

# Regulation 61-107.20

## Solar Energy Systems

### Disclaimer

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SC DEPARTMENT of  
**ENVIRONMENTAL  
SERVICES**

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| <b>Statutory Authority:</b> | 2022 Act No. 119, Section 5, effective January 27, 2022 |
|-----------------------------|---------------------------------------------------------|

| Regulation History as Published in State Register |                 |        |       |
|---------------------------------------------------|-----------------|--------|-------|
| Date                                              | Document Number | Volume | Issue |
| May 24, 2024                                      | 5191            | 48     | 5     |

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## **A. Applicability**

1. This regulation establishes procedures, documentation, and other requirements which must be met to operate large solar energy systems.
2. The requirements of this regulation are not applicable to rooftop solar energy systems or any other solar energy system that does not meet the definition of a large solar energy system.
3. The requirements of this regulation do not supersede or amend R.61-79, Hazardous Waste Management Regulations, or any other applicable laws, statutes, rules, and regulations.
4. The requirements of this regulation do not supersede or amend R.61-107, Solid Waste Management Regulations, or any other applicable laws, statutes, rules, and regulations.

## **B. Definitions**

1. “Decommission” means the removal and proper disposal of solar energy equipment, facilities, or devices located on real property utilized by or in a large solar energy system. “Decommission” includes the reasonable restoration of the property upon which such solar equipment, facilities, or devices are located, including, but not limited to:
  - a. soil stabilization; and
  - b. revegetation of the ground cover of the real property disturbed by the installation of such equipment, facilities, or devices.
2. “Department” means the South Carolina Department of Health and Environmental Control.
3. “End-of-life solar panel” means, for the purpose of this regulation, any solar panel, solar energy equipment or other materials that is no longer suitable for its original intended purpose because of wear, damage, or defect.
4. “Existing large solar energy system (system)” means a large solar energy system installed prior to promulgation of this regulation. The system is considered installed if: onsite physical construction has begun, or the owner or operator has entered into contractual obligations for the installation of the system.
5. “Financial assurance mechanism” means, for the purpose of this regulation, a mechanism designed to demonstrate that sufficient funds will be available to meet specific environmental protection needs of a large solar energy system. Available financial assurance mechanisms include cash, insurance, trust funds, surety bonds, letters of credit, certificates of deposit, and financial tests as determined by the Department, per regulation.
6. "Generation" means the act or process of producing waste materials.
7. “Ground-mounted solar energy systems” means a solar energy system that is structurally mounted to the ground.
8. “Hazardous waste” is defined in Section 44-56-20 of the South Carolina Hazardous Waste Management Act and is applicable to this regulation.

9. “Landowner” means a person or corporation who has assumed legal ownership of the property upon which a solar energy system is constructed.

10. “Large solar energy system” means a ground-mounted solar energy system that occupies in excess of thirteen (13) acres.

11. “Operator” means the person or corporation responsible for the overall operation of a solar energy system.

12. “Owner” means the person or corporation who has assumed legal ownership of the solar energy system through the provisions of a contract or other legally binding transfer of ownership.

13. “Person” means an individual, business entity, partnership, limited liability company, corporation, not-for-profit corporation, association, public benefit corporation, or public authority.

14. “Photovoltaic device” means a device that generates electricity directly from sunlight via an electronic process that occurs naturally in certain types of material, such as semiconductors.

15. “Reasonably restored” means to place a solar energy system back into its original state or in accordance with any other applicable contract between the owner and landowner.

16. “Rooftop solar energy system” means a solar energy system that is structurally mounted to the roof of a house, building, or other structure and does not qualify as a large solar energy system.

17. “Solar energy equipment” means electrical material, hardware, inverters, conduit, storage devices, footings, braces, stands or any other equipment to any electric grid equipment associated with the operation of a solar energy system.

18. “Solar energy system” means components and subsystems required to convert solar energy into electric energy suitable for use. The term includes, but is not limited to, solar panels and solar energy equipment. The area of a solar energy system includes all the land inside the perimeter of the solar energy system, which extends to any interconnection equipment.

19. “Solar panel” means a photovoltaic device capable of collecting and converting solar energy into electricity.

20. “Solid waste” is defined in Section 44-96-40 of the South Carolina Solid Waste Policy and Management Act and is applicable to this regulation.

### **C. General Provisions**

1. Large solar energy systems shall comply with all federal, state, and local zoning, land use, and other applicable ordinances which include, but are not limited to, financial assurance requirements from local governments.

2. All solid waste and hazardous waste generated within the operation, routine or unexpected maintenance, or decommissioning of a large solar energy system’s operation shall be managed according to all applicable laws, statutes, rules, and regulations.

## **D. Registration Requirements**

1. Persons intending to operate a new large solar energy system shall submit a completed registration, prior to operation, via a form provided by the Department. The registration includes the following information:

- a. Name of the large solar energy system;
- b. Address and tax map ID number of the property upon which the large solar energy system will be located;
- c. Landowner information which includes name, address, and contact information;
- d. Owner information which includes name, address, and contact information;
- e. Operator information which includes name, address, contact information;
- f. Number of photovoltaic modules;
- g. Number of energy storage system batteries;
- h. Projected date of decommissioning; and
- i. Signed agreement between owner and landowner, which confirms the plan for land restoration after decommissioning.

2. Existing large solar energy systems operating before the effective date of this regulation shall have one hundred eighty (180) calendar days from the regulation's effective date to comply with the provisions of this regulation.

3. Registrations shall be updated every five (5) years from the registration submission date, or with a transfer of ownership, until the site is completely decommissioned.

## **E. Decommissioning Requirements**

1. Five (5) years prior to a large solar energy system's projected end-of-life, the registrant shall submit to the Department a decommissioning plan for review and approval. The decommissioning plan shall be updated if any changes occur at the facility that require a deviation from the approved decommissioning plan, which includes the cost estimate.

2. Following a continuous twelve (12) month period in which no electricity is generated, the registered owner/operator will have twelve (12) months to complete decommissioning of the large solar energy system, unless otherwise approved by the Department.

3. Decommissioning shall be considered complete once all components of a large solar energy system are removed and properly disposed of, or the property upon which such solar equipment, facilities, or devices are located have been reasonably restored.

4. The decommissioning plan shall include:

a. A description of the large solar energy system that includes:

(1) Total property acreage,

(2) Total acreage used for solar panels and accessory equipment,

(3) The proposed number of solar panels for decommissioning, and

(4) A list of all components of the solar energy system to be properly recycled or disposed of in accordance with the decommissioning plan.

b. A statement of the objective of the decommissioning process. An example of an objective can be the following: to reasonably restore the site to its prior use or to a different use as approved by the owner and landowner;

c. The estimated timeframe it will take to complete the decommissioning process;

d. A description of the tasks involved in decommissioning and the types of equipment that will be required;

e. The registrant shall provide a detailed final decommissioning estimate of the cost of recycling or disposing of all components of the solar energy system, including, but not limited to, solar panels, electrical material, hardware, inverters, conduits, storage devices, footings, braces, stands, or any other appurtenances associated with the operation of a solar energy system. A final decommissioning cost estimate shall provide estimates for third-party costs to properly recycle or dispose of all components of the solar energy system and perform any post-closure care. If applicable, a salvage plan may be included to support proposed salvage values.

f. A financial assurance mechanism that will be used to meet the requirements of the cost estimate.

5. The owner or operator of the large solar energy system shall send a notification to the Department no later than thirty (30) calendar days after the completion of decommissioning.

## **F. Financial Assurance**

1. Once the Department has approved the decommissioning cost estimate, a financial assurance mechanism payable to the Department shall be submitted to the Department for review and approval.

a. A large solar energy system can satisfy the requirements of this section by submitting proof of compliance with financial assurance requirements from the municipal or local government in which the large solar energy system is located.

b. If the municipal or local government submittal is less than the Department-approved decommissioning cost estimate, the Department will require a greater amount to satisfy the financial assurance requirement.

2. Local governments may also establish or retain financial assurance ordinances that are more stringent than the statewide minimum standards.

3. The mechanism shall be adequate to ensure the satisfactory decommissioning of the large solar energy system and post-closure care as required by this regulation in Section E(4).

4. During the remaining operational life of the large solar energy system, the facility owner/operator shall adjust the decommissioning cost estimate as needed for inflation.

a. The large solar energy system owner/operator may update the financial assurance mechanism as needed to account for salvage value.

b. At any time during its period of operation, the large solar energy system owner/operator shall increase the decommissioning cost estimate and the amount of financial assurance provided if changes to the decommissioning plan or facility conditions increase the maximum cost of decommissioning.

c. At any time during its period of operation, the large solar energy system owner/operator may reduce the amount of financial assurance provided for proper closure if the approved decommissioning cost estimate exceeds the maximum cost of decommissioning. Prior to reducing the amount of financial assurance, the justification for the reduction of the decommissioning cost estimate shall be submitted to the Department for review and approval. Provided the new cost estimate is approved, the owner/operator may then reduce the amount of financial assurance secured.

5. The financial assurance mechanism shall consist of one or more of the following mechanisms: cash, insurance, trust funds, surety bonds, letters of credit, certificates of deposit, and financial tests as determined by the Department per regulation.

6. The mechanism used to demonstrate financial assurance under this section shall ensure that the funds necessary to meet the costs of closure and corrective action for known releases will be available whenever needed. The owner/operator shall provide continuous coverage for corrective action and decommissioning until released from financial assurance requirements by the Department.

7. The Department may take possession of a financial assurance mechanism for failure to complete decommissioning, to complete post-closure care, or to renew or provide alternate acceptable financial assurance.

8. The requirements of this Section apply to all large solar energy systems except those owned and operated by local government, a region comprised of local governments, or state or federal

government entities whose debts and liabilities are the debts and liabilities of the state or the United States.

#### **G. Severability**

Should any section, paragraph, sentence, clause, or phrase of this regulation be declared unconstitutional or invalid for any reason, the remainder of this regulation shall not be affected thereby.

#### **H. Violations and Penalties**

1. The Department may impose reasonable civil penalties on a large solar energy system for each day of violation of the provisions of this regulation, including violation of any Department order or standard.