SEDGWICK COUNTY, COLORADO

COMPREHENSIVE PLAN AND ZONING ORDIANCE

WIND AND SOLAR AMENDMENT

EFFECTIVE JANUARY 1, 2022

GENERAL STATEMENT

This amendment to the Sedgwick County, Colorado Comprehensive Plan and Zoning Ordinance ("**Land Use Regulations**"), specifically related to amending the wind and solar regulations ("**Wind and Solar Regulations**"). If there is a contradiction between the original Land Use Regulations and this amendment, this amendment shall prevail.

DEFINITIONS:

Distributed Solar Energy System. Solar electrical power generation that occurs close to where the power is consumed and is primarily used on site by the system owner. A private on-site solar energy conversion system consisting of many ground-mounted solar arrays in rows or roof panels, and associated control or conversion electronics, occupying more than 2.5 acres and no more than 30 acres of land, and that will be used to produce utility power to on-site uses.

Distributed Wind Energy System. Wind electrical power generation that occurs close to where the power is consumed and is primarily used on site by the system owner. A wind energy conversion system consisting of Wind Turbine(s) and associated control or conversion electronics, with a rated capacity of not more than 100 kW per unit, that will be used to produce utility power to on-site uses.

Height (Building). The vertical distance from the "grade" to the highest point of the coping of a flat roof, or to the deck line of a mansard roof, or to the average heights of the highest gable of a pitch or hip roof.

Land Use Change. Any development, grading, construction, activity or operation that changes the basic character, configuration or use of the land or structures after the enactment of this Land Use Change.

Land Use Permit. The Land Use Permit is a conditional land use permit.

MET Tower. A meteorological tower used for the measurement of wind speed.

Public Improvement. Any drainage ditch, roadway, parkway, sidewalk, pedestrian way, tree, lawn, off street parking area, lot improvement, or other facility which benefits the public.

Residential Solar Energy System. A single residential or small business-scale solar energy conversion system consisting of roof panels, ground-mounted solar arrays, or other solar energy fixtures, and associated control or conversion electronics with a rated capacity of less than 500 kW, occupying no more than 2.5 acres of land, and that will be used to produce utility power to on-site uses.

Residential Wind Energy System. Wind electric power generation systems up to 50kW, used on site by the system owner to reduce or eliminate dependence on grid electricity.

System Height. The combined height of the tower, the wind turbine and any blade extended at its highest point, measured from ground level.

Utility Scale Solar Energy System. A utility-scale solar energy conversion system consisting of many ground-mounted solar arrays in rows, and associated control or conversion electronics, occupying more than 30 acres and that will be used to produce utility power to off-site customers.

Utility Scale Wind Energy System. An electricity generating facility consisting of one or more Wind Turbines under common ownership or operating control, and includes substations, MET Towers, cables/wires and other buildings accessory to such facility, whose main purpose is to supply electricity to off-site customer(s).

Wind Turbine. A wind energy conversion system that converts wind energy into electricity through the use of a wind turbine generator. The term "Wind Turbine" shall include the turbine, blade, tower, base and pad transformer.

AMENDMENTS:

The Wind and Solar regulations shall be amended by adding the entire new section entitled "Section 13: Solar and Wind Regulations" as follows:

Section 13:

Solar and Wind Regulations

All requirements in this section are in addition to those required in the Land Use Regulations, specifically those enumerated in Section 12. If there is a contradiction between Section 12 and Section 13, Section 13 shall prevail.

13-101: Activity Notice Required for Construction of Any Wind or Solar Energy Facility.

An Activity Notice shall be obtained for all new buildings and structures comprising the Wind or Solar Energy Facility, including each Wind Turbine, prior to beginning construction. The Activity Notice will be processed only if the Administrator determines that the proposed activity is not a material change from the project approved under the Land Use Permit.

13-102: Residential Wind Requirements and Standards

Residential Wind Energy Systems are exempt from land use permit requirements but shall require an Activity Notice, under 13-101, 13-102, and any additional requirements pursuant to this section.

A. Additional Standards for Activity Notice-Residential Wind Energy System.

1. Setbacks.

a. Minimum Setback. The Residential Wind Energy System shall be set back from any property boundary and ROW a minimum of 130% of the maximum height of the system.

b. Guy-Wire Anchor Setback. Guy wire anchors shall be setback from any property boundary a minimum of ten (10) feet.

c. Waiver or Reduction of Setback. The Applicant may request a waiver from the setback requirements at the time of the Land Use Permit application. The Board at its discretion may consider an applicant's proposal for waiver or reduction of setback in a regular meeting for which the request appears on the agenda. If the Land Use Permit application is approved with a setback waiver or reduction, the approved setback shall be specified in the Land Use Permit approval. The burden is upon the applicant to demonstrate with clear and convincing evidence that:

- The proposed waiver or reduction of setback is

necessary to accommodate the Residential Wind EnergySystem; and

- The public health, safety, welfare and the environment will not be harmed by the proposed waiver or reduction of setback; and

- The proposed Residential Wind Energy System otherwise complies with the relevant standards.

2. System Height.

a. Located Within Airport Flight Path or Airport Influence Zone. Residential Wind Energy System located on property withinan airport flight path or airport influence zone shall comply with applicable FAA safety height requirements. The Residential Wind Energy System shall not interfere with established airport flight paths or structural height restrictions within the airport influence zones.

b. Waiver from Height Restrictions. The Applicant may requesta waiver from maximum height restriction at the time of the Land Use Permit application. The Board at its discretion may consider an applicant's proposal for waiver from maximum height restriction in a regular meeting for which the request appears on the agenda. If the Land Use Permit application is approved with a waiver from maximum height restriction, the approved height shallbe specified in the Land Use Permit approval. The burden is upon the applicant to demonstrate with clear and convincing evidence that:

- The proposed site provides sufficient wind potential tojustify a taller system, based on competent information such as anemometer data or National Renewable Energy Laboratory mapping; and

- The proposed Residential Wind Energy System otherwise complies with the relevant standards.

