

XI. Wind Energy

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A. Definitions

The following words, terms and phrases, when used in this Article and Section, shall have the meaning provided herein, except where the context clearly indicates otherwise:

1. Abandonment (Wind Energy). A Wind Turbine or Wind Energy Facility that has not been operational for a continuous period of one hundred eighty (180) days.
2. Accessory Wind Energy System. A wind energy system that is located on the same lot or parcel as the principal use it serves and is intended primarily to generate electricity for on-site consumption.
3. Collector (Collection Line/System). Underground electrical lines that gather electricity generated by individual wind turbines and transport it to a substation or interconnection point.
4. Hub Height. The distance measured from ground level at the base of a wind turbine to the center of the rotor hub.
5. Meteorological (MET) Tower. A structure equipped with instruments used to measure wind speed, wind direction, and other atmospheric data to evaluate wind resources at a site.
6. Nacelle. The enclosed structure at the top of a wind turbine tower that houses the generator, gearbox, and other mechanical equipment.
7. Nameplate Capacity. The maximum rated electrical generating output of a wind turbine or wind energy facility, as designated by the manufacturer.
8. Non-Participating Property / Non-Participant. A property owner who has not entered into a lease, easement, or other agreement for the placement of wind turbines or associated facilities on their property.

9. Participating Property / Participant. A property owner who has entered into a lease, easement, or other agreement with the permittee for the placement of wind turbines or associated facilities.
10. Power Purchase Agreement (PPA). A contract between a power producer and a purchaser for the sale of electricity generated by a wind energy facility.
11. Rotor Diameter. The diameter of the circular area swept by the rotating blades of a wind turbine.
12. Shadow Flicker. The alternating light and shadow effect caused by the rotation of wind turbine blades passing between the sun and a receptor.
13. Wind Turbine. A device that converts the kinetic energy of wind into electrical energy, consisting of a tower, nacelle, rotor, and blades.
14. Wind Turbine Height. The vertical distance measured from ground level at the base of the turbine to the highest point reached by the tip of a blade.

B. Wind Energy Facility and Wind Turbines

1. The purpose of these regulations is to provide a regulatory framework for the siting, construction and operation of wind energy facilities and wind turbines in the county, subject to reasonable restrictions, that will preserve the safety and well-being of the residents of the county, while allowing equitable and orderly development of wind energy facilities or wind turbines.
2. Application for Permit. No construction, except for wind monitoring, soil testing and other survey work, may commence on a wind energy facility or wind turbine until a Conditional Use Permit ("Permit") has been issued by the Mercer County Commission. Payment of a nonrefundable fee shall be provided in an amount established by resolution of the Mercer County Commission.
3. The application shall include the following information:
 - a. The complete name, legal address and phone number of the applicant and responsible contact person.
 - b. A USGS topographical map of the wind energy facility and 500 feet of all adjoining properties adjoining the wind energy facility perimeter. The map must show all existing features, including property boundaries, structures, improvements, roads, utility lines, public facilities and natural features. The map must also show the location of all proposed improvements for the

wind energy facility, including wind turbines, MET Towers, electrical lines and roads. Each proposed wind turbine shall be numbered and fully described in technical details, including rotor diameter, model, and manufacturer, and distances, measured in feet, from property lines and from existing improvements for each proposed wind turbine.

- c. Details as to how the applicant will comply with the stated setbacks, acoustics, shadow flicker, and compliance with any exclusion zone or avoidance area.
- d. A schedule for the proposed start and completion of construction of the wind energy facility or wind turbine.
- e. Copies or signed summaries of all leases and easements for wind turbines and associated equipment and infrastructure to be sited within the county and copies of any written agreements between the applicant and affected parties holding associated wind rights on adjoining properties.
- f. Proof the applicant is registered either with the North Dakota Secretary of State or is licensed to do business in the State;
- g. A written statement addressing how the proposed wind energy facility or wind turbine(s) is consistent with the Mercer County Comprehensive Plan as well as the purpose and intent of the Mercer County Zoning Ordinance; and
- h. A written summary stating how the proposed project meets the State of North Dakota's energy conversion facilities siting criteria. At a minimum the written statement will address the following state requirements:
 - i. The facility is not located in an exclusion zone:
 - ii. The facility is not located in an avoidance area; and
 - iii. The facility meets the State's minimum selection criteria.
 - iv. A Biological Resource Evaluation that demonstrates no conflicts. The applicant, in consultation with the US Fish & Wildlife Service – Ecological Services Office (USFW) and the North Dakota Department of Game and Fish (NDGF) shall, for the project site, conduct an inventory of existing wildlife management areas, scientific and natural areas, recreation areas, native prairies and forests, wetlands, and any other biologically sensitive areas and wildlife resources, particularly birds and bats, within the site and assess the presence of state- or federally-listed or threatened species, and other protected species, such as migratory birds.
- i. An analysis of the project area based upon a review of the North Dakota Game and Fish Department's Wind Energy Development in North Dakota Best Management Practices.

