

**Kearney County**  
**RESOLUTION 2026-0030**

**A resolution adopting amendments to The Kearney County, Nebraska and The Villages of Norman and Heartwell Zoning Regulations.**

WHEREAS, on June 4, 2024 The Kearney County Board of Commissioners asked the Kearney County Planning & Zoning Administrator and the Kearney County Joint Planning Commission to review the current zoning regulations regarding wind and solar, and

WHEREAS, the Kearney County Joint Planning Commission held public meetings on January 26, 2026, April 1, 2026, and May 18, 2026 and a public hearing on February 23, 2026, to seek public input and information on wind and solar regulations.

WHEREAS, following those meetings and hearings, The Kearney County Planning and Zoning Administrator, Carrie Favinger, submitted the suggested amendments to Kearney County, Nebraska and The Villages of Norman and Heartwell Zoning Regulations and to the Kearney County Joint Planning Commission, and

WHEREAS, the Kearney County Joint Planning Commission held a public meeting on May 18<sup>th</sup>, 2026, at the Kearney County Fairgrounds with notice as required by Neb. Rev. Stat. §19-904, and following such hearing, voted 7-1 in favor of recommending approval of the following amendments to the Zoning Regulations; and

WHEREAS, the Kearney County Board of Commissioners has reviewed those Zoning Regulations and held a public hearing on August 18, 2026, with notice as required by Neb. Rev. Stat. §19-904; and

WHEREAS, the Kearney County Board of Commissioners believes that the Zoning Regulations should be amended as reflected below:

- Page 12 – 3.68 Solar Energy System Definition removed. See 7.41
- Page 17 – 5.13 #4 – Add “Personal” before “alternative energy systems
- Page 19 – 5.14 #22 Remove “Utility”
- Page 21 – 5.23 # 4 – Add “Personal” before “alternative energy systems”
- Page 22- 5.24 #8 – Remove “Utility”
- Page 24- 5.33 #4- Add “Personal” before “alternative energy systems”
- Page 25- 5.34 #6- Use uniform language for Wind generating systems to include, “Commercial Grade Wind Energy Systems utilizing a single tower application or multiple tower applications or “Wind Farm,” in conformance with the provisions of Article 7, Section 7.30 of these Regulations;”
- Page 27- 5.43 #3- Add “Personal” before “alternative energy systems”
- Page 30-5.54 #6 – Move from 5.54 #6 Permitted Special Uses to page 29 -5.53 #2 Permitted Accessory Uses and Structures. Add “Personal” before alternative energy systems”
- Page 31-5.62 #40- Add “Personal” before “alternative energy systems”
- Page 32-5.63 #5 – Remove “Utility”
- Page 37-5.83 #8- Add “Personal” before “alternative energy systems”

WHEREAS, the Zoning Regulations need to be substantially updated, the following Chapters are repealed entirely: Wind Energy Systems Chapter 7.31- 7.32 and replaced with the following Chapters 7.30-7.35 and Solar Energy Systems Chapters 7.4 – 7.42 are hereby repealed entirely and replaced with the following Chapters 7.40 – 7.44 as reflected below:

**7.30 Wind Energy System Location and Distancing Requirements**

1. Wind Energy Conversation Systems as defined by Kearney County Zoning Regulations shall not be located or expanded within:
  - a. Seven miles South of the middle of the south channel of the Platte River.

b. Three miles from any Federal or State wildlife preservation or management area, and any and all inventoried Wetlands, as set out in the U.S. Fish and Wildlife's mapping and inventory of Wetlands, and public conservation lands.

c. Three miles from the center channel of the Little Blue River.

2. Measurements pursuant to the foregoing section shall be made in a straight line, without regard to intervening structures or objects, starting at the nearest portion of the building or structure used as a part of the premises of a Wind Energy System to the nearest portion of the property line of the above mentioned parcels.

