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Signed: *Brenda E. Knable*
BRENDA E. KNABLE
CLEARWATER COUNTY RECORDER

**CLEARWATER COUNTY
RENEWABLE ENERGY ORDINANCE**

JULY, 2020

This ordinance is enacted to support and govern the development of the renewable energy resource industry and to protect and promote the health, safety, general welfare and order within Clearwater County through uniform standards, regulations and procedures. The County Board of Commissioners, Clearwater County, Minnesota, does hereby ordain:

Section 1. General Provisions.

1.10 Purpose

- a) Establish regulations governing the installation and operation of Wind Energy Conversion Systems (WECS) within Clearwater County not otherwise subject to siting and oversight by the State of Minnesota pursuant to Minnesota Statutes, Chapter 216F, Wind Energy Conversion Systems, as amended.
- b) Establish regulations governing the installation and operation of Commercial Solar Energy Systems within Clearwater County.

1.20 Short Title

This ordinance shall be known as the "Clearwater County Renewable Energy Ordinance" and will hereinafter be referred to as "this ordinance".

1.30 Authority and Jurisdiction

The County Board shall serve as the permitting authority for renewable energy systems within the unincorporated areas of Clearwater County in accordance with MN Statutes Chapter 394, as amended. The Environmental Services Administrator shall have the duty of day-to-day administration of this ordinance.

1.40 Minimum Requirements

The requirements listed in this ordinance shall be construed as minimum requirements and the County Board shall have the authority to impose additional, reasonable standards to protect the public's health, safety and general welfare.

1.50 **Validity**

If any section, subdivision or provision of this Ordinance is declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this Ordinance.

Section 2. Definitions.

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the same meaning as they have in common usage and so as to give the ordinance its most reasonable application. For the purpose of this ordinance, the words "must" and "shall" are mandatory; the word "may" is permissive. Words used in the present tense shall include the future, and words used in the singular number shall include the plural number as well.

Administrator – Clearwater County Environmental Services Administrator.

Commercial SES – A solar energy system which is not directly connected to or designed to serve the energy needs of the primary use of the property but rather for the primary purpose of wholesale sales of generated electricity. Commercial Solar Energy Systems include but are not limited to systems otherwise known as solar farms, solar arrays and/or community solar gardens which provide retail electric power (or a financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system, consistent with Minn. Statutes 216B.1641 or successor statute.

Commercial WECS - A WECS of equal to or greater than 40 kW in total name plate generating capacity.

Feeder Line - Power lines that transport electrical power from one or more wind turbines to the point of interconnection with a high voltage transmission line.

Grid-intertie SES – A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.

High-voltage transmission line - A conductor of electric energy and associated facilities designed for and capable of operation at a nominal voltage of 100 kilovolts or more and is greater than 1,500 feet in length.

Name Plate Generating Capacity - The maximum rated output of electrical power production of a generator under specific conditions designated by the manufacturer with a name plate physically attached to the generator.

Non-Commercial SES – Accessory to and designed to supply energy for a residential or agricultural primary land use; excess energy produced may be sold back to the grid through net metering.

Non-Commercial WECS - A WECS of less than 40 kW in total name plate generating Capacity.

Photovoltaic Array – A group of solar photovoltaic modules connected together to increase voltage and/or power to the level required for a given system.

Photovoltaic Device – A system of components that generates electricity from incident sunlight by means of the photovoltaic effect, whether or not the device is able to store the energy produced for later use.

Rotor diameter - The diameter of the circle described by the moving rotor blades

Solar Array – Any number of photovoltaic modules or panels connected together to provide a single electrical output.

Solar Energy System (SES) - A set of devices whose primary purpose is to produce electricity by means of any combination of collecting, transferring, or converting solar-generated energy.

Solar Farm - A solar array compound of multiple solar panels on ground mounted racks or poles.

Substation - Any electrical facility designed to convert electricity produced by wind turbines to a voltage for interconnection with transmission lines.

Total height - The highest point above ground level reached by a rotor tip or any other part of the WECS or SES.

Total Nameplate Generating Capacity - The total of the maximum rated output of the electrical power production equipment for a WECS project.

Tower - Towers include vertical structures that support the electrical generator, rotor blades, or meteorological equipment.

