WIND + ANTENNA

ARTICLE XIV – ARRAYS

Section 3. Exempt Arrays

6. Single wind energy conversion units for private use no more than 80 feet high.

Section 10. Wind Energy Conversion Arrays (WECA)

1. Setbacks:

All parts of the WECA shall be setback from all property lines a distance equal to the height of the wind-system structure measured from the ground to the system's highest point plus the required minimum setback of the district in which it is located.

2. Height:

Each WECA unit shall have a maximum height of 80 feet in all districts as measured from the ground level to the system's highest point except for the Rural/Commercial, Farm and Forest, and Planned Development districts where the maximum height shall be 140 feet as measured from the ground level to the system's highest point.

3. Noise:

The WECA shall not exceed 45 dBA as measured at the property line in all districts except for the Rural/Commercial, Farm and Forest, and Planned Development districts, where the WECS shall not exceed 55 dBA as measured at the property line.

A WECA may exceed 65 dBA in the Rural/Commercial, Farm and Forest, and Planned Development districts and 55 dBA in all other districts during short-term events such as severe wind storms.

4. Shadow Flicker and Blade Reflection

The WECA shall be designed and sited so that alternating changes in light intensity caused by the movement of wind turbine blades casting shadows on the ground or a stationary object (shadow flicker), and/or blade reflection will not fall on any occupied building on a non-participating landowner's property plus an additional 100 foot boundary surrounding the

exterior of the occupied building, the entire outdoor public area surrounding schools, churches and public buildings, and public roads with a posted speed limit greater than 25 mph (shadow flicker receptor).

The shadow flicker or reflection shall not exceed 10 hours per year for any given shadow flicker receptor.

5. Avian and Bat Protection

All WECA site plan applications shall include an Avian and Bat Protection Plan to be approved by the Planning Board.

6. Design Standards:

a. The minimum distance between the ground and any wind-turbine blades of a WECA unit shall be 25 feet as measured at the lowest arc of the blades.

b. All units in a WECA shall be equipped with both manual and automatic over-speed controls.

c. The WECA shall be designed and installed such that public access via step bolts or a ladder is prevented on each unit for a minimum of 12 feet above the ground.

d. The WECA units shall be a non-reflective color that blends the system and its components into the surrounding landscape to the greatest extent possible and incorporates non-reflective surfaces to minimize any visual disruptions.

e. No WECA unit shall be lighted unless required by the FAA.

f. No WECA unit shall be roof-mounted.

Section 11. Antenna Arrays (AA)

1. Setbacks:

All parts of the AA shall be setback from all property lines a distance equal to the required minimum setback of the district in which it is located plus ten (10) feet for each 100,000 square feet or fraction thereof of array surface area.

2. Height:

A ground- or pole-mounted AA shall have a maximum height of 20 feet in all districts as measured from the ground level to the

system's highest point at full tilt except for the Rural/Commercial, Farm and Forest, and Planned Development districts where the maximum height shall be 40 feet as measured from the ground level to the system's highest point at full tilt.

3. Roof Load:

The weight of any AA proposed to be roof mounted on any structure must be calculated and a determination must be made by a registered engineer that the load rating of the underlying structure can accommodate the additional weight.

4. Lot Coverage:

The surface area of a ground- or pole-mounted system, regardless of the mounted angle or the parabolic antenna shape, shall be calculated as part of the overall lot coverage.

5. Design Standards:

a. AA installations shall not obstruct solar access to neighboring properties.

b. Placement of AAs on roofs shall not extend horizontally past the roofline.

c. The AA structure shall be a non-reflective color that blends the system and its components into the surrounding landscape to the greatest extent possible and incorporates non-reflective surfaces to minimize any visual disruptions.

ARTICLE XV - DEFINITIONS

Section 2. Definitions

ANTENNA ARRAY (AA): a set of 2 or more antennas whose signals are combined or processed in order to achieve improved performance over that of a single antenna. An antenna array is often called a 'phased array'. This definition does not include arrays regulated by the Washington Wireless Telecommunication Facility Ordinance.

WIND ENERGY CONVERSION ARRAY (WECA): A grouping of devices sometimes called "wind turbines", more correctly termed "aerofoil-powered generators", that converts kinetic energy from the wind, a solar-generated force, into electrical power. A WECA is sometimes called a "Wind Farm".