

5.23 Solar Energy Collection Systems (SECS) Overlay District

This section establishes special land use and development requirements for Solar Energy Collection Systems. Specifically, it creates a supplemental zone that lies on top of an existing zoning district and is intended to add additional design standards and restrictions beyond those of the underlying zoning district in which it is created. The purpose of this district is to protect the public interests related to solar energy collection at a large scale and may cover parts of several zones or only a portion of a single zone. The overlay district does not regulate small scale, private solar panels that is not sold commercially to a utility but rather is used for private energy consumption.

SECS-1: Definitions.

- A. Solar Energy Collection System (SECS). A solar collection system principally used to capture solar energy, convert it to electrical or thermal energy that is used to produce electrical or thermal energy for consumption.
- B. Commercial Solar Energy Collection System (CSECS). A solar energy collection system that generates energy primarily for use off-site, for wholesale to the electrical grid, or for utility use.
- C. Private Solar Energy Collection System (PSECS). A solar energy collection system that generates energy primarily for private energy consumption on the site.
- D. Concentrated Solar Thermal Power. A SECS that uses lenses or mirrors to focus or reflect a large area of sunlight into a concentrated small area. The concentrated energy is used as a heat source for power generation.
- E. Solar Photovoltaic (PV) System. A SECS consisting of photovoltaic cells made with semiconducting materials that produce electricity when they are exposed to sunlight.
- F. Battery Energy Storage System (BESS). A battery system that stores electrical energy, making the electricity available for later use.
- G. Agrivoltaics System. A Solar Photovoltaic SECS that is co-located on the same parcel of land as agricultural uses, including, but not limited to, crop production, grazing, and apiaries.

SECS-2: Private SECS.

This subsection provides regulations for Private Solar Energy Collection Systems. Unless otherwise stated, the remaining subsections regulate Commercial Solar Energy Collections Systems.

- A. PSECS shall provide energy primarily to an on-site user.
 - 1. Energy that is not used by the on-site user and is surplus may be:
 - a. Stored using a battery system for later usage on-site
 - b. Provided to users off-site or to the utility grid through net metering, distributed generation compensation, or a similar system.
 - 2. PSECS shall not commercially produce energy for wholesale to a utility or off-site user.

~~B. Total panel area of a PSECS shall not exceed 43,560 square feet.~~

~~C.B.~~ PSECS are permitted accessory uses in all zoning districts.

~~D.C.~~ On-building. A PSECS that is installed on an existing or permitted building shall comply with the development standards for structures in the zoning district in which it is installed.

E.D. Ground-mounted. A PSECS that is constructed as free-standing shall comply with the development standards for accessory structures in the zoning district in which it is constructed.

1. The area of solar panels in a ground-mounted PSECS shall not be included in the calculation of impervious surface for the purpose of lot coverage if the soil under the panels is maintained in vegetation and is not compacted.

SECS-3: Approval Process.

The following shall be the process for establishing a Commercial Solar Energy Collection System (CSECS) facility.

- A. Zone map amendment. A SECS Overlay District is reviewed and may be adopted as with any other zone map amendment request, subject to the regulations of this Section. If adopted, the SECS Overlay District provides additional regulations and provisions on the properties over which it is placed.
- B. Development Plan approval. A proposed CSECS shall have a Development Plan approved prior to the issuance of any permits. In addition to those requirements for Development Plans in Chapter 7, the following items shall be required, reviewed, and approved by the Plan Commission as a whole (not the Development Plan Committee):
 1. Site plan
 2. Panel location plan and specifications
 3. Vegetation/landscape plan
 4. Stormwater management plan
 5. Construction period plan, including at least:
 - a. Traffic management and parking
 - b. Laydown and staging areas
 - c. Temporary storage areas
 6. Decommissioning and site restoration plan
 7. Items for review, but are subject to final approval by others:
 - a. Economic Development Agreement
 - b. Road Usage and Repair Agreement/Bond
 - c. Erosion Control Plan
 - d. Emergency Response Plan
- C. Amendments to an approved Development Plan shall follow the process in Section 7.9. Minor changes and reconfigurations of panels and equipment within the setbacks and separations approved in the Development Plan are non-substantial deviations.
- D. Process abandonment and expiration.
 1. If a Development Plan is not approved after a period of three (3) years from the date the properties were approved to be part of the Overlay District, the properties shall be removed from the Overlay District.
 2. A Development Plan approval expires if an Improvement Location Permit (ILP) is not issued within three (3) years from the date of approval. Upon request, and with good cause shown, the time period within which an ILP must be issued may be extended by the Zoning Administrator for a time period not to exceed one (1) year.

