

JAN 22 2008

---

---

# 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



1 energy devices.

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

6 The goal of the United States Department of Energy's  
7 building technologies lighting research and development program  
8 is to develop and demonstrate energy-efficient, high-quality,  
9 long-lasting lighting technologies by 2025 that have the  
10 technical capability of illuminating buildings using fifty per  
11 cent less electricity compared to technologies in 2005.

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

22 The purpose of this Act is to:



- 1           (1) Phase out and ban the use of energy-inefficient
- 2           lighting, especially those products with lead and high
- 3           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 mercury-containing
- 8           compact florescent bulbs.

9                                   PART I

10          SECTION 2. Chapter 342J, Hawaii Revised Statutes, is

11          amended by adding a new part to be appropriately designated and

12          to read as follows:

13                         "PART . HAZARDOUS SUBSTANCE REDUCTION

14             §342J-A Lighting; hazardous substance standards. (a)

15          Beginning January 1, 2010, a person shall not sell or offer for

16          sale in this state, general purpose lights containing levels of

17          hazardous substances that would be prohibited from being sold or

18          offered for sale in the European Union under the RoHS Directive.

19             (b) A manufacturer shall prepare and at the request of the

20          department, submit within twenty-eight days of the date of the

21          request, technical documentation or other information showing

22          that the manufacturer's general purpose lights sold or offered



1 for sale in this state comply with the requirements of the RoHS  
2 Directive.

3 (c) 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 up to \$1,000 for each violation, up to a maximum of \$20,000.

7 **§342J-B Lighting efficiency standards.** (a) Between  
8 January 1, 2012, and December 31, 2015, inclusive, no general  
9 purpose light may be sold in this state unless it produces at  
10 least thirty lumens per watt of electricity consumed.

11 (b) On and after January 1, 2016, no general purpose light  
12 may be sold in this state unless it produces at least fifty  
13 lumens per watt of electricity consumed.

14 (c) Within ninety days before January 1, 2012, the  
15 department shall notify in writing, all retail sellers and  
16 distributors of general purpose lights doing business in this  
17 state, of the provisions of this section.

18 (d) Any violation of subsection (b) or (c) shall be a  
19 misdemeanor; provided a fine of not less than \$50 nor more than  
20 \$500 shall be imposed, and all fines shall be imposed  
21 consecutively. Each general purpose light sold in violation of  
22 this section shall constitute a separate offense.



1           (e) In adopting rules to implement this section the  
2 department shall consult with the department of business,  
3 economic development and tourism. The regulations shall attempt  
4 to minimize the overall cost to consumers of general purpose  
5 lighting, considering the needs of consumers relating to  
6 lighting, technological feasibility, and anticipated product  
7 availability and performance.

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

12           SECTION 3. Section 342J-2, Hawaii Revised Statutes, is  
13 amended by adding the definitions of "general purpose lights"  
14 and "RoHS Directive" to be appropriately inserted and to read as  
15 follows:

16           "General purpose lights" means lamps, bulbs, tubes, or  
17 other electric devices that provide functional illumination for  
18 indoor residential, indoor commercial, and outdoor use. General  
19 purpose lights do not include:

20           (1) Specialty lighting, including: appliance, black  
21 light, bug, colored, infrared light, reflector, rough  
22 service, shatter resistant, sign service, silver bowl,



1 showcase, three-way, traffic signal, and vibration

2 service or vibration resistant;

3 (2) Lights needed to provide special-needs lighting for

4 individuals with exceptional needs; and

5 (3) Lights for emergency purposes or health or safety

6 needs.

7 "RoHS Directive" means the directive on the restriction of  
8 the use of certain hazardous substances in electrical and  
9 electronic equipment which was adopted by the European Union and  
10 came into effect on July 1, 2006, and which bans the placing on  
11 the European Union market of new electrical and electronic  
12 equipment containing more than agreed levels of lead, cadmium,  
13 mercury, hexavalent chromium, polybrominated biphenyl and  
14 polybrominated diphenyl ether flame retardants."

