

**219 SOLAR ENERGY SYSTEM STANDARDS**

**219 PURPOSE & APPLICABILITY:**

The purpose of these regulations is to provide a uniform and comprehensive set of standards for the installation and use of any Personal Solar Energy Systems (PSES) and Solar Farm Energy Systems (SFES) designed for commercial energy production. Subject to reasonable restriction, these regulations are intended to preserve the health and safety of the public. No entity shall construct or operate a PSES and/or SFES within Jay County without having fully complied with the provisions of this Section and/or Ordinance.

**219.1 DEFINITIONS:**

The following words and terms shall, for the purpose of this Section and used elsewhere in this Ordinance, have the meaning shown herein.

**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.

**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.

**Solar Energy System (SES):** The components and subsystems required to convert solar energy into electric or thermal energy suitable for use. The area of system includes all the land inside the perimeter of the system, which extends to any 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 Farm Energy System (SFES):** A commercial facility, on a parcel(s) of five acres or more that converts sunlight to electricity, whether by photovoltaics concentrating solar thermal devices, or various experimental technologies for on-site or off-site use with the primary purpose of selling wholesale or retail generated electricity.

**Solar Farm Energy System Project Area:** A SFES project area may be comprised of a single parcel of land or two or more contiguous parcels of land providing that the total area of SFES project area consists of five acres of land or more

**Primary Structure:** Means, for each property, the structure that one or more persons occupy the majority of time on that property for either business or personal reasons. Primary Structure includes structures such as residences, commercial buildings, hospitals, and day care facilities. Primary Structure excludes structures such as hunting sheds, storage sheds, pool houses, unattached garages and barns.

**Applicant:** The entity or person who submits to the County, an application for the siting of any SFES or Substation or thereafter operates or owns a SFES.

**Operator:** The entity responsible for the day-to-day operation and maintenance of the SFES, including any third party subcontractors.

**Owner:** The entity or entities with an equity interest in the SFES, including their respective successors and assigns. Owner does not mean the property owner from whom land is leased for locating the SFES (unless the property owner has an equity interest in the SFES); or any person holding a security interest in the SFES solely to secure an extension of credit, or a person foreclosing on such security interest provided that after foreclosure, such person seeks to sell the SFES within one year of such event.

## **219.2 PERSONAL SOLAR ENERGY SYSTEM (PSES):**

### **A. PSES Purpose & Standards**

The purpose of these regulations is to provide a uniform and comprehensive set of standards for the installation and use of PSES's 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 PSES's.

### **B. Permitted Use**

A PSES shall be considered an accessory use to a principal permitted use only in districts in the unincorporated areas of the County that are covered by this Ordinance. The PSES shall provide power for on-site use only by the owner.

### **C. Special Requirements**

A PSES shall also be subject to the requirements per zoned district as shown in Sections 205 thru 211 of this Ordinance unless otherwise stated herein.

1. **Ground Mounted PSES Height:** Shall not be greater than twenty (20) feet at the maximum tilt of the solar panel(s) in any zoning district.
2. **Setbacks for Ground Mounted PSES:** The PSES shall maintain perimeter setbacks including side and rear yard setbacks of 10 feet. No PSES shall be permitted to be located in the required front yard setback unless at least 100 feet back from the edge of the right of way with a vegetative buffer toward any neighboring residential structure.
3. **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.
4. **Roof Mounted PSES:** Prior to installation, a certificate from a licensed engineer is required stating the structure can handle the panels. The panels shall be installed per manufactures specifications and have a Visible Disconnect.
5. **Approved Solar Components:** Electric solar energy system components must have an Underwriters laboratory (UL) listing or approved equivalent.
6. **Building Codes:** All county, state and national construction codes shall be followed.
7. **Glare:** The PSES shall be designed and located in order to prevent glare toward any inhabited buildings or adjacent properties as well as adjacent highways or right-of-ways.

