



June 28, 2023

VIA ELECTRONIC MAIL

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233-0001
NYSSolidWastePlan@dec.ny.gov

Re: Solar Panels and the 2023 New York State Solid Waste Management Plan

Dear Commissioner Basil Seggos,

On behalf of the solar industry, the Alliance for Clean Energy New York (ACE NY), New York Solar Energy Industries Association (NYSEIA), and the Solar Energy Industries Association (SEIA) respectfully submit the following comments in response to the proposed 2023 New York State Solid Waste Management plan. Collectively, our member companies are responsible for the majority of solar installations in New York State. ACE NY, NYSEIA and SEIA are overall supportive of the 2023 New York State Solid Waste Management plan, and we appreciate the opportunity to provide comments that pertain specifically to end-of-life planning for solar panels.

Please direct any questions on this submission to Valessa Souter-Kline, vsouterkline@seia.org, (215) 756-5200.

Sincerely,

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Alliance for Clean Energy New York

Noah Ginsburg
New York Solar Energy Industries Association

Valessa Souter-Kline
Solar Energy Industries Association

Summary

The solar industry, represented by trade associations including the Alliance for Clean Energy New York (ACE NY), New York Solar Energy Industries Association (NYSEIA), and Solar Energy Industries Association (SEIA), are committed to responsible end-of-life (EOL) management and are prospectively developing collection, recycling, and disposal processes for the solar sector¹. The industry supports the major Focus Areas identified in the plan, specifically: Waste Reuse, Recycling, and Recycling Market Development and Resiliency. New York's solar industry recommends studying the potential pipeline of anticipated renewable energy generation and storage equipment based on projected 25 to 40-year lifespans, and building out infrastructure to address re-use and recycling.

We urge the state to keep in mind that 1) clean energy adoption is a move away from fossil fuel waste production and 2) there is not currently a sufficient pipeline of end-of-life solar panels to warrant urgent action; a careful approach is needed to ensure we reach our clean energy and climate goals. Finally, the industry strongly opposes an extended producer responsibility (EPR) approach to solar panel EOL and recommends that New York State seek to instead build upon existing EOL practices used in the solar industry. EPR, particularly at the state/local level, introduces a new process to solar development that will complicate financing, raise costs, and involve global manufacturers in an unduly burdensome process with state/local jurisdictions.

As we've seen in Niagara County, where the county passed a local law requiring global manufacturers to provide detailed solar panel recycling plans to the county, manufacturer participation may simply not occur at this early stage. The result in Niagara County has been a de facto ban on solar panel installation. The solar industry strongly supports solar panel recycling; however, we caution against additional policies that will impede progress towards the state's climate goals. Existing practices in the solar industry already obligate companies to repair, replace and remove equipment at the end of a project's useful life. Implementing recycling mandates and imposing those requirements on the manufacturers at this stage will unequivocally increase the cost of deploying clean energy and slow progress toward New York's ambitious clean energy goals.

New York's solar industry proposes an alternative approach that will minimize costs and support continued progress toward New York's climate goals while ensuring responsible EOL management for solar equipment.

Context

Solar PV modules have a typical lifespan of 25-40 years and typically carry a 25-year manufacturer warranty. Ninety percent of solar capacity in New York has been installed since the launch of Reforming the Energy Vision (REV) in 2014, with over 50% installed just in the last 3.5 years. As a result, the anticipated end of life (EOL) for the vast majority of solar panels installed in New York will not occur until 2035 or later – meaning that New York has time to consider and establish sound and effective solutions to address concerns related to the management of EOL solar panels.

¹ SEIA national PV recycling program, Solar Energy Industries Association; [SEIA National PV Recycling Program | SEIA](#); accessed May 9, 2023

A Decommissioning Approach Makes Sense

EPR holds the manufacturer responsible, an approach that adds costs, reduces efficiency, and doesn't make sense for the solar industry, which currently handle EOL considerations (including recycling in some instances) through decommissioning plans. In New York, all solar projects awarded through the Clean Energy Standard (CES) are subject to Section 94-C of New York Executive Law or Article 10 of the Public Service Law, 6 which requires decommissioning plans that address recycling among other EOL considerations. Projects are also required to provide financial security for decommissioning, providing EOL assurances in the event that the company does not implement the decommissioning plan itself.

Section 900-6.6 of the regulations implementing Section 94-C of the Executive Law further requires permittees to provide financial security in the form of a letter of credit or other approved financial assurance for decommissioning and site restoration activities, in accordance with an approved Decommissioning and Restoration Plan, which must remain active until a facility is fully decommissioned. For community solar projects awarded through the NY-Sun program, most municipalities require decommissioning plans with financial assurance prior to issuing a permit. The result is that most of New York's solar installations already have EOL plans in place. The solar industry recommends the following approach to ensure responsible EOL planning for solar equipment:

- Utility-scale – decommissioning plan satisfies EOL requirement.
 - Require recycling or reuse as part of decommissioning.
- Third-party owned/leased solar – decommissioning agreement in lease/PPA satisfies EOL requirement.
 - Require reuse or recycling as part of decommissioning.
- Customer-owned solar – acknowledge responsibility is on the owner at end of life, similar to other appliances. EOL requirement can be satisfied via drop-off sites or included in maintenance service contract with solar company.

We also offer the following more general recommendations for the DEC's consideration:

- To the maximum extent possible, New York should seek to leverage existing recycling resources and infrastructure for clean energy equipment.
- Industry should work to develop a network of third-party collectors who will accept the products for re-use and recycling.
- Industry and New York state should jointly develop resources showing where PV modules can be brought for recycling and provide approximate/benchmark costs to support consumers. Useful resources could include a website, maps, cost estimates, and contact info for facilities.
- Any recycling requirements should be forward-looking, phased in, and account for existing contractual arrangements and industry practices.
- New York State should collect data on PV EOL and encourage the development of in-state recycling capacity, as appropriate.

Infrastructure Needs

New York State does not currently have solar recycling infrastructure in place (in part because there is little to no demand) and to require solar panel recycling now would be premature. The industry supports efforts to bring recycling businesses and processes to the state to continue developing the necessary infrastructure to reclaim, reuse and recycle solar panel components. There is a growing network of waste management firms in the United States that offer options for panel recycling – some of those firms might be interested in the New York market.

Conclusion

Solar photovoltaic (PV) modules are a critical component of New York's clean power supply, substantially reducing the impacts of climate change while improving grid resiliency as a cornerstone of the Climate Leadership and Community Protection Act (CLCPA). Solar energy reduces carbon emissions and other waste from fossil-fuels, drives private investment, and creates good paying jobs in New York State. The solar industry supports a careful review and study of EOL management of solar panels to identify cost-effective solutions and advance New York's energy and environmental goals.