3. Visual Impacts.

a. Colors and surface treatment of the Residential Wind Energy System shall be neutral and non-reflective.

b. Residential Wind Energy System shall not be located where itwould substantially obstruct views from adjacent property.

c. Owner shall locate utility connections underground whenever practicable.

4. Signs. The Residential Wind Energy System shall not be used todisplay graphics and signs.

5. Lighting. The Residential Wind Energy System shall not be artificially lit except to the extent required by the FAA or other applicableauthority.

6. Safety Shutdown. Wind Turbine shall have an automatic braking, furling, or feathering system to prevent uncontrolled rotation, over-speeding and excessive pressure on the tower structure, rotor bladesand turbine components. Owner shall maintain the ability to shut down turbines in an emergency.

7. Physical and Electromagnetic Interference. The Residential Wind Energy System shall not interfere with any microwave communication link or remote telemetry.

8. Certification.

a. All equipment and appurtenant facilities shall be certified by a registered structural engineer to be compliant with the applicable industry, state, federal and local regulations.

b. The electrical system shall be certified by a registered electrical engineer to be compliant with the applicable industry, state, federaland local regulations.

c. Prior to operation, the applicant shall provide the County withthe required certifications.

9. Removal of Discontinued Residential Wind Energy System. If the Residential Wind Energy System ceases to perform its originally intended function for more than eighteen (18) consecutive months, the owner shall remove the Residential Wind Energy System and complete adequate site restoration no later than ninety (90) days after the end of the 18-month period. Adequate site restoration shall include removal of foundations and electrical equipment to below grade.

13-103: Residential Solar Requirements and Standards

Residential Solar Energy Systems are exempt from land use permit requirements but shall require an Activity Notice Activity Notice, under 13-101, 13-103, and any additional requirements pursuant to this section.

A. Additional Standards for Activity Notice-Residential Solar Energy System.

1. **Setbacks.**

    a. **Minimum Setback**

        i. Residential solar collection panels and equipment shall comply with the Residential Setbacks as follows:
            1. Residential Setbacks—Minimum requirements:
                a. Front Yard Setback:
                    i. Arterial: 20 feet
                    ii. Major Collector: 20 feet
                    iii. Local: 20 Feet
                b. Side Yard Setback: 10 feet
                c. Rear Yard Setback:
                    i. Principal Uses: 25 feet
                    ii. Accessory Uses: 5 feet

    b. **Waiver or Reduction of Setback.** The Applicant may request a waiver from the setback requirements at the time of the Land Use Permit application. The Board at its discretion may consider an applicant's proposal for waiver or reduction of setback in a regular meeting for which the request appears on the agenda. If the Land Use Permit application is approved with a setback waiver or reduction, the approved setback shall be specified in the Land Use Permit approval. The burden is upon the applicant to demonstrate with clear and convincing evidence that:

        i. The proposed waiver or reduction of setback is necessary to accommodate the Residential Solar EnergySystem; and

        ii. The public health, safety, welfare and the environmentwill not be harmed by the proposed waiver or reduction ofsetback; and

        iii. The proposed Residential Solar Energy System otherwise complies with the relevant standards.

2. **Maximum System Height.** Roof-mounted systems shall be mounted as flush as possible to the roof. In order to achieve proper solar orientation, panels may exceed the roofline by up to five (5) feet.

3. **Visual Impacts.** The Residential Solar Energy System shall not have an adverse visual impact on the natural features or character of the surrounding area and shall be located to minimize glare on adjacent properties and roadways.

4. **Location Restrictions.**

a. Ground-mounted solar energy collectors may not be located within utility easements or ditch easements unless authorized in writing by the easement holder.

b. Residential Solar Energy Systems with a rated capacity of more than 100 kW shall not be located in areas of critical wildlife habitat.

5. Certification.

a. All equipment and appurtenant facilities shall be certified by a registered structural engineer to be compliant with the applicable industry, state, federal and local regulations.

b. The electrical system shall be certified by a registered electrical engineer to be compliant with the applicable industry, state, federal and local regulations.

c. Prior to operation, the applicant shall provide the County with the required certifications.

6. Removal Of Discontinued Residential Solar Energy System. If the Residential Solar Energy System ceases to perform its originally intended function for more than eighteen (18) consecutive months, the owner shall remove the Small Solar Energy System and complete adequate site restoration no later than ninety (90) days after the end of the 18-month period. Adequate site restoration shall include removal of foundations and electrical equipment to below grade.

13-104: Distributed Wind and Solar Requirements and Standards

A. Application Materials Required for Distributed Wind And Solar Energy System. The application for an Administrative Land Use Permit for a Distributed Wind or Solar Energy System shall include the following information. The Administrator may request additional information that may be necessary to evaluate the application. The Administrator may waive any part of the application material requirements when the information would not be as determined by the Administrator.

1. Written Description. A written description of the proposed Distributed Wind Energy System including the manufacturer and model, rated kW capacity, overall height of the turbine (grade level to highest tip extension), total blade diameter, and rated maximum rotor RPM. A written description of the proposed Distributed Solar Energy System including the manufacturer and model of the system to be installed.

