

ORDINANCE NO. 07- 0463

**AN ORDINANCE AMENDING CHAPTER 154 (ZONING) OF THE HUTCHINSON CITY CODE TO
CREATE SECTION 154.26 ESTABLISHING REGULATIONS FOR THE INSTALLATION AND
OPERATION OF WIND ENERGY CONVERSION SYSTEMS (WECS)**

THE CITY COUNCIL OF THE CITY OF HUTCHINSON, MINNESOTA ORDAINS:

Notice of public hearing was duly given and publication of said hearing was duly made to appear to the satisfaction of the City Council that it would be in the best interests of the City to amend the Zoning Ordinance to create Section 154.26 of the City Code to establish regulations for wind energy conversion systems as follows:

154.26 Wind Energy Conversion Systems

(A) Purpose: The ordinance is established to regulate the installation of Wind Energy Conversion Systems (WECS) within the City of Hutchinson, not otherwise subject to siting and oversight by the State of Minnesota.

(B) Interpretation, Conflict and Separability:

1. Interpretation – In interpreting these regulations and their application, the provisions of these regulations shall be held to be the minimum requirements for the protection of public health, safety and general welfare. These regulations shall be constructed to broadly promote the purposes for which they are adopted.
2. Conflict - These regulations are not intended to interfere with, abrogate or annul any other ordinance, rule or regulation, statute or other provision of law except as provided in these regulations. If any provision of these regulations that impose restrictions different from any other ordinance, rule or regulation, statute or provision of law, the provision that is more restrictive or imposes higher standards shall control.
3. Separability – If any part or provision of these regulations or the application of these regulations to any developer or circumstances is found invalid by any competent jurisdiction, the judgment shall be confined in its operation to the part, provision or application directly involved in the controversy in which the judgment shall be rendered and shall not affect or impair the validity of the remainder of these regulations or the application of them to other developers or circumstances.

(C) Enforcement, Violations, Remedies and Penalties - Enforcement of the Wind Energy Conversion System Ordinance shall be done in accordance with process and procedures established in the City of Hutchinson Zoning Ordinance.

(D) Definitions:

WECS - Wind Energy Conversion System: An electrical generating facility comprised of one or more wind turbines and accessory facilities, including but not limited to: power lines, transformers, substations and meteorological towers, that operate by converting the kinetic energy of wind into electrical energy. The energy may be used on-site or distributed into the electrical grid.

Aggregated Project: Aggregated projects are those which are developed and operated in a coordinated fashion, but which have multiple entities separately owning one or more of the individual WECS within the larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity but are also included as part of the aggregated project.

Commercial WECS: A WECS of equal to or greater than 100 kW in total name plate generating capacity.

Non-Commercial WECS: A WECS of less than 100 kW in total name plate generating capacity.

Fall Zone: The area, defined as the furthest distance from the tower base, in which a guyed tower will collapse in the event of a structural failure. This area is less than the total height of the structure.

Feeder Line: Any power line that carries electrical power from one or more wind turbines or individual transformers associated with individual wind turbines to the point of interconnection with the electric power grid, in the case of interconnection with the high voltage transmission systems, the point of interconnection shall be the substation serving the WECS.

Meteorological Tower: For the purposes of this WECS ordinance, meteorological towers are those towers which are erected primarily to measure wind speed and directions plus other data relevant to siting WECS. Meteorological towers do not include towers and equipment used by airports, the Minnesota Department of Transportation, or other similar applications to monitor weather conditions.

Property line: The boundary line of the area over which the entity applying for a WECS permit has legal control for the purposes of installation of a WECS. This control may be attained through fee title ownership, easement, or other appropriate contractual relationship between the project developer and landowner.

Rotor diameter: The diameter of the circle described by the moving rotor blades.

Substations: Any electrical facility designed to convert electricity produced by wind turbines to a voltage greater than 35,000 volts for interconnection with high voltage transmission lines shall be located outside of the road right of way.

Total height: The highest point, above ground level, reached by a rotor tip or any other part of the WECS.

Tower: Towers include vertical structures that support the electrical generator, rotor blades, or meteorological equipment.

Tower height: The total height of the WECS exclusive of the rotor blades.

Transmission Line: Those electrical power lines that carry voltages of at least 69,000 volts (69 KV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers.

Public conservation lands: Land owned in fee title by State or Federal agencies and managed specifically for grassland conservation purposes, including but not limited to State Wildlife Management Areas, State Parks, State Scientific and Natural Areas, federal Wildlife Refuges and Waterfowl Production Areas. For the purposes of this section public conservation lands will also include lands owned in fee title by non-profit conservation organizations. Public conservation lands do not include private lands upon which conservation easements have been sold to public agencies or non-profit conservation organizations.

Wind Turbine: A wind turbine is any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy through the use of airfoils or similar devices to capture the wind.

