

Are solar panels universal waste?

DTSC held a public webinar on December 17, 2020, to present information on the recently approved regulation to manage waste photovoltaic modules (PV modules), commonly known as solar panels, as universal waste under California's Universal Waste Program.

Should solar panels be regulated as universal waste?

EPA is developing a proposed rule to add solar panels to the universal waste regulations and to add tailored universal waste standards for lithium batteries. EPA is working on this rulemaking in part in response to a petition submitted by a broad coalition of industry associations to regulate solar panels as universal waste.

What is DTSC's new PV module regulation?

DTSC's new PV modules regulation, allowing them to be managed under California's universal waste program, was recently approved by Office of Administrative Law (OAL) and will be effective starting January 1, 2021. Please be sure to check the website for more information as DTSC continues to update this website.

Are solar panels a hazardous waste under RCRA?

If these metals are present in high enough quantities in the solar panels, solar panel waste could be a hazardous waste under RCRA. Some solar panels are considered hazardous waste, and some are not, even within the same model and manufacturer.

Are solar panels regulated under RCRA?

Solid waste is regulated federally under RCRA Subtitle D and through state and local government programs. The discarded solar panel, which is now considered solid waste, may then also be regulated under RCRA Subtitle C as hazardous waste if it is determined to be hazardous.

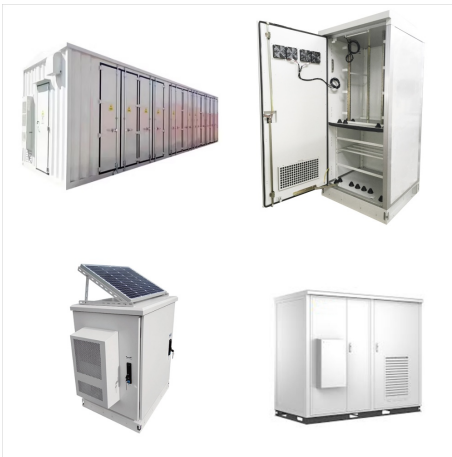
What is a notice of Intent (NOI) for PV modules?

Starting January 1, 2021, businesses that intend to manage waste PV modules as universal waste (UW) shall notify DTSC of the universal waste management activities. You can use DTSC's notification forms provided

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below to file a Notice of Intent (NOI) to handle, treat, or dispose of PV modules.



California: State Universal Waste for PV Modules:
Hawaii: State Universal Waste Regulations for Solar
Panels: New Jersey: Solar Panel Recycling
Commission: North Carolina: Department of
Environmental Quality and Environmental
Management Commission report on the Regulatory
Program for the Management and Decommissioning
of Renewable Energy



Universal Waste Notification and Reporting Staff
P.O. Box 806 Sacramento, CA 95812-0806
Attention: Universal Waste Handling Activities .
Universal waste handler's information [California
Code of Regulations, title 22, section 66273.32(f)(3)]
1. UW handler's name (if the facility owner is
different than the facility operator, also



Photovoltaic modules (PV modules) ??? Universal
Waste Management . 4 . Department Reference
Number: R-2017-04 . 5 . Office of Administrative
Law Notice File Number: Z-2019-0409-04 . 6 . 7 .
DIVISION 4.5, TITLE 22, CALIFORNIA CODE OF
REGULATIONS 8 . 9 Legend: Amendments are
shown from the existing text of the California Code
of 10 . ???

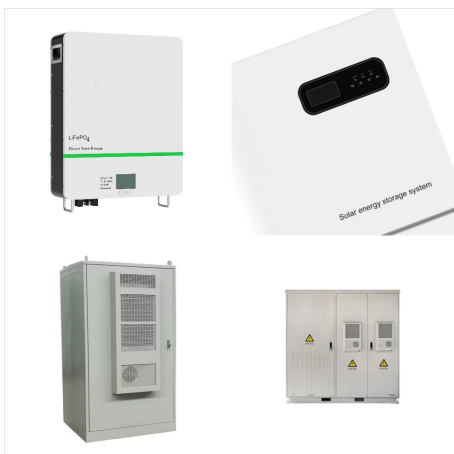
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Photovoltaic Modules (PV Modules) ??? Universal Waste Management DTSC Reference Number R-2017-04 . Department of Toxic Substances Control January 8, 2019 Page 1 of 54 INITIAL STATEMENT OF REASONS . Photovoltaic (PV) Modules ??? Universal Waste Management



[Photovoltaic modules (PV modules) ??? Universal Waste Management] Proposed Regulation Text R-2017-04 Department of Toxic Substances Control Page 2 of 31 Revised January 8, 2019 1 Amend Title 22, division 4.5, chapter 10, article 2, section 66260.10 to read: 2 3 ? 66260.10. Definitions. 4 5 When used in this division, the following terms have the meanings given below:



Photovoltaic Modules (PV Modules) ??? Universal Waste Management This document details the background of the economic and fiscal impacts of Department of Toxic Substances Control's (DTSC's) regulation to allow waste PV modules to be managed in found in California Code of Regulations, title 22, division 4.5, chapter 23. Background .

