

5.12 Sustainable Energy Systems

A. Solar Energy Systems (SES)

- 1. Purpose:** The purpose of this Section is to provide regulations for the construction, installation, and operation Solar Energy Systems (SES) in unincorporated DeKalb County, while ensuring the health, safety, and welfare of the residents of DeKalb County by promoting the safe, effective, and efficient use of solar energy to reduce on-site consumption of fossil fuels or utility-supplied electrical energy. Also, to avoid adverse impact to important areas such as agricultural land, endangered species habitats, conservation land, and other sensitive lands. DeKalb County encourages the development of Commercial Solar Energy Systems (CSES) where such systems present few land use conflicts with current and future development patterns. This ordinance shall not be deemed to nullify any provision of local, state, or federal law. The contents of this Section shall apply to all solar energy installations in unincorporated DeKalb County.
- 2. Definitions:** The following words, terms, and phrases, when used in this Section, shall have the meanings ascribed to this Section except when the context clearly indicates a different meaning:

Active Solar Energy System: A solar energy system whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

Applicant: The entity who submits to the County an CSES Permit application for the establishment and operation of a CSES or substation. All references to Applicant in this Section shall include Applicant's successor's-in-interest and assigns.

Building-integrated Solar Energy Systems: An active solar energy system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. Building-integrated systems include but are not limited to photovoltaic or hot water solar energy systems that are contained within roofing materials, windows, skylights, and awnings.

Commercial Operation Date: The calendar date on which the CSES produces power for commercial sale, not including test power.

CSES Permit: The zoning entitlement allowing for the establishment and operation of a CSES on a property, including any supporting facilities. This permit shall also be required for the alteration of an existing CSES that represents a significant departure from what was originally approved, but does not include routine maintenance, repair, or replacement of CSES components. The CSES Permit shall be considered the equivalent of a Special Use Permit.

CSES Permittee: An Applicant who applies for and receives a CSES Permit for the establishment and operation of a CSES. All references to Permittee in this Section shall include Permittee's successor's-in-interest and assigns.

CSES Zoning Lot: A CSES zoning lot shall mean all contiguous participating properties within a CSES, located wholly within the boundaries of the County and on one side of a street.

Commercial Solar Energy Facility (CSES): Any device or assembly of devices that (i) is ground mounted and (ii) uses solar energy from the sun for generating electricity for the primary purpose of wholesale or retail sale and not primarily for consumption on the property on which the device or devices reside. "Commercial solar energy facility" does not mean a utility-scale solar energy facility being constructed at a site that was eligible to participate in a procurement event conducted by the Illinois Power Agency pursuant to subsection (c-5) of Section 1-75 of the Illinois Power Agency Act. The CSES shall be the primary use of the lot(s) on which it is located.

Facility Owner: (i) A person with a direct ownership interest in a CSES, regardless of whether the person is involved in acquiring the necessary rights, permits, and approvals or otherwise planning for the construction and operation of the facility, and (ii) at the time the facility is being developed, a person who is acting as a developer of the facility by acquiring the necessary rights, permits, and approvals or by planning for the construction and operation of the facility, regardless of whether the person will own or operate the facility.

"Financial Assurance" or "Financial Security" or "Decommission Security": Shall mean assurance from a credit worthy party, examples of which include a surety bond (e.g: performance and payment bond), trust instrument, cash escrow, or irrevocable letter of credit.

Grid-intertie Solar Energy System: A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.

Ground Mount: A solar energy system mounted on a rack or pole that rests on or is attached to the ground.

Nonparticipating Property: Real property that is not a participating property.

Nonparticipating Residence: A residence that is located on nonparticipating property and that is existing and occupied on the date that an application for a permit to develop the CSES is filed with the County.

Occupied Community Building: Any one or more of the following buildings that is existing and occupied on the date that the application for a permit to develop the CSES is filed with the County: a school; place of worship; day care facility; public library; or community center.

Off-grid Solar Energy System: A photovoltaic solar energy system in which the circuits energized by the solar energy system are not electrically connected in any way to electric circuits that are served by an electric utility company.

Operator: The person or entity responsible for the day-to-day operation and maintenance of a CSES, including third-party subcontractors. The Operator must be a qualified solar power professional. All references to Operator in this Section shall include Operator's successor's-in-interest and assigns.

Participating Property: Real property that is the subject of a written agreement between a facility owner and the owner of the real property that provides the facility owner an easement, option, lease, or license to use the real property for the purpose of constructing a CSES or supporting facility. Participating property also includes real property that is owned by a facility owner for the purpose of constructing a CSES or supporting facilities.

Participating Residence: A residence that is located on participating property and that is occupied on the date that an application for a permit to develop the CSES is filed with the County.

Passive Solar Energy System: A solar energy system that captures solar light or heat without transforming it to another form of energy or transferring the energy via a heat exchanger.

Photovoltaic System: An active solar energy system that converts solar energy directly into electricity.

Property Line: Shall mean the boundary line of the area over which the entity applying for a CSES has legal control for the purposes of installation of a CSES. This control may be obtained through fee title ownership, lease, buffer, or land and water reserve under the Illinois Natural Areas Preservation Act.

Protected Lands: Real property that is: subject to a permanent conservation right consistent with the Real Property Conservation Rights Act; or, registered or designated as a nature preserve, buffer, or land and water reserve under the Illinois Natural Areas Preservation Act.

Public Conservation Lands: Land owned in fee title by County, State, or Federal agencies and managed specifically for conservation purposes, including but not limited to County, state and federal parks, state and federal wildlife management areas, state scientific and natural areas, and federal wildliferefuges and waterfowl protection areas. Public conservation lands do not include private lands upon which conservation easements have been sold to government agencies or non-profit conservation organizations. Public conservation lands also do not include private lands for which the owners have entered into contractual relationships with government or non-profit conservation organizations for conservation purposes.

Renewable Energy Easement, Solar Energy Easement: An easement that limits the height or location, or both, of permissible development on the burdened land in terms of a structure or vegetation, or both, for the purpose of providing access for the benefited land to wind or sunlight passing over the burdened land.