### **D. Permitting**

Before a building permit is issued, the following shall be submitted to the Jay County Zoning Administrator for review including, but not limited to:

1. Site plan showing:
  - a. Name, address and phone number of the property owner;
  - b. Property lines; all structures; septic field; setback lines;
  - c. Location of all solar panels and associated equipment; and
  - d. 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.

### **E. Permit Fee**

Before issuing any permits, the applicant will be required to pay the required fee as set forth in the Official Fee Schedule which is maintained by the Zoning Administrator.

### **219.3 SOLAR FARM ENERGY SYSTEM (SFES) DEVELOPMENT PLAN & PERMITTING**

This Section also governs the siting of any solar farm energy system (SFES) designed for commercial energy production and to assure that any development and production of solar generated electricity in Jay County is safe and effective by providing a regulatory scheme for the construction and operation of any SFES in the County.

Prior to the construction of any SFES, the applicant, owner and operator shall be required to obtain the following:

- A. Development Plan approval for the project from the Jay County Plan Commission.
- B. Approval from the Jay County Board of Zoning Appeals for any required variances or special exceptions anticipated for the project.
- C. Improvement Location Permits associated with the project from the Zoning Administrator.

### **219.4 SFES DEVELOPMENT PLAN APPLICATION & REVIEW**

Prior to the construction of any SFES, the applicant, owner and operator shall file with the Zoning Administrator an application for Development Plan review. Development Plan review is provided for by the IC 36-7-4-1400 series. The Development Plan review process is not intended to provide an alternative to rezoning, variance, special exception, platting, or other established procedures; but rather to allow for the administrative review of site conditions and plans for consistency with applicable requirements prior to the issuance of Improvement Location Permits. The filing shall include but not be limited to the following:

- A. **Application:** The applicant, owner and operator shall submit an application for Development Plan review along with a description, including names, address, and contact information of the applicant, owner, and operator including their respective business structures; along with, but not be limited to the following.
  1. **Summary Statement & Site Description:** A SFES project summary shall include, but not be limited to:
    - a. a general description of the project including its approximate generating capacity;
    - b. the general location of the project;
    - c. the type of SFES to be used and the potential equipment manufacturer;
    - e. The number of panels to be installed.
  2. The names, addresses, phone numbers and/or contact information for all property owners with the SFES proposed on their properties.
  3. **Site Plan:** A site plan at a scale approved by the Zoning Administrator showing:
    - a. The proposed location on the SFES showing the boundaries of the site;
    - b. the location of all proposed SFES structures including substations;
    - c. property lines, including identification of adjoining properties;
    - d. location of all primary structures within ¼ mile of the site;
    - e. public roads;
    - f. any wetlands based upon a delineation prepared in accordance with the applicable US Army Corps of Engineer requirements and guidelines.
  4. **A topographic map** of the project site and the surrounding area which shall encompass an area at least a quarter mile radius from the proposed project site with contours of not more than five foot intervals
  5. **Approved Fencing & Landscaping/Buffer Plan** (See Section 219.10)
  6. **Approved Road Use Agreement** (See Section 219.12)
  7. **Approved Decommissioning Plan Agreement** approval (see Section 219.13)

8. **Proof of Liability Insurance Plan approval** (See Section 219.15)
  9. **Any other information** required by the Zoning Administrator for the proper enforcement of this Ordinance
  10. **Application Filing Fee:** The fee applicable to the application shall be payable at the time of submission of the application, **and such fee shall be \$20,000.00**. The Application fee shall be used to defray the costs associated with the Application, including professional fees and expenses.
- B. Zoning Administrator Review:** The Zoning Administrator shall review the Development Plan, including all supporting information. When the proposed Development Plan is in compliance with the requirements of the Ordinance, the Development Plan shall be forwarded to the Plan Commission for review in a public hearing.
- C. Public Hearing Notification:** Notification for the scheduled public hearing regarding the Development Plan shall be completed consistent with the requirements of the Rules & Procedures of the Plan Commission along with the requirements of IC 5-3-1 for publication.
- D. Plan Commission Review:** The Plan Commission shall, in a public hearing, review the development plan. The review of the development plan shall be in compliance with the requirements of IC 36-7-4-1405 as amended.
- E. Findings of Fact (IC 36-7-4-1406):** The Zoning Administrator shall prepare and sign written findings of fact documenting the action taken by Plan Commission.
- F. Permits:** Prior to any construction activity, the applicant, owner and operator shall be required to obtain the appropriate Improvement Location Permit(s) and any other required permits specified by this Ordinance.

