

**Bolded Highlighted** text represent new language to be included  
**Strikethrough highlighted** text represents language to be deleted

## **Section 1211. ~~012~~ Wind Energy System (Wes) Requirements**

### **Section 1211.01 Applicability**

The requirements of these regulations shall apply to all WES facilities except private facilities with a single tower height of less than seventy-five (75) feet and used primarily for on-site consumption of power.

### **Section 1211.~~012~~ Purpose**

The purpose of this ordinance is to insure that the placement, construction and modification of a Wind Energy System (WES) facility is consistent with the County's land use policies, to minimize the impact of WES facilities, to establish a fair and efficient process for review and approval of applications, to assure a comprehensive review of environmental impacts of such facilities, and to protect the health, safety and welfare of the County's citizens.

### **Section 1211.~~023~~ Federal and State Requirements**

All WESs shall meet or exceed standards and regulations of the Federal Aviation Administration and South Dakota State Statutes and any other agency of federal or state government with the authority to regulate WESs.

### **Section 1211.~~034~~ General Provisions**

#### 1. Mitigation Measures

- a. Site Clearance. The permittees shall disturb or clear the site only to the extent necessary to assure suitable access for construction, safe operation and maintenance of the WES.
- b. Topsoil Protection. The permittees shall implement measures to protect and segregate topsoil from subsoil in cultivated lands unless otherwise negotiated with the affected landowner.
- c. Compaction. The permittees shall implement measures to minimize compaction of all lands during all phases of the project's life and shall confine compaction to as small an area as practicable.
- d. Livestock Protection. The permittees shall take precautions to protect livestock during all phases of the project's life.
- e. Fences. The permittees shall promptly replace or repair all fences and gates removed or damaged during all phases of the project's life unless otherwise negotiated with the affected landowner.
- f. Roads

- i. Public Roads. Prior to commencement of construction, the permittees shall identify all state, county or township "haul roads" that will be used for the WES project and shall notify the state, county or township governing body having jurisdiction over the roads to determine if the haul roads identified are acceptable. The governmental body shall be given adequate time to inspect the haul roads prior to use of these haul roads. Where practical, existing roadways shall be used for all activities associated with the WES. Where practical, all-weather roads shall be used to deliver cement, turbines, towers, assemble nacelles and all other heavy components to and from the turbine sites.
- ii. The permittees shall, prior to the use of approved haul roads, make satisfactory arrangements with the appropriate state, county or township governmental body having jurisdiction over approved haul roads for construction of the WES for the maintenance and repair of the haul roads that will be subject to extra wear and tear due to transportation of equipment and WES components. **A haul road agreement in accordance with county standards shall be executed between the applicant and appropriate road authority.** The permittees shall notify the County of such arrangements upon request of the County.
- iii. Turbine Access Roads. Construction of turbine access roads shall be minimized. Access roads shall be low profile roads so that farming equipment can cross them and shall be covered with Class 5 gravel or similar material. When access roads are constructed across streams and drainageways, the access roads shall be designed in a manner so runoff from the upper portions of the watershed can readily flow to the lower portion of the watershed.
- iv. Private Roads. The permittees shall promptly repair private roads or lanes damaged when moving equipment or when obtaining access to the site, unless otherwise negotiated with the affected landowner.
- v. Control of Dust. The permittees shall utilize all reasonable measures and practices of construction to control dust.
- g. Soil Erosion and Sediment control Plan. The permittees shall develop a Soil Erosion and Sediment Control Plan prior to construction and submit the plan to the County. The Soil Erosion and Sediment Control Plan shall address the erosion control measures for each project phase, and shall at a minimum identify plans for grading, construction and drainage of roads and turbine pads; necessary soil information; detailed design features to maintain downstream water quality; a comprehensive revegetation plan to maintain and ensure adequate erosion control and slope stability and to restore the site after temporary project activities; and measures to minimize the area of surface disturbance. Other practices shall include containing excavated material, protecting exposed soil, stabilizing restored material and removal of silt fences or barriers when the area is stabilized. The plan shall identify methods for disposal or storage of excavated material.

2. Setbacks

Wind turbines shall meet the following minimum spacing requirements.