3. If, within two (2) years from the expiration of a Development Plan, a new Development Plan is not approved, the properties shall be removed from the Overlay District.

SECS-4: Permitted zoning districts.

- A. A SECS overlay district may be established over any of the following zoning districts:
 1. AG, Agricultural
 2. AGP, Agricultural Production
 3. IPM, Industrial Park/Manufacturing
 4. IN, Intensive Use
- B. In the event that the underlying zoning district is changed from those districts listed in (A), an established SECS overlay district shall continue in effect.
- C. A SECS overlay district may be of any size that is sufficient to permit the proposed CSECS facility in conformance with the requirements herein.
 1. A SECS overlay district shall not encompass (“doughnut”) areas of ten (10) acres or less in which there is one (1) or more existing dwellings or which is zoned RR, LR, MR, or MP.
 2. The residence owner or property owner(s) may submit a waiver of this standard as part of the review in establishing the SECS overlay district.

SECS-5: Uses.

- A. Permitted Uses
 1. Commercial Solar Energy Collection System (CSECS), Photovoltaic System
 2. Commercial Solar Energy Collection System (CSECS), Agrivoltaic System
 3. Battery Energy Storage System (BESS)
- B. Prohibited Uses
 1. SECS Solar Energy Collection System, Concentrated Solar Thermal Power
- C. Permitted and Special Uses of the underlying zoning district shall continue in effect, except as may be modified by this Overlay District.

SECS-6: Development Standards.

- A. Development Standards of the underlying zoning districts shall continue in effect, except as may be modified by this Overlay District.
- B. Setbacks. Any structure or equipment used for electricity generation or distribution in a CSECS shall have the following minimum setbacks, or that of the underlying zoning district, whichever is more restrictive:
 1. 60’ from the right-of-way of a principal arterial
 2. 40’ from the right-of-way of other classes of public or private roads
 3. 30’ from a side property line, plus buffer yard
 4. 30’ from a rear property line, plus buffer yard

Setbacks do not apply to property lines between parcels that are participating in the CSECS.
- C. Separations. Any inverter, transformer, or BESS in a CSECS shall be separated from certain uses and structures, as follows:

1. 300' to the wall of a dwelling on a ~~non-participating~~nonparticipating property in existence at the time of Development Plan approval
2. 200' to the wall of the primary structure of a religious institution or educational institution in existence at the time of Development Plan approval

D. Height.

1. Solar panels/electrical generation equipment and structures at maximum tilt:
Maximum height: 25'
Minimum clearance: 3'
2. Other structures: as permitted in the underlying zoning district

E. Lot Coverage.

1. The maximum lot coverage for a CSECS facility is that of the underlying zoning district.
2. The area of solar panels shall not be included in the calculation of impervious surface for the purpose of lot coverage if the soil under the panels is maintained in vegetation and is not compacted.

F. Buffering. A CSECS shall be screened from existing dwellings and residential areas and public buildings.

1. Where a CSECS is contiguous (adjacent to ~~non-participating and not separated by a road or railroad right-of-way~~) to a nonparticipating property that contains a nonparticipating dwelling, educational institution, ~~or~~ religious institution, or Major Residential Subdivision (as defined in §5.22) in existence at the time of Development Plan approval, or adjacent is contiguous to ~~non-participating~~nonparticipating property that is zoned RR, LR, MR, or MP, the following buffering requirements apply:

a. An additional 90-170 feet of setback shall be required in addition to the required setback on the yard(s) ~~abutting~~contiguous to the buffered property.