#### **219.5 REVISIONS TO SFES DEVELOPMENT PLAN:**

Any revisions to the approved Development Plan shall require approval prior to the issuance of any construction permits. The proposed revisions along with all required supporting information shall be submitted to the Zoning Administrator for review, to assure that the revisions are in compliance with the Ordinance. If the Zoning Administrator determines that the revisions require Plan Commission approval, the revisions will be forwarded to the Plan Commission for review. If the Plan Commission determines that a public hearing is necessary, notification for the public hearing will be consistent with the requirements of the Rules & Procedures of the Plan Commission. The review shall be in compliance with the requirements of IC 36-7-4-1405 as amended.

## **219.6 REQUIREMENTS FOR IMPROVEMENT LOCATION PERMIT & FEES:**

Prior to any construction associated with the SFES project, the applicant, owner and/or operator shall file with the Zoning Administrator an application for the project site along with any other structures associated with the project and pay the according permit fees.

**A. Application:** The application shall include, but not be limited to the following:

**1. A plot plan showing the following:**

- a. the location of all SFES structures and substations;
- b. location, number and spacing of solar panels;
- c. location of fencing and buffer/screening areas;
- d. property lines, setbacks and any existing easements;
- e. location of access roads and access points
- f. the location of all above ground and underground utility lines associated with the site;
- g. the location of electrical cabling, ancillary equipment and transmission lines;
- h. Field tile locations;
- i. Existing and/or abandoned Wells and Septic Fields;
- k. Floodplain location and elevation and Wetland locations, if any.

**B. Additional Information Requirements:** The following may be submitted one time for the entire project, but must be submitted prior to the issuance of any permits.

**1. Approved Emergency Plan / Fire Safety Plan:**

- A. The site and emergency plan shall be submitted to the local fire protection districts and/or department(s) whose jurisdiction is included in whole or in part within the SFES project area
- B. Any specialized training necessary will be provided at the operator's expense.
- C. Knox boxes and keys shall be provided at locked entrances for emergency personnel access.
- D. The names and phone numbers for the electric utility provider and the site operator along with the facilities 911 address and GPS coordinates shall be provided as part of the emergency plan.

**2. Approved Drainage Plan.** A drainage plan for construction and operation must be approved by the Jay County Drainage Board prior to issuance of any permits.

**3. An Erosion Control Plan (Rule 5)** must be approved by the Jay County Soil & Water Conservation District regarding IDEM Rule 5 requirements prior to issuance of any permits.

**4. Health Department Approval:** The applicant, owner and/or operator shall comply with existing septic and well regulations as required by the Jay County Health Department and the Indiana Department of Public Health prior to the issuance of any applicable permits.

**5. Any other information** required by the Zoning Administrator for the proper enforcement of this Ordinance.

**C. Permit Fees:**

**1.** Prior to the issuance of any permits for the SFES project, the applicant, owner and/or operator shall pay the required permit fee that will be based on \$1,750.00 per MW.

**2.** Any other structure associated with the project shall require a separate Improvement Location Permit. The permit fee will be in accordance with the Official Fee Schedule, which is maintained by the Zoning Administrator.