- a. Distance from existing off-site residences, businesses, churches, and buildings owned and/or maintained by a governmental entity shall be at least one thousand (1,000) feet. Distance from on-site or lessor's residence shall be at least five hundred (500) feet. Distance to be measured from the wall line of the neighboring principal building to the base of the WES tower. **Distance from participating and non-participating residences, businesses, churches, schools, buildings owned and/or operated by a governmental entity, centerline of public roads and property lines shall be in accordance with Table 1211-1.**
- b. Distance from centerline of public roads shall be at least five hundred (500) feet or one hundred ten percent (110%) the height of the wind turbines, whichever distance is greater, measured from the ground surface to the tip of the blade when in a fully vertical position.
- c. Distance from any property line shall be at least five hundred (500) feet or one hundred ten percent (110%) the height of the wind turbine, whichever distance is greater, measured from the ground surface to the tip of the blade when in a fully vertical position unless wind easement has been obtained from adjoining property owner.

**Table 1211-1  
WES Setbacks**

	<b>Setback Distance*</b>
<b>Participating Residence, business, church, school, building owned and/or operated by a governmental entity</b>	<b>1,500 Feet**</b>
<b>Non-Participating Residence, business, church, school, building owned and/or operated by a governmental entity</b>	<b>1,500 Feet</b>
<b>Municipal Boundaries existing at the time of Conditional Use Permit Application</b>	<b>5,280 Feet</b>
<b>Distance from Public Right-of-Way</b>	<b>500 Feet or 110% of the vertical height of the wind turbine, whichever is greater***</b>
<b>Distance from Property Line</b>	<b>500 Feet or 110% of the vertical height of the wind turbine, whichever is greater ****</b>

\* Setback distance to be measured from the wall line of the neighboring principal building to the base of the WES tower. The vertical height of the wind turbine is measured from the ground surface to the tip of the blade when in a fully vertical position.

\*\* No less than 110% of the vertical height of the wind turbine if agreed upon by participating entity

\*\*\* The horizontal setback shall be measured from the base of the tower to the public right-of-way.

\*\*\*\* The horizontal setback shall be measured from the base of the tower to the adjoining property line unless wind easement has been obtained from adjoining property owner.

- d. Exception: The Board of Adjustment may allow setback/separation distances to be less than the established distances identified above, if the **adjoining landowners, road authority, participating or non-participating landowners, or municipality (by resolution of the Governing Body)** agree to a lesser setback/separation distance. If approved, such agreement is to be recorded and filed with the Register of Deeds. **Said agreement shall be binding upon the heirs, successors, and assigns of the title holder and shall pass with the land.**
3. Electromagnetic Interference. The permittees shall not operate the WES so as to cause microwave, television, radio, or navigation interference contrary to Federal Communications Commission (FCC) regulations or other law. In the event such interference is caused by the WES or its operation, the permittees shall take the measures necessary to correct the problem.
  4. Lighting. Towers shall be marked as required by the Federal Aviation Administration (FAA). There shall be no lights on the towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the monitoring equipment. **The preferred manner of lighting is by means of an Aircraft Detection Lighting System (ADLS). Subject to FAA approval, applicants will install an ADLS within one (1) year of approval by FAA for the specified project. In the event FAA does not approve an ADLS system, the turbine owner will comply with all lighting and markings otherwise required by FAA.** ~~Upon commencement of construction of a Tower, in cases where there are residential uses located within a distance which is three hundred (300) percent of the height of the Tower from the Tower and when required by federal law, dual mode lighting shall be requested from the FAA.~~ Beacon lighting, unless required by FAA, shall not be utilized.
  5. Turbine Spacing. The turbines shall be spaced no closer together than three (3) rotor diameters (RD) (measurement of blades tip to tip) within a string. If required during final micro siting of the turbines to account for topographic conditions, up to ten (10) percent of the towers may be sited closer than the above spacing but the permittees shall minimize the need to site the turbines closer.
  6. Footprint Minimization. The permittees shall design and construct the WES so as to minimize the amount of land that is impacted by the WES. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, transformers and monitoring systems shall be mounted on the foundations used for turbine towers or inside the towers unless otherwise negotiated with the affected landowner.
  7. Collector Lines. Collector lines are the conductors of electric energy from the Wind Energy System to the feeder lines. When located on private property, the permittees shall place electrical lines, known as collectors, and communication cables underground between the WES and the feeder lines. The exception to this requirement is when the total distance of collectors from the substation require an overhead installation due to line loss of current from an underground installation. Collectors **lines** and cables shall **also** be placed within or immediately adjacent to the land necessary for turbine access roads unless otherwise negotiated with the affected landowner. This paragraph does not apply to feeder lines.