Roof Mount: A solar energy system that is mounted on a rack that is fastened onto a building roof.

Solar Access: Unobstructed access to direct sunlight on a lot or building through the entire year, including access across adjacent parcel air rights, for the purpose of capturing direct sunlight to operate a solar energy system.

Solar Collector: An assembly, structure, and the associated equipment and housing, designed for gathering, concentrating, or absorbing direct and indirect solar energy for which the primary purpose is to convert or transform solar radiant energy into thermal, mechanical, chemical or electrical energy.

Solar Energy: Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

Solar Energy System (SES): All components required to become a complete assembly, or structure, that will convert solar energy into electricity for use.

Solar Energy System Addition: A private solar energy system which is structurally attached to a building or structure on the zoning lot on which said system is located. Said system shall be considered part of the building and shall comply with all provisions of this ordinance pertaining thereto.

Solar Energy System, Private (PSES): A collection of one (1) or more solar collectors designed for use by the occupant(s) of the zoning lot on which said system is located; excess power generation is limited to net metering or similar technology with regulations set by the local power utility, community, county, and state. Private solar energy system equipment shall conform to applicable industry standards, and applicants for building permits for private solar energy systems shall submit certificates from equipment manufacturers that the equipment is manufactured in compliance with industry standards.

Solar Facility: A solar energy system, along with all of the necessary equipment, structures, and substations needed to facilitate the transfer of the generated electricity offsite; and, all accessory structures and equipment used to maintain and secure said facility.

Solar Heat Exchanger: A component of a solar energy device that is used to transfer heat from one substance to another, either liquid or gas.

Solar Hot Air System: An active solar energy system (also referred to as Solar Air Heat or Solar Furnace) that includes a solar collector to provide direct supplemental space heating by heating and re-circulating conditioned building air.

Solar Hot Water System: A system (also referred to as Solar Thermal) that includes a solar collector and a heat exchanger that heats or preheats water for building heating systems or other hot water needs, including residential domestic hot water and hot water for commercial processes.

Solar Mounting Devices: Racking, frames, or other devices that allow the mounting of a solar collector onto a roof surface or the ground.

Substation: The apparatus that collects and connects the electrical collection system of the Commercial Solar Energy Facility and increases the voltage for connection with the utility's transmission lines.

Supporting Facilities: Shall mean the transmission lines, substations, access roads, meteorological towers, storage containers, and equipment associated with the generation and storage of electricity by the CSES.

3. Private Solar Energy Systems (PSES): A single ground mount, roof mount or building integrated private solar energy system for residential/business use is permitted as an Accessory Use in ALL Zoning Districts where there is a principal structure, and shall be subject to the regulations for accessory uses.

a. Setback Requirements:

- 1). Set back requirements for all PSES shall meet the structure minimum set back requirements when the PSES is oriented at any & all positions.
- 2). No PSES shall be allowed in the front yard of any residentially used or zoned property.
- 3). Roof mounted PSES shall not extend beyond the exterior perimeter of the building on which the system is mounted.

b. Height Requirements.

- 1). Building or roof mounted PSES shall not exceed the maximum allowed height for the Zoning District in which the building is located.
- 2). Ground or pole mounted PSES shall not exceed a maximum height of twelve (12) feet, when oriented at maximum tilt.

c. Reflection angles for solar collectors shall be oriented such that they do not project glare onto adjacent properties.

d. Approved PSES Components. Electric PSES components must have a UL listing, or approved equivalent, and must be designed with anti-reflective properties. Solar hot water systems must have an SRCC rating.

e. Utility Notification: All grid-intertie PSES shall comply with the interconnection requirements of the electric utility. Off-grid systems are exempt from this requirement.

- f. **Coverage:** Roof or building mounted PSES, excluding building-integrated systems, shall allow for adequate roof access for fire-fighting purposes to the south-facing or flat roof upon which the panels are mounted. Ground-mount PSES shall be exempt from impervious surface calculations if the soil under the collector is not compacted and maintained in vegetation. Foundations, gravel, or compacted soils are considered impervious.
 - g. All pile driving activity during the project may only occur between the hours of 7:00 am and 5:00 pm.
 - h. **Design Standards:** Active PSES shall be designed to conform to the DeKalb County Comprehensive Plan and to blend into the architecture of the building or may be require to be screened from routine view from public rights-of-ways, other than alleys. Screening may be required to the extent it does not affect the operation of the system. The color of the solar collector is not required to be consistent with other roofing materials.
 - 1). *Building Integrated Photovoltaic Systems.* Building integrated photovoltaic PSES shall be allowed regardless of whether the system is visible from the public right-of-way, provided the building component in which the system is integrated meets all required setback, land use or performance standards for the district in which the building is located.
 - 2). *PSES with Mounting Devices.* PSES using roof mounting devices or ground-mount PSES shall not be restricted if the system is not visible from the closest edge of any public right-of-way or immediately adjacent to a residential structure.
 - 3). *Reflectors.* All PSES using a reflector to enhance solar production shall minimize glare from the reflector affecting adjacent or nearby properties. Measures to minimize glare include selective placement of the system, screening on the north side of the solar array, modifying the orientation of the system, reducing use of the reflector system, or other remedies that limit glare.
 - i. For PSES, commencing with the issuance of building permits, the Applicant or Owner shall maintain a current liability policy covering bodily injuries and any damage that may occur, on their home owner's policy or other applicable policy as approved by the Director of Community Development.
 - j. **Plan Approval Required:** All PSES shall require administrative plan approval by the DeKalb County Building official via the review of the application for a building permit.
 - 1). **Plan Applications.** Plan applications for PSES shall be accompanied by horizontal and vertical (elevation) drawings. The drawings must show the location of the system on the building or on the property for a ground-mount system, including the property lines.
 - 1. **Pitched Roof Mounted PSES.** For all roof-mounted systems other than a flat roof the elevation must show the highest finished slope of the solar collector and the slope of the finished roof surface on which it is mounted.
 - 2. **Flat Roof Mounted PSES.** For flat roof applications a drawing shall be submitted showing the distance to the roof edge and any parapets on the building and shall identify the height of the building on the street frontage side, the shortest distance of the system from the street frontage edge of the building, and the highest finished height of the solar collector above the finished surface of the roof.
 - 2). **Plan Approvals.** Applications that meet the design requirements of this ordinance, and do not require an administrative variance, shall be granted administrative approval by the Director of Community Development and shall not require Planning and Zoning Committee review. Plan approval does not indicate compliance with Building Code or Electric Code.
4. **Municipal CSES:** CSES that are proposed to be located on lands within the 1.5-mile radius of an incorporated municipality's zoning jurisdiction shall seek zoning and building approval from said municipality.
- a. Prior to the start of any construction or ground work, the facility owner must either:
 - 1). Present documentation that the proposed site is the subject of an approved pre-annexation agreement, and facilitate the creation of an Intergovernmental Agreement between the

