

Solar Outline

Article 19

Solar Energy Systems Siting Regulations

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ARTICLE 19. SOLAR ENERGY SYSTEMS SITING REGULATIONS

19-1 PURPOSE AND INTENT

19-1-1 Purposes

The purpose of this Article is to:

- 19-1-1-1 Assure that the development and production of solar-generated electricity in Randolph County, Indiana, is safe and effective;
- 19-1-1-2 Facilitate economic opportunities for local residents; and
- 19-1-1-3 Develop standards for solar generated energy, utilize natural resources and ecologically sound energy sources, support Indiana's alternative energy sources potential and other such economic development tools.

19-1-2 Intent

The intention of the Solar Energy System (SES) siting regulation is to provide a regulatory scheme for the development, construction and operation of SESs in Randolph County, Indiana, to establish reasonable guidelines and restrictions on the development, construction, operation, rehabilitation, decommissioning and restoration of a SES, and to preserve the health, safety and general welfare of Randolph County residents and the general public.

19-1-2-1 SES consists of the following:

- (a) **Solar Energy System (SES)** - the components and subsystems required to convert solar energy into electric or thermal energy suitable for use. The area of the system includes all the land inside the perimeter of the system, which extends to any fencing, buffer and landscaping. The term applies, but is not limited to, solar photovoltaic (PV) systems, solar thermal systems, and solar hot water systems.
- (b) Regulated systems fit into one of two system types: Commercial (C-SES) or Noncommercial (NC-SES) (as defined in Chapter 19-9).
- (c) As applicable to this ordinance a SES does not include concentrated solar thermal systems and such systems are not permitted.

19-2 APPLICABILITY

The provisions of this Article are applicable to those zoning districts which allow or may allow Solar Energy Systems (SESs) and to govern the siting, development, operation, rehabilitation, decommissioning and restoration of SESs, which generate electricity to be sold in the wholesale market or retail market, or which are utilized to generate electricity for private use and public use.

- 19-2-1 When any part of the development, construction, rehabilitation, operation, decommissioning or restoration of a SES requires action, recommendations, hearing and/or decision pursuant to the provisions of the Unified Zoning Ordinance of Randolph County, Indiana (Zoning Ordinance), notice shall be given pursuant to the Zoning Ordinance and the applicable By-Laws of the Area Planning Commission of Randolph County, Indiana (APC) and the Rules of Procedure (Rules) of the Board of Zoning Appeals of Randolph County, Indiana (BZA).
- 19-2-2 Provisions of this Article or other parts of the Zoning Ordinance which are specifically made applicable to a specific type of SES such as Noncommercial (NC-SES) or Commercial (C-SES), shall apply to that type of SES. Provisions without reference to a specific type of SES, shall apply to all SESs unless determined otherwise by the Executive Director of the APC. The Executive Director of the APC may, upon proper notice, assign any question, general or as to a specific SES application, for discussion and/or instruction from the BZA. An applicant for a SES may appeal the requirement, decision or determination of the Executive Director in the manner prescribed by applicable Rules of the BZA, the Zoning Ordinance and statute(s).
- 19-2-3 **Exemptions**
- 19-2-3-1 NC-SES with an aggregate collection and/or focusing area of 8 square feet or less is exempt from this ordinance.
- 19-2-3 -2 SES constructed prior to the effective date of this Article shall not be required to meet the terms and conditions of this Ordinance. Any physical modifications to an existing SES whether or not existing prior to the effective date of this Article that materially alters the SES shall require approval under this Ordinance. Routine maintenance or like-kind replacements do not require a permit.

19-3 PROHIBITION

No person shall construct, operate, or locate a SES within Randolph County without having fully complied with the provisions of this Article and all other applicable provisions of said Zoning Ordinance and any applicable Rules of the BZA and By-Laws of the APC.

19-4 CONFLICT WITH OTHER REGULATIONS

Nothing in this Article is intended to pre-empt other applicable state and federal laws or regulations. Nor shall any provisions of this Article interfere with, abrogate, or annul any other ordinance, rule, regulation, statute or other provision of law. In the event that any provision of this Article imposes restrictions different from any other ordinance, rule, regulation, statute, or provision of law, the provision which is more or most restrictive or which imposes the higher or the highest standard(s) shall control. Standards specified in this Article that conflict with standards found in other Articles of the UZO takes precedence as it relates to Solar Energy Systems.

19-5 DISTRICT REGULATIONS

19-5-1 Location

NC-SEs and C-SEs, as defined in **Chapter 19-9**, are allowed, may be allowed by Special Exception, or shall not be allowed, in zoning districts as prescribed by Appendix A of this Article.

19-6 NON-COMMERCIAL SOLAR ENERGY SYSTEM (NC-SES) GENERAL REGULATIONS

19-6-1 SAFETY DESIGN AND INSTALLATION STANDARDS FOR NONCOMMERCIAL SOLAR ENERGY SYSTEMS (NC-SES)

19-6-1-1 Interference:

When selecting a site for solar panels, all applicants shall take into consideration the potential maximum allowable structure height and possible landscaping of the adjacent properties to avoid interference and potential loss of efficiency from the sun to the solar panel surface. As part of the application process a written disclaimer is required acknowledging an issued permit does not imply any solar access rights (**subsection 19-6-2-8 and 19-7-4-12**).

19-6-1-2 Roof Mounted and Wall Mounted NC-SES :

- a. A roof mounted or wall mounted NC-SES may be located on a principal or accessory building.
- b. Roof-mounted solar panels installed on a building or structure with a sloped roof shall not project vertically more than the height requirements for the district in which they are located. The panels shall not be located within three (3) feet of any peak, eave, or valley of the roof to maintain pathways of accessibility.
- c. Wall mounted NC-SES shall comply with the setbacks for principal and accessory structures in the underlying zoning districts.

- d. Districts with residential uses in C-1, C-2, C-3, M-1 or M-2 shall conform to the developmental standards of the residential district R-1, R-2 or R-3 as determined by the Administrator to be the current use on the property.
- e. Roof mounted solar panels shall be located only on rear or side-facing roofs as viewed from any adjoining street unless the applicant demonstrates to the Administrator that, due to solar access limitations, no location exists other than the street-facing roof, where the solar energy system can perform effectively.
- f. For roof and wall mounted systems, the applicant shall provide evidence that the plans comply with the Indiana Residential Code and adopted building codes of Randolph County, and that the roof or wall is capable of holding the load imposed on the structure.

19-6-1-3 **Ground Mounted NC-SES:**

- a. Setback
 - i. The minimum yard setbacks from side and rear property lines shall be equivalent to the accessory structure setback in the zoning district.
 - ii. Freestanding solar panels shall only be permitted in the rear and side yard, except when given a waiver under **Subsection 19-6-1-4**
- b. Ground mounted NC-SES shall not exceed 15 feet in height above the ground elevation surrounding the systems. In residential districts the maximum height of a ground mounted NC-SES shall be 10 feet.
- c. Districts with residential uses in C-1, C-2, C-3, M-1 or M-2 shall conform to the developmental standards of the residential district R-1, R-2 or R-3 as determined by the Administrator to be the current use on the property.
- d. Safety/warning signage as required by applicable law concerning voltage shall be placed at ground mounted electrical devices, equipment, and structures.
- e. Ground-mounted N-SES shall not be placed within any legal easement or right-of-way location, or be placed within any storm water conveyance system, or floodplain, or in any other manner that would alter or impede storm water runoff from collecting in a constructed storm water conveyance system except permission is granted in writing by the County Surveyor and/or County Drainage Board, and/or Floodplain Administrator and owner of the land and/or right-of-way and/or easement. This would include but not be limited to State, County and/or privately owned waterways, ditches, drainage tiles, retention areas and designed swells.

19-6-1-4 **Waiver**

In the event any of the provisions in subsections 19-6-1-2&3 have the effect of prohibiting the installation of a solar energy system, the applicant shall have the right to apply for a waiver from these provisions to the Executive Director of Area Planning. The Director may grant a waiver upon determining that a strict application of the Ordinance would result in a hardship prohibiting the installation of a solar energy system. This waiver is not subject to the requirements listed in section 19-9 (definitions) of this Ordinance but must be in writing and kept with the ILP issued for the affected NC-SES. Additional landscaping or other means of mitigating visual or other adverse effects may be required by the Administrator. A site plan shall be submitted with all proposed solar panels and mitigation shown. The Administrator shall attempt to notify by letter or in person any adjoining landowners that may be affected by the waiver, waiting 10 days for written responses to said site plan before granting such a waiver having taken into consideration such written responses. At the discretion of the Administrator, approval of the waiver may be delegated to the BZA at a regular meeting being placed on the agenda with appropriate (appeal) docket number and given proper notice as required by the BZA Rules and Procedures.

19-6-1-5 **Electrical Components**

a. Standards

Electrical components of all NC-SESs shall conform to applicable Local, State and Federal safety codes for similar NC-SESs.

b. All on-site utility, transmission lines, and plumbing shall be placed underground to the extent feasible.

c. When solar storage batteries are included as part of the solar energy collector system, they must be placed in a secure container or enclosure and installed and maintained as required by applicable law.

