
A BILL FOR AN ACT

RELATING TO LIGHTING.

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

1 SECTION 1. The legislature finds that increased energy
2 efficiency and use of renewable energy resources increases
3 Hawaii's energy self-sufficiency and achieves broad societal
4 benefits, including increased energy security, resistance to
5 increases in oil prices, environmental sustainability, economic
6 development, and job creation.

7 Over the years, the legislature has worked steadily to
8 encourage the deployment of renewable energy resources and
9 energy-efficiency initiatives. This includes:

- 10 (1) Establishing a net energy metering program,
11 interconnection standards, and renewable energy tax
12 credits;
- 13 (2) Establishing greenhouse gas and energy consumption
14 reduction goals for state facilities and requiring the
15 use of energy-efficient products in state facilities;
16 and
- 17 (3) Providing incentives for the deployment of solar
18 energy devices.



1 To shape Hawaii's energy future and achieve the goal of
2 energy self-sufficiency for the State of Hawaii, efforts must
3 continue on all fronts, especially by striving to integrate new
4 and evolving technologies in lighting.

5 The goal of the United States Department of Energy's
6 Building Technologies Lighting Research and Development Program
7 is to develop and demonstrate energy-efficient, high-quality,
8 long-lasting lighting technologies by 2025 that have the
9 technical capability of illuminating buildings using 50 per cent
10 less electricity compared to technologies in 2005.

11 Further, the legislature finds that many existing lighting
12 choices contain toxic materials. Most fluorescent lighting
13 products contain mercury. Most incandescent lighting products
14 contain lead. Although hazardous materials in lighting products
15 can be managed through recycling, at present these programs are
16 non-existent within the state. However, fluorescent lighting
17 products delivering the same level of light at the same level of
18 efficiency can have varying levels of mercury. Therefore, a
19 purchasing policy favoring low-mercury fluorescent lamps should
20 be promoted.

21 The purpose of this Act is to:



- 1 (1) Phase out and ban the use of certain energy-
2 inefficient lighting, especially those products with
3 lead and high-mercury content;
- 4 (2) Establish a state lighting efficiency standard for
5 general purpose lights; and
- 6 (3) Direct the department of health to develop a statewide
7 recycling program for recycling all fluorescent lamps.

8 PART I

9 SECTION 2. Chapter 342J, Hawaii Revised Statutes, is
10 amended by adding a new part to be appropriately designated and
11 to read as follows:

12 "PART . HAZARDOUS SUBSTANCE REDUCTION

13 §342J- Lighting; hazardous substance standards. (a)
14 Beginning January 1, 2010, a person shall not sell or offer for
15 sale in this state, general purpose lights containing levels of
16 hazardous substances that would be prohibited from being sold or
17 offered for sale in the European Union under the RoHS Directive;
18 provided that this section shall not apply to high output and
19 very high output linear fluorescent lamps greater than
20 thirty-two millimeters in diameter, and preheat linear
21 fluorescent lamps. Beginning January 1, 2014, the department
22 shall determine, in consultation with companies that manufacture



1 the lamps, whether the lamps excluded under the previous
2 sentence shall be subject to this section.

3 (b) A manufacturer shall prepare and at the request of the
4 department, submit within twenty-eight days of the date of the
5 request, technical documentation or other information showing
6 that the manufacturer's general purpose lights sold or offered
7 for sale in this state comply with the requirements of the RoHS
8 Directive.

9 (c) A person, firm, company, association, corporation, or
10 other organization that violates this section or any rule
11 adopted pursuant to this section shall be subject to a fine of
12 up to \$1,000 for each violation, up to a maximum of \$20,000.

13 **§342J- Lighting efficiency standards.** (a) Between
14 January 1, 2012, and December 31, 2013, inclusive, no general
15 purpose light may be sold in this state unless it produces at
16 least thirty lumens per watt of electricity consumed.

17 (b) On and after January 1, 2014, no general purpose light
18 may be sold in this state unless it produces at least fifty
19 lumens per watt of electricity consumed.

20 (c) Within ninety days before January 1, 2012, the
21 department shall notify in writing all retail sellers and



1 distributors of general purpose lights doing business in this
2 state, of the provisions of this section.

3 (d) A person, firm, company, association, corporation, or
4 other organization that violates this section or any rule
5 adopted pursuant to this section shall be subject to a fine of
6 not less than \$ nor more than \$. This fine shall not be
7 levied against an employee who does not have an ownership or
8 management interest in the enterprise.

9 (e) In adopting rules to implement this section, the
10 department shall consult with the department of business,
11 economic development and tourism. The rules shall attempt to
12 minimize the overall cost to consumers of general purpose
13 lighting, considering the needs of consumers relating to
14 lighting, technological feasibility, and anticipated product
15 availability and performance.

16 (f) The department of business, economic development, and
17 tourism may recommend programs to encourage the sale in this
18 state of general purpose lights that meet or exceed the
19 standards set forth in subsections (a) and (b)."