municipality and the County identifying that the municipality will be taking full jurisdiction over the project site and affected properties for the life of the project; or

- 2). Present documentation that the proposed site has been the subject of an annexation into the municipality.

5. Commercial Solar Energy Systems (CSES)

a. Applicability:

- 1). This Ordinance governs the siting of CSES, and associated supporting facilities, that generate electricity to be sold to wholesale or retail markets.
- 2). No CSES or Substation governed by this Ordinance shall be constructed, erected, installed, or located within unincorporated DeKalb County, unless a CSES Permit has been obtained for each individual CSES or for a group of CSES under a joint CSES Permit application pursuant to this Ordinance.

b. Standards and Requirements:

- 1). CSES are allowed in the A-1, MC, and PD-I Zoning Districts, and shall require a CSES Permit.

2). Setbacks:

1. All setbacks shall be measured from the nearest edge of any component of the facility (including the security fencing), except the interconnection point; and
2. The facility shall be setback at least one hundred fifty (150) feet from the nearest point on the outside wall of an occupied community building or dwelling on a nonparticipating property; and
3. The facility shall be setback at least fifty (50) feet from a public road right-of-way; and
4. The facility shall be setback at least fifty (50) feet from the nearest point on the property lines of a nonparticipating property.
5. There shall be no setback from the boundary lines of a participating property.
6. These setbacks may be waived if the developer of the facility can obtain and submit as part of the CSES Permit application, written, signed, and notarized statements from the owners of each affected nonparticipating property agreeing to waive these setbacks. Any waiver of any of the above setback requirements shall run with the land and be recorded as part of the chain of title in the deed of the subject property.
7. A “spot” survey will be required, at time of installation, verifying that all elements of the facility meet the minimum setbacks. It will be the responsibility of the developer to relocate any component of the facility failing to meet these setbacks in a timely fashion. Failure to do so will constitute a violation of the Permit.
8. This Section does not exempt or excuse compliance with electric facility clearances approved or required by the National Electrical Code, The National Electrical Safety Code, Illinois Commerce Commission, Federal Energy Regulatory Commission, and their designees or successors.

- 3). **Power and Communication Lines.** Power and communication lines running between banks of solar panels and to on-site electric substations or interconnections with buildings shall be buried underground, except at the interconnection point to the electrical grid. Exemptions may be granted by DeKalb County in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines, or distance makes undergrounding infeasible, at the discretion of the Director of Community Development. In addition, the Illinois Department of Agriculture (IDOA) has established standards and policies in the Agricultural Impact Mitigation Agreements (AIMA) regarding the construction or burial of electric transmission lines which should be agreed to and adhered to between the landowner and the developer.

4). Ground Cover, Screening, and Buffer Areas.

1. In order to prevent erosion, manage run-off, and provide ecological benefit, the facility shall install and maintain a “low-profile” native prairie vegetation on the facility (including beneath and between the panels), using a mix appropriate for the region and soil conditions

2. Top soil shall not be removed during development, unless part of a remediation effort.
3. DeKalb County has a Noxious Weed Ordinance which is to be followed.
4. Due to potential county liability under the Illinois Endangered Species Protection Act (520 ILCS 10/11(b)) it is required that any vegetation planted be in compliance with all federal and state laws protecting endangered species. This will also include pollinators such as bees.
5. A strip of turfgrass, the width of one commercial mower, or as otherwise required to allow for maneuvering emergency vehicles, may be maintained along the edge of the access road.
6. Any part of the facility that is within one thousand (1,000) feet of a nonparticipating residence or occupied community building, shall be screened. Additional screening may also be required, if the Hearing Officer deems such is necessary.
 - a. Required screening shall consist of native trees, shrubs, or a combination thereof.
 - b. All screening must be installed prior to the activation and operation of the facility.
 - c. All screening is to be maintained by the facility owner for the life of the project, with replacement plantings and maintenance conducted as necessary. Failure to do so will be a violation of the CSES Permit.
7. Prior to submittal of the Building Permit application, the developer shall submit a Landscape Monitoring and Maintenance Plan to the DeKalb County Soil and Water Conservation District for review and approval, to ensure the establishment and continued maintenance of the native prairie vegetation, all installed landscape screening, and all existing vegetation that provides required landscape screening.
 - a. All vegetation utilized as part of the facility shall meet the performance standards set forth in these regulations and shall be maintained to those standards throughout the life of the project.
- 5). **Interconnection Point.** The interconnection point to the electrical grid shall be located within or as adjacent to a right-of-way or existing power line as is possible, but shall in no case be further than twenty (20) feet from a right-of-way or existing power line. Any poles used as part of the interconnection point shall be placed such that they run parallel to said right-of-way or existing power line. A variation from this standard may be granted, provided the applicant can adequately demonstrate the unique circumstances and particular hardships that would merit such a variation being granted.
- 6). **Height Requirement:** The CSES shall be sited so that no component of a solar panel shall have a height of more than twenty (20) feet above the ground when the arrays are at full tilt. This restriction may be waived if the developer of the facility can obtain and submit as part of the CSES Permit application, a written, signed, and notarized statement from the owner of each affected nonparticipating property agreeing to waive this restriction.
- 7). **Fencing.** The CSES shall be sited so that the facility's perimeter is enclosed by fencing having a height no less than six (6) feet and no more than twenty-five (25) feet. Said fencing shall be a primarily woven wire or agricultural style fencing, and shall contain appropriate warning signage that is posted such that it is clearly visible on the site.
 1. These requirements may be waived if the developer of the facility can obtain and submit as part of the CSES Permit application, a written, signed, and notarized statement from the owner of each affected nonparticipating property agreeing to waive these restrictions.
 2. However, this waiver does not negate any applicable State or Federal requirements regarding the security fencing around a CSES.
- 8). **Sound:** Noise levels from CSES shall be in compliance with applicable Illinois Pollution Control Board (IPCB) regulations. The Applicant shall submit manufacturer's sound power level characteristics and other relevant data regarding noise characteristics necessary for a competent noise analysis. The Applicant, through the use of a qualified professional, shall appropriately demonstrate compliance with the applicable noise requirements in its CSES Permit application.