E. Application Procedures:

Application for WECS shall be reviewed and processed in accordance with the conditional use permit procedures established in Section 154.170 of the Hutchinson Zoning Ordinance, as identified in the District Regulations table. The following information is required in addition to the information required for a site plan or conditional use permit application:

The application for all WECS shall include the following information:

1. The names of project applicant
2. The name of the project owner
3. The legal description and address of the project.
4. A description of the project including: Number, type, name plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid.
5. Property survey, including the location of property lines, wind turbines, electrical wires, interconnection points with the electrical grid, and all related accessory structures. The site layout shall include distances and be drawn to scale.
6. Evidence that the applicant can obtain and maintain adequate liability insurance for the WECS and subject property.
7. Engineer's certification
8. Documentation of land ownership or legal control of the property

The application for Commercial WECS shall also include:

1. The latitude and longitude of individual wind turbines. A USGS topographical map, or map with similar data, of the project site including boundaries of the project area, surrounding property within ¼ mile, and any other WECS within 10 rotor diameters of the proposed project.
2. Location of wetlands, scenic, and natural areas (including bluffs) within one mile of the proposed WECS.
3. FAA Permit Application
4. Location of all known Communications Towers within 2 miles of the proposed project. Provide proof that the WECS will not interfere with emergency or other microwave transmission.
5. A noise study, prepared by a qualified professional, that demonstrate that except for intermittent episodes, the WECS shall not emit noise in excess of the limits established in Minnesota Rules 7030 governing noise and Section 92.18 of the Hutchinson City Code, as applicable.
6. A shadow flicker model that demonstrates that shadow flicker shall not fall on, or in, any existing residential structure. Shadow flicker expected to fall on a roadway or a portion of a residentially zoned property may be acceptable if the flicker does not exceed 30 hours per year; and the flicker will fall more than 100' from an existing residence; or the traffic volumes are less than 500 vehicles (ADT). The shadow flicker model shall:
 - (a) Map and describe with a 1,000' radius of the proposed dispersed wind energy system the topography, existing residences and location of their windows, location of other structures, wind speeds and directions, existing vegetation and roadways. The model shall represent the most probable scenarios of wind constancy, sunshine constancy, and wind directions and speed;
 - (b) Calculate the locations of shadow flicker caused by the proposed project and the expected durations of the flicker at these locations, calculate the total number of hours per year of flicker at all locations.
 - (c) Identify problem areas where shadow flicker will interfere with existing or future residences and roadways and describe proposed mitigation measures, including, but not limited to, a

change in siting of the WECS, a change in the operation of the WECS, or grading or landscaping mitigation measures.

7. Decommissioning Plan
8. Description of potential impacts on nearby WECS and wind resources on adjacent properties.

Application Procedures for Aggregated Projects:

Aggregated Projects may jointly submit a single application and be reviewed under joint proceedings, including notices, hearings, reviews and as appropriate, approvals. Permits will be issued and recorded separately. All aggregated projects over the 5 MW threshold currently outlined in State Statute are subject to State regulation.

F. District Regulations:

WECS will be conditionally permitted or not permitted based on the generating capacity and land use district as established in the table below:

Zoning District	Non-Commercial WECS	Commercial WECS	Meteorological Tower
C-1, C-2, C-3, C-5	Not Permitted	Not Permitted	Not Permitted
C-4	Conditionally Permitted	Conditionally Permitted	Conditionally Permitted
I/C	Conditionally Permitted	Not Permitted	Conditionally Permitted
1-1 & 1-2	Conditionally Permitted	Conditionally Permitted	Conditionally Permitted
GT	Conditionally Permitted	Not Permitted	Conditionally Permitted
R-1, R-2	Conditionally Permitted	Not Permitted	Conditionally Permitted
R-3, R-4, R-5	Not Permitted	Not Permitted	Not Permitted

G. Setbacks

All towers shall adhere to the setbacks established in the following table:

	Non-Commercial WECS	Commercial WECS	Meteorological Towers
Property Lines	1.1 times the total height	1.1 times the total height	1.1 times the total height
Neighboring Structures	Setback to property line of 1.1 times the total height required.	750 feet	Guyed towers: The fall zone, as certified by a professional engineer +10 feet Non-guyed towers: 1.1 times the total height
Road Right of Way and Other Right of Ways (Railroads, power lines, etc.)	Guyed towers: The fall zone, as certified by a professional engineer +10 feet Non-guyed towers: 1.1 times the total height	1.1 times the height	
Other Existing WECS	N/A	600 feet	600 feet

Wetlands, USFW Types III, IV and V	N/A	600 feet	600 feet
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H. Requirements and Standards

1. Safety Design Standards

- (a) Engineering Certification – For all WECS, the manufacture’s engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.
- (b) Clearance – Rotor blades or airfoils must maintain at least 12 feet of clearance between their lowest point and the ground.
- (c) Warnings – For all Commercial WECS, a sign or signs shall be posted on the tower, transformer and substation warning of high voltage. Signs with emergency contact information shall also be posted on the turbine or at another suitable point. Painted aviation warnings are recommended on metrological towers less than 200 feet
- (d) For all guyed towers, visible and reflective objects, such as plastic sleeves, reflectors or tape, shall be placed on the guy wire anchor points and along the outer and innermost guy wires up to a height of 8 feet above the ground. Visible fencing shall be installed around anchor points of guy wires on all commercial, industrial, and institutional properties.

