Chapter 133
Wind Energy Systems

[HISTORY: Adopted by the Board of Trustees of the Village of Newark on....]

GENERAL REFERENCES

Site Plan – See Chapter 134 **Zoning – See Chapter 170**

§ 133-1 Purpose and Intent

The intent of this chapter is to promote and protect the public health, welfare and safety of the inhabitants of the Village of Newark by regulating wind energy systems to thereby create a more attractive economic and business climate, enhance and protect the physical appearance of the community, preserve the scenic and natural beauty of designated areas, preserve property values and provide a more enjoyable and pleasing community.

§ 133-2 Definitions

As used in this chapter, the following terms shall have the meanings indicated:

Accessory Use

A use subordinate and related to the principal use of a lot, or of the principal building or structure on the same lot, and serving a purpose clearly incidental to the permitted principal use of the lot or of its principal building, including parking and swimming pools.

Wind Energy Conversion System – a device that converts wind energy to electrical energy in sufficient voltage and amperage to power home, farm or business machines or appliances.

- **Commercial Wind Energy Conversion System** – a wind energy conversion system that is the prime use on a parcel, providing electrical power for use off-site.
- **Non-commercial Wind Energy Conversion System** – a wind energy conversion system that is incidental and subordinate to another use on the same parcel, supplying electrical power to a business that is the parcel's principal use.

§ 133-3 Requirements

A. All Wind Energy Systems shall be an accessory use, i.e. non-commercial.

B. Wind Energy Systems shall comply with all height requirements of the District that are located within.

C. A permit shall be required prior to erecting a Wind Energy System. All permit fees shall be paid by the applicant pursuant to the Village of Newark Fee Schedule as set forth by the Newark Village Board.

D. All Wind Energy Systems shall require a Special Permit.

E. Applications. Applications for WECS Special Permits shall include:

(1) The name, address, and telephone number of the applicant are required. If the applicant will be represented by an agent, the name, address, and telephone number of the agent are required, as well as an original signature of the applicant authorizing the agent to represent the applicant.

(2) The name, address, and telephone number of the property owner. If the property owner is not the applicant, the application shall include a letter or other written permission signed by the property owner confirming that the property owner is familiar with the proposed application and authorizing the submission of the application.

(3) The address of each proposed Tower site, including the tax map section, block, and lot number.

(4) Evidence that the proposed Tower height does not exceed the height recommended by the manufacturer or distributor of the system.

(5) A line drawing of the electrical components of the system in sufficient detail to allow for a determination that the manner of installation conforms to the Electric Code.

(6) Sufficient information demonstrating that the system will be used primarily to reduce on-site consumption of electricity.

(7) Written evidence that the electric utility service provider that serves the proposed site has been informed of the applicant's intent to install an interconnected customer- owned electricity generator, unless the applicant does not plan, and states so in the application, to connect the system to the electricity grid.

F. Site Plan Requirements.

(1) A Site Plan, prepared by a Professional Engineer registered to practice in New York State, is required to be submitted, and drawn in sufficient detail to show the following:

i. Location of the Tower(s) on the site and the Tower height, including blades, rotor diameter, and ground clearance**.**

ii. Utility lines, both above and below ground, within radius equal to the proposed Tower height, including blades.

iii. Property lot lines and the location and dimensions of all existing structures and uses on site within 400 feet of the system.

iv. Dimensional representation of the various structural components of the Tower construction, including the base and footing.

v. Design data indicating the basis of design, including manufacturer's dimensional drawings and installation and operation instructions.

vi. Certification by a registered Professional Engineer or manufacturer's certification that the Tower design is sufficient to withstand wind-load requirements for structures as established by the Codes of New York State.

vii. Evidence from a qualified individual that the site is feasible for a WECS.

viii. A Full Environmental Assessment Form ("EAF") and Visual EAF Addendum Form prepared in accordance with the State Environmental Quality Review Act shall be submitted.

ix. Digital elevation model-based project visibility map showing the impact of topography upon visibility of the WECS from nearby strategic vantage points, to a distance radius of three (3) miles from the center of the WECS site. Scale used shall depict the 3- mile radius as no smaller than 2.7 inches, and the base map shall be a published topographic map showing cultural features. The visual analysis shall also indicate the color treatment of the system's components and any visual screening incorporated into the project that is intended to lessen the system's visual prominence.

x. No fewer than four (4) and no more than the number of proposed individual wind turbines plus three (3) color photos, no smaller than 3" x 5 ", taken from locations within a 3-mile radius from it and to be selected by the Village Code Enforcement Officer, and computer-enhanced to simulate the appearance of the as-built aboveground facilities as they would appear from these locations.

