



GOV. MSG. NO. 1194

EXECUTIVE CHAMBERS  
HONOLULU

DAVID Y. IGE  
GOVERNOR

June 25, 2021

The Honorable Ronald D. Kouchi,  
President  
and Members of the Senate  
Thirty First State Legislature  
State Capitol, Room 409  
Honolulu, Hawai'i 96813

The Honorable Scott K. Saiki,  
Speaker and Members of the  
House of Representatives  
Thirty First State Legislature  
State Capitol, Room 431  
Honolulu, Hawai'i 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

This is to inform you that on June 25, 2021, the following bill was signed into law:

HB1333 HD1 SD1 CD1

RELATING TO ENERGY  
**ACT 092 (21)**

Sincerely,

DAVID Y. IGE  
Governor, State of Hawai'i

ORIGINAL

Approved by the Governor

on JUN 25 2021

HOUSE OF REPRESENTATIVES  
THIRTY-FIRST LEGISLATURE, 2021  
STATE OF HAWAII

ACT 092

H.B. NO.

1333  
H.D. 1  
S.D. 1  
C.D. 1

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# A BILL FOR AN ACT

RELATING TO ENERGY.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

1           SECTION 1. The legislature finds that in the 1990s, the  
2 federal government began to get involved in the research and  
3 development of solar energy and developed grants and tax  
4 incentives for homeowners who installed and used solar systems.  
5 Since then, manufacturing costs for solar panels have decreased  
6 and efficiency has dramatically increased, and the past  
7 ten years have seen an increasing number of solar panels being  
8 installed in the United States each year. Some appliances, such  
9 as solar water heaters, use solar power to reduce reliance upon  
10 traditional heating sources, including oil, electricity, and  
11 natural gas, to meet state energy goals. In 2008, the  
12 legislature passed Act 204, Session Laws of Hawaii 2008, known  
13 as the "solar water heater mandate", for the benefit of  
14 consumers, which required that new homes utilize solar water  
15 heating except in narrowly limited circumstances, thereby  
16 potentially increasing the use of solar panels in the State.



1           The legislature further finds that solar panels have a life  
2 expectancy of up to thirty years, and panels installed in the  
3 1990s will start requiring disposal in the very near future.  
4 After about thirty years, many crystalline silicon solar panels  
5 will begin having significant dips in energy production and will  
6 need to be disposed of, recycled, or replaced. Heavy metals  
7 such as cadmium and lead are found in solar cells, which can  
8 harm the natural environment if not recycled or disposed of  
9 properly. Solar panels that are disposed of carelessly may end  
10 up in large landfills. The legislature also finds that over  
11 time some of the rare elements in photovoltaic cells, like  
12 gallium and indium, are being depleted from the environment and  
13 recovery of these elements would conserve the limited amount  
14 available on earth for continued use in solar panels and other  
15 products. A 2016 study by the International Renewable Energy  
16 Agency estimated that \$15,000,000,000 could be recovered by 2050  
17 from recycling solar modules.

18           The purpose of this Act is to require the Hawaii natural  
19 energy institute, in consultation with the department of health,  
20 to conduct a comprehensive study to determine best practices for



1 disposal, recycling, or secondary use of clean energy products  
2 in the State.

3 SECTION 2. (a) The Hawaii natural energy institute, in  
4 consultation with the department of health, shall conduct a  
5 comprehensive study to determine best practices for disposal,  
6 recycling, or secondary use of clean energy products in the  
7 State.

8 (b) The study shall address:

- 9 (1) The amount of aging photovoltaic and solar water  
10 heater panels in the State that will need to be  
11 disposed of or recycled;
- 12 (2) Other types of clean energy materials expected to be  
13 discarded in the State in significant quantities,  
14 including glass, frames, wiring, inverters, and  
15 batteries;
- 16 (3) The type and chemical composition of those clean  
17 energy materials;
- 18 (4) Best practices for collection, disposal, recycling, or  
19 reuse of those clean energy materials;
- 20 (5) Whether a fee should be charged for disposal or  
21 recycling of those clean energy materials; and



1 (6) Any other issues that the Hawaii natural energy  
2 institute and department of health consider  
3 appropriate for management, recycling, and disposal of  
4 those clean energy materials.

5 (c) The Hawaii natural energy institute shall submit an  
6 interim report on the progress of the study, including findings,  
7 recommendations, and any proposed legislation, to the  
8 legislature no later than twenty days prior to the convening of  
9 the regular session of 2022. The Hawaii natural energy  
10 institute shall submit a final report of the study, including  
11 findings, recommendations, and any proposed legislation, to the  
12 legislature no later than twenty days prior to the convening of  
13 the regular session of 2023.

14 SECTION 3. This Act shall take effect on July 1, 2021.

APPROVED this 25 day of JUN, 2021



GOVERNOR OF THE STATE OF HAWAII



HB No. 1333, HD 1, SD 1, CD 1

THE HOUSE OF REPRESENTATIVES OF THE STATE OF HAWAII

Date: April 27, 2021  
Honolulu, Hawaii

We hereby certify that the above-referenced Bill on this day passed Final Reading in the House of Representatives of the Thirty-First Legislature of the State of Hawaii, Regular Session of 2021.



Scott K. Saiki  
Speaker  
House of Representatives



Brian L. Takeshita  
Chief Clerk  
House of Representatives

**THE SENATE OF THE STATE OF HAWAI‘I**

Date: April 27, 2021  
Honolulu, Hawaii 96813

We hereby certify that the foregoing Bill this day passed Final Reading in the Senate of the Thirty-First Legislature of the State of Hawai‘i, Regular Session of 2021.

  
President of the Senate

  
Clerk of the Senate