**219.7 SFES SETBACKS –**

A. The minimum setback distances for SFES shall be as follows:

<u>Distance from a...</u>	<u>Minimum Setback Distance</u>
<u>Property line</u> , measured from the edge of the equipment to the property line	<b>150 feet</b> for non-participating landowners. The setback requirement may be waived in writing by participating landowners
<u>Residential dwellings</u> , measured from the edge of the equipment to the property line	<b>150 feet</b> for non-participating landowners. The setback requirement may be waived in writing, by participating landowners
<u>Church, school, business or public building</u> , measured from the edge of the equipment to the property line	<b>150 feet</b> from the property line
<u>Area zoned Commercial, Rural Residential</u> and any Commercial zoned recreational area, measured from the edge of the equipment to the property line	<b>150 feet</b> from the property line
<u>Road right-of-way</u> , measured from the edge of the equipment to the edge of the right-of-way	<b>150 feet</b> from the Road right-of-way
<u>Access driveways</u> to the property line	All access driveways must be <b>300 feet</b> for any non-participating landowner property lines.
<u>Nature preserve, park and/or recreational use</u> including property owned by IDNR, Friends of the Limberlost and/or any such property associated with the Loblolly reconstruction project area, and Public conservation lands, measured from the center of the WECS to the nearest point of the land in question	<b>150 feet</b> from the property line
<u>Wetlands</u> , as defined by the U.S. Army Corps of Engineers, measured from the center of the WECS to the nearest point of the wetland in question	As determined by a permit obtained from the Army Corps of Engineers

B. Any new primary structure built adjacent to a SFES shall maintain the same minimum setback requirements.

C. No part of a SFES shall be constructed in any setback, dedicated easement or County road right-of-way without prior written authorization from the County.

## **219.8 SFES DESIGN & INSTALLATION STANDARDS:**

### **A. Manufacturer's Specifications & Certification:**

The applicant shall provide standard manufacturer's 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 SFES shall be required before a building permit is issued. All SFESs shall conform to applicable industry standards, including those from the UL and Federal Aviation Administration (FAA).

- B. Equipment Type:** All equipment shall be new equipment commercially available. Used, experimental or proto-type equipment still in testing shall require approval by the BZA as per the normal special exception process.

- C. Electrical Components, Cabling & Wiring:** All electrical components of the SFES shall conform to applicable local, state, and national codes, and relevant national and international standards. All SFES electrical collection cables shall be located underground unless they are located on public or utility rights-of-way or with prior County approval.

All underground work outside of the solar field shall comply with the regulations as follows

- a. All underground cabling will be buried no less than 60" (sixty inches) deep.
- b. All underground cabling will have warning mesh at 36" (thirty six inches) deep.
- c. All underground cabling will be marked at road crossings, creeks, river beds and property lines.

- D. Utility Interconnection:** Must be in compliance with all applicable local, state and federal codes.

### **E. Safety & Warnings:**

All SFESs shall provide the following at all locked entrances:

1. A visible "High Voltage" warning sign
2. Names and phone numbers for the electric utility provider
3. names and phone numbers for the site operator
4. The facilities 911 address, GPS coordinates, and
5. A knox box with keys as needed.

- F. Lighting:** If lighting is provided at the project, lighting shall be shielded and downcast such that the light does not spill on to the adjacent parcel and/or residence and/or primary structure.

- G. Height:** Shall not exceed twenty (20) feet in maximum tilt of the solar panel(s).

- H. Glare:** The SFES shall be designed and located in order to prevent glare toward any inhabited buildings or adjacent properties as well as adjacent highways or right-of-ways.

- I. Noise:** Noise levels measured at the property line shall not exceed 50 decibels when located adjacent to an existing residence or residential district.

- J. Outdoor Storage:** Only the outdoor storage of materials, vehicles and equipment that directly support the operation and maintenance of the solar farm shall be allowed.

- L. Damage & Repairs:** All damages including, but not limited to waterways, drainage ditches, field tiles, and/or any other infrastructures caused by the construction or maintenance of the SFES, must be completely repaired to original or better condition, and so as not to impede the flow of water. All repairs must be completed within a reasonable amount of time as agreed upon between the County and the applicant, owner and/or operator.

