

**Report to the North Carolina General Assembly  
Environmental Review Commission and the Joint  
Legislative Commission on Energy Policy**



***Second Quarterly Report on the  
Utility-Scale Solar  
Management Program***

**March 1, 2024**

**Division of Waste Management, Division of  
Environmental Assistance and Customer  
Service**

**NORTH CAROLINA DEPARTMENT  
OF ENVIRONMENTAL QUALITY**

**Pursuant to SL 2023-58, Section 2.(d)**

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## A. Executive Summary

In accordance with Session Law 2023-58, s. 2.(d), Beginning December 1, 2023, through December 1, 2025, the Department of Environmental Quality (DEQ) is submitting quarterly reports to the Environmental Review Commission and the Joint Legislative Commission on Energy Policy on implementation of the requirements of Section 2 of S.L. 2023-58, including program development and the status of the rulemaking. These requirements are fulfilled in the following report, which is the **second** of nine quarterly reports.

This report includes:

- An update on outreach efforts with local governments organizations, the Department of Commerce, and the NC Utilities Commission and Public Staff.
- An update on the development of draft rules.
- An update on the development of the registration form, process, and database.
- Recommendations to the General Assembly.

## B. Background

North Carolina [S.L. 2023-58](#) requires the owner of a utility-scale solar project capable of generating two (2) or more megawatts (MW) alternating current (AC) that is directly connected to the electrical grid to:

- Properly decommission the project upon cessation of operations and restore the property.
- Register with the DEQ and pay a fee.
- Submit a decommissioning plan and establish financial assurance for new and rebuilt/expanded utility-scale solar projects.

S.L. 2023-58, which included the addition of Article 9 Part 2J of Chapter 130A of the General Statutes (G.S. 130A-309.240 through 130A-309.243) and G.S. 130A-309.06(c)(21), made DEQ the lead agency in the statewide administration and enforcement of utility-scale solar project registration, decommissioning, and financial assurance program for new projects, and for enforcing the new state-level statutory registration and decommissioning requirements for existing utility-scale solar projects.

Prior efforts and research that led up to the legislation in S.L. 2023-58 and the information presented in this report can be reviewed in the following prior legislation and subsequent reports/plans submitted to the General Assembly as required in the respective legislation:

### [S.L. 2019-132 \(H329\)](#)

- The EMC and DEQ evaluated the end-of-life management of renewable energy equipment and summarized the evaluation in the January 1, 2021 "[Final Report on the Activities Conducted to Establish a Regulatory Program for the Management and Decommissioning of Renewable Energy Equipment.](#)"

### [S.L. 2021-165 \(H951\)](#)

- DEQ evaluated options for the decommissioning of utility-scale solar projects and financial assurance and summarized the evaluation in the March 1, 2022 "[Plan and Recommendations for Financial Resources for Decommissioning of Utility-Scale Solar Panel Projects.](#)"

## C. Program Activities and Outreach

DEQ created the Utility-Scale Solar Management Program under the Division of Waste Management to administer and enforce the requirements of S.L. 2023-58 and subsequent rulemaking. The Utility-Scale Solar Management Program webpage can be accessed at this link:

<https://www.deq.nc.gov/about/divisions/waste-management/utility-scale-solar-management-program>

The webpage was recently updated to include information on the required annual and quarterly reports. This webpage will continue to be updated throughout program implementation as changes occur. The webpage currently has the following information:

- an overview of the program and its purpose and applicability,
- a link to S.L. 2023-58,
- program and rulemaking status,
- copies of quarterly reports submitted to the General Assembly;
- answers to anticipated questions,
- program contact information, and
- links to fact sheets and additional guidance.

To ensure collaboration between agencies and a smooth program start-up in 2025, DEQ has been reaching out to stakeholders regarding this program. Activities and outreach for August to October 2023 are summarized in the [first Quarterly Report](#) (dated December 1, 2023). Below is a list of outreach conducted between November 2023 and January 2024:

- Met with the Department of Information Technology (DIT) to continue development of the online registration form, the fee invoicing and payment system, the database for site inventory and compliance, and the routing and review process for decommissioning plans and financial assurance mechanisms.
- Presented on the program at the Air and Waste Management Association, 48<sup>th</sup> Annual Air Information Exchange.
- Met with a targeted group of stakeholders including solar developers and engineers for input on rulemaking.

In an effort to identify existing incentives and grant programs that may be used to encourage research and development on recycling and reuse of photovoltaic (PV) modules and to facilitate growth of the State's PV module recycling and reuse industry, the Department of Commerce (DOC) and DEQ wrote letters of support for prospective applicants to the [U.S. Department of Energy's Solar Energy Technologies Office Materials, Operations, and Recycling of Photovoltaics \(MORE PV\)](#) grant opportunity including an electronics recycler expanding their operations in NC. This grant provides up to \$20 million over three years for research and development projects to create innovative and practical approaches to increase the reuse and recycling of solar energy technologies. The application for the electronics recycler did not progress past the first stage, however they are a contributing team member along with DEQ and DOC participating with another applicant that did progress to the second stage.

