

Proposed Zoning Ordinance Amendment

Creation of Division 115: Solar Energy Systems

Sections:

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1.01 Statement of Intent. The purpose of this Division is to facilitate the construction, installation, and operation of Solar Energy Systems (SES) in Louisa County in a manner that promotes economic development, protects property values, and ensures the protection of health, safety, and welfare while also avoiding adverse impacts to important areas such as agricultural lands, conservation lands, and other sensitive lands.

This Division does not repeal, abrogate, annul, impair or interfere with any existing ordinance.

1.02 Personal Solar Energy System (PSES).

A. Purpose and Intent.

The purpose of these regulations is to provide a uniform and comprehensive set of standards for the installation and use of PSESs designed for on-site home, farm and small commercial use that are used primarily to reduce on-site consumption of utility power. The intent of these regulations is to protect the public health, safety, and community welfare without unduly restricting the development of PSESs.

B. Permitted Use.

Personal Solar Energy Systems shall be considered an accessory use to a principal permitted use in any zoning district.

C. Special Requirements

Personal Solar Energy Systems shall be subject to the requirements included in Zoning Ordinance Section 60.6 Bulk Regulations unless otherwise stated herein:

- 1) *Ground Mounted PSES height.* Shall not be greater than fifteen (15) feet at maximum tilt of the solar panel(s) in any zoning district.
- 2) *Structure Mounted PSES height.* Shall not be greater than the allowable height of any structure within the zoning district in which the PSES is to be installed.
- 3) *Setbacks.* The ground mounted PSES shall maintain perimeter setbacks including; side and rear yard setbacks of ten (10) feet measured at full horizontal tilt and shall be ten (10) feet from any other building or structure on the same lot. No PSES shall be permitted to be located in the required front yard setback unless at least sixty (60) feet back from the edge of the county road right of way or at least eighty (80) feet back from the edge of state or federal road right of way.
- 4) *Building Codes.* All county, state, and national construction codes shall be followed.
- 5) *Use.* The PSES shall provide electricity for on-site use by the owner. This does not prohibit an owner from making excess power available for net metering.
- 6) *Approved Solar Components.* Electric solar energy system components must have an Underwriters Laboratory (UL) listing or approved equivalent.

D. Building Permit

Before a building permit is issued, the following shall be submitted to the Louisa County Zoning Administrator for review:

- 1) Site plan showing:
 - a) Name, address, email address, and phone number of the property owner;
 - b) Parcel lines;
 - c) All existing structures, with heights clearly marked;
 - d) Sanitary infrastructure (i.e. Septic field);
 - e) Setback measurements;
 - f) easements present on the property, including those for utilities
 - g) field tile location
 - h) floodplain location, if applicable
 - i) topography lines (2-foot contours)

- f) Location of all solar panels and associated equipment; and,
 - g) Location of the electrical disconnect for the PSES.
- 2) Evidence that the local electric utility has been informed of the customer's intent to install a customer-owned solar energy system.
 - 3) Evidence that the site plan has been submitted to the local fire protection district.

After a review and acceptance of site plan and required information, a letter authorizing construction shall be issued.

1.03 Solar Garden Energy System (SGES) and Solar Farm Energy System (SFES)

A. Purpose and Intent.

The purpose of these regulations is to provide a uniform and comprehensive set of standards for the installation and use of SGES and SFES designed for commercial energy production. The intent of these regulations is to protect the public health, safety, and community welfare while allowing development of solar energy resources for commercial purposes. Concentrating solar power (CSP) systems shall be prohibited.

B. Special Use Permit (SUP).

Solar Garden Energy Systems and Solar Farm Energy Systems shall require a Special Use Exception within the “A-1” Agricultural District, the “B-1” Business District, and the “I-1” Industrial Districts and shall be subject to the procedures and standards included in Section 150.2.2 Special Use Exceptions, in the Louisa County Zoning Ordinance unless otherwise stated in this Solar Energy Ordinance.

