

## 50.42 SOLAR ENERGY SYSTEMS

The purpose of this section is to facilitate the construction installation, and operation of solar farms (Solar Energy Systems - SES) in Madison County that promote economic development and ensure the protection of health, safety, and welfare while also avoiding adverse impacts to important areas such as prime agricultural lands, endangered species habitats, conservation lands, and other sensitive areas. This section is not intended to replace safety, health, or environmental requirements contained in other applicable codes, standards, or ordinances. The provision of this section shall not be deemed to nullify any provisions of local, state or federal law.

### 1. DEFINITIONS:

As used in this section, a Solar Energy Systems ("SES"), also known as a solar power plants and solar farms, means an alternative energy facility that consists of one or more ground-mounted or free-standing solar collection devices, solar energy related equipment, and other associated infrastructure with the primary intention of generating electricity or otherwise converting solar energy to a different form of energy for primarily commercial or other off-site use.

### 2. PERMIT REQUIRED

No person shall construct an SES without first obtaining a Conditional Use Permit and Zoning Certificates (building permits). An SES may be permitted as a Conditional Use in accordance with Section 50.20 and the following regulations and design standards.

### 3. MAXIMUM ACRES

The maximum number of acres in Madison County for Commercial Solar Energy Systems shall not exceed 4,000 acres.

### 4. DESIGN STANDARDS

The design standards and bulk regulations listed for all zoning districts for setbacks, lot size, lot coverage, lot area, height, and signage shall be suspended for all solar energy systems and the following regulations shall apply instead. All other design standards and bulk regulations of the respective districts shall apply. All solar energy systems shall be in compliance with all applicable local state and federal regulatory standards and applicable electric codes.

### 5. FOUNDATIONS

A qualified engineer shall certify that the foundation and design of the solar panels is within accepted professional standards, given local soil and climate conditions.

### 6. SETBACKS

Ground mounted solar energy systems as part of a solar energy development shall have a setback for all equipment, excluding fences, a minimum of 50 feet from any road and/or road right-of-way (typically the front), 50 feet from the rear property line and 25 feet from each side property line, with the exception of adjacent properties containing dwellings or platted subdivisions. The setback for all equipment, excluding fences, from the property line of adjacent properties containing dwellings or platted subdivisions shall be 150 feet. No setback is required for contiguous parcels that both contain a part of any one solar energy development.

### 7. WEED/GRASS CONTROL

Applicant must present an acceptable weed control plan for property inside and outside fenced area for entire property. Plan must include no less than 10% native plants and use a NRCS seeding plan. Site must be maintained to prevent fire hazards and be in compliance with County weed regulations as well as State and Federal environmental regulations. No soil sterilant shall be permitted to be used.

## 8. INSTALLATION AND DESIGN

Individual arrays/solar panels shall be designed and located in order to prevent glare toward any residential dwellings on adjacent properties as well as adjacent street ROW.

Power and communication lines running between banks of solar panels shall be buried underground except from point of interconnection to existing utility-owned, above-ground electrical wires. The Zoning Administrator, when or after granting a building permit, may grant exceptions when shallow bedrock, watercourses, or other elements of natural landscape interfere with the ability to bury Lines. Electrical lines shall be inspected by the State before burial.

- a. Lock boxes and keys shall be provided at locked entrances for emergency personnel access
- b. No SES shall be erected on any lot less than (3) acres in size.
- c. Systems, equipment, and structures shall not exceed thirty (35) feet in height when ground mounted unless approval is granted by the Madison County Board of Adjustment. Excluded from this height requirement are electric transmission lines, utility poles, and other poles and equipment used in connecting a ground-mounted piece of equipment to an electric transmission line.
- d. Drainage tiles shall be repaired or restored to conditions existing when the project began.
- e. MCSWCD shall be contacted prior to beginning development and the developer shall work closely with that office in the planning, construction and development to ensure all required permits are in place, identify any easement areas, and to conserve natural resources.