G. Access. Towers shall be constructed to provide one of the following means of access control or other appropriate method of access:

(1) Tower-climbing apparatus located no closer than twelve (12) feet from the ground.

(2) A locked anti-climb device installed on the Tower.

(3) A locked, protective fence at least six (6) feet in height that encloses the Tower.

H. Noise Requirements for Wind Energy Conversion Systems.

(1) Noise. Except during short-term events, including utility outages and severe wind storms, a WECS shall be designed, installed, and operated so that the statistical sound-pressure level generated by a small WECS shall not exceed L10 - 45 dBA, measured at the closest exterior wall of the nearest off-site dwelling existing at the time of approval (including structures under construction at said time), nor more than six (6) dBA greater than either the nighttime or daytime pre-application background ambient noise level measured in leaf-off conditions for a period of no less than twenty-four (24) hours, measured at the time of completing the SEQRA review of the application.

(2) In the event audible noise due to WECS operations contains a steady pure tone, such as a whine, screech, or hum, the standards for audible noise set forth in subparagraph (a) of this subsection shall be reduced by five (5) dBA. A pure tone is defined to exist if the one-third octave band sound pressure level in the band, including the tone, exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by five (5) dBA for center frequencies of 500 Hz and above, by eight (8) dBA for center frequencies between 160Hz and 4 400 Hz, or by fifteen (15) dBA for center frequencies less than or equal to 125 Hz.

(3) The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in dBA, which is exceeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at the exterior of potentially affected existing residences. Ambient noise level measurement techniques shall employ all practical means of reducing the effect of wind-generated noise at the microphone. Ambient noise level measurements may be performed when wind velocities at the proposed project site are sufficient to allow wind turbine operation, provided that the wind velocity does not exceed thirty (30) mph at the ambient noise measurement location.

(4) Any noise level falling between two (2) whole decibels shall be the lower of the two.

I. Setbacks for Wind Energy Conversion Systems.

(1) Each WECS shall be set back from site boundaries, measured from the center of the WECS, a minimum distance of:

i. 600 feet from the nearest site boundary property line, except the setback shall be 500 feet where the boundary is with state, county, Village, or village owned property.

ii. 600 feet from the nearest public road.

iii. 1,200 feet from the nearest off-site residence existing at the time of application, measured from the exterior of such residence.

iv. 100 feet from state-identified wetlands. This distance may be adjusted to be greater or lesser at the discretion of the reviewing body, based on topography, land cover, land uses, and other factors that influence the flight patterns of resident birds.

(2) Each WECS shall be sited so as to avoid shadow flicker affecting neighboring residences.

(3) Other WECS structures and improvements shall comply with the setback requirements of the applicable zoning district.

(J) Noise and Setback Waivers. Easements. Variances.

(1) In the event the noise levels resulting from a WECS exceed the criteria established in this Section, or a setback requirement is not met, a waiver will be granted from such requirement by the Village Board in the following circumstances, where the adjoining owner's property is considered part of the Site:

i. Written consent from the affected property owners has been obtained stating that they are aware of the WECS and the noise and/or setback limitations imposed by this Section, and that they wish to be part of the site as defined herein, and that consent is granted to (a) allow noise levels to exceed the maximum limits otherwise allowed or (b) allow setbacks less than required; and

ii. In order to advise all subsequent owners of the burdened property, the consent, in the form required for an easement, shall be recorded in the County Clerk's Office describing the benefited and burdened properties. Such easements shall be permanent and may not be revoked without the consent of the Village Board, which consent shall granted upon either the completion of the decommissioning of the benefited WECS m accordance with this Section, or the acquisition of the burdened parcel by the owner of the benefited parcel or the WECS.

(2) In any case where written consent is not obtained, a variance from the Zoning Board of Appeals shall be required.

(K) Electromagnetic Interference. WECS generators and alternators shall be properly filtered and/or shielded in order to avoid electromagnetic interference and shall comply with the rules and regulations of the Federal Communications Commission contained in47 CFR Parts 15 and 18.

(L) Safety.

(1) No WECS 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.

(2) The minimum distance between the ground and any part of the rotor blade system shall be thirty (30) feet.

(3) Procedures acceptable to the Village Planning Board for emergency shutdown of power generation units shall be established and posted prominently and permanently on at least one (1) location on the road frontage of each individual unit.

(4) Appropriate warning signs shall be posted. The type and placement of signs shall be determined on an individual basis as safety needs dictate.

(5) The permittee shall meet all FAA requirements to lighting.

(6) All small WECS Tower structures shall be designed and constructed to be in compliance with pertinent provisions of the Uniform Building Code and National Electric Code.