19-6-1-6 **Utility Interconnection**

A NC-SES, if interconnected to a utility system, shall meet the requirements for interconnection and operate as required by applicable law.

19-6-1-7 **Color, Finish and Glare**

a. To the extent reasonably possible, solar energy panels, regardless of how they are mounted, shall be oriented and/or screened year round so that glare is directed away from adjacent properties and streets.

b. To the extent reasonably possible, NC-SES shall be designed using such features as colors, materials, textures, screening and landscaping so as to blend into their settings and avoid significant visual impact. The NC-SES

shall remain painted or finished in the color or finish that was originally applied by the manufacturer. The exterior surface of any visible components shall be non-reflective, neutral color like white, grey or another non-obtrusive color. Finishes shall be matte or non-reflective.

- c. The applicant has the burden of mitigating any glare produced so as not to have significant adverse impact on adjacent uses. Mitigation is accomplished by panel siting, panel orientation, landscaping and/or other means. The determination of the Executive Director of the APC shall be conclusive relative to applicant's compliance with this standard.

19-6-1-8 **Signage**

No portion of the NC-SES shall contain or be used to display advertising. The manufacturer's name and equipment information or indication of ownership shall be allowed on any equipment of the NC-SES provided they comply with the prevailing Sign Ordinance Appropriate Warning signs will be allowed.

19-6-1-9 **Landscape- Screening**

No trees or other landscaping otherwise required by county ordinances or attached as a condition of approval of any plan, application, or permit may be removed for the installation or operation of a NC-SES.

19-6-2 **APPLICATIONS FOR NC-SES**

Applications for NC-SESs shall include, but not be limited to, the following information:

19-6-2-1 **Engineering Certification:**

For all NC-SES and NC-SES facilities, the manufacturer's engineer or another qualified registered professional engineer shall certify, as part of the Building Permit Application, that all structural aspects of the NC-SES design are within accepted professional standards, and the structure the solar technology will be affixed to will tolerate the installed weight and wind load of said technology (e.g. roof structure, soils, etc.).

19-6-2-2 **Contact Information of NC-SES Applicant:**

The name(s), address(es), telephone number(s) and e-mail address(es) (if available) of the applicant(s).

19-6-2-3 **Legal Description:**

The legal description, 911 Emergency Address or County property key of the real property upon which the NC-SES is to be located..

19-6-2-4 **NC-SES Description:**

The NC-SES description and information including, but not limited to, the following:

- a. Type of solar technology (e.g. solar panels, thermal solar, solar shingles, etc.)
- b. Solar panel mounting technique (e.g. ground-mount, roof-mount, etc.);
- c. Solar panel installation height;
- d. Name plate generating capacity;
- e. The means of interconnecting with the electrical grid;
- f. The potential equipment manufacturer(s) including information sheets and installation manuals;
- g. accessory structures.

19-6-2-5 **Demonstration of Energy Need:**

The primary purpose of the production of energy from a NC-SES shall be to serve the energy needs of the tract or parcel of real property upon which the NC-SES is to be located. The applicant(s) shall demonstrate how much energy is needed and how the proposed size will fulfill this need. Net-Metering may be allowed, but net metering to the extent that the primary purpose of the applicant's NC-SES is to produce energy in excess of demonstrated need shall not be sufficient basis upon which to approve or permit a NC-SES.

19-6-2-6 **Utility Notification:**

The owner of an NC-SES shall provide the Area Planning Department written confirmation that the public utility company to which the NC-SES will be connected has been informed of the customer's intent to install a grid connected system and approved of such connection, including the projected power output of the system. Off-grid systems shall be exempt from this requirement.

19-6-2-7 **Compliance with National Electrical Code:**

A line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code (This information is frequently supplied by the manufacturer and should conform to the current Indiana Residential Code set out in 675 IRC 14 or the current Indiana Electric Code set out in 675 IRC 17).

19-6-2-8 **Disclaimer**

Prior to the issuance of a zoning permit, applicants must acknowledge in writing that the issuing of said permit for a solar energy system shall not and does not create in the property owner, its, his, her or their successors and assigns in title or, create in the property itself : (a) the right to remain free of shadows and/or obstructions to solar energy caused by development of adjacent or other property or the growth of any trees or vegetation on such property; or (b) the right to prohibit the development on or growth of any trees or vegetation on such property.

This disclaimer is subordinate to any solar easements entered into with adjacent land owners and subject to the terms agreed to therein.

19-6-2-9 **Solar Easements**

- a. Where a subdivision or land development proposes a NC-SES, solar easements may be provided. Said easements shall be in writing, and shall be subject to the same conveyance and instrument recording requirements prescribed in IC32-23-2-5 or subsequent amendment(s).
- b. Any such solar easements shall be appurtenant; shall run with the land benefited and burdened; and shall be defined and limited by conditions stated in the instrument of conveyance. Instruments creating solar easement shall meet the requirements of IC 32-23-4-4 and 5 and include but not be limited to the following:
 - i. A description of the dimensions of the easement including vertical and horizontal angles measured in the degrees at which the solar easement extends over the real property that is subject to the solar easement, and a description of the real property to which the solar easement is appurtenant;
 - ii. Restrictions on the placement of vegetation, structures, and other objects which may impair or obstruct the passage of sunlight through the easement;
 - iii. Enumerate any terms and conditions, under which the easement is granted, and may be revised or terminated;
- c. If necessary, a NC-SES owner and/or operator must obtain any solar easements necessary to guarantee unobstructed solar access by separate civil agreement(s) with adjacent property owner(s).

19-6-2-10 Any panels installed to be used by someone other than the owner of the property shall provide an affidavit or evidence of agreement between the lot owner and facility's owner or operator confirming the facility owner or operator has permission of the property owner to install and utilize solar panels.

19-6-3 **IMPROVEMENT LOCATION PERMIT AND BUILDING PERMIT**

19-6-3-1 **Determination of Executive Director**

The Executive Director of the APC shall determine from the requirements set forth in **Sections 19-6-1** which requirements shall be complied with by the applicant, owner or operator prior to issuance of an Improvement Location Permit or a Building Permit for a NC-SES. The Executive Director of the APC may require additional reasonable submittals from time to time. The Executive Director of the APC may, upon proper agenda notice, assign any question, general or as to a specific NC-SES application, for discussion and/or instruction from the BZA. An applicant for a NC-SES may appeal the requirement, decision or determination of the Executive Director in the manner prescribed by applicable Rules of the BZA, the Zoning Ordinance and statute(s).

19-6-3-2 **Permit Requirements:**

- a. Improvement Location Permit(ILP) and Building Permit applications shall document compliance with this Section and shall be accompanied by drawings showing the location of the system on the building or property, including property lines. Permits must be kept on the premises where the NC-SES is constructed.
- b. The ILP and Building Permit shall be revoked if the NC-SES, whether new or pre-existing, is moved or otherwise altered, either intentionally or by natural forces, in a manner which causes the NC-SES not to be in conformity with this Ordinance.
- c. The NC-SES must be properly maintained and be kept free from all hazards, including but not limited to, faulty wiring, loose fastenings, being in an unsafe condition or detrimental to public health, safety or general welfare. In the event of a violation of any of the foregoing provisions, the Administrator shall give written notice specifying the violation to the owner of the NC-SES to conform or to remove the NC-SES. Said NC-SES can be declared a public nuisance if not repaired in 60 days without good cause.

- d. Any physical modification to any NC-SES or a part thereof which materially alters the mechanical load, mechanical load path, or major electrical components shall require re-permitting. Like-kind replacements shall not require re-permitting, unless required by a regulatory authority. Prior to making any material physical modification, other than a like-kind modification, the owner or operator of such NC-SES shall confer with the Randolph County Building Commissioner and Executive Director of the APC.

19-7 COMMERCIAL SOLAR ENERGY SYSTEM (C-SES) GENERAL REGULATIONS

19-7-1 SAFETY DESIGN AND INSTALLATION STANDARDS FOR COMMERCIAL SOLAR ENERGY SYSTEMS (C-SES)

19-7-1-1 Horizontal extension for C-SES

The furthest horizontal extension of a C-SES, excepting the C-SES collection system, C-SES transmission lines, ingress/egress road and C-SES access roads/lanes, shall not extend into a setback which is otherwise required for the zoning district in which the C-SES is located or into a required buffer area or into a setback required for an adjacent zoning district nor be less than fifteen (15') feet from any structure or public right-of-way easement for any above-ground telephone line, electrical transmission line, electrical distribution line or other above ground communication or transmission line.

19-7-1-2 Setback requirements

- a. The minimum setbacks for solar equipment associated with the C-SES shall be 20' larger than the applicable buffer strip to allow for an access road/ lane around the perimeter of the solar arrays. The setback can be reduced with an approved buffer/landscaping plan and/or waiver agreement. Setbacks are identified in **Table 19-7-1-3** and are measured from the road right-of-way (ROW), the property line (PL) where there is no ROW present.
Setbacks apply to solar panels, racking, accessory buildings and other power equipment. They do not apply to underground cabling, fencing, access roads/lanes or ingress/egress roads.
- b. **C-SES Substation**
The substation setbacks shall be the same as those of a C-SES. An adjacent landowner may waive this set back requirement by execution of a written waiver.

