



DAVID Y. IGE  
GOVERNOR

JOSH GREEN  
LT. GOVERNOR

**STATE OF HAWAII  
OFFICE OF THE DIRECTOR  
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS**

335 MERCHANT STREET, ROOM 310  
P.O. BOX 541  
HONOLULU, HAWAII 96809  
Phone Number: 586-2850  
Fax Number: 586-2856  
cca.hawaii.gov

CATHERINE P. AWAKUNI COLÓN  
DIRECTOR

JO ANN M. UCHIDA TAKEUCHI  
DEPUTY DIRECTOR

**Testimony of the Department of Commerce and Consumer Affairs**

**Before the  
House Committee on Energy & Environmental Protection  
Tuesday, February 2, 2021  
8:30 a.m.  
Via Videoconference**

**On the following measure:  
H.B. 592, RELATING TO UTILITIES**

Chair Lowen and Members of the Committee:

My name is Dean Nishina, and I am the Executive Director of the Department of Commerce and Consumer Affairs' (Department) Division of Consumer Advocacy. The Department appreciates the intent of this bill and offers comments.

The purposes of this bill are to require the Public Utilities Commission (Commission) to: (1) explore, through its docket process, the feasibility of relocating above-ground electrical transmission lines and distribution lines underground in high-risk areas on Maui; and (2) submit a report to the Legislature prior to the regular session of 2022.

The Department offers the below comments for the Committee's consideration:

- Placing electric transmission and distribution lines above or below ground poses certain advantages and disadvantages. Underground facilities are more resilient to certain events, such as high winds and damage from vehicles. Underground facilities are far more expensive to install and require more time and costs to restore service.

- Placing facilities overhead is less costly than placing facilities underground. Lifetime maintenance expenses for overhead facilities are less than comparable underground facilities. Overhead facilities are more susceptible to certain events such as high winds, lightning strikes, and damage from vehicles. It is faster to restore services provided by overhead facilities than by underground facilities.
- The Commission has initiatives to explore non-wires alternatives whenever transmission or distribution capital projects are needed. These initiatives may result in greater resilience and could decrease the amount of overhead and underground facilities that may be necessary.
- It is technically feasible to place most transmission and distribution in underground facilities, but whether the overall costs (installation and lifetime maintenance) of underground facilities can and should be borne by customers should be carefully evaluated.
- If this measure intends to replace existing overhead facilities with underground facilities, customer bill costs will increase and a remaining question is the magnitude of the increase.
- If this bill requires the Commission to conduct a proceeding to investigate the proposed replacement of overhead facilities in high-risk areas, the Department respectfully suggests that the Commission's initial report to the Legislature discuss the overall costs that will be incurred and the potential rate and bill impact that Maui customers will face, rather than the proposed plans and timelines to replace the overhead facilities. This information could be used to evaluate whether the projected costs are acceptable.

Thank you for the opportunity to testify on this bill.

TESTIMONY OF  
JAMES P. GRIFFIN, Ph.D.  
CHAIR, PUBLIC UTILITIES COMMISSION  
STATE OF HAWAII

TO THE  
HOUSE COMMITTEE ON  
ENERGY & ENVIRONMENTAL PROTECTION

February 2, 2021  
8:30 a.m.

Chair Lowen and Members of the Committee:

**MEASURE:** H.B. No. 592

**TITLE:** RELATING TO UTILITIES

**DESCRIPTION:** Requires the public utilities commission to explore, through its docket process, the feasibility of relocating above-ground electrical transmission lines and distribution lines underground in high-risk areas on the island of Maui. Requires the public utilities commission to submit a report to the legislature prior to the regular session of 2022.

**POSITION:**

The Public Utilities Commission (“Commission”) offers the following comments for consideration.

**COMMENTS:**

The Commission appreciates this measure’s intent to explore the feasibility of undergrounding transmission lines in high-risk areas on the island of Maui. The Commission has requested detailed reports from Maui Electric Company on recent experiences with its transmission system in high-risk areas. If requested by the Legislature, the Commission will open a formal investigation of this issue and report on the Commission’s findings.

Should this measure move forward, the Commission respectfully recommends that the possible set of solutions be broadened to include other potential options in addition to undergrounding transmission lines (e.g., distributed energy resources, energy storage, microgrids, etc.).

H.B. No. 592  
Page 2

Thank you for the opportunity to testify on this measure.



P.O. Box 37158, Honolulu, Hawai'i 96837-0158  
Phone: 927-0709 henry.lifeoftheland@gmail.com

COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Rep. Nicole E. Lowen, Chair  
Rep. Lisa Marten, Vice Chair

DATE: Tuesday, February 2, 2021  
TIME: 8:30 am

HB 592 RELATING TO UTILITIES

Conditional Support with Amendments

Aloha Chair Lowen, Vice Chair Marten, and Members of the Committee

Life of the Land is Hawai'i's own energy, environmental and community action group advocating for the people and `aina for 51 years. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

If the bill advances, two amendments are needed: (1) Transmission grids should be examined throughout Hawai'i, and (2) An interim report should be filed prior to the regular session of 2022 and a final report should be filed prior to the regular session of 2023.

Alternatively, these issues may be resolved in the PUC open proceeding regarding the HECO Companies Integrated Grid Plan.

Interestingly, the bill does not mention HRS §269-27.6 which codifies legislative bills on when undergrounding makes sense. The bill identifies some but not all sections of the law.

Life of the Land has an extensive background in reliability, resilience, and undergrounding.