~~a.b.~~ Trees shall be planted along the buffered property line at an average rate of:

i. One (1) deciduous canopy tree shall be planted an average of ~~per thirty~~ (30) lineal feet; or

~~i.ii.~~ One (1) coniferous tree planted an average of ~~per twenty~~ (20) lineal feet.

~~b.c.~~ All trees must be planted within ~~ten~~ (10) to ~~thirty~~ (30) feet from the property line ~~on~~of the ~~subject~~buffered property.

~~e.d.~~ All deciduous trees must be at least 1.5" caliper at the time of planting; conifers must be at least 6' in height at the time of planting.

~~d.e.~~ Trees must be properly maintained and be replaced if the tree dies, is diseased, or is damaged.

~~e.f.~~ The developer or owner of the CSECS facility is responsible for installing the buffer yard.

~~f.g.~~ The adjacent property owner shall not have to participate in installing the buffer yard.

2. Where a CSECS abuts and is located across a road right-of-way from a nonparticipating property that contains a nonparticipating dwelling, educational institution, religious institution, or Major Residential Subdivision (as defined in §5.22) in existence at the time of Development Plan approval, or adjacent to

nonparticipating property that is zoned RR, LR, MR, or MP, the following buffering requirements apply:

a. An additional **twenty (20)** feet of setback shall be required in addition to the required setback on the yard(s) abutting the buffered property.

b. The buffering requirements (b) to (g) listed in paragraph (1) above.

~~2.3.~~ Additional areas may be required to be buffered to screen the CSECS facility from public roads, public buildings and properties, or other sensitive uses, as determined during Development Plan review. The standards for the additional areas are the same as above.

~~3.4.~~ The minimum buffering requirements set forth in this subsection may be waived or modified with the written notarized consent of the owner(s) of the buffered property, which shall be recorded as a deed restriction on the buffered property. Such waiver or modification may be reviewed during Development Plan review.

G. Fencing. Perimeter fencing may be installed. If perimeter fencing is installed, the following apply:

1. Razor wire and/or electric fences shall be prohibited.

H. Ground cover. A CSECS shall have ground cover in any combination of the following:

1. Perennial vegetation

- a. Ground around and under solar panels and in project site buffer areas shall be planted, established, and maintained for the life of the solar project in perennial vegetated ground cover.
- b. To the maximum extent feasible for site conditions, pollinator-friendly perennial vegetation ground cover shall be based on a diverse seed mix of native species consistent with guidance specific to the local area provided by the Soil and Water Conservation District office or the Indiana Native Plant Society. The quality of the pollinator habitat shall be demonstrated by using guides such as Purdue University 2020 Indiana Solar Site Pollinator Habitat Planning Scorecard, or other third party solar-pollinator scorecards designed for Midwestern eco-systems, soils, and habitat.
- c. The owner/operator shall demonstrate site maintenance that is intended to remove invasive or noxious species, as listed by the Indiana Invasive Species Council, without harming perennial vegetation.
- d. No insecticide use is permitted on the site. This provision does not apply to insecticide use in on-site buildings, in and around electrical boxes, or as otherwise may be deemed necessary to protect public health and safety.
- e. Plant material must not have been treated with systemic insecticides, particularly neonicotinoids.

2. Agriculture

- a. Agrivoltaic CSECS projects shall establish agricultural ground cover (e.g. crops, pasture, etc.) as may be necessary for the adequate colocation of productive agriculture and electricity generation.
- b. The use of agriculture may modify buffering requirements specified in (F), as determined during Development Plan review.

I. Cables

1. Power and communication lines running between banks of solar panels and to nearby electric substations or interconnections with buildings shall be buried underground. Exception may be approved for agrivoltaic installations to permit cultivation of the soil.
2. Power and communication lines between the facility and the point of interconnection with the transmission system are not required to be buried, including main transmission lines and associated substations.

