

Norman County Wind Energy Ordinance

The Board of Commissioners of the County of Norman, Minnesota Hereby ordains as Follows:

Section 1: Title

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

Section 2: Purpose

This ordinance is established to regulate the installation and operation of Wind Energy Conversion Systems (WECS) within Norman 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, and consideration by the State of Minnesota as permitted by statute.

Section 3: Jurisdiction

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

Section 4: Interpretation

In interpreting and applying the provisions of this Ordinance, they shall be held to the minimum requirements for the promotion of the public health, safety, and general welfare. Where provisions of this Ordinance impose greater restrictions than those of any statute, other ordinance or regulations. The provisions of this Ordinance shall be controlling. Where 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 groups of more than one WECS developed in a coordinated fashion, but which have multiple entities separately owning individual WECS within the larger group of WECS. 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 for decisions of the Environmental Services Officer and, where appropriate, grant variance for the strict application of this Ordinance.
3. **C-BED Project.** A C-Bed Project is a Community Based Energy Development Project that meets the MN statutory definition of a C-Bed Project (MN State Statute 216.B.1612), as amended.
4. **Commercial WECS.** A WECS of equal to or greater than 100kW (.1MW) 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 the recommendations for plan execution, documented in texts, ordinances and maps which constitutes the guide for the future development of the unincorporated areas of the County.
6. **Conditional Use.** A land use or development as is defined by the 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.** Norman County, Minnesota.
8. **County Board.** Includes the County Commissioners, the Board of County Commissioners or any other word or words meaning the Norman 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 between wind turbines and from one or more wind turbines to the point of interconnection with the electrical utility grid.

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 1kW (.001 MW nameplate generating capacity or less and utilizing supporting towers of 40 feet or less.
15. **Non-Commercial WECS.** A WECS of less than 100 kW (.1 MW) and greater than 1 kW (.001 MW) in total name plate generating Capacity.
16. **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.
17. **Project Boundary/Property Line.** The boundary line of the area over which the entity applying for a WECS permit has or intends to have 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. The permit applicant must submit a map showing the final Project Boundary, based on property actually under their control, prior to the start of construction.
18. **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.
19. **Rotor Diameter (RD).** The diameter of the circle described by the moving rotor blades.

20. **Substation.** Any electrical facility designed to convert electricity produced by wind turbines to voltage above 40 kV for interconnection with the electric utility grid.
21. **Total Height.** The highest point, above ground level, reached by a rotor tip or any other part of the WECS.
22. **Total name plate capacity.** The total of the maximum rated output of the electrical power production equipment of a WECS project.
23. **Tower.** Towers include vertical structures that support the electrical generator, rotor blades, or meteorological equipment.
24. **Tower Height.** The total height of the WECS measured from the ground level to the center of the blade hub, exclusive of the rotor blades.
25. **WECS- Wind Energy Conversion Systems.** 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.
26. **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.
27. **Zoning Ordinance.** The Norman County Zoning Ordinance.

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 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(s). For C-BED projects, must provide percent of ownership for each of the project owners.

4. The legal description(s) and address(es) 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. The approximate latitude and longitude of individual wind turbines, in decimal degrees.
9. A USGS topographical map, or map with similar data, of the property within the Project Boundary and surrounding area, including any other properties within 1,320 feet of the Project Boundary that have existing or known proposed WECS.
10. Location of wetlands, scenic, and natural areas including bluffs inside the Project Boundary or within 1,320 feet of the Project Boundary.
11. Copies of all permits or documentation that indicates compliance with all other applicable local, 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), as amended.
 - e. Microwave Beam Path Study.
 - f. Acoustical Analysis.
 - g. Minnesota Department of Natural Resources (MNDNR).
 - h. Minnesota State Historical Preservation Office (MNSHPO).
 - i. U.S. Fish and Wildlife Service (USFWS).
12. Location of all known Communications Towers within 2 miles of the proposed WECS.
13. Location of all known public or private Airports/Airfields or Heliports within 5 miles of the proposed WECS.
14. Detailed Decommissioning Plan including how decommissioning costs would be covered. Applicant may be required to establish an escrow account to fund decommissioning costs.

