BLUE LAKE TOWNSHIP

COUNTY OF KALKASKA
STATE OF MICHIGAN

ORDINANCE NO. _____

ADOPTED: _____

EFFECTIVE: _____

BLUE LAKE TOWNSHIP WIND ENERGY FACILITIES ORDINANCE

SECTION I
PURPOSE AND INTENT

The purpose of this Ordinance is to establish minimum requirements and regulations for the construction, erection, placement, location, maintenance, modification, operation, and decommissioning of Wind Energy Facilities in the Township in a manner that promotes economic development and ensures the protection of health, safety, and welfare while also avoiding adverse impacts to important areas such as agricultural lands, residential areas, endangered species habitats, conservation lands, and other sensitive lands.

SECTION II
DEFINITIONS ADDED TO ARTICLE__II_____

The following definitions shall be added to Section 2.02 of the Township Zoning Ordinance, and shall be inserted into said Zoning Ordinance so that all definitions are in alphabetical order:

"Aircraft detection lighting system" means a sensor-based system designed to detect aircraft as they approach a wind energy facility and that automatically activates obstruction lights until they are no longer needed.

"Applicant" means the individual or organization applying for a Special Land Use permit.

"Construction" means any substantial action taken constituting the placement, erection, expansion, or repowering of an energy facility.

"Dark sky-friendly lighting technology" means a light fixture that is designed to minimize the amount of light that escapes upward into the sky.

"Independent power producer", or "IPP", means a person that is not an electric provider but owns or operates facilities to generate electric power for sale to electric providers, this state, or local units of government.

"Light intensity dimming solution technology" means obstruction lighting that provides a means of tailoring the intensity level of lights according to surrounding visibility.

"Light-mitigating technology system" means an aircraft detection lighting system, a light intensity dimming solution technology, or a comparable solution that reduces the impact of nighttime lighting while maintaining night conspicuity sufficient to assist aircraft in identifying and avoiding collision with the wind energy facilities.

"Maximum blade tip height" means the nominal hub height plus the nominal blade length of a wind turbine, as listed in the wind turbine specifications provided by the wind turbine manufacturer. If not listed in the wind turbine specifications, maximum blade tip height means the actual hub height plus the actual blade length.

"Nameplate capacity" means the designed full-load sustained generating output of an energy facility. Nameplate capacity shall be determined by reference to the sustained output of an energy facility even if components of the energy facility are located on different parcels, whether contiguous or noncontiguous.

"Nonparticipating property" means a property that is adjacent to an energy facility and that is not a participating property.

"Occupied building" means a dwelling, school, place of worship, day-care facility, public library, community center, or other similar building that the applicant knows or reasonably should know is used on a regular basis by a person or persons.

“Operator” shall mean the person or organization responsible for the management and operation of the project.

“Owner” shall mean the property owner or owners of the parcels on which any portion of the project is located.

"Participating property" means real property that either is owned by an applicant or that is the subject of an agreement that provides for the payment by an applicant to a landowner of monetary compensation related to an energy facility regardless of whether any part of that energy facility is constructed on the property.

"Person" means an individual, governmental entity authorized by this state, political subdivision of this state, business, proprietorship, firm, partnership, limited partnership, limited liability partnership, co-partnership, joint venture, syndicate, business trust, labor organization, company, corporation, association, subchapter S corporation, limited liability company, committee, receiver, estate, trust, or any other legal entity or combination or group of persons acting jointly as a unit.

"Wind energy facility" means a system that captures and converts wind into electricity, for the purpose of sale or for use in locations other than solely the wind energy facility property. Wind energy facility includes, but is not limited to, the following equipment and facilities to be

constructed by an electric provider or independent power producer: wind towers; wind turbines; access roads; distribution, collection, and feeder lines; wires and cables; conduit; footings; foundations; towers; poles; crossarms; guy lines and anchors; substations; interconnection or switching facilities; circuit breakers and transformers; overhead and underground control; communications and radio relay systems and telecommunications equipment; monitoring and recording equipment and facilities; erosion control facilities; utility lines and installations; generation tie lines; ancillary buildings; wind monitoring stations; and accessory equipment and structures.