2. Standards

- (a) Total height – Non-Commercial WECS shall have a total height of less than 200 feet.
- (b) Tower configuration – All wind turbines, which are part of a commercial WECS, shall be installed with a tubular, monopole type tower.
- (c) Color and Finish – All wind turbines and towers shall be white, grey or another non-obtrusive color. Blades may be black in order to facilitate deicing. Finishes shall be matt or non-reflective. Metrological towers are exempt from this requirement.
- (d) Lighting – Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by Federal Aviation Administration permits and regulations. Red strobe lights are preferred for night-time illumination to reduce impacts on migrating birds. Red pulsating incandescent lights should be avoided.
- (e) Other Signage – All signage on site shall comply with the City of Hutchinson sign ordinances. The manufacturer’s or owner’s company name and/or logo may be placed upon the nacelle, compartment containing the electrical generator, of the WECS.
- (f) Feeder Lines – All communications and feeder lines, equal to or less than 34.5 kV in capacity, installed as part of a WECS shall be buried where reasonably feasible. Feeder lines installed as part of a WECS shall not be considered an essential service. This standard applies to all feeder lines subject to City authority.
- (g) Shadow Flicker – Shadow flicker may not exceed 30 hours per year and shall not fall more than 100’ from an existing residential property.

- (h) Waste Disposal – Solid and Hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants, shall be removed from the site promptly and disposed of in accordance with all applicable local, state and federal regulations.
- (i) Discontinuation and Decommissioning - A WECS shall be considered a discontinued use after 1 year without energy production, unless a plan is developed and submitted to the Hutchinson City Zoning Administrator outlining the steps and schedule for returning the WECS to service. All commercial WECS and accessory facilities, including the foundation, shall be completely removed within a year of the discontinuation of use for commercial WECS projects. For non-commercial projects, the footings for the WECS may be left in place provided the slab remains in place.
- (j) Each Commercial WECS shall have a Decommissioning plan outlining the anticipated means and cost of removing WECS at the end of their serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a competent party; such as a Professional Engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the WECS and accessory facilities.
- (k) Orderly Development – Upon issuance of a conditional use permit, all Commercial WECS shall notify the Energy Facility Permitting staff of Department of Commerce of the project location and details on the form specified by the Department.
- (l) Noise – All WECS shall comply with Minnesota Rules 7030 governing noise and Section 92.18 “Public Nuisances Affecting Peace and Safety” of the Hutchinson City Code.
- (m) Complaint Resolution – The owner/operator of the WECS shall develop a process to resolve complaints from nearby residents. The process shall use an independent mediator or arbitrator and include a time frame for acting on a complaint. The applicant shall make every reasonable effort to resolve any complaint.
- (n) Electrical codes and standards – All WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.
- (o) Federal Aviation Administration– All WECS shall comply with FAA standards and permits.
- (p) Uniform Building Code – All WECS shall comply with the Uniform Building Code adopted by the State of Minnesota.
- (q) Interference – The applicant shall minimize or mitigate interference with electromagnetic communications, such as radio, telephone, microwaves, or television signals cause by any WECS. The applicant shall notify all communication tower operators within two miles of the proposed WECS location upon application to the City for permits. No WECS shall be constructed so as to interfere with any microwave transmissions.
- (r) Right of Entrance – By the acceptance of the conditional use permit, the owner/operator grants permission to the City of Hutchinson to enter the property to remove the WECS pursuant to the terms of the conditional use permit and to assure compliance with other conditions set forth in the permit.

3. Avoidance and Mitigation of Damages to Infrastructure and Utilities

- (a) Roads – Applicants shall: Identify all county, city or township roads to be used for the purpose of transporting commercial WECS, substation parts, concrete, and/or equipment for construction, operation or maintenance of the commercial WECS and obtain applicable weight and size permits from the impacted road authority(ies) prior to construction.
- (b) Be responsible for restoring or paying damages as agreed to by the applicable road authority(ies) sufficient to restore the road(s) and bridges to preconstruction conditions.
- (c) Drainage System – The Applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the WECS.
- (d) The owner of the WECS is responsible for any damage to any below grade public or private utilities, due to the installation, operation, decommissioning, or action otherwise resulting for any WECS.

EFFECTIVE DATE OF ORDINANCE. This ordinance shall take effect upon is adoption and publication.

Adopted by the City Council this 12th day of June, 2007.

Attest:

Gary D. Plotz
City Administrator

Steven W. Cook
Mayor