

**CITY OF NORTH OLMSTED
ORDINANCE NO. 2009 – 63**

BY: Mayor O'Grady

AN ORDINANCE CREATING NEW CHAPTER 1153 (WIND ENERGY CONVERSION SYSTEMS) OF THE NORTH OLMSTED ZONING CODE IN ORDER TO PERMIT AND ESTABLISH REGULATIONS FOR THE USE OF WIND ENERGY CONVERSION SYSTEMS (WECS) IN THE CITY OF NORTH OLMSTED.

WHEREAS, the North Olmsted Zoning Code currently does not regulate or otherwise provide for the use of Wind Energy Conversion Systems (WECS) in the City; and

WHEREAS, in light of the promise that such systems hold for reducing energy costs and creating a cleaner environment, the Mayor and the Director of Planning recommend that this Council adopt zoning regulations providing for the appropriate use of such systems in the City; and

WHEREAS, the Director of Planning, at the request and direction of the Mayor, has drafted and recommended for the consideration of the City Council, a proposed new Chapter 1153 of the Zoning Code which would establish regulations for the use of WECS in North Olmsted and limit the areas in North Olmsted where WECS could be located, all in a manner to best protect and promote the general health, safety and welfare; and

WHEREAS, it is the desire of this Council to accordingly create new Chapter 1153 of the Zoning Code, as recommended by the Mayor and the Director of Planning; and

WHEREAS, the Planning & Design Commission on the ____ day of _____, 2009, by formal motion, (recommended – did not recommend) (with suggested changes) that this Ordinance be adopted; and

WHEREAS, following publication of newspaper notice in conformance with the provisions of Section 14 of Article IV of the Charter of the City of North Olmsted and Section 1127.03 of the North Olmsted Zoning Code, a public hearing was held on this proposed legislation on the ____ day of _____, 2009;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF NORTH OLMSTED, COUNTY OF CUYAHOGA, AND STATE OF OHIO:

SECTION 1: That there is hereby created new Chapter 1153 of the North Olmsted Zoning Code, entitled "Wind Energy Conversion Systems," which, as created, shall read in its entirety as provided for in attached Exhibit A, which is by reference expressly incorporated herein.

SECTION 2: That any ordinances or parts of ordinances or resolutions that are inconsistent or in conflict with newly created Chapter 1153 of the Zoning Code are, to the extent of any such inconsistency or conflict, repealed, but that in all respects the North Olmsted Zoning Code, as amended and supplemented from time to time, shall remain in full force and effect.

SECTION 3: That, if any section, paragraph, sentence, clause, phrase, term, provision or part of this Ordinance shall be adjudged by any court of competent jurisdiction to be invalid or inoperative, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the section, paragraph, sentence, clause, phrase, term, provision or part thereof directly involved in the controversy in which such judgment shall have been rendered.

SECTION 4: That this Ordinance shall take effect and be in force from and after the earliest period allowed by law.

PASSED: _____

First Reading: _____

Second Reading: _____

Third Reading: _____

Committee: _____

ATTEST:

BARBARA L. SEMAN
Clerk of Council

KEVIN M. KENNEDY
President of Council

APPROVED: _____

APPROVED AS TO LEGAL FORM:

MAYOR THOMAS E. O'GRADY

/s/ James M. Dubelko

JAMES M. DUBELKO
Director of Law

CHAPTER 1153
Wind Energy Conversion Systems

1153.01 Intent.	1153.05 Additional Regulations for Medium WECS.
1153.02 Definitions.	1153.06 Building Integrated WECS.
1153.03 Development Standards for Small and Medium WECS.	1153.07 Administrative Review.
1153.04 Additional Regulations for Small WECS.	1153.08 Abandonment.

1153.01 INTENT.

The intent of this Chapter is to regulate the placement and construction of Wind Energy Conversion Systems (WECS) in order to promote the safe and efficient use of WECS, to increase opportunities for generation of renewable energy, and to minimize the visual, environmental, and operational impacts of WECS on the City and its residents.

