

F. Requirements for Siting Large Wind Energy Conversion Systems

1. Mitigation Measures

- a) Site Clearance. The permittee shall disturb or clear the site only to the extent necessary to assure suitable access for construction, safe operation and maintenance of the LWECS.
- b) Topsoil Protection. The permittee shall implement measures to protect and segregate topsoil from subsoil in cultivated lands unless otherwise negotiated with the affected landowner.
- c) Compaction. The permittee 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 permittee shall take precautions to protect livestock on the LWECS site from project operations during all phases of the project's life.
- e) Fences. The permittee shall promptly replace or repair all fences and gates removed or damaged by project operations during all phases of the project's life unless otherwise negotiated with the fence owner.
- f) Roads
 - i. Public Roads. Prior to the consideration of a building permit or Conditional Use Permit, the permittee shall identify all county "haul roads" that will be used for the WECS project and shall notify the County Highway Superintendent of such roads. In order to determine whether the haul roads identified are adequate to be used as a haul road, the county shall be given adequate time to inspect the haul roads.. As part of any such inspection, the county may require the permittee to hire a third-party engineer, acceptable to the county and at the permittee's expense, to inspect the haul roads, document the current condition of the haul roads, and prepare a written report for the county regarding the adequacy of the haul roads for the activities associated with the WECS and any construction. Where practicable, existing roadways shall be used for all activities associated with the WECS. Where practicable, all-weather roads shall be used to deliver concrete, turbines, towers, assemble nacelles and all other heavy components to and from the turbine sites. In conjunction with any building permits or Conditional Use Permit, the county may require the permittee to enter into a written Haul Road Agreement. The permittee shall, prior to the use of approved haul roads, make satisfactory arrangements with the county for the maintenance and repair of the haul roads that will be subject to extra wear and tear due to transportation of equipment and WECS components. The permittee shall obtain a bond that fully secures permittee's obligations to maintain and repair the haul roads as set forth by the terms herein, with terms releasing the bond to Hughes County in the event permittee's obligations herein and set by the haul road agreement are not met. Said bond must be obtained prior to mobilizing equipment or otherwise operating upon the haul roads and remains in full force and effect until the repairs and

maintenance as contemplated herein are completed in full and roads are returned to preconstruction conditions. The permittee shall notify the Director of Planning and Zoning of such bond and arrangements for the maintenance and repair of haul roads.

- ii. 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. Access roads shall avoid crossing streams and drainage ways wherever possible. If access roads must be constructed across streams and drainage ways, 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.
 - iii. Private Roads. The permittee 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.
 - iv. Control of Dust. The permittee shall utilize all reasonable measures and practices of construction to control dust during construction.
- g) Soil Erosion and Sediment Control Plan. The permittee shall develop a Soil Erosion and Sediment Control Plan in accordance with the sediment and erosion control standards of the Hughes County Conservation District prior to construction and submit the plan to the County Zoning Office. 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 re-vegetation plan that uses native plant species 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. Unless otherwise specified, all setback measurements are from the structural perimeter of a building, the edge of a right-of-way, or the structural perimeter of a tower pylon.

LWECS shall meet the following minimum spacing requirements.

- a) Distance from currently occupied residences, business and public buildings shall be not less than two thousand six hundred forty feet (2640) or 4.9 times tower height, whichever is greater; unless written permission is granted by the affected property owner. The written permission shall be in a form that is acceptable for recording with the Register of Deeds. The written permission may result in a setback of no less than one thousand four hundred feet (1400) and must be filed with the Hughes County Register of Deeds. For the purposes of this section only, the term "business" does not include agricultural uses.

- b) Distance from the right-of-way (ROW) of public roads shall be not one point one (1.1) times the system height.
 - c) Distance from the exterior property boundary of the proposed wind project shall be not less than one point one (1.1) times the system height, unless an appropriate easement has been obtained from adjoining property owner and recorded with the Register of Deeds.
3. Electromagnetic Interference. The permittee shall not operate the LWECS 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 LWECS or its operation, the permittee 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. Flashing white lights shall not be allowed for nighttime lighting.

