
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.



H.B. NO. 1333
H.D. 1
S.D. 1
C.D. 1

Report Title:

Hawaii Natural Energy Institute; DOH; Clean Energy Products;
Disposal and Recycling; Comprehensive Study

Description:

Requires the Hawaii natural energy institute, in consultation with the department of health, to conduct a comprehensive study to determine best practices for disposal, recycling, or secondary use of clean energy products in the State. (CD1)

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