

## **Alternative Energy Task Force of Lake County Communities**

### **Solar and Geothermal Energy Systems Model Ordinance**

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#### **1.0 INTRODUCTION**

This model ordinance was developed by the Alternative Energy Task Force (AETF) of Lake County Communities, a cooperative effort by representatives from over twenty local jurisdictions. Lake County Communities includes the different jurisdictions of local municipalities and unincorporated areas of Lake County. AETF encourages each Lake County jurisdiction to evaluate the separate provisions of this model ordinance, with attorney review, to assure the guidelines will suit their particular needs, including decisions to allow alternative energy systems as Permitted, Conditional or Special Uses.

#### **2.0 PURPOSE AND INTENT**

- 2.1 To establish reasonable and uniform regulations for the location, installation, operation and maintenance of Solar and Geothermal Energy Systems.
- 2.2 To assure that any development and production of solar and geothermal energy systems is safe and to minimize any potentially adverse effects on the community.
- 2.3 To promote the supply of sustainable and renewable energy resources, in support of national, state and local goals.
- 2.4 To facilitate energy cost savings and economic opportunities for residents and businesses situated within communities in Lake County.

#### **3.0 SOLAR ENERGY SYSTEMS**

##### **3.1 General Requirements**

- 1) Systems are permitted in any zoning district, provided that all building permit requirements and general regulations are met including the Building Code, Zoning Code and the requirements referenced herein.
- 2) No system shall be constructed or installed without first obtaining a municipal building permit.

### **3.2 Application Requirements**

An application for permit for all Solar Energy Systems shall contain the following information:

- 1) Name, address and telephone number of the applicant.
- 2) Name, address and telephone number of the person, firm or corporation constructing and installing the solar energy system.
- 3) Elevation drawing(s) (and/or photographs) and site plan showing location, size and design details of proposed system(s).
- 4) Manufacturer specifications of the solar collectors and devices including: wattage capacity, dimensions of collectors, mounting mechanisms and/or foundation details and structural requirements.
- 5) Each system shall conform to applicable industry standards including those of the American National Standards Institute (ANSI).
- 6) A certificate of compliance demonstrating that the system has been tested and approved by Underwriters Laboratories (UL) or other approved independent testing agency.
- 7) Any other information to show full compliance with this and other applicable ordinances.

### **3.3 Use**

- 1) The primary purpose of Solar Energy Systems shall be to produce energy to support the permitted use(s) on the property, with the exception of Utility Solar Energy Systems
- 2) It is permissible to sell excess energy that is produced by a Solar Energy System to the local electric utility company.

### **3.4 Building-Mounted Solar Energy Systems**

#### **A. Location**

- 1) Building-mounted solar energy systems are allowed on permitted principal and accessory structures.
- 2) Only building-integrated and/or flush-mounted solar energy systems shall be used when installed on the front building elevation.

#### **B. Horizontal Projection**

- 1) Solar Energy Systems shall not extend four (4) feet beyond the exterior perimeter of the building on which the system is mounted or built, as measured horizontally from the façade or roof edge on which the panel is mounted.
- 2) All setback restrictions shall apply, as regulated by the respective zoning district.

#### **C. Height**

- 1) Height shall be measured vertically from the lowest edge of the panel to the highest edge of the system.

- 2) Shall not extend more than five (5) feet above the highest point on the roof line, provided the maximum height in the respective zoning district is not exceeded.

### **3.5 Ground-Mounted Solar Energy Systems**

**A. In addition to the application requirements in 3.2 above, the applicant shall also submit a scaled Site Plan drawing(s) which includes the following information:**

- 1) Existing and proposed contours, at a minimum of two foot intervals.
- 2) Location, setbacks, exterior dimensions and square footage of all existing and proposed structures.
- 3) Location and size of existing waterways, wetlands, one hundred-year floodplains, sanitary sewers, storm sewers, drain tiles and water distribution systems.
- 4) Location of any overhead or underground utilities and easements.

**B. Setback**

- 1) In residential zoning districts, systems shall not be located in any front yard or corner side yard.
- 2) In all zoning districts, systems shall comply with the respective setback requirements, as measured from the property line to the closest edge of the system.

