HB 2504 HD2

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME LEINAALA FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
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In reply, please refer to:
File:

COMMITTEE ON ENERGY AND ENVIRONMENT

H.B. 2504, HD2, RELATING TO LIGHTING

Testimony of Chiyome Leinaala Fukino, M.D.
Director of Health

March 18, 2008
3:15 pm

Department's Position: **The Department respectfully opposes the measure.**

Fiscal Implications: The bill directs the Department to develop a statewide recycling program for fluorescent bulbs with no method of funding.

Purpose and Justification: HB 2504, HD2 proposes to phase out and ban the use of lighting products with lead and mercury; establishes a statewide lighting efficiency standard; and directs the Department of Health to develop a statewide recycling program for mercury containing compact fluorescent bulbs.

The Department supports energy-efficiency initiatives and the use of renewable energy sources, but this bill presents problems.

HRS §342J, Management of Hazardous Waste, is not the appropriate chapter to deal with lighting efficiency standards and general consumer product requirements. Devices that contain a hazardous substance are not hazardous waste until they can no longer be used for its intended purpose. As an example, paint thinner is not hazardous waste until it is used and discarded. A fluorescent bulb is not a hazardous waste until it is destined for disposal or recycling. For this reason, HRS §342J is not the

appropriate chapter to deal with manufacturer's lighting standards, nor is the Department the appropriate agency to develop lighting efficiency standards.

Part III of HB 2504, HD2 directs the Department to develop a statewide program for the recycling of mercury-containing compact fluorescent bulbs before January 1, 2011. Recycling of waste compact fluorescent bulbs is currently an option under the hazardous waste regulations. The department can provide and incorporate more education and promotion of recycling fluorescent bulbs for businesses that generate hazardous waste under its existing Pollution Prevention/Waste Minimization program.

We respectfully oppose the development of a new and separate recycling program. The bill calls for a report before the commencement of the 2011 regular session on funds and legislation necessary to implement the recycling program. In light of the additional personnel and continued funding required to implement the proposed program, the Department requests that any provision of resources not adversely affect the priorities in our executive supplemental budget request.

Thank you for the opportunity to testify on this measure.

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

LINDA LINGLE
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Statement of
THEODORE E. LIU
Director
Department of Business, Economic Development, and Tourism
before the
SENATE COMMITTEE
ON
ENERGY AND ENVIRONMENT
Tuesday, March 18, 2008
3:15 p.m.
State Capitol, Conference Room 414

in consideration of
HB2504 HD2
RELATING TO LIGHTING.

Chair Menor, Vice Chair Hooser, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) supports the intent of HB2504,HD2, which 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; and directs the Department of Health to develop a statewide recycling program for recycling mercury-containing compact florescent bulbs. There have been many good ideas introduced this legislative session that support the State's energy goals. We note, however, that this proposal does not provide resources and as such, is not included in the Executive's Supplemental Budget. We request that any resources provided will not displace the priorities contained in that budget.

DBEDT supports the use of energy efficient lighting. Energy Star compact fluorescent lighting products, presently in the marketplace, already meet the fifty lumens per watt standard. The committee may want to delete the word "reflector" from page 5, section 3(1). Reflector lighting is common and generic, rather than being specialty lighting.

We defer to the Department of Health on the implementation measures called for in this bill.

Thank you for the opportunity to offer these comments.

Date: 03/18/2008

Committee: Senate Energy and Environment

Department: Education

Person Testifying: Patricia Hamamoto, Superintendent of Education

Title of Bill: HB 2504,HD2,HSCR1028 RELATING TO LIGHTING.

Purpose of Bill: 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)

Department's Position: The Department of Education continues to support HB 2504, HD2, which 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; and, develops a statewide recycling program for recycling all fluorescent lamps. The Department has already taken steps to phase out the use of general purpose incandescent light bulbs in our schools and is concerned that our schools dispose of spent fluorescent lamps properly. Thank you for the opportunity to testify in support of HB 2504, HD2.

Sierra Club
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SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
March 18th, 2008, 3:15 P.M.

(Testimony is 2 pages long)

TESTIMONY IN SUPPORT OF HB 2504 HD2

Chair Menor and members of the Committee:

The Sierra Club, Hawai`i Chapter, with 5500 dues paying members statewide, strongly supports HB 2504 HD2, establishing a statewide lighting efficiency standard. We support a policy that establishes a lumens-based standard for general purpose bulbs as HB 2504 HD2 does as opposed to an outright ban on one technology or another.

