**For Review**

Chapter 27 – Alternative Energy Systems

**Current wording**

27.3. DEFINITIONS.

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to

them in this section:

Accessory. A system designed as a secondary use to existing buildings or facilities, wherein the power generated is used primarily for on-site consumption.

Alternative Energy Systems. A ground source heat pump, wind or solar energy system.

Building, Height of. The vertical distance from the average grade surface to the highest point of any

building roof or coping.

Building-Integrated Solar Energy System. A solar energy system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building including, but not limited to, photovoltaic or hot water solar systems contained within roofing materials, windows, skylights and awnings.

Closed Loop Ground Source Heat Pump System. A system that circulates a heat transfer fluid, typically food-grade antifreeze, through pipes or coils buried beneath the land surface or anchored to the bottom in a body of water.

Flush-Mounted Solar Energy System. A roof-mounted system mounted directly abutting the roof. The pitch of the solar collector may exceed the pitch of the roof up to five percent (5%) but shall not be higher than ten inches (10") above the roof.

Grade, For Buildings or Structures Adjoining one (1) street only. The elevation of the sidewalk the elevation of the sidewalk at the center of the wall adjoining the street.

Grade, For Buildings or Structures Adjoining more than one (1) street. The average of the elevation of the sidewalk at the centers of all walls adjoining the streets.

Grade, For Buildings or Structures Having No Wall Adjoining a street. The average level of the finished natural surface of the ground adjacent to the centers of all exterior walls of the building.

Grade, For the Purposes of the Section. Natural surface level includes:

1. the level at time of lot purchase;

2. a previously excavated level, if substantially unchanged for ten (10) or more years; or

3. a new level resulting from expressly approved excavation of lot. Any wall or structure parallel

or nearly parallel to and not more than five feet (5’) from a street line is to be considered as adjoining the street.

Ground Source Heat Pump System. A system that uses the relatively constant temperature of the earth or a body of water to provide heating in the winter and cooling in the summer. System components include open or closed loops or pope, coils or plates; a fluid that absorbs and transfers heat; and a heat pump unit that processes heat for use or disperses heat for cooling: and an air distribution system.

Horizontal Ground Source Heat Pump System. A closed loop ground source heat pump system where the loops or coils are installed horizontally in a trench or series of trenches no more than twenty feet (20') below the land surface.

Heat Transfer Fluid. A non-toxic and food grade fluid such as potable water, aqueous solutions of propylene glycol not to exceed twenty percent (20%) by weight or aqueous solutions of potassium acetate not to exceed twenty percent (20%) by weight.

Horizontal Axis Wind Turbine. A wind turbine design in which the rotor shaft is parallel to the ground and the blades are perpendicular to the ground.

Hub. The center of a wind generator rotor, which holds the blades in place and attaches to the shaft. Hub Height. The distance measured from natural grade to the center of the turbine hub.

Open Loop Ground Source Heat Pump System. A system that uses groundwater as a heat transfer fluid by drawing groundwater from a well to a heat pump and then discharging the water over land, directly in a water body or into an injection well.

Monopole Tower. A tower constructed of tapered tubes that fit together symmetrically and are stacked one (1) section on top of another and bolted to a concrete foundation without support cables.

Passive Solar Energy System. A system that captures solar light or heat without transferring it to another form of energy or transferring the energy via a heat exchanger.

Photovoltaic System. A solar energy system that converts solar energy directly into electricity.

Residential Wind Turbine. A wind turbine of ten kilowatt (10 kw) name plate generating capacity or less.

Small Wind Turbine. A wind turbine of one hundred kilowatt (100 kw) nameplate generating capacity or less.

Solar Energy System. A device or structural design feature, a substantial purpose of which is to provide daylight for interior lighting or provide for the collection, storage and distribution of solar energy for space heating or cooling, electricity generation or water heating.

Total Height. The highest point above natural grade reached by a rotor tip or any other part of a wind turbine.

Tower. A vertical structure that supports a wind turbine.

Utility Wind Turbine. A wind turbine of more than one hundred kilowatt (100 kw) name plate

generating capacity.

Vertical Axis Wind Turbine. A type of wind turbine where the main rotor shaft runs vertically.

Vertical Ground Source Heat Pump. A closed loop ground source heat pump system where the loops or coils are installed vertically in one or more borings below the land surface.

Wind Turbine. Any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy through the use of airfoils or similar devices to capture the wind.

**Proposed Wording**

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**Reasons for proposed changes**

1. Applicable definitions move to Chapter 1
2. Unnecessary Engineering definitions removed