This restriction shall not apply to infrared heating devices used to protect the monitoring equipment.

Security lighting on the site shall not exceed twenty (20) feet in height and be directed toward the ground to reduce light pollution, prevent off site light spillage, and avoid illuminating the tower.

5. Turbine Spacing. The turbines shall be spaced no closer than is allowed by the turbine manufacturer in its approval of the turbine array for warranty purposes.
6. Footprint Minimization. The permittee shall design and construct the WECS so as to minimize the amount of land that is impacted by the WECS. Associated facilities in the vicinity of turbines such as electrical/electronic boxes, transformers and monitoring systems shall to the extent practicable be mounted on the foundations used for turbine towers or inside the towers unless otherwise allowed by the landowner on whose property the LWECS is constructed.
7. Electrical Cables. The permittee shall place electrical lines, known as collectors, and communication cables underground when located on private property except when total distance of collectors from the substation require an overhead installation due to line loss of current from an underground installation. This paragraph does not apply to feeder lines.
8. Feeder Lines. The permittee shall place overhead electric lines, known as feeders, on public rights-of-way if a public right-of-way exists or immediately adjacent to the public right-of-way on private property. Changes in routes may be made as long as feeders remain on public rights-of-way or immediately adjacent to the public right-of-way on private property and approval has been obtained from the county. If no public right-of-way exists, the permittee may place feeders on private property. When placing feeders on private property, the permittee shall place the feeder in accordance with the easement(s) negotiated. The permittee shall submit the site plan and engineering drawings for the feeder lines to the Planning Director before commencing construction.

9. Height from Ground Surface. The minimum height of blade tips at their lowest possible point shall be twenty-five (25) feet above grade.

10. Towers

- a) Color and Finish. The finish of the exterior surface shall be non-reflective or matte and of a neutral color.
- b) All towers shall be singular tubular design, unless approved by the Planning Director.

11. Noise. Noise level produced by the LWECS shall not exceed 45 dBA, average A-weighted sound pressure at the perimeter of occupied residences existing at the time the permit application is filed, unless a signed waiver or easement is obtained from the owner of the residence and recorded with the Register of Deeds.

12. Permit Requirements.

- a) Individual building permits shall be required for each tower in a multiple tower system.
- b) The permit shall become void if no substantial construction has been completed within two (2) years of issuance.
- c) Building permit information and reporting requirements shall be, at a minimum, the same as those identified for SWECS.
- d) Multiple tower systems shall require a Conditional Use Permit and, at a minimum, the following additional information:
 - i. Boundaries of the site proposed for LWECS and associated facilities on United States Geological Survey Map or other map as appropriate.
 - ii. Map of easements for LWECS.
 - iii. Map of occupied residential structures, business and public buildings within one half mile of the proposed LWECS site boundaries.
 - iv. Preliminary map of sites for LWECS, access roads and utility lines. Location of other LWECS within five (5) miles of the proposed LWECS site.
 - v. Project-specific environmental and cultural concerns (e.g. native habitat, rare species, and migratory routes). This information shall be obtained by consulting with the following agencies:
 - a) Federal Communications Commission
 - b) Federal Aviation Administration
 - c) South Dakota Department of Game, Fish and Parks;
 - d) U.S. Fish and Wildlife Service; and
 - e) South Dakota Public Utilities Commission
 - f) South Dakota State Historical Society

Evidence of such consultation shall be included in the application.

- vi. Project schedule.
- vii. Mitigation measures.
- viii. Decommissioning Plan.
- ix. Status of interconnection studies/agreements.
- x. Pre-construction Filing. At least forty-five (45) days prior to commencement of construction, the applicant/permittee shall submit final maps depicting the approximate location of the proposed wind turbines, access roads and collector and feeder lines. Upon completion, the applicant shall also supply an “as-built” ALTA survey indicating that the proposed facilities are in compliance with the setbacks in the permit.