- j. An archeological resource survey. The applicant shall work with the State Historic Preservation Office (SHPO) at the State Historical Society of North Dakota at the beginning of the planning process for the wind energy conversion facility to determine whether an archaeological survey is recommended for any part of the proposed project. If recommended, the applicant shall contract with a qualified archaeologist to complete such surveys, and shall submit the results to the county planner and the SHPO. The SHPO will make recommendations for the treatment of any significant archaeological sites which are identified. Any issues in the implementation of these recommendations will be resolved by the County in consultation with the SHPO. All information provided or submitted under this provision is subject to North Dakota Century Code Section 55-02-07.1.
- k. A study addressing the potential impact on human and animal health and safety from the proposed project.

4. Public Hearings

- a. Upon receipt of the application, the Planning and Zoning Commission, along with any experts it may retain, shall review the permit application and shall hold a public hearing on the application within no more than 45 days from receipt of the application, providing at least 15 day notice prior to the hearing in the official newspaper of the county.
- b. The applicant shall be responsible for mailing out certified notice letters to property owners within 5 miles of the proposed wind energy facility perimeter or proposed wind turbine location. The applicant will be responsible for the cost of the certified notice letter mailing. The County will provide a copy of the property owner notice letter to be sent out by certified mail. At least two weeks prior to the scheduled public hearing the applicant shall submit to the County proof of the certified letter mailing, a list of property owners within 5 miles, and a signed statement with a notary seal certifying all property owners within five miles of the request have been noticed.

5. Demonstration of Compliance

- a. A Wind Energy Facility or Wind Turbine Conditional Use Permit issued shall be contingent upon the applicant's final demonstration of compliance with the requirements of the permit following completion of construction of the wind energy facility. Within 90 days of wind energy facility construction, the permittee shall submit to the Planning and Zoning Commission an updated and final USGS topographical map, or survey if available, providing all information as required under this subsection and demonstrating actual compliance with the requirements and conditions of the permit.

- b. Permittee on a biannual schedule shall submit to the Planning and Zoning Commission a compliance report which shall include a status of the wind turbine facility or wind turbines, all mechanical issues, repairs or updates made to the wind energy facility or wind turbines since the last compliance report. The report will address how the permittee complies with the County's adopted conditions of approval. The report shall list any complaints received and remedial actions that have taken place. Proof of adequate liability insurance and before and after photographs of all roadways within the wind energy facility perimeter. Photographs of compliance to all requirements and remedial action taken. The permittee report shall only be deemed in compliance with this section if the biannual report encompasses answers to all requirements therein. Failure to comply with the requirements in this section shall result in a revocation hearing to be held within 30 days of the biannual reports submission date with the Mercer County Planning & Zoning Commission and/or a penalty of up to \$2,000 per day or an amount to be determined by the Mercer County Commission.
 - c. A power purchase agreement shall be provided no later than six months after approval of the permit. The applicant's failure to provide such an agreement within six months renders the permit void where no extension has been granted by the County.
 - d. An interconnection agreement for connection to the electrical grids that serve North Dakota (Midcontinent Independent Systems Operator ("MISO") and Southwest Power Pool ("SPP")).
- 6. Standards for Appearance, Lighting, Facility Footprint, Agricultural Operations, Roads and Power Lines
 - a. Wind turbines shall be painted a non-reflective, non-obtrusive and uniform color.
 - b. Wind turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the wind energy facility.
 - c. Each wind turbine shall be marked with a visible identification number to assist with provision of emergency services, and a permittee shall file with local fire departments, law enforcement and the county emergency management coordinator a wind energy facility map identifying wind turbine locations and numbers.
 - d. Wind turbines shall not be artificially lighted, except to the extent required by the FAA, by N.D.C.C. 42-22-16.4 which requires functioning light-mitigating technology, and by other applicable authority. This requirement applies to wind energy facilities and wind turbines.