2. Site Plan. The site plan for applications for a Distributed Windor Solar Energy System shall include the following elements:

a. Date of preparation, revision box, written scale, graphic scale, and north arrow (designated as true north).

b. Clearly identified boundary lines, corner pins, anddimensions of the site.

c. Location of lot lines.

d. Size of the site, in acres or square feet.

e. Existing uses of the site and the adjacent properties.

f. Existing structures shown by location anddimension.

g. Location and dimensions of proposed DistributedWind Energy System and distance from the boundaries ofthe site.

h. Location and dimensions of proposed ground- mounted solar collection panels, associated control and conversion electronics and distance from the boundaries ofthe site.

i. Dimensional drawing of roof-mounted solar collection panels showing height and orientation, and distance of structure housing the panels from the boundariesof the site.

j. Existing roads, railroads, utility lines, and easements and rights-of-way on the site, shown by locationand dimension.

3. **Detailed Drawing or Photograph.** Detailed drawing of the Distributed Wind or Solar Energy System to be installed. The drawing shall include dimensions for wind tower footprint, towerheight, hub height and blade tip height.

4. **Notice to FAA.** If the Distributed Wind Energy System is located within twenty thousand feet (20,000') of the runway of an airport, the application shall be accompanied by a copy of the written notification to the Federal Aviation Administration (FAA).

5. **Notice to Operation of Communication Link.** If the Distributed Wind Energy System is located within two (2) miles ofany microwave communications link and/or remote telemetry, the application shall be accompanied by a copy of the written notification to the operator of the communication link.

B. Additional Standards for Distributed Wind Energy System Land Use Permits.

1. **Industry Standards, and State and Federal Requirements.** Wind turbines, their components and appurtenant facilities shall conform to applicable industry standards, including those of the American National Standards Institute and National Electrical Commission, and shall comply with all relevant state and federal requirements.

2. **Artificial Lighting.** Wind turbines and appurtenant structures shall not be artificially lit except to the extent required by the FAA or other applicable authority.

3. **Setbacks for Distributed Wind Energy Systems.**

   a. **Minimum Setback.**

   - Distributed Wind turbines shall be set back from any property boundary or public road, highway or railroad right-of-way a minimum of 130% of the maximum heightof the system.
   - Distributed Wind turbines shall be set back from above ground public electric power lines or communication lines a minimum of 130% of the maximum height of the system.
   - Distributed Wind turbines shall be set back from inhabited structures located outside of the site boundary aminimum of 130% of the maximum height of the system.

   b. **Scenic Resource Setback.**

   - The Distributed Wind Energy System shall be setback a minimum of ¼ mile from any highway eligible or designated to be a scenic highway or roadway by the Sedgwick County Land Use Regulations or by the state.
   - A scenic resource protection setback requirement maybe reduced if the Board determines that the characteristicsof the surrounding property eliminate or substantially reduce considerations of scenic value.

   c. **Waiver or Reduction of Setback.** The Applicant may request a waiver from the setback requirements at the time of the Land Use Permit application. The Board at its discretion may consider an applicant's proposal for waiver or reduction of setbackin a regular meeting for which the request appears on the agenda. If the Land Use Permit application is approved with a setback waiver or

reduction, the approved setback shall be specified in the Land Use Permit approval. The burden is upon the applicant to demonstrate with clear and convincing evidence that:

- The proposed waiver or reduction of setback is necessary to accommodate the Distributed Wind Energy System; and

- The public health, safety, welfare and the environment will not be harmed by the proposed waiver or reduction of setback; and

- The proposed Distributed Wind Energy System otherwise complies with the relevant standards.

4. Safety and Security.

a. Fencing, or other barriers acceptable to the County, shall beinstalled to prevent unauthorized access to the Distributed Wind Energy Facility electrical interconnection facilities.

b. All wiring between Wind Turbines and the DistributedWind Energy Facility substation shall be underground.

c. Guy wires shall be distinctly marked and fenced on all permanent towers.

d. All access doors to Wind Turbine towers and electrical equipment shall be lockable and remain locked when unattended.

e. Signs warning of the electrical hazard and other hazards associated with the Wind Energy Facility shall be posted atthe base of each Wind Turbine tower, electrical equipment,and at the entrance of the Wind Energy Facility.

f. A security patrol or other security measure may be required if it is determined to be necessary and appropriate to ensurepublic safety.

5. Fire Protection. The Wind Energy Facility shall have adequatefire control and prevention measures.

6. Underground Location of Powerlines. Unless geologic conditions prevent underground installation, electrical collection system wiring, and powerlines shall be installed underground except where the Wind Energy Facility collector wiring is brought together for connection to the transmission or

distribution network.All underground installations located within the public road easement or right-of-way shall comply with the applicable permit and design requirements of Sedgwick County Road and Bridge and should include the following elements:

a. **Restoration.** Any disturbed portion of the right of way shall be restored as nearly as possible to its condition immediately prior to construction, improvements, location or relocation, and to the satisfaction of Sedgwick County Roadand Bridge. Backfilling shall be made in six (6) inch lifts, mechanically tamped and packed, and the last twelve (12) inches shall be crushed rock or gravel.

b. **Safety.** Safety measures shall be implemented to the satisfaction of Sedgwick County Road and Bridge and in accordance with state and federal requirements to protectthe public from harm during construction, improvements,location or relocation.

c. **Roadway Crossing.** When the installation crosses a roadway, it shall be located as perpendicular to the roadway as physically practical and installed in compliance with the requirements of Sedgwick County Road and Bridge.

d. **As-built drawings.** Certified as-built drawings shall be provided to the County once the construction, improvements, location or relocation has been completed.

e. **Permit and Notice to Proceed.** No work associated with construction, improvements, location or relocation shall commence until the required permit(s) and notice to proceed have been issued by the County.