Life of the Land was (1) a party in the Board of Land and Natural Resources (BLNR) contested case hearing re Conservation District Use Application (CDUA) OA-2801 for the proposed HECO 138-kV Transmission Line (1973-2002), (2) provided input for the Undergrounding Public Utility Lines (1999) by the Legislative Reference Bureau<sup>1</sup>, (3) actively participated in the HECO-financed "Oahu Utilities Under-grounding and Visual Mitigation Studies" by the American Institute of Architects Honolulu Chapter in 2003, (4) was a party in PUC dockets on the East Oahu Transmission Project, (5) was a party in PUC dockets on Big Wind, (6) appointed by the PUC to serve on the Reliability Standards Working Group, (7) served on the HECO Integrated Grid Planning Resilience Working Group, and (8) extensively reviewed analyses of the HECO outages in 1983, 1987, 1988, 2006, and 2008.

Underground and overhead lines and infrastructure are all impacted in different ways by historically occurring events and will be by future events that may be caused or occur in higher intensity due to the climate crisis.

Transmission impacts can be caused by high winds, wildfires, flooding, lightning strikes, tsunamis, earthquakes, lava eruptions, and sea level rise.

Replacing an overhead line with an underground line in the exact same place doesn't usually make sense except to maintain legacy systems. Soils, rocks, and other infrastructure needs to be accounted for if the goal is simply replacing one existing system for a new costly system.

Undergrounding, relocating, reconfiguring, smartening, and/or hardening the transmission system may make sense. Examining the transmission systems holistically is of paramount importance.

If changes are desired, a queue may be needed that puts priorities on the most critical segments first.

Using the docket process makes sense.

### State Law

The Legislature passed bills now codified as HRS §269-27.6 re Construction of high-voltage electric transmission lines; overhead or underground construction.

(a) Notwithstanding any law to the contrary, whenever a public utility applies to the public utilities commission for approval to place, construct, erect, or otherwise build a new 46 kilovolt or greater high-voltage electric transmission system, either above or below the surface of the ground, the public utilities commission shall determine whether the electric transmission

---

<sup>1</sup> This report examines the policies and issues of undergrounding public utility lines. The policies and issues discussed in Chapter 2 have been categorized into seven topics: (1) type of line; (2) location; (3) benefits of undergrounding; (4) costs; (5) public sentiment; (6) technological issues; and (7) legal matters

system shall be placed, constructed, erected, or built above or below the surface of the ground; provided that in its determination, the public utilities commission shall consider:

- (1) Whether a benefit exists that outweighs the costs of placing the electric transmission system underground;
- (2) Whether there is a governmental public policy requiring the electric transmission system to be placed, constructed, erected, or built underground, and the governmental agency establishing the policy commits funds for the additional costs of undergrounding;
- (3) Whether any governmental agency or other parties are willing to pay for the additional costs of undergrounding;
- (4) The recommendation of the division of consumer advocacy of the department of commerce and consumer affairs, which shall be based on an evaluation of the factors set forth under this subsection; and
- (5) Any other relevant factors.

(b) In making the determination set forth in subsection (a), for new 138 kilovolt or greater high-voltage transmission systems, the public utilities commission shall evaluate and make specific findings on all of the following factors:

- (1) The amortized cost of construction over the respective usable life of an above-ground versus underground system;
- (2) The amortized cost of repair over the respective usable life of an above-ground versus underground system;
- (3) The risk of damage or destruction over the respective usable life of an above-ground versus an underground system;
- (4) The relative safety and liability risks of an above-ground versus underground system;
- (5) The electromagnetic field emission exposure from an above-ground versus underground system;
- (6) The proximity and visibility of an above-ground system to: (A) High density population areas; (B) Conservation and other valuable natural resource and public recreation areas; (C) Areas of special importance to the tourism industry; and (D) Other industries particularly dependent on Hawaii's natural beauty;
- (7) The length of the system;

(8) The breadth and depth of public sentiment with respect to an above-ground versus underground system; and

(9) Any other factors that the public utilities commission deems relevant.

(c) A public utility making an application to the public utilities commission under this section shall clearly and fully state and support its evaluation of each factor set forth in subsection (b).

Mahalo  
Henry Curtis  
Executive Director





**Hawaiian  
Electric**

**TESTIMONY BEFORE THE COMMITTEE ON  
ENERGY & ENVIRONMENTAL PROTECTION**

**HB 592**

**Relating to Utilities**

2/2/2021

8:30AM, Agenda Item 1

Video Conference

Kerstan Wong  
Director, Operations Planning & Construction Management  
Hawaiian Electric Company

Chair Lowen and Vice Chair Marten, and Members of the Committee.

My name is Kerstan Wong and I am testifying on behalf of Hawaiian Electric Company **in opposition** of House Bill 592.

We support the intent of the bill which is to have the Public Utilities Commission assess the feasibility of converting existing electrical overhead transmission and distribution lines in Maui County as a mitigation against the adverse effects of wildfire, high-winds, and sea-level rise. However, the Public Utilities Commission currently has an on-going open Docket No. 2018-0165, to investigate Integrated Grid Planning, which provides a framework for external stakeholder engagement to address grid needs. One of the Working Groups identified in this Docket is the “Resilience Working Group.” The Resilience Working Group, with oversight from the PUC, will incorporate state and local considerations and related resiliency planning activities and synthesize these resiliency needs into Integrated Grid Planning criteria. It is anticipated that the scope of the Resilience Working Group will cover the concerns conveyed in this Bill. Thus, this Bill

could circumvent the work of the Resilience Working Group, which consists of various community and government stakeholders.

In addition, the Public Utilities Commission like many other government entities have limited resources. Thus, initiating another formal docket, when one exists that covers the intent of this Bill would further burden limited resources.

Accordingly, the Hawaiian Electric Company opposes House Bill 592. Thank you for this opportunity to testify.