

RESOLUTION NO. 2018-10-02.01

A RESOLUTION, AMENDING ARTICLE 8 TO PROVIDE REVISED REGULATIONS FOR SMALL WIND ENERGY SYSTEMS AND COMMERCIAL/UTILITY GRADE WIND ENERGY SYSTEMS IN ADAMS COUNTY; PROVIDING FOR REPEAL OF CONFLICTING SECTIONS; AND PROVIDING FOR EFFECTIVE DATE.

WHEREAS, pursuant to Neb. Rev. Stat. Section 23-174.10, as amended, any county which has adopted a county zoning regulation may make such regulations as may be necessary or expedient to promote the public health, safety, and welfare; and

AND WHEREAS, the Adams County has adopted zoning regulations and the Adams County Board of Supervisors desires to update the Small Wind Energy Systems and Commercial/Utility Grade Wind Energy Systems Regulations within Adams County; and

AND WHEREAS, the Adams County Planning and Zoning Commission conducted a public hearing on the following regulations on October 2, 2018;

AND WHEREAS, the Adams County Board of Supervisors conducted a public hearing on said regulations on October, 2018.

NOW, THEREFORE, BE IT ORDAINED BY THE CHAIRMAN AND BOARD OF SUPERVISORS OF ADAMS COUNTY, NEBRASKA, THAT:

SECTION 8.03. ARTICLE 8 of the Adams County Zoning Regulations of Adams County, Nebraska, shall be amended to read as follows:

Section 8.03 Small Wind Energy Systems

Purpose: It is the purpose of this regulation to promote the safe, effective and efficient use of small wind energy systems installed to reduce the on-site consumption of utility supplied electricity.

Definitions: The following are defined for the specific use of this section.

1. **Small Wind Energy System** shall mean a wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than 100 kW and which is intended to primarily reduce on-site consumption of utility power.
2. **Tower** shall mean the vertical structures that support the electrical equipment or rotor blades.
3. **Tower Height** shall mean the height above grade of the first fixed portion of the tower, excluding the wind turbine itself.
4. **Total Height** shall mean the highest point, above ground level, reached by a rotor tip or any other part of the Wind Energy Conversion System.
5. **Fall Zone** shall mean the area, defined as the furthest distance from the tower base, in which a tower will collapse in the event of a structural failure.
6. **Feeder Line** shall mean any power line that carries electrical power from one or more wind turbines or individual transformers associated with individual wind turbines to the

point of interconnection with the project distribution system, in the case of interconnection with the high voltage transmission systems the point of interconnection shall be the substation serving the wind energy conversion system.

7. **Rotor Diameter** shall mean the diameter of the circle described by the moving rotor blades.

8. **Transmission Line** shall mean the electrical power lines that carry voltages of at least 69,000 volts (69 kV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers.

9. **Wind Energy Conservation Systems** shall mean an electrical generating facility comprised of one or more wind turbines and accessory facilities, including but not limited to: power lines, transformers, and substations that operate by converting the kinetic energy of wind into electrical energy. The energy may be used on-site or distributed into the electrical grid.

10. **Wind Turbines** shall mean any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy using airfoils or similar devices to capture wind.

Exemptions: Small wind energy systems shall be permitted as an Exception within the Agricultural District. Zoning Permits are required.

Requirements: Small wind energy systems shall be permitted as an Accessory Use within any district where the use is listed and allowed. Certain requirements as set forth below shall be met:

1. Tower
 - a. The tower and foundation must be approved by a certified Engineer competent in disciplines of Wind Energy Conversion Systems.
2. Tower Height
 - a. For property sizes between ½ acre and one acre the tower height shall be limited to 80 feet.
 - b. For property sizes of one acre or more, there is no limitation on tower height, except as imposed by FAA regulations.
3. Noise/Sound
 - a. Small wind energy systems shall not exceed 50 dBA, as measured at the closest neighboring inhabited dwelling unit. An Acoustical Analysis that certifies that the noise requirements within the regulation can be met.
 - b. The noise level may be exceeded during short term events such as utility outages and/or severe wind storms.
4. Approved Wind Turbines
 - a. Small wind turbines must have been approved under the Emerging Technologies program of the California Energy Commission or any other small wind certification program recognized by the American Wind Energy Association.
5. Compliance with Building and Zoning Codes
 - a. Applications for small wind energy systems shall be accomplished by standard drawings of the wind turbine structure, including the tower base, and footings.

