

MURRAY COUNTY WIND ENERGY ORDINANCE

SECTION 1 TITLE

The title of this ordinance is the Murray County Wind Energy Ordinance, and will be referred to herein as this Ordinance.

SECTION 2 PURPOSE

This ordinance is established to set forth processes for permitting Wind Energy Conversion Systems (WECS) with a rated capacity of less than 25,000 kilowatts (kW) or 25 megawatts (MW), and to regulate the installation and operation of WECS within Murray County not otherwise subject to siting and oversight by the State of Minnesota pursuant to Minnesota Statutes, Chapter 216F, Wind Energy Conversion Systems, as amended.

SECTION 3 JURISDICTION

The regulations of this Ordinance shall apply to all the area of Murray County outside the incorporated limits of municipalities.

SECTION 4 INTERPRETATION

In interpreting and applying the provisions of this Ordinance, they shall be held to be the minimum requirements for the promotion of the public health, safety, and general welfare. Where the provisions of this Ordinance impose greater restriction than those of any statute, other ordinance or regulations, the provisions of this Ordinance shall be controlling. Where the provisions of any statute, other ordinance or regulation impose greater restrictions than this Ordinance, the provisions of such statute, other ordinance or regulation shall be controlling.

SECTION 5 DEFINITIONS

1. **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.
2. **Board of Adjustment.** An officially constituted quasi-judicial body appointed by the County Board whose principle duties are to hear appeals from decisions of the Zoning Administrator and, where appropriate, grant variance from the strict application of this Ordinance.
3. **C-BED Project.** A C-BED Project is a Community Based Energy Development Project that must have local owners; no single owner may be allowed to own more than 15 percent of a project; must have a local resolution of support; and the Power Purchase Agreement must ensure levelized cash flow to the project owners. Based on their total name plate generating capacity, C-BED Projects are considered Micro-WECS, Non-Commercial WECS or Commercial WECS as defined in this Section.
4. **Commercial WECS.** A WECS of equal to or greater than 100 kW in total name plate generating capacity.
5. **Comprehensive Plan.** Comprehensive plan means the policies, statements, goals, and interrelated plans for private and public land and water use, transportation, and community facilities including recommendations for plan execution, documented in texts, ordinances and maps which constitute the guide for the future development of the unincorporated area of the county.
6. **Conditional Use.** A land use or development as is defined by the Murray County Zoning Ordinance that would not be appropriate generally but may be allowed with appropriate restrictions as provided by official controls upon the finding that: (1) certain conditions as detailed in the Zoning Ordinance exist, and (2) use or development conform to the comprehensive plan of the County and (3) is compatible with the existing neighborhood.
7. **County.** Murray County, Minnesota.
8. **County Board.** Includes the County Commissioners, the Board of County Commissioners or any other word or words meaning the Murray County Board of Commissioners.
9. **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.
10. **Feeder Line.** Power lines that transport electrical power from one or more wind turbines to the point of interconnection with a high voltage transmission line.
11. **Generator nameplate capacity.** The maximum rated output of electrical power production of a generator under specific conditions designated by the manufacturer with a nameplate physically attached to the generator.
12. **High-voltage transmission line.** A conductor of electric energy and associated facilities designed for and capable of operation at a nominal voltage of 100 kilovolts or more and is greater than 1,500 feet in length.

13. **Meteorological Tower.** For the purposes of this 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.
14. **Micro-WECS.** Micro-WECS are WECS of 1 kW nameplate generating capacity or less and utilizing supporting towers of 40 feet or less.
15. **Native Prairie Plan.** The plan shall address steps to be taken to identify native prairie within the project area, measures to avoid impacts to native prairie, including foundations, access roads, underground cable and transformers, shall not be placed in native prairie unless addressed in the prairie protection and management plan.
16. **Non-Commercial WECS.** A WECS of less than 100 kW and greater than 1 kW in total name plate generating Capacity.
17. **Power Purchase Agreement.** A legally enforceable agreement between two or more persons where one or more of the signatories agrees to provide electrical power and one or more of the signatories agrees to purchase the power.
18. **Project Boundary/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.
19. **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.
20. **Rotor diameter (RD).** The diameter of the circle described by the moving rotor blades.
21. **Substations.** Any electrical facility designed to convert electricity produced by wind turbines to a voltage for interconnection with transmission lines.
22. **Total height.** The highest point, above ground level, reached by a rotor tip or any other part of the WECS.
23. **Total name plate capacity.** The total of the maximum rated output of the electrical power production equipment for a WECS project.
24. **Tower.** Towers include vertical structures that support the electrical generator, rotor blades, or meteorological equipment.
25. **Tower height.** The total height of the WECS exclusive of the rotor blades.