- c. **Poles and Underground Wiring**
For all poles carrying overhead wiring and for any underground wiring connecting the racks and components of a C-SES and/or to connect a C-SES to a substation for connection to or other direct connection to a utility's electric transmission line, there are no setback requirements from property lines of adjoining landowners so long as the poles and underground wiring are located within a recorded easement for such purpose or right-of-way.
- d. **Ground-mounted C-SES** shall not be placed within any legal easement or right-of-way location, or be placed within any storm water conveyance system, or floodplain, or in any other manner that would alter or impede storm water runoff from collecting in, and/or conveyance through, and/or discharge from, a constructed storm water conveyance system (including, without limitation any swale, legal drain, water course or drainage tile) except as permitted in writing by the County Surveyor and/or County Drainage Board, and/or Floodplain Administrator and owner of the land and/or right-of-way and/or easement. This would include, but not be limited to, State, County and/or private owned waterways, ditches, drainage tiles, retention areas and designed swells. Notwithstanding the foregoing, nothing in the preceding sentence shall prevent the replacement, repair, reconstruction and/or relocation of any such water conveyance system as necessary to develop and install the C-SES with any necessary approvals from the County Surveyor and/or County Drainage Board.
- e. Any inverter shall be a minimum of two hundred fifty (250) feet from any dwelling. This requirement shall not be waived.
- f. Ingress/egress roads into a C-SES shall be no closer than 50' to an adjoining landowner property line.
- g. Setback from solar equipment in A-L not adjoining incorporated areas of Randolph County as described in 3.01.B (1) shall be 500' from the property line of a zoned (AR; R-1,2 or 3; C-1,2 or 3; M-1 or 2) parcel or camp ground.

19-7-1-3 **Buffer strip, Screening & Vegetation**

The buffering and screening shall comply with the following design and developmental standards:

- a. The width of Buffer strips are identified in Table 19-7-1-3 and are measured from the road right-of-way (ROW) or the property line (PL) where there is no ROW present.

TABLE 19-7-1-3

Distance From	Solar Farm Buffer	Minimum Setback²
Agriculture Use ¹	0'	20' (includes 0' buffer, 20' access road/lane)
Residential Use & Public Use (platted building sites, parks, etc.) 1 st and 2 nd Side	20' With Visual Barrier	40' (includes 20' buffer, 20' access road/lane)
Residence & Public Buildings Within 400' of Equipment. 1 st and 2 nd Side	20' With Visual Barrier	40' (includes 20' buffer, 20' access road/lane)
Residence & Public Buildings Within 400' of Equipment 3 rd and 4 th Side	80' With Visual Barrier at Fence	100' (includes 80' buffer, 20' access road/lane)
Zoned Properties and Camp Grounds within A-L areas not adjacent to Incorporated Areas	480'	500' (includes 480' buffer, 20' access road/lane)
Commercial C-1&C-2	40'	60' (includes 40' buffer, 20' access road/lane)
Commercial C-3 Industrial M-1 & M-2	25'	45' (includes 25' buffer, 20' access road/lane)
Public Street or Road Right-of-way	40'	60' (includes 40' buffer, 20' access road/lane)
Ingress/Egress Drive	(see 19-7-1-2 (f) above)	All ingress/egress drives must be a minimum of 50' from adjoining landowners

¹Required fence may be placed on the property line where no buffer is required in A-I

²Where two participating parcels adjoin in A-I no setbacks to the property lines are required.

- b. A natural vegetative ground cover shall be maintained under and around the solar arrays. Only non-invasive species shall be used and native species are recommended. In interest of protecting pollinators seed mixes consisting of native meadow grasses and pollinator-friendly wildflower forbs and/or clover species shall be used in consultation with a USDA Farm Bill biologist or local Soil and Water Conservation District professional on 20% of the area under and around the solar arrays. Maintenance shall include eradication of all noxious weeds and plants prior to the weeds seeding and spreading.

- c. No trees or other landscaping otherwise required by the County ordinances or attached as a condition of approval of any plan, application, or permit may be removed for the installation or operation of a C-SES.
- d. All Buffers requiring landscaping/screening shall have a Visual Barrier as defined in 19-9. A Visual Barrier shall provide a year round barrier of evergreens or other similar plantings
- e. Only the following improvements shall be permitted within the buffer strip:
 - i. Vehicular ingress/egress drives which tie into approved access points as determined by INDOT and/or Randolph County Highway Department.
 - ii. Landscaping and landscaping fixtures
 - iii. Lighting
 - iv. Fencing
 - v. Signage
 - vi. Underground utility lines
 - vii. Overhead utility lines
 - viii. Drainage or storm water detention or retention areas
- f. The Access road/lane shall be adjoining the fence which shall adjoin the buffer strip. The visual order of placement shall be panels, access road, fence then buffer strip (extending to the property line or right-of-way).
- g. Landscaping/Screening Requirements:
 - i. Right-of-ways (ROW) in A-I do not require landscaping/screening. ROW in all other districts excepting C-3, M-1 and M-2 require a 40' buffer with a Visual Barrier but may receive a reduction in density with a Landscaping and Screening Plan approved by the BZA with proper notice and hearing.
 - ii. A Visual Barrier shall be provided for any adjacent home or public use building within 400' of solar equipment. Solar panels shall be placed in a straight linear parallel manner along a property line so as not to avoid the 400' mark. Furthermore, any parcel that has an existing residential use, and/or is parceled to 5 acres or less with the intent of future residential use (parceled or platted building sites are "protected properties") shall be

provided a Visual Barrier upon development. The 5 acre maximum dimension shall be 726' required to be landscaped along any one side of a residential use property line (726'x300'=5acres) Landscaping/screening shall be placed on all sides adjacent to the C-SES. Approval of the location of the Visual Barrier shall be by the residential property owner in conjunction with diagrams in 19-7-1-3 (to be added later). If the property owner is unresponsive within 60 days of the mailing of a certified letter to the taxing address informing them of their choice (and said 60 day limit) then the location of the Visual Barrier along the property line or C-SES fence line when required on a third and fourth side shall be made by the developer. A Visual Barrier is intended to exclude visual contact with the solar equipment from any protected property. A Visual Barrier may be composed of landscaping, landscaped berm, or combination thereof. Solid Fencing shall not be used as part of the Visual Barrier where the adjacent use is Residential, Neighborhood Commercial (C-1) or Community Commercial (C-2). The density, buffer width and method of screening may be waived by the adjacent property owner(s). Natural areas as detailed below may also be used to meet screening requirements.

Natural areas: An existing vegetated area located on the same property as the solar farm; is within or includes the required buffer; and is of sufficient height, length, and depth and contains adequate and sufficient healthy vegetation to provide a Visual Barrier where required. The Administrator may determine that further screening improvements shall not be required.

The developer may choose to enter into a waiver agreement with the adjoining landowner to reduce the buffer to 20' with or without the Visual Barrier which may be placed with permission on the adjoining property.

- iii. Buffers adjoining C-1 and C-2 districts and parcels where C-1 and C-2 permitted uses exist, may use a Visual Barrier composed of landscaping, landscaped berm, or any combination thereof to screen from those districts as approved by the Administrator. The Administrator should take into consideration the design wishes of the adjacent property owner/operator. Fencing and walls shall not be used for screening however this requirement may be waived by the adjoining property owner(s). The width and density requirements may be waived by the adjacent property owner(s) to a reduction of landscaping no less

than that required in transition yard density for the district and/or a reduction of width equal to the greater of 50% of the required buffer width shown in Table 19-7-1-3 or the required transition yard width for the district (a C-SES shall be considered a M-1 use as it pertains to transition yards and screening in 6.07 and 6.12).

- iv. Buffers and landscaping, or combination thereof. A waiver for density and width may be waived by the adjoining property owner(s) however the width may not be less than any required transition yard width nor density less than required by subsection 6.10 and 6.12.
- v. Landscaping required within buffer strips shall be done in accordance with a certified landscape plan that shows a Visual Barrier with a predicted minimum height of seven feet (7') within three (3) years will be achieved by the selected species and planting size and density during normal growing conditions. A minimum height of fifteen (15') is to be maintained over the life of the project. Height is measured from original grade.
- vi. Grass or ground cover shall be planted on all portions of the required buffer areas not occupied by other landscaped material. Only non-invasive species shall be used and native species are recommended. All noxious weeds and plants shall be eradicated prior to the weeds seeding or spreading.
- vii. All landscaping materials shall be installed and maintained according to accepted nursery industry procedures. The owner of the property shall be responsible for the continued property maintenance of all landscaping materials and shall keep them in a proper, neat, and orderly appearance free from refuse and debris at all times.
- viii. Unhealthy and dead plants shall be replaced within one (1) year of being provided written notice from the Administrator of the violation. The determination of whether a plant is unhealthy shall be at the discretion of the Administrator or a recognized landscape professional.
- ix. The effectiveness of screening shall be maintained as the plant materials mature.
- x. A clear sight triangle shall be maintained at all intersections and ingress/egress locations.