(7) All WECS shall be equipped with manual and automatic overspeed controls. The conformance of rotor and overspeed control design and fabrication with good engineering practices shall be certified by the manufacturer.

(8) All WECS developments shall make appropriate provisions for access by emergency vehicles and maintenance vehicles.

M. Transmission Lines. All on-site electrical wires associated with the WECS shall be installed underground, except for tie-ins to a public utility company and public utility company transmission poles, towers, and lines. This standard may be modified by the Village Planning Board if the project terrain is determined to be unsuitable due to reasons of excessive grading, biological impacts, or similar factors.

N. Other Development Standards

(1) The WECS Tower and blades shall be painted a non-reflective, unobtrusive color that blends the system and its components into the surrounding landscape to the greatest extent possible and incorporates non-reflective surfaces to minimize any visual disruption.

(2) The WECS shall be designed and located in such a manner to minimize adverse visual impacts from public viewing areas (e.g., public parks, roads, and trails).

(3) Exterior lighting on any structure associated with the WECS shall not be allowed except that which is specifically required by the Federal Aviation Administration.

(4) At least one (1) sign shall be posted on the Tower, at a height of five (5) feet, warning of electrical shock or high voltage and harm from revolving machinery. No brand names, logo, or advertising shall be placed or painted on the Tower, rotor,

generator, or tail vane where they would be visible from the ground, except that a system or tower manufacturer's logo may be displayed on a system generator housing in an unobtrusive manner.

(5) Anchor points for any guy wires for a system Tower shall be located within the property that the system is located on and not on or across any aboveground electric transmission or distribution lines. The point of attachment for the guy wires shall be enclosed by a fence six (6) feet high or sheathed in bright orange or yellow covering from three (3) to eight (8) feet above the ground.

(6) Construction of on-site access roadways shall be minimized. Temporary access roads utilized for initial installation shall be regraded and revegetated to the pre-existing natural condition after completion of installation.

(7) No chemicals may be used to control road dust during construction.

(8) All WECS shall be maintained in good condition and in accordance with all requirements of this section.

O. Liability Insurance. Prior to the issuance of a Building Permit, the applicant shall provide the Village proof, in the form of a duplicate insurance policy or a certificate issued by an insurance company, that liability insurance has been obtained to cover damage or injury which might result from the failure of the Tower and/or the WECS or any part thereof and transmission facility. The Village Board, in consultation with the Village's insurer, may set the level of insurance required at whatever level it deems adequate.

P. Abatement.

(1) Any WECS which is not used for twelve (12) successive months shall be deemed abandoned and shall be dismantled and removed from the property within twenty-four (24) additional months at the expense of the property owner or permittee. Removal of the system shall include removal of the entire structure, including foundations, transmission equipment, and fencing, from the property.

(2) Bond/Security. The Special Permit for a WECS shall require a permittee to execute and file with the Village Clerk a bond or other form of security acceptable to the Village Board and Village Attorney as to the form, content, and manner of execution, in an amount sufficient to ensure the faithful performance of the removal of the Tower and the restoration of the site subsequent to its removal. The amount of the bond or security shall be no less than 125% of the cost of the Tower removal and restoration of the site.

(3) If removal of Towers and appurtenant facilities is required and the applicant, permit holder, or their successors, fails to remove the Towers and appurtenant facilities from the property within thirty (30) days from the date of notification by the

Village Board, the Board may contract for such removal and pay for removal from the bond.

(4) The owner of each WECS shall have it inspected at least every two (2) years for structural and operational integrity by a New York State licensed Professional Engineer, and shall submit a copy of the inspection report to the Village Code Enforcement Officer. If such report recommends that repairs or maintenance are to be conducted, the owner shall provide to the Code Enforcement Officer a written schedule for the repairs or maintenance.

(5) A WECS shall not begin its initial operation until inspections required by the Village of Newark have been made and all necessary approvals have been given. After initial operations have begun, the Code Enforcement Officer or his/her designated representative shall have the right at any reasonable time to enter the premises on which a WECS has been placed to inspect any or all parts of said installation.

(6) After conducting an inspection, the Code Enforcement Officer may order the owner of a WECS to render said WECS inoperative for reasons related to assuring safety of operations, abating noise, or eliminating electromagnetic interference. The owner of the WECS shall not return the WECS to service until any and all of the reasons which caused the Code Enforcement Officer to issue the order to the owner to make said WECS inoperative have been corrected to the satisfaction of the Code Enforcement Officer.

(7) Prior to allowing a WECS to resume operations, the Code Enforcement Officer may require the owner of the WECS to have an inspection made and a report issued by a professional engineer licensed in the State of New York, certifying that the WECS and/or Tower is safe.