7. **Interconnection and Electrical Distribution Facilities.**

a. All distribution lines, electrical substations, and other interconnection facilities shall be constructed to the specifications of the American National Standard Institute (ANSI), National Electrical Code (NEC), Institute of Electrical and Electronic Engineers (IEEE), and National Utility Standards.

b. Interconnection shall conform to the requirements of theelectric utility company, and applicable state and federal regulatory requirements.

8. **Interference with Navigational Systems.** The Applicant shall minimize or mitigate any interference with electromagnetic communications caused by the Wind Energy Facility, includingradio, telephone or television signals.

a. Every Wind Turbine shall comply with Federal Aviation Administration regulations for sighting structures near anairport or VORTAC installation.

9. Certification of Equipment and Appurtenant Facilities.

a. All equipment and appurtenant facilities shall be certified by a registered structural engineer to be compliant with theapplicable state, federal and local regulations and to conform with good engineering practices.

b. The electrical system shall be certified by a registered electrical engineer to be compliant with the applicable state, federal and local regulations, and to conform withgood engineering practices.

10. Signs. Wind Turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the Wind Energy facility.

11. Color and Finish.

a. All Wind Turbines shall be painted a non-reflective, non-obtrusive color.

b. Design of accessory buildings and related structures shall, to the extent practicable, use materials, colors, textures, screening and landscaping that will blend the Wind EnergyFacility to the natural setting and existing environment.

12. Preservation of Land Use under Decommissioning Plan. Decommissioning of the Wind Energy Facility shall not interferewith surrounding land use.

13. Dimension and Location of Each Wind Turbine. Applicant has submitted a site plan that designates the location and dimensions ofeach Wind Turbine to be authorized by the final Land Use Permit.

C. Additional Standards for Distributed Solar Energy System Land Use Permits.

1. Setbacks for Distributed Solar EnergySystem.

a. Minimum Setback.

- Distributed solar collection panels and equipment shall comply with the Industrial/Commercial Setbacks as follows:

- Minimum Setback Requirements:
  - Front Setback: 30 feet from the road ROW
  - Side Yard Setback: 25 feet from adjacent residential/agricultural property
  - Side Yard Setback: 10 feet from adjacent commercial/industrial property.
  - Rear Yard Setback: 25 feet from adjacent residential/agricultural property.

b. Scenic Resource Setback.

- The Distributed Solar Energy System shall be setback a minimum of ¼ mile from any highway eligible or designated to be a scenic highway or roadway by the Sedgwick County Land Use Regulations or by the state.

- A scenic resource protection setback requirementmay be reduced if the Board determines that the characteristics of the surrounding property eliminate or substantially reduce considerations of scenic value.

c. Waiver or Reduction of Setback. The Applicant may request a waiver from the setback requirements at the time of the Land Use Permit application. The Board at its discretion may consider an applicant's proposal for waiver or reduction of setback in a regular meeting for which the request appears on the agenda. If the Land Use Permit application is approved with a setback waiver or reduction, the approved setback shall be specified in theLand Use Permit approval. The burden is upon the applicant to demonstrate with clear and convincing evidence that:

- The proposed waiver or reduction of setback is necessary to accommodate the Distributed Solar EnergySystem; and

- The public health, safety, welfare and the environment will not be harmed by the proposed waiver orreduction of setback; and

- The proposed Distributed Solar Energy System otherwise complies with the relevant standards.

2. **Maximum System Height.** Roof-mounted systems shallbe mounted as flush as possible to the roof. In order to achieve proper solar orientation, panels may exceed the roofline by up to five feet.

3. **Visual Impacts.** The Distributed Solar Energy System shallnot have an adverse visual impact on the natural features or character of the surrounding area and shall be located to minimize glare on adjacent properties and roadways.

4. **Location Restrictions.**

   a. Ground-mounted solar energy collectors may not belocated within utility easements or ditch easements unless authorized in writing by the easement holder.

   b. Distributed Solar Energy Systems shall not be located inareas of critical wildlife habitat.

   c. Distributed Solar Energy Systems are encouraged to locateon predominately (more than 60 %) non-prime farmland.

5. **Certification.**

   a. All equipment and appurtenant facilities shall be certifiedby a registered structural engineer to be compliant with the applicable industry, state, federal and local regulations.

   b. The electrical system shall be certified by a registered electrical engineer to be compliant with the applicable industry,state, federal and local regulations.

   c. Prior to operation, the applicant shall provide the Countywith the required certifications.

13-105: Utility Wind and Solar Requirements and Standards

A. Additional Utility Wind and Solar Requirements and Standards.

1. **Additional Materials Required for Utility Scale Wind or SolarEnergy System.** A Utility Scale Wind or Solar Energy System shall include the following information:

   a. **Facility Owner/Operator Information and Written Description.** Contact information for facility owners and operators, and all other pertinent party associated with the Utility Scale Wind or Solar Energy System. The written description of the proposed Utility Scale Wind or Solar Energy System shall include the manufacturer and model ofthe

system to be installed.

b. Location Map. In lieu of a vicinity map, the Applicant shall submit a location map, to scale, that illustrates the following:

i. Location of the proposed Utility Scale Wind orSolar Energy System in the County.

ii. Location of all property for which a permit is beingrequested and of property within 500 feet of the exterior boundary of the site of the proposed Utility Scale Wind or Solar Energy System.

c. Site Plan. The site plan for applications for Utility Scale Wind or Solar Energy System shall include the following elements:

i. Distance of proposed ground-mounted solar collection panels from the boundaries of the site.

ii. Dimensional drawing of roof-mounted solar collection panels showing height and orientation,and distance of structure housing the panels fromthe boundaries of the site.

iii. Locations and dimensions for each Wind Turbine inthe proposed Wind Energy System, to the extent known. Prior to final approval of the permit by the Board, Applicant shall designate the location and dimensions of each Wind Turbine.