C. Special Requirements.

SGES and SFES are subject to the following requirements:

- 1) *Height.* Shall not exceed fifteen (15) feet at maximum tilt of the solar panel(s).
- 2) *Setbacks.*
 - a. The front yard setbacks shall be a minimum of fifty (50) feet from the edge of the right of way which form the outside perimeter of a SGES or SFES project area and one hundred (100) feet from a residence that is a part of the SGES or SFES project area. The Board of Adjustment may grant an exception to the setback requirement if the proposed or existing buffer is sufficient to screen the project from view of adjoining property or public rights-of-way, if the owners of the adjoining properties agree in writing to waive these setback requirements
 - b. In the case of a SGES or SFES to be built on more than one parcel and parcels are abutting, a zero (0) side or rear setback shall be permitted to the property line in common with the abutting parcel(s).

- c. Solar panels shall be least three hundred (300) feet from a residence that is not part of the SGES or SFES project area. The Board of Adjustment may grant an exception to the setback requirement if the proposed or existing buffer is sufficient to screen the project from view of adjoining property or public rights-of-way, if the owners of the adjoining properties agree in writing to waive these setback requirements
 - d. Solar panels shall be eighty (80) feet from the State Right of Way and sixty (60) feet from County Right of Way.
- 3) *Screening.* A landscape buffer may be required to be installed and maintained during the life of the operation. Determination of screening requirements will be made by the Board of Adjustment as part of the review and approval process and will be based on adjacent or nearby surrounding land uses and topography.
 - 4) *Fencing.* A security fence of at least six (6) feet in height but no greater than eight (8) feet shall enclose the SGES or SFES. **To restrict access to public.**
 - 5) *Lighting.* If lighting is provided for the SGES or SFES, lighting shall be shielded and downcast such that the light does not project directly onto the adjacent parcels.
 - 6) *Noise.* Noise levels caused by the SGES or SFES measured at the property line shall not exceed fifty (50) decibels when located adjacent to an existing residence or residential district.
 - 7) *Installation and Design.* The SGES or SFES shall be designed and located in such a fashion so as to prevent glare toward any inhabited buildings on adjacent properties, as well as adjacent roadways.
 - 8) *Utility Connections.* Reasonable efforts shall be made to place all utility connections from the solar installation underground, depending on appropriate soil conditions, shape and topography of the site, distance to the connection, or other conditions or requirements.
 - 9) *Outdoor storage.* Only the outdoor storage of materials, vehicles, and equipment that directly support the operation and maintenance of the solar farm or solar garden shall be allowed.
 - 10) *Endangered Species and Wetlands.* Applicant shall seek natural resource consultation with the Iowa Department of Natural Resources.
 - 11) *Weed control.* Applicant must present an acceptable weed/grass control plan for property inside and outside fenced area for the entire property. The operating company during the operation of the Solar Farm must maintain the fence and adhere to the weed control plan.
 - 12) *Waste.* All solid wastes, whether generated from supplies, equipment parts, packaging, operation or maintenance of the SGES or SFES shall be removed from the site and disposed

of in an appropriate manner. All hazardous waste generated by the operation shall be removed from the site immediately and disposed of in a manner consistent with all local, state, and federal requirements.

- 13) *Maintenance, repair or replacement of a facility.* Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to emergency response officials. Any retrofit, replacement or refurbishment of equipment shall adhere to all applicable local, state and federal requirements.
- 14) *Cleaning chemicals and solvents.* During operation of the proposed installation, all chemicals or solvents used to clean photovoltaic panels shall be low in volatile organic compounds and the operator shall use recyclable or biodegradable products to the extent possible. Any on-site storage of chemicals or solvents shall be referenced on the site plan.
- 15) *Road Use Agreements.* All routes on county roads that will be used for the construction and maintenance purposes shall be identified on the site plan. All routes for either ingress or egress shall be shown. The solar farm developer must complete and provide a preconstruction baseline survey to determine existing road conditions for assessing potential future damage due to development related traffic. The developer shall provide a road repair plan to ameliorate any and all damage, installation, or replacement of roads that might be required by the developer. The developer shall provide a letter of credit or surety bond in an amount and form approved by the appropriate highway authority(s) officials when warranted. The provision of this subsection shall be subject to the approval of the Louisa county Engineer.
- 16) *Soil erosion and sediment control.* The applicant agrees to conduct all roadwork and other site development work in compliance with a national pollutant discharge elimination system (NPDES) permit as required by the state department of natural resources and comply with requirements as detailed by local jurisdictional authorities during the plan submittal. If subject to NPDES requirements, the applicant must submit the permit for review and comment, and an erosion and sediment control plan before beginning construction. The plan must include both general "best management practices" for temporary erosion and sediment control (both during and after construction), and permanent drainage and erosion control measures to prevent both damage to local roads/adjacent areas and sediment laden run-off into waterways.
- 17) *Storm Water Management.* For the purposes of pollutant removal, stormwater rate and runoff management, flood reduction and associated impacts, the applicant shall provide a detailed storm water management plan with analysis of pre- and post-development stormwater runoff rates for review by local jurisdictional authorities.
- 18) *Administration and Enforcement.* The Zoning/Building Administrator and any necessary personnel may enter any property for which a special use or building permit has been issued

