

CONCURRENCE IN SENATE AMENDMENTS

AB 864 (Ward)

As Amended August 20, 2026

Majority vote

SUMMARY

Requires, on or before July 1, 2028, the Department of Toxic Substances Control (DTSC) to convene one or more public workshops to comment on the applicability of specified federal regulations to hazardous waste streams, including but not limited to solar photovoltaic modules (solar PV modules). Authorizes DTSC to adopt, via regulation, a specified federal regulation and apply it to end-of-life photovoltaic modules that are identified as hazardous waste.

Senate Amendments

- 1) Delete the following provisions from the bill:
 - a) Exempts solar PV modules, not identified as hazardous waste and treated as universal waste, from state hazardous waste requirements if the solar PV modules are transferred to a designated recycler for legitimate recycling as authorized under federal law and regulation.
 - b) Requires solar PV modules, subject to the federal transfer-based exclusion requirements under federal regulation, and transferred to a legitimate recycling facility, to be managed in accordance with those federal regulations.
 - c) Requires solar PV modules to comply with the requirements for recyclable materials under the Hazardous Waste Control Law (HWCL).
 - d) Provides that solar PV modules that are not hazardous waste, but are treated as universal waste, are exempt from regulation as hazardous waste if the modules are transferred to a designated recycler for legitimate recycling as defined under federal regulation.

COMMENTS

Are solar panels hazardous waste? End-of-life disposal of solar products in the United States is governed by the federal Resource Conservation and Recovery Act (RCRA), and state policies that govern waste. To be governed by RCRA, solar panels must be classified as hazardous waste. To be classified as hazardous, panels must fail to pass the Toxicity Characteristics Leach Procedure (TCLP) test. Most solar panels pass the TCLP test, and thus are classified as non-hazardous and are not federally regulated. However, the production of solar panels involves toxic heavy metals, such as cadmium, copper, lead, and selenium; therefore, some solar panels are likely to exhibit the characteristic of toxicity that have adverse environmental and public health effects.

SB 489 (Monning), Chapter 419, Statutes of 2015 added section 25259 to Health and Safety Code, which authorizes DTSC to adopt regulations to designate end-of-life PV modules that are identified as hazardous waste as a universal waste and subject those modules to universal waste management.

Universal waste: Universal wastes are hazardous wastes that are widely produced by households and many different types of businesses. Universal wastes include televisions, computers, other electronic devices, batteries, fluorescent lamps, mercury thermostats, and other mercury containing equipment.

Hazardous waste regulations identify seven categories of hazardous wastes that can be managed as universal wastes. Any unwanted item that falls within one of these waste streams can be handled, transported, and recycled following the simple requirements set forth in the universal waste regulations versus the more stringent requirements for hazardous waste.

California's Universal Waste Rule allows individuals and businesses to transport, handle, and recycle certain common hazardous wastes, termed universal wastes, in a manner that differs from the requirements for most hazardous wastes. The more relaxed requirements for managing universal wastes were adopted to ensure that universal waste is managed safely and not disposed of in the trash. The universal waste requirements are also less complex and structured to increase compliance.

Hazardous Waste Management Report (Report): In July 2023, as part of its programmatic reforms, DTSC released the first Report, which presents data on the types and amounts of hazardous waste generated, transported, and disposed of in the state. The main objectives of the first Report were to establish a baseline understanding of the management of hazardous waste in California, identify data gaps and items that require additional research, and develop plans to fill data gaps. The final Report was issued by DTSC in the fall of 2023.

Hazardous Waste Management Plan (Plan): On March 14, 2025, DTSC released the draft Plan. The Plan is organized into 10 goals, each with specific recommendations intended to address the challenges of California's hazardous waste management system and strive towards the development of a circular economy.

Evaluating opportunities to support circular economy capacity: Included in the Plan is DTSC's evaluation of opportunities to support circular economy capacity:

"DTSC recommends an evaluation on how the state can promote and incentivize protective hazardous waste recycling facilities in California to progress towards the state's goal of a circular economy. One method to identify potential opportunities to promote hazardous waste recycling is through the evaluation of exemptions and exclusions. The United States Environmental Protection Agency (U.S. EPA) has adopted exclusions and exemptions for certain types of hazardous secondary materials or the processing of hazardous waste.

