

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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**Testimony of
WILLIAM J. AILA, JR.
Chairperson**

**Before the House Committee on
FINANCE**

**Thursday, February 21, 2013
11:00 AM
State Capitol, Conference Room 308**

**In consideration of
HOUSE BILL 471
RELATING TO STARLIGHT RESERVE**

House Bill 471 proposes to extend the termination date of a temporary advisory committee relating to the statewide starlight reserve strategy from June 30, 2013, to June 30, 2015. **The Department of Land and Natural Resources (Department) supports this bill.**

The use of artificial lighting serves the essential purpose of providing safety and security, and facilitates many of the routine activities of society. Artificial lighting, however, also affects biological and cultural resources by impacting wildlife populations and interfering with night sky viewing and research. The excessive use of artificial lights also contributes to excess consumption of energy resources and impacts global climate change.

The purpose of the Starlight Reserve Advisory Committee (Committee) is to examine issues related to artificial lighting in the State and recommend workable solutions to reduce the negative impacts of lighting on natural resources and related activities. The Committee has demonstrated a valuable collaboration of stakeholders and an extension of the sunset date for the Committee will provide additional time needed to complete the tasks essential to evaluating issues related to lighting and recommend solutions to the Legislature.

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ESTHER KIA'AINA
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS



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Statement of

RICHARD C. LIM
Director

Department of Business, Economic Development & Tourism

before the

HOUSE COMMITTEE ON FINANCE

Thursday, February 21, 2013

1:30 p.m.

State Capitol, Conference Room 308

in consideration of

HB 471

RELATING STARLIGHT RESERVE.

Chair Luke, Vice Chairs Nishimoto and Johanson, and Members of the Committee. The Department of Business, Economic Development and Tourism supports the intent of this bill to extend the life of the State's Starlight Reserve Committee to June 30, 2015.

This legislation will provide an opportunity for the Committee to complete its efforts to develop and help implement a statewide strategy to reduce nighttime light pollution, or "skyglow," which in turn will help preserve dark skies for astronomy, protect endangered species, improve human health, and reduce nighttime energy consumption statewide.

Thank you for the opportunity to testify on this legislation.



UNIVERSITY OF HAWAII SYSTEM

Legislative Testimony

Testimony Presented Before the
House Committee on Finance
Thursday, February 21, 2013 at 1:30pm
by
Richard J. Wainscoat
Astronomer, Institute for Astronomy
University of Hawai'i at Mānoa

HB 471 – RELATING TO STARLIGHT RESERVE

Chair Luke and members of the Committee. My name is Richard Wainscoat and I am here today to submit this testimony in my capacity as an astronomer at the University of Hawai'i at Mānoa, and as a member of Commission 50 of the International Astronomical Union. We strongly support the extension of the termination date of the Starlight Reserve Committee by 2 years to June 30, 2015.

Mauna Kea on the island of Hawai'i, and Haleakalā on the island of Maui, are two of the best astronomy sites in the world. Dark night skies are essential for these observatories to continue to operate. However, increasing urban lighting is threatening the dark night skies over these observatories. Light pollution extends well beyond county boundaries; lights from O'ahu have a major and growing impact on Haleakalā. Statewide legislation is needed to protect the observatories. The economic impact of astronomy in Hawai'i is between \$150 and \$200 million per year.

The Starlight Reserve Committee was established by the 2009 legislature to address light pollution issues at a statewide level. Astronomers are not the only people affected by light pollution. Light pollution affects many endangered species across Hawai'i, including birds and turtles. It produces enormous energy waste. Poorly designed lighting compromises safety.

