

## CHAPTER 147

# WIND ENERGY SYSTEMS

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**147.01 PURPOSE.** The purpose of this chapter is to accommodate a wind energy system, in appropriate locations, while minimizing any adverse visual, safety, and environmental impacts of the system. In addition, this chapter provides a permit process for wind energy systems to ensure compliance with the provisions of the requirements and standards established herein.

**147.02 DEFINITIONS.** For use in this chapter the following terms are defined:

1. “Rooftop wind energy system” means small wind energy systems designed to be mounted on the rooftops of residential or commercial buildings.
2. “Total system height” means the vertical distance from ground level to the highest point of the system, including any blades.
3. “Tower wind energy system” means any free-standing electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy and associated structures and equipment.

**147.03 PERMIT REQUIREMENTS.** No tower wind energy system shall be erected, constructed, installed, or modified without first obtaining an approved special exception use permit from the Board of Adjustment. The owner/operator of the wind energy system shall obtain all other permits required by federal, state, and local agencies prior to construction of the system.

**147.04 SPECIAL EXCEPTION PERMIT.** The special exception permit will be submitted to the Board of Adjustment in accordance with Section 165.37 of this Code of Ordinances. It shall include the following information.

1. Complete property dimensions.
2. Location and full dimensions of all buildings existing on the property.
3. Location and distances of all buildings within 200 feet of the property.
4. Dimensions of any natural or manmade features on or within 200 feet of the property.
5. Location of all easements upon the property.
6. Proposed location of the wind energy system, including height and setbacks from property and overhead utility lines.
7. Drawings, to scale, of the wind energy system, including base, footings, guy wires and electrical components.

**147.05 DESIGN STANDARDS.**

1. Tower Wind Energy Systems. All tower wind energy systems shall comply with the following design standards.

A. A setback of 110% of the total system height from any property line or overhead utility lines is required. Guy wires shall not extend into the setbacks.

B. All wind energy systems shall have a maximum height of eighty (80) feet.

C. Ground clearance for the rotor blades shall not extend within fifteen (15) feet of the ground.

D. The base of the system shall not be climbable up to fifteen (15) feet from the ground.

E. The sound of the system shall not exceed fifty (50) decibels measured at the property line.

F. The system shall not cause vibration for neighboring properties.

G. No system shall interfere with television, microwave, navigational, radio, or other personal communication devices transmissions.

H. The system shall not cause shadow flicker on neighboring properties.

I. All systems shall have a neutral color, non-reflective surface.

J. All systems shall be constructed in accordance with plans prepared and stamped by a qualified professional engineer. These plans shall be submitted for review with the special exception permit.

K. All systems shall be equipped with manual and automatic over speed controls to limit the blade rotation speed to within the design limits of the system.

L. These systems are only allowed in zone A-1, C-1, C-2, I-1 and on government owned land.

2. Rooftop Wind Energy Systems. All rooftop wind energy systems shall comply with the following design standards.

A. The sound of the system shall not exceed fifty (50) decibels measured at the property line.

B. The system shall not cause vibration for neighboring properties.

C. No system shall interfere with television, microwave, navigational, radio, or other personal communication devices transmissions.

D. The system shall not cause shadow flicker on neighboring properties.

E. All systems shall have a neutral color, non-reflective surface.

F. These systems are only allowed in zone A-1, C-1, C-2, I-1 and on government owned land.

**147.06 GENERAL REGULATIONS.**

1. Insurance Requirements. The following insurance requirements are required for all tower wind energy systems.
  - A. Proof of insurance coverage must be provided prior to the issuance of a building permit.
  - B. Liability insurance with a minimum coverage of \$500,000 shall be maintained by the owner of the tower wind energy system.
  - C. The City shall be notified if coverage lapses and reserves the right to stop use of the system until coverage is reinstated.
2. Accessory Structure. Wind energy systems shall not be considered as accessory structures.
3. Inspections. An inspection of all tower wind energy systems shall be conducted by a qualified professional at least once every twenty-four (24) months, with a copy of the inspection report submitted to the Building Official. In the event a property owner fails to provide the required inspection, use of the system must cease until an inspection is completed and a report submitted.
4. Number of Systems. No more than one wind energy system may be placed on any parcel, lot, or tract.
5. Lighting and Signage. Lighting and signs shall not be placed on the wind energy systems unless required by federal or state law, or FAA regulations.
6. Abandonment. Any wind energy system that is not operated for a period of twelve (12) consecutive months shall be considered abandoned and shall constitute a nuisance. The owner shall dismantle and remove the entire system from the property within ninety (90) days of notice from the City. If the abandoned system is not removed in the specified amount of time, the City may remove it and recover its costs from the owner of the property on which it is located.

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