- b. An engineering analysis of the tower showing compliance with official building code of the governing body and/or the State of Nebraska and certified by a licensed professional engineer shall also be submitted.
 - c. Wet stamps shall not be required.
6. Compliance with FAA Regulations
- a. Small wind energy systems must comply with applicable FAA regulations, including any necessary approvals for installations close to airports.
7. Compliance with National Electrical Code
- a. Permit applications for small wind energy systems shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code.
 - b. The manufacturer frequently supplies this analysis.
8. Utility Notification
- a. No small wind energy system shall be installed until evidence has been given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator.
 - b. Off-grid systems shall be exempt from this requirement.
9. All towers shall adhere to the setbacks established in the following table:

	Wind Turbine – Non Commercial WECS	Meteorological Towers
Property Lines	One times the total height	One times the tower height
Neighboring Dwelling Units*		One times the tower height
Road Rights-of-Way**	One times the tower height	One times the tower height
Other Rights-of-Way	One times the tower height	One times the tower height
Wildlife Management Areas and State Recreational Areas	NA	600 feet
Wetlands, USFW Types III, IV, and V	NA	600 feet
Other structures adjacent to the applicant's sites	NA	One times the tower height
Other existing WECS not owned by the applicant	NA	NA
River Bluffs	NA	NA

* The setback for dwelling units shall be reciprocal in that no dwelling unit shall be constructed within the same distance required for a commercial/utility Wind Energy Conversion System.

** The setback shall be measured from any future Rights-of-Way if a planned change or expanded right-of-Way is known.

10. Tower Setbacks

- a. No part of the wind system structure, including guy-wire anchors, may extend closer than 10 feet to the property lines of the installation site. Setback shall be the "Total Height" plus ten (10) feet.

11. Aesthetics

- a. Free Standing Towers (No towers with guyed wires)

12. Multiple Towers

- a. Multiple towers will be considered based on these same regulations.

13. Abandonment

a. The owner of an inoperable turbine for a period of twelve (12) months will be notified by the zoning administration that they have six (6) months from the notice date to restore their small wind energy system to operating condition. If the tower is not in operating condition after that time, the owner of the tower will then have ninety (90) days to have it removed. If the owner fails to remove the wind tower within the allowable time, the county will have it removed at the owners expense and a lien will be filed against the property on which the small wind energy systems is located.

14. Application requirements

- a. Legal Description and address of project site.
- b. Tower Type, height, rotor diameter, and total height of wind turbine and means of interconnecting with the feeder lines.
- c. Site layout, including the location of property lines, wind turbine, electrical grid, and all related accessory structures. This site layout shall include distance and be drawn to scale.
- d. Certification from Engineer.
- e. Documentation of land ownership or legal control of property.
- f. The latitude and longitude of wind turbine.
- g. Location of any wetland, scenic, and natural acres within 1000 feet.
- h. An Acoustical Analysis certifying that the noise requirements within the regulations can be met.
- i. Evidence that there will be no interference with any commercial or public safety communication towers.
- j. All approved wind turbines are to be completed within two (2) years of the date of approval.

FURTHERMORE, THAT SECTION 8.04. ARTICLE 8 of the Adams County Zoning Regulations of Adams County, Nebraska, shall be amended by the following language:

Section 8.04 Commercial/Utility Grade Wind Energy Systems

8.04.01 Purpose: It is the purpose of this regulation to promote the safe, effective and efficient use of commercial/utility grade wind energy conversion systems within Adams County.

8.04.02 Definitions: The following are defined for the specific use of this section.

1. AGGREGATE PROJECT shall mean projects that are developed and operated in a coordinated fashion, but which have multiple entities separately owning one or more of the individual WECS within the larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity but are also part of the aggregated project.