SECTION III
ADD TO ARTICLE VII, A NEW SECTION: 7.01.16, TITLED "WIND ENERGY FACILITY REGULATIONS"

A new Section 7.01.16, entitled "Wind Energy Facility Regulations" is hereby added to the Township Zoning Ordinance to read as follows:

Section 7.01.16 Wind Energy Facility Regulations.

The following requirements shall apply to all Wind energy facilities:

1. Site Selection. In the Agricultural District, this land use shall not unreasonably diminish farmland, including, but not limited to, prime farmland and, to the extent that evidence of such farmland is available in the evidentiary record, farmland dedicated to the cultivation of specialty crops.

2. Wind Energy Facilities shall be allowed as a special land use in the following zoning districts:

    a. Conservation Resource
    b. Agricultural
    c. Commercial and Industrial

3. The following minimum setbacks shall be required for all Wind Energy Facilities. Setbacks are measured from the nearest facility structure to the nearest point on the associated item:

    a. Each commercial wind turbine generator shall be setback from any adjoining lot line and any adjoining public or private road right of-way or easement a distance equal to 1,500 feet. The setback shall be measured from the outermost point on the base of the wind turbine generator. The Planning Commission shall reduce this setback to the shortest distance, not less than 735 feet, where the proposed commercial wind turbine generator meets standards b, c, and d below.
    b. Each anemometer tower shall be setback from any adjoining lot line and any adjoining public or private road right-of-way or easement a distance equal to the height of the anemometer tower. The setback shall be measured from the outermost point on the base of the anemometer tower.
    c. Each private wind turbine generator shall be set back from any adjoining lot line and from a public or private road right-of-way or easement a minimum distance equal to one and one-half (1.5) times the height of the private wind turbine generator tower. The setback shall be measured from the outermost point on the base of the wind turbine generator.

d. For any newly proposed wind turbine generator (both commercial and private) a wind access buffer equal to a minimum of five (5) rotor diameters shall be observed from any existing off-site wind turbine generator tower.

4. Height. The height of all structures within the facility, except for the wind turbines themselves and electric distribution or transmission poles, shall not exceed a height of twenty (20) feet as measured from the natural grade of the property beneath the structure. The height of the wind turbines shall be limited by the setback distances required above, as well as prevailing aircraft safety regulations as may be recommended or required by the Federal Aviation Administration or National Transportation Safety Board.

   a. The maximum commercial wind turbine generator tower height or the height of an anemometer tower erected prior to a commercial wind turbine generator shall be 300 feet.
   b. The Planning Commission may approve an increased height for a commercial wind turbine generator tower or an anemometer tower, not to exceed 400 feet, if all of the following conditions are met:
      1. The need for the increased height is the result of a stand of trees, existing land forms, or structures that would substantially hinder the operation of the commercial wind turbine at the normal height limitation.
      2. The increased height is the minimum necessary to achieve a reasonable rate of return on the operation of the commercial wind turbine generator given the documented wind speeds and other site conditions. A reasonable rate of return is not equivalent to maximizing economic return to the operator. The Planning Commission shall not grant the increased height if economic return is not met due to the use of inefficient equipment that does not utilize current commercial technologies.
      3. The increased height will not result in increased intensity on lighting of the tower due to FAA requirements. c) 5) The maximum height of a private wind turbine generator tower or the height of an anemometer tower erected prior to a private wind turbine generator shall be 110 feet.

5. Fencing. All structures, including the wind turbines, shall be completely enclosed with fencing in compliance with the latest version of the National Electrical Safety Code or any applicable successor standard approved by the Michigan Public Service Commission. Fencing need not surround the entirety of participating properties, but only those structures or turbines which would present a risk to safety or security if accessible.

6. Sound. The system may not generate a maximum sound in excess of 50 db(A) average hourly as modeled at the property line of the nearest nonparticipating property. Decibel modeling shall use the A- weighted scale designed by the American National Standards Institute.

7. Maximum Vibrations. Any proposed wind turbine generator shall not produce vibrations beyond the property lines of the site in question of such intensity, duration, frequency or character which annoy, disturb, or cause or tend to cause adverse psychological or physiological effects on any reasonable person of normal sensitiveness. Provided, however, this standard shall not apply to an anemometer tower.