19-7-1-4 **Equipment type**

- a. All C-SES shall be constructed of commercially available equipment and in conformance with subsection 19-7-1-5. Material Safety Data Sheets and/or Safety Data Sheets shall be submitted for each model of solar panel to be used.

- b. Experimental or proto-type equipment:

Experimental or proto-type equipment still in testing which does not fully comply with industry standards, may be approved by the BZA after notice and hearing pursuant to the variance procedures of this Zoning Ordinance.

- c. When solar storage batteries are included as part of the solar energy collector system, they must be placed in a secure container or enclosure meeting the requirements of the Indiana Building Code and IDEM regulations when in use and when no longer used shall be disposed of in accordance with all applicable laws and regulations.

- d. All SESs shall conform to applicable industry standards, as well as all local, state and federal regulations. An applicant shall submit certificate(s) of design compliance that solar manufacturers have obtained from Underwriters Laboratories, Det Norske Veritas, Germanishcher Lloyd Solar Energie, or an equivalent third party.

19-7-1-5 **Electrical components**

- a. Electrical components of all C-SES shall conform to applicable local, State and national safety codes for similar C-SES

- b. Cables and Lines:

All cables and lines on site within the fenced area shall follow the current Indiana Electric Code (identified in 675IAC 17). Transmission cables and lines outside the fenced site shall be buried no less than forty eight (48”) inches underground with a warning mesh located at thirty six inches (36”) deep. No plow type installations are permitted, only open trenching or boring installations. All underground cabling will be marked at road crossings, creeks, river beds and property lines with a metal or fiberglass post at least 5 feet in height. For any installation method of cables and lines except as provided herein, applicant shall apply for a variance before the BZA pursuant to this Zoning Ordinance.

19-7-1-6 **Color Finish and Glare**

In addition to any applicable FAA requirements that now exist and the same are amended from time to time, the following shall also apply:

- a. The solar energy systems shall remain painted or finished in the color or finish that was originally applied by the manufacturer provided the exterior surface of any visible components are non-reflective, a neutral color like white, grey or another non-obtrusive color. Finishes shall be matte or non-reflective.
- b. To the extent reasonably possible, solar energy panels, regardless of how they are mounted, shall be oriented and/or screened year round so that glare is directed away from-adjacent properties, structures and roadways.
- c. The applicant has the burden of mitigating any glare produced so as not to have significant adverse impact on adjacent uses. Mitigation is accomplished by panel siting, panel orientation, landscaping and/or other means. The determination of the Executive Director of the APC shall be conclusive relative to applicant's compliance with this standard.

19-7-1-7 **Materials handling, storage and disposal**

- a. Solid wastes:

All solid wastes whether generated from supplies, equipment, parts, packaging, operation, maintenance, rehabilitation, decommissioning, restoration of the facility, or otherwise, including, but not limited to, old parts and equipment related to the maintenance, rehabilitation, decommissioning, or restoration of any C- SES shall be removed from the site promptly and disposed of in accordance with all federal, state and local regulations, laws and ordinances. The C-SES owner and C-SES operator shall have the same responsibility for compliance hereof.
- b. Hazardous materials:

All hazardous materials or hazardous waste related to the construction, operation, maintenance, rehabilitation, decommissioning, or restoration of any C-SES or otherwise generated by the facility shall be handled, stored, transported and disposed of in accordance with a all applicable local, state and federal regulations and laws. The C-SES owner and the C-SES operator shall have the same responsibility for compliance hereof.

19-7-1-8 **Sewer and water**

All C-SES facilities shall comply with the septic system and well regulations as currently required or as hereinafter amended, of the Randolph County Health Department and the State of Indiana Department of Public Health.

19-7-1-9 **Utility interconnection**

A C-SES, if interconnected to a utility system, shall meet the requirements for interconnection and operate as prescribed by the interconnection agreement with the electrical utility, as any applicable federal and state regulations now exist and as the same are from time to time amended.

19-7-1-10 **Signage**

Signs will comply with the Sign Standards provided in applicable Articles of the Zoning Ordinance.

a. Development Signs:

An identification sign relating to a C-SES may be located on each side of the fenced facility area, provided that there shall be no more than one (1) sign located on any side of the C-SES fenced facility area, unless additional identification signs are required to provide reasonable notice to the general public.

b. A sign shall be securely posted on each gate entry point clearly displaying an emergency telephone number(s) and other contact information.

c. All ingress/egress roads to a C-SES shall have posted in a conspicuous location a ~~Emergency~~ 911 Address road sign indicating the assigned address for that location.

d. Warning signs shall comply with applicable laws.

e. No portion of the C-SES shall contain or be used to display advertising. The manufacturer's name and equipment information or indication of ownership shall be allowed on any equipment of the C-SES provided they comply with the prevailing sign regulations.

f. All signage required or permitted by this Article shall be made of materials and constructed in a manner to be durable and long lasting. The same shall be painted or made of material with a distinct, high contrast background and be weather proof paint or other weather proof material to promote safety and protect the public from hazards and potential hazards.

19-7-1-11 **Collection cable/lines**

Collection cables, collection lines, and communication lines installed as part of any C-SES shall not be considered essential services.

19-7-1-12 **Other Appurtenances**

No appurtenances other than those associated with the C-SES construction, operations, maintenance, repair, replacement, rehabilitation, decommissioning, restoration, removal, and permit requirements shall be connected to the C-SES area except after notice of hearing and the hearing before the BZA pursuant to the applicable Article(s) of this Zoning Ordinance.

19-7-1-13 **Height**

Ground mounted C-SES arrays shall not exceed eighteen (18) feet in height when oriented at maximum tilt.

19-7-1-14 **Fence**

- a. For security, all ground-mounted C-SES shall be completely enclosed by a minimum six (6) foot high fence with a locking gate accessed by a key pad or Knox box with key.
- b. Signage will be permitted as specified in subsection 19-7-1-10.
- c. The fence should be located immediately adjacent to the access road/lane and between any required landscaping in the Buffer strip and said access unless otherwise approved in 19-7-1-16
- d. A fence in an A (agriculture) zone located on the property line is the sole responsibility of the C-SES owner/operator.

19-7-1-15 **Noise**

No operating solar power plant shall produce noise that exceeds any of the following limitations except during construction. Adequate setbacks, barriers, enclosures, use of quieter equipment, or other effective means of reducing noise shall be used to comply with these limitations.

- a. Fifty dBA, as measured at the property line of any adjacent residentially zoned lot;
- b. Forty-five dBA, as measured at any existing adjacent residence between the hours of nine p.m. and seven a.m.
- c. Sixty dBA, as measured at the property lines of the project boundary, unless the owner of the affected property agrees to a higher noise level, as follows:

The owner of an adjacent property that would otherwise be protected by the sixty dBA noise limitations may voluntarily agree, by written waiver, to a higher noise level. Any such agreement must specifically state the noise standard being modified, the extent of the modification, and be in the form of a legally binding contract or easement between the landowner (including assignees in interest) and the solar energy system developer, effective for the life of the project. This waiver must be recorded and cross-referenced with the affected property (properties).

19-7-1-16 **Ingress/Egress and Perimeter Access**

- a. At a minimum, a 20' wide ingress/egress road must be provided from a public street, legally established access drive, road or other roadway into the site. This ingress/egress road shall be graveled or paved a minimum width of 12' and must meet all State and Federal regulations.

- b. At a minimum, a 20' wide perimeter access road/lane shall be provided around the perimeter of the C-SES between the solar arrays and required fence to allow access for maintenance vehicles and emergency management vehicles including fire apparatus and emergency vehicles. The access road/lane may be a mown well maintained grass lane.

19-7-1-17 **Lighting**

The ground mounted C-SES shall not be artificially lit except to the extent required for safety or applicable federal, state, or local authority. Such lighting shall be shielded and downcast so as not to affect adjacent properties.

19-7-2 OPERATION AND MAINTENANCE

19-7-2-1 **Repair**

The C-SES owner and/or operator shall repair, maintain and replace the C-SES and related solar equipment during the term of the permit in a manner consistent with industry standards as needed to keep the C-SES in good repair and operating condition.

19-7-2-2 **Operation and Maintenance Plan**

The applicant shall submit a plan for the operation and maintenance of the C-SES, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operation and maintenance of the installation

19-7-2-3 **Physical Modifications**

Any physical modification to any C-SES or a part thereof which materially alters the mechanical load, mechanical load path, or major electrical components shall require re-certification by all appropriate regulatory authorities. Like-kind replacements shall not require re-certification, unless required by a regulatory authority. Prior to making any material physical modification, other than a like-kind modification, the owner or operator of such C-SES shall confer with the Randolph County Building Commissioner, Executive Director of the APC, Randolph County Surveyor, Randolph County Highway Department Superintendent, and any other appropriate regulatory authority as to whether or not the proposed physical modification requires re-certification of such C-SES.

