

Date of Hearing: May 10, 2023

ASSEMBLY COMMITTEE ON APPROPRIATIONS

Chris Holden, Chair

AB 2 (Ward) – As Amended April 26, 2023

Policy Committee:	Environmental Safety and Toxic Materials	Vote:	8 - 0
	Natural Resources		10 - 0

Urgency: No State Mandated Local Program: No Reimbursable: No

SUMMARY:

This bill requires a manufacturer of solar panels to develop and implement an end-of-life management plan (plan) for the recycling of solar panels.

Specifically, this bill, among other things:

- 1) Requires the Department of Resources Recycling and Recovery (CalRecycle) to develop guidelines for the development of manufacturer plans for the safe, convenient, and environmentally sound management and recycling of the manufacturer's solar panels and component materials and requires CalRecycle, by January 1, 2026, to adopt regulations to implement this bill.
- 2) Requires a manufacturer or its agent to develop a plan for each model of solar panel it manufactures and sells or offers for sale in the state and submit it, by July 1, 2026, to CalRecycle for approval or disapproval. For solar panels first sold on or after July 1, 2026, requires the manufacturer submit a plan to CalRecycle no later than 30 days after the solar panels are first sold or offered for sale in the state.
- 3) Requires a manufacturer or agent to implement the plan, as approved by CalRecycle.
- 4) Requires a manufacturer or agent, beginning January 1, 2027, and annually thereafter, to provide CalRecycle with a written report for the prior calendar year documenting the implementation of the plan and assessing the achievement of the performance goals.
- 5) Provides that a manufacturer that violates any requirement of this bill is liable for an administrative civil penalty of \$500 for the first violation and \$1,000 for a subsequent violation.

FISCAL EFFECT:

- 1) CalRecycle estimates costs of approximately \$1.7 million in fiscal year (FY) 2024-25, \$2.8 million in FY 2025-26, and \$3.0 million in FY 2026-27 (General Fund or special fund) and ongoing for new staff positions to develop regulations and guidelines, review and evaluate notices, plans, and reports from manufacturers, and provide ongoing assistance.
- 2) Civil penalty revenue of an unknown but likely minor amount from violations of this bill.

COMMENTS:

1) **Purpose.** According to the author:

In 2006, California launched the Million Solar Roofs Initiative to incentivize consumers and businesses to invest in solar. As of 2022, California has the largest solar market in the United States, supplying over 20% of its electricity. Unfortunately, given a 20-30 year life span, many of these panels are beginning to reach the end of their lifecycle. Assembly Bill (AB) 2 will establish the foundation for a convenient, safe, and environmentally sustainable system for the end-of-life management of solar photovoltaic (PV) panels. With the right conditions in place, end-of-life industries for PV panels can thrive as an important pillar of a sustainable solar industry in California.

2) **Background.**

Recycling Solar Panels. California is the largest solar market in the United States. According to the Solar Energy Industries Association (SEIA), solar panels have a lifespan between 20 and 30 years. According to the United States Environmental Protection agency, “waste from end-of-life solar panels presents opportunities to recover valuable materials and create jobs through recycling.” By 2030, the International Renewable Energy Agency estimates that the cumulative value of recoverable materials from solar panels globally will be approximately \$450 million. While solar panels are recyclable, their long lifespan means there are not enough panels in the market yet to support a robust recycling system. This results in too many solar panels being disposed in landfills. Experts estimate that only 1 in 10 solar panels is currently recycled in California. This lack of recycling capacity and increase in solar panel installation is going to result in a deluge of waste in coming years. SEIA established a national solar panel recycling program in 2016 and states it is working with its members to create a robust network of recycling and refurbishment providers that offer end-of-life management services for solar panels.

Extended Producer Responsibility (EPR). According to CalRecycle, EPR is a strategy that places shared responsibility for end-of-life product management on the producers, and all entities involved in the product chain, instead of on the general public and local governments, with oversight and enforcement provided by a governmental agency. This approach provides flexibility for manufacturers, based on their expertise in designing products and the systems that bring these products to market, to design systems to capture those products at the end-of-life to meet statutory goals. Currently there are four statewide EPR programs: paint, carpet, mattresses, and pharmaceutical and sharps waste. Additionally, last year, the Legislature adopted an expansive EPR program for single-use packaging and foodware that will be implemented over the next several years.

This bill establishes a framework for the management of solar panel waste in California. While not a true EPR program, this bill begins the process of requiring solar panel manufacturers to plan for the end-of-life management for the materials they generate. The author indicates he is working with stakeholders on a number of issues.

Of particular note to this committee, the EPR programs currently overseen by CalRecycle require covered entities, either individually or through a stewardship organization, to pay administrative fees that cover all costs incurred by CalRecycle in administering and enforcing the program. As noted, while this bill is not a true EPR program, the author may

wish to consider including a cost recovery mechanism in this bill to cover CalRecycle's administrative costs.

- 3) **Related Legislation.** AB 1238 (Ward) requires the Department of Toxic Substances Control, by January 1, 2026, to adopt alternative management standards for the management of solar panels. AB 1238 is pending in this committee.

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