20 SECTION 3. Section 342J-2, Hawaii Revised Statutes, is
21 amended by adding two new definitions to be appropriately
22 inserted and to read as follows:



1 "General purpose lights" means lamps, bulbs, tubes, or
2 other electric devices that provide functional illumination for
3 indoor residential, indoor commercial, and outdoor use. General
4 purpose lights do not include:

- 5 (1) Specialty lighting, including: appliance, black
6 light, bug, colored, infrared light, reflector, rough
7 service, shatter-resistant, sign service, silver bowl,
8 showcase, three-way, traffic signal, and vibration
9 service or vibration-resistant;
- 10 (2) Lights needed to provide special-needs lighting for
11 individuals with exceptional needs; and
- 12 (3) Lights for emergency purposes or health or safety
13 needs.

14 "RoHS Directive" means the directive on the restriction of
15 the use of certain hazardous substances in electrical and
16 electronic equipment which was adopted by the European Union and
17 came into effect on July 1, 2006, and which bans the placing on
18 the European Union market of new electrical and electronic
19 equipment containing more than agreed-upon levels of lead,
20 cadmium, mercury, hexavalent chromium, polybrominated biphenyl
21 and polybrominated diphenyl ether flame retardants."



1 PART II

2 SECTION 4. Section 196-9, Hawaii Revised Statutes, is
3 amended by amending subsection (b) to read as follows:

4 "(b) With regard to buildings and facilities, each agency
5 shall:

6 (1) Design and construct buildings meeting the Leadership
7 in Energy and Environmental Design silver or two green
8 globes rating system or another comparable
9 state-approved, nationally recognized, and
10 consensus-based guideline, standard, or system, except
11 when the guideline, standard, or system interferes or
12 conflicts with the use of the building or facility as
13 an emergency shelter;

14 (2) Incorporate energy-efficiency measures to prevent heat
15 gain in residential facilities up to three stories in
16 height to provide R-19 or equivalent on roofs, R-11 or
17 equivalent in walls, and high-performance windows to
18 minimize heat gain and, if air conditioned, minimize
19 cool air loss. R-value is the constant time rate
20 resistance to heat flow through a unit area of a body
21 induced by a unit temperature difference between the
22 surfaces. R-values measure the thermal resistance of



1 building envelope components such as roof and walls.
2 The higher the R-value, the greater the resistance to
3 heat flow. Where possible, buildings shall be
4 oriented to maximize natural ventilation and day-
5 lighting without heat gain and to optimize solar for
6 water heating. This provision shall apply to new
7 residential facilities built using any portion of
8 state funds or located on state lands;

- 9 (3) Install solar water heating systems where it is cost-
10 effective, based on a comparative analysis to
11 determine the cost-benefit of using a conventional
12 water heating system or a solar water heating system.
13 The analysis shall be based on the projected life
14 cycle costs to purchase and operate the water heating
15 system. If the life cycle analysis is positive, the
16 facility shall incorporate solar water heating. If
17 water heating entirely by solar is not cost-effective,
18 the analysis shall evaluate the life cycle, cost-
19 benefit of solar water heating for preheating water.
20 If a multi-story building is centrally air
21 conditioned, heat recovery shall be employed as the
22 primary water heating system. Single family



1 residential clients of the department of Hawaiian home
2 lands and any agency or program that can take
3 advantage of utility rebates shall be exempted from
4 the requirements of this paragraph so they may
5 continue to qualify for utility rebates for solar
6 water heating;

7 (4) Implement water and energy efficiency practices in
8 operations to reduce waste and increase
9 conservation~~[7]~~, including the use of ENERGY STAR
10 labeled lamps to provide the most efficient lighting;

11 (5) Incorporate principles of waste minimization and
12 pollution prevention, such as reducing, revising, and
13 recycling as a standard operating practice in
14 programs, including programs for waste management in
15 construction and demolition projects and office paper
16 and packaging recycling programs;

17 (6) Use life cycle cost-benefit analysis to purchase
18 energy efficient equipment such as ENERGY STAR
19 products and use utility rebates where available to
20 reduce purchase and installation costs; and



1 (7) Procure environmentally preferable products, including
2 recycled and recycled-content, bio-based, and other
3 resource-efficient products and materials."

4 PART III

5 SECTION 5. The director of health shall develop a
6 statewide program for recycling all fluorescent lamps, including
7 mercury-containing compact fluorescent bulbs before January 1,
8 2011, and report to the legislature twenty days before the
9 commencement of the 2011 regular session on the funds and
10 legislation necessary to implement the recycling program.

11 PART IV

12 SECTION 6. If any provision of this Act, or the
13 application thereof to any person or circumstance is held
14 invalid, the invalidity does not affect other provisions or
15 applications of the Act, which can be given effect without the
16 invalid provision or application, and to this end the provisions
17 of this Act are severable.

18 SECTION 7. Statutory material to be repealed is bracketed
19 and stricken. New statutory material is underscored.

20 SECTION 8. This Act shall take effect upon its approval.



Report Title:

Lighting; Energy Efficiency; Hazardous Substance Reduction

Description:

Phases-out and bans the use of certain lighting products with lead and high mercury content; establishes a statewide lighting efficiency standard for general purpose lights; directs the department of health to develop a statewide recycling program for recycling all fluorescent lamps. (HB2504 HD2)