19-7-2-4 **Declaration of Public Nuisance**

Any C-SES declared unsafe by the County Commissioners by being in breach of, or, out of compliance with its C-SES permit(s) may seek to be rehabilitated and declared safe by appropriate repair(s) and other essential steps necessary to eliminate the breach(es) so as to be in compliance with such C-SES permit(s). A C-SES declared by the County Commissioners by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage, abandonment or as provided herein to be determined unsafe, is hereby declared to be a public nuisance. A *Rehabilitation Plan* should be submitted to the County Commissioners within 60 days. This plan shall provide procedures to rehabilitate the C-SES in a time not to exceed three hundred sixty-five (365) days except in the event of force majeure, including but not limited to unavailability of components or parts, strikes, and moratoriums which said majeure extends said time to 18 months total or a reasonable extension agreed to by the County Commissioners. In the absence of an approved *Rehabilitation Plan* or meeting the agreed to time schedule(s), or failure to execute the required repair(s), in the time determined reasonable by the County Commissioners, such C-SES shall be demolished and removed in accordance with the *Decommissioning-Restoration Plan and Agreement*.

19-7-2-5 **Public Nuisance Waiver**

In the instance that an unavoidable Act of God inhibits, damages, or destroys part of, or the majority of the C-SES, the three hundred sixty-five (365) day public nuisance removal timeline will be waived so long as the C-SES owner and/or C-SES operator provides a *Rehabilitation Plan* to remedy the damage and said plan

is submitted to, and approved by, the County Commissioners. Said plan will outline the necessary protocol and time schedule for returning the C-SES to energy production and must be submitted to the County within sixty (60) days of the date the damage was incurred or a time determined reasonable by the County Commissioners.

19-7-2-6 Contact Information

The C-SES owner and/or operator shall maintain a phone number and identify a person responsible for the public to contact with inquiries and complaints throughout the life of the project and provide this number and name to the Administrator. The C-SES owner and/or operator shall make reasonable efforts to respond to the public's inquiries and complaints.

19-7-3 LIABILITY INSURANCE

The owner and operator of a C-SES shall maintain a commercial general liability policy covering death, bodily injury and property damage, which may be combined with umbrella coverage, and shall be required to name Randolph County, Indiana as an additional insured solely to the extent of liabilities arising under this Ordinance, and said policy shall carry dollar amounts satisfactory to the County Commissioners and with agreed upon dollar amount limits per occurrence, aggregate coverage, and deductible amounts, all of which shall be agreed upon by the owner and operator and said County Commissioners and provided in the *Decommissioning-Restoration Plan and Agreement* or other appropriate plan or agreement between the County Commissioners and C-SES owner and C-SES operator.

The County Commissioners shall be authorized to require the C-SES owner and/or operator to furnish a certificate of insurance and annual renewal certificate of insurance pursuant to this provision. The County Commissioners may require the certificate of insurance and any renewal certificate at a time agreed between the County Commissioners and C-SES owner and/or operator, provided, however, the County Commissioners may require the certificate of insurance as part of the application procedures or at such earlier time that said Commissioners believe the same to be necessary and appropriate

19-7-4 APPLICATIONS FOR C-SES

Applications for C-SESs shall include the following information:

19-7-4-1 **Contact Information of C- SES Applicant:**

The name(s), address(es), telephone number(s) and e-mail address(es) (if available) of the applicant(s), together with a description of the applicant's business structure and overall role in the proposed project.

19-7-4-2 **Contact Information of C-SES Owner:**

The names(s), address(es), telephone number(s) and e-mail address(es) (if available) of the C-SES owner(s), together with a description of the owner's business structure and overall role in the proposed C-SES, and documentation of real estate ownership of any real property upon which any part of the proposed C-SES is to be located. The C-SES owner shall inform the Executive Director of the APC of any change of C-SES ownership, in whole or in part, and shall furnish the required information regarding such owner.

19-7-4-3 **Contact Information of C-SES Operator:**

The name(s), address(es), telephone number(s) and e-mail address(es) (if available) of the operator(s), as well as a description of the operator's business structure and overall role in the proposed project. The C-SES operator shall inform the Executive Director of the APC of any change of the C-SES operator and furnish the required information regarding such operator.

19-7-4-4 **Legal Description:**

The legal description and the 911 Emergency Address of the real property upon which the C-SES is to be located.

19-7-4-5 **C-SES Description:**

The C-SES description and information including, but not limited to, the following:

- a. Type of solar technology (e.g. solar panels, solar shingles, etc.);
- b. Solar panel mounting technique (e.g. ground-mount, roof-mount, etc.);
- c. Solar panel installation height;
- d. Name plate generating capacity;

- e. The means of interconnecting with the electrical grid;
- f. The potential equipment manufacturer(s); including information sheets and installation manuals;
- g. accessory structures and other appurtenances.

19-7-4-6 **Preliminary site plan:**

- a. A site plan, drawn to scale, including distances pertaining to all applicable setback and buffer requirements. All drawings shall be at a scale of one (1") inch equals thirty (30') feet (1 inch = 30 feet). Any other scale must be approved by the Executive Director of the APC. No individual sheet or drawing shall exceed twenty-four (24") inches by thirty six (36") inches (24 inches by 36 inches) without the prior consent of said Executive Director.
- b. The preliminary site plan shall illustrate the following:
 - i. Property lines upon tract(s) subject to the application, together with property lines and with the names of owners of record of each adjacent tract(s).
 - ii. Location and name/number of public roads surrounding, abutting, and/or traversing the C-SES and any C-SES ingress/egress road.
 - iii. Substations: location
 - iv. Location of electrical cabling outside of fenced areas
 - v. Ancillary equipment
 - vi. Any structure within one quarter (1/4) mile of the proposed SES boundary.
 - vii. The location of any airport within one (1) mile of the proposed C-SES boundary.
 - viii. Setback lines: Distances from the solar energy system to each setback requirement listed in subsections 19-7-1-2 & 3.
 - ix. The location of any historic or heritage sites as recognized by the Division of Historic Preservation and Archeology of the Indiana Department of Natural Resources, within one (1) mile of a proposed C-SES.

- x. The location of any wetlands based upon a delineation plan prepared in accordance with the applicable U.S. Army Corps of Engineers requirements and guidelines, within one (1) mile of a proposed C-SES.
- xi. Location and height of fencing, access roads, berms and landscaping associated with any buffer zone.
- xii. Location and spacing of panels/arrays and key components
- xiii. All other information reasonably requested by the BZA, APC and Executive Director of the APC.

19-7-4-7 **Topographic map**

A United States Geological Survey (USGS) topographical map, or map with similar data, of the property and the surrounding area, with contours of not more than five (5') foot intervals.

19-7-4-8 **Landowner Agreements**

- a. A Memorandum of Agreement for all agreements of any description signed by participating landowners authorizing the placement of the identified C-SES on landowner's property.
- b. Fully executed *Setback Waiver Agreements*, if applicable, signed by adjacent landowners.
- c. An executed copy of any other waiver agreement signed by adjacent landowner(s).
- d. A copy of any recorded *Solar Easements* from adjacent landowners.

19-7-4-9 **Engineering Certification:**

For all C-SES and C-SES facilities, the manufacturer's engineer or another qualified registered professional engineer shall certify, as part of the Building Permit Application, that all structural aspects of the C-SES design are within accepted professional standards, and the structure or substrate the solar technology will be affixed to will tolerate the installed weight of said technology (e.g. roof structure, soils, etc.).

19-7-4-10 **Proof of Correspondence and Cooperation with Wildlife Agencies:**

For the purposes of demonstrating compliance with required permits, the applicant shall provide written documentation that the applicant is in direct

correspondence, cooperation and in compliance and shall remain in compliance with all applicable regulations and requirements of the U.S. Fish and Wildlife Service and the Indiana Department of Natural Resources.

19-7-4-11 Prior to the issuance of an Improvement Location Permit (ILP), C-SES applicants must acknowledge in writing that the issuing of said permit shall not and does not create in the property owner, its, his, her or their successors and assigns in title or, create in the property itself : (a) the right to remain free of shadows and/or obstructions to solar energy caused by development of adjacent or other property or the growth of any trees or vegetation on such property; or (b) the right to prohibit the development on or growth of any trees or vegetation on such property.

This disclaimer is subordinate to any solar easements entered into with adjacent land owners and subject to the terms agreed to therein.

19-7-4-12 Solar Easement may be entered into between affected parties as described in subsection 19-7-6-6 and must be submitted with the C-SES application.

