SECTION 13A WIND ENERGY CONVERSION SYSTEMS

Subdivision 1: PURPOSE

The purpose of this chapter is regulate the installation and operation of Wind Energy Conversion Systems (WECS) within the City not otherwise subject to siting and oversight by the State of Minnesota under the Minnesota Power Plant Siting Act (MS 116C.51 – 116C.697).

Subdivision 2: PROCEDURES

Land Use/Building Permits, Conditional Use Permits and Variances shall be applied for and reviewed under the procedures established in this Ordinance.

1. The application for all WECS shall include the following information:

    A. The names of project applicant.
    B. The name of the project owner.
    C. The legal description and address of the project.
    D. 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.
    E. Site layout, 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.
    F. Engineer's certification.
    G. Documentation of land ownership or legal control of the property.

2. The application for Commercial WECS shall also include:

    A. The latitude and longitude of individual wind turbines.
    B. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other WECS within ten (10) rotor diameters of the Proposed WECS.
    C. Location of all known Communications Towers within one mile of the proposed WECS.
    D. Decommissioning Plan.
    E. Description of potential impacts on nearby WECS and wind resources on adjacent properties.
    F. Any additional information as may be requested by the Zoning Administrator.

Subdivision 3: 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. Joint applications will be assessed fees as one project. Aggregated projects having a combined capacity equal to or greater than the threshold for State oversight as set forth in MS Statute 116C.691 through 116C.697 shall be regulated by the State of Minnesota.

Subdivision 4: DISTRICT REGULATIONS

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

District	**Non-Commercial***	**Commercial**	**Meteorological Tower***
Agriculture Preservation SP-1	Permitted	Conditionally Permitted	Permitted
General Agricultural A-40	Permitted	Conditionally Permitted	Permitted
Industrial I-1 & I-2	Conditionally Permitted	Conditionally Permitted	Permitted
Shoreland Residential Management R1	Not permitted Unless on 5 Acres or More CUP	Not permitted Unless on 5 Acres or more CUP	Not permitted Unless on 5 Acres or more CUP
Shoreland Resource Management RM	Conditionally Permitted	Not Permitted	Permitted
Community Residence R1, R2, R3	Not Permitted unless on 5 Acres or more CUP	Not Permitted unless on 5 acres or more CUP	Not Permitted unless on 5 Acres or more CUP
Central Business District B1 & B2	Not Permitted	Not Permitted	Not Permitted

- Non-Commercial WECS and Meteorological Towers shall require a Conditional Use Permit if over two hundred (200) feet in height.

Subdivision 5: SETBACKS WIND TURBINES AND METEROLOGICAL TOWERS

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

	Wind Turbine – Non- Commercial WECS	Wind Turbine - Commercial WECS	Meteorological Towers
Property lines	The fall zone, as certified by a professional engineer plus 10 feet or 1.1 times the total height.	The fall zone, as certified by a professional engineer plus 10 feet or 1.1 times the total height.	The fall zone, as certified by a professional engineer plus 10 feet or 1.1 times the total height.
Dwellings*	NA	1.5 x Total Height	The fall zone, as certified by a professional engineer plus 10 feet or 1.1 times the total height.
Rights-of-Way **	The fall zone, as certified by a professional engineer plus 10 feet or 1.1 times the total height.	The fall zone, as certified by a professional engineer plus 10 feet or 1.1 times the total height.	The fall zone, as certified by a professional engineer plus 10 feet or 1 times the total height.
Public Conservation Lands	NA	600 feet	600 feet
Protected Wetlands, on the Protected Waters Inventory Map for the City	NA	600 feet	600 feet
Other Existing WECS	NA	To be considered based on: ***	

* The setback for dwellings shall be reciprocal in that no dwelling shall be constructed within five hundred feet of a commercial wind turbine.
The setback from any non-permitted districts R-1, R-2, B1 & B2 SRM or where a conditional use permit is needed shall not be less than 500' from the property line.

** The setback shall be measured from future rights-of-way if a planned changed or expanded right-of-way is known.

*** - Relative size of the existing and proposed WECS
- Alignment of the WECS relative to the predominant winds.
- Topography
- Extent of wake interference impacts on existing WECS.
- Property line setback of existing WECS.
- Other setbacks required.

- Waived for internal setbacks in multiple turbine projects including aggregated projects.

Subdivision 6: SAFETY DESIGN STANDARDS

1. 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.

2. Clearance – Rotor blades or airfoils must maintain at least thirty-five feet of clearance between their lowest point and the ground.

3. Warnings:

   a. 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.

   b. 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 eight (8) feet above the ground. Visible fencing shall be installed around anchor points of guy wires. Consideration shall be given to painted aviation warnings on metrological towers of less than two hundred (200) feet.

Subdivision 7: STANDARDS

1. Total Height – Non-Commercial WECS shall have a total height of less than two hundred (200) feet. Section 27 of this ordinance requires a conditional use for all structures over two hundred (200) feet in total height.

2. Tower Configuration – All wind turbines, which are part of a commercial WECS, shall be installed with a tubular, monopole type tower. Meteorological towers may be guyed.

3. Color and Finish – All wind turbines and towers that are part of a commercial WECS 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. Exceptions may be made for metrological towers, where concerns exist relative to aerial spray applicators.

4. 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. Exceptions may be made for metrological towers, where concerns exist relative to aerial spray applicators.

5. Other Signage – All signage on site shall comply with Section 12 of this Ordinance. The manufacturers or owner's company name and/or logo may be placed upon the nacelle compartment containing the electrical generator, of the WECS.

6. 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 the City of Rockville authority.

7. 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.

8. Discontinuation and Decommissioning - A WECS shall be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the City of Rockville Zoning Administrator outlining the steps and schedule for returning the WECS to service. All WECS and accessory facilities shall be removed to four (4) feet below ground level within ninety (90) days of the discontinuation of use. 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.

9. Orderly Development – Upon issuance of a conditional use permit, all Commercial WECS shall notify the Environmental Quality Board Power Plant Siting Act program Staff of the project location and details on the survey form specified by the Environmental Quality Board.

Subdivision 8: OTHER APPLICABLE STANDARDS

1. Noise – All WECS shall comply with Minnesota Rules 7030 governing noise.

2. Electrical Codes and Standards – All WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.

3. Federal Aviation Administration– All WECS shall comply with FAA standards and permits.

4. Uniform Building Code – All WECS shall comply with the Uniform Building Code adopted by the State of Minnesota.

Subdivision 9: INTERFERENCE

The applicant shall minimize or mitigate interference with electromagnetic communications, such as radio, telephone, microwaves, or television signals caused by any WECS. The applicant shall notify all communication tower operators within one mile of the proposed WECS location upon application to the City of Rockville for permits. No WECS shall be constructed so as to interfere with City or Minnesota Department of Transportation microwave transmissions.

Subdivision 10: AVOIDANCE AND MITIGATION OF DAMAGES TO PUBLIC INFRASTRUCTURE

1. Roads – Applicants shall: Identify all County, City or State roads to be used for the purpose of transporting WECS, substation parts, cement, and/or equipment for construction, operation or maintenance of the WECS and obtain applicable weight and size permits from the impacted road authority (ies) prior to construction. Conduct a pre-construction survey, in coordination with the impacted local road authority (ies) to determine existing road conditions. The survey shall include photographs and a written agreement to document the condition of the public facility. 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.

2. 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.