1153.02 DEFINITIONS.

- (a) "Fall zone" means the area on the ground within a prescribed radius from the base of a WECS. The fall zone is the area within which there is a potential hazard from falling debris (such as ice) and, in the case of towers, shall not be less than a radius equal in distance to the total height of the WECS.
- (b) "Hub height" means the vertical distance from the base of the tower to the center of rotation of the rotor.
- (c) "Occupied building" means a residence, school, hospital, church, library, or other building used for public gathering that is occupied or in use when the permit application is submitted.
- (d) "Shadow flicker" means the on-and-off flickering effect of a shadow caused when the sun passes behind the rotor of a wind turbine.
- (e) "Total height" means the vertical distance from the base of the tower to the tip of a wind generator blade when the tip is at its highest point.
- (f) "Tower, monopole" means a wind energy conversion system tower consisting of a single pole, constructed without guyed wires and anchors.
- (g) "Wind Energy Conversion System (WECS)" means equipment that converts and then stores or transfers energy from the wind into usable forms of energy and includes any base, blade, foundation, generator, nacelle, rotor, tower, transformer, turbine, vane, wire, or other component used in the system.
- (h) "Wind Energy Conversion System, Building Integrated" means a wind energy facility designed to be permanently mounted on an occupied building or accessory structure, with a rated capacity no greater than 10 kilowatts, designed to be operated in direct contact with a building.
- (i) "Wind Energy Conversion System, Medium" means a wind energy system that has a rated capacity greater than 10 kilowatts and no greater than 250 kilowatts, has a total

height of 170 feet or less, and is primarily used to generate energy for use by its owner, reduce the need to purchase utility power from the grid, and has the ability to sell power back to the grid.

- (j) "Wind Energy Conversion System, Small" means a wind energy system that has a rated capacity of 10 kilowatts or less, has a total height of 75 feet or less, and is primarily used to generate energy for use by its owner, reduce the need to purchase utility power from the grid, and has the ability to sell power back to the grid.

1153.03 DEVELOPMENT STANDARDS FOR SMALL AND MEDIUM WECS.

- (a) Design. Any WECS shall be designed as a monopole tower. Lattice towers are prohibited. All electrical wires associated with a WECS shall be located within the tower and underground.
- (b) Blade clearance. The vertical distance from ground level to the tip of a wind energy generator blade when the blade is at its lowest point must be at least 30 feet. No blades may extend over parking areas, driveways or sidewalks.
- (c) Noise. Any WECS shall not exceed 55 dB(A) at any adjacent property line. This sound pressure level may be exceeded during short-term events such as utility outages and/or severe wind storms. If the ambient sound pressure level exceeds 55 dB(A), the standard shall be ambient dB(A) plus 10 dB(A).
- (d) Appearance, color, and finish. The exterior surface of any visible component of a WECS must be a non-reflective, neutral color.
- (e) Controls and brakes. Any WECS shall be equipped with manual (electronic or mechanical) and automatic over speed controls to limit the blade rotation speed to within the design limits of the system.
- (f) Shadow flicker. The WECS owner and operator shall make reasonable efforts to minimize shadow flicker to any occupied building on a non-participating landowner's property.
- (g) Access. All ground-mounted electrical and control equipment must be labeled and secured to prevent unauthorized access. A tower may not have step bolts or a ladder within 12 feet of the ground.
- (h) Lighting. A WECS tower may not be artificially lighted unless lighting is required by the Federal Aviation Administration.
- (i) Signage. No sign, other than a warning sign or installer, owner, or manufacturer identification sign, may be placed on any component of a WECS so as to be visible from any public right-of-way. Permitted signs shall be limited to four (4) square feet in area.

1153.04 ADDITIONAL REGULATIONS FOR SMALL WECS.

- (a) Use regulations. Small WECS shall be permitted as a conditional use in all zoning districts, subject to the requirements of Chapter 1118.
- (b) Minimum lot size. Minimum lot size for a small WECS is one (1) acre. Only one (1) WECS is permitted per lot.
- (c) Height. The height of a small WECS shall be limited by the height regulations of the district in which the small WECS is proposed, but in no case may be greater than 75 feet in total height.

- (d) **Setbacks.** The minimum setback distance between a small WECS and all surrounding property lines, overhead utility or transmission lines, and public rights of way shall be equal to no less than 1.2 times the total height of the tower. Furthermore, the fall zone for any WECS must be kept free of all occupied buildings during the operational life of the tower.

1153.05 ADDITIONAL REGULATIONS FOR MEDIUM WECS.

- (a) **Use regulations.** Medium WECS shall be permitted as a conditional use within the Wind Energy Overlay District subject to the requirements of Chapter 1118.
- (b) **Minimum lot size.** Minimum lot size for a medium WECS is five (5) acres. Only one (1) WECS is permitted per lot.
- (c) **Height.** Medium WECS may be no greater than 170 feet in total height.
- (d) **Setbacks.** In any non-residential district, the minimum setback distance between a medium WECS and all surrounding property lines, overhead utility or transmission lines, and public rights of way shall be equal to no less than 1.2 times the total height of the tower. In any residential district, the minimum setback distance shall be equal to no less than 1.5 times the total height of the tower. Furthermore, the fall zone for any WECS must be kept free of all occupied buildings during the operational life of the tower.