- e. At wind energy facility sites, the design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, and location that will blend the wind energy facility into the natural setting and existing environment.
 - f. At wind energy facility sites, the location and construction of access roads and other infrastructure shall, to the extent reasonably possible, minimize disruption to farmland, the landscape and agricultural operations within the county. Prior to construction, the applicant shall make satisfactory arrangements (including obtaining permits) for road use access road intersections, maintenance and repair of damages with governmental jurisdiction with authority over each road. The applicant shall notify the county road superintendent on request.
 - g. A permittee shall promptly replace or repair all fences or gates removed or damaged during all phases of the wind energy facility's life, unless otherwise negotiated with the affected landowner. All such gates shall be constructed such that the minimum width shall not be less than 20 feet. When the permittee installs a gate where electric fences are present, the permittee shall provide for continuity in the electric fence circuit.
 - h. A permittee shall ensure that, following completion of construction of a wind energy facility, county roads will be repaired or restored to a condition at least equal to the condition prior to construction of such facility.
 - i. A permittee shall place electrical lines, known as collectors, and communication cables underground when located on private property. Collectors and cables shall also be placed within or adjacent to the land necessary for wind turbine access roads, unless otherwise negotiated with the affected landowner. This paragraph does not apply to feeder lines.
 - j. A permittee shall place overhead feeder lines on public rights-of-way, if a public right-of-way exists, or a permittee may place feeder lines on private property. A change of routes may be made as long as the feeders remain on public rights of way and approval has been obtained from the governmental unit responsible for the affected right-of-way. When placing feeders on private property, the permittee shall place the feeder in accordance with the easement negotiated with the affected landowner.
 - k. If approved, prior to construction the permittee will be required to post a bond to cover the costs of decommissioning and restoration.
7. Standards for Setbacks. The following setbacks and separation requirements shall apply to all wind turbines in a wind energy facility or to wind turbines not in a wind energy facility.

- a. Refer to Table 1 for setback requirements.
- b. 'Habitable structure' shall be defined as a structure assigned a 911 address that is capable of habitation any time of year.
- c. Variances may be granted from setbacks A, B, C, or G if all legal owners agree, in writing, that the setback distance may be waived.
- d. Shadow flicker minimization: Each wind turbine shall be placed such that shadow flicker to any habitable structure occurs no more than 24 hours per year.

Table 1 – Wind Energy Setback Requirements

Setback	Minimum Setback Distance
A. Occupied dwelling, commercial building or publicly used structure or facility	2,500' (from center of turbine monopole) OR 7 times the turbine height, whichever is greater.
B. Habitable structures of non-participants	2 miles
C. Non-participating property lines	1 mile
D. North Dakota Highway 1806 right of way	2 miles
E. State and interstate road right of way Railroad right of way 115 kilovolt or higher transmission line edge	1.1 times turbine height
F. County or section road centerline	2.1 times turbine height plus 75'
G. Wind energy facility perimeter	2.5 times turbine height
H. Doppler radar station, or fixed broadcast, retransmission, or reception antennas for television, radio, or wireless phone or other personal communication systems with an estimated value of \$25,000 or more that would produce electromagnetic interference with signal transmission or reception	2.5 miles

