

ORDINANCE NO. 3810

AN ORDINANCE AMENDING CHAPTER 15 OF THE CITY'S  
CODIFIED ORDINANCES FOR THE PURPOSE OF ADDING  
ARTICLE 7 REGULATING ALTERNATIVE POWER SOURCES.

WHEREAS, City staff have been directed to create an Ordinance for Alternative Power Sources within the City of Osawatomie, Kansas; and

WHEREAS, it is deemed necessary to amend the Osawatomie City Code to address the addition of Article 7, Regulating Alternative Power Sources within the city; and

WHEREAS, The Governing Body finds that amending the City Ordinance the city can safeguard its interests in protecting the life, safety, general welfare and health of persons occupying dwellings and in preserving the value of land and buildings throughout the city;

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF OSAWATOMIE KANSAS, as follows:

**Section 1.** The City adopts the following provisions relating to Alternative Power Sources:

**15-701. Solar collectors**

**15-702. Purpose.**

To permit solar collectors in all zoning districts provided the following performance standards are met

**15-703. Standards.**

All solar collectors shall meet or exceed the current standards expressed in the adopted building codes.

**1. A building permit and a structural analysis are required prior to the installation of any solar collector system.**

**2. Installation on a pitched roof:**

(a) Roof-mounted solar collectors located on front or side building pitched roofs shall not extend above the peak of the roof plane on which they are mounted, and no portion of any such solar collector shall extend more than 24 inches perpendicular to the point on the roof where it is mounted.

(b) Roof-mounted solar collectors located on the rear side of building roofs shall not extend above the peak of the roof plane on which they are mounted, and no portion of any such solar collector shall extend more than four (4) feet perpendicular to the point on the roof where it is mounted.

### **3. Installation on a flat roof:**

(a) Roof-mounted solar collectors may be mounted on a flat roof at an optimum angle to the sun for maximum energy production when the building parapet or roof design provides full screening of the solar panels from public streets.

(b) For installation of roof-mounted solar collectors on flat-roof buildings without parapets, panels shall be placed in the most obscure location without reducing the operating efficiency of the collectors, such as the center of the roof. The panels shall be installed at the same angle or as close as possible to the pitch of the roof. Associated equipment may be permitted on the roof, provided it is screened from view of the public street. Solar collector panels are exempt from the screening provision of this subsection.

### **4. Installation on the side of a building:**

(a) In any planned zoning district or in any district requiring site plan approval, the construction or installation of any solar collection system on the side of a building shall be subject to either Final Development Plan approval or Site Plan approval by the City.

(b) Wall-mounted solar collector panels shall not extend more than five (5) feet to the furthest extension of the solar collection panels from the wall plane on which they are installed.

(c) Wall-mounted solar collector panels shall not extend more than 25 percent into any required side setback or 50 percent into any required rear setback. No part of the system shall extend into any required front setback.

(d) Wall-mounted solar collectors shall not extend above the top of the wall on which they are mounted.

### **5. Ground-mounted installation:**

(a) Ground-mounted solar collectors shall not exceed eight (8) feet in total height and shall meet all required setbacks.

(b) All lines serving a ground-mounted solar collector shall be located underground.

### **6. Parking lot light pole installation:**

(a) The mounting height for parking lot light fixtures shall not exceed 33 feet as measured to the top of the fixture from grade.

(b) Twenty (20) percent of the height of the light pole may be added above the light fixture for the purpose of installing a solar collector panel.

(c) The overall height of the parking lot light pole and solar collector shall not exceed 40 feet. Any necessary solar collector appurtenances shall be painted to match the light pole and fixture.

## **15-704. WIND ENERGY CONVERSION SYSTEMS (WECS)**

### **15-705. Purpose.**

The City of Osawatomie regulates Wind Energy Conversion Systems (WECS) for the purpose of accommodating the development of wind power resources in the City while providing standards to protect the public health, safety and general welfare.

### **15-706. Definitions.**

For the purpose of this section, and in addition to words defined in other sections of these regulations, certain terms or words used in this subsection of these regulations shall be interpreted or defined as follows, unless the context clearly indicates otherwise:

Facility Owner: the entity or entities having equity interest in the Wind Energy Conversion System, including their respective successors and assigns.

Hub Height: The distance from the base of the tower to the center of the hub to which rotors are connected.

Meteorological Tower: Temporary towers erected by WECS owner-applicants to measure wind speed and directions, as well as other data relevant to siting WECS. Meteorological towers do not include towers and equipment used by airports or similar structures to monitor weather conditions.

Operator: The entity responsible for the day-to-day operation and maintenance of the Wind Energy Facility.

Property line: The boundary line of the area over which the entity applying for a WECS permit has legal control for the purposes of installation of a WECS. This control may be attained through fee title ownership, easement, or other appropriate contractual relationship between the facility owner/developer and landowner.

