

Chapter 17.86 WIND ENERGY CONVERSION SYSTEMS

Sections:

- 17.86.010 Specific purposes.
- 17.86.020 Definitions.
- 17.86.030 Use permit required.
- 17.86.040 Application requirements.
- 17.86.050 Additional notice required.
- 17.86.060 Public hearing – When required.
- 17.86.070 Design and construction standards.
- 17.86.080 Minimum performance standards.
- 17.86.090 Abatement.
- 17.86.100 WECS for common use.
- 17.86.110 Appeals.

17.86.010 Specific purposes.

This chapter establishes regulations and standards for wind energy conversion systems. The intent is to allow such uses within the city as long as certain standards for design, construction, and performance are met. (Ord. 87-4 N.S., 1987).

17.86.020 Definitions.

In this chapter, unless the context otherwise requires, the following words shall have the meanings set out in this section:

- A. “Dominant wind direction” means the direction from which 80 percent of the energy contained in the wind flows.
- B. “Overspeed control” means a mechanism used to limit the speed of blade rotation to below the design limits of the WECS.
- C. “Swept area” means the largest area of the WECS which extracts energy from the wind system.
- D. “Total height” means the height of the tower and the farthest vertical extension of the WECS.
- E. “Wind energy conversion systems (WECS)” is a device designed or used for the purpose of converting wind energy into electrical or mechanical power. (Ord. 87-4 N.S., 1987).

17.86.030 Use permit required.

The installation of a wind energy conversion system requires a use permit in every zoning district.

A. IG General Industrial, IL Limited Industrial and IW Waterfront Industrial Districts.

1. In an IG, IL or IW district, the community development director may issue the use permit or may refer the proposal to the planning commission for a decision.

2. Before the community development director issues a use permit, he shall give notice of the proposed WECS application in the manner provided by Chapter 17.104 BMC and BMC 17.86.050. If one or more written objection is received, the community development director shall refer the proposal to the planning commission for a public hearing and a decision.

B. Other Districts. In all other zoning districts, the planning commission shall act upon the use permit for a WECS. (Ord. 87-4 N.S., 1987).

17.86.040 Application requirements.

An application for a use permit shall be made in writing to the community development director on a form provided by the planning department and shall include the following information:

A. Name and address of applicant, and permission of the owner if the applicant is not the owner;

B. A plot plan and development plan drawn in sufficient detail to clearly describe:

1. Property line and physical dimensions of the proposed site,
2. Location, dimensions, descriptions of types, and height of every structure within 150 feet of the WECS tower,
3. Location of the proposed WECS,
4. Location of all above-ground utility lines on-site or within a distance equal to one radius of the total height of the WECS, including the farthest vertical extension of the rotor assembly,
5. Location of each tree that may potentially grow taller than 35 feet during the lifetime of the WECS within a 150-foot radius of the proposed WECS,
6. The location of all transmission facilities proposed for installation, and

7. The location of all road and other service structures proposed as part of the installation. (Ord. 87-4 N.S., 1987).

17.86.050 Additional notice required.

In addition to the notice required by Chapter 17.104 BMC, notice of the time and place of the hearing shall be mailed to property owners, as shown on the last equalized assessment roll, who own property within 1,000 feet of the exterior boundaries of the property that is the subject of the application. (Ord. 87-4 N.S., 1987).

17.86.060 Public hearing – When required.

Unless the use permit is granted by the community development director as provided in BMC 17.86.030, a public hearing shall be held on the application. (Ord. 87-4 N.S., 1987).

17.86.070 Design and construction standards.

The WECS shall conform with the following construction standards:

A. Compliance with Uniform Building Code.

1. The building permit application shall be accompanied by standard drawings of the structural components of the WECS and support structures, including base and footings. The application also shall include engineering data and calculations to demonstrate compliance of the support structure with seismic and structural design provisions of the Uniform Building Code. Drawings and engineering calculations shall be certified in writing by a California-registered structural engineer.
2. All equipment and materials shall be used or installed in accord with the approved drawings.
3. A soils report shall be submitted on the site of each WECS proposal, and the WECS structure shall be designed for 100-mile-per-hour wind conditions.

