



Solar Panel & Wind Turbine Recycling State Legislation

May 2023

At least 12 states—California, Hawaii, Illinois, Indiana, Maine, Maryland, New Jersey, North Carolina, South Carolina, Tennessee, Virginia and Washington—have enacted legislation related to the end-of-life management of solar panels and/or wind turbines. Legislation is currently pending in 10 states. See the tables below for more information.

Enacted Legislation 2015-2023

State	Bill Number	Summary
California	2015 SB 489	Grants the department of toxic substances control the authority to designate hazardous waste photovoltaic modules as universal waste through regulations.
Hawaii	2021 HB 1333	Requires the Hawaii Natural Energy Institute to conduct a study to determine the best practices for disposal, recycling, or secondary use of clean energy products.
Illinois	2022 SB 3790	Establishes the Renewable Energy Component Recycling Task Force to investigate options for recycling and other end of life management methods for renewable energy generation components and energy storage devices. The task force is also charged with projecting the economically productive life cycle of various types of equipment and model the impact to landfill capacity, as well as identifying infrastructure that may be needed to collect and transport equipment for reuse, refurbishment, recycling or disposal.
Indiana	2023 SB 33	Requires the department of environmental management to conduct a study regarding the decommissioning and disposal of solar panels and wind power devices located in the state. The department shall consider, among other things, creation of a state program to manage the decommissioning and disposal of solar panels and wind power devices and the appropriate state agency to administer a program.
Maine	2021 LD 1595	Provides for the stewardship of solar panel waste. Allocates state grant funding for the development of a process that recycles 95% of solar panels. Sets penalties for improper disposal of solar energy equipment, for failure to register solar energy equipment and for refusal to permit inspection of solar energy equipment.
Maryland	2022 HB 528	Establishes the Solar Photovoltaic Systems Recovery, Reuse, and Recycling Working Group to evaluate options for options for recycling or reusing solar panels.
New Jersey	2018 SB 601	Requires the owner of a solar energy generation system to remove and recycle the facility or structure, including any related equipment or infrastructure after termination of its use. Requires the Department of Environmental protection to adopt rules and regulations for the removal and recycling of solar energy facilities and structures.
North Carolina	2019 HB 329	Directs a study to consider the adoption of regulations to govern the management of end-of-life photovoltaic modules used in utility-scale projects.

South Carolina	2021 SB 525	Directs the Department of Health and Environmental Control to submit regulations regarding the management of end-of-life photovoltaic modules and energy storage system batteries on solar projects and the decommissioning of solar projects more than thirteen acres.
Tennessee	2021 SB 2797	Directs a study of the overall effects of utility-scale solar energy development in the state, including an examination of methods of decommissioning and managing end-of-life photovoltaic modules, energy storage system batteries, and other equipment used in utility-scale solar energy development.
Virginia	2022 HB 774/SB 499	Establishes a task force to analyze the life cycle of renewable energy facilities. The analysis must assess the feasibility, costs, recycling and salvage opportunities; potential impacts of underground infrastructure post-decommissioning; and potential beneficial economic impact of solar, wind, and battery storage development.
Washington	2021 HB 1393	Delays certain implementation dates for the photovoltaic module stewardship and takeback program.
	2020 HB 2645	Revises provisions relating to the Photovoltaic Module Stewardship and Takeback Program. Defines distributor, installer, and retailer. Requires the Department of Ecology to send a written warning to a distributor, installer, or retailer that sells or installs a photovoltaic module made by a manufacturer that is not participating in a stewardship plan.
	2017 SB 5939	Modifies renewable energy system tax incentives and provides guidance for renewable energy system component recycling to promote a sustainable, local renewable energy industry.

