



# HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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Testimony of  
**SCOTT J. GLENN, Chief Energy Officer**

before the  
**SENATE COMMITTEE ON WAYS AND MEANS**

Wednesday, April 7, 2021  
9:45 AM  
State Capitol, Conference Room 211 & Videoconference

Comments in consideration of  
**HB 1333, HD1**  
**RELATING TO ENERGY.**  
(Written Testimony Only)

Chair Dela Cruz, Vice Chair Keith-Agaran, and Members of the Committee, the Hawaii State Energy Office (HSEO) provides comments on HB 1333, HD1, which requires HSEO, in consultation with the Department of Health (DOH), to conduct a comprehensive study to determine best practices for disposal and recycling of discarded clean energy products in the State, requires an interim report to the Legislature before the 2022 session, and requires a final report to the Legislature before the 2023 session. HSEO appreciates the over-all concept of HB 1333, HD1, as it includes initiatives supportive of HSEO's goals and objectives, but HSEO acknowledges the cost implications generated by this proposal.

HSEO recognizes the need for this type of analysis as earlier generation technologies are now passing their useful commercial lifetime and need to be disposed, including photovoltaic (PV) modules (commonly known as "PV panels"), solar thermal collectors (solar water heater panels), and batteries, including those used in stationary storage systems as well as from electric vehicles. In addition, many new technologies are now being deployed that must be accounted for in the future when they are no longer useful. HSEO appreciates that HB 1333, HD1, includes other clean energy materials expected to be discarded in the State in significant quantities.

HSEO also appreciates the current work underway by DOH to update the Hawai'i Administrative Rules (HAR) regarding businesses that generate or handle hazardous wastes, including new regulations regarding solar panels.<sup>1</sup> A study such as that proposed by HB1333, HD1, may inform, or be informed by, any discussion or proposed additions or changes to the HAR, including definitions.

HSEO believes it is important to collaborate with other stakeholders who have direct experience with this issue and could be involved in any implemented actions, including the solar industry and experts from the shipping, recycling, and waste management industries, and other pertinent stakeholders. There are many lessons to be learned from the European Union's progress in this area and the emerging industry in the United States.

The National Renewable Energy Laboratory has a project envisioning a circular economy for energy materials,<sup>2</sup> including several technical reports.<sup>3</sup> Additionally, a few states have recently considered or enacted legislation regarding solar panel disposal and recycling including California,<sup>4</sup> North Carolina,<sup>5</sup> and Washington.<sup>6</sup>

HSEO's comments are guided by its mission to promote energy efficiency, renewable energy, and clean transportation to help achieve a resilient, clean energy, decarbonized economy.

Thank you for the opportunity to testify.

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<sup>1</sup> <https://health.hawaii.gov/shwb/hwrules/>

<sup>2</sup> <https://www.nrel.gov/news/video/vision-circular-economy-for-energy-materials-text.html>

<sup>3</sup> <https://www.nrel.gov/news/program/2021/what-it-takes-to-realize-a-circular-economy-for-solar-photovoltaic-system-materials.html>

<sup>4</sup> <https://dtsc.ca.gov/solarpanels/>

<sup>5</sup> [https://files.nc.gov/ncdeq/Waste Management/DWM/HW/Guidance Document table documents/Solar-Panel-Guidance.pdf](https://files.nc.gov/ncdeq/Waste%20Management/DWM/HW/Guidance%20Document%20table%20documents/Solar-Panel-Guidance.pdf)

<sup>6</sup> <https://ecology.wa.gov/Waste-Toxics/Reducing-recycling-waste/Solar-panels>