8. Feeder Lines. Feeder lines are the conductors of electric energy from the collector lines to the main electric terminal. **They may be located either above or below ground.** The permittees shall place overhead electric lines, known as feeders, on public rights-of-way or private property. **Changes in routes on public rights-of-way may be made as long as approval has been obtained from the governmental unit responsible for the affected right-of-way.** When placing feeders on private property, the permittees shall place the feeder in accordance with the easement negotiated with the affected landowner. The permittees shall submit the site plan and engineering drawings for the feeder lines before commencing construction. Feeder line support structures (power poles) shall be placed on private property where concrete or other similar materials are used as an exposed or above-ground permanent foundation.

9. **Flicker Analysis. A Flicker Analysis shall include the duration and location of flicker potential for all schools, churches, businesses and occupied dwellings within a one (1) mile radius of each turbine within a project. The applicant shall provide a site map identifying the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sun-rise to sun-set over the course of a year. The analysis shall account for topography but not for obstacles such as accessory structures and trees. Flicker at any receptor shall not exceed thirty (30) hours per year within the analysis area.**

a. **Exception: The Board of Adjustment may allow for a greater amount of flicker than identified above if the participating or non-participating landowners agree to said amount of flicker. If approved, such agreement is to be recorded and filed with the Grant County Register of Deeds. Said agreement shall be binding upon the heirs, successors, and assigns of the title holder and shall pass with the land.**

#### **9.10.** Decommissioning/Restoration/Abandonment

- a. Cost Responsibility. The owner or operator of a WES is responsible for decommissioning that facility and for all costs associated with decommissioning that facility and associated facilities.
- b. Decommissioning Plan. Within 120 days of completion of construction, the permittees shall submit to the County a decommissioning plan describing the manner in which the permittees anticipate decommissioning the project in accordance with the requirements of paragraph (d) below. The plan shall include the estimated decommissioning cost per turbine and a description of the manner in which the permittees will ensure that it has the financial capability to carry out these restoration requirements when they go into effect. The permittees shall ensure that it carries out its obligation to provide for the resources necessary to fulfill these requirements. The County may at any time request the permittees to file a report with the County describing how the permittees are fulfilling this obligation.
- c. Financial Assurance. **After the tenth (10<sup>th</sup>) year of operation of a WES facility,** The Board may **shall** require a performance bond, surety bond, **escrow account,** letter of credit, corporate guarantee or other form of financial assurance that is acceptable to the Board to cover the anticipated costs of decommissioning the WES facility. **At least thirty (30) days prior to construction the applicant shall file a plan with the Board for Board approval that provides an acceptable financial assurance plan. The plan shall contain provisions that:**

- i. It Is funded by the turbine owner annually at a rate of five thousand dollars (\$5,000) per turbine for a period of thirty (30) years.
  - ii. The Board may allow decreased annual payment, if the Board determines the full rate as identified in the financial assurance plan is not necessary to cover costs of decommissioning.
  - iii. All interest earned by any financial assurance account remains in the account.
  - iv. A financial assurances statement is provided upon request to the administrative official.
  - v. The financial assurance plan follows ownership of the wind turbines.
  - vi. The financial assurances are not subject to foreclosure, lien, judgment, or bankruptcy.
  - vii. Beginning in year ten (10) following the beginning of operation and each fifth year thereafter, the turbine owner shall submit to the Board an estimated decommissioning date, if established, and estimated decommissioning costs and salvage values. Based on the verification of the information in this filing the Board may change the annual financial assurance funding rate to more closely match the estimated amount needed for decommissioning.
  - viii. Funds from the financial assurances are to be paid to the turbine owner at the time of decommissioning. Said funds are to be paid as decommissioning costs are incurred and paid for by the turbine owner.
  - ix. If the turbine owner fails to execute the decommissioning requirement, the funds are payable to the landowner as the landowner incurs and pays decommissioning costs.
- d. Site Restoration. The decommissioning of the WES shall begin within eight (8) months of the expiration of this permit, or earlier termination of operation of the WES and be completed within eighteen (18) months of the expiration of this permit or earlier termination of operation of the WES. The permittees shall have the obligation to dismantle and remove from the site all towers, turbine generators, transformers, overhead **and underground** collector and feeder lines, foundations, buildings and ancillary equipment to a depth of four (4) feet. To the extent possible the permittees shall restore and reclaim the site to its pre-project topography and topsoil quality. All access roads shall be removed unless written approval is given by the affected landowner requesting that one or more roads, or portions thereof, be retained. Any agreement for removal to a lesser depth or for no removal shall be recorded with the County and shall show the locations of all such foundations. All such agreements between the permittees and the affected landowner shall be submitted to the County prior to completion of restoration activities. The site shall be restored in accordance with the requirements of this condition within eighteen (18) months after expiration.