under this ordinance to conduct an inspection to determine whether the conditions stated in the permit have been met as specified by statute, ordinance and code. Failure to provide access shall be deemed a violation of this ordinance.

D. Certification.

SGES or SFES shall conform to applicable industry standards, including those from the Underwriters Laboratory (UL) and Federal Aviation Administration (FAA).

All applicable county, state, and national construction and electric codes shall be followed.

E. Safety.

All SGES or SFESs shall provide the following at all locked entrances:

- 1) A visible "High Voltage" warning sign;
- 2) Name(s) and phone number(s) for the electric utility provider;
- 3) Name(s) and phone number(s) for the site operator;
- 4) The facility's 911 address, GPS coordinates; and,
- 5) A lock box with keys as needed.

F. Application.

The application for a Special Use permit for a Solar Garden Energy System or Solar Farm Energy System shall include:

- 1) A written summary of the project including a general description of the project and its approximate generating capacity.
- 2) The name(s), address(s), and phone number(s) of the owner and SGES or SFES operator.
- 3) The Interconnection Agreement.
- 4) A site plan of the SGES or SFES site showing:
 - a) Boundaries of the site;
 - b) All proposed SGES or SFES structures;
 - c) Property lines;
 - d) Setback measurements;
 - e) Location of all existing structures within the project area with their uses identified and any existing structure within three hundred (300) feet of the project area with their uses identified.
 - (f) topography lines (2-foot contours); and

(g) floodplain location, if applicable.

5) All other information contained in Section 19.7 of the Zoning Ordinance as may be required to file a petition.

To protect agricultural soils, all solar gardens and solar farms will be subject to a land evaluation site assessment (LESA). The LESA information will be utilized for a special use permit application and not for map amendment or rezoning purposes.

G. Decommissioning Plan.

Prior to applying for a building permit, the SGES or SFES project owner/operator shall submit a decommissioning plan to the Louisa County Zoning Administrator. The Zoning Administrator shall review the plan for completeness and refer it to the Louisa County Board of Adjustment. The plan shall include:

- 1) A description of the plan to remove the SGES or SFES equipment and restore the land to its previous use upon the end of the project's life, as stated in the Solar Energy Ordinance granting the Special Use Permit, or as stated in the Louisa County Zoning Ordinance.
- 2) Provisions for the removal of structures, debris, and associated equipment on the surface and to a level of not less than ten (10) feet below the surface, and the timeline/sequence in which removal is expected to occur;
- 3) Provisions for the restoration of the soil, vegetation and disturbed earth, which shall be graded and reseeded;
- 4) An estimate of the decommissioning costs certified by a licensed professional engineer in current dollars. The engineer providing this estimate shall submit it to the Louisa County Zoning Administrator for review and all costs associated with this engagement shall be borne by the applicant;
- 5) A written financial plan approved to ensure that funds will be available for decommissioning and land restoration;
- 6) A provision that the terms of the decommissioning plan shall be binding upon the owner or operator and any of their successors, assigns, or heirs.
- 7) Upon review of the decommissioning plan, the Louisa County Board of Adjustment shall set an amount to be held in a bond, escrow, or other acceptable form of funds approved by the Board. The value of the surety shall not be reduced based on the salvage value of any materials or equipment. The plan shall state that Louisa County shall have access to the project and to the funds to effect or complete decommissioning one (1) year after cessation of operations; and,
- 8) The applicant shall provide the county with a new estimate of the cost to decommission the SGES or SFES project every five (5) years under the same conditions as set forth in this Sections above. Salvage value of structures, electrical wire and other appurtenances

shall not be considered with in the cost estimate calculations. Upon receipt of this new estimate, the county may require, and the applicant, owner, and/or operator of the SGES or SFES project shall provide, a new financial plan for decommissioning acceptable to the county. Failure to provide an acceptable financial plan shall be considered a cessation of operations.

