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# 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, including:

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



1           (3) Providing incentives for the deployment of solar  
2                   energy devices.

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

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

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



1 The purpose of this Act is to:

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

11 PART I

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

15 "PART . HAZARDOUS SUBSTANCE REDUCTION

16 §342J- Lighting; hazardous substance standards. (a)

17 Beginning January 1, 2010, no person shall sell or offer for  
18 sale in this state, general purpose lights containing levels of  
19 hazardous substances that would be prohibited from being sold or  
20 offered for sale in the European Union under the RoHS Directive;  
21 provided that this section shall not apply to high output and  
22 very high output linear fluorescent lamps greater than



1 thirty-two millimeters in diameter, and preheat linear  
2 fluorescent lamps; provided further that:

3 (1) Beginning January 1, 2012, no person shall sell or  
4 offer for sale in this state, high intensity discharge  
5 lamps and compact fluorescent lamps greater than nine  
6 inches in length; and

7 (2) Beginning January 1, 2014, no person shall sell or  
8 offer for sale in this state, general service  
9 incandescent lamps and enhanced spectrum lamps.

10 (b) Beginning January 1, 2014, the department shall  
11 determine, in consultation with companies that manufacture the  
12 lamps, whether the lamps excluded under subsection (a) shall be  
13 subject to this section, taking into consideration changes in  
14 lamp design or manufacturing technology that will allow for the  
15 removal or reduction of mercury.

16 (c) A manufacturer shall prepare and at the request of the  
17 department, submit within twenty-eight days of the date of the  
18 request, technical documentation or other information showing  
19 that the manufacturer's general purpose lights sold or offered  
20 for sale in this state comply with the requirements of the RoHS  
21 Directive.



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

5 **§342J- Lighting efficiency standards.** (a) Between  
6 January 1, 2012, and December 31, 2013, inclusive, no general  
7 purpose light may be sold in this state unless it produces at  
8 least thirty lumens per watt of electricity consumed.

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

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

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



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 rules shall attempt to  
4 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 two new definitions to be appropriately  
14 inserted and to read as follows:

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

19 (1) Specialty lighting, including: appliance, black  
20 light, bug, colored, infrared light, reflector, rough  
21 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 restriction of the use of  
8 certain hazardous substances in electrical and electronic  
9 equipment, which was adopted by the European Union and came into  
10 effect on July 1, 2006, and which bans the placing on the  
11 European Union market of new electrical and electronic equipment  
12 containing more than agreed-upon 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."

16 PART III

17 SECTION 5. The director of health shall develop a  
18 statewide program for recycling all fluorescent lamps, including  
19 mercury-containing compact fluorescent bulbs before January 1,  
20 2011, and report to the legislature twenty days before the  
21 convening of the regular session of 2011 on the funds and  
22 legislation necessary to 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. Statutory material to be repealed is bracketed  
9 and stricken. New statutory material is underscored.

10 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. (SB2842 HD1)