Tower height - The total height of the tower exclusive of the rotor blades.

Wind Energy Conversion System (WECS) - A device such as a wind charger, windmill, or wind turbine and associated facilities that converts wind energy to electric energy.

Wind Turbine - A wind turbine is any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy through the use of airfoils or similar devices to capture the wind.

Section 3. Procedures for Wind Energy Conversion Systems

3.10 Permit Required.

Commercial WECS shall require the issuance of a Conditional Use Permit, processed in accordance with MN Statutes, Section 394.301 by the Clearwater County Planning Commission and approved by the County Board. Conditions may be imposed by the County Board related to the requirements and standards of this ordinance and generally to protect the public interest. A permit is not required for Non-Commercial WECS, however all Non-Commercial WECS shall comply with the setback requirements of Section 4.10.

3.20 Permit Application.

The application for all Commercial WECS shall include the following information:

- a. Project size determination by the Minnesota Department of Commerce, pursuant to Minnesota Statute 216F.011.
- b. The name/s and contact information of the project applicant.
- c. The name/s and contact information of the project owner.
- d. The legal description and address of the project.
- e. A description of the project including: Number, type, total name plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the electrical grid.
- f. Site layout, including the location of property lines, wind turbines, electrical wires, interconnection points with the electrical grid, all related buildings and structures on the site and the location of dwellings and other structures on adjacent properties. The site layout shall include distances and be drawn to scale; accurately depicting the proposed WECS and its relationship to adjacent land uses.
- g. Location of wetlands, parks, public lands and shoreland areas within $\frac{1}{4}$ mile of the proposed WECS.
- h. Documentation of land ownership or legal control of the property.
- i. Statement describing the planned use for the power produced by the WECS.

- j. The latitude and longitude of individual wind turbines.
- k. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other WECS within 10 rotor diameters of the Proposed WECS
- l. Description of potential impacts on nearby WECS and wind resources on adjacent properties.
- m. Location of all known Communications Towers within 5 miles of the proposed WECS.
- n. Decommissioning Plan

Section 4. WECS Requirements and Standards

4.10 Setbacks. All towers shall adhere to the setbacks established in the following table unless an adjustment is approved by the County Board:

	Commercial WECS
Wind Access Buffer (lands and/or wind rights not under permittee's control)	3 rotor diameters (RD) on the secondary wind axis (typically east-west) and 5 RD on the predominant wind axis (typically north-south).
Dwellings, other non-WECS occupied structures including schools, churches and businesses	Distance required to meet state noise standards, minimum 500 feet and may be increased upon consideration by county board.
Public Road Rights-of-way	250 feet
Extractive operations	No turbines, towers or associated facilities shall be located in active extractive operations such as sand and gravel pits.
Wetlands	No setback requirement. No turbines, towers or associated facilities shall be located in public waters wetlands except for collector or feeder lines in compliance with Wetlands Conservation Act and related requirements.
Shoreland Areas	No turbines, towers or associated facilities shall be located in shoreland areas.
Aviation facilities	In compliance with MnDOT and FAA requirements.

4.20 Safety Design Standards.

- a. Engineering Certification. For all WECS, the manufacture's engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.
- b. Clearance. Rotor blades or airfoils must maintain at least 12 feet of clearance between their lowest point and the ground.
- c. Public Information. The permittee shall provide educational materials upon request to interested persons pertaining to the project and any restrictions or dangers associated with the project.
- d. Emergency. The permittee shall register the WECS with the Clearwater County 911 addressing system.
- e. The permittee shall provide necessary safety measures to restrict public access to turbines and associated facilities, such as gates and/or warning signs. For all Commercial WECS, a sign or signs shall be posted on the tower, transformer and substation warning of high voltage.

4.30 Tower Configuration Standards.

- a. Non-Commercial WECS shall have a total height of less than 200 feet.
- b. All wind turbines which are part of a commercial WECS shall be installed with a tubular, monopole type tower.
- c. Feeder Lines. All feeder lines used to collect power from individual turbines and all associated communications lines shall be buried underground where reasonably feasible.
- d. Color and Finish. All wind turbines and towers that are part of a commercial WECS shall have a uniform white/off white/grey color. Blades may be black in order to facilitate deicing. Finishes shall be matte or non-reflective.
- e. Lighting. Towers shall be marked as required by the Federal Aviation Administration (FAA). There shall be no lighting on towers other than that which is required by the FAA.

