City of Henderson

WIND ENERGY SYSTEMS HANDOUT

DEFINITION

A wind energy conversion system consisting of a wind turbine and associated control or conversion electronics mounted to a tower or building that has a rated capacity of not more than 10 kilowatts (kW) or less for residential use or 100 kilowatts (kW) or less for nonresidential uses and that is intended to primarily reduce on-site consumption of utility power.

STANDARDS

APPROVAL

For freestanding wind energy systems in RS-6, RS-8, RM-10, RM-16, RH-24, RH-36, RMH, DRL, DRM, and DRH districts. A conditional use permit is required.

For Wind energy systems in all other districts and building-mounted systems in RS-6, RS-8, RM-10, RM-16, RH-24, RH-36, RMH, DRL, DRM, and DRH districts. A design review is required.

LOCATION

For projects in single-family residential areas. wind energy system is not located in the front yard between the principal structure and the public right-of-way.

For projects in all other districts. Wind energy system is integrated into the design and architecture of accessory structures if placed between a principal structure and the public right-of-way.

SETBACK

No part of the wind energy system structure, including guy wire anchors, is located within five feet of adjacent property lines or ten feet of other structures.

For projects located adjacent to residentially zoned property, all parts of a freestanding wind energy system shall be setback a minimum distance equal to the total extended height. The setback may be reduced to 15 feet if the applicant provides a registered engineer's certification that the wind energy system is designed to collapse, fall, curl, or bend within a distance or zone shorter than the height of the wind energy system.

HEIGHT

The maximum height of wind energy systems attached to buildings located within all residential zoning districts does not exceed ten feet above the maximum height permitted within the zoning districts.

For projects in RS-6, RS-8, RM-10, RM-16, RH-24, RH-36, RMH, DRL, DRM, and DRH districts
The height has been approved through the conditional use permit.

For building-mounted wind energy systems in all residential districts, the heigth does not exceed ten feet above the maximum height permitted by the zoning district unless approved through a conditional use permit.

For wind energy systems in nonresidential or mixed use districts and freestanding wind energy systems in RS-1, RS-2, and RS-4 districts, the height does not exceed 70 feet unless approved through a conditional use permit.

NOISE

Noise produced by the turbine under normal operating conditions, as measured at the property line of any adjacent property improved with a dwelling unit at the time of the issuance of the zoning certificate, complies with Section 19.7.8.G Noise. The maximum noise level may be exceeded during short-term events out of the owner's control such as utility outages and/or severe wind storms.

APPEARANCE, COLOR, AND FINISH

Building-mounted wind energy system is painted or finished to blend or complement the color of the building.

Freestanding wind energy system in non-residential or mixed use districts. Wind energy system is designed to blend or complement the color of the site on which it is located or be used as a decorative feature.

STANDARDS

CLEARANCE

The blade tip or vane of any wind energy system has a minimum ground clearance of 20 feet as measured at the lowest point of the arc of the blades.

No blades extend over parking areas, driveways, or sidewalks.

SIGNAGE

Other than the manufacturer's or installer's identification, appropriate warning signs, or owner identification, no signs are posted on any part of the structure associated with a small wind energy system visible from any public road.

LIGHTING

No illumination of the turbine or tower, unless required by the FAA.

ACCESS

Any climbing foot pegs or rungs below 12 feet of a freestanding tower are removed to prevent unauthorized climbing

For lattice or guyed towers: sheets of metal or wood or similar barriers are fastened to the bottom tower section such that it cannot readily be climbed. These treatments have been integrated into the design of the tower structure.

COMPLIANCE WITH FAA REGULATIONS

Wind energy systems comply with all applicable FAA regulations, including any necessary approvals for installations close to airports.

UTILITY NOTIFICATION

Prior to installation of the wind energy system, proof of the customer's intent to install an interconnected customer-owned generator has been provided to the utility company. (Off-grid systems are exempt from this requirement.)