26. **WECS - Wind Energy Conversion System.** A device such as a wind charger, windmill, or wind turbine and associated facilities that converts wind energy to electric energy, including, but not limited to: power lines, transformers, substations, and meteorological towers. The energy may be used on-site or distributed into the electrical grid.
27. **Wind Turbine.** 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.
28. **Zoning Ordinance.** The Murray County Zoning Ordinance.

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SECTION 6 PROCEDURES

SUBDIVISION 1 PERMIT APPLICATION

Land Use Permits, Conditional Use Permits and Variances shall be applied for and reviewed under the procedures established in the Murray County Zoning Ordinance and Minnesota Statutes Chapter 394, except where noted below. An application to the County for a permit under this section is not complete unless it contains the following:

1. Letter from the State Agency responsible for size determination of a project, pursuant to Minnesota Statutes, Chapter 216F.011, as amended.
2. The names and addresses of project applicant.
3. The names and addresses of the project owner. For C-BED projects, must provide percent of ownership for each of the project owners.
4. The legal description and address of the project.
5. A description of the project including: Number, type, total name plate generating capacity, tower height, rotor diameter, total height of all wind turbines, and means of interconnecting with the electrical grid.
6. Site layout, including the location of project area boundaries (purchased wind rights), property lines, roads, 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.
7. Documentation of land ownership or legal control of the property and current land use on the site and surrounding area.
8. Signed copy of the Power Purchase Agreement or documentation that the power will be utilized on-site.
9. The latitude and longitude of individual wind turbines.
10. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other WECS within 10 rotor diameters of the Proposed WECS.
11. Location of wetlands, scenic, and natural areas including bluffs within 1,320 feet of the proposed WECS.
12. Copies of all permits or documentation that indicates compliance with all other applicable State and Federal Regulatory Standards:
 - A. Uniform Building Code, as amended.
 - B. The National Electrical Code, as amended.
 - C. Federal Aviation Administration (FAA), as amended.
 - D. Minnesota Pollution Control Agency (MPCA)/Environmental Protection Agency (EPA), as amended.
 - E. Microwave Beam Path Study
 - F. Acoustical Analysis

13. Location of all known Communications Towers within 2 miles of the proposed WECS.
14. Location of all known public or private Airports or Heliports within 5 miles of the proposed WECS.
15. Detailed Decommissioning Plan including how decommissioning costs would be covered. Applicant may be required to establish an escrow account to fund decommissioning costs.
16. Description of potential impacts on nearby WECS and wind resources on adjacent properties. A Wake Loss Study may be required if the county determines the proposed project may have a significant impact on nearby WECS.
17. Additional information stated in Minnesota Rules, part 7836.0500 (subpart 1), as amended.
18. Identification of Haul Routes to be utilized for material transportation and construction activities: State, Federal, County and/or Township roads. Must provide written documentation that all haul routes have been approved by each of the road authorities with jurisdiction.
19. Locations and site plans for all temporary, non-residential construction sites and staging areas.

