

Small Wind Energy Systems

- [153.20](#) Purpose
- [153.21](#) Authority
- [153.22](#) Definitions
- [153.23](#) Small wind energy systems permitted
- [153.24](#) Application for building permit
- [153.25](#) Small wind energy systems by special use
- [153.26](#) Application for special use
- [153.27](#) Evaluation of special use
- [153.28](#) Enforcement

SMALL WIND ENERGY SYSTEMS

§ 153.20 PURPOSE.

The requirements of this chapter are established for the purpose of allowing the county residents and businesses to use small wind energy systems to harness wind energy for individual properties in order to reduce on-site energy consumption while protecting the public health, safety, and general welfare of the county. The requirements of this subchapter shall apply to small wind energy systems when they are allowed as a permitted use or by special use under the County Zoning Code.

(Prior Code, 7 TCC 4-1)

§ 153.21 AUTHORITY.

Pursuant to 55 ILCS 5/5-12001 et seq., the county has the authority to regulate and restrict the location and use of structures.

(Prior Code, 7 TCC 4-2)

§ 153.22 DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

BUILDING DENSITY. The number of buildings in a given area.

FAA. The Federal Aviation Administration of the United States Department of Transportation.

GUY CABLE. Any cable or wire that extends from a small wind energy system for the purpose of supporting the system structure.

PRIMARY STRUCTURE. The structure that one or more persons occupy the majority of time on a property for either business or personal reasons. **PRIMARY STRUCTURE** includes structures such as, but not limited to, residences, commercial buildings, industrial buildings, and schools.

SMALL WIND ENERGY SYSTEM. A wind energy conversion system consisting of a single wind turbine, single tower, and associated control or conversion electronics that generates power for an individual property for the purpose of reducing on-site energy consumption.

SYSTEM. A small wind energy system.

SYSTEM HEIGHT. The height above grade of the highest point of the arc of the blades.

TOWER. The upright portion of a small wind energy system to which the primary generator devices are attached.

(Prior Code, 7 TCC 4-3)

§ 153.23 SMALL WIND ENERGY SYSTEMS PERMITTED.

A small wind energy system shall be permitted by building permit if all of the following conditions are met:

- (A) The system height is no greater than 100 feet;
- (B) The parcel on which the system is to be located shall be no smaller than one acre and shall only be permitted as an accessory use to a primary structure, and in no case shall a small wind energy system be permitted on a vacant parcel;
- (C) Small wind energy systems shall be permitted in all zoning districts except the R-1 and R-2 Zoning Districts; and
- (D) There shall be no more than one small wind energy system located on a parcel.

(Prior Code, 7 TCC 4-4)

§ 153.24 APPLICATION FOR BUILDING PERMIT.

When a small wind energy system is allowed as a permitted use, a site plan shall be submitted to the Community Development Administrator demonstrating compliance with the following restrictions.

- (A) *Purpose.* The only allowable purpose of a small wind energy system is to reduce on-site energy consumption.
- (B) *Setbacks.* All parts of the structure of a small wind energy system, including the tower, base, footings, and turbine, but excluding guy cables and their anchors, shall be set back a distance equal to 110% of the system height from all adjacent property lines and a distance equal to 150% of the system height from any inhabited structure, road right-of-way, railroad right-of-way, and right-of-way for overhead electrical transmission or distribution lines. Guy cables and their anchors shall meet the setback requirements under the County Zoning Code for accessory structures in the zoning district in which the system is proposed to be located.
- (C) *Noise.* The small wind energy system shall not exceed a noise level of 60 decibels as measured at the closest property line. The noise level may be exceeded during short-term events such as utility outages and/or severe wind storms.
- (D) *Building Code compliance.* Building permit applications shall be accompanied by standard drawings of the system structure, including the tower, base, footings, and guy cables. An engineering analysis of the tower showing compliance with the Uniform Statewide Building Code and certified by a licensed professional engineer also shall be submitted. This analysis may be supplied by the manufacturer.
- (E) *Electric Code compliance.* Building permit applications for small wind energy systems shall be accompanied by a line drawing of the electrical components of the system showing compliance with the National Electric Code and certified by a licensed professional engineer. This information may be supplied by the manufacturer.
- (F) *Notifications regarding aircraft.* Small wind energy systems shall comply with all applicable regulations of the FAA, including any necessary approvals for installations close to airports. The applicant has the responsibility of determining the applicable FAA regulations and securing the necessary approvals. If the system is proposed to be sited in an agricultural area that may have aircraft operating at low altitudes, the applicant shall notify all aircraft pilots that conduct activities pertaining to agriculture registered to operate in the county no later than five business days prior to submitting a building permit application. Copies of letters must be included in the building permit application.
- (G) *Local utility company notification.* If a small wind energy system is to be connected to the electricity grid, the applicant shall notify the electric utility service provider that serves the proposed site of his or her intent to install an interconnected customer-owned electricity generator no later than five business days prior to submitting a building permit application. Copies of letters must be included in the building permit application.
- (H) *Minimum distances.* The distance between any protruding blades utilized on a small wind energy system and the ground shall be a minimum of 15 feet as measured at the lowest point of the arc of the blades. The distance between the lowest point of the arc of the blades and the peak of any structure within 150 feet of the blade arc shall be a minimum of ten feet.
- (I) *Radio and television signals.* The small wind energy system shall not cause any radio, television, microwave, or navigation interference. If a signal disturbance problem is identified, the applicant shall correct the problem within 90 days of being notified of the problem.