Incandescent lights are basically electric space heaters that give off light as a byproduct. They are highly inefficient, wasting most of the power they consume as heat. Some countries (Australia, Canada) have passed outright bans on incandescent bulbs. While this is an option, most policy experts agree that the superior approach is to set the desired efficiency standards rather than prescribe the actual technology (i.e. incandescent, compact fluorescent, light-emitting diode, glowworms, etc.). A lighting efficiency standard would not directly prohibit or promote any one technology over another—it would simply set the efficiency bar that any light source has to achieve, regardless of technology. Lights needed for medical, emergency, or safety lighting is properly excluded from this standard (although we believe the exemption list in HB 2504 HD2 could be tightened).

A lighting standard is necessary because far too often consumers make poor energy purchasing decisions. Consumers usually focus on the first cost of an energy-consuming product instead of its lifecycle or energy use cost. This leads to highly irrational purchasing decisions, where consumers end up expending far more on basic energy use than needed. This wouldn't necessarily be a problem requiring government intervention, but the corollaries to a consumer's energy money wasting is excess greenhouse gas pollution, increased oil dependency, and utility system strain. All three of these impacts affect society as a whole.

Consider a typical lighting need for a small reading lamp. Let's say a Kaua'i resident uses a typical 40-watt incandescent bulb for the lamp. The resident could use an equivalent 10-watt compact fluorescent light (CFL) or even a new 4-watt light emitting diode (LED) bulb. The table on the following page presents the various costs and impacts for the three options if the lamp is illuminated for an average of 5 hours per day (at the current $0.35 per kilowatt-hour on Kaua'i).

Bulb	Wattage	Lumens	Eff (Lum/W)	Watt-hours	kWh	$	CO_2 (lbs)	Initial Cost	5 year cost
Incandescent	40	420	***10.5***	73000	73	**$25.55**	147	$ 0.75	$ 128.50
Compact Fluorescent	10	520	***52***	18250	18.25	**$ 6.39**	37	$ 2.50	$ 34.44
Light Emitting Diode	4	230	***57.5***	7300	7.3	**$ 2.56**	15	$ 30.00	$ 42.78

Despite the increased initial cost of both a CFL and an LED, the savings become dramatic over a few years. In this example, in fact, it would take just over one month for a CFL to recoup its initial cost in electricity savings! After that the resident would enjoy 75% savings every hour the bulb is used.

Even more striking is the greenhouse gas savings offered by a higher efficiency light (CFL or LED). One year of incandescent usage as stated above would produce roughly 150 pounds of greenhouse gas. Switching to a CFL would produce about 40 pounds, and switching to a LED would produce only 15 pounds—90% less than an incandescent.

We believe that the timeline for the lighting standards set forth in this measure are achievable and fair. Given the strong market pressure for more energy efficient lighting and appliances, the cost of high-efficiency lighting—particularly LEDs—is likely to drop significantly by the time the new Hawai'i standards take effect.

The Sierra Club also strongly supports the establishment of a CFL recycling program as described in Section 5 of HB 2504 HD2. An education campaign to ensure full participation in the recycling program should be part of this effort. An alternative approach to capture used CFLs and prevent mercury from entering Hawaii's landfills or H-POWER would be to require that light bulb retailers take back the CFLs that they sell.

While we strongly support this concept, we are concerned about placing this standard within Hawaii's existing hazardous waste chapter. We believe that the new standard should be placed in the more appropriate HRS § 196, Hawaii's energy resources chapter. We would also support a higher efficiency standard for the year 2014 and beyond, perhaps something greater than 60 lumens per watt.

Please forward HB 2504 HD2. We are available to work with the Committee on a Senate draft to address the following issues if there is interest:

1. Tightening the lighting efficiency standards exemption list;
2. Moving the lighting standard from HRS § 342J to HRS § 196; and
3. Increasing the standard for the year 2014 (perhaps 60 or 80 lumens per watt).

Thank you for the opportunity to testify.

Setting Standards for Excellence

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TESTIMONY ON HB 2504
("A Bill for An Act Relating to Lighting")

BEFORE THE HAWAII LEGISLATURE

SENATE COMMITTEE ON ENERGY & ENVIRONMENT

MARK A. KOHORST
SENIOR MANAGER - ENVIRONMENT, HEALTH & SAFETY

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

March 18, 2008

TESTIMONY

Mister Chairman and members of the ENE Committee, thank you for the opportunity to present these comments for your consideration. My name is Mark Kohorst, and I am Senior Manager for Environment, Health & Safety at the National Electrical Manufacturers Association (NEMA). Our organization is the principle trade association for US-based manufacturers of the broad spectrum of electrical products involved in the generation, transmission, distribution, and end use of electrical energy. I am submitting these comments on behalf of the NEMA lamp manufacturing section, which consists of the most globally prominent names in the lighting products industry such as GE, OSRAM Sylvania, and Philips.