8. Blade Throw. The potential blade and ice throw from any wind turbine generator (both commercial and private) shall not cross the property lines of the site in question. Provided,

however, this standard shall not apply to an anemometer tower.

9. Rotational Controls. All wind turbine generators (both commercial and private) shall be equipped with controls to limit the rotational speed of the blades within design limits for the specific wind turbine generator. Provided, however, this standard shall not apply to an anemometer tower.

10. Transmission Lines. The on-site electrical transmission lines connecting the commercial wind turbine generator to a public utility electricity distribution system shall be located underground. Provided, however, this standard shall not apply to a private wind turbine generator or an anemometer tower.

11. Interference with Residential Reception. All wind turbine generators (both commercial and private) and any anemometer tower shall be constructed and operated so that it does not interfere with television, radio, or microwave reception in neighboring areas. If degradation of television, radio, or microwave reception occurs as the result of the wind turbine generator or anemometer tower, the developer shall pay to correct the television, radio, or microwave reception.

12. State or Federal Requirements. All wind turbine generators (both commercial and private) and any anemometer tower shall meet or exceed any standards and regulations of the FAA, the Michigan Public Service Commission, National Electric Safety Code, and any other agency of the state or federal government with the authority to regulate wind turbine generators or other tall structures in effect at the time the special use permit is approved.

13. Aesthetics and Lighting. All wind turbine generators (both commercial and private) and any anemometer tower shall meet the following requirements:

    a. The wind turbine generator or anemometer tower shall, subject to any applicable standards of the FAA, be painted a neutral color so as to reduce visual obtrusiveness. Excessively bright or neon colors are not acceptable. The Planning Commission, however, may approve an alternate color if the wind turbine generator or anemometer tower is located within an avian migratory route or if an alternate color would otherwise benefit the neighborhood.
    b. A commercial wind turbine generator shall be a monopole or monotube style construction (as distinguished from a lattice-style tower) and shall not utilize guy wires. A private turbine generator or anemometer tower may be a lattice-style tower and may utilize guy wires.
    c. The wind turbine generator or anemometer tower shall not be artificially lighted unless required by the FAA. Where the FAA requires lighting, the lighting shall be the lowest intensity allowable under FAA regulations, the fixtures shall be shielded and directed to the greatest extent possible to minimize glare and visibility from the ground, and no strobe lighting shall be permitted, unless expressly required by the FAA. Unless the FAA requires otherwise, the lighting shall be a nonpulsating or nonblinking red light.
    d. Each wind turbine generator or anemometer tower shall be sited on the property in a location that reduces to the maximum extent possible any adverse impacts on significant view corridors from adjacent properties, while at the same time maintaining contact with economically viable wind resources.

e. Each wind turbine generator (both commercial and private) or an anemometer tower shall have no advertising painted on or attached to the tower or any other structure of the wind turbine generator.
f. Each wind turbine generator tower shall be designed to aesthetically complement the color and design of any existing wind turbine generator tower within a one-mile radius. The Planning Commission may require design changes in order to lessen the visual clutter associated with the siting of multiple wind turbines with non-complementary, inconsistent design within sight of each other.

14. Lighting. The system must implement dark sky-friendly lighting solutions, and must also comply with all aircraft safety requirements as may be established by the Federal Aviation Administration.

15. Signage. The facility shall post signage at all major entrances to any structure that is part of the facility. The signage shall include basic information on the system type and technology, special hazards, fire suppression system and 24-hour emergency contact information, including reach-back phone number. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations. Additional signage may be permitted or required by the Planning Commission as is necessary to ensure the safe operation of the system.

16. Shadow Flicker. All wind turbine generators (both commercial and private) shall be designed and sited in such a manner to minimize shadow flicker expected to fall on a roadway and on any existing structures located off the property on which the wind turbine generator is constructed. Provided, however, this standard shall not apply to an anemometer tower.

17. Landscaping. The Planning Commission may require reasonable measures to minimize visual impacts by preserving existing natural vegetation, requiring new vegetative screening, or other appropriate measures. These visual screening requirements shall be determined on a site-specific basis. These screening requirements shall not pose an unreasonable burden on the Applicant, nor shall they require that the turbines themselves be screened from all possible viewing angles on non-participating properties.

