

## RESOLUTION 2022-16

A resolution of the Leavenworth County Kansas Board of County Commission, to amend the following articles of the 2006 Zoning and Subdivision Regulations:

Article 3 – Definitions

Article 19 – Table of Uses

Article 57 – Renewable Energy Conversion Systems

Article 3 – Definitions

**Commercial Wind Energy Conversion System:** An electrical generating facility comprised of one or more wind turbines and accessory facilities that operate by converting the kinetic energy of wind into electrical energy, for the primary purpose of wholesale sales of generated electricity via connection to a larger electrical network exclusive of individual use.

**Noncommercial Wind Energy Conversion System:** An electrical generating facility that operates by converting the kinetic energy of wind into electrical energy for the primary purpose of on-site use and not for resale.

**Total Tower Height:** The height of a wind energy conversion system as measured from the elevation of the ground surface at the base to the highest point of the blade system during rotation.

**Total Hub Height:** The height of a wind energy conversion system as measured from the elevation of the ground surface at the base to the highest point of the turbine hub.

**Private Airstrip:** A location that is registered with the Kansas Department of Transportation and Federal Aviation Administration, appears on aeronautical charts, and has a landing surface(s) which is maintained and capable of providing a safe landing for aircraft, all in effect at the time of application.

Article 19 – Table of Uses

S = Special Use Permit	RR-2.5/5	R-1/2/3/4	B-1	B-2	B-3	I-1	I-2	I-3	PR-1/2/3	MXD	PC	PI
A = Allowed Use	Rural	1/2 Fam Apt	Neigh Bus	Lim Bus	Gen Bus	Lim Ind	Lite Ind	Hvy Ind	Plnd Res Dis	Mixed	Plnd Comm	Plnd Ind
<b>Renewable Energy Conversion System</b>												
Commercial Wind Energy Conversion System	S (RR-5 only)											
Noncommercial Wind Energy Conversion System	A	A	A	A	A	A	A	A	A	A	A	A
Solar Energy Conversion System	S											

Article 51 – Renewable Energy Conversion Systems

### Section 3. WIND ENERGY CONVERSION SYSTEM REGULATIONS

1. *Standards* The following standards apply to all Wind Energy Conversion Systems (WECS):

- a. *Sound.* Audible noise due to WECS operations shall not exceed 55 dBA or 10 decibels greater than ambient noise levels, measured at the nearest dwelling or otherwise occupied structure. Sound levels may be exceeded during short-term events such as utility outages and/or severe wind storms.
- b. *Lighting.* No illumination of the turbine or tower shall be allowed unless required by the FAA.
- c. *Access.* All WECS shall be designed as to avoid tampering or trespassing.
  - i. *Freestanding Tower.* Climbing apparatus below 12 feet of a freestanding tower shall be removed to prevent unauthorized climbing.
  - ii. *Lattice or Guyed Towers.* The bottom tower section must be secured such that it cannot readily be climbed.

- iii. *Fencing*: All ground mounted equipment shall be fenced or secured in a manner as to avoid trespassing.
  - d. *FAA Regulations*. No WECS shall be constructed, altered, or maintained so as to project above any of the imaginary airspace surfaces described in FAR Part 77 of the FAA guidance on airspace protection.
  - e. *Communication Interference*. No WECS shall interfere with any microwave, television, radio, telecommunications or navigation systems.
  - f. *Visual Impact*. Reasonable measures shall be identified and undertaken to mitigate specific adverse visual impacts such as reflections, shadow flicker, blade glint and any other impact on neighboring properties.
2. *Noncommercial Wind Energy Conversion Systems (NWECS)*
- a. *Standards*.
    - i. *Setbacks*. All NWECS shall meet the following setbacks:
      - 1. Property lines – 1.5 times the total height.
      - 2. Public Utility Lines – 1.5 times the total height.
      - 3. Structures – 1.5 times the total height.
    - ii. *Height*. The maximum height permitted for a NWECS shall be 50 feet as measured from the hub height.
    - iii. *Rotor Blades*. All rotor blades must be a minimum of 15 feet above ground level.
    - iv. *Ice Throw*. All NWECS shall provide documentation of potential ice throw from said structure and the siting of all NWECS shall be in a manor in which said Ice Throw will not negatively impact a neighboring property, any structure, public or private right-of-way or utility easement.
3. *Commercial Wind Energy Conversion Systems (CWECS)*
- a. *Standards*
    - i. *Setbacks*. All CWECS shall meet the following setbacks:
      - 1. Property Lines – 1,500 feet.
      - 2. Public Utility Lines – 1.5 times the total tower height.
      - 3. Structures – 1.5 times the total tower height.
    - ii. *Height*. The maximum height permitted for CWECS shall be 200 feet as measured from the total tower height.
    - iii. *Rotor Blades*. At the lowest point of the rotor blades shall be a minimum of 50 feet above ground level as measured from the base of the tower.
    - iv. *Sensitive Land and Species Requirements*. #1. Land owned in fee title by State or Federal agencies and managed specifically for conservation purposes, including but not limited to State Wildlife Management Areas, State Parks, federal Wildlife Refuges and Waterfowl Production Areas. For purposes of this regulation, public conservation lands will also include lands owned in fee title by non-profit conservation organizations. Public conservation lands will also include private lands upon which conservation easements have been sold to public agencies or non-profit conservation organizations. All CWECS shall maintain a distance of 3 miles from any land determined to be Sensitive Land.
    - v. *Public Airport and Private Airstrips*. All CWECS shall be a minimum of 2 nautical miles, calculated as 12,160 feet, from any public airport or private airstrip approach of a runway and a minimum of 1.5 nautical miles, calculated as 9,120 feet, from any sides of a runway. A private airport/airstrip owner may waive the setback requirement.
    - vi. *City Boundaries*. All CWECS shall be a minimum of 1 mile from any incorporated city boundary at the time of application.
    - vii. *Lubricant and Hazardous Material Storage and Disposal*. All lubricants and/or hazardous materials to be located on the premises in connection with the CWECS facility shall be kept and transported in accordance with all state and federal regulations.

