

## MASON COUNTY SOLAR ENERGY SYSTEM (SES) ORDINANCE

### Scope

This article applies to all solar energy installations in unincorporated areas of Mason County for solar arrays that are not considered Commercial Solar Energy Facilities pursuant to 55 ILCS 5/5-12020. No provisions of this article shall apply to Commercial Solar Energy Facilities unless specifically noted.

### Purpose

The purpose of this ordinance is to ensure protection of the health, safety and welfare of the residents of Mason County and promote the safe, effective, and efficient use of solar energy. Also, to avoid adverse impact to important areas such as agricultural land, endangered species habitats, conservation land, and other sensitive lands. This ordinance shall not be deemed to nullify any provisions of local, state or federal law.

### Definitions

Ground Mount: A solar energy system mounted on a rack or pole that rests on or is attached to the ground.

Photovoltaic System: An active solar energy system that converts solar energy directly into electricity.

Roof Mount: A solar energy system that is mounted on a rack that is fastened onto a building roof.

Solar Energy: Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

Solar Energy System (SES): All components required to become a complete assembly or structure that will convert solar energy into electricity for use.

Solar Hot Water System: A system (also referred to as Solar Thermal) that includes a solar collector and a heat exchanger that heats or preheats water for building heating systems or other hot water needs, including residential domestic hot water and hot water for commercial processes.

Solar Mounting Devices: Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

### Building Permit Requirements and Fees

All Solar Energy Systems (SES) will be required to have a Mason County Building Permit before any work can be started. A written plan and a plat/ drawing for the proposed Solar Energy System shall be provided with the Building Permit Application. The plat / drawing must show the location of the system on the building or on the property, (for a ground-mount system show arrangement of panels), with all property lines and set back footages indicated. Fees for processing the applications for building permits shall be submitted to and collected by the Mason County Community Development Department as follows:

0-	10 kilowatts (kW)	\$ 150.00
11-	50 kilowatts (kW)	\$ 300.00
51-	100 kilowatts (kW)	\$ 600.00
101-	500 kilowatts (kW)	\$ <u>1,200.00</u>
501-	1,000 kilowatts (kW)	\$ <u>2,750.00</u>

1,001- 2,000 kilowatts (kW) \$ 6,000.00  
Over 2,000 kilowatts (kW) \$ 6,000.00 + 200.00 for each additional 0-100 kilowatts

*Any SES that construction has started before a Building Permit has been applied and paid for will be charged double the permit fee.*

### **Permitted/Special Use**

1. In non-residentially zoned districts, ground mount SES under 1 acre in total size or roof mount SES utilized exclusively for providing electricity to a single residence or other structure located on the same parcel as the SES are permitted. All other SES shall require a Special Use Permit. All ground mount solar arrays in a residential district must obtain a Special Use Permit from the County.
2. All SES, regardless of whether permitted or by Special Use Permit, shall comply with the design specifications of this article and the specifications for the zoning district in which the SES sits, including but not limited to: setbacks, noise, fencing, warning and safety requirements.

### **Set Back Requirements**

1. Set back requirements for all Solar Energy Systems (SES) shall meet the structure minimum set back requirements when the SES is oriented at any & all positions.
2. All SES shall be kept at least one hundred (100) feet from a property line or right-of-way, including any fencing surrounding the SES. However, this requirement may be waived, provided the SES owner/lessee obtains, and records with the Mason County Recorder, signed and notarized affidavits, agreeing that the required minimum setback be waived, from all property owners and affected road authorities adjoining the zoning lot on which the SES is to be located (as determined by Mason County). However, in no instance shall any part of a solar array, be located within fifty (50) feet of any of the aforementioned items.
3. No solar energy system shall be allowed to be placed in the front yard of any residentially used or zoned property.
4. Roof mounted solar energy systems shall not extend beyond the exterior perimeter of the building on which the system is mounted.

### **Height Requirements**

1. Roof mounted solar energy systems shall not exceed the maximum allowed height in any Zoning District.
2. Ground mounted solar energy systems shall not exceed 20 feet in height when the panels are at full tilt.

### **Other Requirements**

1. Upon request from the Mason County Zoning Department, an owner of a SES must provide documentation, within thirty (30) days, that the SES is still in use. If it is not, the owner of the System will have 180 days to remove the SES.
2. No fencing is required, unless otherwise required by law or condition of approval. If fencing is installed, the fencing shall have a maximum height of eight (8) feet. The fence shall contain appropriate warning signage that is posted such that is clearly visible on the site.

3. Any lighting shall be shielded so that no glare extends substantially beyond the boundaries of the parcel.
4. Reflection angles for solar collectors shall be oriented such that they do not project glare onto adjacent properties.
5. SES components must have a UL listing and must be designed with anti-reflective properties.
6. SES must be in compliance with all State of Illinois Building, Electric, Plumbing and Energy Codes.
7. For SES located within 500 feet of an airport or within approach zones of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of SES on Federally Obligated Airports, or most recent version adopted by the FAA.

*Plan Approval Required:* All permitted SES shall submit a plan for approval by the Mason County Zoning Department via the review of the application for a building permit.