- M. Waste Handling & Disposal:** All solid waste whether generated from supplies, equipment, parts, packaging, operation and/or maintenance of the facility, including but not limited to old parts and equipment, shall be removed from the site promptly and disposed of in accordance with all local, state and federal, laws. All hazardous materials and/or waste related to the construction, operation and/or maintenance of the facility, including but not limited to lubrication materials, shall be handled, stored, transported and disposed of in accordance with all local, state and federal laws.

#### **219.9 UNDERGROUND WORK AFTER CONSTRUCTION:**

To help insure the safety of the public, no underground work, including but not limited to farm drainage, gas lines, and/or any other such work, shall be performed on land within the SFES project area without an employee of the SFES operation on site. This includes but is not limited to, property owners, sub-contractors, utility workers and/or County employees.

#### **219.10 SFES FENCING & LANDSCAPING PLAN**

The SFES project must comply with the following requirements:

- A. **Fencing:** All SFES systems equipment, panels and structures shall be fully enclosed and secured by a fence with a minimum height of 6 feet but no greater than 8 feet and must setback a minimum of 30 feet from any property line.
- B. **Buffer:** The SFES shall have a 25 foot wide buffer of which part shall be consisting of a compact evergreen hedge or other type of evergreen foliage which shall be along the road frontage and perimeter of adjacent single family dwelling.

#### **219.11 SFES OPERATION, MAINTENANCE AND INSPECTIONS:**

- A. **Maintenance:** Any physical modification to the SFES that alters the mechanical load, mechanical load path, or major electrical components shall require re-certification. Like-kind replacements shall not require re-certification. Prior to making any physical modifications (other than a like-kind replacement), the owner and/or operator shall confer with the County Building Inspector to determine whether the physical modification requires re-certification.
- B. **Interference & Glare:** If, after construction of the SFES, the owner and/or operator receives a written complaint related to interference with any local broadcast residential television, telecommunication, communication, microwave transmissions and/or glare, the SFES owner and/or operator shall take reasonable steps to respond to minimize the complaint.
- C. **Inspections:** The County Building Inspector, and/or licensed third party professionals retained by the County for the specific purpose of conducting inspections of the SFES shall have the right, at any reasonable time and with sufficient prior notice, to accompany the owner and/or operator and/or his agent, on the premises where a SFES has been constructed, to inspect all parts of said SFES installation and to require that repairs or alterations be made. The owner and/or operator of a SFES may retain a licensed third party professional engineer familiar with systems to prepare and submit to the County Building Inspector which addresses the repairs or alterations requested and which suggest alternate methods for addressing the concerns or provides evidence that said repairs or alterations are unnecessary, within thirty (30) days after receiving notice from the County Building Inspector that repairs or alterations are requested, or within a longer period of time mutually acceptable to both parties. The County Building Inspector will consider any such written report and determine whether the repairs or alterations should be made as originally requested or as suggested in the written report. In the event of a dispute between the County Building Inspector and the owner and/or operator, or a third party professional engineer retained by them, as to the repairs or alterations which are required, the decision of the County Building Inspector shall be final. Any fees for inspections made by a third party professional inspector and/or engineer retained by the County shall be paid by the owner and/or operator.
- D. **Declaration of a Public Nuisance:** Any SFES thereof declared to be unsafe by the Jay County Building Inspector by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal in accordance with the approved Decommissioning Plan Agreement. Nothing in this Ordinance is intended to preempt any other applicable state and federal laws and regulations.