## 9. SCREENING AND FENCING

- a. Perimeter chain link fencing having a minimum height of (6) six feet shall be installed, maintained and secured around the boundary of the SES. The fence shall contain appropriate warning signage that is posted such that it is clearly visible.
- b. The SES shall have a 25 foot wide buffer which shall consist of a compact evergreen hedge or other type of evergreen foliage along any road frontage and the perimeter of any adjacent single family dwelling.
- c. The buffer shall be planted at a minimum of three (3) feet tall and with the expectation that this hedge shall reach the height of at least six (6) feet within five years and shall be maintained in good condition. Dead evergreen foliage shall be removed and replaced.

- d. A landscape plan shall be submitted for review and will become part of any approval. The landscape plan shall take into account the type(s) of evergreens to be planted, along with the proposed spacing of the plantings, along with an evaluation of the soils.
- e. Topographical features and existing wooded areas may be accepted in lieu of or in combination of the above requirements, if they conceal the use from public view and are maintained. This should be included as part of the submittal request and must be approved.
- f. The landscape plan shall also incorporate native grasses, flowers and plants which will provide wildlife and pollinator habitat, soil erosion protection and/or aid in strengthening the soil structure. This shall not be part of the evergreen screen but shall be for all other areas of the solar farm that will not interfere with the solar arrays.

#### 10. LIGHTING

A photometric plan shall be submitted for review as part of the submittal. All free standing and wall mounted security light fixtures shall not exceed 30 feet in height. The lighting elements shall be shielded from view of adjacent properties and the foot candle measurement at the property line shall not exceed 0.5. If the applicant chooses to apply safety lighting to the power plant stacks, said lighting can exceed the 30-foot height limit but shall not exceed a measurement of 0.5 foot-candles at the property line. Applicant is responsible for hiring a contractor to perform tests to confirm that lighting does not exceed 0.5 foot-candles at property line during construction and completion of construction. The Madison County Board of Adjustment has the right to approve the firm to perform assessment.

#### 11. NOISE

Noise levels when the solar energy development is in production shall not be detectable by the human ear measured at 500 feet from the property line when the solar energy development is located adjacent to an existing residence. This noise restriction applies to permanently installed solar equipment and excludes noise from routine maintenance, repair, and construction.

#### 12. SIGNAGE

An appropriate warning sign shall be provided at the entrance to the facility and along the perimeter to the solar energy development project. The sign at the entrance to the facility shall include the facility's 911 address and a 24 hour emergency contact number.

#### 13. MANUFACTURERS SPECIFICATIONS

The applicant shall provide standard manufacturers specifications and recommended installation methods for all major equipment, including solar panels, mounting systems and foundations for poles and racks. Specifications for the actual equipment to be used in the SES shall be required before a building permit is issued.

#### 14. AVIATION PROTECTION

Any SES located within five hundred (500) feet of an airport or within approach zones of an airport shall 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 Federal Obligated Airports, or most recent version adopted by the FAA.

#### 15. FIRE PROTECTION

Applicant shall provide a fire protection plan for the construction and operation of the facility and emergency access to the site.

16. SUBMITTAL REQUIREMENTS - *site plan with existing conditions showing the following:*

- a. Existing property lines and property lines extending five hundred feet from the exterior boundaries, including the names of adjacent property owners and current use of those properties including platted subdivisions and existing dwellings.
- b. Existing public and private roads, showing widths of the roads and any associated easements.
- c. A contour map showing topography at two (2) foot intervals of the project site. (A contour map of surrounding properties may also be required).
- d. Existing vegetation (list type and percent of coverage: i.e. cropland/plowed fields, grassland, wooded areas etc.)
- e. Waterways, watercourses, lakes and public water wetlands
- f. Any delineated wetland boundaries.
- g. A copy of the current FEMA FIRM map that shows the subject property.
- h. Mapped soils according to the Madison County Soil Survey and the CSR of the site.
- i. Surface water drainage patterns and field tile lines.
- j. Location, number, and spacing of solar panels.
- k. Location of access roads and access points.
- l. Planned location of underground or overhead electric lines connecting the SES to a building, substation or other electric load.
- m. New electrical equipment other than at the existing building or substation that is to be the connection point for the solar farm.