- 9). **Stormwater:** CSES are subject to DeKalb County’s Stormwater Management regulations, erosion and sediment control provisions. The facility owner will have to submit and receive approval of a Site Development Permit to demonstrate that these requirements will be met.
 - 10). **Drainage Systems:** The Applicant, at its expense, will repair, in a prompt and timely manner, all waterways, drainage ditches, agricultural drainage systems, field tiles, or any other private and public infrastructure improvements damaged during construction, maintenance and operation phases of the CSES in accordance with the Agricultural Impact Mitigation Agreement.
 - 11). **Supporting facilities:** Supporting facilities constructed in conjunction with the CSES are subject to all of the same siting requirements as the CSES, and must be fully detailed and presented as part of the CSES Permit application. Additionally, large-scale supporting facilities which require the permanent removal and/or destruction of the farm soils of the land on which the facility is to be placed, such as substations, shall be located so as to minimize, to the greatest extent possible, the impact of said facilities.
 - 12). **Aviation Protection.** For CSES located within 500 feet of an airport or within approach zones of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or most recent version adopted by the FAA.
 - 13). **Standards and Codes:** All CSES shall be in compliance with all applicable local, state and federal regulatory codes, including, but not limited to: the State of Illinois Plumbing Code; The State of Illinois Electric Code; The State of Illinois Energy Code; the State of Illinois Uniform Building Code, as amended; the National Fire Protection Association (NFPA); the National Electric Code, as amended; and, all DeKalb County Health Department requirements.
 - 14). **Approved CSES Components.** Electric CSES components must have a UL listing, or approved equivalent, and must be designed with anti-reflective properties.
 - 15). **Guy Wires:** Visible, reflective, colored objects, such as flags, plastic sleeves, reflectors, or tape shall be placed on the anchor points of guy wires and along the guy wires up to a height of fifteen (15) feet from the ground.
 - 16). **Lighting.** Except for lighting that is required by the FCC or FAA, all lighting shall be shielded so that no glare extends substantially beyond the boundaries of the facility.
 - 17). **Utility Notification:** All CSES shall comply with the interconnection requirements of the electric utility.
- c. **Content of an CSES Permit Application:** A CSES Permit application shall require the following:
- 1). For CSES Permit applications for projects proposed to occupy more than one (1) CSES zoning lot, only one (1) application covering the entire project is required. However, although processed as one, each CSES zoning lot within the CSES shall be assigned its own CSES Permit, and shall require their own separate Site Development Permit and Building Permit.
 - 2). The application shall include two (2) printed copies and one electronic copy of the entire application (including: the application forms and any attachments or other submittals included therein).
 - 3). **A completed “Application for Zoning Action” form.**
 - 4). **Initial Deposit towards the CSES Permit:** An initial deposit of \$850.00 is due at the time of submission. The applicant is responsible for all costs (staff review, publication costs, hearing officer fees, etc.) associated with processing the CSES Permit. The total fee will not be known until all of the final costs have been received (typically, about 2 to 3 weeks after the public hearing). At which time, the initial deposit will be applied towards the total fee, and the applicant invoiced for the remainder of fee. Payment of the remainder of the fee must be received before the CSES Permit will be released.
 - 5). **Facility Contacts:** The names, company names, addresses, emails, and phone numbers of the Applicant, the Facility Owner, and Operator of the CSES, if known.

- 6). If the applicant is not the owner of the property, the applicant shall also include a signed & dated statement (or similar document) from the property owner(s) acknowledging that the applicant has their approval to seek the requested CSES Permit.
- 7). **Narrative Statement:** A written document providing to the extent available: (a) a detailed description of the project, including (i) its approximate overall name plate generating capacity, (ii) the potential equipment manufacturer(s), (iii) type(s) of solar panels, cells and modules, (iv) the number of solar panels, cells and modules, (v) the maximum height of the solar panels at full tilt, (vi) the number of Substations, (vii) project phasing plan and project construction timeline plan, and (viii) the general location of the project; and (b) a description of the Applicant, Owner and Operator, including their respective business structures.
- 8). A plat of survey, or property boundary plat, of the subject property. If the project will only result in a portion of the subject property being acquired or leased by the applicant, a plat of the proposed project area will also be required.
- 9). **Site Plan.** A detailed site plan for both existing and proposed conditions must be submitted, showing the location of all: solar arrays; associated supporting facilities; existing structures; property lines; rights-of-way; service roads; floodplains; wetlands and other protected natural resources; topography; drainage structures, including surface drainage ditches and subsurface drainage lines; electric equipment; fencing; and, screening materials, and all other characteristics requested by DeKalb County. The Site Plan must also identify all setback lines, occupied community structures, participating residences, nonparticipating property lines, and residences on nonparticipating properties within two hundred (200) feet of the property line, and their distance from them to the fencing around the CSES.
- 10). **Waivers:** Copies of any waivers to be submitted, along with verification that they have been properly recorded.
- 11). **Noise Analysis:** The Applicant shall submit manufacturer's sound power level characteristics and other relevant data regarding noise characteristics necessary for a competent noise analysis, and through the use of a qualified professional, shall appropriately demonstrate compliance with the applicable noise requirements.
- 12). Drawings, elevations, or pictures of any structures to be altered, built, or included as part of the proposed project.
- 13). A CSES developer shall be required to initiate a natural resource review consultation with the Illinois Department of Natural Resources (IDNR) through the department's online, EcoCat program. Areas reviewed through this process will be endangered species and wetlands. The cost of the EcoCat consultation will be borne by the developer. The results of this consultation shall be included as part of the CSES Permit application.
- 14). A CSES developer shall be required to initiate a consultation with the Illinois Historic Preservation Agency (IHPA) to assess potential impacts on State-registered historic sites under the Illinois State Agency Historic Resources Preservation Act. The cost of this consultation shall be at the developer's expense. The results of this consultation shall be included as part of the CSES Permit application.
- 15). A CSES developer shall be required to include as part of the CSES Permit application demonstration of the avoidance of protected lands as identified by the IDNR and the Illinois Nature Preserve Commission. The facility owner shall abide by the recommendations of the IDNR for setbacks from protected lands, including areas identified by the Illinois Nature Preserve Commission.
- 16). A CSES developer shall be required to include as part of the CSES Permit application the results of the United States Fish and Wildlife Service's Information for Planning and Consulting environmental review or a comparable successor tool that is consistent with the any applicable United States Fish and Wildlife Service solar wildlife guidelines that have been subject to public review.