**C. Lot Coverage**

The total solar panel surface area shall be included in the lot coverage calculations for the respective zoning district.

**D. Height**

Shall not exceed the height limits for accessory structures in the respective zoning district, as measured from adjoining grade at base to the highest elevation of the equipment.

### **3.6 Utility Solar Energy Systems**

**A. In addition to the requirements in 3.2 above, the applicant shall also submit a scaled Site Plan drawing(s) which includes the following information:**

- 1) Existing and proposed contours, at a minimum of two foot intervals.
- 2) Location, setbacks, exterior dimensions and square footage of all existing and proposed structures.
- 3) Location and size of existing waterways, wetlands, one hundred-year floodplains, sanitary sewers, storm sewers, drain tiles and water distribution systems.
- 4) Location of any overhead or underground utilities and easements.

**B. Use**

Shall be permitted as a principal use in agricultural and industrial zoning districts and as a conditional or special use in all other zoning districts.

**C. Setback**

Shall comply with the principal building setback requirements of the respective zoning district.

**D. Lot Coverage**

The total solar panel surface area shall be included in the lot coverage calculations for the respective zoning district.

**E. Height**

Shall not exceed twenty (20) feet in height measured from adjoining grade at base to the highest elevation of the equipment.

**F. Fencing Required**

Systems shall be enclosed with a fence that restricts direct access to the public. Such fencing shall, at a minimum, encompass the entire systems facility, contain a locking mechanism and, be subject to the fence regulations of the zoning ordinance. This requirement may be waived at the sole discretion of the Zoning Administrator, if it is determined that such fencing would result in reduced security or is not necessary.

**4.0 GEOTHERMAL ENERGY SYSTEMS**

**4.1 General Requirements**

- 1) Shall be allowed as a permitted use in any zoning district, provided that a building permit is obtained and all permit requirements and general regulations are met, including: the Building Code, Zoning Code, Lake County Health Ordinance and the requirements referenced herein.
- 2) Geothermal Energy System components shall conform to applicable industry standards including those of the American National Standards Institute (ANSI). Applicants shall submit certificate of compliance demonstrating that the system has been tested and approved by Underwriters Laboratories (UL) or other approved independent testing agency.

**4.2 Application Requirements**

An application for permit for all Geothermal Energy Systems shall contain the following information:

- 1) Name, address and telephone number of the applicant.
- 2) Name, address and telephone number of the person, firm or corporation installing and constructing the Geothermal Energy System.
- 3) Project summary including site plan and manufacturer information with specifications of materials and devices.

### **4.3 Setback**

- 1) Above-ground equipment shall comply with the setback requirements of the respective zoning district.
- 2) Equipment, piping and devices shall not be located in any easement or right-of-way.

## 5.0 DEFINITIONS

**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 part of the building. Building-integrated systems include, but are not limited to, photovoltaic or hot water systems that are contained within roofing materials, windows, skylights, shading devices and similar architectural components.

**Building-Mounted Solar Energy System:** A solar energy system that is mounted on the façade or roof of either a principal or accessory structure.

**Geothermal Energy System:** A sealed, watertight loop of pipe buried outside of a building foundation, intended to re-circulate a liquid solution through a heat exchanger. This includes but is not limited to: vertical closed loop, horizontal closed loop and body of water closed loop systems.

**Ground-Mounted Solar Energy System:** A solar energy system not attached to another structure and is ground mounted.

**Flush-Mounted Solar Energy System:** A solar energy system that is mounted flush with a finished surface, at no more than six (6) inches in height above that surface.

**Photovoltaic Cell:** A semiconductor device that converts solar energy into electricity.

**Solar Energy System:** A system for which the primary purpose is to convert solar energy into thermal, mechanical or electrical energy for storage and use.

**Solar Panel:** A group of photovoltaic cells are assembled on a panel. Panels are assembled on-site into solar arrays.

**Utility Solar Energy System:** A solar energy system that is used in order to produce energy for commercial distribution.