2. COMMERCIAL WECS shall mean a wind energy conversion system of equal to or greater than 100 kW in total name plate generating capacity.

3. HUB HEIGHT shall mean the distance from ground level as measured to the centerline of the rotor.

4. FALL ZONE shall mean the area, defined as the furthest distance from the tower base, in which a guyed or tubular tower will collapse in the event of a structural failure. This area may be less than the total height of the structure.

5. FEEDER LINE shall mean any power line that carries electrical power from one or more wind turbines to the point of interconnection with the project distribution system, in the case of interconnection with the high voltage transmission systems the point of interconnection shall be the substation serving the wind energy conversion system.

6. METEOROLOGICAL TOWER shall mean, for purposes of this regulation, a tower which is erected primarily to measure wind speed and directions plus other data relevant to siting a Wind Energy Conversion System. Meteorological towers do not include towers and equipment used by airports, the Nebraska Department of Roads, or other applications to monitor weather conditions.

7. PROPERTY LINE shall mean the boundary line of the area over which the entity applying for a Wind Energy Conversion System permit has legal control for the purpose of installing, maintaining and operating a Wind Energy Conversion System.

8. PUBLIC CONSERVATION LANDS shall mean 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 nonprofit 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.

9. ROTOR DIAMETER shall mean the diameter of the circle described by the moving rotor blades.

10. SMALL WIND ENERGY SYSTEM shall mean a wind energy conversion system consisting of a wind turbine, a tower, and associated control or conversion electronics, which has a rated capacity of not more than 100 kW and which is intended to primarily reduce on-site consumption of utility power.

11. SUBSTATIONS shall mean any electrical facility to convert electricity produced by wind turbines to a higher voltage for interconnection with high voltage transmission lines.

12. TOTAL HEIGHT shall mean the highest point, above ground level, reached by a rotor tip or any other part of the Wind Energy Conversion System.

13. TOWER shall mean the vertical structures, including the foundation that support the electrical generator, rotor blades, or meteorological equipment.

14. TOWER HEIGHT shall mean the total height of the Wind Energy Conversion System exclusive of the rotor blades.

15. TRANSMISSION LINE shall mean the electrical power lines that carry voltages of at least 69,000 volts (69 KV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers.

16. WIND ENERGY CONVERSION SYSTEM shall mean an electrical generating facility comprised of one or more wind turbines and accessory facilities, including but not limited to: power lines, transformers, substations and meteorological towers that operate by converting the kinetic energy of wind into electrical energy. The energy may be used on-site or distributed into the electrical grid.

17. WIND TURBINES shall mean any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy using airfoils or similar devices to capture the wind.

8.04.03 Requirements: Commercial/Utility Grade wind energy systems shall be permitted as a Conditional Use within any district where the use is listed and allowed. The following requirements and information shall be met and supplied:

1. The name(s) of project applicant.
2. The name of the project owner.
3. The legal description and address of the project.
4. A description of the project of the project including: Number, type, name plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid.
5. Site layout, including the location of property lines, wind turbines, feeder lines, and all related accessory structures. This site layout shall include distances and be drawn to scale.
6. Certification by an Engineer competent in disciplines of WEC's.
7. Documentation of land ownership or legal control of the property.
8. The latitude and longitude of individual wind turbines; included with this shall be an area or zone in close proximity that meets all setbacks; where actual WEC will be considered.
9. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other Wind Energy Conversion System, within 10 rotor distances of the proposed Wind Energy Conversion System not owned by the applicant.
10. Location of wetlands, scenic, and natural areas (including bluffs) within 1,320 feet of the proposed Wind Energy Conversion System.
11. An Acoustical Analysis that certifies that the noise requirements within this regulation can be met
12. The applicant shall supply the emergency management agency and/or fire departments with a basic emergency response plan.
13. FAA and FCC permit, if necessary. Applicant shall submit permit or evidence that the permit has been filed with the appropriate agency.