- 17). **Natural Resources Inventory Report (NRI):** All CSES projects that will result in property being taken out of agricultural production is required to obtain an NRI from the DeKalb County Soil and Water Conservation District, and include it as part of the application.
 - 18). **Legal Descriptions:** Two (2) legal descriptions shall be submitted: the first will be of the subject property(s) on which the facility will be located, which will be used for the public notice; and, the second will be of the specific leased/purchased area(s) to be occupied by the facility.
 - 19). **AIMA:** The facility owner must include signed & completed copies of the Agricultural Impact Mitigation Agreement (AIMA) that they entered with the Department of Agriculture.
 - 20). **Decommissioning and Site Reclamation Plan:** The Applicant (or Owner, if different from the Applicant) must submit a Decommissioning and Site Reclamation Plan with cost estimation to the County as part of the CSES Permit application, and shall be prepared to provide testimony supporting the calculation of costs provided in said plan during the public hearing.
 - 21). **Landscape Plan:** A Preliminary Landscape Plan showing the proposed locations and dimensions of all plantings and landscaping must be submitted as part of the CSES Permit application.
- d. **CSES Permit Application Process:**
- 1). The hearing officer shall hold a public hearing on the application, and shall have the authority to determine whether the CSES Permit application meets the regulations as set forth for CSES in this Ordinance. The hearing officer shall make a finding of fact and determination of compliance based upon those regulations herein prescribed.
 - 2). A complete application for a CSES Permit shall be filed with the Community Development Department. The Department will then arrange for a public hearing to be held on the application, no more than 45 days after the filing of the application. Notice of the hearing shall be published at least once, not more than 30 days or less than 15 days before the hearing, in a newspaper of general circulation in the County. Supplemental or additional notices may be published or distributed as the hearing officer may, by rule, prescribe from time to time. Additionally, a copy of such notice shall be mailed to: owner(s) of record of all properties adjacent to the parcel(s) included in the application; to those properties adjacent to the aforesaid properties; and, any municipality whose boundaries are within 1-1/2 miles of any part of the property proposed as a Commercial Solar Energy Facility. The County may also provide notice of such hearing by erection of a sign on the subject property, posted in a conspicuous place on the subject property allowing unobstructed public viewing.
 - 3). Interested parties to a CSES Permit shall be allowed an opportunity to present evidence and to cross-examine witnesses at the hearing; however, the Hearing Officer may impose reasonable restrictions on the public hearing, including reasonable time limitations on the presentation of evidence and the cross-examination of witnesses. Public comment shall also be allowed at the public hearing in accordance with the Open Meetings Act.
 - 4). **AIMA:** If copies of the signed AIMA were not included as part of the CSES application, then the petitioner must be prepared to submit at the hearing two (2) signed & completed copies of the AIMA, one to the Hearing Officer and one to DeKalb County Community Development staff, dated prior to the date of the public hearing. If no AIMA is submitted, the application shall be considered incomplete and denied.
 - 5). **Findings of fact and Determination of Compliance of the hearing officer:** Within 30 days after the close of the hearing on a proposed CSES, the hearing officer shall make written findings of fact and shall submit same together with his Determination of Compliance to the Community Development Department. The hearing officer shall make findings based upon the evidence presented to him in each specific case.
 - 6). **Resolution of the CSES Permit Application:** A copy of the Hearing Officer's Findings of Fact and Determination of Compliance shall be forwarded to the applicant, along with the final invoice for the total fee amount.