15. Description of potential impacts on nearby existing or known planned WECS and wind resources within 5 RD of the Project Boundary. A Wake Loss Study may be required if the county determines the proposed project may have a significant impact on nearby WECS.
16. Additional information stated in Minnesota Rules, part 7836.0500 (subpart 1), as amended.
17. 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.
18. Locations and site plans for all temporary, non-residential construction sites and staging areas.

Section 7: 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 (P = Permitted, C = Conditionally Permitted, NP = Not Permitted, I = Interim Permitted):

Zoning District	Micro-WECS	Non-Comm <100 kW	Commercial >100 kW	Meteorological Towers
General Floodplain	C	C	C	C/I
Floodway	NP	NP	NP	NP
Flood Fringe	P	C	C	C/I
Special Protection	C	NP	NP	NP
Residential District	C	NP	NP	NP
Special Protection - Low Development	C	NP	NP	NP
Resource Protection Wellhead	P	C	NP	C/I
Resource Protection Aggregate	P	C	C	C/I
Resource Protection Biological	C	C	C	I
Agricultural General	P	P	C	C/I
Agricultural Service Center	P	C	C	C/I
Urban Expansion District	P	C	C	C/I
Highway Commercial	P	C	C	C/I
Limited Highway Commercial	P	C	C	C/I
Landing Field Overlay	NP	NP	NP	NP

Section 8: Setbacks

All towers shall adhere to the setbacks established in the following table, as measured from the edge of each tower.

Subdivision 1: Setbacks

	Micro-WECS	Non-Commercial < 100 kW	Commercial >100 kW	Meteorological Tower
1. Non-participating properties	An amount equal to the total height of the structure	1.1 time the total height	3 RD in the non-prevailing wind axis and 5 RD in the prevailing wind axis or 1,500 feet whichever is greater	1.1 time the total height. Minimum 250 feet. Any guy wires must meet the setbacks of the Zoning District.
2. Occupied Dwelling	Not applicable if all other setbacks are met	500 feet and/or sufficient distance to meet state noise standards whichever is greater	1,200 feet from dwellings.	1.1 times the total height. Minimum 250 feet.
3. Noise Standard	Minnesota Rule 7030, as amended	Minnesota Rule 7030, as amended. Non-participant dwellings <40 dB(A) during night hours (10pm-7am)	Minnesota Rule 7030, as amended. Non-participant dwellings <40 dB(A) during night hours (10pm-7am)	N/A
4. Public Road Right of Way	1.1 times total height.	1.1 times total height.	1.1 times total height.	1.1 times total height. Minimum 250 feet. Any guy wires must meet the setback requirements of the Zoning District.
5. Other rights of way (recreational trails, vulnerable utility infrastructure, etc.)	1.1 times total height.	1.1 times total height.	1.1 times total height.	1.1 times total height. Minimum 250 feet.
6. Public Conservation lands managed as grasslands	An amount equal to the total height of the structure.	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	1.1 times the total height. Minimum 250 feet.
7. Wetlands, USFWS Types III, IV, and V	An amount equal to the total height of the structure	Follow USFWS requirements, as amended	Follow USFWS requirements, as amended	1.1 times the total height. Minimum 250 feet
8. Other vulnerable Structures	1.1 times total height	1.1 times total height	1.1 times total height	1.1 times total height. Minimum 250 feet
9. Other existing or known planned WECS Project Boundaries and Internal Turbine Spacing	N/A	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	N/A

Subdivision 2: Additional Setback Requirements

1. Based on their total aggregate name plate generating capacity, projects may be 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, Sub. 1 of this Ordinance.
2. Sand and Gravel Operations -- No turbines, towers or associated facilities shall be located in active sand and gravel operations without meeting reasonable setbacks from actual mining operations agreed to, in writing, with the property owner.
3. Aviation (public and private airports) - No turbines, towers or associated facilities shall be located so as to create an obstruction to navigable airspace of public and private airports in Norman County. Setbacks or other limitations determined in accordance with MN/DOT Department of Aviation and Federal Aviation Administration (FAA) requirements.
4. Setbacks for substations, accessory facilities, and feeder lines not located within a public right-of-way or any utility easement required by the Zoning Ordinance shall be setback at least 140 feet from the centerline of any county or township road.
5. 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.