3. Distance certifications: An application for a Wind Energy System shall be accompanied by a current certificate and straight-line drawing prepared within thirty (30) days prior to application by a registered land surveyor depicting the property lines and all structures within five miles of the property to be certified; that shall minimally include the property lines of any residence or other structure, church, synagogue or temple, cemetery, town or village, hospital, public school or public park, any day care center or day care home or roadway within two-miles of the property to be certified;

4. For purposes of this sub-section, a use shall be considered existing if it is in existence at the time an application is submitted.

#### **7.31 Definitions:**

**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.

**COMMERCIAL WIND ENERGY CONVERSION SYSTEM (CWES)** shall mean a wind energy conversion system of equal to or greater than 100 kW in total name plate generating capacity.

**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.

**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.

**HUB HEIGHT** shall mean the distance above ground level as measured to the centerline of the rotor blade diameter.

**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.

**NON-PARTICIPATING PROPERTY** shall mean any property that is not the subject of an agreement with the Wind Energy Conversion System Owner or Operator.

**PARTICIPATING PROPERTY** shall mean any property that is under lease or other property agreement with the Wind Energy Conversion System Owner or Operator.

**PERSONAL USE WIND POWERED GENERATOR (WPG):** A turbine or rotary type generator designed to extract kinetic energy from the wind and convert this energy to electrical energy. It is comprised of a base where it attaches Kearney County Zoning Regulations 19 to the ground, supporting member of the generator housing usually referred to as a tower, wiring at or within the tower, generator housing, and a means to propel the armature shaft in the generator housing by use of the power of the wind accomplished through use of airfoils or similar devices connected to the armature shaft. A Personal WPG cannot exceed 25kW rated nameplate capacity.

**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.

**PUBLIC CONSERVATION LANDS** shall mean land owned or operated by State or Federal agencies and managed specifically for conservation or preservation purposes, including but not limited to State Wildlife Management Areas, State Parks, state or federal Wildlife Refuges, Waterfowl Production Areas, and inventoried Wetlands. For purposes of this regulation, public conservation lands will also include lands owned by non-profit conservation organizations operating for similar purposes of conservation or preservation. Public conservation lands will also include private lands upon which conservation easements have been sold to public agencies or non-profit conservation organizations.

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

**SHADOW FLICKER:** The strobe effect that occurs when the sun is horizontal to the rotor blades, which causes repetitive intermittent shadows that can affect people on near-by properties.

**SMALL WIND ENERGY CONVERSION 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.

**STRUCTURALLY MOUNTED SYSTEM** shall mean a system that is designed to be mounted on a building, including residential dwellings.

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

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

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

**TOWER HEIGHT** shall mean the height above the original ground level to the hub portion of the tower, excluding the wind turbine itself.

**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.

**WIND ENERGY CONVERSION SYSTEM (WECS)** 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.

**WIND FARM:** One or more wind powered generators that create and transmit power principally for connection to publicly used power grid. Wind farms shall include but shall not necessarily be limited to the following structures and uses: wind powered generators, operations and/or maintenance buildings, meteorological towers, electrical wiring, collector grids, roads and substations. Any wind powered generator or generators that create over 25 kW, singly and/or wholly, is a wind farm.

**WIND TURBINES GENERATOR (WTG)** 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.

1. **NET METERING:** Net metering means a system of metering electricity in which a local distribution utility:

- (a) Credits a customer-generator at the applicable retail rate for each kilowatt-hour produced by a qualified facility during a billing period up to the total of the customer-generator's electricity requirements during that billing period. A customer-generator may be charged a minimum monthly fee that is the same as other non-customer-generators in the same rate class but shall not be charged any additional standby, capacity, demand, interconnection, or other fee or charge; and
- (b) Compensates the customer-generator for Net Excess Generation during the billing period at a rate equal to the electric utility avoided cost of electric supply over the billing period. The monetary credits shall be applied to the bills of the customer-generator for the preceding billing period and shall offset the cost of energy owed by the customer-generator. If the energy portion of the customer-generator's bill is less than zero in any month, monetary credits shall be carried over to future bills of the customer-generator until the balance is zero. At the end of each annualized period, any excess monetary credits shall be paid out to coincide with the final bill of that period.