13. Maintenance.

- a) All WECS components, support structures, and facilities shall be maintained in good condition, order, and repair so that they do not endanger the life or property of any person.
- b) Upon the determination of the Planning Director that a structure is a hazard to public safety, the owner shall be required to perform an inspection by a registered professional engineer and make all recommended corrections.
- c) If an owner discontinues use of a WECS, the owner shall give written notice to the Planning Director of the date of such discontinuance.

14. Decommissioning

- a) Cost Responsibility. The owner or operator of a LWECS is responsible for decommissioning that facility and for all costs associated with decommissioning that facility and associated facilities. The decommissioning plan shall clearly identify the responsible party.
- b) Useful Life. A LWECS is presumed to be at the end of its useful life if the facility generates no electricity for a continuous period of three-hundred-sixty-five (365) days. The presumption may be rebutted by submitting to the Planning Director for approval of a plan outlining the steps and schedule for returning the LWECS to service within twelve (12) months of the submission.
- c) Decommissioning Period. The facility owner or operator shall begin decommissioning a LWECS facility within eight (8) months after the time the facility or turbine reaches the end of its useful life, as determined in 14(b). Decommissioning must be completed with eighteen (18) months after the facility or turbine reaches the end of its useful life.
 - d) Decommissioning Requirements. Decommissioning and site restoration includes dismantling and removal of all towers, turbine generators, transformers, overhead and underground cables, foundations, buildings and ancillary equipment to a depth of forty-two (42) inches; and removal of surface road material and restoration of the roads and turbine sites to

substantially the same physical condition that existed immediately before construction of the LWECS. To the extent possible, the site must be restored and reclaimed to the topography and topsoil quality that existed just prior to the beginning of the construction of the commercial wind energy conversion facility or wind turbine. Disturbed earth must be graded and reseeded, unless the landowner requests in writing that the access roads or other land surface areas be retained. All easements related to the turbine, or turbines, being decommissioned shall be released as part of the decommissioning process.

- e) **Decommissioning Plan.** Prior to commencement of operation of a LWECS facility, the facility owner or operator shall file with the County Commission the estimated decommissioning cost per turbine, in current dollars at the time of the application, for the proposed facility and a decommissioning plan that describes how the facility owner will ensure that resources are available to pay for decommissioning the facility at the appropriate time. The County Commission shall review a plan filed under this section and shall approve or disapprove the plan within six (6) months after the decommissioning plan was filed. The County Commission may at any time require the owner or operator of a LWECS to file an annual report describing how the LWECS owner or operator is fulfilling this obligation.
 - f) **Financial Assurance.** At any time after the first (1st) year of operation of a LWECS facility, the County Commission may review the owner/operator's financial strength, credit rating, and internal measures for removing the liability or risk of decommissioning the WECS and may require a form of financial assurance ranging from corporate guarantee to a letter of credit, performance bond, surety bond, or other form of financial assurance (i.e. scrap value, etc.) that is acceptable to the County Commission to cover the anticipated costs of decommissioning the LWECS facility.
 - g) **Failure to Decommission.** If the LWECS facility owner or operator does not complete decommissioning, the County Commission 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 County Commission may take such action as may be necessary to decommission a LWECS facility and seek additional expenditures necessary to do so from the facility owner.
15. **Pre-construction Filing.** At least forty-five (45) days prior to commencement of construction, the applicant/permittee shall submit final maps depicting the approximate location of the proposed wind turbines, access roads and collector and feeder lines. Upon completion, the applicant shall also supply an "as-built" ALTA survey indicating that the proposed facilities are in compliance with the setbacks in the permit.

Source: Ord. No. 2007-08, 2007; Ord. No. 2009-02, 2009; Ord. No. 2009-15, 2009, Ord. No. 2017-06, 2017; Ord. No. 2020-05, 2020.