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/balls, 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. Warning balls shall be installed on guy wires near the top of the tower. Aviation warning shall be painted on meteorological towers of less than 200 feet and towers greater than 200 feet shall maintain a certificate of no hazard to navigation from the FAA.

Subdivision 2: Height Standards.

1. Total height. Non-Commercial WECS shall have a total height of less than 200 feet.
2. Total height. No Commercial WECS shall have a total height of more than 500 feet.

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, slow flashing lights are preferred for night-time illumination to reduce impacts on migrating birds. Red or white steady burning lights should be avoided if possible.

Subdivision 4: Other Applicable Standards.

1. Other Signage. All signage on site shall comply with Section 7.1 of the Norman 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 Norman 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 to the extent it is physically and technically feasible. Feeder lines installed as part of a WECS shall not be considered an essential service. If not buried, overhead lines must be of the shortest length possible, and must be buried again as soon as it is physically and technically feasible.
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 Norman County Environmental Services Officer outlining the steps and schedule for returning the WECS to service. If no such plan is submitted, all WECS and accessory facilities shall be removed to four feet below ground level within 18 months 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. Additionally, non-commercial and commercial WECS sounds shall not exceed 40 dB(A) at the nearest residential receptor during the nighttime hours between 10:00 pm and 7:00 am.
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 cause 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 Norman 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 Norman 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 to the following individuals a minimum of one week prior to said meeting:
 - a. Township Chair.
 - b. Norman County Highway Engineer.
 - c. Norman County Sheriff.
 - d. Norman County Environmental Service Officer.
 - e. Area Hydrologist, Minnesota Department of Natural Resources.
 - f. Minnesota Pollution Control Agency.
 - g. United States Farm Service Agency.
 - h. Norman County Soil and Water Conservation District.
 - i. US Fish and Wildlife Service.
 - j. Minnesota State Historical Preservation Office.
 - k. Two Planning Commission members: Chair and County Board Representative.
 - l. MN/DOT.

Section 10: Enforcement, Violations, Remedies, Penalties and Fees.

Subdivision 1. Enforcement, Violations, Remedies, and Penalties.

Enforcement for this Ordinance shall be done in accordance with process and procedures established in the Zoning Ordinance.

Subdivision 2. Fees

1. The fees for a zoning certificate, variance, amendment, or conditional use permit, shall be established by the Board. The Board may review and revise the fee schedule periodically. The Zoning Administrator shall issue the Zoning Certificate only after the fee has been paid and a determination has been made that the building plans, together with the application comply with the terms of this Ordinance. Any person filing a petition for an amendment to this Ordinance or requesting a variance shall pay the prescribed fees according to the schedule established by the Board before any work proposed may commence. The fee is payable at the time of filing a petition and is not refundable.
2. Municipal corporations and governmental agencies shall be exempt from the fee requirements as prescribed by this Ordinance.

Section 11: Validity

Subdivision 1. Validity.

Should any section or provisions of this Ordinance be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the Ordinance as a whole or any part thereof other than the part so declared to be invalid.

Section 12. Date of Effect

Subdivision 1. Date of Effect

This ordinance shall be in full force and effect from and after it's passage and publication according to law.

Adopted this 20th day of May 2010

Dated 5/20/10

Lee Ann Hall

Chair, Norman County Board of Commissioners

Richard Munter

Richard Munter, Auditor/Treasurer, Norman County

OFFICE OF COUNTY RECORDER #220964
NORMAN COUNTY, MINNESOTA
I hereby certify that this instrument # 220964 was filed in
this office for record on 5/25/2010 at 11:45 AM
County Recorder [Signature]
Deputy [Signature]
Numbered Indexed Tracted Reviewed

Return: NORMAN COUNTY AUDITOR/TREASURER
16 E 3RD AVE
ADA MN 56510

Fees Paid: \$ 0.00 Receipt # 102900

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8. The approximate latitude and longitude of individual wind turbines, in decimal degrees.
9. A USGS topographical map, or map with similar data, of the property within the Project Boundary and surrounding area, including any other properties within 1,320 feet of the Project Boundary that have existing or known proposed WECS.
10. Location of wetlands, scenic, and natural areas including bluffs inside the Project Boundary or within 1,320 feet of the Project Boundary.
11. Copies of all permits or documentation that indicates compliance with all other applicable local, State and Federal Regulatory Standards:
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12. Location of all known Communications Towers within 2 miles of the proposed WECS.
13. Location of all known public or private Airports/Airfields or Heliports within 5 miles of the proposed WECS.
14. Detailed Decommissioning Plan including how decommissioning costs would be covered. Applicant may be required to establish an escrow account to fund decommissioning costs.