## **7.32 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.

**Requirements:** Small wind energy systems shall meet the following requirements.

### **1. 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 and set back requirements.

### **2. Noise**

- a. Small wind energy systems shall not exceed 50 dBA, as measured at the closest neighboring inhabited dwelling unit.
- b. The noise level may be exceeded during short term events such as utility outages and/or severe wind storms.

### 3. 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.

### 4. Compliance with Local and State Building and Zoning Codes

- a. Applications for small wind energy systems shall be accomplished by standard drawings of the site boundaries, right of way, easements, existing structures, overhead utilities wind turbine structure, including the tower base, and footings. A survey may be required. It shall also include the manufacturer, model, rotor diameter, tower height, and tower type.
- b. An engineering analysis of the tower showing sufficient structural integrity and 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. Ownership of all adjacent property and all residential and other structures on all adjacent property shall be provided, as set forth in 7.30.
- d. Wet stamps shall not be required.

### 5. Small wind energy systems must comply with applicable FAA and NDA regulations, including any necessary approvals for installations within 3 miles of any airports or airstrips.

### 6. 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.

### 7. 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 and has approved of such a connection.
- b. Off-grid systems shall be exempt from this requirement.

### 8. Setbacks

- a. No part of the wind system structure, including guy-wire anchors, may extend closer than the building setbacks of the appropriate zoning district to the property lines of the installation site.

All towers shall adhere to the setbacks established in the following table:

|                                                          | Wind Turbine -<br>Non Commercial WECS | Meteorological Towers |
|----------------------------------------------------------|---------------------------------------|-----------------------|
| Property Lines                                           | 2 times tower height                  | 1 times tower height  |
| Neighboring-<br>owner dwelling units                     | 2 times tower height                  | 2 times tower height  |
| Road Right-of-way                                        | 2 times tower height                  | 2 times tower height  |
| Other Right-of-way                                       | 2 times tower height                  | 2 times tower height  |
| Wildlife Mngmt<br>Areas & State Rec<br>Areas             | Designated elsewhere                  | 2 times tower height  |
| Wetlands USFW<br>Types III, IV, & V                      | Designated elsewhere                  | 2 times tower height  |
| Other structures<br>adjacent to the<br>applicant's sites | N/A                                   | 2 times tower height  |
| Other existing<br>WEC's not owned<br>by the applicant    | N/A                                   | N/A                   |
| River Bluffs                                             | N/A                                   | N/A                   |

\* The setback for dwelling units shall be reciprocal in that no dwelling unit shall be constructed within the same distance required for a Small 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.

### 7.33 COMMERCIAL WIND ENERGY SYSTEMS

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

*Requirements:* Commercial wind energy systems shall be permitted within any district where the use is listed and allowed. The following requirements and information shall be met and supplied at the time of the application:

1. The name(s) of project applicant.
2. The name of the project owner.
3. The legal description and address of the project. The lot or parcel must be at least ten (10) acres in size.
4. A description of the project including: number, type, nameplate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid. It shall include the manufacturer, model, rotor diameter, tower height, tower location and tower type.
5. Application shall include standard drawings of site layout, including the location of property lines right of way, easements, wetlands, existing structures, overhead utilities, protected areas, wind turbines structures including tower base and tooling, feeder lines, and all related accessory structures. This site layout shall include distances and be drawn to scale. The ownership and dwellings on all adjacent property within five miles must be listed and mapped, as set forth in 7.30. A survey may be required.
6. Certification by an Engineer competent in disciplines of WEC's to include a certification of structural integrity and compliance with official local and state building codes.
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 System, within 10 rotor distances of the proposed Wind Energy Conversion System not owned by the applicant.
10. Location of wetlands, Designated scenic area, and natural areas within 7 miles of the proposed Wind Energy System.
  11. The applicant shall supply the Kearney County Emergency Management Agency and local Fire Departments with a basic emergency response plan and a map showing all shut offs, disconnects, valves, etc. Applicant must provide, maintain, and train on all equipment necessary for the appropriate fire district. Training shall be yearly regardless of ownership of the wind energy system and should be at no cost to the local fire department. Annual training must be provided by the applicant / owner at no cost to the local fire department(s).
  12. FAA and FCC permit, if necessary. Applicant shall submit permit or evidence that the permit has been filed with the appropriate agency.
  13. Evidence provided by Engineer / Architect, or equivalent that there will be no inference with any commercial and/or public safety communication towers.
  14. Decommissioning Plan including the financial means to implement the plan.
  15. Applicant shall identify potential effects in terms of constraints or benefits the wind energy facility may place on current or future use of the land within the project site and the surrounding area. The extent of any limitations due to public health and safety risks shall be specifically addressed and the effects on the following activities shall also be addressed:
    - a. Existing or proposed tourist or recreation activities;
    - b. Residential activities;
    - c. Industrial activities;
    - d. Agricultural activities;
    - e. Commercial activities;
  16. Soil erosion, sediment control and storm water runoff plan shall address what types of erosion control measures will be used during each phase of the project. It shall identify plans for:
    - a. Construction and drainage of access roads and turbine pads;
    - b. Design features to control dust;
    - c. Design features to maintain downstream water quality;
    - d. Re-vegetation to ensure slope stability;
    - e. Restoring the site after temporary project activities;
    - f. Disposal or storage of excavated materials;
    - g. Protecting exposed soil;
    - h. Stabilizing restored material and removal of silt fences or barriers when the area is stabilized; and
    - i. Maintenance of erosion controls throughout the life of the project;
  17. Applicant shall provide information regarding any animal, reptile, or avian, and flora and fauna of the proposed project area including:
    1. Officially listed threatened or endangered species.
    2. Critical habitat and habitat conditions;
    3. An avian study based on the U.S. Fish and Wildlife Services. "Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines."
  18. A pre-construction noise modeling study shall be conducted in accordance with procedures approved by Standard 61400-11 of the International Electrotechnical Commission (IEC); and shall include all property with the dwelling within one mile of a tower support base. The protocol, methodology, and noise modeling shall be included in the study. The complete results and full study report shall be submitted

to the Kearney County Planning Commission for review at the time of the application.

19. Projections of the “shadow flicker” on an existing structure located off the property on which the CWECS will be constructed and shall include the extent and duration of the shadow flicker on these existing structures.

20. Certification by a registered engineer that shows:

1. There is a substantial need for the proposed use of CWECS, one hundred (100) kW or greater;
2. All applicable local, state, and federal buildings, structural, and electrical codes have been followed;
3. The site is feasible for a CWECS; the CWECS can be successfully operated in the climate conditions found in Kearney County;
4. The rotor and over speed control have been designed for the proposed use on the proposed site;
5. The design and safety of the proposed tower to withstand winds of ninety (90) miles per hour; and
6. If the wind turbine were to fall, no building or structure existing or potential, would be damaged.

**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.

**Setbacks:**

All towers shall adhere to the setbacks established in the following table:

|                                                                 | Wind Turbine - Commercial WECS                                                                                                                                                              | Meteorological Towers    |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Property Lines                                                  | 2.5 times tower height from property lines, however the Setback may be less when 2 adjoining property owners are within the aggregate project.<br>No more than 4 towers per quarter section | 2 times the tower height |
| Neighboring Dwelling Units                                      | 2 miles                                                                                                                                                                                     | 2 times the tower height |
| Road Right-of-Way                                               | 2.5 times the tower height                                                                                                                                                                  | 2 times the tower height |
| Other Right-of-Way                                              | 2.5 times the tower height                                                                                                                                                                  | 2 times the tower height |
| Wildlife Mgmt. Areas and State Recreation areas                 | Regulation 7.30 #1                                                                                                                                                                          | 2 times the tower height |
| Wetlands USFW Types III, IV, & V                                | Regulation 7.30 #1                                                                                                                                                                          | 2 times the tower height |
| Other structures & cemeteries adjacent to the applicant's sites | 2.5 times the tower height                                                                                                                                                                  | 2 times the tower height |
| Other existing WECS not owned by the applicant.                 | 6,000 lineal feet                                                                                                                                                                           | N/A                      |
| River Bluffs                                                    | 1 mile                                                                                                                                                                                      | N/A                      |

\* The setback for dwelling units shall be reciprocal in that no dwelling unit shall be constructed within the same distance required for a commercial 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.

