

Photovoltaic Modules (Solar Panels)/Universal Waste: California Department of Toxic Substances Control Proposed Designation



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05/24/2019

The California Department of Toxic Substances Control (“DTSC”) is proposing to include photovoltaic modules (“PV”) on the list of hazardous wastes eligible to be managed as universal waste.

PV modules are commonly denominated solar panels.

DTSC states that the purpose of the proposal is to:

... promote a streamlined approach to the end-of-life management of solar panels and add safeguards that will provide enhanced protection for human health, safety, and the environment.

PV modules consist of photovoltaic cells which primarily encompass silicon materials and are connected by electrical contacts. Such contacts consist of various metals. DTSC states that some PV modules may exhibit the hazardous waste characteristic of toxicity because of the presence of certain metals.

PV modules are stated to have an expected service life of 30 years. DTSC notes that PV modules may become a waste at various stages, which include:

- Manufacturing
- Installation
- Replacement

The increase in demand for solar energy (and therefore the associated PV modules, etc.) is deemed to have resulted in an increased number of installations and operation of such equipment. As a result, DTSC believes that the proposal will “ensure PV modules have a pathway for streamlined management once they reach the end of their useful life.”

The agency asserts the proposal will result in a combination of better ensuring PV modules are taken to an appropriate disposal facility which will be facilitated by reducing unnecessary regulation and notes:

While full hazardous waste regulations reduce the risks associated with PV modules, businesses that generate PV modules do not always manage these wastes in compliance with hazardous waste management regulations. For those generators that know or suspect that PV modules are hazardous waste, complying with lawful management requirements may be complex and costly. These burdens serve as a disincentive for generators to make a hazardous waste determination and manage this waste stream. Additionally, the low risks posed by PV modules are not commensurate with the level of regulatory oversight and protection provided by full hazardous waste regulation.

A copy of the proposal can be downloaded [here](#).