15. Description of potential impacts on nearby existing or known planned WECS and wind resources within 5 RD of the Project Boundary. A Wake Loss Study may be required if the county determines the proposed project may have a significant impact on nearby WECS.
16. Additional information stated in Minnesota Rules, part 7836.0500 (subpart 1), as amended.
17. 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.
18. Locations and site plans for all temporary, non-residential construction sites and staging areas.

Section 7: 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 (P = Permitted, C = Conditionally Permitted, NP = Not Permitted, I = Interim Permitted):

Zoning District	Micro-WECS	Non-Comm <100 kW	Commercial >100 kW	Meteorological Towers
General Floodplain	C	C	C	C/I
Floodway	NP	NP	NP	NP
Flood Fringe	P	C	C	C/I
Special Protection	C	NP	NP	NP
Residential District	C	NP	NP	NP
Special Protection - Low Development	C	NP	NP	NP
Resource Protection Wellhead	P	C	NP	C/I
Resource Protection Aggregate	P	C	C	C/I
Resource Protection Biological	C	C	C	I
Agricultural General	P	P	C	C/I
Agricultural Service Center	P	C	C	C/I
Urban Expansion District	P	C	C	C/I
Highway Commercial	P	C	C	C/I
Limited Highway Commercial	P	C	C	C/I
Landing Field Overlay	NP	NP	NP	NP

Section 8: Setbacks

All towers shall adhere to the setbacks established in the following table, as measured from the edge of each tower.

Subdivision 1: Setbacks

	Micro-WECS	Non-Commercial < 100 kW	Commercial >100 kW	Meteorological Tower
1. Non-participating properties	An amount equal to the total height of the structure	1.1 time the total height	3 RD in the non-prevailing wind axis and 5 RD in the prevailing wind axis or 1,500 feet whichever is greater	1.1 time the total height. Minimum 250 feet. Any guy wires must meet the setbacks of the Zoning District.
2. Occupied Dwelling	Not applicable if all other setbacks are met	500 feet and/or sufficient distance to meet state noise standards whichever is greater	1,200 feet from dwellings.	1.1 times the total height. Minimum 250 feet.
3. Noise Standard	Minnesota Rule 7030, as amended	Minnesota Rule 7030, as amended. Non-participant dwellings <40 dB(A) during night hours (10pm-7am)	Minnesota Rule 7030, as amended. Non-participant dwellings <40 dB(A) during night hours (10pm-7am)	N/A
4. Public Road Right of Way	1.1 times total height.	1.1 times total height.	1.1 times total height.	1.1 times total height. Minimum 250 feet. Any guy wires must meet the setback requirements of the Zoning District.
5. Other rights of way (recreational trails, vulnerable utility infrastructure, etc.)	1.1 times total height.	1.1 times total height.	1.1 times total height.	1.1 times total height. Minimum 250 feet.
6. Public Conservation lands managed as grasslands	An amount equal to the total height of the structure.	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	1.1 times the total height. Minimum 250 feet.
7. Wetlands, USFWS Types III, IV, and V	An amount equal to the total height of the structure	Follow USFWS requirements, as amended	Follow USFWS requirements, as amended	1.1 times the total height. Minimum 250 feet
8. Other vulnerable Structures	1.1 times total height	1.1 times total height	1.1 times total height	1.1 times total height. Minimum 250 feet
9. Other existing or known planned WECS Project Boundaries and Internal Turbine Spacing	N/A	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	3 RD in the non prevailing wind axis and 5 RD in the prevailing wind axis.	N/A

Subdivision 2: Additional Setback Requirements

1. Based on their total aggregate name plate generating capacity, projects may be 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, Sub. 1 of this Ordinance.
2. Sand and Gravel Operations -- No turbines, towers or associated facilities shall be located in active sand and gravel operations without meeting reasonable setbacks from actual mining operations agreed to, in writing, with the property owner.
3. Aviation (public and private airports) - No turbines, towers or associated facilities shall be located so as to create an obstruction to navigable airspace of public and private airports in Norman County. Setbacks or other limitations determined in accordance with MN/DOT Department of Aviation and Federal Aviation Administration (FAA) requirements.
4. Setbacks for substations, accessory facilities, and feeder lines not located within a public right-of-way or any utility easement required by the Zoning Ordinance shall be setback at least 140 feet from the centerline of any county or township road.
5. 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.