- viii. *Ice Throw*. No CWECS shall be constructed or installed in manner in which ice throw from an in-motion rotor blade can hit or destroy an inhabited structure.
- ix. *River Bluffs and Bodies of Water*. All CWECS shall be a minimum of 1.5 times the total height from any river bluff 15 feet or taller or body of water protected by County, State or Federal agencies.
- x. *Access Road*. Applicant shall construct the smallest number of turbine access roads as reasonably feasible. All access road entrances shall comply with Article 41 Access Management. All access road locations shall be agreed upon in writing between the applicant and property owner. Where an access road crosses a stream or drainage way identified as a Special Flood Hazard Area, the applicant shall obtain a floodplain development permit from the county.

b. *Documents, Plans, Studies, Reports, Other Permits*.

The information listed below shall be submitted with the special use permit application and used to evaluate compliance with the Zoning and Subdivision Regulations. The Planning Commission or Board of County Commissioners may require additional information not listed below or conduct separate studies for the purpose of evaluating the proposed special use permit.

1. A copy of all signed lease agreements for property designated in the Special Use Permit. Sensitive financial or confidential information may be redacted.
2. An expected economic impact report to the County which assumes the proposed project is approved and constructed as proposed on the special use permit application. The report shall be prepared by an independent third-party company or four-year college institution.
3. An acoustic study prepared by an independent third-party company. The study shall include maps and charts that indicate the anticipated sound level expected at each principal building and explain the methodology used to compute the anticipated sound levels.
4. A visual impact study prepared by an independent third-party company. The study shall include maps and charts that indicate the anticipated amount of shadow flicker, reflections, blade glint or any other visual impact expected at each inhabited structure and explains the methodology used to compute the anticipated visual impact. The study shall show the anticipated number of hours per year an inhabited structure will receive shadow flicker, the time of day and time of year.
5. Documentation from the Kansas Department of Wildlife, Parks and Tourism (KDWP) or its successor indicating the agency has reviewed the proposed CWECS.
6. All setback, noise or shadow flicker waivers are to be executed by all owners of an affected parcel. All such waivers shall be notarized and submitted with the special use permit application.
7. A report shall be conducted by a third-party company on existing environment and sensitive land concerns and filed with the special use permit application.
8. An ice throw analysis and map prepared by a third-party company shall be required with the special use permit application. The study shall analyze the conditions which may cause ice to be thrown off an in-motion turbine blade and toward an inhabited structure within the project boundary. The study should explain the methodology used in evaluating the risk of damage to all inhabited structures. Also included in the study should be the manufacturer's setback distances related to in-motion ice throws and the type of ice monitoring sensors and devices installed in each turbine and the potential maximum distance ice could be thrown from an in-motion turbine blade.
9. A soil erosion, sediment control and stormwater runoff plan shall be prepared by a third-party company addressing what type of erosion control measures will be implemented during each phase of the project. If required, the applicant shall obtain an erosion control permit for the project from the Kansas Department of Health and Environment (KDHE) or its successor. The plan shall address the following concerns:
  - a. Grading;
  - b. Construction and drainage of access roads and turbine pads;
  - c. Necessary soil information;
  - d. Design features to maintain downstream water quality;
  - e. Re-vegetation of disturbed areas to ensure slope stability;
  - f. Restoration of the site after temporary project activities have ended;
  - g. Creation of a new wetland area that is equal to or greater than any wetland area that is filled in or destroyed;
  - h. Disposal or storage of excavated materials;
  - i. Protecting exposed soil;
  - j. Stabilizing restored material and removal of silt fences or barriers when the area is stabilized;
  - k. Maintenance of erosion control measures throughout the life of the project.
10. An emergency event response plan shall be provided which outlines the potential fire risk associated with the project, including both prescribed burning and non-prescribed burning (natural or accidental). The plan shall also include descriptions of measures that will be employed in the case of destruction of facilities and equipment, natural disaster or any other event that may require emergency personnel response.

11. A Road Maintenance Agreement with Leavenworth County shall be included designating all public roads used for transportation routes for construction and maintenance of the CWECS.
12. Oversized/Overweight permit

WHEREAS, it is hereby found that the Leavenworth County Planning Commission, after notice as required by law, did conduct a public hearing upon the amendment of the Leavenworth County Zoning and Subdivision Regulations the 13<sup>th</sup> day of July, 2022; and

WHEREAS, it is hereby found that the Leavenworth County Planning Commission, based upon specific findings of fact incorporated by reference herein, did recommend that the amendment be approved, as set forth; and

WHEREAS, the Board of County Commission considered, in session on 3<sup>rd</sup> day of August, 2022, the recommendation of the Leavenworth County Planning Commission.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commission of Leavenworth County, Kansas, that:

1. Based upon the recommendation and findings of fact of the Leavenworth County Planning Commission; and,
2. Based upon the findings of fact adopted by the Board of County Commission in regular session on the 3<sup>rd</sup> day of August, 2022 and incorporated herein by reference;


That the amendments listed herein be approved:


Adopted this 3<sup>rd</sup> day of August, 2022  
 Board of County Commission  
 Leavenworth, County, Kansas

  
 Mike Smith, Chairman


  
 Jeff Culbertson, Member

absent  
 Vicky Kaaz, Member

  
 Doug Smith, Member

  
 Mike Stieben, Member



  
 Janet Klasinski