**7.34 Special Safety and Design Standards:** All towers for any wind energy system shall adhere to the following safety and design standards:

1. Clearance of rotor blades or airfoils must maintain a minimum of 30 feet of clearance between their lowest point and the ground.

2. All Commercial WECS shall have an illuminated sign or signs posted on the tower, transformer and substation, warning of high voltage, manufactures name, operators name, emergency contact name and phone number and emergency shut down procedure and have other emergency contact information. Other signs shall be posted on the turbine with emergency contact information. A 911 address shall be established and signage visible from nearest roadway.
3. All wind turbines, which are a part of a commercial WECS, shall be installed with a tubular, monopole type tower and shall be designed to minimize adverse visual and noise impacts on adjacent property.
4. Color and finish: All wind turbines and towers that are part of a 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. No logos, brands, or advertising shall be present.
5. 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.
6. Other signage: All other signage shall comply with the sign regulations found in these regulations.
7. 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.
8. Waste Disposal: Solid and Hazardous waste, 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.
9. Discontinuation and Decommissioning:
  - a. A WECS shall be considered a discontinued use after 12months 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 six feet below ground level within 180 days of the discontinuation of use.
  - b. Each 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. At the end of the projects life, the entire site shall be restored to original condition within 12 months.
  - c. A bond on each WECS shall be set and issued by the 3rd party of sound financial institution in a form reasonably acceptable to the County for decommissioning. The amount will be set after Professional Engineer assesses how much it will cost to remove the WECS and restore the area to its original state. Such bond or escrow shall not be less than 120% of the decommission cost estimate. It shall be kept continuously regardless of ownership until the

site has been returned to its original condition. Proof shall be continuously provided to the Kearney County Clerk at least once every twelve months and the amount may be increased as needed.

10. Noise:

- a. Commercial Wind Energy Systems (CWECs) shall not exceed 50 dBA, as measured at the closest neighboring inhabited dwelling unit.
- b. The noise level may be exceeded during short term events such as utility outages and/or severe wind storms.

11. 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.

12. Roads: Applicants shall:

- a. Identify all roadways 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. Restoration must be maintained for 5 years.

13. 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.

14. Kearney County may require other testing and safeguards such as soil testing, water testing, etc.

15. Shadow/Flicker

Shadow/flicker shall not be allowed on any dwelling or public road, excluding minimum maintenance roads. A flicker study will need to be submitted and contain the following input:

- Turbine Location (latitude and longitude)
- Shadow/Flicker receptor (dwelling)
- USGS 1:24,000 topographic scale and USGS Digital Elevation Model (height contours)
- Turbine Rotor diameter
- Turbine Hub Height
- Wind Speed and direction frequency distribution data
- Identification of the model and turbine size.

Output from the model must include the following information:

- Calculated shadow flicker time at selected receptors
- Tabulated and plotted time of day with shadow flicker at selected receptors
- Map showing turbine locations, selected shadow/flicker receptors and iso-line contour indications of projected shadow/flicker time (hours/year)

16. Maximum Height of any tower shall not exceed 600 feet above original grade.

17. Each tower or other component shall be properly grounded to safely sustain lightning strike.

18. Each tower shall be equipped with anti-climbing devices. Tower climbing apparatus shall not be located within 15 feet of the ground.