1153.06 BUILDING INTEGRATED WECS.

- (a) **Use regulations.** Building integrated WECS shall be a permitted accessory use in all zoning districts, subject to the requirements of the district in which the system is proposed, and further subject to the development standards described in 1153.03(c) through (f).
- (b) **Height.** Hub height shall not exceed 10 feet as measured from the base of the tower, which is the location at which the tower and exterior layer of the building meet.
- (c) **Blade clearance.** The lowest vertical extension of any blade or other moving component of a building integrated WECS shall be at least 15 feet above the ground (at grade level) and in addition at least 15 feet above any outdoor surfaces intended for human occupancy, such as balconies, that are located directly below the system. The rotor diameter of the building integrated WECS may not exceed 7 feet.
- (d) **Separation.** If more than one building integrated WECS is installed, a distance equal to the length of the total height of the tallest system must be maintained between the bases of each system.

1153.07 ADMINISTRATIVE REVIEW.

- (a) **Procedure.** A building permit shall be required for the installation of any WECS. The administrative review and approval process shall follow the procedure described in Chapter 1126.
- (b) **Submittal requirements.** In addition to the applicable submittal requirements in Chapter 1126, each application for a WECS shall include the following:
- (1) Applicant's name, contact information and evidence of site control;
 - (2) Address, permanent parcel number and zoning district of the subject property;
 - (3) Detailed site survey including:

- A. Property lines and physical dimensions of the property,
 - B. Location, dimensions, and types of existing structures on the property,
 - C. Location of the proposed tower showing required fall zone and setback radii,
 - D. The right-of-way of any public road that is contiguous to the property,
 - E. Location of access roads,
 - F. Any overhead utility lines;
- (4) Drawings and specifications including:
- A. Description of all components of the WECS or met tower including the manufacturer, model, capacity, blade length, and total height,
 - B. Blueprints or drawings which have been approved by a registered professional engineer for any tower and tower foundation,
 - C. Simulated, scaled photographic perspectives showing the appearance of the structure and the placement of the WECS from neighboring properties and rights-of-way;
- (5) Engineering certifications including:
- A. An analysis from a licensed engineer showing how the WECS shall be designed, constructed and operated in compliance with all applicable federal, state, and local laws, codes, standards and ordinances.
 - B. A written certification from a licensed structural engineer that the tower has the structural integrity to carry the weight and wind loads of the WECS and have minimal vibration impacts on the structure. In the case of a building integrated WECS, a written certification from a licensed structural engineer that the existing structure onto which the building integrated WECS will be attached is capable of withstanding the additional load, force, torque, and vibration imposed by the system and will comply with structure provisions set out in applicable building codes;
 - C. A written certification from a licensed engineer confirming that the WECS is designed to not cause electrical, radio frequency, television and other communication signal interference.
- (6) Evidence of liability insurance in an amount, and for a duration, sufficient to cover loss or damage to persons and property occasioned by the failure or malfunctioning of the system, including provisions for indemnification of the City;
- (7) Any other information required by the City to determine if the standards in this Chapter and other applicable codes have been met.
- (c) Expiration. A permit issued pursuant to this ordinance shall expire if:
- (1) The WECS is not installed and functioning within 18-months from the date the permit is issued; or
 - (2) The WECS is out of service or otherwise unused for a continuous 12-month period.

1153.08 ABANDONMENT.

- (a) A WECS that is out-of-service for a continuous 12-month period will be deemed to have been abandoned. The Building Commissioner may issue a Notice of Abandonment to the

owner of a WECS that is deemed to have been abandoned. The owner shall have the right to respond to the Notice of Abandonment within 30 days from Notice receipt date. The Building Commissioner shall withdraw the Notice of Abandonment and notify the owner that the Notice has been withdrawn if the owner provides information that demonstrates the WECS has not been abandoned.

- (b) If the WECS is determined to be abandoned, the owner shall remove the WECS within 90 days of the Notice of Abandonment and the site must be reclaimed to a depth of four (4) feet. If the owner fails to remove a WECS and reclaim the site, the City may remove or cause the removal of the WECS and the reclamation of the site. The cost of removal and reclamation will become a lien upon the property and may be collected in the same manner as property taxes.