



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
Senate Committees on Higher Education and
Agriculture and Environment
Monday, March 20, 2017 at 1:45 p.m.

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HB 427 HD2 – RELATING TO DARK NIGHT SKIES PROTECTION

Chairs Kahele and Gabbard, Vice Chairs Kidani and Riviere, and members of the committee:

The University of Hawai'i strongly supports the establishment of a dark skies advisory committee via HB 427 HD2.

Dark night skies are a tremendously important natural, cultural, scientific, educational, and economic resource for Hawai'i. But the dark night sky is under increased threat from urban lighting.

Maunakea observatory has one of the darkest skies in the world, thanks to over 25 years of careful lighting on the Island of Hawai'i. The sky at Haleakalā observatory is less dark due in part to its close proximity to Honolulu.

Dark skies are vitally important for Hawai'i's two major astronomical observatories. These are among the best astronomical sites on the planet. If the sky is allowed to become bright over these observatories, the telescopes will lose their ability to see faint objects. On Haleakalā, the University of Hawai'i is engaged in a NASA sponsored effort to search the sky for dangerous asteroids. The aim is to find any dangerous asteroid that may hit Earth early enough that it can be deflected before impact. This search relies heavily on the dark night sky, and it would be significantly weakened if the sky on Maui becomes any brighter.

The advisory committee described in this bill will bring together representatives from the state, the counties and the public, and will provide a valuable forum for exchanging information regarding nighttime lighting and for preservation of the dark night sky. Please note that it is the University's understanding that the Land Use Commission prefers not to be on this advisory committee.

Light Emitting Diodes (LEDs) are rapidly being introduced to replace older forms of lighting. These offer some energy benefits, but their blue light is harmful to astronomy and to endangered species such as birds and turtles. The committee described in this bill will be able to provide excellent advice on limiting blue light, thereby preventing costly mistakes. Kaua'i is a prime example of a location where many expensive light replacements have had to be done because of the impact of unshielded lights on endangered birds. Recent developments related to LEDs include a recommendation by the American Medical Association to limit exposure to blue light at night, new findings that suggest road safety is improved by limiting blue light, and big improvements in energy efficiency in low correlated color temperature LEDs.