

Sec. 24-84. - ~~Solar panels~~ Solar Energy Facility.

- ~~(a) In residential areas, the location of solar panels shall be placed in such a manner as to not cause glare onto roadways or adjacent properties.~~
- ~~(b) A plan showing the proposed location of solar panel(s), the arrangement of the panels, distance from the roof, pitch of the finished roof, and distance from the proposed site improvements to all property lines.~~
- ~~(c) Solar energy system components must have a UL listing and must be designed with anti-reflective glare coatings to minimize solar glare.~~
- ~~(d) Written authorization from the local public utility company acknowledging that it has been informed of the Applicant's intent to install an interconnected customer-owned generator and that it also approves of such connections.~~
- ~~(e) Roof-mounted solar collector systems shall meet the following standards:
  - ~~(1) Roof-mounted accessory collector systems shall not extend above the ridge cap or exceed the height restriction of the district.~~
  - ~~(2) The collector surface and mounting devices for roof-mounted systems shall not extend beyond the exterior perimeter of the building on which the system is mounted or built.~~
  - ~~(3) Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side or rear yard exposure.~~
  - ~~(4) Roof-mounted systems shall not be located within three feet of any peak, eave, or valley of the roof to maintain pathways of accessibility.~~
  - ~~(5) Roof-mounted systems shall be mounted parallel to the roof at the same pitch or no greater than five percent steeper than the roof.~~
  - ~~(6) Solar panels shall be placed such that concentrated solar radiation or glare shall not be directed onto other properties or public access areas.~~
  - ~~(7) Mounting hardware and framing shall be non-reflective or matte black in color.~~
  - ~~(8) Roof-mounted systems shall provide, as a part of the permit application a design review and structural certification from a South Carolina registered engineer.~~~~
- ~~(f) The site shall adhere to the applicable sections of the International Building Code at time of construction and throughout the operation of the accessory use.~~
- ~~(g) Solar farm—Where a series of ground-mounted solar collectors (minimum of three) are placed in an area for generating photovoltaic power for resale purposes must also meet the following conditions:
  - ~~(1) A letter from a registered South Carolina engineer stating that the panels are placed in such a way as to not be offensive to traffic or residences.~~
  - ~~(2) No structure shall achieve a height greater than 20 feet.~~
  - ~~(3) A fence of at least six feet in height must control access to the site with a vegetative landscape buffer meeting the requirements of section 24-107 provided between the fencing and the property line.~~
  - ~~(4) Solar farms, which have not been in active and continuous service for a period of one year, shall be removed at the owner or operators expense, and the site shall be restored to as natural condition as possible within six months of removal.~~
  - ~~(5) The manufacturers' or installers' identification and appropriate warning signage shall be posted at the site in a clearly visible manner.~~
  - ~~(6) A sign containing the contact information for the responsible party shall be posted in a clearly visible manner.~~~~

- ~~(7) Solar farms shall meet the setback, height, and coverage requirements of section 24-32.~~
- ~~(8) On-site power lines shall, to the maximum extent practicable, shall be placed underground.~~
- ~~(9) Solar farms shall not be adjacent to any airport.~~

(Ord. No. 17-18-723, § 1(Exh. A), 9-5-2017)

**(a)** These standards and review procedures are for the development, operation, siting, and decommissioning of utility-scale solar energy facilities in Edgefield County.

