operator or designated contact person shall be deemed reasonable notice.
- (2) Avian/bat impact study plan. The applicant shall submit a plan for monitoring the avian impact of the commercial wind-energy facility to the Planning Board for its review and approval. Such plan shall document and follow accepted scientific study procedures. In addition, the applicant shall agree to submit a report to the Planning Board, according to the requirements of the applicable regulatory agencies, that identifies all dead birds found within 500 feet of the commercial wind-energy facility.
- (3) Periodic reporting required. The applicant shall agree to submit periodic monitoring reports to the Planning Board. The report shall contain data on the operations and environmental impacts and shall be in the form prescribed by the Planning Board.
- (4) Power production report required. The applicant shall agree to submit a quarterly power production report to the Planning Board. The power production report shall cover the preceding calendar quarter and shall be in the form prescribed by the Planning Board and shall include actual power production in kilowatt hours for each commercial wind-energy facility.
- (5) Inspections. Unless waived by the Planning Board, wind turbines or poles over 150 feet in height shall be inspected annually by a New York State licensed professional engineer who has been approved by the Town or at any other time upon a determination by the Town's Code Enforcement Office that the wind turbine, tower or pole may have sustained structural damage, and a copy of the inspection report shall be submitted to the Town Code Enforcement Officer. Any fee or expense associated with this inspection shall be borne entirely by the permit holder.
- (6) General complaint process:
  - (a) During construction, the Town of Somerset Code Enforcement Officer can issue a stop order at any time for any violations of the permit.
  - (b) Post-construction. After construction is complete, the permit holder shall establish a contact person, including name and phone number, for receipt of any complaint concerning any permit requirements. Upon receipt of complaint from the Town of Somerset Code Enforcement Officer, the permit holder/contact person shall have seven working days to reply to the Town in writing.

E. Application and development impact fees and costs:

- (1) Application fee. The applicant shall pay all costs associated with the Town of Somerset's review and processing of the application. The applicant shall submit a deposit with the application in the amount as determined by resolution by the Town Board. The Town of Somerset may require additional deposits to cover the costs of reviewing and processing the application. Such additional deposits, if requested, shall be promptly submitted by the applicant. Following action on the application, any unused amount of the deposit(s) shall be returned to the applicant with a summary of the costs incurred.
- (2) Development fees to be paid. A one-time or periodic fee and a requirement to provide public works or services may be imposed as a condition of a commercial wind-energy facility permit. Such fees must be related to the public need created by the wind-energy development. The purposes for which the permit fee may be used include, but are not limited to, providing roads required by the wind-energy development, providing fire protection services, and establishing and operating a monitoring system.
- (3) Payment in lieu of taxes (host community agreement):
  - (a) Prior to a building permit being issued, the applicant is required to negotiate a payment in lieu of taxes (host community) agreement with the Town of Somerset.
- (4) Proof of insurance. Prior to the issuance of a building permit, the applicant shall provide the Town Clerk with proof of insurance in a sufficient dollar amount to cover potential personal and property damage associated with construction and operation thereof.
- (5) The Town of Somerset reserves the right to, by local law, provide that no exemption pursuant to the provision of the New York State Real Property Tax Law (RPTL) § 487 shall be applicable within its jurisdiction.

F. Findings.

- (1) Findings necessary to grant a commercial wind-energy facility permit: In order to grant a commercial wind-energy facility permit, the Town of Somerset shall review the application, all filings by any other party, and conduct a public hearing. A commercial wind-energy facility permit shall not be granted unless the Town of Somerset makes the following findings based on substantial evidence.
  - (a) Consistent with the Comprehensive Plan. The proposed commercial wind-energy facility project is consistent with the Comprehensive Plan of the Town of Somerset.
  - (b) Will not unreasonably interfere with the orderly land use and development plans. The proposed commercial wind-energy facility will not unreasonably interfere with the orderly land use and development plans of the Town of Somerset.
  - (c) Benefits to the applicant and public will exceed any burdens. That the benefits to the applicant and the public of the proposed commercial wind-energy facility project will exceed any burdens.
  - (d) Not detrimental to the public health, safety and general welfare of the community. The proposed commercial wind-energy facility will not be detrimental to the public health, safety or general welfare of the community.
  - (e) Complies with all required provisions of the Zoning Ordinance. The proposed commercial wind-energy facility shall comply with all required provisions of the Zoning Ordinance, unless variances have been properly applied for and granted pursuant to Article XVIII.

- G. The Planning Board may grant the special use permit, deny the special use permit, or grant the special use permit with written stated conditions. Denial of the special use permit shall be by written decision based upon substantial evidence submitted to the Board. Upon issuance of the special use permit, the applicant shall obtain a building permit for each tower (wind-energy conversion system).
- H. The special use permit shall not be assignable or transferable.
- I. Amendments to special use permit. Any changes or alterations post construction to the wind-energy conversion system shall be done only by amendment to the special use permit and subject to all requirements of this section.