Rotor diameter: The diameter of the circle described by the moving rotor blades.

Substations: Any electrical facility designed to convert electricity produced by wind turbines to a voltage greater than 35,000 V (35 KV) for interconnection with high voltage transmission lines.

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

Turbine Height: The distance measured from the surface of the tower foundation to the highest point of the turbine rotor plane.

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

Tower height: The total height of the WECS exclusive of the rotor blades.

Transmission Line: Those electrical power lines that carry voltages of at least 69,000 volts (69 KV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers. In a commercial WECS, a transmission line will carry electricity from the WECS substation to the point of interconnect (POI).

Wind Energy Conversion System (WECS): An electrical generating facility comprised of one or more wind turbines and accessory facilities, including but not limited to: power lines, transformers, substations, and metrological towers, which operate by converting the kinetic energy of wind into electrical energy. The energy may be used on-site or distributed into the electrical grid. Categories of WECS are distinguished for regulatory purposes as follows:

1. Micro-WECS: A WECS of up to 10.0 kW nameplate generating capacity or less and utilizing supporting towers of 60 feet or less.
2. Commercial-WECS: A WECS of more than 10.0 kW and less than 100 kW in total nameplate generating Capacity.
3. Large-capacity Commercial-WECS: A WECS greater than 100 kW in total nameplate generating capacity.
4. Alternative-WECS: A WECS other than a standard turbine-mounted propeller-type blade system, such as a vertical axis or a horizontal axis wind conversion system, a helix wind turbine, or similar alternative design.

Wind Energy Facility: a WECS.

Wind Turbine (or Turbine): Any piece of electrical generating equipment that converts the kinetic energy of wind into electrical energy through the use of airfoils or similar devices to capture the wind, and includes the nacelle, rotor, tower, and pad transformer, if any.

#### **15-707. Applicability. CIRCUMSTANCES REQUIRING APPLICATION OF THE WECS REGULATIONS.**

(1) No WECS shall be considered for a building permit without first being granted approval by the City for a Special Use Permit (UPUR) as provided in this Section; except that, the regulations in this Section shall not apply to:

- a. Large-capacity Commercial-WECS, which shall be prohibited within the City corporate limits; and
- b. A subdivision or re-subdivision of land, or a lot split for a micro-WECS that meets all other requirements of these regulations, which may be approved administratively.

(2) Any physical modification to a permitted WECS that materially alters the size, type and number of Wind Turbines or other equipment shall require approval under the same Zoning procedures as an original application. Like-kind replacements shall not require a permit modification.

(3) The Planning Commission or Governing Body, when considering a UPUR for a WECS, shall have the ability to grant a deviation from these standards subject to review and approval of detailed information submitted by the applicant illustrating the need and justification for the deviation.

### **15-708. General Provisions.**

The following general provisions apply.

(1) **Damage to Public Property.** Applicants shall be held liable for any damage to public roads or rights-of-way resulting from tower construction, deconstruction, and/or maintenance activity.

(2) **Tower Design.** No lattice structures shall be permitted. All tower structures shall be of self-supporting, monopole construction; except that, a wind turbine designed to be attached to a structurally reinforced roof shall not require a self-supporting monopole design where such support is not warranted, provided that the roof-mounted turbine height is no greater than one half the height of a standard two-story building.

(3) The UPUR for a WECS is to run with the land, not with the UPUR applicant; provided, however, if the land or WECS ownership is transferred to another party, then the UPUR is to be transferred from the approved party to the new land owner or WECS owner; provided further, that said transfer is approved by the City.

(4) If a surety bond has been required as a condition of Commercial-WECS approval, first party shall inform the second party of the surety bond and all other requirements of the UPUR. The second party, or new holder of the UPUR shall meet the surety bond requirements and all other requirements of the UPUR, subject to "Abandonment and Removal" provisions of these regulations. A transfer fee per turbine, as established by the City in a fee ordinance, shall be paid to the City as a condition of City transfer of the UPUR to the new holder.

### **15-709 Standards and Regulations.**

All WECS shall meet or exceed the following standards:

(1) **Federal and State Regulations.** All WECS shall meet or exceed State and Federal standards and regulations.

(2) **Electrical Codes and Standards.** All WECS and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards. All electrical wires associated with a WECS shall be located underground except for those wires necessary to connect the wind generator to the tower wiring, the tower wiring to the disconnect junction box, and the grounding wires. Wherever possible collection cables will be placed underground. When necessary, collection cables may be placed above ground.

(3) Collection Lines. All communications and collection lines, equal to or less than 34.5kV in capacity, installed as part of a WECS shall be buried wherever possible.