8.04.04 Aggregated Projects:

1. Aggregated projects may jointly submit a single application and be reviewed under joint proceedings, including notices, public hearings, reviews and as appropriate approvals.
2. Permits may be issued and recorded separately.
3. Joint projects will be assessed fees as one project.

8.04.05 Setbacks:

All towers shall adhere to the setbacks (measured from the edge of the tower) established in the following table:

	Wind Turbine – Commercial/Utility WECS	Meteorological Towers
Property Lines	150 feet from property lines; however, the setback may be less when two adjoining property owners are within the aggregate project.	One times the tower height.
Neighboring Dwelling Units*	2,400 feet	One times the tower height.
Road Rights-of-Way**	One times the tower height.	One times the tower height
Other Rights-of-Way	One times the tower height.	One times the tower height
Wildlife Management Areas and State Recreational Areas	600 feet***	600 feet***
Wetlands, USFW Types III, IV, and V	600 feet***	600 feet***
Other structures and cemeteries adjacent to the applicant's sites	One times the tower height.	One times the tower height.
Other existing WECS not owned by the applicant.	6,000 lineal feet	NA
River Bluffs	1,320 feet	NA

* The setback for dwelling units shall be reciprocal in that no dwelling unit shall be constructed within the same distance required for a commercial/utility Wind Energy Conversion System.

** The setback shall be measured from any future Rights-of-Way if a planned change or expanded Right-of-Way is known. Such right-of-ways shall be verified with the Nebraska Department of Roads and County Roads Department.

*** Setback may be reduced to a distance of no less than 100 feet based on review of proposed distance and approval by Nebraska Game & Parks Commission, U.S. Fish and Wildlife, and Army Corps of Engineers. Such reduction shall not be less than 100 feet and be based on certified engineer reports showing no effects on the identified areas. Applicant shall submit report and approval or evidence that the study has been performed and the request for approval has been submitted to the appropriate agency prior to the issuance of a zoning permit. Such permit would be conditional and contingent upon such approval.

8.04.06 Special Safety and Design Standards: All towers shall adhere to the following safety and design standards:

1. Clearance of rotor blades or airfoils must maintain a minimum of 12 feet of clearance between their lowest point and the ground.
2. All Commercial/Utility WECS shall have a sign or signs posted on the tower, transformer and substation, warning of high voltage. Other signs shall be posted on the turbine with emergency contact information.
3. All wind turbines, which are a part of a commercial/utility WECS, shall be installed with a tubular, monopole type tower.
4. Consideration shall be given to painted aviation warnings on all towers more than 200 feet.

5. Color and finish: All wind turbines and towers that are part of a commercial/utility WECS shall be white, grey, or another non-obtrusive color. Blades may be black in order to facilitate deicing. Finishes shall be matte or non-reflective.
6. Lighting: Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by the FAA permits and regulations. Red strobe lights shall be used during nighttime illumination to reduce impacts on neighboring uses and migratory birds. Red pulsating incandescent lights should be avoided.
7. Other signage: All other signage shall comply with the sign regulations found in these regulations.
8. Feeder Lines: All communications and feeder lines associated with the project distribution system installed as part of a WECS shall be buried, where physically feasible. Where obstacles to the buried lines create a need to go above ground, these lines may be placed above ground only to miss the obstacle. All distribution and/or transmission lines outside of the project distribution system may be above ground.
9. 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.
10. Discontinuation and Decommissioning:
 - a. A WECS shall be considered a discontinued use after one year without energy production, unless a plan is developed and submitted to the Zoning Administrator outlining the steps and schedule for returning the WECS to service. All WECS and accessory facilities shall be removed to four feet below ground level within 180 days of the discontinuation of use. The 180 days may be extended if proof of weather delays is provided.
 - b. Each Commercial/Utility WECS shall have a Decommissioning plan outlining the anticipated means and cost of removing WECS at the end of their serviceable life or upon being 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 decommissioning and removal of the WECS and accessory facilities.
11. Noise: No Commercial/Utility WECS shall exceed 50 dBA at the nearest structure or use occupied by humans. Such structures or uses include dwelling units, churches, daycares, and the like, but do not include barns, sheds, or agricultural, commercial or industrial uses.
12. Interference: The applicant shall minimize or mitigate interference with any commercial or public safety electromagnetic communications, such as radio, telephone, microwaves, or television signals caused by any WECS. The applicant shall notify all communication tower operators within five miles of the proposed WECS location upon application to the county for permits.
13. Roads: Applicants shall:
 - a. Identify all county, municipal or township roads to be used for the purpose of transporting WECS, substation parts, cement, and/or equipment for construction,

