
A BILL FOR AN ACT

RELATING TO DARK NIGHT SKIES PROTECTION.

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

1 SECTION 1. The legislature finds that dark night skies
2 hold important cultural, scientific, astronomical, natural,
3 landscape, and tourism related value. Light pollution caused by
4 the excessive, misdirected, or obtrusive use of artificial light
5 has become a worldwide problem, and is now posing significant
6 challenges for the State. The inappropriate use of lighting at
7 night includes over-illumination, with the excessive use of
8 artificial light, use of fixtures that direct light upward that
9 causes glare and sky glow, and use of fixtures that have
10 excessive amounts of blue light.

11 Light pollution is a statewide issue because light travels
12 far distances. For example, the western part of Molokai has a
13 much brighter night sky than the eastern part because of the sky
14 glow from Oahu; and the sky glow from Oahu is easily visible
15 from Haleakala and interferes with astronomical observations in
16 the western part of the sky.



1 Light at night interferes with various species of animals,
2 including threatened and endangered birds and turtles. The
3 historical use of poorly designed light fixtures has required
4 very costly retrofits to reduce the impact on these species.
5 Light at night, particularly blue light, also interferes with
6 circadian rhythms, including those in humans. The World Health
7 Organization has listed "shift work" that involves circadian
8 disruption as a probable carcinogen. Research suggests that
9 light intrusion, even if dim, is likely to have measurable
10 effects on sleep disruption and melatonin suppression. Even if
11 these effects may be relatively small from night to night,
12 continuous chronic circadian sleep and hormonal disruption may
13 have longer-term health risks.

14 Another consideration concerning night light is the cost
15 involved. Nighttime illumination of state highways, harbors,
16 airports, and other facilities is costly and consumes large
17 amounts of energy. Application of new lighting technologies may
18 produce substantial energy and cost savings.

19 The legislature finds that the preservation of the State's
20 dark night skies is essential to the State's well-being and that



1 the State needs a statewide coordinated strategy to address this
2 issue.

3 The purpose of this Act is to preserve dark night skies in
4 Hawaii by establishing a dark night skies protection advisory
5 committee.

6 SECTION 2. (a) There is established the dark night skies
7 protection advisory committee to assist the University of Hawaii
8 in developing a statewide dark night skies protection strategy.
9 The advisory committee shall be placed within the University of
10 Hawaii for administrative purposes.

11 (b) The members of the advisory committee shall consist of
12 the following thirteen persons or their designees:

- 13 (1) The president of the University of Hawaii;
- 14 (2) The comptroller;
- 15 (3) The director of business, economic development, and
16 tourism;
- 17 (4) The director of health;
- 18 (5) The director of transportation;
- 19 (6) The chairperson of the board of land and natural
20 resources;
- 21 (7) The mayor of each county;



- 1 (8) The administrator of the office of Hawaiian affairs;
- 2 (9) The director of the University of Hawaii institute for
- 3 astronomy; and
- 4 (10) A representative of the University of Hawaii at Hilo.
- 5 The president of the University of Hawaii shall designate a
- 6 chairperson from among the members of the advisory committee.
- 7 (c) The chairperson of the advisory committee may invite
- 8 interested parties to advise the advisory committee, including:
- 9 (1) A representative from the United States Fish and
- 10 Wildlife Service;
- 11 (2) A representative of the United States military, to be
- 12 appointed by the Commander of the United States
- 13 Pacific Command;
- 14 (3) A representative from the Federal Aviation
- 15 Administration;
- 16 (4) A representative from the United States Coast Guard;
- 17 (5) A representative from the Federal Highway
- 18 Administration;
- 19 (6) A representative of the Occupational Safety and Health
- 20 Administration;
- 21 (7) A member of the Hawaiian Astronomical Society; and



- 1 (8) A lighting engineer.
- 2 (d) In developing the dark night skies protection
- 3 strategy, the advisory committee shall consider and evaluate
- 4 issues that include:
- 5 (1) Reduction of light pollution in the State;
- 6 (2) Methods to conserve energy;
- 7 (3) Cultural, scientific, astronomical, natural, tourism,
- 8 and landscape related values associated with dark
- 9 night skies;
- 10 (4) Protection of threatened and endangered species that
- 11 are affected by artificial light;
- 12 (5) Impacts of light pollution on astronomical
- 13 observations from Mauna Kea, Mauna Loa, and Haleakala;
- 14 (6) Educational uses of the dark night sky by K-12 and
- 15 higher education students;
- 16 (7) Establishment of dark night sky parks, which are
- 17 designated locations that have special protections for
- 18 the night sky and are locations where residents and
- 19 visitors can view the night sky with minimal
- 20 interference from artificial light;



1 (8) Statewide monitoring of light pollution to monitor
2 light pollution levels and long-term trends;

3 (9) Public safety issues related to the reduction in
4 artificial light; and

5 (10) Any additional considerations that the advisory
6 committee believes will help to protect dark night
7 skies in the State.

8 (e) In conjunction with developing the statewide dark
9 night skies protection strategy, the advisory committee shall
10 consult with the United States Fish and Wildlife Service.

11 (f) Members of the advisory committee shall not be
12 compensated but shall be reimbursed by their respective
13 organization for necessary expenses incurred, including travel
14 expenses, in carrying out their duties. The University of
15 Hawaii shall provide all necessary administrative, professional,
16 technical, and clerical support required by the advisory
17 committee.

18 (g) As used in this Act, "advisory committee" means the
19 dark night skies protection advisory committee.

20 (h) The advisory committee shall be dissolved on June 30,
21 2027.



1 SECTION 3. The University of Hawaii shall report its
2 initial findings and recommendations, including any proposed
3 legislation, to the legislature no later than twenty days prior
4 to the convening of the regular session of 2018. The advisory
5 committee shall report its updated findings and recommendations,
6 including any proposed legislation, to the legislature no later
7 than twenty days prior to the convening of each regular session
8 of 2019, 2020, and 2021.

9 SECTION 4. This Act shall take effect upon its approval.



Report Title:

Light Pollution; Dark Night Skies Protection Advisory Committee;
University of Hawaii

Description:

Establishes a Dark Night Skies Protection Advisory Committee to assist the University of Hawaii in developing a statewide dark night skies protection strategy. (HB427 HD1)

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