J. Emergency and fire safety

1. A sign shall be posted at the entrance(s) of the CSECS that includes the CSECS owner name, operator name, facility name, emergency contact phone number, physical site address, and gate number (if applicable).
2. An emergency response plan shall be developed in conjunction with and approved by the Fire Department(s) serving the CSECS facility.
3. The CSECS shall have reasonable accessibility for maintenance and emergency service vehicles.

K. Equipment.

1. At initial installation, all components necessary for the CSECS shall be new and commercially available, including solar panels, inverters, DC/AC disconnect, meters, wiring, racking, mounting, charge controllers, batteries, or any such equipment necessary.
2. Subsequent upgrades of equipment may reuse existing equipment components on the property.
3. Best available technology is to be used for all equipment.

L. Maintenance and repair/replacement of CSECS:

1. CSECS owner must maintain the facility in accordance with the Zoning Ordinance, the approved Development Plan, the Improvement Location Permit, and any conditions thereof. There shall be no outdoor storage of damaged, broken, or nonworking parts or components on the site.
2. The replacement of a CSECS with new or updated equipment shall be permitted if the substantive terms of the approved Development Plan continue to be met. Whenever possible, it is encouraged that a CSECS site be renovated as technology changes to avoid repetitive creation of new SECS Overlay Districts.

M. Damage:

1. AnyIf the construction, installation, maintenance, and/or decommissioning and restoration of a CSECS causes damage to waterways, public~~/or~~ regulated drains or ditches, private or mutual drains, county tiles, or any other ~~item to regulate~~ drainage ~~caused by the construction, installation, maintenance and/or decommissioning and restoration of a CSECS must~~system which adversely affects drainage on nonparticipating properties, such damage shall be completely repaired by the CSECS owner to the original or better condition~~so~~.
- a. Repair may include rerouting, detention, resizing, or other measure as appropriate to ~~not impede~~resolve the ~~natural flow of water. All adverse effects on~~ nonparticipating properties.

~~a.b.~~ Repairs must be ~~compliant and~~ approved by the Drainage Board ~~or its~~
representative.

2. Any damage to streets, county roads ~~or~~ highway infrastructure, and/or public utilities caused by the construction, installation, maintenance, and/or decommissioning and restoration ~~must~~shall be completely repaired by the CSECS owner to the original or better condition. All repairs must be compliant and approved by the County Highway Superintendent, Indiana Department of Transportation, and/or County Commissioners.
3. Bond or surety for damage. The following are required:
 - a. Financial surety that will cover damage to the drainage infrastructure, public or private, that may occur during the construction process. Such surety would commence upon completion of each phase of construction of the CSECS. Such performance surety may be released after no less than two (2) years and upon satisfactory inspection by the Drainage Board that any damage has been repaired.
 - b. Financial surety that will cover the reconstruction of public infrastructure due to construction activity related to the CSECS that will be approved in association with the Traffic Management Plan. Such surety would commence upon completion of each phase of construction of the CSECS. Such performance surety may be released after no less than two (2) years and upon satisfactory inspection by the Highway Department that any damage has been repaired.
 - c. Upon release of either performance surety, a maintenance bond covering any repair work done shall be provided and be in effect for two (2) years. The maintenance bond may be waived by the reviewing agency.

N. Nuisance prevention

1. Equipment in a CSECS that creates objectionable sounds during normal operations shall be located as far as practicable away from any ~~non-participating~~nonparticipating existing dwelling. Sound attributed to the CSECS shall not exceed an hourly average sound level of fifty (50) decibels at the wall of an existing dwelling located on an adjacent nonparticipating property. The requirement set forth in this subsection may be waived with the written notarized consent of the owner(s) of each adjacent nonparticipating property.
2. If used, proposed lighting shall be shown on the proposed Development Plan and be no more than the minimum necessary for security. Any such lighting shall be shielded and/or oriented to prevent glare on a public road or off-site residence. Light shall not exceed 0.5 foot-candles at a residential property line.
3. A CSECS at no time shall create glare on any ~~non-participating~~nonparticipating property line, structure or right-of-way. Temporary laydown/staging areas shall be no less than 400 feet from any nonparticipating dwelling.
4. Employee and equipment parking shall be prohibited along county roads.
5. A CSECS shall be constructed and operated so it does not interfere with television, internet, telecommunications, microwave, GPS, military defense radar, navigational or radio reception to neighboring areas.