- e. **Post CSES Permit Approval:** Following the approval of the CSES Permit, the facility owner shall submit and obtain approval of the following:
- 1). The CSES shall be constructed and operated in substantial conformity to the plans and materials submitted as part of the application and presented at the public hearing.
 - 2). **Landscape Plan:** The facility owner shall submit their fully detailed Landscape Plan to the DeKalb County Soil and Water Conservation District (SWCD) for review and approval. This plan shall then be subsequently revised as necessary to comply with the recommendations of the SWCD. Copies of the revised plan shall be submitted as part of the Site Development Permit application. The following information shall be provided in the detailed Landscape Plan:
 1. Project name and geographic location;
 2. A site plan showing the location of each plant community proposed on-site (e.g.: different plant communities under panels, between panels, landscape screening, or other site areas);
 3. Lists of proposed native species to be installed, including scientific name, common name, and quantity;
 4. Separate species lists shall be provided for each plant community being proposed;
 5. A general description of the proposed site preparation and installation methods for the native species (e.g.: seed drill, hand broadcast, plant plugs, etc.).
 - 3). **Tile Investigation Report.** The facility owner must submit a Tile Investigation Report, as part of the Site Development Permit application, for the entire area of the CSES, identifying all drain tiles located therein. The CSES developer shall maintain and protect all drain tiles located within the project area, and shall repair or replace any drain tiles damaged as a consequence of the installation or removal of the CSES.
 - 4). **NPDES Permit:** CSES are subject to the requirements of a NPDES Permit from the Illinois Environmental Protection Agency. The facility owner shall submit copies of documentation that the facility will meet these requirements as part of the Site Development Permit application.
 - 5). **Site Development Permit:** The facility owner shall submit a complete application for a Site Development Permit, and receive approval thereof prior to the submittal of the Building Permit for the CSES.
 1. For CSES projects occupying more than one (1) CSES zoning lot, each CSES zoning lot within the CSES shall require its own separate Site Development Permit.
 - 6). **Landscape Monitoring and Maintenance Plan:** The facility owner shall submit a Landscape Monitoring and Maintenance Plan to the DeKalb County SWCD for review and approval prior to the submittal of the Building Permit for the CSES.
 - 7). **Road Use Agreements:** Road Use Agreements shall be established with all appropriate road authorities prior to the submittal of the Building Permit for the CSES. The Applicant shall provide an executed road use agreement between the Applicant and the appropriate governing road and highway jurisdictions or the Illinois Department of Transportation, to the County showing approved entrances prior to the submittal of any CSES Building Permit.
 - 8). **Interconnection Agreement:** A copy of the Interconnection Agreement application submitted to electrical utility needs to be submitted prior to submittal of the Building Permit. The CSES shall comply with the interconnection requirements of the electric utility.
 - 9). **Decommissioning and Site Reclamation Plan:** The Applicant or Owner shall provide a Decommissioning Agreement and post the required Financial Assurances for the benefit of the County, prior to the submittal of the Building Permit for the CSES. The Decommissioning Agreement and Financial Assurances shall comply with 55 ILCS 5/5-12020.
 - 10). **Solar PV Building Permit:** The facility owner shall submit a Solar PV Building Permit application to the DeKalb County Community Development Department for review and approval.

1. **Plan Approval Required:** All solar energy systems shall require administrative plan approval by the DeKalb County Building official via the review of the application for a building permit.
 1. **Plan Applications.** Plan applications for solar energy systems shall be accompanied by horizontal and vertical (elevation) drawings. The drawings must show the location of the system on the property for a ground-mount system, including the property lines.
 2. **Plan Approvals.** Applications that meet the design requirements of this ordinance, and do not require an administrative variance, shall be granted administrative approval by the Director of Community Development and shall not require Planning and Zoning Committee review. Plan approval does not indicate compliance with Building Code or Electric Code.
 2. For CSES projects occupying more than one (1) CSES zoning lot, each CSES zoning lot within the CSES shall require its own separate Solar PV Building Permit.
 3. Large scale support facilities, such as substations, shall require their own separate Building Permit.
 4. All pile driving activity during the project may only occur between the hours of 7:00 am and 5:00 pm.
 5. Foundations. A qualified engineer shall certify that the foundation and design of the solar panels racking and support is within accepted professional standards, given local soil and climate conditions.
 6. The County may retain a qualified, independent code inspector or professional engineer both to make appropriate inspections of the CSES during and after construction and to consult with the County to confirm that the construction, substantial repair, replacement, repowering and/or decommissioning of the CSES is performed in compliance with applicable electrical and building codes. The cost and fees so incurred by the County in retaining said inspector or engineer shall be promptly reimbursed by the Applicant of the CSES.
 - 11). **As-Built Map and Plans:** Within sixty (60) calendar days of completion of construction of the CSES, the Applicant or Operator shall deliver "as-built" maps, site plan and engineering plans for the CSES that have been signed and stamped by a Professional Engineer and a licensed surveyor.
 - 12). The Siting Approval Permit granted to the Applicant shall bind and inure to the benefit of the Applicant, its successors-in-interest and assigns. If any provision in this Ordinance is held invalid, such invalidity shall not affect any other provision of this Ordinance that can be given effect without the invalid provision and, to this end, the provisions in this Ordinance are severable.
- 6. Operation and Maintenance**
- a. Upon request from the DeKalb County Community Development Department, an owner of a CSES must provide documentation, within thirty (30) days, that the CSES is still in use. If it is not, the owner of the System will have 180 days, after notification from the Community Development Department, to remove the CSES from the property.
 - b. Upon request from the DeKalb County Community Development Department, the owner or operator of a CSES must submit, within 14 days, a current operation and maintenance report to the Department.
 - c. **Decommissioning Plan:** Periodically, and as required by the Agricultural Impact Mitigation Agreement, the Owner must update the Decommissioning Plan and cost estimations, and provide updates Financial Assurances to the benefit of the County.
 - d. All solid wastes related to the construction, operation and maintenance of the CSES shall be removed from the site promptly and disposed of in accordance with all federal, state and local laws.
 - e. All hazardous materials related to the construction, operation and maintenance of the CSES shall be handled, stored, transported and disposed of in accordance with all applicable local, state and federal laws.