(4) Clearance. The minimum distance between the ground and any part of the rotor blade system of a Commercial-WECS shall be 30 feet. The blade tip clearance for Micro-WECS shall, at its lowest point, have a ground clearance of not less than 25 feet.

(5) Self-Support Structures. All tower structures shall be of monopole construction unless attached to a structurally reinforced roof where such support is not warranted. Meteorological towers may be guyed. For all guyed towers, visible and reflective objects, such as plastic sleeves, reflectors, or tape, shall be placed on the guy wire anchor points and along the outer and innermost guy wires up to a height of 8 feet above the ground. Visible fencing shall be installed around anchor points of guy wires.

(6) Tower Access. All access doors to the tower and electrical equipment shall be lockable. If access doors are not lockable the supporting tower shall be enclosed with a six-foot-tall fence with a locking portal placed around the tower's base or the tower climbing apparatus shall be limited to no lower than 12 feet above ground level.

(7) Signage. Appropriate warning signage shall be placed on wind turbine towers, electrical equipment and WECS facility entrances. Signs and/or logos shall be limited to the manufacturer's, installer's, or owner's identification and appropriate warning signs. Commercial advertising is prohibited.

(8) Building code compliance. All wind turbines shall meet or exceed the current standards expressed in the adopted building codes. A building permit is required prior to the installation of any wind turbine.

(9) Utility connections. Reasonable efforts shall be made to locate utility connections from the wind turbine(s) underground, depending on appropriate soil conditions, shape, and

topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider. For electrical transformers with a 40 footprint greater than two (2) square feet in area, landscaping shall be provided where necessary to substantially screen the structure from public view and/or the view of adjacent homeowners. Maintenance of all landscaping shall be the responsibility of the property owner.

(10) Electrical wires. All electrical wires associated with a wind turbine shall be located underground except for those wires necessary to connect the wind generator to the tower wiring, the tower wiring to the disconnect junction box, and the grounding wires.

(11) Safety Shutdown. No wind turbine shall be permitted that lacks an automatic braking, furling, or feathering system to prevent uncontrolled rotation, over-speeding and excessive pressure on the tower structure, rotor blades, and turbine components. Owner shall maintain the ability to shut down turbines in an emergency.

(12) Lighting. Wind turbines shall not be artificially lighted except as required by the FAA and as necessary for safety and security purposes. Except as required by the FAA any lighting shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

(13) Color/Finish. Wind turbines, exclusive of the towers, shall be painted a non- reflective, non-obtrusive color such as the manufacturer’s default color option or a color that conforms to the environment and architecture of the community.

(14) Alternative-WECS. For regulatory purposes the standard turbine-mounted, propeller-type blade WECS shall be the basis for these regulations. Alternative-WECS shall be evaluated by the standards that are applicable to standard turbine-mounted, propeller-type blade WECS that are found to be in the same category of WECS; and by the manufacturers’ published installation standards as to noise, setback and related matters for the health, safety and welfare of the public.

**15-710. Size and Lot or Parcel Restrictions.**

The wind turbines constructed under these regulations shall meet the following size and setback restrictions:

WECS Type	Minimum Lot or Parcel Size	Maximum Turbine Height	Minimum Setback *	Enhanced Requirements
Micro-WECS	1-acre	60 feet	110% of the Turbine Height	None
Commercial-WECS	2-acres	150 feet	110% of the Turbine Height	Sect. 16-1130
Large-capacity	Prohibited			

*Measured from the closest adjacent lot line or parcel line or above ground public utility.*

**15-711. APPLICATIONS FOR COMMERCIAL-WECS.**

The following items shall be submitted in support of an application for a Commercial-WECS; except that, the City may require additional technical studies deemed necessary to fully evaluate the application, such as a noise study or geotechnical report:

- (1) Name of the project applicant(s), facility owner(s) and operator(s).
- (2) Legal description and address of the project.
- (3) Documentation of land ownership or legal control of the property.
- (4) Description of the project including: model, size, number, type, name plate generating capacity, rated power output, tower height, rotor material, rotor diameter, performance, safety, and noise characteristics of each wind turbine being proposed; also, tower and electrical transmission equipment, and total height of all wind turbines and means of interconnecting with the electrical grid.

(5) A site development plan utilizing a standard engineering scale not to exceed 1:100, indicating the placement of the wind turbine(s) and distances from the proposed turbine location to existing buildings including purpose (e.g. residence, garages, barns, etc.), any above-ground utilities, the nearest tree(s), and all property lines; and including the location of property lines, wind turbines, electrical wires, interconnection points with the electrical grid, and all related accessory structures.

(6) Meteorological tower information, if applicable, including location, height, and appearance.

(7) Digital pictorial representations of “before and after” views (photo simulation or similar graphic display) from key viewpoints as may be required by the city.

(8) Certification by the manufacturer’s engineer or another qualified engineer that the turbine, foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.