15 PART II

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

18 "(b) With regard to buildings and facilities, each agency  
19 shall:

20 (1) Design and construct buildings meeting the Leadership  
21 in Energy and Environmental Design silver or two green  
22 globes rating system or another comparable



1 state-approved, nationally recognized, and  
2 consensus-based guideline, standard, or system, except  
3 when the guideline, standard, or system interferes or  
4 conflicts with the use of the building or facility as  
5 an emergency shelter;

- 6 (2) Incorporate energy-efficiency measures to prevent heat  
7 gain in residential facilities up to three stories in  
8 height to provide R-19 or equivalent on roofs, R-11 or  
9 equivalent in walls, and high-performance windows to  
10 minimize heat gain and, if air conditioned, minimize  
11 cool air loss. R-value is the constant time rate  
12 resistance to heat flow through a unit area of a body  
13 induced by a unit temperature difference between the  
14 surfaces. R-values measure the thermal resistance of  
15 building envelope components such as roof and walls.  
16 The higher the R-value, the greater the resistance to  
17 heat flow. Where possible, buildings shall be  
18 oriented to maximize natural ventilation and day-  
19 lighting without heat gain and to optimize solar for  
20 water heating. This provision shall apply to new  
21 residential facilities built using any portion of  
22 state funds or located on state lands;



- 1           (3)   Install solar water heating systems where it is cost-  
2                   effective, based on a comparative analysis to  
3                   determine the cost-benefit of using a conventional  
4                   water heating system or a solar water heating system.  
5                   The analysis shall be based on the projected life  
6                   cycle costs to purchase and operate the water heating  
7                   system.  If the life cycle analysis is positive, the  
8                   facility shall incorporate solar water heating.  If  
9                   water heating entirely by solar is not cost-effective,  
10                  the analysis shall evaluate the life cycle, cost-  
11                  benefit of solar water heating for preheating water.  
12                  If a multi-story building is centrally air  
13                  conditioned, heat recovery shall be employed as the  
14                  primary water heating system.  Single family  
15                  residential clients of the department of Hawaiian home  
16                  lands and any agency or program that can take  
17                  advantage of utility rebates shall be exempted from  
18                  the requirements of this paragraph so they may  
19                  continue to qualify for utility rebates for solar  
20                  water heating;
- 21           (4)   Implement water and energy efficiency practices in  
22                   operations to reduce waste and increase





- 1            conservation[+], including the use of ENERGY STAR  
2            labeled lamps to provide the most efficient lighting;
- 3            (5) Incorporate principles of waste minimization and  
4            pollution prevention, such as reducing, revising, and  
5            recycling as a standard operating practice in  
6            programs, including programs for waste management in  
7            construction and demolition projects and office paper  
8            and packaging recycling programs;
- 9            (6) Use life cycle cost-benefit analysis to purchase  
10           energy efficient equipment such as ENERGY STAR  
11           products and use utility rebates where available to  
12           reduce purchase and installation costs; and
- 13           (7) Procure environmentally preferable products, including  
14           recycled and recycled-content, bio-based, and other  
15           resource-efficient products and materials."

## PART III

17           SECTION 5. The director of health shall develop a  
18           statewide program for recycling mercury-containing compact  
19           florescent bulbs before January 1, 2011, and report to the  
20           legislature twenty days before the commencement of the 2011  
21           regular session on the funds and legislation necessary to  
22           implement the recycling program.



1

PART IV

2

SECTION 6. If any provision of this Act, or the

3

application thereof to any person or circumstance is held

4

invalid, the invalidity does not affect other provisions or

5

applications of the Act, which can be given effect without the

6

invalid provision or application, and to this end the provisions

7

of this Act are severable.

8

SECTION 7. In codifying the new sections added by section

9

2 of this Act, the revisor of statutes shall substitute

10

appropriate section numbers for the letters used in designating

11

the new sections in this Act.

12

SECTION 8. Statutory material to be repealed is bracketed

13

and stricken. New statutory material is underscored.

14

SECTION 9. This Act shall take effect upon its approval.

15

*J. Kelly Gil*

INTRODUCED BY:

*Roy Mann*

*Clemente Siskind*

*Will Eyo*

*S.S.L.*

*John D. ...*

*Norman Salom...*

*James Mercedes K...*

*Erzanne Chien Adland*

*Ray L. Ham...*

*Carol Zuker...*

*Jill*

*Amelie R. Brown*



S.B. NO. 2842

Russell Kohl

~~\_\_\_\_\_~~

Mike Gabbal

Arvid Y. Ige

Randy H. Baker

**Report Title:**

Lighting; Energy Efficiency; Hazardous Substance Reduction

**Description:**

Phases-out and bans the use of 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 mercury-containing compact florescent bulbs.

