

SB 2885



February 6, 2008

The Honorable Senator Ron Menor, Chair
Energy and Environment Committee
Hawaii State Capitol
415 South Beretania Street
Honolulu, HI 96813

Re: SB 2885

Energy Industries is a Hawaii based, national energy efficiency and renewable energy project developer. Our business thrives on the integration of energy efficient technologies. Hawaii is too dependent on fossil fuels for energy and electricity. Our company helps Hawaii business reduce their energy consumption, which makes them more profitable, while reducing Hawaii's oil consumption and carbon emissions.

We are pleased that the Legislature is taking global warming and energy security very seriously and making it a priority this session. However we have major concerns on how Senate Bill 2885 is currently written. Energy Industries does not support the prohibition of a technology, any technology. Instead, a more appropriate measure is to set efficiency standards for products. If the manufacturers of a technology can make advancements to meet efficiency standards of an industry leader, they should be allowed to do so. We should encourage innovation, not prohibition.

The federal Energy Independence and Security Act of 2007 is well written and the biggest energy-saver among the standards in the bill are those for bulbs requiring them to use about 25-30% less energy than today's most common incandescent bulbs by 2012-2014, and at least 60% less energy by 2020. The initial targets can be met by advanced incandescent lamps which the major manufacturers are introducing to the market, compact fluorescent lamps (CFLs) and light-emitting diodes (LEDs). CFLs and LEDs will also meet the longer-term targets and, based on industry statements, so will at least one incandescent technology. It is estimated by the Alliance to Save Energy that the savings from the transition to more efficient lighting, in part due to the standard, will exceed the combined energy and money savings of all 21 federal appliance standards adopted since the year 2000. It is powerful legislation with realistic targets while not prohibiting any technology through the establishment of efficiency standards.

So while our business is predicated on energy efficiency, and this law would in theory create more opportunities for us, it isn't the best solution in its current form.

The recycling of compact fluorescent lamps is a major issue for Hawaii. Currently there are not any lamp recycling facilities here. We conduct many lighting retrofit projects replacing old inefficient linear fluorescents with more efficient lamps and ballasts.



However we have to send the spent lamps to the mainland for recycling, which is already an issue with the volume we are currently handling. This legislation and timeline could cause major issues with improper lamp disposal.

It our suggestion that SB2885 include language contained in states such as Virginia and Maryland that facilitate the recycling and proper disposal of spent lamps. As an example, Virginia encourages recycling and reclamation of mercury containing bulbs, Virginia allows the use of bulb crushing devices meeting certain standards of operations. Crushed bulb residues may be managed for reclamation, not disposal, as a universal waste under these regulations. The specific requirements for management and use of bulb crushing devices may be found at <http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+9VAC20-60-273> . This is extremely important as we do not want mercury in our landfills.

Again we are very pleased that the committee is being aggressive in reducing the energy consumption in the state. We hope to see additional legislation that set standards of efficiency that need to be met, such as Energy Star certification of buildings as an example.

If you have any questions or would like to discuss this further, please do not hesitate to contact me at (808) 839-7300 x106.

Sincerely,

Brian Kealoha
Senior Vice President
Certified Lighting Efficiency Professional and Energy Manager by the Association of Energy Engineers

Cc: Vice Chair Senator Gary Hooser
Senator Les Ihara
Senator Lorraine Inouye
Senator Will Espero
Senator Rosalyn Baker
Senator Robert Bunda
Senator Carol Fukunaga
Senator David Ige
Senator DonnaKim
Senator Brian Taniguchi
Senator Russell Kokubun

Testimony before the
Senate Committee on
Energy & Environmental Protection

S. B. 2885 - Relating to Incandescent Light Bulbs

Thursday, February 7, 2008
3:30 p.m., Conference Room 414

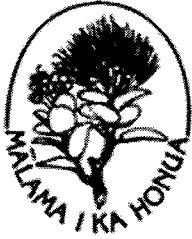
by Alan K.C. Hee
Manager, Energy Services Department
Hawaiian Electric Company, Inc.

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 supports the installation of energy efficient lighting products and supports SB 2885. 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.



Sierra Club Hawai'i Chapter

PO Box 2577, Honolulu, HI 96803
808.537.9019 hawaii.chapter@sierraclub.org

SENATE COMMITTEE ON COMMITTEE ON ENERGY AND ENVIRONMENT February 7th, 2008, 3:30 P.M.

(Testimony is 2 pages long)

TESTIMONY IN SUPPORT OF SB 2842 AND SB 2885

Chair Menor and members of the Committee:

The Sierra Club, Hawai'i Chapter, with 5500 dues paying members statewide, strongly supports SB 2842, establishing a statewide lighting efficiency standard. We also support the intent of SB 2885, but the Sierra Club would prefer policy that establishes a lumens-based standard for general purpose bulbs as SB 2842 does as opposed to an outright ban on one technology or another (SB 2885). Our following comments apply to both measures (which would essentially yield the same outcomes).

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 SB 2842 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
<i>Incandescent</i>	40	420	10.5	73000	73	\$25.55	147	\$ 0.75	\$ 128.50
<i>Compact Fluorescent</i>	10	520	52	18250	18.25	\$ 6.39	37	\$ 2.50	\$ 34.44
<i>Light Emitting Diode</i>	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 SB 2842. 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 2016 and beyond, perhaps something greater than 60 lumens per watt.

Please forward SB 2842. 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 2016 (perhaps 60 or 80 lumens per watt).

Thank you for the opportunity to testify.