19. Owner and/or operator shall maintain and provide proof of a current insurance liability policy the amount of which shall be established as a condition of approval. It shall cover liability installation, operation and any possible damage or injury that might result from the failure of any tower or other part of the facility. Proof must be provided to the Kearney County Clerk.
20. Applicant and/or owner must provide annual emergency response training at no cost to participants and all local fire departments. It must provide all necessary equipment and also provide maintenance.

#### **7.35 Location and Distance Requirements Commercial Grade Wind Energy Systems.**

- A. Measurements pursuant to the foregoing section shall be made in a straight line, without regard to intervening structures or objects, starting at the nearest portion of the building or structure used as a part of the premises of a Wind Energy System to the following distances; The nearest property line of any of the above mentioned parcels or areas.
- B. Distance certifications: An application for a Wind Energy System shall be accompanied by a current certificate and straight-line drawing prepared within thirty (30) days prior to application by a registered land surveyor depicting the property lines and the structures as required in 7.30
- C. For purposes of this sub-section, a use shall be considered existing if it is in existence at the time an application is submitted.

### **SOLAR ENERGY SYSTEMS**

#### **7.40 Solar Energy Systems**

*Purpose:* it is the purpose of this regulation to promote the safe, effective and efficient use of solar energy conversion systems within Kearney County

No solar panel, shall be constructed within Kearney County zoning jurisdiction unless an appropriate permit has been issued and is constructed in conformance with the state building codes and the following requirements. For those devices that include electrical, plumbing and heating components, the applicable permits shall also be obtained.

#### **7.41 Definitions**

**SOLAR ENERGY:** Radiant energy (direct, diffuse and/or reflective) received from the sun.

**SOLAR ENERGY SYSTEM (SES):** An area of land or other area used for a solar collection system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power. Principal solar energy systems consist of one (1) or more free-standing ground, movable, and/or roof mounted solar collector devices, solar related equipment and other accessory structures and buildings including light reflectors, concentrators, and heat exchangers.

**SOLAR FARM:** A commercial large-scale solar energy system facility for the primary purpose of wholesale sales of generated electricity. A solar farm can be the principal or secondary use of the land for the parcel on which it is located. It is designed for providing energy to off-site users or export to the wholesale market. It is comprised of one or more Solar Energy System(s) (SES) that create and transmit power principally for connection to publicly used power grid. Solar Farm(s) shall include, but shall not necessarily be limited to the following structures and uses: Solar Energy Systems, operations and/or maintenance buildings, meteorological towers, electrical wiring, collector grids, roads and substations. Any Solar Energy System (SES) with rated nameplate capacity over 25kw singly and/or wholly, is a Solar Farm. It can include, but is

not necessarily limited to, substations, electrical infrastructure, transmission lines and other appurtenant structures used to collect and distribute power from the Solar Farm.

**SOLAR PANEL:** That part or portion of a solar energy system containing one or more receptive cells or modules, the purpose of which is to convert solar energy for use in space heating or cooling, for water heating and/or for electricity.

**SOLAR RELATED EQUIPMENT:** Items including a solar photovoltaic cell, module, panel, or array, or solar hot air or water collector device panels, lines, pumps, batteries, mounting brackets, framing and possibly foundations or other structures used for or intended to be used for collection of solar energy. This equipment can consist of:

- 1. SOLAR ARRAY:** A grouping of multiple solar modules with purpose of harvesting solar energy.
- 2. SOLAR CELL:** The smallest basic solar electric device which generates electricity when exposed to light.
- 3. SOLAR MODULE:** A grouping of solar cells with the purpose of harvesting solar energy.