- 9) Release of Financial Security. Financial security shall only be released when the Zoning Administrator determines, after inspection, that the conditions of the decommissioning plan have been met.

H. Building Permit

Before a building permit is issued, the following shall be submitted to the Louisa County Zoning Administrator for review:

- 1) Site plan with all items previously required in the petition. Additional items to be included are:
 - a) All SGES or SFES structures including, but not limited to, the project solar panels, substation, interconnect substation, and location and voltage of any overhead transmission lines;
 - b) Ancillary equipment;
 - c) Transmission lines;
 - d) Wells;
 - e) Sanitary infrastructure (i.e. Septic fields);
 - f) Field tile location;
 - g) Existing easements; and,
 - h) Wetland location, if any.
- 2) Emergency Plan. The site and emergency plan shall be submitted to the local fire protection district(s) and/or department(s) whose jurisdiction is included in whole or in part within the SGES or SFES project area. Any specialized training necessary will be provided at the operator's expense.
- 3) All required studies, reports, certifications, and approvals demonstrating compliance with the provisions of this ordinance.

After a review and acceptance of site plan and required information, a letter authorizing construction shall be issued.

1.04 Indemnification and Liability.

The applicant, owner, and/or operator of the SGES or SFES project shall defend, indemnify, and hold harmless the County of Louisa and its officials from and against any and all claims, demands, losses,

suites, causes of action, damages, injuries, costs, expenses, and liabilities whatsoever, including attorney's fees, without limitation, arising out of acts or omissions of the applicant, owner, and/or operator associated with the construction and/or operations of the SGES or SFES project.

1.05 Cessation of Operations.

Any SGES or SFES provided for in this ordinance that has not been in operation and producing electricity for at least one hundred and eighty (180) consecutive days, excluding natural catastrophic event, shall be removed. The Louisa County Zoning Administrator shall notify the owner to remove the system. Within ninety (90) days, the owner shall either submit evidence showing that the system has been operating and producing electricity or remove it. If the owner fails to or refuses to remove the solar energy system, the violation shall be referred to the Louisa County Attorney. In the case of a natural catastrophic event, a detailed restoration plan to return to operational status must be provided to the Zoning Administrator.

1.06 Violations & Penalties.

Violations and Penalties of this division are set forth in Division 140.

1.07 Solar Farm Energy System owner/County/Property Owner Restoration Agreement.

A. Reasonable evidence of financial ability to construct the solar energy system as determined by the Board of Adjustment is a condition precedent to the issuance of any special use or building permit under this ordinance.

B. Louisa County and/or the property owner leasing land for a solar energy system shall require a performance bond, surety bond, escrow account, letter of credit or other financial assurance to Louisa County and/or property owner for each solar energy system that guarantees the performance of the restoration agreement, as referenced in the Decommissioning Plan.

1.08 Related Rules and Regulations.

Each Solar Energy System shall comply with all applicable local, state and federal requirements.

1.09 Severability.

The provisions of this ordinance are severable, and the invalidity of any section, subdivision, paragraph or other part of this ordinance shall not affect the validity or effectiveness of the remainder of the ordinance.

1.10 Special Use Permit Fee Structure for Solar Garden Energy Systems and Solar Farm energy Systems.

For Systems Sized	Permit Fee
0-50 kilowatts (kW-dc)	\$300
51-100 kilowatts (kW-dc)	\$500
101-500 kilowatts (kW-dc)	\$1,000

501 - 1000 kilowatts (kW-dc)	\$3,000
1000 - 2000 kilowatts (kW-dc)	\$6,000
> 2000 kilowatts (kW-dc)	\$200 for each additional 0-100 kilowatts, with a maximum of \$10,000.

Proposed Amendments to the Zoning Ordinance

Additions to the Division 20: Definitions

The following definitions shall be added to 20.3 Definitions:

Concentrated or Concentrating Solar Power (CSP) System. A solar energy system that generates solar power by using mirrors or lenses to concentrate a large area of sunlight on to a small area.

Ground Mount Solar Energy System. A solar energy system that is directly installed into the ground and is not attached or affixed to an existing structure.