19-7-4-13 That prior to the issuance of an Improvement Location Permit (ILP) and a Building Permit, and in addition to all other application requirements and any other requirements for the applicant, owner and/or operator to be in compliance with the Zoning Ordinance, the following shall be submitted to the Executive Director of the APC:

Form, Content and Title of Agreements

The plans and agreements set forth in subsections 19-7-6-1 (*Emergency Service Plan*), 19-7-6-2 (*Operation and Maintenance Plan*), 19-7-6-3 (*Decommissioning-Restoration Plan and Agreement*), 19-7-6-4 (*Drainage Agreement, and Road Use and Maintenance Agreement*), 19-7-6-5 (*Erosion Control Plan*), 19-7-6-7 (*Economic Development*), 19-7-6-8 (*Waste Management Plan*), 19-7-7-1 (*Avoidance and Mitigation of Damages to Public Infrastructure*), 19-7-8-1&2 (*Construction Requirements*) and 19-7-9-1 (*Road Repairs*) may be merged into one or more agreements. Any agreement title or document name/designation made by the parties shall be sufficient provided such plans and agreements are in compliance with the requirements of the Zoning Ordinance and all other requirements of applicable federal, state and local laws, rules, regulations and ordinances.

19-7-4-14 **Waivers**

All waiver agreements shall be in writing and follow the requirements specified in section 19.R (definitions). Copies of all waivers are required as part of the C-SES application.

19-7-4-15 **Aggregated C-SES Applications**

Aggregated C-SESs may jointly submit a single application and be reviewed under joint proceedings, including notices, hearing, and reviews, and as appropriate, approvals. All permits shall be issued pursuant to **Section 19-7-5.**

19-7-5 IMPROVEMENT LOCATION PERMIT AND BUILDING PERMIT

19-7-5-1 Solar technology used for NC-SESs and C-SESs, Meteorological Towers, Operational Support Meteorological Towers, and SES Accessory Buildings, Structures or Facility(ies):

All application requirements as set forth in **Section 19-7-4** together with all other applicable requirements of this Article and the Zoning Ordinance, shall be completed and approved by all required authorities, federal, state and local, before an Improvement Location Permit or Building Permit is issued.

19-7-5-2 **Aggregated SES**

For aggregated SES, Improvement Location Permits and Building Permits shall be issued individually for each SES, Meteorological Towers, and Operational Support Meteorological Towers upon meeting the requirements of this Article and any other applicable provisions of the Zoning Ordinance and compliance with all agreements applicable to the SES contemplated by this Zoning Ordinance.

19-7-5-3 Application for and acceptance of an ILP is an agreement by the applicant to be bound by the terms of this Ordinance.

19-7-6 PLANS AND AGREEMENTS

All reasonable attorney fees incurred in the preparation of any agreement or plan required hereunder shall be borne by the applicant.

Aggregated plans and agreements must be approved by the County Commissioners and shall include, singly or in combination, all the following:

19-7-6-1 **Emergency Services Plan**

Prior to issuance of a building permit, the C-SES owner or operator shall provide a plan including but not limited to the project summary, electrical schematic, and site plan to the appropriate local safety officials including the Randolph County Homeland Security Emergency Management, Sheriff Department, the responding Fire Department, the responding police department, Randolph County Fire Chief Association and Building Inspector. Upon request the owner or operator shall cooperate with local safety officials in developing an emergency response plan. Specialized training will be provided at the operator’s expense to these entities. Knox boxes and keys shall be provided at locked entrances for emergency personnel access. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.

19-7-6-2 **Operation and Maintenance Plan (from Section 19-7-2)**

The applicant shall submit a plan for the operation and maintenance of the C-SES which shall include measures for maintaining safe access to the installation, storm water controls (19-7-6-5), as well as general procedures for operation and maintenance of the facility. Maintenance of vegetation within the buffer strip and underneath the ground mounted solar arrays should be included in the plan and consistent with the requirements in subsection 19-7-1-3.

19-7-6-3 **Decommissioning-Restoration Plan and Agreement**

Prior to receiving an Improvement Location Permit and Building Permit, under this Ordinance, the applicant, owner and operator shall submit and shall enter into a *Decommissioning-Restoration Plan and Agreement* with the County Commissioners outlining the anticipated means, costs and method of payment of all costs in carrying out such *Decommissioning-Restoration Plan and Agreement* at the end of the C-SES life or the life of any part of a C-SES, upon becoming an abandoned use, or being declared a public nuisance as provided by subsections 19-7-2-4&5 and 19-7-6-3.

a. Discontinuation and abandonment

- i. Owner operator shall give written notice of intent to abandon use of a C-SES facility 60 days prior to the discontinuation of electrical production to the County Commissioners and Area Planning Department.
- ii. A C-SES or portion of a C-SES shall be considered an abandoned use after one (1) year without energy production unless a *Rehabilitation Plan* developed by the C-SES owner and C-SES operator is submitted to, and approved by, the County Commissioners outlining the necessary procedures and time schedule for commencing or returning the C-SES to energy

production as provided in **subsection.19-7-2-4&5**. Failure by the C-SES owner and/or operator to commence, energy production at such C-SES or return such C-SES to energy production within the time schedule which has been approved by the County Commissioners, said C-SES or portion of C-SES shall be considered an abandoned use and/or a public nuisance (as provided in subsections 19.H.4,5).

b. Removal and Restoration

The C-SES owner and/or the C-SES operator is required to remove all physical material pertaining to the C-SES above ground level and all improvements of said C-SES below ground level to a depth of thirty-six (36”) inches for all C-SES’s declared irreparably damaged, and/or-an abandoned use and/or a public nuisance. All materials shall be so removed and C-SES site restored within three hundred sixty five (365) days of the discontinuation of energy production or in accordance with agreements developed under subsections **19-7-2-4 and 19-7-6-3**. A C-SES which is irreparably damaged, abandoned or declared to be a public nuisance shall within said time limit (365 days) require the C-SES owner and/or C-SES operator to have completed restoration of the C-SES site to as near as practicable to the original condition of the C-SES site prior to the development of such C-SES. If any portion of the C-SES is found to be hazardous in nature by State or Federal regulatory agency(ies) or required to be recycled the C-SES owner and/or C-SES operator is required to remove in a manner as prescribed by law.

c. Identification and Removal of Hazardous Materials

During removal and restoration the C-SES owner/operator shall identify all hazardous materials as regulated by State and Federal regulatory agencies (such as the EPA and IDEM) as well as non-hazardous materials and indicate the appropriate handling, storage and transport during Disposal and/or Diversion of both.

d. Performance Guarantee

- i. Prior to issuance of an ILP or Building Permit, the applicant must provide the County with a performance guarantee in the form of a bond, and agreement, or other financial security acceptable to the County Commissioners in the amount of 125% of the estimated decommission and restoration cost. Estimates shall be determined by a licensed engineer.
- ii. Unless otherwise agreed to by all parties, every five (5) years a new engineer's estimate of probable cost of *Decommissioning and Restoration* shall be submitted for

approval in the same manner as the initial submission, and the bond, letter of credit, or other financial security acceptable to the county shall be adjusted upward or downward as necessary. A new estimate will be submitted to the Commissioners prior to the sale of any portion of the C-SES and the Performance Guarantee adjusted appropriately and made part of the sales contract.

iii. All expenses involved in such removal and restoration shall be paid by the C-SES owner and C-SES operator, or removal and restoration will be completed by Randolph County at the C-SES owner's expense and C-SES operator's expense as specifically provided by the *Decommissioning-Restoration Plan and Agreement*.

e. Written notices

Prior to implementation of any procedures or remedy for the resolution of any C-SES owner's and/or operator's failure to decommission the C-SES pursuant to the *Decommissioning-Restoration Plan and Agreement*, and/or *Rehabilitation Plan* and/or the Ordinance, the County Commissioners shall first provide written notice to the owner and/or operator, setting forth the alleged default(s). Such written notice shall provide the owner and/or operator a reasonable time period not to exceed sixty (60) days, except upon such longer time to which all said parties agree, for good faith negotiations between the C-SES owner and/or operator and the County Commissioners or its duly appointed representative, to resolve the default(s). In the event the negotiations fail to resolve the default issue(s), either party may pursue any and all remedies available by the terms of the Zoning Ordinance and/or *Decommissioning-Restoration Plan and Agreement* and/or *Rehabilitation Plan*.

f. Costs incurred by the County

In the event, after written notice, the owner and/or operator shall fail to enter into a *Rehabilitation Agreement* ([subsection 19-7-2-4](#)) or decommission the C-SES in accordance with the Zoning Ordinance and the *Decommissioning-Restoration Plan and Agreement*, the owner and/or operator shall pay all reasonable cost, including reasonable attorney fees, incurred by the County to remove the C-SES. The County shall be entitled to apply the salvage value of the C-SES to the costs of removal, subject to any rights of the C-SES Owners lenders.

g. Proof that the *Decommissioning-Restoration Plan and Agreement* or *Rehabilitation Plan* has been recorded with the Randolph County Recorder.

19-7-6-4 **Drainage Agreement, and Road Use and Maintenance Agreements**

A Drainage Agreement, and a Road Use and Maintenance Agreement approved by the County Commissioners or their designees. The Drainage Agreement must prescribe or reference provisions to address field tile damages and repairs thereof for any field tile owned by Randolph County.