1. Setbacks of the Wind Turbines from boundaries of the site and the distance between each Wind Turbine.

2. Location and dimensions of the associated control or conversion electronics, accessory buildings and structures, and distance from the boundaries of the site.

d. Detailed Drawing or Photograph. Detailed drawing or aphotograph of the Solar Energy System or Wind Turbine model to be installed as part of the Utility Scale Wind or Solar Energy System.

e. Phasing of Development. An application proposing to phase development shall provide a description of each phase of development including the number of Wind Turbines, Solar Panels and the accessory structures, infrastructure and interconnection requirements for each phase

f. Utility and/or Transmission Interconnection.

i. Description of utility interconnection or electric transmission system interconnection.

ii. Copy of feasibility study request to applicable electric utility or electric transmission entity ofintent to interconnect the Utility Scale Wind or Solar Energy System to the electric utility or electric transmission entity.

g. Geotechnical Report. A Geotechnical Report thatincludes:

i. Soils engineering and engineering geologic characteristics of the site based upon on-sitesampling and testing.

ii. Foundation design criteria for all proposedstructures.

iii. Slope stability analysis.

iv. Grading criteria for ground preparation, cuts andfills, and soil compaction.

h. Notice to FAA. If any Wind Turbine included in the proposed Utility Scale Wind Energy system has a system height over two hundred (200) feet or is located within twenty thousand (20,000) feet of the runway of an airport, the application shall be accompanied by a copy of the written notification to the Federal Aviation Administration(FAA).

i. Notice to Operation of Communication Link. If any Wind Turbine included within the proposed Utility Scale Wind Energy System is located within two (2) miles of anymicrowave communications link, and/or remote telemetry the application shall be accompanied by a copy of the written notification to the operator of the communication link.

j. Notice to Mineral Estate Owners. Evidence that mineral estate owners have been provided with notice of the proposeddevelopment in compliance with C.R.S. § 24-65.5-103(1). Additional notice may be required by the Board of County Commissioners at the recommendation of the Land Use Administrator or Planning Commission.

k. Decommissioning Plan. A Decommissioning Plan that includes the following information and elements:

i. Anticipated life of the project.

ii. An estimate of the decommissioning costs certified by a Professional Engineer, to be updated every five (5) years following year fifteen (15) of operation.

iii. Description of financial security provisions relative to decommissioning process, in compliance with therequirements stated herein, Section 13-103(b), Utility Wind and Solar Financial Security Requirements.

iv. Anticipated manner in which the project will be decommissioned and the site restored.

v. Description of triggering events for decommissioning the Utility Scale Wind or Solar Energy System, or any aspect of the facility, upon eighteen (18) months of continuous non-operation of the facility or of any aspect of any facility, unless by force majeure.

vi. Provisions for the removal of structures, debris andcabling, including those below the soil surface down to twenty-four (24) inches.

vii. Provisions for the restoration of the soil andvegetation.

viii. A provision that decommissioning of the UtilityScale Wind or Solar Energy System will not interfere with surrounding land use.

ix. A provision that the terms of the Decommissioning Plan shall be binding upon the Owner or Operator and any of their successors, assigns, or heirs.

x. A provision that the County shall have the right to review and reconsider the Utility Scale Wind or Solar Energy System Decommissioning Plan at the time of decommissioning

xi. A provision that the County shall have the right toreview final decommissioning and reclamation to confirm it is consistent with the DecommissioningPlan

xii. A provision that the County shall have access to thesite, pursuant to reasonable notice, to effect or complete decommissioning if decommissioning does not proceed in compliance with the Decommissioning Plan or landowner agreement(s).

l. Proof of Liability Insurance. Proof of liability insurance in the form of a current general liability policy covering bodily injury and property damage with limits of at least $1million per occurrence and $1 million in the aggregate.

m. Third Party Certifications. Certificates of designcompliance with applicable industry standards obtained by the equipment manufacturers from Underwriters Laboratories, Det Norske Veritas, Germanischer Lloyd Wind Energy, or an equivalent third-party certification body with expertise in the wind energy field.

B. Utility Wind and Solar Financial Security Requirements.

The applicant may be required to provide financial security as the Board determines necessary to guaranty completion of Public Improvements, compliance with permit conditions, or completion of decommissioning of a Wind Energy Facility.

1. Form of Financial Security.

a. The applicant shall provide financial security in any form and combination acceptable to the Board of County Commissioners. Evidence of the selected form(s) of financial security shall be included with the application materials.

b. The Board may reject the proposed forms of financial security if the evidence submitted does not adequately assure that the required funds will be available. The applicant shall be notified in writing within sixty (60) days of receipt of the evidence of financial security of the decision to accept or reject the proposed form(s) of financial security.

2. Public Improvements. Where Public Improvements will be required to serve a Major Land Use, no Major Land Use Permit shall beissued until the applicant has submitted adequate financial security to guaranty completion of the Public Improvements. However, if a Major Land Use Permit holder must obtain an Activity Notice before commencing construction related activities, the posting of adequate financial security is not required until the Activity Notice is issued.

a. Improvements Agreement and Financial Security. The applicant shall provide an improvements agreement, agreeing to construct any Public Improvements required by the land use, together with financial security in an amount not less than 125 percent (125%) of the estimated cost of the required Public Improvements. The financial security shall be sufficient, in the judgment of the Board, to make reasonable provisions for completion of the Public Improvements in compliance with the

plans and specifications and with the terms of the improvements agreement.

b. Request for Inspection.

