South Carolina Department of Health and Environmental Control

Dr. Edward D. Simmer
Director

2nd Quarterly Report on the Activities Conducted to Establish a Regulatory Program for End-of-Life Management of Photovoltaic Modules and Energy Storage Systems

Pursuant to R-116, H.4100, the Fiscal Year 2021-2022 General Appropriations Act, Part 1B, Section 34, Proviso 34.62

January 7, 2022

TO: Chairman of the Senate Judiciary Committee
Chairman of the House Labor, Commerce and Industry Committee

FROM: Dr. Edward D. Simmer, Director
S.C. Department of Health and Environmental Control

DATE: January 7, 2022

SUBJECT: Photovoltaic Modules and Energy Storage Systems

Enclosed is the 2nd Quarterly Report on the Activities Conducted to Establish a Regulatory Program for End-of-Life Management of Photovoltaic Modules and Energy Storage Systems Pursuant to R-116, H.4100, the Fiscal Year 2021-2022 General Appropriations Act, Part 1B, Section 34, Proviso 34.62

Quarterly Report on the Activities Conducted to Establish a Program for End-of-Life Management of Photovoltaic Modules and Energy Storage Systems

I. Executive Summary

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I. Executive Summary

Pursuant to R-116, H.4100, the Fiscal Year 2021-2022 General Appropriations Act, Part 1B, Section 34, Proviso 34.62, the Department of Health and Environmental Control must submit quarterly interim reports to the Chairman of the Senate Judiciary Committee and the Chairman of the House Labor, Commerce and Industry Committee, concerning implementation of the proviso. These reports are to detail the activities of the Department, including initiation of a stakeholder process, updates on the development of rules governing end-of-life solar panels and energy storage systems, and recommendations for financial assurance requirements for the decommissioning of utility-scale solar projects. This report details the activities of the second quarter, September 30, 2021 to December 31, 2021.

II. Matters Entrusted to the Department:

Pursuant to Budget Proviso 34.62, the Department is to consider six matters when developing regulations for the managing of solar panels and energy battery systems and the decommissioning of utility-scale solar projects. The Department is directed to collaborate with stakeholders to consider:

1. Whether photovoltaic modules, energy storage system batteries, their materials, or other equipment used in utility-scale solar projects exhibit any of the characteristics of hazardous waste, as identified in 40 C.F.R. Part 261, or under rules adopted pursuant to the S.C. Hazardous Waste Management Act, Section 44-56-10 of the 1976 Code, or if any such equipment is properly characterized as solid waste under State and Federal law.

2. Preferred methods to responsibly manage end-of-life photovoltaic modules, energy storage system batteries, or the constituent materials thereof, or other equipment used in utility-scale solar projects, including the extent to which such equipment may be:

(a) reused, if not damaged or in need of repair, for a similar purpose;

(b) refurbished, if not substantially damaged, and reused for a similar purpose;

(c) recycled with recovery of materials for similar or other purposes;

(d) safely disposed of in construction and demolition or municipal solid waste landfills for material that does not exhibit any of the characteristics of hazardous waste under state or federal law; or

(e) safely disposed of in accordance with state and federal requirements governing hazardous waste for materials that exhibit any of the characteristics of hazardous waste under state or federal law.

3. The volume of photovoltaic modules and energy storage system batteries currently in use in the State, and projections, based upon the data on life cycle identified currently on impacts that may be expected to the State's landfill capacity if landfill disposal is permitted for such equipment at end-of-life.

4. Whether adequate financial assurance requirements are necessary to ensure proper decommissioning of solar projects in excess of thirteen acres upon cessation of operations.

5. Infrastructure that may be needed to develop a practical, effective, and cost-effective means to collect and transport end-of-life photovoltaic modules, energy storage system batteries, and other equipment used in utility-scale solar projects for reuse, refurbishment, recycling, or disposal.

6. Whether or not manufacturer or installer stewardship programs for the recycling of end-of-life photovoltaic modules and energy storage system batteries should be established for applications other than utility-scale solar project installations, and if so, fees that should be established for these manufacturers and installers to support the implementation of such requirements.

III. DHEC Report of Activities

Stakeholder Group

The following governmental, private, and not-for-profit groups participated in the stakeholder process initiated to help fulfill the requirements of Budget Proviso 34.62 during the activities from September 30, 2021 to December 31, 2021.

Parker Poe	SC Department of Consumer Affairs
SC Office of Regulatory Staff	SC Coastal Conservation League
Conservation Voters of SC	NP/Waste Management
SC Association of Counties	Solar Energy Industries Association
SC Municipal Association	SC Dept. of Commerce
Dominion	SC Recyclers Association
Duke Energy	Dynamic Lifecycle Innovations
Santee Cooper	SC SWANA/ HDR Inc.
Electric Cooperatives of SC	Capcon
Southern Alliance for Clean Energy	SC Dept. of Agriculture
Sunstore	Carolinas Clean Energy Business Alliance
Southern Current	Pinegate Renewables
Gregory Electric	Cleanlites Recycling
Richland County	Representing Cypress Creek Renewables
Newberry County	Farm Bureau
United States Department of Agriculture	Central Electric Power Cooperative, Inc.

Materials Gathered

1. Department staff conducted research and held internal meetings related to the state's landfill capacity and the incoming future volume of PV modules and energy storage system batteries.

2. Department staff conducted research on legislation, regulation, ordinances and other rules used in municipalities, counties, and other states for the end-of-life management of

photovoltaic modules and energy storage system batteries. This information was used to create a chart comparing program elements of South Carolina's counties with relevant ordinances.

3. Stakeholder group members from Pinegate Renewables organized a field trip to a solar farm in Pelion, South Carolina in order to understand how one operates, and how that can factor into end-of-life management.

4. Stakeholder group members from the Solar Energy Industry Association provided information about solar ordinance development in Texas for the group.

5. Department staff conducted research and held internal meetings related to preferred methods to manage end-of-life PV modules and energy storage system batteries.

Meetings Held

1. The third Solar Panel Stakeholder Workgroup Meeting was held on October 20, 2021. The group in this meeting reviewed ordinances related to photovoltaic modules from municipal, county, and other state governments to understand the important program aspects that each policy is designed to address, among them the types of projects affected, whether decommissioning is required, whether financial assurance is needed, the timeframe in which decommissioning must be complete, and other elements.

2. Stakeholder group members from Pinegate Renewables organized a field trip for other group members to a solar farm in Pelion, South Carolina on November 9, 2021, to understand how one operates, and how that can factor into end-of-life management.

3. The fourth Solar Panel Stakeholder Workgroup Meeting was held on November 16, 2021. Discussion was focused on potential components for decommissioning requirements for large-scale solar projects and what elements would be essential to ensure proper site restoration. Stakeholder group members shared experiences from the November 9 site visit to a solar farm, which provided the group with knowledge as to how a utility-scale solar project operates.

Upcoming Activities

The Department is planning to convene stakeholder meetings on a regular basis throughout 2022 until June to assist the Department in developing rules to manage end-of-life photovoltaic modules and storage battery systems and decommissioning large solar energy projects. The next stakeholder meeting is tentatively scheduled for late January. Pursuant to Budget Proviso 34.62, the next report will be submitted on or before March 31, 2022.

Status on Proviso matters

Proviso 34.62	Activities Performed	Status
Whether PV modules or energy storage system batteries exhibit characteristics of hazardous waste	• The Department has made presentations detailing typical hazardous waste identification procedures. • The Department is reviewing current hazardous waste methodology and how the current regulations would apply to PV modules and energy storage system batteries.	• Staff in the Waste Management Division have informed the Department that they do not believe it is necessary to add PV modules to Universal Waste Rules. • The Department is currently evaluating how current regulations would apply to hazardous waste determinations regarding PV modules and energy storage system batteries.
Preferred methods to manage end-of-life PV modules and energy storage system batteries	• The Department has had discussions with interested parties and conducted research.	• The Department believes that the waste management hierarchy is applicable for PV modules. PV module waste generation should be reduced as much as possible, materials that can be should be reused, recycled, and recovered, and materials that cannot be reused, recycled, or recovered should be properly disposed.
Impact of end-of-life management of PV modules and energy storage system batteries on SC's landfill capacity	• The Department has had discussions with interested parties and conducted analysis of the state's capacity and the incoming future volume of PV modules and energy storage system batteries.	• The Department is currently attempting to estimate the future volume of PV modules and its impact on the state's landfill capacity.
Whether financial assurance should be required for large-scale solar projects (>13 acres)	• Stakeholders and the Department have had discussions on the need for FA for large-scale PV module projects. • The Department is putting together model template language for decommissioning PV farms.	• The Department is putting together model template language for decommissioning PV farms. • More research and deliberation will be undertaken to ensure the matter has been properly considered.

Infrastructure that may be needed to collect and transport end-of-life PV modules and energy storage system batteries.	• The Department has had discussions with interested parties and conducted research.	• The Department is planning to solicit feedback on this matter from the larger stakeholder group at a future meeting.
Utility of a manufacturer stewardship program for recycling end-of-life PV modules and energy storage system batteries.	• The Department has had discussions with interested parties and conducted research.	• The Department is planning to solicit feedback on this matter from the larger stakeholder group at a future meeting.

IV. Appendix

1. PowerPoint Presentation from October 20

2. PowerPoint Presentation from November 16

3. County ordinance chart

End-of-life Management of Photovoltaic Systems

Stakeholder Workgroup
October 20, 2021

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Budget Proviso

- The department shall submit regulations to guide in:
  - the management of end-of-life photovoltaic modules and energy storage system batteries on solar projects
  - the decommissioning of solar projects in excess of thirteen acres- to include partial refurbishing and complete decommissioning

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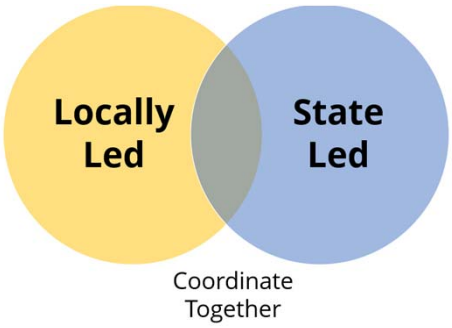

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Decommissioning in SC

- 19 counties w. ordinances to regulate PVMs
- 14 counties w. decommissioning requirements for large-scale projects
- 10 ordinances require financial assurance
- No statewide requirements for decommissioning large-scale projects

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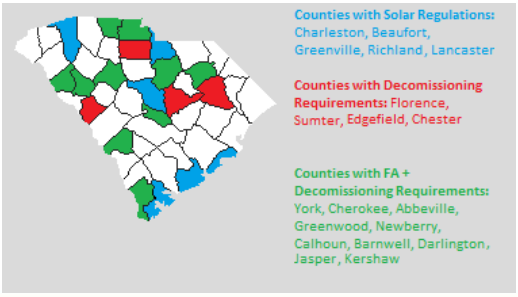
Decommissioning in SC



Counties with Solar Regulations: Charleston, Beaufort, Greenville, Richland, Lancaster

Counties with Decomissioning Requirements: Florence, Sumter, Edgefield, Chester

Counties with FA + Decomissioning Requirements: York, Cherokee, Abbeville, Greenwood, Newberry, Calhoun, Barnwell, Darlington, Jasper, Kershaw

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Decommissioning ordinance template

- Define decommissioning
- Specify whether requirements apply to all facilities, or certain size, type, etc.
- Specify when and to whom a decommissioning plan should be submitted (for example, submitted to planning office, filed with Register of Deeds, etc.)
- Specify financial assurance requirements
- Specify timeframe for completion of decommissioning

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Decommissioning ordinance template: (CONTINUED)

- Specify decommissioning plan requirements
- Identify elements that need removal and management
- Specify site restitution requirements
- Provide guidance for making cost estimates
- Specify allowable financial mechanisms
- Define what constitutes completed decommissioning
- Define abandonment and detail allowable actions upon abandonment; i.e. revocation of FA, initiating decommissioning, levying fines, liens, etc.

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Decommissioning plan components

- Specify when decommissioning is to be initiated
- Description of any landowner agreement (e.g., lease)
- ID the party responsible for decommissioning
- Description of removal, disposal, recycling activities
- Description of site restoration
- Cost estimates for decommissioning
- Proposed FA mechanism

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Financial assurance for decommissioning

- Specify in what instances FA will be required
- Outline how cost estimates are to be calculated
- Specify at what point in time FA is required, i.e. 100% at start-up or allowable phase-in?
- Specify allowable mechanisms
- Specify approval process for submitting FA proposal
- Specify by whom FA will be accessed if needed

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Nonfinancial mechanisms

- **Abandonment and Removal Clause**. Zoning enforcement via the imposition of civil penalties and fines, and/or by imposing a lien on the property to recover the associated costs

- **Special Permit Application.** Mandates through zoning code that decommissioning plan be submitted by the solar developer; allows the local government to place a lien on the property to pay for the costs of removal and remediation

- **Temporary Variance/Special Permit Process.** If not renewed, the site would no longer be in compliance with local zoning, and the locality could use zoning enforcement authority to require the removal of the facility

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What are the critical elements of a decommissioning ordinance?

- Texas ordinance to review
  - Estimated cost/FA
    - Reassess (or first assess) value 10 years and every 5 years
    - Method vs. value for FA
  - Decommissioning defined
  - State siting board holds plans
- PSC review 75 megawatts or over (Siting Act)
  - Gap for smaller facilitites (5-10 acres per megawatt)

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Needs & Questions

- How do we help with education & outreach on this issue?
  - DHEC's role
  - Energy Office
  - Uniformity is key in sharing to private sector and public
  - Solar Energy Assn. with consistency

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Example 1 – Barnwell County

An applicant must include a decommissioning plan that describes the anticipated life of the solar farm, the estimated decommissioning costs in current dollars, the method for ensuring that funds will be available for decommissioning and restoration, and the anticipated manner in which the solar farm project will be decommissioned and the site restored. Following a continuous six-month period in which no electricity is generated, the permit holder will have six months to complete decommissioning of the solar farm. Decommissioning includes removal of solar panels, buildings, cabling, electrical components, and any other associated facilities below grade as described in the decommissioning plan. Prior to issuance of a Building Permit, the applicant must provide the County with a performance guarantee (surety or performance bond, certified check or irrevocable letter of credit) in the amount of $50,000 or 125% of the estimated decommission cost minus the salvageable value, whichever is greater. Estimates shall be determined by an engineer licensed to practice in South Carolina. If the salvage value is determined to be greater than the cost of decommissioning then the performance guarantee will be deemed unnecessary. If the developer can provide proof in the form of a notarized statement or like document that a performance guarantee for decommissioning is part of the land lease or purchase agreement, then the performance guarantee will be unnecessary.

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Example 2 – Chester County

it is the responsibility of the company managing and/or owning the Solar Farm, whether the property is outright owned by the company managing or owning the Solar Farm or whether property is being leased, to remove within twelve months all obsolete or unused systems to include the concrete pads, solar panels, wiring and all related equipment necessary for the operation of the Solar Farm;

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Example 3 – KY Model Template

(i) Decommissioning. Other than as specifically approved by the Board of Adjustment or other authority having jurisdiction upon application and notice, decommissioning shall begin no later than twelve (12) months after a Ground Mounted SES has ceased to generate electricity or thermal energy:

1. If the Ground Mounted SES was a permitted use without a conditional use permit, all structures and facilities associated with the SES shall be removed within six (6) months of the beginning of decommissioning. All materials shall be recycled or otherwise reused to the extent reasonably practicable and the disturbed areas shall be reclaimed, revegetated, and restored consistent with the zoning classification of the property.

2. If the Ground Mounted SES was allowed under a conditional use permit, the SES shall be decommissioned according to the decommissioning plan approved in the Conditional Use Permit.

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Example 3 – KY Model Template

9. A decommissioning plan prepared by a registered professional engineer, and updated every seven (7) years, containing the following:

a. The anticipated life of the project and defined conditions upon which decommissioning will be initiated;

b. The estimated decommissioning cost, including removal of the SES and related foundations, pads, underground collector lines and roads, and the salvage value of any equipment in current dollars and the calculations supporting the decommissioning estimate. The estimated salvage value of the material using current, publicly available material indices and/or firm quotes from a decommissioning or recycling company experienced in the decommissioning of SES, shall be provided. The Board of Adjustment or other authority having jurisdiction shall consider the salvage value identified in computing the amount, if any, of financial assurance required under subsection e.

c. The manner in which the project will be decommissioned, including provision and a timetable for the removal of all structures and foundations, and for the revegetation and restoration of the property to its original condition or a condition compatible with the zoning of the parcel(s);

d. The party responsible for decommissioning;

e. A performance bond, letter of credit, or other financial assurance payable to [Board of Adjustment or applicable governmental unit], sufficient to cover the net costs identified in subsection 9b and to assure that decommissioning of the site can be achieved by a third party in the event that a permittee defaults in that obligation, which financial assurance shall be provided prior to commencement of construction;

f. A copy of any lease containing specific agreements regarding decommissioning with the landowner;

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Comparative Overview

Barnwell	Chester	Kentucky
Decommission: Removal and Site Restoration	Decommission: All Solar Equipment Removed	Conditional Use submit a Decommissioning Plan
		Permitted Use: Removal Required
Financial Assurance Required	No Financial Assurance	Conditional Use Financial Assurance Required;
		Permitted Use—No Financial Assurance

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Additional questions, needs & next steps

- Marlboro zoning and setback
- SC-APA updates on additional counties and zoning
- Arrange a site visit
- DHEC draft model template for group to review
- Webpage updates for solar stakeholder groups
  - Legislative report

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Questions?

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End-of-life Management of Photovoltaic Systems

Stakeholder Workgroup
Nov. 16, 2021

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Solar Farm Visit – 11/9/21


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Solar Farm Visit – 11/9/21

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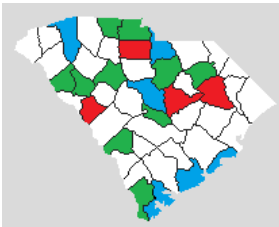
Decommissioning in SC



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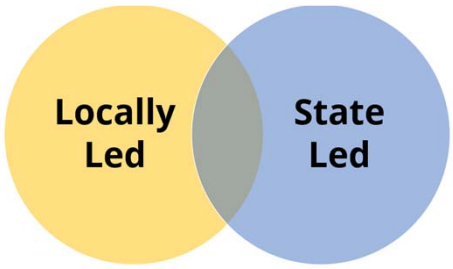

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What should be in a model ordinance?

- Decommissioning plan
  - Specify/define
  - Restore site to pre-existing condition/remove/ restore to use prior to install
  - Off-ramp for landowner/lessee if alternative form of preferred land restoration
  - Is salvage value considered
- Zoning requirement
- Approval process of plans
- Financial assurance requirement
  - Form
  - Timing
  - Calculation
  - Structure and availability
  - Municipal discretion
- Process—public notice
  - Abutting neighbors & re-zoning/planning commission consistency
  - Some counties with no zoning

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What may be in a model ordinance?

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What should not be addressed in a model ordinance?

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Other considerations

- Template solar ordinance from other states including NC, NY
- DHEC role in assisting with/advising on decommissioning plan/financial assurance
- Financial assurance can be negotiated with FILOT—connects local govt and solar developers
- Acreage size of other states—KY (10 acres—input that it may be too small)—(13 acres based on VA)
  - SC legacy 2 MegaWatts (14 acres)—utility scale—sale to utility
  - Usually define by project owner/size/Tech
    - Would not have exclusions
- Solid vs. Hazardous Waste designations and recycling
  - Resources and ongoing discussions on waste designations and testing processes—often solar modules

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Education and Outreach

- How do we help with education & outreach on this issue?
  - DHEC's role
  - Energy Office
  - Uniformity is key in sharing to private sector and public
  - Solar Energy Assn. with consistency

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Next Steps

- Draft a model to share with the group
- Share information on disposal capacity with group
- Share copy of reports with group for input
- Add to the workgroup webpage

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County Name	Link	Type of solar projects affected	Decomissioning Requirements	Financial Assurance	Timeframe
Abbeville	Link	A solar farm is defined by this ordinance as a series of at least three (3) ground-mounted solar collectors placed on a parcel for the purpose of generating photovoltaic power ("PV") for resale purposes.	Yes	125% of the estimated decomission cost minus the salvageable value.	Following 6 months of no electricity generation, the permit holder will have 6 months to complete decomissioning.
Barnwell	Link	Farms of more than one megawatt	Yes	$50,000 or 125% of the estimated decomission cost minus the salvageable value, whichever is greater.	Following 6 months of no electricity generation, the permit holder will have 6 months to complete decomissioning.
Beaufort	Link	N/A	N/A	N/A	N/A
Calhoun	Link	More than 1 acre	Yes	$50,000 or 125% of the estimated decomission cost minus the salvageable value, whichever is greater.	Following 6 months of no electricity generation, the permit holder will have 6 months to complete decomissioning.
Charleston	Link	N/A	N/A	N/A	N/A
Cherokee	Link	A series of ground-mounted solar collectors placed in an area for generating photovoltaic (PV) power as a commercial enterprise.	Yes	$50,000	Following 6 months of no electricity generation, the permit holder will have 6 months to complete decomissioning.
Chester	Link	Solar farms are defined as an area of land designated for the purpose of producing photovoltaic electricity.	Yes	N/A	It is the responsibility of the company managing and/or owning the Solar Farm, whether the property is outright owned by the company managing or owning the Solar Farm or whether property is being leased, to remove within twelve months all obsolete or unused systems to include the concrete pads, solar panels, wiring and all related equipment necessary for the operation of the Solar Farm.
Darlington	Link	A series of ground mounted solar collectors placed in an area for generating photovoltaic (PV) power as a commercial enterprise. The minimum size for a solar energy system is one acre. The maximum megawatt output of a solar energy system is 75.	Yes	$50,000	Following 6 months of no electricity generation, the permit holder will have 6 months to complete decomissioning.
Edgefield	Link	Solar farms are defined as a series of ground mounted solar collectors (minimum of three) are placed in an area for generating photovoltaic power for resale purpose	Yes	N/A	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.
Florence	Link	The minimum size for a solar farm is five acres.	Yes	N/A	N/A
Greenville	Link	N/A	N/A	N/A	N/A
Greenwood	Link	Where a series of ground mounted solar panels (minimum of three) are placed in an area for the purpose of generating photovoltaic power for resale purposes.	Yes	$50,000 or 125% of the estimated decomission cost minus the salvageable value, whichever is greater.	Following 6 months of no electricity generation, the permit holder will have 6 months to complete decomissioning.

County Name	Link	Type of solar projects affected	Decomissioning Requirements	Financial Assurance	Timeframe
Jasper	Link	The solar farm consists of a minimum of five acres	Yes	$50,000 or 125% of the estimated decomission cost minus the salvageable value, whichever is greater.	Decommissioning will be required following a continuous period of 12 months in which no electricity is generated by the facility other than for mechanical, repair, replacement and/or maintenance purposes, following which must be completed in 12 months.
Newberry	Link	Any series of 3 or more ground-mounted solar collectors installed on a site for the purpose of converting energy into electrical or thermal energy for on-site and/or off-site energy consumption.	Yes	$50,000 or 125% of the estimated decomission cost minus the salvageable value, whichever is greater.	Following 6 months of no electricity generation, the permit holder will have 12 months to complete decomissioning.
Richland	Link	A system consisting of solar panels, modules, and related equipment (e.g., heat exchanger, pipes, inverter, wiring, storage) that collects solar radiation and transfers it as heat to a carrier fluid for use in hot water heating or space heating and cooling, and/or that collects solar energy and converts it into electricity. As a principal use, a solar energy conversion system is designed to meet demands for a large area and is typically mounted on the ground.	Yes	N/A	If the system ceases operating for a period of 18 consecutive months, the county shall deem it abandoned and shall provide a written notice of abandonment to the owner. Within 180 days after notice of abandonment is provided, the owner shall either complete all decommissioning activities and site restoration in accordance with the decommissioning plan or resume operations
Sumter	Link	A ground-mounted photovoltaic solar facility with components and subsystems that generate electricity from sunlight, to be sold to a wholesale electricity market through a regional transmission organization and an inter-connection with the local utility power grid. The area of the facility includes all the land inside the perimeter of the system, which extends to any fencing, land area required for setbacks, landscaping and signage.	Yes	N/A	N/A
York	Link	An energy generating facility or area principally used to convert solar energy to electricity, which includes, but is not limited to, the use of one or more solar energy systems. This definition shall exclude those facilities that are installed on the roof of a building, where the primary purpose of such building is not for the commercial production of solar energy.	Yes	$50,000 or 125% of the estimated decomission cost minus the salvageable value, whichever is greater.	The maximum time permitted for decommissioning and restoring the site shall be six months. It will be considered abandoned after 12 months of no electricity being generated.

County Name	Link	Type of solar projects affected	Decomissioning Requirements	Financial Assurance	Timeframe
Olean, New York	Link	An area of land or other area used for a solar collection system principally used to capture solar energy and convert it to electrical energy to transfer to the public electric grid in order to sell electricity to or receive a credit from a public utility entity, but also may be for on-site use. Solar farm facilities consist of one or more freestanding ground- or roof-mounted solar collector devices, solar-related equipment and other accessory structures and buildings,including light reflectors, concentrators, and heat exchangers, substations, electrical infrastructure, transmission lines and other appurtenant structures and facilities	Yes	N/A	If the applicant begins but does not complete construction of the project within 18 months after receiving final site plan approval, this may be deemed abandonment of the project and require implementation of the decommissioning plan to the extent applicable. Systems which have not been in active and continuous service for one (1) year shall be removed at the owner's or operator's expense.
Georgia	Link	For purposes of the [County/City] zoning code, SES refers only to (1) photovoltaic SESs that convert solar energy directly into electricity through a semiconductor device or (2) solar thermal systems that use collectors to convert the sun's rays into useful forms of energy for water heating, space heating, or space cooling.	Yes	N/A	Unless otherwise approved by the [zoning authority], decommissioning shall begin no later than 12 months after a Ground Mounted SES has ceased to generate electricity or thermal energy:
Kentucky	Link	Solar Energy System (SES) means a device, including its components and subsystems, that collects solar energy for electricity generation, consumption, or transmission, or for thermal applications. SES systems fixated on the ground for commercial purposes can be broken into small, intermediate, and large scale ground mounted Solar Energy Systems.	Yes	A performance bond, letter of credit, or other financial assurance payable to [Board of Adjustment or applicable governmental unit], sufficient to cover the net costs (estimated cost for decomissioning minus the salvage value).	Decommissioning shall begin no later than twelve (12) months after a Ground Mounted SES has ceased to generate electricity or thermal energy. If the Ground Mounted SES was a permitted use without a conditional use permit, all structures and facilities associated with the SES shall be removed within six (6) months of the beginning of decommissioning. Those with a conditional use permit shall follow the approved decomission plan.