18. Access Drives. If the system includes an access drive(s) for maintenance purposes, the surface of the access drive(s) shall be permeable (unless on brownfield land or on an already paved surface at the time of application for approval, such as a parking lot or former building foundation.)

19. Except as otherwise depicted on and subject to approval of the Planning Commission, the area within which the system is located shall not be paved with asphalt/concrete or any other surface material that is impermeable to water other than for slab foundations for structures and equipment. This shall not apply to a system located on brownfield land or on an existing paved area such as a former building slab or in an unused parking area when adequate parking remains for all other uses on the site.

20. All surface water runoff shall be effectively managed on-site.

21. Installation and Operational Safety. The system shall comply with all of the following

requirements:

a. The system shall be designed and constructed for interconnection to a Michigan Public Service Commission or Midcontinent Independent System Operator regulated utility electrical power grid and shall be operated with such interconnection.

b. The system and all foundation elements shall comply with all applicable building and electrical code requirements, and any applicable federal/state regulations. The manufacturer's engineer or another qualified engineer shall provide written certification that the design, installation (including foundations), and interconnection is compliant with the manufacturer and industry standards, all applicable local construction and electrical codes, and any applicable federal/state regulations.

c. Other than transmission or distribution lines for interconnection to the electric power grid, all electrical wiring shall be buried underground; except where the manufacturer's engineer or a qualified engineer employed by the utility that owns/operates the electrical power grid to which the system shall be interconnected certifies an underground wiring installation is not permitted by an applicable code and/or applicable federal/state regulation, with attached complete documentation supporting any such certification.

d. The system shall be designed, located, and maintained so as to comply with all applicable codes and regulations.

22. Repair and Augmentation. In addition to repairing or replacing facility components to maintain the system, the facility may at any time be augmented without the need to submit a new site plan so long as the augmentation is within the same footprint (e.g., same dedicated use building or on footings/foundations in the same location) as the original permit. When a facility is anticipated to be augmented over its lifetime by adding additional components, the applicant should apply for the final/augmented site arrangement. A proposal to increase the size the project footprint may be considered a new application, subject to the ordinance standards at the time of the request. A repair or augmentation which increases the height of any wind turbine or the length of any wind turbine arms shall require a new site plan.

23. Decommissioning and Removal. The system shall comply with all of the following requirements:

a. A decommissioning plan, including a Decommissioning Plan and Decommissioning Agreement in a form recordable at the _Kalkaska_ County Register of Deeds, shall be provided and shall address the following:

1. State the anticipated life of the project;

2. Describe estimated decommissioning costs in current dollars and provide that this figure will be updated every fifth (5th) year after commercial operation of the system;

3. Be signed by the party responsible for decommissioning and shall bind all successors, heirs and assigns;

4. Define the conditions upon which decommissioning will be initiated (e.g.; end of land lease, no power storage for 12 months, etc.);

5. State that all equipment, conduit, structures, fencing, roads, and foundations will be removed to a depth of four feet by the end of the decommissioning period;

6. Require property to be restored as near as reasonably possible to the condition it was in prior to the development of the system;

7. Describe the timeframe for completion of decommissioning activities;

8. Describe any agreement (e.g., lease) with the landowner regarding decommissioning;

9. State the party currently responsible for decommissioning; and

10. Describe any plans or circumstances requiring an update of the decommissioning plan.

b. A recorded copy of the Decommissioning Agreement shall be submitted to the Township.

c. Decommissioning shall be completed within 12 months of determination by the Township Board that the system is no longer being maintained in an operable state of good repair, unless the current responsible party provides substantial evidence to the Planning Commission of the intent to maintain and reinstate operation of the system.

d. The Decommissioning Plan shall include financial assurance in the form of a bond, or an irrevocable letter of credit, but excluding cash. The amount of the financial assurance shall not be less than the estimated cost of decommissioning the system. Salvage value shall not be included in the estimated cost of decommissioning. The financial assurance must be posted in at one-hundred-and-twenty-five percent (125%) total decommissioning value by the start of full commercial operation and continuously maintained for the period of the life of the system.