**(b) Definitions**

- 1. Acreage coverage** - The total acres covered by blocks of photovoltaic panels, including spaces between panels, buildings, inverters, substations, battery storage, ancillary equipment, and fencing around these items, but excluding wildlife corridors, mandated setbacks, wetlands, and other avoided natural or cultural features outside of the security fencing on the project site.
- 2. Applicant** - The person or entity who submits an application to Edgefield County for a permit to install a utility-scale solar facility under this ordinance.
- 3. Battery energy storage system** - A physical container or structure that is providing secondary containment to battery cells equipped with cooling, ventilation, fire suppression, and a battery management system.
- 4. Decommissioning Plan** - A plan to disconnect, remove, and properly dispose of equipment, facilities, or devices.
- 5. Hazmat** - An abbreviation for "hazardous materials," substances in quantities or forms that may pose a reasonable risk to health, property, or the environment. HAZMATs include toxic chemicals, fuels, nuclear waste products, and biological, chemical, and radiological agents. HAZMATS may be released as liquids, solids, gases, or a combination or form of all three, including dust, fumes, gases, vapor, mist, and smoke.
- 6. Operator** – The person responsible for the overall operation and management of a solar energy system.
- 7. Owner** – The person who owns all or a portion of the real property.
- 8. Photovoltaic or PV** – Materials and devices that absorb sunlight and convert it directly into electricity using semiconductors.
- 9. Rated Capacity** – The maximum capacity of a solar energy project based on the sum total of each photovoltaic system's nameplate capacity.
- 10. Site** – The area containing a solar energy system.
- 11. Utility-Scale Solar Facility** – Any solar facility designed to produce electricity for sale. This excludes any residential or commercial property.
- 12. Viewshed Analysis** – The process of identifying locations that are visual from one or more observer points.

**(b) Applicability**

1. This special use permit shall be binding on any successors, assignees, current or future lessee, or facility owner and is granted solely for constructing and operating a utility-scale solar energy facility.
2. This ordinance shall apply to all solar facilities, including physical modifications to any existing solar facilities that materially alter the type, configuration, or size of such facilities or other equipment.

**(c) Conditions for the Establishment and Operation of Commercial Solar Energy Facilities**

An applicant for a utility-scale solar facility to be located in Edgefield County shall complete a Special Use Permit (SUP) application including:

1. Pre-application meeting. Schedule a pre-application meeting with Edgefield County to discuss the proposed use's location, scale, and nature and what will be expected during the process.
2. Comprehensive Plan Review. A review by Edgefield County Planning Commission of public utility facility proposals to determine if their general or approximate location, character, and extent are substantially in accord with the Comprehensive Plan or part thereof.
3. Documents demonstrating the ownership of the subject parcel(s).
4. Proof that the Applicant has the authorization to act upon the owner's behalf.
5. A letter of commitment from the utility company who will interconnect to the facility and a statement of line capacity before and after interconnection. Additionally, the Applicant shall be required to provide to the County a minimum performance of the system at any time during the life of the project.
6. List of adjacent property owners, their tax map numbers, and addresses.
7. A description of the current use and physical characteristics of the subject parcel(s).
8. A description of the existing uses of nearby properties.
9. A narrative identifying the Applicant, owner, and Operator, and describing the proposed solar facility project, including an overview of the project and its location, approximate rated capacity of the solar facility project, the approximate number of panels, representative types and chemical composition, expected footprint of solar equipment to be constructed, and type and location of interconnection to an electrical grid.
10. Aerial imagery which shows the proposed location of the solar facility, fenced area, driveways, and interconnection to the electrical grid with the closest distance to all adjacent property lines and dwellings along with main points of ingress/egress.

11. Payment of the application fee(s) and any additional review costs, advertising, or other required staff time.
12. The Applicant shall consult with the South Carolina Department of Natural Resources and provide a written recommendation regarding wildlife corridors and an endangered species management plan where applicable.

**(d) Site Plan** – prepared by a South Carolina licensed civil engineer that shall include the following:

1. A description of the subject parcels.
2. Property lines and setback lines. A land survey by a South Carolina licensed surveyor is required.
3. Existing and proposed buildings and structures; including preliminary locations of the proposed solar panels and related equipment; proposed fencing, driveways, internal roads, and structures; and points of ingress/egress.
4. The location and nature of proposed buffers and screening elements, including vegetative and constructed buffers.
5. A grading plan.
6. A landscaping maintenance plan.
7. Existing and proposed access roads, drives, turnout locations, and parking.
8. Location of substations, electrical cabling from the solar facility systems to the substations, ancillary equipment, buildings, and structures including those within any applicable setbacks.
9. Fencing or other methods of ensuring public safety.
10. Ten sets (11" x 17" or larger), one reduced copy (8½" x 11"), and one electronic copy of the site plan, including elevations and landscape plans as required.
11. Provide an inventory of all solar facilities – existing or proposed – within a ten (10) mile radius.
12. A proposed method of providing appropriate escrow, surety or security for grounds maintenance, fencing, landscaping, and the cost of the decommissioning plan.
13. Additional information may be required as determined by Edgefield County.

**(e) Public Meeting**

A public meeting shall be held prior to any public hearing with the Planning Commission to allow the community to hear from the Applicant and ask questions regarding the proposed project.

- (1) The Applicant shall inform Edgefield County and adjacent property owners in writing of the meeting's date, time, and location.
- (2) The meeting's date, time, and location shall be advertised in the County's newspaper at least seven (7) but no more than fourteen (14) days in advance of the meeting date.

- (3) The meeting shall be held within the County at a location open to the general public with adequate parking and seating facilities that may accommodate persons with disabilities.
- (4) The meeting shall allow members of the public to review application materials, ask questions of the Applicant, and provide feedback.

**(f) Before Issuance of a Special Use Permit**

1. Utility-scale solar energy facilities, as described in this ordinance, are permitted exclusively in Industrial Manufacturing zones. Conditionally, a utility-scale solar facility may be permitted on lands defined as pastures, open, and former farmland which has not been clear-cut or logged in the last five years.
2. A special use permit shall not be issued for a utility-scale solar facility until the Applicant submits a feasibility study demonstrating that the amount of generated power can be supported by the relevant electric company and electric grid, and as may be necessary that the South Carolina Public Service Commission has approved the plan when required.
3. The Applicant shall submit an economic cost/benefit analysis describing estimated increases in property tax revenues, sales taxes, other taxes, estimated permanent jobs, and costs associated with the project's impact on County infrastructure.
4. A utility-scale solar energy facility shall generate electric power for commercial or industrial purposes only. The size of the facility (generated power) shall be limited to 50% of the annual total power usage of all users in Edgefield County. The Applicant shall provide accurate information for electrical power usage in the County for the most current year.
5. A viewshed analysis shall be conducted from the perspectives of neighboring landowners and roadway travelers.
6. The Applicant shall bear all costs to the County for increased staff time and attention to matters related to construction, maintenance, administrative costs, and enforcement of the requirements of this section and this permit. A portion of the calculated costs shall be paid at the time an application is submitted to the County.
7. The Applicant shall submit a decommissioning plan to be reviewed and approved by County staff and the County attorney. The decommissioning plan shall be reviewed and updated every three years by a certified independent utility-scale solar facility engineer who has expertise in the removal of solar facilities acceptable to the County and at no cost to the County.
8. The design and installation of utility-scale solar facilities shall conform to applicable industry standards, including those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), or other similar certifying organizations and shall comply with all fire and safety requirements.
9. A utility-scale solar facility shall provide at least one access corridor for wildlife to navigate the site per 50 acres of acreage coverage. Proposed wildlife corridor(s) shall be shown on the site plan submitted to the County and shall be a minimum of twenty-

five (25) feet in width. Areas between fencing shall be kept open to allow the movement of migratory animals and other wildlife. The Operator shall be required to submit an annual report to the County detailing the loss of any wildlife due to any installed component (e. g. fencing, solar panels, electrical conductors, etc.).

10. Utility-scale solar facilities shall be within one (1) mile of electric transmission lines.

**(g) Location/Setbacks**

1. The Applicant shall address the impact of the facility on rivers and streams. All buffers shall meet or exceed those imposed by any and all regulatory agencies, including the South Carolina Department of Natural Resources, U. S. Fish and Wildlife Service, and U. S. Army Corps of Engineers.

2. All aspects and components of the facility shall meet the minimum setback requirement of buffer yard 5 as found in section 24-107 except the minimum buffer width should be 300 feet. This setback requirement is in addition to the buffer requirements for rivers and streams established in No. 1 above.

3. Construction of utility-scale solar facilities shall be subject to erosion and sedimentation ordinances which include but are not limited to: the extent of grading and grading phases, runoff information, management of runoff, and pollution both during construction and throughout the lifetime of the project. An approved Stormwater Plan by the South Carolina Department of Health and Environmental Control (SCDHEC) shall be obtained prior to the commencement of any construction to include land clearing (e. g. timbering).

4. The perimeter of the facility shall be secured through the use of security fencing of at least eight (8) feet in height. The fencing shall not be topped with razor/barbed wire. The fencing shall be installed at the limits of the constructed solar field and not include the buffer. For every one-hundred linear feet of fencing, the buffer shall contain a minimum of four (4) native evergreen tree specimens with a minimum DBH of two (2) inches at the time of planting, a mature height of 30-40 feet, and expected longevity of thirty (30) years. At no time shall a developer clear-cut the site of a required buffer.

5. Utility-scale solar facilities shall not be located within 200 feet of historical sites, cultural, sites or gravesites.

6. The percent of acreage coverage for a utility-scale solar facility shall not exceed 65% of the total solar facility site or a maximum of 200 acres (308 gross acres) of solar panels and support structures.

7. Photovoltaic solar panels and any associated equipment shall not be located on slopes 10 percent or greater, and no site shall be graded more than 50 percent of the site surface area. Additionally, SCDHEC recommendation of limiting grading disturbances to fifty (50) acres at a time until stabilization has been established shall be adhered to, without exception.

8. Battery storage systems, if required, shall be installed with industry best practices, including Battery Management System (BMS) with 24/7 monitoring and automated fire suppression.

9. Edgefield County shall retain the services of an independent third-party engineer (civil, electrical, environmental) qualified in solar development and operation for the purpose of reviewing and analyzing solar power applications. All expenses incurred for this service will be borne exclusively by the Applicant.
10. The Applicant shall provide proof of adequate liability insurance for the utility-scale solar facility prior to commencing construction and before the issuance of a requisite permit from Edgefield County. Edgefield County and all adjacent property owners shall be named on the policy as secondary.
11. To preserve forest resources including national and state designated forests, utility-scale solar facilities shall be located outside forested areas as identified and defined by a South Carolina licensed and certified silviculturist or dendrologist.
12. Construction of utility-scale solar facilities shall be subject to any relevant erosion and sedimentation ordinances which include but are not limited to: extent of grading and grading phases, runoff information, management of runoff and pollution both during construction and throughout the lifetime of the project.
13. When the land surface is prepared for construction, the Applicant shall design the facility so that grading and fill are kept to a minimum. Top soil shall be removed before grading, etc. and stored on site to be returned to the disturbed land to a minimum of four (4) inches to maintain the quality of the soil prior to final approval by the County.
14. In the event water is not provided by public utilities, all wells must be approved by SCDHEC and Edgefield County so as not to adversely impact the flow rate and potable status for surrounding homes and businesses. Monitoring wells shall be placed at the perimeter adjacent to downstream adjoining properties. Monitoring of existing streams and water bodies shall be based on criteria established by SC Adopt a Stream protocols. The monitoring shall be reported to the County on an annual basis. The initial monitoring shall be conducted prior to any land disturbance.
15. Prior to construction, the Applicant shall provide written panel specifications to include composition, toxicological information, and the physical and chemical properties of all panels to be used in the facility. The Applicant shall also provide the country of origin of the panels to be used in the facility. Only bio-degradable cleaners and water shall be used to clean panels. Applicant shall install new or refurbished panels that are UL listed and approved. Installation of used panels is not authorized. All broken or waste solar panels shall be removed from the site within 30 days of being taken out of service. Panels or pieces thereof from the property shall be disposed of outside Edgefield County and through a viable recycling method in accordance with federal and state law. A receipt of disposal shall be required.
16. The Applicant is encouraged to participate in all aspects outlined in the South Carolina Solar Habitat Act (Section 50-4-10) to utilize voluntary solar best-management practices for utility-scale solar facilities, to "establish a native vegetation habitat and pollinator management plan to be used as technical guidance. An owner of a ground-mounted commercial solar energy generation site is encouraged to follow voluntary site management that (1) provides native perennial vegetation and foraging habitats beneficial to gamebirds, songbirds, and pollinators; and (2) reduce storm water runoff and erosion at the generation site".
17. Ground cover on the site shall be pollinator-friendly native and non-invasive vegetation. A performance bond reflecting the costs of anticipated landscaping maintenance shall

be posted and maintained. Failure to maintain the landscaping shall result in revocation of the Operator's permit and the facility's decommissioning. Incorporation of non-invasive plant species that require no pesticides, herbicides, and fertilizers or the use of pesticides and fertilizers with low toxicity, persistence, and bioavailability is recommended. The Operator shall notify the County prior to the application of pesticides and fertilizers. The County reserves the right to request soil and water testing at no cost to the County.

18. The owner and Operator shall give the County written notice of any change in ownership, Operator, or power purchase agreement a minimum of thirty (30) days prior to such action.

#### **(h) Safety/Access**

1. All electrical equipment associated with and necessary for the operation of the facility shall comply with all local and state codes. All design and installation work shall comply with all applicable provisions of the National Electric Code (NEC), the Standard Building Code and the South Carolina Building Code. Use of above-ground lines shall be prohibited.
2. The Applicant shall provide training before, during, and after construction for all emergency services in Edgefield County. The Applicant shall provide a set of procedures and protocols for managing the risk of fire and for responding in the event of a HAZMAT emergency at the facility. The Applicant of the facility shall conduct regular training for first responders during the operation of the facility on a regular basis but no less than annually. Training shall be provided at no cost to the County.
3. Special and/or unique equipment that may be required to ensure the safety of fire and rescue personnel when responding to an emergency at the facility, especially HAZMAT, shall be provided at no cost to the County.
4. The Applicant shall provide for and maintain reasonable means of access for emergency services. Lock boxes and keys shall be provided at locked entrances for emergency personnel access. Warning signage shall be placed on electrical equipment and plant entrances.
5. The Applicant shall obtain all required permits from the South Carolina Department of Transportation. If any public roadways and/or adjoining properties are damaged as a result of ingress/egress to/from the facility, the Applicant shall remedy all damages in full at no cost to the County or residents impacted by said damages.
6. All facilities must meet or exceed the standards and regulations of the Federal Aviation Administration (FAA) and any other agency of the local, state or federal government with the authority to regulate such facilities that are in force at the time of the application.

#### **(i) Landscaping/Appearance**



1. Lighting shall be the minimum necessary for safety and/or security purposes and shall be shielded and downward facing to minimize off-site glare.
2. Noise associated with construction and operation shall be defined, maintained, and be of minimal levels. Construction shall be conducted during the hours of 6:00 a.m. and 8:00 p.m. Monday through Saturday to limit disturbance to neighbors.
3. The use of pile driving equipment is prohibited within 600 feet of any structure or private or public water system unless pile driving monitoring equipment to evaluate and control vibration is utilized.
4. The Applicant shall place all solar panels in a manner that minimizes or negates any solar glare onto nearby properties or roadways.
5. No aspect of the facility shall exceed twenty (20) feet in height, as measured from grade at the structure's base to its highest point (excluding power lines).
6. All site features, including landscaping, fencing, etc., shall be adequately maintained throughout the life of the permit.
7. A minimum 300 foot vegetative buffer shall be installed and maintained around the entire circumference of the facility and its components to reduce the visual impact on the surrounding property owners. In areas where there is not a native timber buffer of at least 300 feet, a buffer yard type 5 as described in section 24-107 shall be followed. The Applicant shall promptly replace any dead or diseased trees in the buffer but no later than 180 days from specimen loss. The County shall approve all landscaping.
8. The facility shall not be used to display advertising of any type, including banners, billboards, streamers, or reflectors. However, notices, warnings, and identification information required by law shall be displayed.

#### **(j) Additional Requirements**

1. The County shall require the owner/operator to provide an annual activity statement to ensure that the facility is actively producing electricity for the power grid. If power production is below the stated output requirements, the Operator shall submit to the County, within thirty (30) days, a written report detailing the proposed action to correct the output issue. After corrections have been made, the Operator shall provide the County verification of new output within thirty (30) days.
2. If there is evidence that the facility or any aspect of such is not in conformance with any of the conditions of approval, a Notice of Violation shall be sent to the owner of the facility and the landowner. A continued violation of any conditions of approval shall be grounds for revocation of the special use permit.

#### **(k) Decommissioning Requirements**

1. The Applicant shall submit a decommissioning plan to be reviewed by and approved by County Staff, County Attorney, and the Planning Commission. The decommissioning plan shall be reviewed and updated every three (3) years by a certified independent utility-scale solar facility engineer who has expertise in removing solar facilities acceptable to the County at no cost to the County. The estimated cost of decommissioning shall be guaranteed by the deposit of funds in the amount equal to the estimated cost in an escrow account at a federally insured financial institution approved by the County. The escrow account agreement shall prohibit the release of the escrow funds without the written consent of the County. **The amount of funds required to be deposited in the escrow account shall be 125% of the full amount of the estimated decommissioning cost without regard to the possibility of salvage value.** The estimated cost shall be recalculated every five (5) years by a licensed Engineer qualified in solar development and operation at no cost to the County. The County may approve alternative methods to secure the availability of funds to pay for the decommissioning of a utility-scale solar facility, such as a performance bond, letter of credit, or other security approved by the County.
2. Further, the decommissioning plan shall include the following:
  - (a) The anticipated life of the project;
  - (b) The estimated decommissioning cost in current dollars;
  - (c) How the estimate was determined;
  - (d) The method of ensuring that funds will be available for decommissioning and removal;
  - (e) The method that the estimated decommissioning cost will be kept current, and
  - (f) The manner in which the project will be decommissioned and the site restored.
  - (g) The location for the disposal of the waste materials, to include the hazardous components.
3. When the facility ceases to be operational, the owner/operator of the facility shall return the land to its original natural state, including at least four (4) inches of top-soil and replacement vegetation identified. As part of the application, the Operator shall provide the County photographic documentation of the property to include aerial images to establish "original natural state." All surface and sub-surface materials shall be removed in their entirety.
4. When the facility ceases to be operational for nine (9) months, decommissioning shall be enforced unless the owner is diligently working to rectify the issue(s), to the satisfaction of the County, to restore the facility to operational status. The County shall be updated in writing on the progress of this operation monthly.

5. If the facility is not removed within the specified time after the County Notice, the County may cause the removal of the facility with costs being borne by the project owner or property owner and secured by a Bond acceptable to the County.
6. If a solar energy system is abandoned or decommissioned, the system owner shall notify the respective power company to enable the power company to remove the facility from its system.
7. Proposed cost savings associated with recycling solar panels and other materials shall not be part of the decommissioning plan.
8. Hazardous materials, panels, or pieces thereof from the property shall be disposed of through a viable recycling method and in accordance with federal and state law and not in Edgefield County.
9. All decommissioning activities shall be completed within six (6) months after notice of inactivity is received by the County.
10. Upon enactment, Applicant shall comply with regulations formulated by SCDHEC re: solar projects) as mandated by the South Carolina Legislature. (Currently under development).