(1) The County shall inspect completed Public Improvements following receipt of the permittee's request for inspection pursuant to terms of the improvements agreement.

(2) If the County determines that any of the Public Improvements are not constructed in compliance with the plans and specifications or with terms of the improvements agreement, the County shall provide the permittee with a written explanation of the noncompliance and a deadline for coming into compliance. Failure to comply with the plans and specifications or with the terms of the improvements agreement shall be a violation of this Land Use Code and may be subject to any and enforcement provisions in the Sedgwick County Land Use Regulations and/or State laws.

c. Release of Financial Security for Public Improvements. The permittee may apply to the Board for release of the financial security following inspection of completed Public Improvements.

(1) The request for release of the financial security must be submitted in writing to the Board a minimum of ten (10) working days before the next regularly scheduled meetingat which the Board may consider the request.

(2) The Board shall release the financial security once the Public Improvements have been accepted by the County.

(3) If the Board determines that any of the Public Improvements are not constructed in substantial compliance with plans and specifications or with terms ofthe improvements agreement, it shall withhold financial security to guaranty substantial compliance.

3. Permit Conditions. Where permit conditions have been imposed to ensure compliance with this Code, the Board at its discretion may require the applicant to provide financial security to guaranty performance of the permit condition(s), and no Permit shall be issued until the applicant has submitted the required guaranty.

a. Financial Security. The amount of the financial security shall be sufficient, in the judgment of the Board, to ensure performance ofthe

permit condition(s).

b. Request for Inspection.

(1) At any time, the permittee believes that a permit condition(s) has been satisfied, the permittee may request that the County perform an inspection. The County shall conduct an inspection following receipt of the permittee's written request for inspection.

(2) If the County determines that the permit condition(s) hasnot been satisfied, the County shall provide the permitteewith a written explanation of the noncompliance and a deadline for coming into compliance with the permit condition(s). Failure to comply with the permit condition(s)shall be a violation of this Land Use Code and may be subject to the enforcement provisions of Article 9 of this Code.

c. Release of Financial Security for Permit Condition(s). The permittee may apply to the Board for release of the financial security for the permit condition(s) as the permit condition(s) is satisfied.

(1) The request for release of the financial security must be submitted in writing to the Board a minimum of ten (10) working days before the next regularly scheduled meetingat which the Board may consider the request.

(2) Upon inspection and determination that the permit condition(s) has been satisfied the Board may release the financial security for the permit condition(s).

(3) If the Board determines that the permit condition(s) has not been satisfied, it shall withhold financial security to guaranty the permit condition(s) is satisfied.

4. Decommissioning of a Utility Scale Wind or SolarEnergy System. The applicant shall provide adequate financial security to guaranty decommissioning of a Utility Scale Wind or Solar Energy System in compliance with the Decommissioning Plan and these regulations. Unless otherwise established by the Board as a condition of the Permit, no Permit shall be issued until the applicant has submitted the required financial security.

a. Financial Security.

(1) Financial security shall be in an amount equal to the decommissioning costs, based upon an estimate of the decommissioning costs certified by a professional Engineer and updated every five (5) years following year fifteen (15)of operation.

(2) The Board, at its discretion, may waive its requirement for financial security if the applicant demonstrates to the Board's satisfaction that:

- The landowner agreement(s) includes provisions that ensure decommissioning of the Utility Scale Wind or Solar Energy System in compliance withthe Decommissioning Plan; and

- The landowner has consented to a waiver of the financial security that would be required by theBoard.

b. Request Inspection.

(1) Following written request of the Owner or Operator, or at the Board's discretion the County shall review final decommissioning of a Utility Scale Wind or Solar Energy System to confirm compliance with the Decommissioning Plan and these regulations.

(2) If the County determines that the decommissioning is not in compliance, the County shall furnish the Owner or Operator with a written explanation of the noncompliance and a deadline for coming into compliance.

- Failure to decommission the Utility Scale Wind or Solar Energy System in compliance with the Decommissioning Plan and these regulations shall be a violation of this Land Use Code and may be subject to the enforcement provisions of Article 9 ofthis Code.

- If decommissioning does not proceed in accordancewith the Decommissioning Plan and these regulations, the County shall have the right to enter the property at the Board's discretion and cause theappropriate abandonment and decommissioning measures to be completed.

c. Release of Financial Security for **Decommissioning Utility Scale Wind or Solar Energy System**. The Owner or Operator may apply to the Board for release of financial security once the decommissioning of the Utility Scale Wind or Solar Energy System

has been completed.

(1) The request for release of the financial security must be submitted in writing to the Board a minimum of ten (10) working days before the next regularly scheduled meetingat which the Board may consider the request.

(2) Financial security for decommissioning of a Wind Energy Facility may be released under any of the following conditions.

- Decommissioning of the Utility Scale Wind orSolar Energy System has been satisfactorily completed and accepted; or

- The permit has been surrendered to the County before commencement of any physical activity onthe site of the Utility Scale Wind or Solar EnergySystem; or

- The land use has been abandoned and the site returned to its original condition or to a conditionacceptable to the County.

5. Cancellation of Bond After Board Consent. Any bond or other form of financial security may be canceled by a surety upon consent of the Board of County Commissioners, after ninety (90) days written notice to the Board, when such cancellation will not detract from or otherwise diminish the purpose of the financial security.