- f. The CSES shall comply with existing septic and well regulations as required by the County Health Department and the State of Illinois Department of Public Health.
- 7. Remedies**
- a. The Applicant's failure to materially comply with any of the provisions under the CSES Permit granted herein, or any applicable state, federal, or local laws and regulations, shall be a default and shall be grounds for revocation of the CSES Permit by the County Board.
 - b. Prior to implementation of the applicable County procedures for the resolution of default(s), the County Board must first provide written notice to the Applicant and Operator, setting forth the alleged default(s) and provide an opportunity for the Applicant or the Operator to cure the default(s) within a thirty (30) calendar day period from the date of the notice. Should the Applicant commence the cure within that 30-day cure period, and diligently pursues a cure, then the Applicant shall receive an additional sixty (60) days to continue to pursue the cure before the County pursues procedures for the resolution of default. If the default relates to a life safety issue or interference with local, government public safety (police, fire, emergency medical services, emergency management services, 911 dispatch) communications, the Applicant or the Operator shall take all necessary and available commercial measures to immediately cure the default. If the Applicant or Operator cannot cure the default(s) or resolve the alleged default(s) within the cure period, then applicable County ordinance provisions addressing the resolution of such default(s) shall govern.
- 8. Coordination with Emergency Responders**
- a. The Applicant shall submit to the local emergency responders a copy of the Site Plan, Standard Operating Procedures (SOPs) and Standard Operating Guidelines (SOGs), and any amendments to such documents, for the CSES so that the local law enforcement, fire protection district and rescue units, emergency medical service providers and emergency management service providers that have jurisdiction over each site may evaluate and coordinate their emergency response plans with the Applicant of the CSES.
 - b. The Applicant, at its expense, shall provide annual training for, and the necessary equipment to, the Operator and local emergency response authorities and their personnel so that they can properly respond to a potential emergency at the CSES.
 - c. The Applicant and the Operator shall cooperate with all local emergency responders to develop an emergency response plan. The plan shall include, at a minimum, 24-hour contact information (names, titles, email addresses, cell phone numbers) for the Applicant and the Operator and at least three (3) designated CSES representatives (a primary representative with two (2) alternate representatives, each of whom are on-call "24 hours per day / 7 days per week / 365 days per year"). Any change in the designated CSES representative or his/her contact information shall be promptly communicated to the County. The content of the emergency response plan, including the 24-hour contact information, shall be reviewed and updated on an annually basis.
 - d. Nothing in this section shall alleviate the need to comply with all other applicable life safety, fire / emergency laws and regulations.
- 9. Use of Public Roads**
- a. An Applicant proposing to use any County, municipality, township or village road(s), for the purpose of transporting CSES or Substation parts and/or equipment for construction, operation, or maintenance of the CSES or Substation(s), shall:
 - 1) Road Agreement: A road agreement that includes all effected jurisdictions (municipal, township, county, state, etc.) must be agreed upon by all parties and recorded with the DeKalb County Recorder's Office. A signed agreement must be recorded prior to the issuance of the Building Permit. The agreement shall include, but not be limited to:
 - 1. Identify all such public roads; and
 - 2. Obtain applicable weight and size permits from the relevant government agencies prior to construction.
 - 2) To the extent an applicant, owner, or operator must obtain a weight or size permit from the County, municipality, or township, the applicant, owner, or operator shall:
 - 1. Conduct a pre-construction baseline survey to determine existing road conditions for assessing potential future damage; and
 - 2. Any proposed public roads that will be used for construction purposes shall be identified and approved in writing by the respective Road District Commissioner and the County Engineer prior to the granting of the CSES Permit. Traffic for construction

purposes shall be limited to these roads. All overweight and/or oversized loads to be transported on public roads may require a permit from the respective highway authority. Any road damage caused by the transport of the facility's equipment, the installation, maintenance, or removal, must be completely repaired to the reasonable satisfaction of the Road District Commissioner and the County Engineer. The Road District Commissioner and County Engineer may choose to require either remediation of road repair upon completion of the CSES Project or are authorized to collect fees for overweight and/or oversized load permits. Further, financial assurance in an amount to be fixed by the Road District Commissioner to ensure the Road District or the County that future repairs are completed to their reasonable satisfaction shall be provided. Applicant shall submit a draft form of said financial assurance with application for CSES Permit.

3. Enter into a road use agreement with the County and each affected Road District that includes the following provisions, at a minimum:
 - a. Project layout map;
 - b. Transportation impact analysis;
 - c. Pre-construction plans;
 - d. Project traffic map;
 - e. Project scope of repairs;
 - f. Post-construction repairs;
 - g. Insurance;
 - h. Financial Security in forms and amounts acceptable to the County;

The road use agreement shall require Applicant to be responsible for the reasonable cost of improving roads used to construct CSES and the reasonable cost of repairing roads used by the facility owner during construction of the CSES so that those roads are in a condition that is safe for the driving public after the completion of the CSES construction. Roadways improved in preparation for and during the construction of the CSES shall be repaired and restored to the improved condition at the reasonable cost of the developer if the roadways have degraded or were damaged as a result of construction-related activities

- 3) All repairs and improvements to County public roads and roadway appurtenances shall be subject to the prior approval of the County before being made and shall also be subject to inspection and acceptance by the County after such repairs and improvements are completed. The County's road use agreement, and any further agreements contemplated therein, regarding the maintenance and repair of County public roads and highways, must be approved by the County prior to the approval of any Building Permit applications related to the construction of the proposed CSES Project.

10. Landscape Monitoring and Maintenance Plan

- a. The Landscape Monitoring and Maintenance Plan (LMMP) shall provide an explanation of how the ecological quality of the site will be achieved and maintained throughout the life of the facility. At a minimum, the Year 5 performance standards described below should continue to be met. Basic elements of the LMMP shall address the following activities:
 - 1). *Mowing*: A discussion of the mowing strategy(s) and frequency(s) that will be used. For instance, annual mowing should be properly timed and kept to a minimum to avoid disturbance of wildlife and native vegetation but frequent enough to prevent the establishment of weeds/trees/shrubs that may be introduced by seed over time. Annual mowing is recommended once a year, after October 15, since most native plants have flowered and gone to seed by this time, and before April 15, which is the typical start of prime nesting season for birds. If invasive or weedy species need to be targeted outside of this time frame, the use of high mowing (mower blade over 12" high) or properly timed use of brush cutter/weed ship can be implemented to target specific species and prevent the formation of weed seed without harming native plants. To prevent smothering of native plants, the cut material should be chopped into small enough parts or cut material should be collected, removed, and properly disposed of.
 - 2). *Chemical Control*: Chemical pesticides/herbicides shall be applied selectively (e.g.: spot

application rather than routine broadcast spraying) unless part of an approved adaptive management strategy to address problem areas (e.g.: areas with a dominance of invasive plant species that do not respond well to mechanical control measures). Pesticide/herbicide applications are to be performed by a licensed professional applicator in strict compliance with all warning labels and applicable codes, standards, and best management practices.