SECTION 7 DISTRICT REGULATIONS

SUBDIVISION 1 PERMITTED AND CONDITIONAL USES

WECS will be permitted, conditionally permitted or not permitted based on the generating capacity and land use district as established in the table below (P=Permitted, C=Conditionally Permitted, NP=Not Permitted):

District	Micro-WECS	Non- Commercial < 100 kW	Commercial > 100 kW	Meteorological Tower
1. Special Protection	C	C	NP	NP
2. Agricultural	P	P	C	P
3. Rural Residential	C	C	C	P
4. General Business	C	C	C	P
5. Industry	C	C	C	P
6. Floodplain Management	C	C	C	P
7. Shoreland	C	NP	NP	NP

SECTION 8 SETBACKS

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

SUBDIVISION 1 SETBACKS

	Micro-WECS	Non-Commercial < 100 kW	Commercial > 100 kW	Meteorological Tower
1. Project Boundary/ Property lines	An amount equal to the height of the structure.	1.1 times the total height.	3 RD on east-west axis and 5 RD on north-south axis.	1.1 times the total height. Minimum 250 feet. Any guy wires must meet the setbacks of the District.
2. Dwelling(s), other than project owners	Not applicable if setbacks are met.	1,000 feet and sufficient distance to meet state noise standards.	1000 feet and sufficient distance to meet state noise standards.	1.1 times the total height. Minimum 250 feet.
3. Noise Standard	Minnesota Rule 7030, as amended.	Minnesota Rule 7030, as amended.	Minnesota Rule 7030, as amended.	N/A
4. Road Rights-of-Way	1.1 times the total height.	1.1 times the total height.	1.1 times the total height.	1.1 times the total height. Minimum 250 feet. Any guy wires must meet the setbacks of the District.
5. Other Rights-of-Way (Recreational Trails, power lines, Etc.)	1.1 times the total height.	1.1 times the total height.	1.1 times the total height.	1.1 times the total height. Minimum 250 feet.
6. Public conservation lands managed as grasslands	An amount equal to the height of the structure.	1.1 times the total height.	3 RD on east-west axis and 5 RD on north-south axis.	1.1 times the total height. Minimum 250 feet.
7. Wetlands, USFW Types III, IV and V	An amount equal to the height of the structure.	1.1 times the total height.	3 RD on east-west axis and 5 RD on north-south axis.	1.1 times the total height. Minimum 250 feet.
8. Other Structures	1.1 times the total height.	1.1 times the total height.	1.1 times the total height.	1.1 times the total height. Minimum 250 feet.
9. Other Existing WECS and Internal Turbine spacing	N/A	3 RD on east-west axis, and 5 RD on north-south axis.	3 RD on east-west axis, and 5 RD on north-south axis.	N/A

SUBDIVISION 2 ADDITIONAL SETBACK REQUIREMENTS

1. Based on their total name plate generating capacity, C-BED Projects are considered Micro-WECS, Non-Commercial WECS or Commercial WECS as defined in this Ordinance, and will follow the setbacks established for the category for which they fall under, as listed in Section 8 of this Ordinance.
2. Native Prairie ó Turbines and associated facilities shall not be placed in native prairie unless approved in native prairie protection plan. Native prairie protection plan shall be submitted if native prairie is present. The permittee shall, with the advice of the DNR and any others selected by the permittee, prepare a prairie protection and management plan and submit it to the County and DNR Commissioner 60 days prior to the start of construction.
3. Sand and Gravel Operations ó No turbines, towers or associated facilities in active sand and gravel operations.
4. Aviation (public and private airports) ó No turbines, towers or associated facilities shall be located so as to create an obstruction to navigable airspace of public and private airports in Murray County. Setbacks or other limitations determined in accordance with Mn/DOT Department of Aviation and Federal Aviation Administration (FAA) requirements.
5. Setbacks ó substations, accessory facilities, and feeder lines not located within a public right-of-way or any utility easement required by the Murray County Zoning Ordinance shall be setback at least 150 feet from the centerline of any county road as regulated in Section 17 of the Zoning Ordinance.
6. The setback for new dwellings shall be reciprocal in that no dwelling shall be constructed within the same setback as a new turbine would need to meet to an existing dwelling.
7. No wind turbines allowed within Shoreland Districts, except Micro Towers may be allowed by permission of the Murray County Planning Commission through the conditional use process and only in areas where electricity is not presently available.

SECTION 9 REQUIREMENTS AND STANDARDS

SUBDIVISION 1 SAFETY DESIGN STANDARDS

1. Engineering Certification. For all WECS, the manufacturer'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 30 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 8 feet above the ground. Visible fencing shall be installed around anchor points of guy wires. Aviation warning shall be painted on meteorological towers of less than 200 feet.

