

ORDINANCE #3930

AN ORDINANCE AMENDING CHAPTER 160 SOLAR SYSTEM REGULATIONS OF THE CITY OF KEWANEE CODE OF ORDINANCES, AND DECLARING THAT THIS IS ORDINANCE IS IN FULL FORCE AS PROVIDED BY LAW.

CHAPTER 160: SOLAR SYSTEM REGULATIONS

Section

General Provisions

- 160.000 Purpose and Intent
- 160.010 Definitions
- 160.015 Individuals Installing Solar Systems Require Certification

Permits; Fees; Standards

- 160.100 Small Solar Systems/Roof/Building Mounted, Permits Required
- 160.150 Small Solar Systems/Ground Mounted, Permits Required
- 160.250 Large Solar Systems, Permits Required

Penalty

- 160.990 Penalty

GENERAL PROVISIONS

§160.000 PURPOSE AND INTENT

The purpose of this chapter is to establish reasonable and uniform regulations for the location, installation, operation and maintenance of Solar Systems. Solar Systems include photovoltaic, thermal collector or any other solar powered system to be installed on property within the limits of the City of Kewanee.

§160.010 DEFINITIONS

For the purpose of this chapter the following definitions shall apply unless the context clearly indicates or requires a different meaning.

**GLARE.** The effect produced by light with an intensity sufficient to cause annoyance, discomfort, or loss in visual performance and visibility.

**PHOTOVOLTAIC CELL.** A semiconductor device that converts solar energy directly into electricity.

**SOLAR COLLECTOR.** A professionally manufactured device, structure or part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, or electrical energy.

**SOLAR COLLECTOR SURFACE.** Any part of a solar collector that absorbs solar energy for use in the collector's energy transformation process. Collector surface does not include frames, supports and mounting hardware.

**SOLAR ENERGY SYSTEM, BUILDING MOUNTED.** A solar energy system, in which all parts, are professionally mounted on the roof of a principal building or accessory structure. A Building Mounted Solar Energy System includes Building Integrated Solar Energy Systems, Flush Mounted Solar Energy Systems and Non-Flush Mounted Solar Energy Systems.

**SOLAR ENERGY SYSTEM, BUILDING INTEGRATED.** A Building Mounted 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 Solar Energy Systems include, but are not limited to, Photovoltaic Cell or hot water systems that are contained within roofing materials, skylights, shading devices and similar architectural components.

**SOLAR ENERGY SYSTEM, FLUSH MOUNTED.** A Building Mounted Solar Energy System that is mounted to a finished roof surface where the solar collector, once installed, projects no further than six (6) inches in height beyond the roof surface.

**SOLAR ENERGY SYSTEM, NON-FLUSH MOUNTED.** A Building Mounted Solar Energy System that is mounted to a finished roof surface where the solar collector, once installed, projects more than six (6) inches in height beyond the roof surface.

**SOLAR ENERGY SYSTEM, GROUND MOUNTED.** A free-standing solar energy system that is placed, affixed, or mounted to the ground.

**SOLAR ENERGY SYSTEM, LARGE.** A solar energy system that contains multiple Solar Collectors and is primarily used to produce energy to be sold commercially.

**SOLAR ENERGY SYSTEM, SELF CONTAINED.** A professionally manufactured device that utilizes Solar Collector(s) to produce small amounts of power that are generated exclusively for the device. A Self-Contained Solar Energy System is typically located in areas that are not in close proximity to a utility power source. Examples of these types of Self-Contained Solar Energy Systems include, but are not limited to: light poles in parks for security or safety reasons, pedestrian street crossing signs that alert oncoming traffic of the crossing, natural

resource observation systems (such as tracking flood level depths), pumps that aerate an isolated pond, and attic fans mounted on a roof that are used for ventilation purposes.

**SOLAR ENERGY SYSTEM, SMALL.** A professionally manufactured system accessory to the principal use that utilizes Solar Collectors to convert solar energy from the sun into thermal, mechanical or electrical energy for storage and use and is intended to primarily reduce on-site consumption of utility power. Energy produced in excess of on-site consumption may be sold back to the electric utility service provider that serves the proposed site for use with the existing energy grid.