- e. Failure to Decommission. If the WES facility owner or operator does not complete decommissioning, the Board may take such action as may be necessary to complete decommissioning, including requiring forfeiture of the bond. The entry into a participating landowner agreement shall constitute agreement and consent of the parties to the agreement, their respective heirs, successors, and assigns, that the Board may take such action as may be necessary to decommission a WES facility.

**10.11** Abandoned Turbines. The permittees shall advise the County of any turbines that are abandoned prior to termination of operation of the WES. The County may require the permittees to decommission any abandoned turbine.

**11.12** Height from Ground Surface. The minimum height of blade tips, measured from ground surface when a blade is in fully vertical position, shall be twenty-five (25) feet.

**12.13** Towers.

- a. Color and Finish. The finish of the exterior surface shall be non-reflective and non-glass.
- b. All towers shall be ~~singular~~ tubular design

**13.14** Noise. Noise level shall not exceed ~~50~~ **45** dBA, average A-weighted Sound pressure including constructive interference effects **measured twenty-five (25) feet from** ~~at~~ the perimeter of the ~~principal and accessory structures~~ of existing ~~off-site~~ **non-participating** residences, businesses, and buildings owned and/or maintained by a governmental entity.

**Noise level shall not exceed 50 dBA, average A-weighted Sound pressure including constructive interference effects measured twenty-five (25) feet from the perimeter of participating residences, businesses, and buildings owned and/or maintained by a governmental entity.**

**Noise level measurements shall be made with a sound level meter using the A-weighting scale, in accordance with standards promulgated by the American National Standards Institute. A L90 measurement shall be used and have a measurement period no less than ten (10) minutes unless otherwise specified by the Board of Adjustment.**

**14.15** Permit Expiration. The permit shall become void if no substantial construction has ~~been completed~~ **commenced** within ~~two (2)~~ **three (3)** years of issuance; **or if a State Permit from the South Dakota Public Utility Commission has not been issued within two (2) years of issuance of the permit.**

**15.16** Required Information for Permit.

- a. Boundaries of the site proposed for WES and associated facilities on United States Geological Survey Map or other map as appropriate.
- b. Map of easements for WES.
- c. Affidavit attesting that necessary easement agreements with landowners have been obtained.

- d. Map ~~of~~ **including any** occupied residential structures, businesses, churches and buildings owned and/or maintained by a governmental entity **within one (1) mile of the project area.**
- e. Preliminary map of sites for WES, access roads and collector and feeder lines. Final map of sites for WES, access roads and utility lines ~~to be submitted sixty (60) days prior to construction~~ **is required prior to the issuance of any building permits associated with the conditional use permit.**
- f. Proof of right-of-way easement for access to utility transmission lines and/or utility interconnection **to be submitted prior to construction.**
- g. Location of other WES in general area.
- h. ~~Project-specific environmental concerns (e.g. native habitat, rare species, and migratory routes). This information shall be obtained by consulting with state and federal wildlife agencies. Evidence of such consultation~~ **with State and Federal wildlife agencies regarding project-specific environmental concerns (e.g. native habitat, rare species, and migratory routes)** shall be included in the application.
- i. Final haul road agreements to be submitted ~~sixty (60) days~~ prior to construction.