4.40 Other Applicable Standards

- a. **Noise.** All WECS shall comply with Minnesota Rules Chapter 7030, as amended, governing noise.
- b. **Electrical codes and standards.** All WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.
- c. **Aeronautics.** All WECS shall comply with Federal Aviation Administration and Minnesota Department of Transportation standards and permits.
- d. **Interference.** The permittee shall minimize or mitigate interference with 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. No WECS shall be constructed so as to interfere with County or Minnesota Department of Transportation microwave transmissions.
- e. **Waste Disposal.** Solid and Hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants, shall be removed from the site promptly and disposed of in accordance with all applicable local, state and federal regulations.
- f. **Each Commercial WECS shall have a Decommissioning plan that is in compliance with MN Rules 7854.0500, subpart 13, as amended.** This plan shall outline the anticipated life of the project and the anticipated means and cost of removing WECS at the end of their serviceable life or upon becoming a 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 estimated costs shall be presented in current dollars along with a method and schedule for updating the costs. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the WECS and accessory facilities. Disposal of WECS structures and facilities shall be in full compliance with applicable solid waste regulations including the Clearwater County Solid Waste Management Ordinance and MN Rules Chapter 7035.2825 governing demolition debris land disposal.

Section 5. Procedures for Solar Energy Systems

5.10 Permit Required.

Commercial SES shall require the issuance of a Conditional Use Permit, processed in accordance with MN Statutes, Section 394.301 by the Clearwater County Planning Commission and approved by the County Board. Conditions may be imposed by the County Board related to the requirements and standards of this ordinance and generally to protect the public interest. A permit is not required for a non-commercial solar energy system.

5.20 Permit Application.

An applicant for a Commercial SES shall submit an application package that clearly identifies the property location, name and contact information for the project applicant and property owner, and includes the following information:

- 1) A site plan of existing conditions which shall contain:
 - a. Existing property lines and property lines extending one hundred (100) feet from the exterior boundaries, including the names of the adjacent property owners and current use of those properties.
 - b. Existing public and private roads, showing widths of roads, rights-of-way and any associated easements.
 - c. Location and size of any in-use and/or abandoned wells and sewage treatment systems.
 - d. Existing buildings and all impervious surfaces.
 - e. Topography at two-foot intervals including source. A contour map of the surrounding properties may also be required.
 - f. Existing vegetation type(s) and percent coverage.
 - g. Watercourses, lakes and public water wetlands.
 - h. Delineated wetland boundaries, as needed to determine applicability of MN Wetlands Conservation Act.
 - i. The 100-year flood elevation and regulatory flood protection elevation, if available.
 - j. Mapped soils according to available Clearwater County Soil Survey data.
 - k. Surface water drainage patterns.
- 2) A site plan of proposed conditions which shall contain:
 - a. Location, size and spacing of solar collectors included in the project.
 - b. Location and ownership of all roadways related to the project.
 - c. Planned location of underground and overhead electric lines connecting the SES to buildings, substations or another electric load.
 - d. Identification of new electrical equipment related to the project.
 - e. Proposed erosion and sediment control measures related to the project.
 - f. Sketch elevation of the premises accurately depicting the proposed SES and its relationship to structures on adjacent land within ½ mile, if any.
 - g. Changes in surface water drainage patterns resulting from the project.