#### §160.015 INDIVIDUALS INSTALLING SOLAR SYSTEMS REQUIRE CERTIFICATION

Individuals engaged in the business of installing Solar Energy Systems shall show proof of valid Distributed Generation Installer Certification as required by the Illinois Commerce Commission. Individuals having acquired a Distributed Generation Installer Certification may perform work required to install said Solar Energy Systems after receiving and paying for an approved permit to install.

#### PERMITS; FEES; STANDARDS

#### §160.100 SMALL SOLAR SYSTEMS/ROOF/BUILDING MOUNTED, PERMITS REQUIRED

- A. Except as authorized by the City Council for public utility and/or public infrastructure purposes, Solar Systems shall only be permitted if accessory to a principal building and/or principal use.
- B. Roof and Building mounted Solar Systems shall have the mounting method documented on the provided plans. Said plans shall be signed and stamped by a licensed design professional.
- C. Any person seeking to erect, construct, install, or maintain a Small Solar Energy System on property located within the city limits of the City of Kewanee, shall obtain an Electrical and Building Permit prior to the installation of any Solar Energy System. The fees for said permits shall be calculated per section §150.016 of the City of Kewanee Code of Ordinances. As part of the application for the required Permits, a person seeking to erect, construct, install, or maintain a Small Solar Energy System shall also submit a written narrative and graphic form, which includes all of the items listed below:
  1. Name, address, and telephone number of property owner;
  2. Name, address, and telephone number of the installer of the Small Solar Energy System;

3. Description of the proposed Small Solar Energy System indicating the following:
  - A. Plan showing the proposed location of the Small Solar Energy System;
  - B. System dimensions and specifications;
  - C. Evidence showing compliance with all applicable setback requirements;
  - D. Evidence showing compliance with applicable setback and/or height regulations;
  - E. Distance to any roads or overhead utility lines; and,
  - F. Compliance with each regulation contained herein.

4. A licensed design professional, shall stamp all plans and specifications for the proposed Small Solar Energy System. These plans shall include certification, signed and stamped from said professional, that the structure on which the solar system is being installed will support the proposed solar system.

5. Utility Notification: No grid-intertie Photovoltaic Cell system shall be installed until evidence has been given to the City of Kewanee Electrical Inspector that the person seeking to erect or install said Small Solar Energy System has submitted notification to the utility company of their intent to install an interconnected customer-owned generator. Off-grid systems are exempt from this requirement.

- D. The City of Kewanee Fire Department shall review said application for an Electrical Permit to verify that adequate roof access will be allowed for emergency personnel in the case of an emergency.
- E. Small Solar Energy Systems shall be installed according to manufacturer specifications and in accordance with all applicable City of Kewanee, building codes, electrical codes, fire codes, and other ordinances, codes, rules, and regulations pertaining to Small Solar Energy Systems.
- F. Electric solar energy system components must have a UL listing.
- G. All Small Solar Energy Systems shall have a lockable, utility accessible, load breaking, manual disconnect switch, which can be utilized to connect and/or disconnect all electric solar energy system components. The manual disconnect switch shall be located not more than four (4) feet from the building's Electric Service Meter. The manual disconnect switch shall not be obstructed from access in any manner, including, but not limited to, landscaping, shrubs, trees, terraces, fencing, etc.
- H. All Small Solar Energy Systems shall have caution labels installed and/or placed on said Small Solar Energy System as required by the National Electric Code.
- I. Type Permitted and Maximum Roof Area
  1. For properties zoned Residential:

- a. Building Integrated Solar Energy Systems and/or Flush Mounted Solar Energy Systems are permitted to be installed on any roof area;
  - b. The Solar Collector Surface area shall not cover more than 60% of any roof area upon which the Solar Collectors are mounted, and shall be set back on the roof edges and ridge as required by the City of Kewanee adopted Fire Code and Electrical Code.
  - c. Requests for Solar Collector Surface area greater than 60% of any roof area, but which does not depart from the setback requirements, may be allowed following the applicant securing a variance from the Zoning Board of Appeals; and,
  - d. Glare from Solar Collector surfaces shall be oriented away from neighboring windows.
2. For properties zoned Business District or Manufacturing:
    - a. Building Integrated Solar Energy Systems and/or Flush Mounted Solar Energy Systems are permitted to be installed on any roof area;
    - b. The Solar Collector Surface area shall not cover more than 60% of any roof area upon which the Solar Collectors are mounted, and shall be set back on the roof edges and ridge as required by the City of Kewanee adopted Fire Code and Electrical Code.
    - c. Requests for Solar Collector Surface area greater than 60% of any roof area, but which does not depart from the setback requirements, may be allowed following the applicant securing a variance from the Zoning Board of Appeals; and,
    - d. Glare from Solar Collector surfaces shall be oriented away from neighboring windows.
- J. Maximum Permitted Height & Building Projection/Extension:
1. For properties zoned Residential:
    - a. The Small Solar Energy System shall conform to the height regulations of the zoning district in which the property where the Small Solar Energy System is to be installed, mounted, built is located;
    - b. Non-Flush Mounted Solar Energy Systems shall not extend above the highest point on the roof line; and,
    - c. Small Solar Energy Systems shall not project/extend beyond the exterior wall of any building on which said Small Solar Energy System has been installed, mounted, or built.
  2. For properties zoned Business or Manufacturing:
    - a. The Small Solar Energy System shall conform to the height regulations of the zoning district in which the property where the Small Solar Energy System is to be installed, mounted, built is located;
    - b. Non-Flush Mounted Solar Energy Systems shall not extend above the highest point on the roof line or a parapet wall; and,

- c. Small Solar Energy Systems shall not project/extend beyond the exterior wall of any building on which said Small Solar Energy System has been installed, mounted, or built.
- K. Self-Contained Solar Energy Systems: The provisions of this ordinance shall not apply to a Self-Contained Solar Energy System, provided, however, that a Self-Contained Solar Energy System(s) shall be limited to an aggregate Solar Collector Surface area of less than or equal to 6 square feet.

§160.150 SMALL SOLAR SYSTEMS/GROUND MOUNTED, PERMITS REQUIRED

- A. Except as authorized by the City Council for public utility and/or public infrastructure purposes, Solar Systems shall only be permitted if accessory to a principal building and/or principal use.
- B. Any person seeking to erect, construct, install, or maintain a Ground Mounted Small Solar Energy System on property located within the city limits of the City of Kewanee, shall obtain an Electrical and Building Permit prior to the installation of any Solar Energy System. As part of the application for a the required Permits, a person seeking to erect, construct, install, or maintain a Small Solar Energy System shall also submit a written narrative and graphic form, which includes all of the items listed below:
  - 1. Name, address, and telephone number of property owner;
  - 2. Name, address, and telephone number of the installer of the Small Solar Energy System;
  - 3. Description of the proposed Small Solar Energy System indicating the following:
    - A. Plan showing the proposed location of the Small Solar Energy System;
    - B. System dimensions and specifications;
    - C. Evidence showing compliance with all applicable setback requirements;
    - D. Evidence showing compliance with applicable setback and/or height regulations;
    - E. Distance to any roads or overhead utility lines; and,
    - F. Compliance with each regulation contained herein.
  - 4. A professional engineer, licensed in the State of Illinois, shall stamp all plans and specifications for the proposed Small Solar Energy System.
  - 5. Utility Notification: No grid-intertie Photovoltaic Cell system shall be installed until evidence has been given to the City of Kewanee Electrical Inspector that the person seeking to erect or install said Small Solar Energy System has submitted notification to

the utility company of their intent to install an interconnected customer-owned generator. Off-grid systems are exempt from this requirement.