C. Additional Standards for Utility Scale Wind Energy. The following standards shall apply to Utility Scale Wind Energy System:

1. Industry Standards, and State and Federal Requirements. Wind turbines, their components and appurtenant facilities shall conform to applicable industry standards, including those of the American National Standards Institute and National Electrical Commission, and shall comply with all relevant state and federal requirements.

2. Artificial Lighting. Wind turbines and appurtenant structures shall not be artificially lit except to the extent required by the FAAor other applicable authority.

3. Setbacks.

a. **Measurement.** Front, rear, and side setbacks shall be measured as the distance between the nearest lot line and center of the foundation of a structure, along a line at right angles to the lot line.

b. **Safety Setbacks.** Unless otherwise required by federal or state regulations, the following minimum setbacks shall apply to each Wind Turbine comprising the Wind Energy Facility.

	MINIMUM SETBACK
Setback of Wind Turbine from above-ground public electric power lines or communication lines[1]	2 times system height
Setback of Wind Turbine from public road or highway or railroad[2]	2 times system height
Setback of Wind Turbine from public road or highway with ADT of 7,000 or more[3]	2 times system height or 420 feet, whichever is greater
Setback of Wind Turbine from an inhabited structure located on-site, including residence, school, hospital, church or public library.	2 times system height, or 1000 feet, whichever is greater
Setback of Wind Turbine from an inhabited structure located outside the site boundary, including residence, school, hospital, church or public library.	2 times the system height or 2000 feet from the property line, whichever is greater
Setback from all other property lines, unless appropriate easements are secured from adjacent property owners or other acceptable mitigation is approved by the Board	2 times system height or 1000 feet, whichever is greater.

c. **Scenic Resource Setback.** Wind Turbines comprising the Wind Energy Facility shall be setback a minimum of ¼ mile from any highway eligible or designated to be a scenic highway or roadway by the Sedgwick County Land Use Regulations or by the state.

(1) A scenic resource protection setback requirement may be reduced to 2 times the total Wind Turbine height if the Board determines that the characteristics of the surrounding property eliminate or substantially reduce considerations of scenic value.

[1] Measured from the outer boundary of the public utility right-of-way or easement [or from existing power line or telephone line]
[2] Measured from the outer boundary of the public road/highway right-of-way or railroad right of way
[3] Average daily trips, based on traffic field measurements [determined by Colorado Department of Transportation or County]

d. **Waiver or Reduction of Setback.** The applicant may request a waiver from the setback requirements at the time of the Land Use Permit application. The Board at its discretion may consider an applicant's proposal for waiver or reduction of setback in a regular meeting for which the request appears on the agenda. If the Land Use Permit application is approved with a setback waiver or reduction, the approved setback shall be specified in the Land Use Permit approval. The burden is upon the applicant to demonstrate with clear and convincing evidence that:

(1) The proposed waiver or reduction of setback is justified; and

(2) The public heath, safety, welfare, and the environment will not be harmed by the proposed waiver or reduction of setback; and

(3) The proposed Utility Scale Wind Energy System otherwise complies with the relevant standards.

4. **Minimum Ground Clearance.** The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet.

5. **Safety and Security**.

a. Fencing, or other barriers acceptable to the County, shall be installed to prevent unauthorized access to the Wind Energy Facility electrical interconnection facilities.

b. All wiring between Wind Turbines and the Wind Energy Facility substation shall be underground.

c. Guy wires shall be distinctly marked and fenced on all permanent towers.

d. All access doors to Wind Turbine towers and electrical equipment shall be lockable and remain locked when unattended.

e. Signs warning of the electrical hazard and other hazards associated with the Wind Energy Facility shall be posted at the base of each Wind Turbine tower, electrical equipment, and at the entrance of the Wind Energy Facility.

f. A security patrol or other security measure may be required if it is determined to be necessary and appropriate to ensure public safety.

6. **Fire Protection.** The Wind Energy Facility shall have adequate fire control and prevention measures.

7. **Underground Location of Powerlines.** Unless geologic conditions prevent underground installation, electrical collection system wiring, and powerlines shall be installed underground except where the Wind Energy Facility collector wiring is brought together for connection to the transmission or distribution network.All underground installations located within the public road easement or right-of-way shall comply with the applicable permit and design requirements of Sedgwick County Road and Bridge and should include the following elements:

   a. **Restoration.** Any disturbed portion of the right of way shall be restored as nearly as possible to its condition immediately prior to construction, improvements, location or relocation, and to the satisfaction of Sedgwick County Roadand Bridge. Backfilling shall be made in six (6) inch lifts, mechanically tamped and packed, and the last twelve (12)inches shall be crushed rock or gravel.

   b. **Safety.** Safety measures shall be implemented to the satisfaction of Sedgwick County Road and Bridge and in accordance with state and federal requirements to protect the public from harm during construction, improvements, location or relocation.

   c. **Roadway Crossing.** When the installation crosses a roadway, it shall be located as perpendicular to the roadway as physically practical and installed in compliance with the requirements of Sedgwick County Road and Bridge.

   d. **As-built drawings.** Certified as-built drawings shall be provided to the County once the construction, improvements, location or relocation has been completed.

   e. **Permit and Notice to Proceed.** No work associated with construction, improvements, location or relocation shall commence until the required permit(s) and notice to proceed have been issued by the County.

8. **Interconnection and Electrical Distribution Facilities.**

   a. All distribution lines, electrical substations, and other interconnection facilities shall be constructed to the specifications of the American National Standard Institute

(ANSI), National Electrical Code (NEC), Institute of Electrical and Electronic Engineers (IEEE), and National Utility Standards.

b. Interconnection shall conform to the requirements of the electric utility company, and applicable state and federal regulatory requirements.