19-7-6-5 **Erosion Control Plan**

- a. An erosion control plan developed in ~~consultation~~ accordance with the Natural Resources Conservation Services (NRCS) guidelines, and any storm water quality management plan adopted by the applicable jurisdiction(s).
- b. The area beneath the ground mounted C-SES is considered pervious cover. However, use of impervious construction materials within the C-SES would cause areas to be subject to the impervious surfaces limitations for the applicable Zoning District. Natural (pervious) ground covers are required beneath the solar arrays.

19-7-6-6 **Solar Easements**

- a. Where a land development proposes a C-SES, solar easements may be provided. Said easements shall be in writing, and shall be subject to the conveyance and instrument recording requirements prescribed in IC 32-23-2-5 or subsequent amendment.
- b. Any such easements shall be appurtenant; shall run with the land benefited and burdened; and shall be defined and limited by conditions stated in the instrument of conveyance. Instruments creating solar easement shall include but not be limited to:
 - i. A description of the dimensions of the easement including vertical and horizontal angles measured in the degrees at which the solar easement extends over the real property that is subject to the solar easement, and a description of the real property to which the solar easement is appurtenant;
 - ii. Restrictions on the placement of vegetation, structures, and other objects which may impair or obstruct the passage of sunlight through the easement;
 - iii. Enumerate any terms and conditions under which the easement is granted, and may be revised or terminated;

- c. If necessary, a C-SES owner and/or operator must obtain any solar easements necessary to guarantee unobstructed solar access by separate civil agreement(s) with adjacent property owner(s). Copies of such easements shall be submitted as part of the application process with proof of appropriate recording in the Randolph County Recorder Office.

19-7-6-7 **Economic Development Agreement**

Due to the complexity of large-scale alternative energy projects, the county requires an *Economic Development Agreement* or other appropriate instrument to address the taxing, land use, property assessment, as well as other issues related to such a project. The county is required to ensure the prevention of large tax shifts that may otherwise be incurred by the taxpayers of the county and more particularly of those taxing units upon which the project resides due to any reduction in tax base caused by these said projects. Therefore, in cooperation with all parties, an agreement shall be established that allows for an acceptable solution for the proper taxation of said C-SES. Any agreement drafted and or implemented shall be developed in conjunction with and be approved by the board of County Commissioners and any other Board or Council as may be required by law prior to the issuance of any permits and or the commencing of construction.

19-7-7 PRE-CONSTRUCTION REQUIREMENTS FOR C-SES

19-7-7-1 **Avoidance and Mitigation of Damages to Public Infrastructure**

In addition to complying with the approved *Road Use and Maintenance Agreement*, an applicant, owner, and/or operator proposing to use any county road(s), for the purposes of transporting any component of a C-SES, substation and/or any other equipment for the construction, operation or maintenance of a C-SES shall comply with the following pre-construction requirements.

- a. **Identification of road and services**

All roads and services, to the extent that all proposed routes that will be used for transportation of construction materials, construction of the C-SES, and/or maintenance of the C-SES shall be identified. If the route includes a public road, such route shall be approved by the Randolph County Highway Department Superintendent. To the extent possible State or Federal Highways shall be utilized for the purposes of transporting any component of a C-SES, substation and/or any other equipment for the construction, operation or maintenance of a C-SES.

- b. **Pre-construction survey**

The applicant, owner and/or operator shall conduct a pre-construction baseline survey in coordination with, and acceptable to, the Randolph

County Highway Superintendent and such survey shall be a part of the *Road Use and Maintenance Agreement* to determine existing road conditions for assessing current needed improvements and potential future damage. The survey shall include, but not be limited to, photographs, and/or video, or a combination thereof, and a written agreement to document the condition of the public facility as the same exists on the date of the baseline survey. This survey shall be the basis for determining the minimum width of roads (not platted width) when repair or replacement is required in the *Road Use and Maintenance Agreement* (subsection 19-7-6-4).

19-7-7-2 **Amendments and Changes to the Preliminary Site Plan**

Any material change of location of the C-SES fenced boundary and any material change in the location of C-SES facilities outside of the C-SES fenced boundary shall be furnished to the Executive Director of the APC, Building Commissioner, Highway Superintendent, County Surveyor and any other person(s) designated and authorized by the County Commissioners. It shall be the duty and responsibility of the applicant, owner and/or operator to obtain any variance required by such change and to comply with any other requirement necessitated by such change. Any variance required by this Section shall be obtained prior to construction or implementation of such change.

19-7-8 CONSTRUCTION REQUIREMENTS FOR C-SES

During construction, the applicant shall demonstrate and document to the satisfaction of the Building Commissioner, Highway Superintendent, County Surveyor, Executive Director of the APC and any other person(s) designated and authorized by the County Commissioners, that the following requirements are being met:

19-7-8-1 **Dust control**

All reasonable dust control measures required by the County Commissioners during construction of the C-SES are being followed together with any additional steps or adjustments for dust control which may from time to time be required by the County Commissioners.

19-7-8-2 **Drainage**

Reasonable storm water best management practices as required by the approved *Drainage Plan/Agreement*.

19-7-8-3 **Noise**

Near a residence or public use parcel noise shall be kept to a minimum during the hours of 7 pm to 7am.

19-7-9 POST-CONSTRUCTION REQUIREMENTS FOR C-SES

Post-construction, the applicant shall comply with the following provisions:

19-7-9-1 Road Repairs

Any road damage caused by the transport of any matter or material utilized in any way regarding the C-SES, in the construction of the C-SES, the installation of the same, and/or the removal and decommissioning of the same, shall be repaired to the satisfaction of the Randolph County Highway Department Superintendent (as per the *Road Use and Maintenance Agreement*). The Superintendent may choose to require either remediation of road(s) upon completion of the C-SES or said Superintendent is authorized to collect fees for oversized load permits. Further, a surety bond or letter of credit in an amount to be determined by a professional highway engineer selected by the County Commissioners may be required by the County to insure that future repairs are completed to the satisfaction of the unit(s) of local government. The cost of such bond or letter of credit shall be paid by the C-SES owner and said bond shall remain in full force and affect until the decommissioning and restoration is fully completed as prescribed by this Zoning Ordinance and the *Decommissioning-Restoration Plan and Agreement*.

19-7-9-2 As-Built Plans Requirement

Where upon completion of all development, the exact measurements of the location of utilities, structures and components erected during the development are necessary for public record and shall therefore be recorded. The applicant, owner, and/or operator shall submit a copy of the final as built survey to the Executive Director of the APC with the locations of the C-SES facilities shown thereon. Said Executive Director, after being satisfied that the locations of the C-SES facilities are substantially similar to the locations on the originally approved final plan(s) or as the same were from time to time amended, shall approve, date and sign said as-built survey for the C-SES, which the applicant, owner, and/or operator shall then record and provide Area Planning a copy of said recorded Plans.

19-7-9-3 Change in Ownership

It is the duty and responsibility of the C-SES applicant, C-SES owner and/or C-SES operator and any subsequent C-SES owner and C-SES operator, in addition to the notice requirements of any C-SES plan(s) and C-SES agreement(s) to notify by written notice the County Commissioners and Executive Director of the APC of any change in the ownership of the C-SES or any part of the ownership thereof to and through the time that the final *Decommissioning-Restoration Plan and Agreement* are concluded and all applicable acceptances, releases and performance standards of any description have been met and concluded and accepted by the appropriate local, state, federal or private authority, department, agency, and person(s) and all financial payments or other

financial obligations are fully satisfied and all appropriate parties are in receipt thereof. In order for the owner and/or operator to inform said County Commissioners and Executive Director of the required information regarding changes as herein provided, said notice shall be sent by certified mail with certified funds for any required recording fees and any other applicable fee(s) to the Randolph County Board of County Commissioners, 100 S. Main, Room 102, Winchester IN 47390 and Executive Director of the Area Planning Commission of Randolph County, Indiana, 325 South Oak Street, Suite 204, Winchester, Indiana 47394, or by personally delivering the same to said County Commissioners and Executive Director.

19-7-10 INDEMNIFICATION

The applicant, owner and/or operator of the C-SES project shall defend, indemnify, and hold harmless the County and its officials from and against any and all claims, demands, losses, suits, causes of action, damages, injuries, costs, expenses, and liability whatsoever, including attorneys' fees, without limitation, arising out of acts or omissions of the applicant, owner and/or operator associated with the construction and/or operations and/or design of the C-SES project.

19-8 FEES

19-8-1 Meteorological Towers, Operational Support Meteorological Towers, and any C-SES accessory buildings, structures or facilities:

Shall be assessed fees as prescribed by the County's Official Schedule of Fees.

19-8-2 Aggregated C-SES

Applications shall be assessed a \$20,000 application fees for each C-SES construction-phase as prescribed by the County's Official Schedule of Fees.

19-8-3 An ILP fee of \$1,750/MW shall be assessed.

19-8-4 Building permits will be \$500 per MW)

19-9 DEFINITIONS

See Article XIII of this Ordinance.

Adjacent: lying near, close; contiguous; adjoining; neighboring.

Adjoining: being in contact at some point or line; contiguous; bordering.