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containers holding PV modules ??? "Universal Waste-PV module(s)" ??? Accumulation start date. Department of Toxic Substances Control. 27. Universal Waste - PV modules D"Qar BB-8. 5/4/2019. Outer Rim Planet



[Photovoltaic modules (PV modules) ??? Universal Waste Management] Proposed Regulation Text R-2017-04 Department of Toxic Substances Control Page 1 of 31 Revised January 8, 2019 1 . 2 . T. 9 Legend: Amendments are shown from the existing text of the California Code of 10 . Regulations, title 22, as:



(g) Department notification requirement for universal waste handlers of PV modules. (1) Any universal waste handler of PV modules who accepts more than 10,000 kilograms (or 22,000 pounds) of PV modules from all offsite sources in a calendar year, calculated collectively, or who conducts manual disassembly of PV modules pursuant to

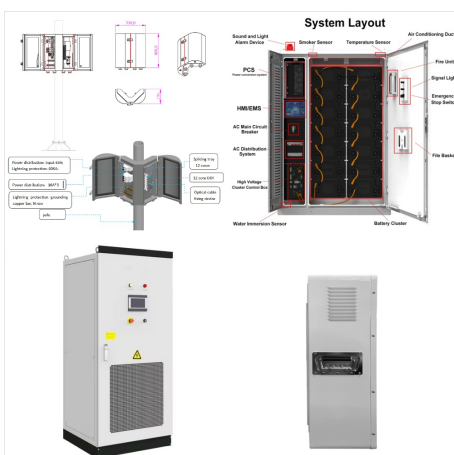
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proposed regulations that would allow hazardous waste PV modules to be managed according to universal waste management standards in California Code of Regulations, title 22, division 4.5, chapter 23. These and other rulemaking documents are available for review on DTSC's website at <https://dtsc.ca.gov/regs/>. Written comments were



Furthermore, the assessment shows that there is no specific regulation in the country that deals with PV module waste. Policies for PV module waste monitoring, take-back scheme, and subsidization



ARTICLE 17. Photovoltaic Modules Effective Jan. 1, 2016 "The department may, by regulation, designate end-of-life photovoltaic modules that are identified as hazardous waste as a universal waste and subject those modules to universal waste management." 8 DTSC 7/19/2016

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EPA's universal waste regulations streamline the hazardous waste management standards for certain categories of hazardous waste that are commonly generated by a wide variety of establishments. The streamlined regulations: Solar Panels/Photovoltaic Modules. California, Hawaii. Note: The list above is not comprehensive. Hazardous Waste



Photovoltaic modules (PV modules) ??? Universal Waste Management, which was released to the public on April 19, 2019. The timeline for DTSC interaction with the All referenced section numbers are found in d ivision 4.5 of title 22 of the California Code of Regulations, unless otherwise specified. 6 . Table 1. List of Commenters # Name of



SACRAMENTO ??? On Jan. 1, California will be the first state in the nation to add hazardous waste solar panels to its universal waste program, a move intended to promote solar panel recycling and reuse and to keep them out of landfills. The new regulation is a stepping stone toward the full "cradle-to-grave" approach for climate initiatives that California sets forth ???

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Photovoltaic Modules (PV Modules) ??? Universal Waste Management . Department Reference Number: R-2017-04 . Office of Administrative Law Notice File Number: Z-2019-0409-04 . NOTICE IS HEREBY GIVEN . that the Department of Toxic Substances Control (DTSC) proposes to adopt amended California Code of Regulations, Title 22, Division 4.5, Chapters



Photovoltaic (PV) Modules ??? Universal Waste Management . Department of Toxic Substances Control reference number: R-2017-04 . Office of Administrative Law Notice Reference Number: Z-2019-0409-04 For purposes of this FSOR, all regulatory references are to the California Code of Regulations, title 22, division 4.5, unless otherwise



hazardous waste PV modules to be managed according to universal waste management standards in California Code of Regulations, title 22, division 4.5, chapter 23. Concurrently, DTSC also submitted the Economic and Fiscal Impact Analysis (STD 399 and attachment) of the final regulation package to the Department of Finance (DOF) for its approval.

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This bill would authorize the department to adopt regulations to designate end-of-life photovoltaic modules that are identified as hazardous waste as a universal waste and subject those modules to universal waste management. The bill would authorize the department to ???



Photovoltaic modules (PV modules) ??? Universal Waste Management, which was . 2 . released to the public on December 24, 2019. The timeline for DTSC interaction with All referenced section numbers are found in division 4.5 of title 22 of the California Code of Regulations, unless otherwise specified. 3 . Table 1. List of Commenters # Name



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a waste *. ??? When you know PV module is hazardous: Analytical test results that show that the module is hazardous Using generators' knowledge of the materials in the panel ??? All PV module waste can be managed as universal waste without requiring a hazardous waste determination.

*Universal waste management standards do not apply to PV



together with universal waste electronic devices (UWEDs)? A: No. Solar panels are not considered universal waste and may not be managed as such. Generators of solar panels must presently comply with the generator standards in Chapter 12 of Title 22, California Code of Regulations, including section 66262.34.



How Were PV Modules Managed Before the New Regulations? PV modules may become a waste in several ways: After electronic wastes were added to California's universal waste program, more than two dozen e- waste treatment facilities were created, so it is likely that new facilities will be created in the near future. //dtsc.ca.gov

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State of California. Transportation requirements for universal waste PV modules are the same as those of other universal wastes (see Chapter 23 or Universal Waste Fact Sheet). Additionally, universal waste transporters that transport more than 100 kilograms (220 pounds) of PV module waste at one time must contain the waste in order to prevent potential breakage and spillage ???