



# UNIVERSITY OF HAWAII SYSTEM

## ‘ŌNAEHANA KULANUI O HAWAII

### Legislative Testimony

### Hō'ike Mana'o I Mua O Ka 'Aha'ōlelo

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Testimony Presented Before the  
Senate Committee on Energy, Economic Development, and Tourism  
Senate Committee on Higher Education  
Thursday, February 9, 2023 at 1:01 p.m.

By

Della Teraoka, Interim Associate Vice President for Community Colleges  
University of Hawai'i System

#### SB 1520 – RELATING TO THE HAWAII PACIFIC HYDROGEN HUB

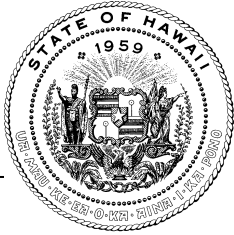
Chairs DeCoite and Kim, Vice Chairs Wakai and Kidani, and Members of the  
Committees:

The University of Hawai'i supports the intent of SB 1520, which requires the Department of Business, Economic Development, and Tourism to work with the University of Hawai'i on workforce development activities that support the development of the Hawai'i Pacific Hydrogen Hub and other related aspects of the State's hydrogen energy industry.

The University of Hawai'i Community Colleges recently kicked off its [Good Jobs Hawai'i](#) program which includes clean energy as one of four sector focus areas. The Good Jobs Hawai'i initiative seeks to identify and meet current and future needs of Hawai'i's clean energy workforce. The Hawai'i State Energy Office (HSEO) is the lead organization for the Clean Energy and Skilled Trades sector of the Good Jobs Hawai'i program funded by the U.S. Department of Commerce, Economic Development Administration.

The University of Hawai'i supports the intent of SB 1520, on the condition its passage does not replace or adversely impact priorities as indicated in our BOR Approved Budget.

Thank you for the opportunity to provide testimony in support of SB 1520.



# HAWAII STATE ENERGY OFFICE STATE OF HAWAII

JOSH GREEN, M.D.  
GOVERNOR

MARK B. GLICK  
CHIEF ENERGY OFFICER

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Testimony of  
**MARK B. GLICK, Chief Energy Officer**

before the  
**SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM  
AND  
SENATE COMMITTEE ON HIGHER EDUCATION**

Thursday, February 9, 2023  
1:01 PM  
State Capitol, Conference Room 229 and Videoconference

In SUPPORT of  
**SB 1520**

**RELATING TO THE HAWAII PACIFIC HYDROGEN HUB.**

Chairs DeCoite and Kim, Vice Chairs Wakai and Kidani, and Members of the Committees, the Hawai'i State Energy Office (HSEO) supports SB 1520, which requires the Department of Business, Economic Development, and Tourism to work with the University of Hawai'i on workforce development activities that support the development of the Hawai'i Pacific Hydrogen Hub and other related aspects of the State's hydrogen energy industry and appropriates funds to the Department of Business, Economic Development, and Tourism for the Hawai'i Pacific Hydrogen Hub, provided that its passage does not replace or adversely impact priorities indicated in the Executive Budget.

The Full Application for the Hawai'i Pacific Hydrogen Hub proposal is due to the United States Department of Energy by April 7, 2023, with preselection interviews through summer and selection notifications anticipated during the autumn of 2023.

In a related effort, HSEO is the lead organization for the Clean Energy and Skilled Trades sector of the [Good Jobs Hawai'i](#) program led by the University of Hawai'i Community Colleges and funded by the U.S. Department of Commerce, Economic Development Administration.

With clean energy as one of four sector focus areas, the Good Jobs Hawai'i initiative seeks to identify and meet current and future needs of Hawai'i's clean energy workforce.

Thank you for the opportunity to testify.

Statement of  
**Stanley J. Osserman Jr., President,**  
**Tigershark Energy Consulting Hawaii – Hydrogen, LLC.**  
before the  
**Senate Committee on Energy, Economic Development and Tourism**  
**And**  
**Senate Committee on Higher Education**

09 February 2023  
1:01 pm  
State Capitol, Conference Room #229

In consideration of  
**SB 1520**  
**Relating to The Hawaii Pacific Hydrogen HUB**

Chairs DeCoite and Mercado-Kim, Vice Chairs Wakai and KIdani and members of the Committees.

As the former Director of the Hawaii Center for Advanced Transportation Technologies (2013-2019), Under the Hawaii Department of Business, Economic Development and Tourism (DBEDT) and appointed by Hawaii Revised Statute as the Hydrogen Implementation Coordinator for the state, I continue to serve our state by promoting the application of hydrogen technologies to replace fossil fuels and promote a hydrogen economy in our state by doing business as (DBA) Tigershark Energy Consulting Hawaii – Hydrogen, LLC. This testimony is being given, not as a paid consultant or lobbyist, but as a professional that has been promoting hydrogen technology for the betterment of our state and nation. I am not being compensated by any individual, company, organization, or group as I provide this testimony.

I stand in Strong Support of SB 1520 because it helps our state prepare for the rapidly approaching transition to a hydrogen economy that was first proposed by Hawaii's late Congressman and Senator Spark Matsunaga over a quarter century ago. As I study the Global transformation to electric transportation, it is readily apparent that hydrogen, in one of it's many forms, will provide the energy storage we need for clean transportation and even long term grid energy storage. This complex transition will

require new infrastructure, expanded clean/renewable electrical generation and will provide fulfilling careers for Hawaii's future workforce across many career fields. These will not just be "jobs", they will be careers that provide great wages and fulfilling work for future generations. Preparing our keiki for that future starts with solid education and workforce development, and I feel that SB1520 moves us forward in this critical early step of the hydrogen transition.