- (J) *Appearance.* The small wind energy system shall maintain a galvanized neutral finish or be painted to conform the system color to the surrounding environment to minimize adverse visual effects. No small wind energy system shall have any signage, writing, pictures, or decorations placed on it at any time other than warning equipment and ownership information. No small wind energy system shall have any flags, streamers, banners, and other decorative items that extend from any part of the system placed on it at any time.
- (K) *Repair.* A small wind energy system that is not functional shall be repaired by the owner or removed. In the event that the county becomes aware of any system that is not operated for a continuous period of three months, the county will notify the landowner by registered mail and provide 45 days for a written response. The written response shall include reasons for the operational difficulty, the corrective actions to be performed, and a reasonable timetable for completing the corrective actions. If the county deems the corrective actions and/or the timetable for completing corrective actions as unfeasible and/or unreasonable, the county shall notify the landowner and such landowner shall remove the turbine within 120 days of receiving said notice.
- (L) *Removal upon end of useful life.* When a system reaches the end of its useful life and can no longer function, the owner of the system shall remove the system within 120 days of the day on which the system last functioned. The owner is solely responsible for removal of the system and all costs, financial or otherwise, of system removal.
- (M) *Fencing.* The tower shall be enclosed with a fence of at least eight feet in height or the base of the tower shall not be climbable for a distance of 12 feet measured from the ground.
- (N) *Height.* The applicant shall provide evidence that the proposed height does not exceed the height recommended by the manufacturer or distributor of the system.
- (O) *Required safety features.* The small wind energy system shall have an automatic overspeed control to render the system inoperable when winds are blowing in excess of the speeds for which the system is designed and a manually operable method to render the system inoperable in the event of a structural or mechanical failure of any part of the system.

(Prior Code, 7 TCC 4-5)

§ 153.25 SMALL WIND ENERGY SYSTEMS BY SPECIAL USE.

A special use shall be required for a small wind energy system if one or more of the following conditions apply:

- (A) The system height is greater than 100 feet;
- (B) The parcel on which the system is to be located is smaller than one acre; and/or
- (C) Failure to meet the criteria as set forth under § [153.24](#).

(Prior Code, 7 TCC 4-6)

§ 153.26 APPLICATION FOR SPECIAL USE.

When a special use is required for a small wind energy system, a site plan shall be submitted to the Community Development Administrator demonstrating compliance with the restrictions listed in § [153.24](#). An application shall also be submitted to the Community Development Administrator which meets the requirements of the application procedures found in §§ [157.435](#) through [157.447](#).

(Prior Code, 7 TCC 4-7)

§ 153.27 EVALUATION OF SPECIAL USE.

Following the procedures as established in §§ [157.435](#) through [157.447](#), the Zoning Board of Appeals, in evaluating a special use for a small wind energy system, shall consider the following matters:

- (A) The height of the system relative to the size of the parcel on which the system is proposed to be located;
- (B) The need for the proposed height of the system in order to allow the system to operate effectively;

- (C) The visual impacts of the system on adjacent properties and the general area in which the system is proposed to be located;
- (D) The building density of the general area in which the system is proposed to be located;
- (E) Whether a substantial adverse effect on public safety will result from the height of the system or some other aspect of the system's design or proposed construction, but only if that aspect of design or construction is modifiable by the applicant;
- (F) The existing uses on adjacent and nearby properties; and
- (G) Whether the design of the proposed system reflects compliance with § [153.24](#).

(Prior Code, 7 TCC 4-8)

§ 153.28 ENFORCEMENT.

The erection or operation of any small wind energy system in violation of the subchapter shall subject the owner and/or the operator of the system to civil penalty. The civil remedies available to the court shall include the removal of the system. If such removal is ordered, all expenses shall be paid by the owner and/or operator of the system.

(Prior Code, 7 TCC 4-9)