
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 continued
6 decreasing and efficiency has dramatically increased, and the
7 past ten years have seen an increasing number of solar panels
8 being sold and installed in the United States each year.
9 Appliances, such as water heaters, use solar power to reduce
10 reliance upon traditional heating sources, such as oil,
11 electricity, and natural gas in order to meet state energy
12 goals. In 2008, the legislature passed Act 204, Session Laws of
13 Hawaii 2008, known as the "solar water heater mandate," for the
14 benefit of consumers, and required that new homes utilize solar
15 water 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 Agency
16 estimated that \$15,000,000,000 could be recovered by 2050 from
17 recycling solar modules.

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



1 disposal and recycling of solar panels, and appliances dependent
2 on solar energy, such as solar water heaters.

3 SECTION 2. (a) The state energy office, in consultation
4 with the department of health, shall conduct a comprehensive
5 study to determine the best practices for disposal and recycling
6 of solar panels and appliances dependent on solar energy, such
7 as solar water heaters.

8 (b) The study shall address:

- 9 (1) The number of aging solar panels in the State that
10 will need to be disposed or recycled;
- 11 (2) The type and chemical composition of those solar
12 panels;
- 13 (3) Best practices for collection, disposal, and recycling
14 of photovoltaic waste for adoption across local,
15 national, and international communities;
- 16 (4) Whether a fee should be charged for disposal or
17 recycling of solar panels; and
- 18 (5) Any other issues that the state office of energy and
19 the department of health consider appropriate for
20 photovoltaic waste disposal and recycling.



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1 SECTION 3. The state energy office shall submit an interim
 2 report on the progress of the study, including findings,
 3 recommendations, and any proposed legislation, to the
 4 legislature no later than twenty days prior to the convening of
 5 the regular session of 2021. The state energy office shall
 6 submit a final report 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.

10 SECTION 4. There is appropriated out of the general
 11 revenues of the State of Hawaii the sum of \$ or so
 12 much thereof as may be necessary for fiscal year 2020-2021 to
 13 conduct the study pursuant to this Act.

14 The sum appropriated shall be expended by the department of
 15 business, economic development, and tourism for the purposes of
 16 this Act.

17 SECTION 5. This Act shall take effect on July 1, 2020.

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INTRODUCED BY: *Diakiragawa*

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Report Title:

Solar Energy; Solar Panels; Photovoltaic Waste Disposal; State Energy Office; Appropriation

Description:

Requires the Hawaii State Energy Office, in consultation with DOH, to conduct a comprehensive study of the disposal and recycling of solar panels. Requires an interim report and a final report to the legislature. Appropriates funds for study.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.