(9) Proof of compliance with Airport Hazard Regulations in accordance with Federal Aviation Administration (FAA) and Kansas Department of Transportation (KDOT) Aviation Section standards under FAR Part 77, “Objects Affecting Navigable Airspace.”

(10) A noise compliance summary statement to demonstrate that the wind turbine will not exceed noise standards of these regulations, except for during short-term events such as utility outages and severe windstorms. The noise summary shall include:

a. A description and map of the project’s noise producing features, including the range of noise levels expected, and the basis for such expectations.

b. A description and map of the noise sensitive environment, including any sensitive

noise receptors (e.g., residences, resident care facilities, libraries, schools, and other facilities where quiet is important or where noise could be a nuisance) within one thousand (1,000) feet.

## **15-712.**

### **APPLICATIONS FOR MICRO-WECS.**

The following items shall be submitted in support of an application for a Micro-WECS:

(1) Name of the project applicant(s), facility owner(s) and operator(s).

(2) Legal description and address of the project.

(3) A plot plan utilizing a standard engineering scale not to exceed 1:100, indicating the placement of the wind turbine(s) and distances from the proposed turbine location to existing buildings including purpose (e.g., residence, garages, barns, etc.), any above-ground utilities, the nearest tree(s), and all property lines.



(4) Turbine information: specific information on the type, model, size, height, rotor material, rated power output, performance, safety, and noise characteristics of each wind turbine being proposed, tower and electrical transmission equipment.

(5) A noise compliance summary statement to demonstrate that the wind turbine will not exceed noise standards of these regulations, except for during short-term events such as utility outages and severe windstorms.

(6) Drawings of the electrical components in sufficient detail to allow for a determination that the manner of electrical wiring is in compliance with the manufacturer's specifications

(7) Any other data that the city may require of the applicant for the proposed wind turbine

structure, including the tower, base, and footings in sufficient detail to allow for a determination that the proposed Micro-WECS shall meet all the aforementioned standards. The city may require an engineering analysis of the tower showing compliance with the manufacturer's specifications.

#### **15-713. USE LIMITATIONS.**

All WECS shall comply with the following use limitations:

(1) Noise. The noise emitted from any wind turbine shall not exceed 50 dBA within 100 feet of the nearest property line, except during short-term events such as utility outages and severe windstorms.

(2) Materials, signs and markings. Structures for wind turbines shall be self-supporting tubular towers painted a neutral color such as a white or pale gray. No lattice structure shall be used. No logos or advertisements are allowed on these structures. Each turbine shall be marked with a visible identification number located no higher than fifteen (15) feet above ground level.

(3) Electromagnetic interference. No individual tower facility shall be installed in any location where its proximity with fixed broadcast, retransmission or reception antenna for radio, television or wireless phone or other personal communications systems would produce electromagnetic interference with signal transmission or reception. In the event the WECS and its associated facilities or its operations cause such interference, the facility owner(s) and/or operator(s) shall take timely measures necessary to correct the problem.

(4) Separation requirements. If two or more ground-mounted wind turbines are located on one lot, they shall be separated by a distance 110 percent of the total height of the tallest wind turbine on the lot.

#### **15-714. REMOVAL AFTER DISUSE OF A COMMERCIAL-WECS.**

Upon disuse by the facility owner(s) and operator(s) of a Commercial-WECS for a continuous period of fifteen (15) months, the turbine shall be considered abandoned, and the owner(s) of such wind turbine shall remove the WECS within ninety (90) days of receipt of notice from the

City notifying the owner of such abandonment. The following additional conditions and procedures shall apply:

(1) The Facility Owner and Operator shall, at their expense, complete decommissioning of the turbine.

(2) Decommissioning shall include removal of turbines and any associated buildings, cabling, electrical components, roads, and all other associated facilities. Foundations of turbines shall be removed to a depth of four (4) feet below the ground surface. Any access roads shall be removed to the landowner's satisfaction, and the ground shall be reseeded in grasses; except that, requirements to remove access roads shall not apply to roads in existence before the WECS application was filed. The landowner may choose to have access roads left intact with the approval of the City.

(3) If such turbine and associated facilities are not removed within said ninety (90) days, the City may remove them at the owner's expense.

**Section 2. EFFECTIVE DATE.** This ordinance shall take effect and be in force from and after July 15, 2022 after one publication in the official City newspaper.

**Section 3. Scrivener's Errors.** The City Clerk is authorized to correct any scrivener's errors that may be identified in this document.

**PASSED AND APPROVED** by the Governing Body of the City of Osawatomie, Kansas, a majority being in favor thereof, this 23rd day of June, 2022.

**APPROVED AND SIGNED** by the Mayor.

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Nick Hampson  
Mayor

(SEAL)

ATTEST:

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Tammy Seamands  
City Clerk