However, California has not adopted all of the exclusions or exemptions for recycling hazardous wastes that the federal government has adopted. One example of an exclusion that DTSC will evaluate is 40 Code of Federal Regulations (CFR) Section 261.4 (a)(24). The conditions associated with this exclusion were introduced under U.S. EPA's Definition of Solid Waste (DSW) rulemakings and are intended to facilitate the legitimate reclamation of hazardous secondary materials to encourage resource conservation and materials recovery, while also maintaining protection of human health and the environment. This recycling exclusion provides a list of requirements for the safe and legitimate use of certain hazardous secondary materials. States may implement one of two separate versions of 40 CFR Section 261.4 (a)(24) by implementing the 2018 Transfer-Based exclusion or the 2015 Verified Recycler exclusion. Currently, 33 states have adopted at least one version of these two rules.

An evaluation of these recycling exclusions is recommended to determine how they may be adopted for California's hazardous waste management program.

DTSC will begin the evaluation in 2025 and may be complete by 2026. Then, if DTSC recommends moving forward with one of these recycling exclusions, a regulatory or statutory process will be identified before implementation."

This bill: AB 864 requires DTSC, on or before July 1, 2028, to convene a public workshop on the applicability of specified federal regulations as they relate to hazardous waste streams, including but not limited to solar PV modules. The bill requires DTSC to consider feedback received at the public workshops and then evaluate the applicability of the specified federal regulations for the management of solar PV modules as an alternative to existing California regulations governing the management of solar PV modules. AB 864 authorizes DTSC, after that evaluation, to adopt those federal regulations and apply them to the management of end-of-life solar PV modules. The bill does not limit DTSC's authority from adopting regulations that do not incorporate the specified federal regulations for the management of solar PV modules.

According to the Author

"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. This poses a huge challenge for the State to ensure these panels are properly collected and managed, however it also offers a huge opportunity to reclaim valuable materials and create a truly sustainable and circular market. AB 864 reduces barriers for legitimate recyclers to transport and manage these panels at the end of their useful life, by adopting the federal transfer based exclusion."

Arguments in Support

According to the California Product Stewardship Council,

"California is currently listed as one of the top three states for annual solar capacity additions. In the next 25 years, rooftop solar installations are expected to continue increasing. These installations, often subsidized, will decrease California homeowners' energy bills by as much as 75% and reduce reliance on fossil fuels. The success of solar adoption has also led to a requisite increase in de-installation across the state as panels near the end of their lifecycle.

Solar panels are one of the few products that are not accepted for free at most collection sites, like other universal or household hazardous waste. There are limited opportunities for solar panel owners dropping unwanted panels at a public collection site, or directly with recyclers. As more panels are removed from rooftops, more recycling opportunities are needed. Current DTSC rules for managing solar panel waste have limitations on how collectors can select and transfer the panels to a legitimate recycler and how that recycler can manage the panel.

AB 864 provides DTSC with a pathway for alternative management standards for solar panels, so working and repairable panels go into reuse, and nonviable, nonhazardous panels can be safely recycled in or out-of-state. Allowing transfer-based exemption for solar panels to be more easily recycled out of state supports the growing demand for industry-funded recyclers managing take-back programs and decommissioning plans."

Arguments in Opposition

None on file.

FISCAL COMMENTS

According to the Senate Appropriations Committee, enactment of this bill could cost DTSC approximately \$1 million annually in implementation costs.

VOTES:**ASM ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: 7-0-0**

YES: Connolly, Ellis, Bauer-Kahan, Castillo, Lee, McKinnor, Papan

ASM APPROPRIATIONS: 14-0-1

YES: Wicks, Arambula, Calderon, Caloza, Dixon, Elhawary, Fong, Mark González, Hart, Pacheco, Pellerin, Solache, Ta, Tangipa

ABS, ABST OR NV: Sanchez

ASSEMBLY FLOOR: 79-0-0

YES: Addis, Aguiar-Curry, Ahrens, Alanis, Alvarez, Arambula, Ávila Farías, Bains, Bauer-Kahan, Bennett, Berman, Boerner, Bonta, Bryan, Calderon, Caloza, Carrillo, Castillo, Chen, Connolly, Davies, DeMaio, Dixon, Elhawary, Ellis, Flora, Fong, Gabriel, Gallagher, Garcia, Gipson, Jeff Gonzalez, Mark González, Hadwick, Haney, Harabedian, Hart, Hoover, Irwin, Jackson, Kalra, Krell, Lackey, Lee, Lowenthal, Macedo, McKinnor, Muratsuchi, Nguyen, Ortega, Pacheco, Papan, Patel, Patterson, Pellerin, Petrie-Norris, Quirk-Silva, Ramos, Ransom, Celeste Rodriguez, Michelle Rodriguez, Rogers, Blanca Rubio, Sanchez, Schiavo, Schultz, Sharp-Collins, Solache, Soria, Stefani, Ta, Tangipa, Valencia, Wallis, Ward, Wicks, Wilson, Zbur, Rivas

UPDATED

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