As you would expect, NEMA lighting division members are integrally involved in policy discussions at all levels of government throughout the US concerning the transformation to more efficient lighting technologies. We were active participants in the process that led to passage of the Federal Energy Independence and Security Act of 2007, signed by President Bush last month. We also worked closely with California legislators on the California Lighting Efficiency and Toxics Reduction Act (AB 1109), which the state enacted during its 2007 legislative session. As explained below, both of these laws have implications for the bill pending before your committee in Hawaii.

First, Title III, Subtitle B of the Federal bill establishes efficiency standards for general service lamps and ***explicitly preempts states***[1] from establishing their own standards that differ from this national framework. This new Federal Law therefore preempts part 1 Sec 2, §342J of HB 2504 ("Lighting Efficiency Standards"), to the extent that it is inconsistent with the standards set therein. That being true, NEMA recommends that this provision be stricken from the bill,

[1] Excluding California and Nevada

or at minimum be amended to mirror the Federal standards. Otherwise, it would be unenforceable within the state and essentially meaningless.

Second, NEMA lamp manufacturers share your concern over the environmental and public health impacts of hazardous materials in lighting products. We therefore supported the intent of California AB 1109, which adopted the thresholds contained in the European Union's RoHS[2] Directive for lead and mercury content in lamps sold in California. §342J-a of Hawaii's bill appears to have the same intent.

The California law, however, contains some necessary, time-limited exemptions for lighting products that are sold in US markets but not in Europe. These exemptions are not matched in SB 2842. NEMA believes that AB 1109 establishes a sensible, technologically feasible framework for reducing lead and mercury in lamps and we would support a similar approach in Hawaii. We cannot support more restrictive thresholds, however, which would disrupt the market, deprive consumers and municipalities in Hawaii of highly valuable lighting products, and have adverse consequences for US-based factories that need the "ramp-up" time built into the California schedule to remain in production.

While I note that §342J-a of HB 2504 has been amended since its origin to allow for one of these necessary exemptions (high output and very high output linear fluorescent lamps greater than thirty-two mm in diameter), there are two others needed to make it consistent with California AB 1109. To facilitate this, I have attached an amended version of the relevant sections of HB 2504 that contains language to address the problem. By incorporating this language, you will ensure the bill reflects the current state of lighting technology and supports free

[2] DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment; the so-called "RoHS Directive"

choice for consumers in the market, while still measurably reducing hazardous substances in lighting products.

In summary, NEMA supports the intent of HB 2504 to advance the transition within Hawaii to energy-efficient lighting and to encourage reductions in hazardous materials in lighting products. Part of the bill is preempted, however, and we respectfully urge you to amend the threshold provisions to avoid serious market disruptions that will otherwise occur.

Thank you very much for your consideration. I and the NEMA lamp section members are happy to answer questions and provide whatever additional assistance you would find helpful.

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"PART . HAZARDOUS SUBSTANCE REDUCTION

§342J- Lighting; hazardous substance standards. (a) Beginning January 1, 2010, a person shall not sell or offer for sale in this state, general purpose lights containing levels of hazardous substances that would be prohibited from being sold or offered for sale in the European Union under the RoHS Directive; provided that this section shall not apply to high output and very high output linear fluorescent lamps greater than thirty-two millimeters in diameter, and preheat linear fluorescent lamps. Beginning January 1, 2014, the department shall determine, in consultation with companies that manufacture the lamps, whether the lamps excluded under the previous sentence shall be subject to this section, taking into consideration changes in lamp design or manufacturing technology that will allow for the removal or reduction of mercury. Beginning January 1, 2012, high intensity discharge lamps and compact fluorescent lamps greater than nine inches in length shall be subject to this section. Beginning January 1, 2014, general service incandescent lamps and enhanced spectrum lamps shall be subject to this section.

Written Testimony before the
Senate Committee on
Energy and Environment

H. B. 2504 H.D. 2 - Relating to Lighting

Tuesday, March 18, 2008
3:15 p.m., Conference Room 414

by Alan K.C. Hee
Manager, Energy Services Department
Hawaiian Electric Company, Inc.

Chair Menor, Vice Chair Hooser and Members of the Committee:

My name is Alan Hee and I am testifying on behalf of Hawaiian Electric Company, Inc., and its subsidiaries, Maui Electric Company (MECO) and Hawaii Electric Light Company, Inc. (HELCO).

Hawaiian Electric strongly supports the installation of energy efficient lighting products and strongly supports HB 2504 H.D. 2. The response to our demand-side management compact fluorescent lamp (CFL) rebate program by customers and distributors has been excellent, resulting in greater awareness and availability of these energy efficient lighting products.

Thank you for this opportunity to testify.