- C. Small Solar Energy Systems shall be installed according to manufacturer specifications and in accordance with all applicable City of Kewanee, building codes, electrical codes, fire codes, and other ordinances, codes, rules, and regulations pertaining to Small Solar Energy Systems.
- D. Electric solar energy system components must have a UL listing.
- E. All Small Solar Energy Systems shall have a lockable, utility accessible, load breaking, manual disconnect switch, which can be utilized to connect and/or disconnect all electric solar energy system components. The manual disconnect switch shall be located not more than four (4) feet from the building's Electric Service Meter. The manual disconnect switch shall not be obstructed from access in any manner, including, but not limited to, landscaping, shrubs, trees, terraces, fencing, etc.
- F. All Small Solar Energy Systems shall have caution labels installed and/or placed on said Small Solar Energy System as required by the adopted Electrical Cod of the City of Kewanee and as required by the power utility.
- G. Setbacks; Height Requirements.
  - 1. Setbacks; Residential:
    - a. Front Yard. Solar Energy Systems shall not be located within any required front yard setback.
    - b. Side Yard. Solar Energy Systems shall be located no closer than 6 feet to the side lot lines when located within the side yard along the side of the principal building or in the front yard with the required variance;
    - c. Rear Yard. Solar Energy Systems may be located no closer than 3 feet from the side lot line and 5 feet from the rear lot line when the Solar System is located in its entirety in the back yard behind the principal building;
    - d. Proximity to other structures. Solar Systems shall not be closer than 6 feet to other structures whether on the same parcel or an adjacent parcel;
    - e. Corner Lot. On corner lots there shall be maintained a side yard of not less than 15 feet on the side adjacent to the street which intersects the street upon which the principal building maintains frontage, and in the case of a reversed corner lot, no Solar Systems on said reversed corner lot shall project beyond the front yard required on the adjacent lot to the rear;
    - f. Easements, Utilities, Rights of Way. No portion of any Solar System shall extend into any easement, right of way or public way, regardless of above stated exceptions and regulations for setback and yard requirements.

2. Setbacks; Business and Manufacturing:

Setbacks for Solar Systems located in Business or Manufacturing Zoning Districts shall comply with all setbacks set forth in the City of Kewanee Zoning Regulations with exception to a Business or Manufacturing zoned lot that is adjacent to a residential zoned lot. In that case, the Solar System installed on a Business or Manufacturing zoned lot must comply with the setbacks defined above for residential property.

3. Lot coverage; Maximum size:

- A. The footprint of a Ground Mounted Solar System will be taken into account with all other structures when calculating lot coverage as defined in the City of Kewanee Zoning Regulations.
- B. The Maximum size, without a variance, of a ground mounted system shall be 10kw.

H. Maximum Permitted Height.

- 1. Residential. Ground Mounted Solar Systems shall extend no taller than Twelve (12) feet from grade when located in a side or rear yard.

- I. Fences Required. A fence with a minimum height of 48 inches and a lockable gate shall be required around all ground mounted Solar Systems. The fence material must be in compliance with the Fence Regulations of the City of Kewanee.

- J. Self-Contained Solar Energy Systems: The provisions of this ordinance shall not apply to a Self-Contained Solar Energy System, provided, however, that a Self-Contained Solar Energy System(s) shall be limited to an aggregate Solar Collector Surface area of less than or equal to 6 square feet.

§160.250 LARGE SOLAR SYSTEMS, PERMITS REQUIRED

Large solar systems shall only be permitted in Manufacturing Districts and shall require a Special Use Permit recommended by the Plan Commission and approved by the City Council. The application for the Special Use Permit shall include plans stamped by an Illinois Licensed Engineer and include all details for placement, height and setbacks. The Plan Commission and City Council may place stipulations on the Special Use Permit for screening or other stipulations depending upon adjacent properties and zoning.

§160.250 PENALTY

The provisions of §10.99 shall apply to this chapter.



Adopted by the Council of the City of Kewanee, Illinois this 29<sup>nd</sup> day of May, 2018.

ATTEST:

\_\_\_\_\_  
Melinda Edwards, City Clerk

\_\_\_\_\_  
Steve Looney, Mayor

RECORD OF THE VOTE	Yes	No	Abstain	Absent
Mayor Steve Looney				
Council Member Andrew Koehler				
Council Member Chris Colomer				
Council Member Steve Faber				
Council Member Michael Yaklich				

DRAFT