Act 161 asked the Starlight Reserve Committee to assist DBEDT to develop legislation to implement a statewide intelligent lighting and light pollution law that takes into consideration the following:

1. Develop rules regulating the requirements of outdoor lighting to guarantee the protection of night sky quality;
2. Incorporate measures to conserve energy and promote responsible outdoor night lighting;
3. Develop standards for intelligent lighting design in architecture, urban planning, engineering, and infrastructure development;
4. Strengthen statewide commitment to preserving the night sky by adopting intelligent lighting in the public sector;
5. Promote labeling to recognize intelligent lighting fixtures and products;
6. Develop alliances with both public and private entities primarily responsible for outdoor night lighting;
7. Develop measures to avoid obtrusive light and improve the quality of life of local populations; and

8. Educate local residents about existing solutions, as well as the environmental, personal, and energy-savings benefits that intelligent lighting entails.

Act 287, SLH 2012, added new requirements for state lighting in a manner recommended by the Starlight Reserve Committee. The requirements of this act become effective July 1, 2014. In order to eliminate cost, the changes in lighting mandated by the Act will occur over long time periods of time, as fixtures become old and need to be replaced. There is a corresponding need to extend the existence Starlight Reserve Committee to monitor changes and improvements in light pollution as this Act takes effect.

2013 will see two bright comets visible in the sky over Hawai'i. The first of these comets, Comet PANSTARRS, was discovered by University of Hawai'i astronomers using a telescope on Haleakalā. It is expected to be visible to the naked eye low in the western evening sky in early March. The view of both of these comets by many of Hawai'i's residents will be severely impacted by unnecessary light pollution. Over time, the work of the SRC should help to reduce light pollution, and restore the view of the night sky to Hawai'i's residents.

It is clear that the Starlight Reserve Committee still has much work to do. The work that the committee is doing is very important for the future of astronomy in Hawai'i and at the University of Hawai'i.

Testimony Related to
House Bill 471
RELATING TO STARLIGHT RESERVE
Presented before the
House Committee on Finance
The Twenty-Seventh Legislature
February 21, 2013
by
Richard J. Wainscoat
Chair, Starlight Reserve Committee

Chair Luke and members of the Committee. My name is Richard Wainscoat and I am here today to submit this testimony in my capacity as Chair of the Starlight Reserve Committee. I strongly support the extension of the termination date of the Starlight Reserve Committee by 2 years to June 30, 2015.

The Starlight Reserve Committee was established by the 2009 legislature to address light pollution issues at a statewide level. Astronomers are not the only people affected by light pollution. Light pollution affects many endangered species across Hawaii, including birds and turtles. It produces enormous energy waste. Poorly designed lighting compromises safety.

The committee has met on numerous occasions and has engaged many stakeholders. It provided guidance to the 2012 Legislature in crafting Act 287 which added new requirements for state lighting that become effective July 1, 2014. In order to eliminate cost, the changes in lighting mandated by this Act will occur over long time periods of time, as fixtures become old and need to be replaced. There is a corresponding need to extend the existence Starlight Reserve Committee to monitor changes and improvements in light pollution as this Act takes effect.

The Starlight Reserve Committee is tasked with assisting DBEDT to develop legislation to implement a statewide intelligent lighting and light pollution law that takes into consideration the following:

1. Develop rules regulating the requirements of outdoor lighting to guarantee the protection of night sky quality;
2. Incorporate measures to conserve energy and promote responsible outdoor night lighting;
3. Develop standards for intelligent lighting design in architecture, urban planning, engineering,

- and infrastructure development;
4. Strengthen statewide commitment to preserving the night sky by adopting intelligent lighting in the public sector;
 5. Promote labeling to recognize intelligent lighting fixtures and products;
 6. Develop alliances with both public and private entities primarily responsible for outdoor night lighting;
 7. Develop measures to avoid obtrusive light and improve the quality of life of local populations;
and
 8. Educate local residents about existing solutions, as well as the environmental, personal, and energy-savings benefits that intelligent lighting entails.

It is clear that the Starlight Reserve Committee still has much work to do.

Over the next years, lighting is expected to undergo a major change as solid-state lighting (LEDs) comes into common use. The input and guidance of the Starlight Reserve Committee will be important as that transition occurs.