#### **7.42 Solar Energy Systems Less than 25 KW**

*Requirements:* Solar energy systems less than 25 kW shall be permitted within any district where the use is listed and allowed. Requirements as set forth below shall be met:

1. A description of the project including: Generating capacity, agreement and means of interconnecting with the electrical grid unless not connected to electrical grid and a net metering agreement with the electric utility if applicable.
2. Site layout, including the location of property lines, solar panels, electrical grid, and all related accessory structures. This site layout shall include distances and be drawn to scale. A survey may be required. The manufacturer and model or panels to be used, shall be included.
3. Solar panels shall conform to the required front, side and rear lot setback requirements for the zoning district in which it is located, unless otherwise provided in specific regulations.
  - a. A solar panel which is attached to an integral part of the principal building may project two feet into the front yard; six feet into the rear yard; and two feet into the side yard.
  - b. A solar panel which is freestanding shall be located only in the required rear or side yard provided it does not exceed 12 feet in height and not closer than five feet to any existing easement or lot line as measured from the closest point of the structure including its foundation and anchorage's nor shall the solar panel be located in the required front yard.
  - c. The physical structure and connections to existing structures shall conform to the applicable state building and electrical codes.
  - d. Comply with any and/or all State and Federal regulations if applicable.
4. Compliance with National Electrical Code: Permit applications for solar 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.
5. Applicant must obtain a 911 address and keep it posted at the nearest roadway.
6. Applicant must have approval from the appropriate electrical utility.

**7.43 Solar Energy Systems 25 KW or Larger**

*Requirements:* Commercial Grade solar energy systems shall only be permitted within any district where the use is listed and allowed. The following requirements and information shall be met and supplied by the applicant:

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 including: number, type, nameplate generating capacity, agreement and means of interconnecting with the electrical grid, as well as a net metering agreement with the electric utility. The manufacturer and model of all panels to be used shall be included.
5. Site layout, including the location of property lines, easements, wetlands, protected areas, solar panels, electrical grid, and all related accessory structures. This site layout shall include distances and be drawn to scale and in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. A survey may be required.
6. Certification of approval by an Engineer competent in disciplines of solar energy of the entire project.
7. Documentation of land ownership or legal control of the property.
8. Location of wetlands, Designated scenic area, and natural areas within 3 miles of the proposed solar panels(s)
9. Vegetation management plan dealing with overgrowth and soil stabilization.
10. The applicant shall supply the Kearney County Emergency Management agency and local Fire Departments with a basic emergency response plan and a map showing all shut offs, disconnects, valves, etc. Emergency contact name and number shall be clearly visible. All equipment necessary for emergency management must be supplied by the applicant/owner. It must be maintained by applicant/owner at no cost to the fire department. Annual training must be provided by applicant/owner at no cost to the fire department.
11. Evidence provided by Engineer / Architect, or equivalent that there will be no inference with any commercial and/or public safety communication towers.
12. All solar panels shall adhere to the setbacks as measured from centerline of solar panel established in the following table.

| Less than 25 KW    | More than 25 KW |                                                                   |
|--------------------|-----------------|-------------------------------------------------------------------|
| 75 ft. Waiverable  | 150 ft.         | Property Lines                                                    |
| 150 ft. Waiverable | 1320 ft.        | Neighboring Dwelling Units                                        |
| 150 ft.            | 150 ft.         | Road Right-of-way                                                 |
| 150 ft.            | 150 ft.         | Other Rights-of-way                                               |
| 1320 ft.           | 1320 ft.        | Wildlife Mngmt Areas & State Rec areas                            |
| 1320 ft.           | 1320 ft.        | Wetlands USFW Types III, IV, & V                                  |
| 150 ft.            | 150 ft.         | Other structures and cemeteries adjacent to the applicant's sites |

13. Pre-existing solar panels: Not withstanding noncompliance with the requirements of this section, a solar panel erected prior to the adoption of these regulations may continue to be utilized so long as it is continuously maintained in operational condition.

14. Proof of Liability insurance and/or bond shall be furnished to the Kearney County Clerk.
15. A decommissioning plan including the financial means to implement the plan must accompany the application. See 7.43
16. Aggregated Projects:
  - a. Aggregated projects may jointly submit a single application and be reviewed under joint proceedings, including notices, public hearings, reviews and appropriate approvals.
  - b. Permits may be issued and recorded separately.
  - c. Joint projects will be assessed fees as one project.

