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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
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 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.