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/balls, 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. Warning balls shall be installed on guy wires near the top of the tower. Aviation warning shall be painted on meteorological towers of less than 200 feet and towers greater than 200 feet shall maintain a certificate of no hazard to navigation from the FAA.

Subdivision 2: Height Standards.

1. Total height. Non-Commercial WECS shall have a total height of less than 200 feet.
2. Total height. No Commercial WECS shall have a total height of more than 500 feet.

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, slow flashing lights are preferred for night-time illumination to reduce impacts on migrating birds. Red or white steady burning lights should be avoided if possible.

Subdivision 4: Other Applicable Standards.

1. Other Signage. All signage on site shall comply with Section 7.1 of the Norman 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 Norman 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 to the extent it is physically and technically feasible. Feeder lines installed as part of a WECS shall not be considered an essential service. If not buried, overhead lines must be of the shortest length possible, and must be buried again as soon as it is physically and technically feasible.
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 Norman County Environmental Services Officer outlining the steps and schedule for returning the WECS to service. If no such plan is submitted, all WECS and accessory facilities shall be removed to four feet below ground level within 18 months 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. Additionally, non-commercial and commercial WECS sounds shall not exceed 40 dB(A) at the nearest residential receptor during the nighttime hours between 10:00 pm and 7:00 am.
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 cause 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 Norman 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 Norman 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 to the following individuals a minimum of one week prior to said meeting:
 - a. Township Chair.
 - b. Norman County Highway Engineer.
 - c. Norman County Sheriff.
 - d. Norman County Environmental Service Officer.
 - e. Area Hydrologist, Minnesota Department of Natural Resources.
 - f. Minnesota Pollution Control Agency.
 - g. United States Farm Service Agency.
 - h. Norman County Soil and Water Conservation District.
 - i. US Fish and Wildlife Service.
 - j. Minnesota State Historical Preservation Office.
 - k. Two Planning Commission members: Chair and County Board Representative.
 - l. MN/DOT.

Section 10: Enforcement, Violations, Remedies, Penalties and Fees.

Subdivision 1. Enforcement, Violations, Remedies, and Penalties.

Enforcement for this Ordinance shall be done in accordance with process and procedures established in the Zoning Ordinance.

Subdivision 2. Fees

1. The fees for a zoning certificate, variance, amendment, or conditional use permit, shall be established by the Board. The Board may review and revise the fee schedule periodically. The Zoning Administrator shall issue the Zoning Certificate only after the fee has been paid and a determination has been made that the building plans, together with the application comply with the terms of this Ordinance. Any person filing a petition for an amendment to this Ordinance or requesting a variance shall pay the prescribed fees according to the schedule established by the Board before any work proposed may commence. The fee is payable at the time of filing a petition and is not refundable.
2. Municipal corporations and governmental agencies shall be exempt from the fee requirements as prescribed by this Ordinance.

Section 11: Validity

Subdivision 1. Validity.

Should any section or provisions of this Ordinance be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the Ordinance as a whole or any part thereof other than the part so declared to be invalid.

Section 12. Date of Effect

Subdivision 1. Date of Effect

This ordinance shall be in full force and effect from and after it's passage and publication according to law.

Adopted this 20th day of May 2010

Dated 5/20/10

Lee Ann Hall

Chair, Norman County Board of Commissioners

Richard Munter

Richard Munter, Auditor/Treasurer, Norman County

OFFICE OF COUNTY RECORDER #220964
NORMAN COUNTY, MINNESOTA
I hereby certify that this instrument # 220964 was filed in
this office for record on 5/25/2010 at 11:45 AM
County Recorder [Signature]
Deputy [Signature]
Numbered Indexed Tracted Reviewed

Return: NORMAN COUNTY AUDITOR/TREASURER
16 E 3RD AVE
ADA MN 56510

Fees Paid: \$ 0.00 Receipt # 102900