SECS-7: Decommissioning. A decommissioning plan is vital to protect the general welfare from the burden of an inoperable and abandoned CSECS.

- A. A project operator may not install or locate a CSECS project unless the project operator submits as part of the Development Plan the *Decommissioning and site restoration plan*

including the recycling of as much of the solar panels and other equipment as reasonably possible, posts a financial surety in the form of a performance bond or equivalent means of surety acceptable to the Zoning Administrator, Plan Commission, County Commissioners, and County Attorney, and also a liability insurance policy naming Whitley County as an additional insured as set forth below.

- B. The financial surety must be equal to the decommissioning costs included in the Development Plan as calculated by a third party licensed or registered engineer or professional with suitable experience in the decommissioning of CSECS, as agreed upon by project operator, Zoning Administrator, and County Commissioners.
 - 1. The amount of the financial surety shall at least recuperate the costs incurred to the County to the extent the County takes part in the decommissioning of the CSECS, as shown in the decommissioning plan.
 - 2. The estimated decommissioning cost may be reduced by the anticipated salvage value of recoverable materials, if approved as part of the decommissioning presented in the Development Plan.
- C. The surety shall be updated by the project operator every five (5) years starting at the commencement of energy production and adjusted as necessary to ensure sufficient funds are available to decommission the project.
- D. The surety adjustment shall be submitted to the Zoning Administrator and added to the original surety.
- E. Change in CSECS Operator or Owner.
 - 1. A new operator or owner shall agree to any and all provisions of any and all prior owner requirements, including the surety, and shall furnish a copy of the transfer or new surety satisfactory to the Zoning Administrator before commencing business.
 - 2. The prior operator or owner shall remain liable until being formally released by the Plan Commission. Release of liability by the prior operator or owner by the Plan Commission shall only be approved when the new operator or owner provides a new surety satisfactory to the Plan Commission.
- F. Project operator must provide to the Zoning Administrator a written notice of the project operator's intent to decommission a CSECS no less than sixty (60) days before discontinuation of the facility.
 - 1. All solar panels, structures, foundations, roads, gravel areas, cables and all product, materials or other items associated with the CSECS project shall be removed to a depth of 36". The Zoning Administrator will authorize any and all sureties to be released upon final inspection and approval of the full decommissioning.
 - 2. The ground shall be restored to a condition reasonably similar to its condition before the start of construction.
 - 3. Decommissioning must be complete within 1 year of the start date, with the allowance of no more than a 6-month extension by the Zoning Administrator. If necessary, the Zoning Administrator, Plan Commission, County Surveyor, County Commissioners, and/or other County agencies as needed may engage with qualified contractors to:
 - a. Enter the site
 - b. Remove CSECS project assets
 - c. Sell assets removed
 - d. Remediate the site

- e. May include proceedings to recover assets

SECS-8: Abandonment.

- A. The CSECS operator must submit a letter of intent for decommission in writing to the Plan Commission and proceed with decommissioning within the time periods as stated in this section.
- B. A CSECS facility is considered abandoned 540 days after the date on which the CSECS last generated electricity. Once a CSECS is considered abandoned, decommissioning shall proceed
- C. Upon determination of abandonment of a CSECS, the properties shall be removed from the Overlay District.

SECS-9: Conflicts. Nothing in the SECS Overlay District shall preempt other applicable state and federal laws or regulations. This ordinance and the regulations contained within shall not interfere with, abrogate or annul any other ordinance, rule or regulation, statute or provision of law. In the event that any provision of the regulations contained within this ordinance impose restrictions different from other ordinances, rules or regulations, statutes or provisions of the law, then the provisions that are more restrictive and/or impose a higher standard shall govern SECS.