#### **219.12 SFES ROAD USE AGREEMENT:**

Prior to the use of any county road for the purpose of transporting parts and/or equipment for construction, operation, or maintenance of the SFES or substation, the applicant, owner and/or operator must provide proof of a signed road agreement between the County and the applicant, owner and/or operator. The Road Use Agreement must include, but not be limited to the following:

- A. **Identification of all such public roads.** Any proposed routes that will be used for construction and maintenance purposes shall be identified. If the route includes a public road, it must be approved by the County Engineer. The County Engineer shall conduct a pre-construction baseline survey to determine existing road conditions for assessing potential future damage.
- B. Any road damage caused by the construction of the SFES project equipment, the installation of same, or the removal of same, must be repaired to the satisfaction of the County Engineer. The County Engineer may choose to require either remediation of road damage upon completion of the project or is authorized to collect fees for oversized load permits. Further, a corporate surety bond in an amount to be fixed by a professional engineer may be required by the County Engineer to insure the County that future repairs are completed to the satisfaction of the County. The cost of bonding is to be paid by the applicant, owner and/or operator.
- C. Newly constructed SFES access roads may not impede the flow of water and shall comply with the Jay County Drainage Ordinance and Drainage Plan Agreement.
- D. No part of the SFES including, but not limited to above ground transmission lines and poles or below ground transmission lines shall be constructed and/or placed in any County road right-of-way or dedicated easement without prior written approval from the County.

#### **219.13 SFES DECOMMISSIONING PLAN AGREEMENT:**

Prior to receiving construction approval for the SFES project, the applicant, owner and/or operator must provide proof of a signed Decommissioning Plan Agreement between the County and the applicant, owner and/or operator. The Decommissioning Plan is to ensure that the SFES facilities are properly decommissioned upon the end of the project life or facility abandonment. The Decommissioning Plan shall include but not be limited to the following:

- A. Assurance that the facilities are properly decommissioned upon the end of the project life or facility abandonment. The applicant, owner and/or operator's obligations with respect to decommissioning shall include removal of all physical material pertaining to the project improvements to a depth of 48" beneath the soil surface, and restoration of the area occupied by the project improvements to the same or better condition that existed immediately before construction of such improvements. Prior to issuance of a building permit, the applicant, owner and/or operator shall provide a contractor cost estimate for demolition and removal of the SFES facility and will provide financial assurance in an amount at least equal to said demolition and removal contractor cost estimate, through the use of a bond, letter of credit or other security acceptable to the County, the cost of decommissioning the solar field(s) under the building permit, which security shall be released when said solar field(s) is properly decommissioned as determined by the County Building Inspector. In the event of abandonment by the owner and/or operator, the applicant will provide an affidavit to the Zoning Administrator representing that all easements for the solar field(s) shall contain terms that provide financial assurance, including access to the salvage value of the equipment, for the property owners to ensure that facilities are properly decommissioned within twelve (12) months of expiration or earlier termination of the project.
- B. The applicant, owner, and/or operator's failure to comply with, or make reasonable progress in getting into compliance any of the above provisions shall constitute a default under this Ordinance.
- C. Prior to implementation of the existing County procedures for the resolution of each default, the appropriate County body shall first provide written notice to the owner and operator, setting forth the alleged default. Such written notice shall provide the owner and operator a reasonable time period, not to exceed 60 days, for good faith negotiations to resolve the alleged default.
- D. If the County determines, in its discretion, that the parties cannot resolve the alleged default within the good faith negotiation period, the existing County ordinance provisions addressing the resolution of such default shall govern.

**219.14 INDEMNIFICATION**

The applicant, owner and/or operator of the SFES project shall defend, indemnify, and hold harmless the County and its officials from and against any and all claims, demands, losses, suites, causes of action, damages, injuries, costs, expenses, and liability 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 SFES project.

**219.15 LIABILITY INSURANCE:**

The owner or operator of the SFES shall maintain general comprehensive liability insurance coverage naming Jay County as an additional party insured with a company and under terms approved by Jay County with combined limits for bodily injury and property damage in the aggregate amount of \$5 million per occurrence with a commercially reasonable deductible approved by Jay County.

**219.16 CHANGE IN OWNERSHIP:**

It is the responsibility of the owner and/or operator listed in the application to inform the Zoning Administrator of all changes in ownership and operation during the life of the SFES project, including the sale or transfer of ownership and/or operation.

**219.17 WAIVING REQUIREMENTS:**

Requirements of this Section may be waived by the Jay County Board of Zoning Appeals upon application and after public hearings.