Accessory Use: A use customarily incidental and subordinate to the primary use or building and located on the same lot therewith. A use which dominates the primary use or building in area, extent, or purpose shall not be considered an accessory use.

Battery Back-Up: A battery system that stores electrical energy from a solar PV system, making the electricity available for future use. Battery Back-Up systems are common in Off-Grid Systems and Hybrid Systems.

Concentrated Solar Thermal Power (CST): Solar Energy Systems that use lenses or mirrors, and often tracking systems, to focus or reflect a large area of sunlight into a small area. The concentrated energy is absorbed by a transfer fluid or gas and used as a heat source for either a conventional power plant, such as a steam power plant, or a power conversion unit, such as a sterling engine. Although several concentrating solar thermal technologies exist, the most developed types are the solar trough, parabolic dish and solar power tower.

Electricity Generation (aka production, output) - The amount of electric energy produced by transforming other forms of energy, commonly expressed in kilowatt-hours (kWh) or megawatt-hours (MWh).

Electrical Equipment: Any device associated with a solar energy system, such as an outdoor electrical unit/control box, that transfers the energy from the solar energy system to the intended on-site structure.

Ground-Mount System: A solar energy system that is directly installed on specialized solar racking systems, which are attached to an anchor in the ground and wired to connect to an adjacent home, building or utility. Ground-mount systems may be applicable when insufficient space, structural and shading issues, or other restrictions prohibit rooftop solar.

Hybrid Solar Photovoltaic Systems (aka grid-tied PV with battery back-up): Solar photovoltaic electricity generation systems designed to serve the electricity needs of the building to which it is connected, thus offsetting a home's or business's electricity usage, while also utilizing a battery back-up in the event of a power outage. This is the only system that provides the ability to have power when the utility grid is down. Typical system components include: PV panels, inverter(s), and required electrical safety gear, battery bank, and a charge controller.

IAC- Indiana Administrative Code

Indiana Electric Code- Identified in 675 IAC 17

Indiana Residential Code- Identified in 675 IAC 14

Indiana Building Code- Identified in 675 IAC 13

Inverter: A device that converts the Direct Current (DC) electricity produced by a solar photovoltaic system is converted to useable alternating current (AC).

Megawatt (MW) - Equal to 1000 Kilowatts; a measure of the use of electrical power.

Megawatt-hour (MWh) - A unit of energy equivalent to one Megawatt (1 MW) of power expended for 1 hour of time.

National Electric Code (NEC) - Sets standards and best practices for wiring and electrical systems.

Net Metering: A billing arrangement that allows customers with grid-connected solar electricity systems to receive credit for any excess electricity generated on-site and provided to the utility grid.

Off-Grid Solar Photovoltaic Systems with battery back-up: Solar photovoltaic electricity systems designed to operate independently from the local utility grid and provide electricity to a home, building, boat, RV (or remote agricultural pumps, gates, traffic signs, etc.). These systems typically require a battery bank to store the solar electricity for use during nighttime or cloudy weather (and/or other back-up generation). Typical system components include: PV panels, battery bank, a charge controller, inverter(s), required disconnects, and associated electrical safety gear.

Passive Solar: Techniques, design, and materials designed to take advantage of the sun's position throughout the year (and the local climate) to heat, cool, and light a building with the sun. *Passive solar* incorporates the following elements strategically to maximize the solar potential of any home or building (namely, maximizing solar heat gain in winter months and minimizing solar heat gain in summer months to reduce heating/cooling demand; and maximizing the use of daylighting to reduce demand for electricity for lighting): strategic design and architecture, building materials, east-west and building lot orientation, windows, landscaping, awnings, ventilation

Photovoltaic (PV) System: A solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells, which generate electricity when exposed to sunlight. A PV system may be roof-mounted, ground-mounted, or pole-mounted.

PV-Direct Systems: The simplest of solar photovoltaic electric systems with the fewest components (no battery back-up and not interconnected with the utility) designed to only provide electricity when the sun is shining. Typical system components include: PV panels, required electrical safety gear, and wiring.

Racking: Solar energy systems are attached securely and anchored to structural sections of the roof-mounted or pole-mounted systems. Specially designed metal plates called flashings prevent leaks and are placed under shingles and over bolts to create a water-tight seal.

Roof-Mount System (aka rooftop mounted, building mounted): A solar energy system consisting of solar panels are installed directly on the roof of a home, commercial building, and/or an accessory structure, such as a garage, pergola, and/or shed. Solar panels are mounted and secured using racking systems specifically designed to minimize the impact on the roof and prevent any leaks or structural damage. Roof-mount systems can be mounted flush with the roof or tilted toward the sun at an angle.

Solar Access: the ability of one property to continue to receive sunlight across property lines without obstruction from another's property (buildings, foliage or other impediment).

Solar Array: Multiple solar panels combined together to create one system.

Solar Collector: A solar PV cell, panel, or array, or solar thermal collector device, that relies upon solar radiation as an energy source for the generation electricity or transfer of stored heat.

Solar Easement: An easement recorded pursuant to Chapter IC 32-23-4, obtained for the purpose of insuring exposure of a solar energy device or a passive solar energy system to the direct rays of the sun. Solar Easements are further described and regulated in subsections 19-6-2-9 & 19-7-6-6. Solar easements are to follow the State requirements of Recording (IC32-23-2-5).

Solar Energy System (SES): - the components and subsystems required to convert solar energy into electric or thermal energy suitable for use. The area of the system includes all the land inside the perimeter of the system, which extends to any fencing, buffer and landscaping. The term applies, but is not limited to, solar photovoltaic (PV) systems, solar thermal systems, and solar hot water systems.

Solar Energy System, Commercial (C-SES): means a utility-scale commercial facility that converts sunlight into electricity with the primary purpose of wholesale or retail sales of generated electricity.

. Concentrated Solar Thermal (CST) is not permitted or considered a C-SES for the purposes of this Ordinance.

Solar Energy System, Noncommercial (NC-SES): include any photovoltaic, solar thermal, or solar hot water devices that are accessory to, and incorporated into the development of an authorized use of the property, and which are designed for the purpose of reducing or meeting on-site energy needs.

Solar Glare: The potential for solar panels to reflect sunlight, with intensity sufficient to cause annoyance, discomfort, or loss in visual performance and visibility.

Solar Photovoltaic (Solar PV) System– Solar systems consisting of photovoltaic cells, made with semiconducting materials, that produce electricity (in the form of direct current (DC)) when they are exposed to sunlight. A typical PV system consist of PV panels (or modules) that combine to form an array; other system components may include racks and hardware, wiring for electrical connections, power conditioning equipment, such as an inverter and/or batteries.

Solar Panel (or module): A device for the direct conversion of sunlight into useable solar energy (including electricity or heat).

Solar Thermal System (aka Solar Hot Water or Solar Heating Systems): A solar energy system that directly heats water or other liquid using sunlight. Consist of a series of tubes that concentrate light to heat either water or a heat-transfer fluid (such as food-grade propylene glycol, a non-toxic substance) in one of two types of collectors (flat-plate collectors and evacuated tube collectors). The heated liquid is used for such purposes as space heating and cooling, domestic hot water, and heating pool water.

Visual Barrier: As used in Article19 it is a density of landscaping equal to Thuja Green Giant Arborvitae spaced 4’ apart which initial planting size and density is expected to attaining a height of 7’ in three years under normal growing conditions. A minimum height of 15’ is to be maintained thereafter. The intent is to completely exclude visual contact with solar panels and equipment.

Waiver: Waiver Agreement – An agreement to modify a standard required in this Ordinance which is entered into by and between the landowner burdened by lessening the standard required by the Ordinance and the landowner requesting the modification of the standard required by this Ordinance. An agreement to modify a standard required by this Ordinance, or “waiver agreement”, is permissible only when a waiver of such standard is specifically authorized by this Ordinance. In order to be valid, a “waiver agreement” must:

- a. be in writing;
- b. specifically state that the document is a waiver agreement;
- c. briefly describe the standard or requirement which is being modified;
- d. briefly describe the standard agreed upon by the parties to the waiver agreement;
- e. be executed in a manner free from coercion or duress;
- f. be executed by both parties to the waiver agreement;
- g. be subject to the approval of the Zoning Administrator; and
- h. filed with the Area Planning Office.

Watts (W) - A measure of the use of electrical power (power (Watts) = voltage (volts) X current (Amps)).

APPENDIX A:

SOLAR ENERGY SYSTEMS: ZONING DISTRICTS

	AG-I	AG-L ²	AG-L ¹	A-R	R-1,2,3	C-1	C-2	C-3	M-1	M-2
C-SES	P	SE	PL	X	X	SE	SE	SE	SE	SE
NC-SES	P	P	P	P	P	P	P	P	P	P

¹ Parcels zoned other than A-L or camp grounds within A-L zoning that do not adjoin incorporated areas of Randolph County as described in 3.01.B (2) and (3).

²A-L: areas within 1 mile of incorporated areas of Randolph County described in 3.01.B (1).

- P- permitted use
- PL- permitted with special limitations in Article 19-7-1
- SE- special exception use
- X- not permitted, no variance allowed