Special Land Use Permit and Site Plan Application Requirements

24. Applications for special land use permit approval shall comply with Section 6.02 of this Ordinance. A formal application for site plan approval for this land use shall comply with Section 5 of this Ordinance. An incomplete application will not be accepted. Each such application shall also be subject to the following additional submission requirements:

    a. The site plan shall be submitted with the special land use permit application.

    b. The submission shall include content responsive to all the following, to the extent not otherwise provided pursuant to the above referenced sections:

    c. All information and supporting materials relied upon by the applicant to demonstrate compliance with all special land use permit approval standards and site plan approval standards as specified in this Ordinance.

    d. Preliminary Fire Response Plan as required by the Clean and Renewable Energy and Energy Waste Reduction Act, as amended, MCL 460.1001 *et seq*.

e. A Preliminary Emergency Operations Plan for the proposed system when operational, including the means by which firefighters and other emergency services personnel can access and shut down the system on an emergency basis. The approved emergency plan shall include a 24-hour emergency contact telephone number for use by emergency services providers. The means of emergency access and the means of an emergency shutdown of the system by emergency services personnel shall be provided to the Township or other appropriate agency managing emergency response.

f. A Groundcover and Vegetation Establishment and Management Plan shall be provided as part of the site plan. Vegetation establishment must include native species and natural seed mixes and may not include invasive plant species or noxious weeds and shall satisfy Section 226(6)(a) and Section 226(6)(b) of Michigan Public Act 233 of 2023.

g. Equipment specification sheet(s) for the system components, if available.

h. All proposed changes to the landscape of the existing site, including grading, vegetation removal, fencing and vegetative screening. Views shall be minimized from adjacent properties to the extent reasonably practicable using architectural features, earth berms, landscaping or other screening methods that will harmonize with the character of the property and surrounding area while not interfering with ventilation or exhaust ports.

i. Drawings showing the layout of the proposed facility, including distances from all existing and proposed structures/buildings and fencing on the site to all lot lines including to all boundaries of a leased site, where applicable, and to all structures/buildings on adjacent nonparticipating properties.

j. Preliminary Augmentation Plan demonstrating the proposed augmentation phases including which structures/components are expected to be installed and in which time frames shall be provided.

k. The height of all existing and proposed buildings/structures, including the height of all wind turbines and their blades at maximum blade tip height.

l. A preliminary electrical schematic plan for the proposed system, including disconnect and overcurrent devices.

m. Anticipated life expectancy of the system components including the estimated schedule for replacement to maintain the system throughout its lifetime.

n. Preliminary Decommissioning Plan and Decommissioning Agreement as described above.

o. Modifications that increase a facility's footprint or total energy capacity by 20% or more require site plan and special land use approval by the Planning Commission.

p. Building Permit. Prior to issuance of a Building Permit, the following information shall be provided.

    1. Equipment specification sheets.

    2. Identification and contact information for the installer(s) of the proposed system.

3. Augmentation Plan.

4. Approved Decommissioning Plan and executed Decommissioning Agreement, with proof of the required financial guarantee.

5. Life expectancy of the system components including the anticipated schedule for battery replacement to maintain megawatts over the system's lifetime.

6. Hazard Mitigation Analysis.

7. Operation and Maintenance Manual.

8. Identification and contact information for the installer of the system.

9. Electrical schematic plan for the system, including disconnect devices.

10. Final Emergency Operation Plan Approved by the Fire Chief.

11. A Community Host Agreement providing to the Township not less than $2,500 per MW of nameplate capacity in the project.

SECTION VI
SEVERABILITY

The provisions of this ordinance are hereby declared to be severable and if any clause, sentence, word, section or provision is hereafter declared void or unenforceable for any reason by a court of competent jurisdiction, it shall not affect the remainder of such ordinance which shall continue in full force and effect.

SECTION VII
REPEALER AND EFFECTIVE DATE

Pursuant to Section 401 of the Michigan Zoning Enabling Act (MCL 125.3401), this Ordinance shall take effect eight (8) days after publication of this Ordinance, or a summary of the regulatory effect thereof, which publication shall occur in a newspaper of general circulation in the Township within fifteen (15) days after adoption.

This Ordinance is hereby declared to have been passed and adopted by Blue Lake Township, County of Kalkaska, State of Michigan, at a regularly scheduled meeting thereof duly called and held on this _____ day of _____, 2025.