2023 Legislation (Pending and Failed)

State	Bill Number	Status	Summary
California	2023 AB 2	Pending	Requires a manufacturer of solar photovoltaic panels sold or offered for sale in the state to develop an end-of-life management plan for the management and recycling of the solar photovoltaic panels it manufactured and the component materials.
	2023 AB 1238	Pending	Requires the department of toxic substances control to develop alternative management standards for managing photovoltaic modules. Specifies parameters for the standards, including that they promote the safe collection, reuse, and recycling of photovoltaic modules.
Connecticut	2023 SB 98	Failed	Establishes an extended producer responsibility program for solar panels.
	2023 SB 202	Failed	Establishes extended producer responsibility programs for solar panels and lithium-ion batteries.
Illinois	2023 SB 1545	Pending	Establishes a stewardship program to ensure the convenient, safe, and environmentally sound takeback and recycling of photovoltaic modules and their components and materials. Convenes a Photovoltaic Module Recovery, Reuse, and Recycling Working Group to advise on potential methodologies for the management of end-of-life photovoltaic modules.
	2023 SB 1549	Pending	Provides that on a specified date, a wind turbine manufacturer must participate in a wind turbine stewardship and takeback program under which, where realistic, the wind turbine manufacturer must recycle wind turbine components that are not toxic after their useful life instead of disposing them in landfills.

State	Bill Number	Status	Summary
Maine	2023 LD 826	Pending	Amends existing law related to the decommissioning of solar energy developments to provide that such decommissioning includes the recycling or disposal of the solar panels used during the operation of the development.
Minnesota	2023 HB 703	Pending	Requires producers to, individually or through a stewardship organization, implement and finance a statewide product stewardship program that manages wind and solar energy infrastructure that has been discarded by reducing waste generation, promoting recycling, and negotiating and executing agreements to collect, transport, and process for recycling.
	2023 HB 2310/SB 2438	Pending	Requires the commissioner of the pollution control agency, in consultation with the commissioners of commerce and employment and economic development, to coordinate preparation of a report on developing a statewide system to reuse and recycle solar photovoltaic modules and installation components in the state.
North Carolina	2023 SB 669	Pending	Relates to decommissioning of utility-scale solar projects. Requires, at a minimum, that the owner or operator take the following steps: (1) disconnect from the power grid; (2) remove all equipment and either ship for reuse, recycle or properly dispose in a landfill; and (3) restore the property to its prior condition or an alternative condition if agreed upon. Requires registration, a decommissioning plan and financial assurance.
New York	2023 AB 5101/SB 2215	Pending	Requires manufacturers of solar panels to establish and maintain a program for the collection, transportation and recycling of such panels that have been taken out of service. Sets collection goals and reporting requirements.
	2023 SB 1691	Pending	Establishes a photovoltaic module stewardship and take-back program. Directs the department of environmental conservation to guide manufacturers in preparing and implementing a self-directed program to ensure the convenient, safe, and environmentally sound takeback and recycling of photovoltaic modules and their components and materials.
Oregon	2023 HB 2406	Pending	Directs the Energy Facility Siting Council to adopt standards for siting, construction, operation, and retirement of energy facilities that generate electricity from a renewable energy source, addressing the impacts of the energy facility's equipment waste recycling and disposal needs over time.
Pennsylvania	2023 SB 550	Pending	Provides for community solar facilities. Relates to decommissioning, recycling, and photovoltaic panel removal.
Rhode Island	2023 HB 6178/SB 499	Pending	Provides that no solar energy permit will be issued unless the permit applicant has committed in writing and submitted evidence demonstrating that resources are set aside to pay for the decommissioning and recycling of the photovoltaic panels at the end of their useful life. Requires that wind turbine blades are disposed of or recycled within the state.
Vermont	2023 HB 47	Pending	Requires any person or company who installs solar panels within the state to have a recycling plan for decommissioned solar panels that has been approved by the Public Utility Commission.
Washington	2023 SB 5287	To Gov.	Directs a study on the feasibility of recycling wind turbine blades installed at facilities in the state, including information on the cost, feasibility, and environmental impact of various disposal methods; potential incentives for recycling facilities within the state; and considerations for the design of a state-managed product stewardship program for wind turbine blades.