- 1) *Plan Applications.* Plan applications for SES shall be accompanied by horizontal and vertical (elevation) drawings. The drawings must show the location of the system on the building or on the property for a ground-mount system, including the property lines.
  - a. *Pitched Roof Mounted Solar Energy Systems.* For all roof-mounted systems other than a flat roof the elevation must show the highest finished slope of the solar collector and the slope of the finished roof surface on which it is mounted.
  - b. *Flat Roof Mounted Solar Energy Systems.* For flat roof applications a drawing shall be submitted showing the distance to the roof edge and any parapets on the building and shall identify the height of the building on the street frontage side, the shortest distance of the system from the street frontage edge of the building, and the highest finished height of the solar collector above the finished surface of the roof.
- 2) *Plan Approvals.* Applications that meet the design requirements of this ordinance, and do not require a variance or Special Use Permit, shall be granted a building permit. Plan approval does not indicate compliance with Building Code or Electric Code.
- 3) *Approved Solar Components:* Electric solar energy system components must have a UL listing or approved equivalent and solar hot water systems must have an SRCC rating.
- 4) *Compliance with Building Code:* All active SES shall meet approval of county building codes, consistent with the State of Illinois Building Code and solar thermal systems shall comply with HVAC-related requirements of the Energy Code. Any county adopted building codes will apply and take precedence where applicable.
- 5) *Compliance with State Electric Code:* All photovoltaic systems shall comply with the Illinois State Electric Code.
- 6) *Compliance with State Plumbing Code:* Solar thermal systems shall comply with applicable Illinois State Plumbing Code requirements.

### **SES's Requiring a Special Use Permit**

SES's requiring a Special Use Permit shall comply with all provisions of this ordinance, any conditions, and shall demonstrate compliance with the ordinance during the Special Use Permit hearing. In addition to those provisions listed above, the Applicant/ Owner shall also comply with the following provisions.

1. *Stormwater and NPDES.* Solar farms are subject to Mason County's Stormwater Management regulations, erosion and sediment control provisions and NPDES permit requirements.
2. *Ground Cover and Buffer Areas.* Top soils shall not be removed during development, unless part of a remediation effort. Soils shall be planted to and maintained in perennial vegetation to prevent erosion, manage run off and build soil. A plan must be approved by the Soil Water Conservation District and paid for by the developer. Mason County has a Noxious Weed Ordinance which is to be followed. Due to potential county liability under the Illinois Endangered Species Protection Act (520 ILCS 10/11(b)) it is required that any crops planted be in compliance with all federal and state laws protecting endangered species. This will also include pollinators such as bees. A report showing demonstration of plan compliance shall be submitted annually, and paid for by the developer. Owner shall install a vegetative buffer of evergreen trees and shrubs that shall shield the SES from the view of any non-participating residence(s) within 500 feet of the SES. Applicant shall provide a vegetative buffer plan during the Special Use Permit hearing process and in the written application.
3. *Foundations.* A qualified engineer shall certify that the foundation and design of the solar panels racking and support is within accepted professional standards, given local soil and climate conditions.
4. *Other Standards and Codes.* All solar farms shall be in compliance with all applicable local, state and federal regulatory codes, including the State of Illinois Uniform Building Code, as amended; and the National Electric Code, as amended.
5. *Power and Communication Lines.* Power and communication lines running between banks of solar panels and to on-site electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted by Mason County in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines, or distance makes undergrounding infeasible, at the discretion of the Director of Community Development. In addition, the Illinois Department of Agriculture (IDOA) has established standards and policies in the Agricultural Impact Mitigation Agreements (AIMA) regarding the construction or burial of electric transmission lines which should be agreed to and adhered to between the landowner and the developer.
6. *Site Plan Required.* A detailed site plan for both existing and proposed conditions must be submitted, showing location of all solar arrays, other structures, property lines, rights-of-way, service roads, floodplains, wetlands and other protected natural resources, topography, farm tile, electric equipment, fencing, and screening materials and all other characteristics requested by Mason County. The site plan should also show all zoning districts, and overlay districts.
7. *Aviation Protection.* For solar farms located within 500 feet of an airport or within approach zones of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or most recent version adopted by the FAA.
8. *Endangered Species and Wetlands.* Solar farm developers shall be required to initiate a natural resource review consultation with the Illinois Department of Natural Resources (IDNR) through the department's online, EcoCat program. Areas reviewed through this process will be endangered species and wetlands. The cost of the EcoCat consultation will be borne by the developer.

### **Liability insurance and indemnification**

1. Commencing with the issuance of building permits, the Applicant or Owner shall maintain a current liability policy covering bodily injuries and any damage that may occur, on their homeowner's policy or other applicable policy as approved by the Director of Community Development.
2. Any SES(s), Applicant, Owner, or Operator, whether individual or commercial, shall defend, indemnify, and hold harmless the County and its officials, employees, and agents (collectively and individually, the "Indemnified Parties") from and against any and all claims, demands, losses, suits, causes of actions, damages, injuries, costs, expenses, and liabilities whatsoever, including reasonable attorney's fees, except to the extent arising in whole or part out of negligence or intentional acts of such Indemnified Parties (such liabilities together known as "liability") arising out of Applicant, Owner, or Operators selection, construction, operation, and removal of the SES(S) and affiliated equipment including, without limitation, liability for property damage or personal injury (including death), whether said liability is premised on contract or on tort (including without limitation strict liability or negligence). This general indemnification shall not be construed as limited or qualifying the county's other indemnification rights available under the law.

### **Severability**

If any term or provision of this Ordinance is deemed invalid by a Court of competent jurisdiction, the remainder of the provisions of this Ordinance shall continue in effect and enforceable.

### **Effective Date**

This Ordinance shall become effective on the date of its passage by the County Board.