8. Standard for Noise: Shall not exceed the limits as found in the North Dakota Century Code, as amended.
9. Standard for Maximum Wind Turbine Height: No Wind Turbine with a height of more than 500 feet shall be allowed.
10. Minimum Ground Clearance
 - a. The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than 75 feet.
 - b. Maintenance and Abandonment
 - c. Any Wind Turbine that is determined by the County to be not in operational condition for a period of 180 days shall be deemed abandoned and shall be removed, decommissioned and reclaimed per the requirements of this section within 60 days from the date a written notice is sent to the turbine owner by the county. The operator shall be allowed 30 days from the date of a written notice from the County to respond to the complaint and to make an appeal.
11. Project-related Damages
 - a. The permittee is responsible for damage caused by the facility or its components.
 - b. The permittee must repair, restore, or compensate for verified off-site damage within 120 days of date the damage is verified by the County.
 - c. The permittee must maintain insurance sufficient to cover damage claims.
 - d. The County shall be indemnified from damage claims tied to the project.
12. Decommissioning and Restoration. Within 180 days of termination or abandonment of any leases or easements for a wind energy facility or wind turbine located in the county, the permittee shall, at its expense, begin the decommissioning process and fully comply with the following decommissioning requirements:
 - a. Submit for county approval a detailed decommissioning and reclamation plan.
 - b. Decommissioning and site restoration by permittee, at permittee's cost, includes, but is not limited to, dismantling and removal of all towers, turbine generators, transformers, and overhead cables; removal of underground cables; removal of foundations, buildings and ancillary equipment; and removal of surface road material and restoration of the roads; and turbine sites to the same physical condition that existed immediately before

construction of the commercial wind energy conversion facility or wind turbine.

- c. The site must be restored and reclaimed to the same general topography that existed prior to the beginning of the construction of the wind energy conversion facility above and below ground.

13. Transfer of Conditional Use Permit. Thirty (30) days prior to any change in ownership of a commercial wind energy facility permitted in Mercer County, or a change in the controlling interest of any entity owning a wind energy facility permitted in Mercer County, an application shall be made to the Mercer County Commission, requesting transfer of the conditional use permit. Approval of such transfer shall be conditioned upon explicit agreement by the new applicant to comply with all provisions of this section and all conditions attached to the original conditional use permit. The application may be in letter form and shall be signed by the authorized representatives or agents of both the current applicant and the prospective applicant.

14. Bonding Requirements. The County Auditor shall require submission of a bond by the owner in the amount of the estimated cost to perform the decommissioning and reclamation work. Proof of a cash or surety bond payable to Mercer County Auditor must be submitted to the county and shall meet all of the following requirements:

- a. Bond requirements. Prior to commencing construction of a wind energy facility, wind turbine or appurtenance or road access thereto, the permittee shall submit to the Mercer County Commission, and obtain its approval, a surety bond or cash bond. The permittee must be the principal on the bond. Each surety bond shall be executed by a responsible surety company authorized to transact business in North Dakota. Bonding requirements shall be reviewed by the county on a biennial schedule. Permittee shall contact the county and place on the Mercer County Commission meeting agenda a request to review the bond.
- b. Bond amounts and limitations. The bond shall be in the minimum amount of \$650,000 per wind turbine or as otherwise set by the Mercer County Commission. All bond amounts must be adjusted on a biennial basis to account for US-CPI inflation indexes.
- c. Bond terms. The bond shall be considered a compliance, decommissioning and reclamation bond. If the principal does not satisfy the bond's conditions, then the surety shall satisfy the conditions or forfeit to the county the face value of the bond.
- d. Transfer under bond. Transfer of property does not release the bond.
- e. Penalty for failure to submit bond. If the permittee does not submit an acceptable bond to the county within the timeframe required herein, the

county may assess an administrative penalty up to \$2,000 for each day the bond is out of compliance or an amount to be determined by the Mercer County Commission.

- f. Bond release or use of bond. The permittee upon completion of decommissioning and reclamation must submit a report and photographs of all reclamation processes, including written statements from all participating landowners approving the final reclamation. The Mercer County Commission shall, in writing, advise the permittee and any sureties on any bond as to whether the decommissioning and reclamation is approved after review of the permittee's report. If approved, liability under such bond may be formally terminated upon receipt of a written request by the permittee. The request must be signed by an officer of the principal or a person authorized to sign for the permittee. The county may forfeit a bond in full or part if the county finds the permittee has violated any of the terms or conditions of the bond, fails to properly decommission or reclaim the site, refuses or is unable to perform or has abandoned the wind energy facility or wind turbine.

15. Accessory Wind Energy Systems. Wind energy systems are permitted as an accessory use, subject to the following requirements.

- a. An accessory wind energy system must be located on the same lot or parcel of land as the primary use it is intended to serve.
- b. An accessory wind energy system is intended to produce energy primarily for on-site consumption but excess electrical power may be transferred to a power supply grid pursuant to utility company interconnection agreements.