9. Interference with Navigational Systems. The Applicant shall minimize or mitigate any interference with electromagnetic communications caused by the Wind Energy Facility, including radio, telephone or television signals.

a. Every Wind Turbine shall comply with Federal Aviation Administration regulations for sighting structures near an airport or VORTAC installation.

10. Certification of Equipment and Appurtenant Facilities.

a. All equipment and appurtenant facilities shall be certified by a registered structural engineer to be compliant with theapplicable state, federal and local regulations and to conform with good engineering practices.

b. The electrical system shall be certified by a registered electrical engineer to be compliant with the applicable state, federal and local regulations, and to conform with good engineering practices.

11. Signs. Wind Turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the Wind Energy facility.

12. Color and Finish.

a. All Wind Turbines shall be painted a non-reflective, non-obtrusive color.

b. Design of accessory buildings and related structures shall, to the extent practicable, use materials, colors, textures, screening and landscaping that will blend the Wind Energy Facility to the natural setting and existing environment.

13. Preservation of Land Use under Decommissioning Plan. Decommissioning of the Wind Energy Facility shall not interfere with surrounding land use.

14. Dimension and Location of Each Wind Turbine. Applicant has submitted a site plan that designates the location and dimensions of each Wind Turbine to be authorized by the final Land Use Permit.

D. Additional Standards for Utility Scale Solar Energy System.

1. Setbacks.

a. Minimum Setback.

(1) Utility Scale solar collection panels and equipmentshall comply with the Industrial/Commercial Setbacks in Section 13-104(C).

(2) Scenic Resource Setback.

i. The Utility Scale Solar Energy System shall be setback a minimum of ¼ mile from any highway eligible or designated to be a scenic highway or roadway by the Sedgwick County Land Use Regulations or by the state.

ii. A scenic resource protection setback requirementmay be reduced if the Board determines that the characteristics of the surrounding property eliminate or substantially reduce considerations of scenic value.

(3) Waiver or Reduction of Setback. The Applicant may request a waiver from the setback requirements at the time of the Land Use Permit application. The Board at its discretion may consider an applicant's proposal for waiver or reduction of setbackin a regular meeting for which the request appears on the agenda. If the Land Use Permit application is approved with a setback waiver or reduction, the approved setback shall be specified in the Land Use Permit approval. The burden is upon the applicant to demonstrate with clear and convincing evidence that:

i. The proposed waiver or reduction of setback is necessary to accommodate the Utility Scale Solar Energy System; and

ii. The public health, safety, welfare and the environment will not be harmed by the

proposed waiver orreduction of setback; and

iii. The proposed Utility Scale Solar Energy Systemotherwise complies with the relevant standards.

b. Maximum System Height. Roof-mounted systems shallbe mounted as flush as possible to the roof. In order to achieve proper solar orientation, panels may exceed the roofline by up to five feet.

c. Visual Impacts. The Utility Scale Solar Energy System shall not have an adverse visual impact on the natural features or characterof the surrounding area and shall be located to minimize glare on adjacent properties and roadways.

d. Safety and Security.

(1) Fencing. Fencing or other barriers acceptable to the County shall be installed to prevent unauthorized access to solarcollectors and equipment.

(2) Fire Protection. The Utility Scale Solar Energy Systemshall have adequate fire control and prevention measure.

e. Location Restrictions.

(1) Ground-mounted solar energy collectors may not be located within utility easements or ditch easements unless authorized in writing by the easement holder.

(2) Utility Scale Solar Energy Systems shall not be located in areas of critical wildlife habitat.

(3) Utility Scale Solar Energy Systems are encouraged to locate on predominately (more than 60%) non-prime farmland.

f. Certification.

(1) All equipment and appurtenant facilities shall be certified be a registered structural engineer to be compliant with the applicable industry, state, federal and local regulations.

(2) The electrical system shall be certified by a

registered electrical engineer to be compliant with the applicable industry, state, federal, and local requirements.

(3) Prior to operation, the applicant shall provide the County with the required certification.

g. Removal of Discontinued Utility Scale Solar Energy Systems. If the Utility Scale Solar System ceases to perform its originally intended function for more than eighteen (18) consecutive months, the system shall be removed and adequate site restoration performed no later than ninety (90) days after the end of the 18-month period. See the steps to decommissioning a Utility Scale Energy System in Section 13-105(B)(4).

E. Additional Enforcement Regulations Applicable to Wind Energy Facilities:

1. Monitoring. Upon twenty-four hours' notice, the Board or its official representative may enter the property on which a Wind Energy Facility has been permitted, for the purpose of ensuring compliance with the termsof permit approval and applicable County regulations, and of monitoring noise, environmental impacts and other impacts which may arise.

2. Removal Of Unsafe And Inoperable Wind Turbines

a. Any unsafe structure or inoperable Wind Turbine and WindTurbines for which the Land Use Permit has expired shall be removed by the owner. All safety hazards created by theinstallment and operation of the Wind Turbine shall be eliminated and the site shall be restored to its natural condition to the extent feasible. A bond or other appropriate form of security may be required to cover the cost of removal and site restoration.

b. Any unsafe or inoperable Wind Turbine deemed an unsafe structure, by the Land Use Regulations, law or the Administrator shall be considered a public nuisance subject to abatement by repair, rehabilitation, demolition or removal. A Wind Turbine shall not be considered unsafe or abandoned if the owner can demonstrate to the Board's satisfaction that modernization, rebuilding or repairs are in progress or are planned and will be completed within six months of the date of notice of violation issued by the County.

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