

Windmills and Wind Generators

Wind Generator Definition

A generator specifically designed to convert kinetic energy in wind into electrical energy. A wind generator may include a generator, tower, and associated control or conversion electronics. The height of a wind generator is measured at the hub of the generator.

Accessory Wind Generator - Land Use

Code, Section 3.4.9.A

Each lot may include a wind generator for the use of the property owner.

An accessory wind generator that cannot meet all the following standards requires review and approval through the Administrative Special Review Application process.

Approval of the site plan must be obtained prior to submitting a building permit application.

Wind generator standards:

1. One wind generator per lot is allowed.
2. The lot shall be at least one acre.
3. The hub height of the wind generator shall not exceed 40 feet. The height of a vertical axis turbine is measured at the top of the generator.
4. The wind generator shall be setback from property lines, public right of way and access easements at least 2 times the hub height of the generator.
5. The wind generator shall be painted or coated a non-reflective white, gray or other neutral color.
6. The wind generator shall not be artificially illuminated.
7. The wind generator shall not be used to display advertising.
8. Electrical controls shall be wireless or underground and power lines shall be underground except for an interconnection to an existing above ground power grid.
9. Noise emanating from the wind generator shall be in compliance with Larimer County Code Chapter 30, Article V, Noise.

Additional information on Land Use Code:

Planning Division
200 West Oak Street, 3rd floor
Fort Collins, CO 80521
970-498-7679
Email: poc@co.larimer.co.us

Small Wind Energy Facility Definition

A facility which is used for the production of electrical energy from energy supplied by the wind including any transmission lines and developed for the purposes of supplying or distributing electrical energy to a customer or customers, and in which there are no more than three wind generator towers, and the hub height of the wind towers does not exceed 80 feet.

Special Review Approval

The Larimer County Land Use Code requires a Special Review application and approval for a Small Wind Facility. This approval must be obtained prior to submitting a building permit application.

Building Permit

Wind generators greater than twelve (12) feet in hub height are required to obtain a building permit. All building permits will be reviewed for compliance with zoning setback requirements and zoning use as designated by the Land Use Code.

Building Permit Submittal Requirements

1. Three site plan drawings showing the location of the wind generator tower, any accessory generator, or buildings. Include the hub height in site plan drawing.
2. Two sets of engineered construction drawings including calculations for wind design according to the high wind speed map with ½" ice retention and engineered foundation plans.
3. Two sets of a one-line electrical diagram showing the locations of all field-installed components
4. Wire size, type, number of wires per conduit (including grounds), grounding electrode, conductor size, location, conduit type and size.
5. AC and DC disconnect-amperage, voltage, fuse size/type. Busbar amperage rating for panel receiving power from the inverter AC output

All systems/equipment must be listed/labeled by a nationally recognized testing laboratory.

All equipment must be installed in accordance with the manufacturer's instructions, carefully observing operating temperature limitations for inverters installed outdoors.

Outdoor conductors and conduit fittings must be listed for wet locations.

Electrical Permit

Wind generators must obtain an electrical permit through Larimer County for inspection of electrical work and must comply with NEC Article 694.