## D. Rulemaking

DEQ staff in the Division of Waste Management are drafting proposed rule language and an associated fiscal note and working with stakeholders to attempt to address initial concerns, where possible, prior to publishing the proposed rules for public comment. The rules will need to be effective early enough to give project owners time to register, pay the fee, and submit any required decommissioning and financial assurance documentation prior to the Session Law deadline of November 2025.

### Proposed Rulemaking Schedule (subject to change):

Date	Action
May 2024	Beginning of 60-day public comment period for rules
July 2024	End of comment period for rules
October 2024	Goal for DEQ to adopt rules
December 2024	Rules Review Commission Meeting for approval of rules
January 2025	Goal for Effective Date of Rules
August 2025	Session Law Deadline for DEQ rule adoption

### Proposed Rule Structure/Outline (subject to change):

- .0101 Applicability and Definitions
- .0102 Registration and Fee Requirements
- .0103 Registration Fee Amount
- .0104 Decommissioning and Cost Estimate Requirements
- .0105 General Requirements for Financial Assurance
- .0106 Amount of Financial Assurance and Periodic Updates
- .0107 Allowable Mechanisms for Financial Assurance
- .0108 Required Language for Financial Assurance Mechanisms

## E. Registration and Fee

DEQ is working with DIT to develop an all-in-one electronic/online platform solution for the registration form and review process, the database for site inventory, invoicing and payment of the registration fee, and the five-year registration updates. The platform should allow project owners to create an account online where they can do the following:

- register all of their utility-scale solar projects;
- upload copies of decommissioning plans and financial assurance mechanism documents;
- view and pay invoices for the registration fee; and
- update the project information every five years to complete the registration update requirements.

Once the platform is nearing completion, DEQ expects to demonstrate the platform for stakeholders to solicit feedback on the design, prior to making the platform live for use by project owners in February 2025.

## F. Recommendations

DEQ requests the North Carolina General Assembly's consideration on the following recommendations.

- ***Provide resources for DEQ to administer the program through general appropriations.***

Currently, the only funding associated with the program is available after the collection of the fees associated with registration, which is effective November 1, 2025. The mandated fees are recurring only every five years, and the amount of the fee still must be determined through rulemaking including a public comment period. To be able to cover the FTEs required to operate the program, the fees would be substantial and would likely receive negative public comments. Work performed to start up the program and to comply with mandated requirements of S.L. 2023-58 is currently done by existing employees in addition to their regularly assigned workload. In the short term, priorities have been shifted and triaged to be able to meet the mandates of S.L. 2023-58; however, this is not a long-term solution nor is it sustainable. The utility-scale solar project decommissioning and financial assurance program needs to be adequately funded to be successful.

- ***Require counties to review and repeal/amend duplicative or less stringent requirements that apply to utility-scale solar projects after November 1, 2025.***

In 2021, there were 60 North Carolina counties that already had financial assurance/decommissioning requirements in county ordinance (Plan and Recommendations for Financial Resources for Decommissioning of Utility-Scale Solar Panel Projects, March 1, 2022).

S.L. 2023-58 allows for decommissioning/financial assurance requirements more stringent than the statewide minimum standards to be retained by counties. For existing projects (constructed prior to November 1, 2025), counties may continue to administer any financial assurance requirements included in county ordinances. For projects that are constructed after that deadline, counties may continue to administer any decommissioning or financial assurance requirements that are more stringent than the new state requirements included in S.L. 2023-58. However, S.L. 2023-58 is not clear on what to do if/when counties maintain decommissioning/financial assurance requirements in their county ordinance that are duplicative with state requirements and will apply to utility-scale solar facilities that are constructed after November 1, 2025.

To ensure there are no duplicative requirements and to reduce confusion for the regulated entities and the entities administering the program, the General Assembly could mandate that counties review ordinances related to utility-scale solar projects and repeal and/or amend county ordinance to ensure any decommissioning/financial assurance requirements that still apply to utility-scale solar projects constructed on or after November 1, 2025 are not duplicative or less stringent than the requirements established by the statewide program.

- ***Provide resources to encourage economic development of recycling or reuse of solar panels.***

North Carolina's recycling industry currently employs over 15,000 people in more than 500 businesses. The strength of the industry provides the state with a unique opportunity to take advantage of the burgeoning market for solar panel recycling. In fact, North Carolina is already home to the first dedicated solar panel recycling line on the east coast. Further resources may be



needed, however, to keep North Carolina businesses in a leading position. While S.L. 2023-58 mandated that the Department of Commerce identify existing incentives and grant programs that may be used to encourage research and development on recycling and reuse of PV modules and to facilitate growth of the State's PV module recycling and reuse industry, the North Carolina General Assembly did not allocate any financial resources to encourage the economic development of this industry.