B. Compliance with National Electrical Code. The building permit application shall be accompanied by a drawing identifying the location of the metering, protection and control devices, and transformer equipment in sufficient detail to allow for a determination that the manner of installation will conform to the National Electrical Code. The application shall include a statement from a California-registered electrical engineer certifying that the electrical system conforms with good engineering practices and complies with the National Electrical Code. All equipment and materials shall be used or installed in accord with the drawings and diagrams.

C. Rotor Safety. A WECS must be equipped with both manual and automatic controls to limit the rotational speed of the blade below the design limits of the rotor. The application must include a statement by a California-registered mechanical engineer certifying that the rotor and overspeed controls have been designed and fabricated for the proposed use in accord with good engineering practices. The engineer shall certify the compatibility of possible towers and available rotors.

D. Tower Access. Tower-climbing apparatus shall be no higher than 12 feet from the ground. A six-foot-high safety fence, with locked gate, completely enclosing the base of the tower in such a manner as to prevent unauthorized access to the structure may be required by the community development director or the planning commission, as the case may be.

E. Signs. At least one sign shall be posted at the base of the tower warning of high voltage. The generator, alternator, or service entrance shall be posted with the following information:

1. Maximum power output (kw), rated voltage (volts) and current;
2. Normal and emergency shutdown procedures;
3. The maximum wind speed the WECS in automatic, unattended operation can sustain without damage to structural components or loss of the ability to function normally; and
4. Emergency telephone numbers.

F. Size. This chapter authorizes a WECS whose swept area is 500 square feet or less. For conventional propeller WECS, the diameter of blade configuration shall not be greater than 23 feet, unless the planning commission finds that the applicant's needs on the site justify a WECS having a greater capacity.

G. Height. The maximum allowed total height is 100 feet. The lowest reach of the propeller blade shall be 40 feet from the ground unless, due to unusual circumstances, the planning commission permits a lower reach. In no case may the rotor be less than 15 feet from the ground.

H. Setbacks. The WECS shall meet all side- and front-yard setbacks for the site as prescribed by the applicable zoning regulations.

I. Undergrounding Electrical Lines. Electrical lines serving the WECS shall be installed underground. (Ord. 87-4 N.S., 1987).

17.86.080 Minimum performance standards.

The WECS, as constructed and operated, shall comply with the following minimum performance standards:

- A. It shall not raise the noise level above 55 decibels within 300 feet of the tower;
- B. No interference with radio or television broadcasting or reception may be caused; and
- C. Maintenance and inspection records shall be maintained on the site and shall be made available for inspection by the building official on request. (Ord. 87-4 N.S., 1987).

17.86.090 Abatement.

A WECS that has not produced energy for 90 calendar days for reasons other than lack of wind may be declared abandoned, and the use permit may be revoked after notice to the property owner and tenant and after a hearing before the planning commission. (Ord. 87-4 N.S., 1987).

17.86.100 WECS for common use.

Contiguous property owners may construct a WECS for use in common, subject to this chapter. In such cases, the planning commission may permit a WECS machine to have a diameter blade configuration greater than 23 feet. (Ord. 87-4 N.S., 1987).

17.86.110 Appeals.

A decision on a use permit by the community development director or planning commission shall become final on the tenth business day following action, unless appealed in accordance with Chapter 1.44 BMC. (Ord. 07-62 § 1; Ord. 87-4 N.S., 1987).

The Benicia Municipal Code is current through Ordinance 12-06, passed September 18, 2012.

Disclaimer: The City Clerk's Office has the official version of the Benicia Municipal Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

City Website: <http://www.ci.benicia.ca.us/>
(<http://www.ci.benicia.ca.us/>)

City Telephone: (707) 746-4201

Code Publishing Company
(<http://www.codepublishing.com/>)

eLibrary

(<http://www.codepublishing.com/elibrary.html>)