17. DECOMMISSIONING PLAN

A decommission plan shall be required for solar energy system projects to ensure that facilities are properly removed after their useful life.

- a. Decommissioning of solar panels must occur in the event they are not in use for twelve (12) consecutive months. The last day of this twelve (12) month period shall be considered the termination date. The operating company and/or land owner shall complete decommissioning of the SES within six months of the termination date or the county will perform decommissioning at the operating company's expense.
- b. The plan shall include provisions for removal of all structures (including equipment, fencing and roads), foundations and restoration of soil and vegetation.
- c. Prior to the issuance of a building permit, owner/developer shall submit bond(s) to cover the cost of Decommissioning. The prorated amount of the bond(s) shall be based on an independent engineer's estimate and increased annually to reflect the building schedule as to cover the additional improvements as they are constructed, starting with the issuance of the first building permit. At the completion of construction, the bond(s) must total 150% of the Engineer's estimate of the total decommission costs. It shall be the responsibility of owner/developer to maintain the bonds in sufficient amounts at all times after the completion of construction. Such responsibility to maintain the bond(s) shall include, but not be limited to, any necessary renewals or the issuance of new bond(s). All bonds shall be submitted to the Madison County Auditor. Madison County has the right to approve the individual or firm that conducts the independent Engineer's estimate for the total decommissioning bond costs.

- d. An update to this decommissioning plan shall be submitted to the Madison County Zoning Department every three years. In addition, decommissioning plans signed by the party responsible for decommissioning and the landowner (if different) shall be submitted with the application.
- e. The county reserves the right to require additional information or components to the plan as the county deems necessary to ensure that an adequate proposal is in place to decommission the facility in its entirety and that adequate funds are available.

#### 18. PUBLIC NUISANCE

Any solar project declared to be unsafe by Madison County Board by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage, or abandonment is hereby declared a Public Nuisance and shall be abated by repair, rehabilitation, demolition, or removal in accordance with the procedure set forth in this ordinance.

#### 19. PERMIT VALIDITY

Actual onsite construction must commence within 12 months of the approval date of the Conditional Use Permit by the Madison County Board of Adjustment or the Conditional Use Permit becomes null and void. The Madison County Board of Adjustment has the authority to extend the Conditional Use Permit expiration date if request for public hearing on an extension is received no later than 60 days prior to the 12 month anniversary date of the approval.

#### 20. LIABILITY INSURANCE

The owner or operator of the solar energy system project shall maintain a current and general liability policy covering bodily injury and property damage with limits of at least two million dollars per occurrence and five million dollars in the aggregate. The owner or operator of the solar project shall maintain this policy for the lifetime of the solar project and submit a copy of the same to the Madison County Zoning Administrator at each renewal. Madison County and its officials shall be named as additional insured's.

#### 21. FEES AND COSTS

No solar energy system Conditional Use Permit application shall be accepted until the filing fee is paid.

#### 22. SEVERABILITY

If any section, clause, or provision of this ordinance is declared unconstitutional or otherwise invalid by a court of competent jurisdiction, said declaration shall not affect the validity of the remainder of the ordinance as a whole or any part thereof, other than the part so declared to be unconstitutional or invalid.

Indemnification- The applicant, owner and/or operator of the solar project shall defend, indemnify, and hold harmless the County of Madison and its officials from and against any and all claims, demands, losses, suites, class of action, damages, injuries, costs, expenses and liabilities whatsoever, including attorney's fees, without limitation arising out of acts of

omissions of the applicant, owner and/or operator associated with the construction and/or operator associated with the construction and/or operation of the solar project.