Net Metering. A billing arrangement that allows solar customers to obtain credit for the excess electricity that they generate and deliver back to the grid so that they only pay for their net electricity usage at the end of the month.

Perimeter. Circumference around two or more contiguous parcels actively engaged in SGES or SFES and connected to the same energy network.

Solar Energy. Radiant energy emitted by the sun that can be collected in the form of heat or light for use in power generation.

Solar Energy System (SES). The components and subsystems required to convert solar energy into electricity for use. The area of the system includes all the land inside the perimeter of the system, which extends to any security fencing.

Personal Solar Energy System (PSES). Any device or combination of devices or elements which rely upon direct sunlight as an energy source including but not limited to any substance or device which collects sunlight for generating electricity for use on-site. However, the energy output may be delivered to a power grid to offset the cost of energy on-site.

Solar Garden Energy System (SGES). A commercial solar-electric (photovoltaic) array that provides electric power to a cluster of households or businesses residing or located offsite from the location of the SES. It may be comprised of a single parcel of land or two (2) or more contiguous parcels of land.

Solar Farm Energy System (SFES). A commercial facility that converts sunlight to electricity, whether by photovoltaics (PV) or other conversion technologies for the primary purpose of wholesale sales of generated electricity. It may be comprised of a single parcel of land or two (2) or more contiguous parcels of land.

Solar Panel. A device for the direct conversion of solar energy into electricity.

Structure Mount Solar Energy System. A solar energy system in which solar panels are mounted on top of a roof structure as either a flush mounted system or as modules fixed to frames which can be tilted toward the south at an optical angle.

Wetlands. Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Additions to the Special Use Exceptions in “C-1” Conservation District

The following exceptions shall be added to 50.3 Special Use Exceptions:

50.3.4 Solar Garden Energy Systems (SGES)

50.3.5 Solar Farm Energy Systems (SFES)

Additions to the Special Use Exceptions in “A-1” Agricultural District

The following exceptions shall be added to 60.4 Special Use Exceptions:

E. Solar Garden Energy Systems (SGES)

F. Solar Farm Energy Systems (SFES)

Amendment to 160.4.1 Comprehensive Plan and Zoning Hearings

Strike: Notice of the time and place of the hearing will be given, and that at least 4 days (Iowa Code, Chapter 335) before such hearing, by one publication in a newspaper of general circulation.

Replace with: Notice of the time and place of the hearing will be given following the provisions of Iowa Code, Chapter 335.

Amendment to 170.1 County Board May Amend Ordinance

Strike: Before submitting its recommendations and report to the Board of Supervisors, the Commission shall hold a public hearing on the proposed amendment, supplement or change. It shall give not less than 15 nor more than 30 days notice of the time and place of hearing by

publication in a newspaper published in the county and when a change district boundaries or classification of property is involved by mailing notices to all property owners directly involved, contiguous to or directly across a road or alley from the area proposed to be altered.

Replace with: Before submitting its recommendations and report to the Board of Supervisors, the Commission shall hold a public hearing on the proposed amendment, supplement or change. Notice of the time and place of hearing will be as set forth in Iowa Code Chapter 335 and when a change district boundaries or classification of property is involved by mailing notices to all property owners directly involved, contiguous to or directly across a road or alley from the area proposed to be altered.

DRAFT

Proposed Amendment to Comprehensive Plan

Addition of new Chapter 9

CHAPTER 9: RENEWABLE ENERGY

Definition

Renewable Energy is defined by the U.S. Environmental Protection Agency (EPA) as “resources that rely on fuel sources that restore themselves over short periods of time and do not diminish. Such fuel sources include the sun, wind, moving water, organic plant and waste material (eligible biomass), and the earth’s heat (geothermal).”

Goals

Goal 1: Encourage and support the development and use of renewable energy sources to build the local economy, improve the environment, and reduce long-term risks associated with traditional energy supply from fossil fuels.

Goal 2: Encourage local production of solar energy on new residential and commercial construction.

Goal 3: Maximize the production of solar photovoltaic energy to the extent feasible, while minimizing potential biological, agricultural, aesthetic, and other environmental impacts.

Policies

Policy 1: Support the State’s efforts to develop Iowa’s local energy resources and reduce reliance on imported energy fuels by encouraging appropriate solar development in regulations and programs.