SUBDIVISION 2 HEIGHT STANDARDS

1. Total height. Non-Commercial WECS shall have a total height of less than 200 feet.
2. In those districts where meteorological towers are a permitted use, meteorological towers of less than 200 feet shall be exempt from Conditional Use process established for structures exceeding height requirements

SUBDIVISION 3 TOWER CONFIGURATION STANDARDS

1. All wind turbines, which are part of a commercial, non-commercial or C-BED WECS, shall be installed with a tubular, monopole type tower.
2. Meteorological towers may be guyed.
3. Color and Finish. All wind turbines and towers that are part of a 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.
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.

SUBDIVISION 4 OTHER APPLICABLE STANDARDS

1. Other Signage. All signage on site shall comply with Section 18 of the Murray County Zoning Ordinance. 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.
2. All feeder lines subject to Murray County Authority equal to or less than 34.5 kV in capacity shall be buried and located on the back side of the right-of-way. Feeder lines installed as part of a WECS shall not be considered an essential service. If not buried, must apply for a variance and shall follow Section 23 of the Zoning Ordinance for variance procedures.
3. 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.
4. 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 Murray County Zoning Administrator outlining the steps and schedule for returning the WECS to service. All WECS and accessory facilities shall be removed four feet below ground level within 90 days of the discontinuation of use.
5. All WECS projects 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. The plan shall also address road maintenance during and after completion of the decommissioning.
6. Orderly Development. Upon issuance of a conditional use permit, all WECS shall notify the Minnesota Public Utilities Commission (PUC) Energy Facilities Permitting program Staff of the project location and details on the survey form specified by the PUC.
7. Noise. All WECS shall comply with Minnesota Rules 7030, as amended, governing noise.
8. Electrical codes and standards. All WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.
9. Federal Aviation Administration. All WECS shall comply with FAA standards and permits.

SUBDIVISION 5 INTERFERENCE

1. 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 two miles of the proposed WECS location upon application to the county for permits. No WECS shall be constructed so as to interfere with County or Minnesota Department of Transportation microwave transmissions.

SUBDIVISION 6 AVOIDANCE AND MITIGATION OF DAMAGES TO PUBLIC INFRASTRUCTURE

1. Roads. Applicants shall:
 - A. Identify all public roads to be used for the purpose of transporting WECS, substation parts, materials, 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.
 - B. Contact the road authority for road closures, road signage removals, road signage re-locating, road signage restoring, moving permits, culverts, access/driveway permits, tile outlet permits, widening road intersections, standard utility permits and any other road activities that may require permits.
 - C. Contact the Murray County Dispatch prior to any road closures for the re-routing of emergency vehicles during the closure.
 - D. Contact the road authority to conduct an inspection of the road conditions of the haul routes prior to and after construction.
 - E. Provide a Performance Bond to be held by the county until the Township and/or County road authority(ies) have provided the County Auditor with a written release that all haul routes within their jurisdiction in Murray County have been returned to pre-construction condition.
2. Drainage System. The Applicant shall be responsible for immediate repair of damage to public and private drainage systems stemming from construction, operation, maintenance, or decommissioning.

SUBDIVISION 7 PRE-CONSTRUCTION MEETING

1. Applicant will conduct a Pre-Construction meeting prior to construction commencement with a written notice sent the following individuals a minimum of one week prior to said meeting:
 - A. Township Chairman
 - B. Murray County Highway Engineer
 - C. Murray County Sheriff
 - D. Murray County Zoning Administrator
 - E. Area Hydrologist, Minnesota Department of Natural Resources
 - F. Minnesota Pollution Control Agency
 - G. United States Farm Service Agency
 - H. Murray County Soil & Water Conservation District
 - I. US Fish & Wildlife Service
 - J. Minnesota State Historical Society
 - K. Two Planning Commission Members: Chair and County Board Representative
 - L. Mn/DOT

SECTION 10 ENFORCEMENT, VIOLATIONS, REMEDIES AND PENALTIES

Enforcement of this Ordinance shall be done in accordance with process and procedures established in Section 26 of the Murray County Zoning Ordinance.

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