#### **7.44 Special Safety and Design Standards:**

All Solar Energy Systems shall adhere to the following safety and design standards:

1. All solar energy systems 25 kW or Larger shall have an illuminated sign or signs posted, 911 address, warning of "high voltage" and have other emergency contact information. All other signage shall comply with the sign regulation found in these regulations.
2. All structures, buildings, components, etc. shall be natural or non-obtrusive in color suggested colors are blue, black, or grey and must be non-reflective. No logos, brands, or advertisements are allowed.
3. Feeder Lines: All communications and feeder lines associated with the project distribution system installed as part of the solar energy system 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.
4. Waste Disposal: Solid and Hazardous waste, 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.
5. Operation Maintenance Discontinuation and Decommissioning:
  - a. All systems and all components shall be kept in operational condition, including the appearance of all components, and the ground beneath such components shall be kept in a presentable manner.
  - b. A solar Energy System shall be considered a discontinued use after 12 months without energy production, unless a plan is developed and submitted to the Zoning Administrator outlining the steps and schedule for returning the solar energy system to service. All solar energy system and accessory facilities shall be removed to four feet below ground level within 180 days of the discontinuation of use.
  - c. Each solar energy system shall have a Decommissioning plan outlining the anticipated means and cost of removing solar energy system 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 solar energy system and accessory facilities. The entire site shall be returned to original condition within 1 year.

- d. A Bond on each solar panel shall be set and issued by a 3rd party of sound financial institution in a form reasonably acceptable to the County for decommissioning. The amount will be set after Professional Engineer assesses how much it will cost to remove the solar panel(s) and restore the area to its original state. The amount shall not be less than 120% of decommission estimate. It shall be continuously maintained regardless of ownership and proof shall be reported to the Kearney County Clerk continuously.
  - e. After a solar energy system has been discontinued use for more than 1 year, a new special use permit must be obtained before repowering.
6. 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 solar energy system. The applicant shall notify all communication tower operators within five miles of the proposed solar energy system location upon application to the county for permits.
7. Roads: Applicants shall:
- a. Identify all county, municipal or township roads to be used for the purpose of transporting solar energy systems, substation parts, cement, and/or equipment for construction, operation or maintenance of the solar energy system 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. Such restoration must be maintained for 5 years.
8. Drainage System(s): The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the solar energy system.
9. Kearney County Joint Planning Commission may require other testing and safeguards such as Soil Testing, water testing, etc.
10. Applicant shall provide maintenance and training for all necessary equipment to each fire district that houses any solar panel, solar neighborhood, or solar farm within this district. Training shall be annually.
11. Applicant shall comply with any additional specific requirements of any appropriate fire district.
12. Applicant shall provide evidence that the project meets commonly accepted management practices for avian, wildlife, and environmental protections in place at the time of the application.
13. Applicant shall provide proof that they have met with the electric utility and have the necessary approval and interconnection agreement with the electric utility.
14. Concentrated solar power systems which use mirrors or lenses or the like to concentrate a large area of sunlight or thermal energy into a small area are not permitted in Kearney County.
15. An eight (8) foot fence shall be placed around any solar energy system 25 kW or larger.

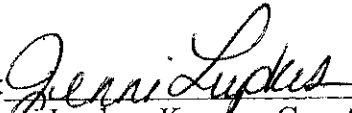
NOW THEREFORE, BE IT RESOLVED BY THE KEARNEY COUNTY BOARD OF COMMISSIONERS that the above Kearney County, Nebraska and The Villages of Norman and Heartwell Zoning Regulations amendments be ADOPTED by approval of this Board, to be effective August 18, 2026.

FURTHER, that a copy of the Zoning Regulations Amendments together with a copy of this Resolution shall be kept with the Kearney County Clerk and made available to the public at the Office of the Kearney County Clerk.

Dated this 18<sup>th</sup> day of August, 2026



Brent Stewart, Chairperson  
Kearney County Board of Commissioners

ATTEST:   
Jenni Lupkes, Kearney County Clerk



Voting Aye:

Voting Nay: