



End-of-life Management of Photovoltaic Systems

Stakeholder Workgroup

August 4, 2021

South Carolina Department of Health and Environmental Control

Healthy People. **Healthy Communities.**

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

Budget Proviso

Consider:

- Disposal as HW or SW
- Reuse/recycling options
- Impact on landfill capacity
- Financial Assurance needs for decommissioning
- Infrastructure to collect, transport EOL material
- Stewardship for smaller-scale installations



Budget Proviso

Reporting

Quarterly interim reports to Senate Judiciary Committee and the House Labor, Commerce and Industry Committee on all activities

Final report with findings, including stakeholder input, to the to the Chairman of the Senate Judiciary Committee and the Chairman of the House Labor, Commerce

Purpose/Goals

- Convene stakeholders
- Consider proviso directives
- Accept input, information and guidance
- Prepare recommendations/regulations
- Report to legislature



Timeline

NOD- July 23, 2021

Quarterly Reports due beginning Sept. 30

Final Report due June 31, 2022



DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

CHAPTER 61

Statutory Authority: R-116, H.4100, the Fiscal Year 2021-2022 General Appropriations Act, Part 1B, Section 34, Proviso 34.62; 1976 Code Sections 44-56-10 et. seq.; and 1976 Code Sections 44-96-10 et. seq.

Notice of Drafting:

The Department of Health and Environmental Control (“Department”) proposes drafting a new regulation for the management of end-of-life photovoltaic modules and energy storage system batteries on solar projects in excess of thirteen acres. Interested persons may submit comment(s) on the proposed new regulation to Juli Blalock of the Bureau of Land and Waste Management; S.C. Department of Health and Environmental Control, 2600 Bull Street, Columbia, S.C. 29201; swregdev@dhec.sc.gov. To be considered, the Department must receive comments no later than 5:00 p.m. on August 23, 2021, the close of the Notice of Drafting comment period.

Synopsis:

Pursuant to R-116, H.4100, the Fiscal Year 2021-2022 General Appropriations Act, Part 1B, Section 34, Proviso 34.62 (“Proviso”), the Department was directed to submit regulations which develop rules to guide all South Carolinians invested in, selling, installing, and using photovoltaic modules and energy storage system batteries in the management of end-of-life photovoltaic modules and energy storage system batteries on solar projects and the decommissioning of solar projects in excess of thirteen acres. The Department proposes promulgating a new regulation as directed in the Proviso. The new regulation will establish rules for the responsible management and disposal of materials and equipment used in utility-scale solar projects.

The Administrative Procedures Act, S.C. Code Section 1-23-120(A), requires General Assembly review of the proposed new regulation.

Stakeholders

- Manufacturers
- Developers
- Recyclers
- Energy producers
- Environmental organizations
- Local Governments
- SC Office of Regulatory Staff
- Other interested parties
- **To recommend additional parties, please send contact information to swregdev@dhec.sc.gov**

Solar Power in SC

❖ South Carolina Statistics

- 1,891.44 MW of Solar PV modules installed
- 3,086 jobs in the Solar Industry
- 2.35% of it's power drawn from solar energy; and
- Projected to install 1,320.44 MW worth of Solar PV modules in the next 5 years

❖ Source: Solar Energy Industries Association, South Carolina

Decommissioning in SC

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

Decommissioning in SC (cont'd)

- Typically required within six-months after a six-month period of no electricity being generated or sold
- Includes removal of solar panels, buildings, cabling, electrical components and any other associated facilities

Background

A one-megawatt system will generally require about six acres of land for 3,000 to 4,000 individual solar panels and will cost \$2 million to \$3 million to build

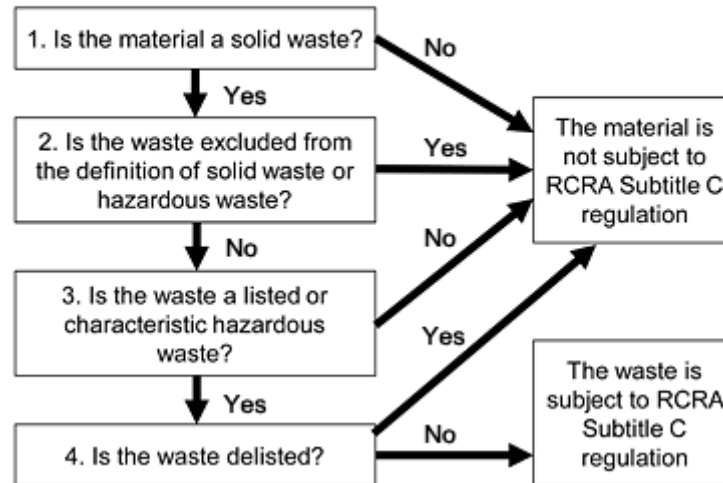
Source: New York State Energy Research and Development Authority

End-of-Life Management

- EOL Options: Refurbish, recycle, dispose
- Concerns: Responsible parties
- Costs and Financial Assurance
- Items: panels, inverters, ballasts, batteries

Regulatory Authority

The Hazardous Waste Identification Process





Regulatory Authority Other Issues

Subtitle D

Household Hazardous Waste
Exemption

Universal Waste Rules

Financial Assurance

Should it be required? If so:

- By whom?
- To whom?
- When?
- Using what mechanisms?
- How should costs be determined?

Purpose/Goals (revisited)

- Convene stakeholders
- Consider proviso directives
- Accept input, information and guidance
- Prepare recommendations/regulations
- Report to legislature



Other discussion items (TBD)



Next Steps

South Carolina Department of Health and Environmental Control
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Questions?

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