
A BILL FOR AN ACT

RELATING TO LIGHTING.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. Section 201-8.5, Hawaii Revised Statutes, is
2 amended by amending the title and subsections (a) through (e) to
3 read as follows:

4 "~~§~~201-8.5~~§~~ **Night sky protection strategy~~[-]~~; energy**
5 **efficient lighting.** (a) [~~Beginning July 1, 2014, all~~] All
6 state agencies shall comply with energy efficient shielded
7 lighting fixture requirements under this section, whereby,
8 except as specified otherwise in subsections (c) through (f),
9 every new outdoor lamp light fixture emitting more than three
10 thousand lumens shall be required to be energy efficient, fully
11 shielded, and to have a correlated color temperature of four
12 thousand Kelvin or less; provided that the impact of artificial
13 light on shoreline and ocean waters shall be subject to
14 compliance with section 205A-71. A lighting fixture is
15 considered to be fully shielded when the lighting fixture is
16 shielded in [~~such~~] a manner that all light rays emitted by the
17 fixture, either directly from the lamp, or indirectly from the



1 fixture, are projected below a horizontal plane running through
2 the lowest point of the fixture. A lighting fixture is
3 considered to be energy efficient when the electricity usage of
4 the lighting fixture is less than seventy per cent of a non-
5 adaptive low-pressure sodium lighting fixture emitting the same
6 number of lumens.

7 (b) No new mercury vapor lamps shall be sold or installed
8 after July 1, 2014. No new low-pressure sodium lamps shall be
9 sold or installed after July 1, 2017.

10 (c) As applicable, retrofit work or replacement of
11 existing lighting fixtures shall:

12 (1) Limit the rated correlated color temperature of
13 emitted light (lamp, fixture, and filter if used) to
14 less than or equal to four thousand Kelvin, except in
15 the case of outdoor athletic facilities as described
16 in subsection (d);

17 (2) Not be subject to the shielding requirement for lamp-
18 by-lamp replacement work; ~~and~~

19 (3) Require one hundred per cent fully shielded lighting
20 fixtures be installed if more than fifty per cent of



1 existing nonconforming lighting fixtures need to be
2 replaced[-]; and

3 (4) Require energy efficient lighting fixtures be
4 installed.

5 (d) For outdoor athletic facilities, energy efficient
6 fully shielded lighting fixtures with correlated color
7 temperatures less than or equal to four thousand Kelvin are
8 preferred, but not required. Where fully shielded lighting
9 fixtures are not used, acceptable luminaries shall include light
10 fixtures that are:

11 (1) Equipped with internal, external, or internal and
12 external glare control louvers and are installed so as
13 to limit direct up-light to less than five per cent of
14 the total lumens exiting from the installed fixtures
15 and minimize offsite light trespass; and

16 (2) Installed and maintained with minimum aiming angles of
17 twenty-five degrees downward from the horizontal;
18 provided that the aiming angle shall be measured from
19 the axis of the luminaire maximum beam candlepower, as
20 certified by an independent testing agency.



1 (e) [~~Fully~~] Energy efficient fully shielded replacement
2 lighting fixtures for state managed roadways and highways shall
3 be installed on a case-by-case basis, subject to the
4 availability of capital improvement project funding and
5 compliance with applicable federal, state, or county design
6 standards or guidelines. Where energy efficient fully shielded
7 fixtures are not used, acceptable luminaires shall be energy
8 efficient partially shielded lights that emit no more than five
9 per cent of their light above the horizontal plane, as certified
10 by an independent testing agency."

11 SECTION 2. Beginning July 1, 2015, and annually
12 thereafter, not less than five per cent of all lighting fixtures
13 for state managed roadways and highways, as measured on July 1,
14 2015, shall be retrofitted with energy efficient fully shielded
15 lighting fixtures; provided that where energy efficient fully
16 shielded fixtures are not permitted or not practicable,
17 acceptable luminaires shall be energy efficient partially
18 shielded lights that emit no more than five per cent of their
19 light above the horizontal plane, as certified by an independent
20 testing agency.



H.B. NO. 812

1 SECTION 3. There is appropriated out of the general
 2 revenues of the State of Hawaii the sum of \$ or so
 3 much thereof as may be necessary for fiscal year 2015-2016 and
 4 the same sum or so much thereof as may be necessary for fiscal
 5 year 2016-2017 for the retrofitting of state managed roadways
 6 and highways lighting fixtures.

7 The sums appropriated shall be expended by the department
 8 of transportation for the purposes of this Act.

9 SECTION 4. Statutory material to be repealed is bracketed
 10 and stricken. New statutory material is underscored.

11 SECTION 5. This Act shall take effect on July 1, 2015.

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INTRODUCED BY:

[Handwritten signatures: Mark Spivey, Jonathan Wai, Paul Stey, Alan, Lou Bern, Karl Rhoads]

JAN 26 2015



H.B. NO. 812

Report Title:

Street Lights; Energy Efficiency

Description:

Requires that new and retrofitted street lights on state highways and roads be energy efficient. Requires that a portion of existing street lights be retrofitted with energy efficient lighting fixtures. Appropriates moneys.

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