- 3). *Fertilizer Use*: Fertilizers shall not be used in areas planted with native vegetation.
 - 4). *Erosion Control*: No area on the vegetated portion of the site greater than one (1) square meter shall be devoid of vegetation, as measured by aerial coverage. The site shall have no rills or gullies greater than four (4) inches wide by four (4) inches deep.
 - 5). *Supplemental Seeding/Revegetation*: Remedial actions may be needed as site conditions warrant. Such actions may include reseeding or planting live plugs of native plant species. Installation of supplemental plugs and/or seed should be consistent with the approved seed mix and appropriate for the habitat conditions, or approved by SWCD.
 - 6). *Tree/Shrub Replacement*: At least 80% of the trees/shrubs identified in the permitted plans must remain alive and healthy throughout the life of the facility. The LMMP shall include a discussion of how trees/shrubs will be monitored and replaced.
 - 7). *Adaptive Management*: To maintain the ecological quality of the site, the applicant must be prepared to adapt management practices if site conditions change. For instance, an outbreak of an invasive species may require more intensive management and reseeding to restore habitat. The earlier a problem is identified and adaptive strategies are implemented, the less corrective action is typically required. The LMMP shall include a brief discussion of how adaptive management strategies would be established and implemented.
- b. **Inspections**: The DeKalb County Community Development Department and SWCD reserve the right to request access to the site to conduct visual inspections and assess the condition of the native planting areas.
- c. **Annual Monitoring and Maintenance Reports**: A brief monitoring and Maintenance Report shall be submitted to SWCD annually for the first five (5) years or until compliance approval is provided by SWCD. See the compliance approval subsection below for information on performance standards associated with compliance approval. The reports shall be submitted to SWCD by December 31st of each year. The Monitoring and Maintenance Report shall be prepared by an ecologist and shall include, at a minimum:
- 1). Project name and geographic location;
 - 2). Map location and description of each plant community present on-site;
 - 3). Description of the general condition of each plant community including any issues or deficiencies from the performance standards;
 - 4). List of all species observed in each plant community, including scientific and common names, based on a minimum of two (2) meander searches conducted by an ecologist during the growing season (one (1) meander search in the spring and one (1) in the summer);
 - 5). List of five (5) most dominant species present in each community, estimated based on visual observation during the meander searches, including scientific and common names;
 - 6). Discussion of maintenance activities implemented during the current year being reported on;
 - 7). Summary of maintenance activities planned for the coming year, including any “adaptive management” strategies proposed to address issues or to correct deficiencies from the performance standards; and
 - 8). Color photos representing each plant community and their general condition including any issues observed or deficiencies in performance standards.
- d. **Performance Standards**
- 1). **Upon Completion of Construction**: A temporary cover crop shall be planted to aid in the establishment of the native species and prevent erosion. Cover crop may include species such as Oats (*Avena sativa*). NOTE: Perennial Rye (*Lolium perenne*) and Barnyard Grass (*Echinochloa crusgalli*), which are identified as cover crop on some regional species lists, shall not be used.
 - 2). **Within three (3) Months of Seeding**: At least 70% of the project site (excluding access road(s) and equipment pad(s)), as measured by aerial coverage, shall be vegetated or otherwise stabilized against erosion. The cover crop may be used to accomplish this requirement.
 - 3). **Year 1**: By the end of the first full growing season, planted areas shall have 90% vegetation

cover. The cover crop may be used to accomplish this requirement. Any planted trees/shrubs that are dead or trees/shrubs with 50% or more dead branches shall be replaced.

- 4). **Year 2:** By the end of the second growing season, at least 50% of the vegetation present shall be native, non-invasive species. No area on the vegetated portion of the site greater than one (1) square meter shall be devoid of vegetation, as measured by aerial coverage. Any planted trees/shrubs that are dead or trees/shrubs with 50% or more dead branches shall be replaced. None of the 3 most dominant species within the planted communities shall be non-native or invasive species, including, but not limited to: ...
- 5). **Year 3:** By the end of the third growing season at least 60% of the vegetation present shall be native, non-invasive species. No non-native or invasive species shall be among the three (3) most dominant species. No area on the vegetated portion of the site greater than one (1) square meter shall be devoid of vegetation, as measured by aerial coverage. Any planted trees/shrubs that are dead or trees/shrubs with 50% or more dead branches shall be replaced.
- 6). **Year 4:** By the end of the fourth growing season at least 70% of the vegetation present shall be native, non-invasive species. No non-native or invasive species shall be among the three (3) most dominant species. No area on the vegetated portion of the site greater than one (1) square meter shall be devoid of vegetation, as measured by aerial coverage. Any planted trees/shrubs that are dead or trees/shrubs with 50% or more dead branches shall be replaced.
- 7). **Year 5:** By the end of the fifth growing season at least 75% of the vegetation present shall be native, non-invasive species. No non-native or invasive species shall be among the three (3) most dominant species. No area on the vegetated portion of the site greater than one (1) square meter shall be devoid of vegetation, as measured by aerial coverage. A minimum of 80% of all trees/shrubs identified in the approved plans must be alive and healthy.
- 8). **Compliance Approval:** After Year 5 performance standards have been achieved, the applicant can submit a written request for compliance approval from SWCD. SWCD staff will visit the site to evaluate if performance has been met. If performance standards are confirmed to have been met, SWCD will provide written confirmation to the Community Development Director. Once compliance approval has been obtained, the applicant is responsible for implementing the long-term portion of the maintenance plan and maintaining the Year 5 performance standards throughout the life of the facility.
- 9). **Post Compliance Approval Reporting:** At each 5-year interval after compliance approval, a brief monitoring report shall be submitted to SWCD for review and acceptance. Failure to submit this report will be a violation of the Special Use Ordinance. The format of the report shall follow the format of the Annual Monitoring and Maintenance Report. If the report shows that the site does not meet or exceed the Year 5 performance standards, additional maintenance shall be performed during subsequent years to achieve the Year 5 standards. Monitoring reports shall be submitted annually until such standard is achieved, at which point the 5-year reporting period shall be resumed.