With Hawaii being nominated as a finalist in the U.S. Department of Energy's Hydrogen HUB program, federal funds will be made available, if Hawaii's Pacific Hydrogen HUB proposal is successful. Initiatives like those proposed in SB 1520 send a clear signal to the Federal government, that Hawaii is serious about being a leader in aggressively moving our state and nation forward in clean energy.

If I can be of assistance to you in your efforts to move Hawaii ahead in hydrogen technologies, I will be happy to help. Aloha,

Mahalo for the opportunity to testify on this important proposed legislative matter.

Stanley J. Osserman Jr., President

Tigershark Energy Consulting Hawaii – Hydrogen, LLC.

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**Sustainable Energy Hawai'i**  
sustainableenergyhawaii.org

February 8, 2023

**SUPPORT for SB1520 - RELATING TO THE HAWAII PACIFIC HYDROGEN HUB**

Dear Chairs DeCoite and Kim, Vice Chairs Wakai and Kidani, and Committee members.

I'm testifying on behalf of **Sustainable Energy Hawai'i**, a 501(c)3 non-profit dedicated to improving the quality of life for Hawaii Island residents. Our mission is to enable an economic, social, and environmental revival in Hawaii through a just transition to sustainable, 100% locally-sourced renewable energy and the creation of a thriving clean hydrogen economy.

*Disclosure: Sustainable Energy Hawai'i is a Hawai'i Pacific Hydrogen Hub consortium member.*

**Sustainable Energy Hawai'i supports SB1520**, which requires *"the Department of Business, Economic Development, and Tourism to work with the University of Hawai'i on workforce development activities that support the development of the Hawai'i Pacific Hydrogen Hub and other related aspects of the State's hydrogen energy industry. Appropriates funds to the Department of Business, Economic Development, and Tourism for the Hawai'i Pacific Hydrogen Hub."*

Hawai'i has a unique opportunity to establish a strategic green hydrogen ecosystem, one that would provide clean energy solutions across the Pacific region, contribute to geopolitical security (via energy security for the U.S. Indo-Pacific Command), enable decarbonization of sectors that are difficult to decarbonize (e.g., aviation, maritime, and heavy ground transport, high-heat industrials, and fertilizer production), and contribute to our economic well-being through energy resilience, food security, jobs, and revenue.

Enabling this ecosystem will require tremendous capital, technology, and people. The latter is of special concern since this hydrogen ecosystem will require new jobs and skill sets across several sectors, e.g., geothermal energy production, hydrogen and derivative energy carrier production, storage, and transport, hydrogen and fuel-cell propulsion system maintenance, fuel bunkering, and environmental monitoring. These spaces will require a variety of jobs that our local workforce must fill. To make this a reality, we must act now to deploy relevant workforce development programs.

Finally, additional capital is needed to support the Hawai'i Pacific Hydrogen Hub fully. The development of the ecosystem will require infrastructure to produce green electricity for

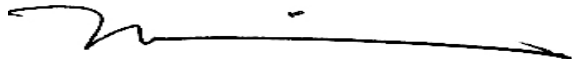
electrolyzed hydrogen production at scale. Geothermal energy is a key to abundant green electricity. Thus, funding should support the exploration and development of new geothermal energy production.

SB1520 represents a critical step towards developing the Hawai'i Pacific Hydrogen Hub, a key to our energy security, sustainability, and resilience.

Please pass this measure.

Thank you for this opportunity to testify.

Respectfully,

A handwritten signature in black ink, appearing to be 'Noel Morin', written over a horizontal line.

Noel Morin, Chairman, on behalf of the Sustainable Energy Hawai'i Board of Directors:

Peter Sternlicht – Treasurer | Kanani Aton – Secretary | David De Luz – Director | Desmon Haumea – Director | Jerry Chang - Director | Stanley Osserman - Director

**SB-1520**

Submitted on: 2/6/2023 2:58:03 PM

Testimony for EET on 2/9/2023 1:01:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
LIBRADO COBIAN	Testifying for AAC	Support	Written Testimony Only

Comments:

I support SB 1520 and the use of Hydrogen and Nuclear Energy . Solar , EV, and Windmills require components that are processed through the most polluting industries on the planet and require minerals from the most polluted and corrupt countries in the world . Soon these Green Energy' systems will be mining this minerals from the Ocean starting July 2023 . Goggle BOEM Bureau of ocean Energy Management. This mining will impact the ocean's environment tremendously. With the advance clean emission technology of gas powered cars the EV's and Solar industry has surpassed any technology in being the most dangerous to our environment. We must invest in real clean energy and that's Hydrogen and Nuclear. Li Cobian. Federal Environmental Contractors 35 Years



**SB-1520**

Submitted on: 2/7/2023 9:05:17 AM

Testimony for EET on 2/9/2023 1:01:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Caroline Azelski	Individual	Support	Written Testimony Only

Comments:

Strong support. A hydrogen industry can help us be an exporter of energy and increase energy resilience. Thank you.

**SB-1520**

Submitted on: 2/7/2023 11:04:33 PM

Testimony for EET on 2/9/2023 1:01:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Testify</b>
Alice Kim	Individual	Support	Written Testimony Only

Comments:

By serving as a constant, virtually unlimited source of energy in Hawaii, geothermal can play a huge role in hydrogen fuel development. This industry can offer Hawaii quality jobs, economic growth opportunities, renewable energy storage, and a way for Hawaii to achieve 100 percent clean energy by 2045.