- h. A table or other clear method to describe the total added impervious surface resulting from the project, including but not limited to: inverter pads, access roads, solar collectors and buildings.
- 3) The proposed installed capacity, in kilowatts, for the project.
 - 4) Proposed type of mounting and racking system, and Manufacturer's specifications or recommended installation methods for all major equipment including solar collectors, mounting systems and foundations for poles or racks.
 - 5) A description of the method for connecting the system to a building or substation.
 - 6) A copy of the interconnection agreement with the local electric utility or a written explanation outlining why an interconnection agreement is not necessary.
 - 7) Each Commercial SES shall have a Decommissioning Plan that outlines the anticipated life of the project and the anticipated means and cost of removing and disposing all SES components at the end of their serviceable life or upon becoming a discontinued use. SES shall be considered a discontinued use after 12 consecutive months without energy production. Cost estimates for decommissioning 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 estimated costs shall be presented in current dollars along with a method and schedule for updating the costs to account for inflation. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the SES and accessory facilities. The Board shall require the posting of a bond, letter of credit or the establishment of an escrow account to ensure financing for proper decommissioning exists in perpetuity, or assure that other such funding source is provided. Disposal of SES structures and facilities shall be in full compliance with applicable solid waste regulations including the Clearwater County Solid Waste Management Ordinance.
 - 8) Aviation Analysis. If the project is within two miles of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or successor policy. The applicant must also complete the Air Space Case Analysis (Form 7460) and provide results.
 - 9) Visual Impact Analysis. An analysis of the potential visual impacts from the project including solar panels, roads and fencing along with measures

to avoid, minimize or mitigate the visual effects shall be required. A plan may be required showing vegetative screening or buffering of the system from those items to mitigate visual impacts.

5.30 Solar Energy System Setbacks.

Minimum setbacks for SES and all above-ground components of SES shall be as follows, unless modified in accordance with Section 5.10:

Property Boundaries	100 feet
Road Right-of-Way	100 feet
Residence or Dwelling	300 feet

5.40 Utility Notification.

No grid-intertie photovoltaic system shall be installed until evidence has been given to the Administrator that the owner has notified the utility company of the customer's intent to install an interconnected customer-owned generator.

Section 6. Avoidance and Mitigation of Damages to Public and Private Infrastructure and Facilities.

6.10 Roads. Applicants shall:

- a. Identify all county, city or township roads to be used for the purpose of transporting parts, materials and/or equipment for construction, operation or maintenance of renewable energy systems and obtain applicable weight and size permits from the impacted road authority(ies) prior to construction.
- b. Conduct a pre-construction survey, in coordination with the impacted road authority(ies) to determine existing road conditions. The survey shall include photographs and a written agreement to document the condition of the public facility.
- c. Be responsible for restoring or paying damages as agreed to by the applicable road authority(ies) sufficient to restore the road(s) and bridges to pre-construction conditions.

6.20 Other Applicable Standards

- a. Drainage System. The permittee shall be responsible for immediate repair of damage to public and/or private drainage systems caused by construction, operation or maintenance of renewable energy systems.

- b. **Compaction.** The permittee shall minimize soil compaction of all lands during all phases and confine soil compaction to the smallest area possible.
- c. **Site Restoration.** The permittee shall restore the area affected by renewable energy system activities to its pre-development state as follows unless agreed otherwise by the landowner:
 - i. Site cleanup followed by general surface grading and, if necessary, restoration of surface drainage swales, ditches and drain tiles.
 - ii. Any excavation and/or trenching caused by removal of building or equipment foundations, supports and buried electrical provisions will be backfilled with appropriate material and leveled to match surrounding contours.
 - iii. Roads and parking areas will be removed completely, filled with suitable sub-grade material and leveled.

Section 7. Penalties.

Any person, firm, or corporation who violates any of the provisions of this Ordinance, fails to comply with any of the Ordinance provisions, or makes or submits any false statements in the required submittals, shall be guilty of a misdemeanor and, upon conviction, be punished by a fine of an amount not to exceed that allowed by law and/or by imprisonment as allowed by law. Each day that a violation continues shall constitute a separate offense.

In the event of violation or threatened violation of this Ordinance, the County Board of Commissioners, in addition to other remedies including prosecution, may institute appropriate actions or proceedings to prevent, restrain, correct or abate such violations or threatened violations, and it shall be the duty of the Clearwater County Attorney to institute such action.

Adoption and Effective Date

This ordinance shall be in full force and effect upon its adoption this 14th day of July, 2020

Neal Illies



Chairman, County Board of Commissioners

Board of Commissioners:

- District 1: Mark Titera
- District 2: Dean Newland
- District 3: Neal Illies
- District 4: John A. Nelson
- District 5: Mark Larson

ATTEST:

Emily McDougall,



Board Coordinator

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