operation or maintenance of the WECS and obtain applicable weight and size permits from the impacted jurisdictions prior to construction.

b. Conduct a pre-construction survey, in coordination with the appropriate jurisdictions to determine existing road conditions. The survey shall include photographs and a written agreement to document the condition of the public road.

c. Be responsible for restoring the road(s) and bridges to preconstruction conditions.

14. Drainage System: The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the WECS.

15. Permit Fees: Applicant shall remit an application fee set by the Board of Supervisors.

NOW, THEREFORE BE IT RESOLVED, by the County Board of Supervisors of Adams County, Nebraska that the above regulations pertaining to Small Wind Energy Systems and Commercial/Utility Grade Wind Energy Systems are hereby approved.

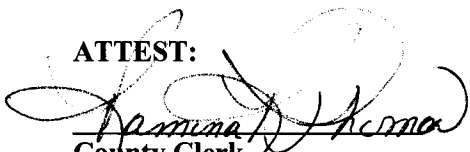
FURTHER IT BE RESOLVED, that this Resolution shall take effect and be in full force from and after its passage, approval, and publication or posting as required by law and all other resolutions and sections in conflict are hereby repealed.

Motion by: Chuck Neumann Second by: Glen Larsen

Vote: Aye 7 Nay 0

Passed and approved this 2 day of October, 2018.

ATTEST:


County Clerk

Adams County Board of Supervisors

Board Chairman

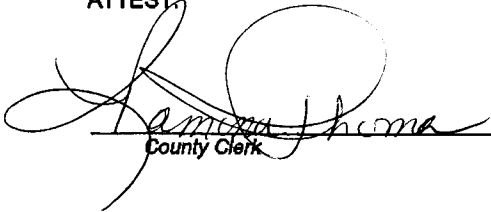
**Certification
TO
BOARD OF PUBLIC ROADS CLASSIFICATIONS AND STANDARDS**

In compliance with the provisions of the State of Nebraska Statutes Requiring Annual reporting to the Board of Public Roads Classifications and Standards, the Village of _____, City of _____, County of Adams or the Department of Roads hereby certifies that the minimum standards of design, construction, and maintenance of roads, streets, and highways under their authority have been met; and all tax revenues, including State, County and Municipal tax revenues as well as highway-user revenue allocations for roads, streets, and highways, has been expended in accordance with approved plans and standards and the rules and regulations of the Board of Public Roads Classifications and Standards for the period beginning July 1, 2017, and ending June 30, 2018.

Documentation in support of this certificate is on file in the office of the appropriate official and this information is available to the Board upon written request and is located at 415 North Adams Central Ave., Juniaata, Nebraska 68955
(Address)

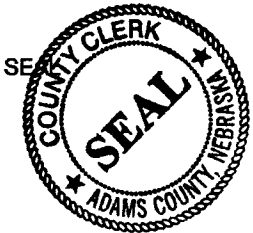
On this 2 day of October, 2018

ATTEST:



County Clerk

Adams County Highway Dept.
(Name of Political Subdivision)

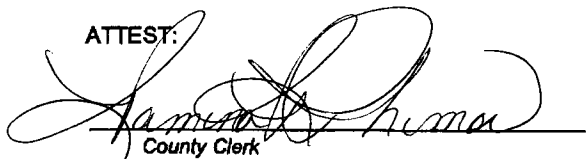


(Signature of County Highway Superintendent)

County Highway Superintendent
(Title)

On this 2 day of October, 2018

ATTEST:



County Clerk



(Signature Chairman of County Board)

