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Testimony of the Department of Commerce and Consumer Affairs

Before the
Senate Committee on Commerce and Consumer Protection
And
Senate Committee on Transportation and Culture and the Arts
Tuesday, March 19, 2024
9:35 a.m.
Conference Room 229

On the following measure:

H.B. 1997, H.D. 1, RELATING TO THE INTERISLAND TRANSPORT OF HYDROGEN

Chair Keohokalole, Chair Lee, and Members of the Committees:

My name is Michael Angelo, and I am the Executive Director of the Department of Commerce and Consumer Affairs (Department) Division of Consumer Advocacy. The Department offers comments on this bill.

The purpose of this bill is to authorize the Public Utilities Commission (Commission) to establish a discounted rate by tariff for water carriers that engage in the interisland transport of renewable hydrogen.

The Department supports the cost-effective production and delivery of renewable fuels that align with the State's clean energy and climate policies. The Department recognizes the intent of this bill, which the Department believes is seeking to enable a greater diversity in the type of renewable fuels available for use within the State. Hydrogen is a renewable fuel if it is produced from renewable resource types that are defined under Hawaii Revised Statutes § 269-91.

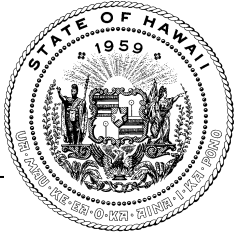
The Department is concerned; however, that the customers of water carriers transporting renewable hydrogen between the islands will bear additional financial burden by enacting the discount because water carriers will likely attempt to recover their decreased revenues by raising rates for other cargo types. Hawaii residents and businesses are already paying high interisland cargo rates since Young Brothers LLC (Young Brothers), the State's regulated water carrier providing interisland shipping, was granted an average (interim) rate increase of about 46% in a pandemic emergency order a few years ago. (See Order No. 37280 issued on August 17, 2020 in Docket No. 2019-0117). The Department also notes there is no financial benefit identified to water carriers' ratepayers from providing the discounted rate for shipping hydrogen. As such, enacting this discount would result in an inequitable burden to Young Brothers' customers bearing the additional costs of providing the discount.

The Department also notes its concerns as to whether there is currently a need to ship renewable hydrogen between the islands and, if such a need did arise in the future, water carrier customers on islands other than Oahu would inequitably bear the cost of providing hydrogen to Oahu at a discounted shipping rate. The Hawaii Natural Energy Institute (HNEI) of the University of Hawaii concludes on pages 7 and 8 of its December 2023 report to the Hawaii State Legislature on the "[Potential Production and Use of Renewable Hydrogen in Hawaii](#)" that:

- Oahu has sufficient land and resources to meet potential near-term [hydrogen] uses but if developed at a larger scale than considered in this report, Oahu would be required to import hydrogen to meet its needs.
- [A]ll the islands other than Oahu have ample land to meet any reasonable on-island uses.
- [I]nterisland shipping was found to be complex and expensive limiting the large-scale applications of hydrogen to the neighbor islands for the foreseeable future.
- While the use of hydrogen for long-term storage (aka firm power) is an often mentioned application, the use of hydrogen to provide

energy during periods of extended low solar or wind resource [availability] was found to require very large amounts of on-island storage. Although included as a potential end-use throughout the report, the amount and cost of this storage is considered prohibitive based on currently available technology.

Thank you for the opportunity to testify on this bill.



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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
**SENATE COMMITTEES ON
COMMERCE AND CONSUMER PROTECTION
AND
TRANSPORTATION AND CULTURE AND THE ARTS**

Tuesday, March 19, 2024
9:35 AM
State Capitol, Conference Room 229 and Videoconference

Providing Comments on
HB 1997, HD1

RELATING TO THE INTERISLAND TRANSPORT OF HYDROGEN.

Chairs Keohokalole and Lee, Vice Chairs Fukunaga and Inouye, and members of the Committees, the Hawai'i State Energy Office (HSEO) offers comments on HB 1997, HD1, that authorizes the Public Utilities Commission to establish a discounted rate by tariff for water carriers that engage in the interisland transport of hydrogen.

As a part of Hawai'i's energy strategy, HSEO believes energy generated from hydrogen will play a role in the State's target to sequester more atmospheric carbon and greenhouse gases than emitted within the State as quickly as possible, but no later than 2045, and supports incentives for its development. Local clean hydrogen production at scale was identified as a decarbonization opportunity in HSEO's [Act 238 HSEO Decarbonization Report](#).

HSEO defers to the appropriate agencies for comments on fiscal, administrative, and regulatory impacts of this bill.

Thank you for the opportunity to testify.

TESTIMONY OF
LEODOLOFF R. ASUNCION, JR.
CHAIR, PUBLIC UTILITIES COMMISSION
STATE OF HAWAII

TO THE
SENATE COMMITTEE ON
COMMERCE AND CONSUMER PROTECTION
and
TRANSPORTATION AND CULTURE AND THE ARTS

March 19, 2024
9:35 a.m.

Chairs Keohokalole and Lee, Vice Chairs Fukunaga and Inouye, and Members of the Committees:

MEASURE: H.B. No. 1997, HD1

TITLE: RELATING TO THE INTERISLAND TRANSPORT OF HYDROGEN.

DESCRIPTION: Authorizes the Public Utilities Commission to establish a discounted rate by tariff for water carriers that engage in the interisland transport of renewable hydrogen. Effective 7/1/3000. (HD1).

POSITION:

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

COMMENTS:

The Commission appreciates the intent of this measure to enable discounted rates for transport of renewable hydrogen in support of a clean energy economy.

The Commission observes that in accordance with HRS §§ 269-16.5, 269-26.5, 269-26.6, 269-27.3, and 269-27.7, there are currently different types of discount programs that could offer models for implementing such a program. The program most similar to that contemplated in this measure was developed under HRS § 269-26.6, which authorized the Commission to establish preferential water carrier service rates for agricultural

activities. On November 3, 1995, the Commission approved an amendment to Young Brother's tariff, Tariff No. 5-A, by Order No. 14356. This amendment defines the "Island Agricultural Product Discount," which was later modified in 2009. The current iteration of the agricultural discount provides a 35 percent reduction in container rate and 30 percent reduction in all other intrastate shipment types for agricultural products.¹

The Commission appreciates the flexibility offered by the measure in establishing said discounted rate for the advancement of clean energy opportunities for Hawaii. Should this measure pass, the Commission would likely incorporate discussion of and decision on discounted rates for transportation of hydrogen within an ongoing or future rate case.

The Commission could also consider an application by a regulated utility for such a discounted commodity rate. In its examination of the issue, consistent with the Commission's past testimony on related measures, the Commission would consider potential cross-subsidization from all other customers and determine any appropriate remediations. The Commission also appreciates the Committees' clarification of this measure to apply only to renewable hydrogen.

The Commission observes that there may be issues to work out to ensure safe transport of hydrogen. Given the nature of this measure, the Commission respectfully defers to Department of Transportation, Harbors Division, and other maritime regulatory entities as to the feasibility of transportation of hydrogen, along with any applicable and necessary safety standards.

Thank you for the opportunity to testify on this measure.

¹ Following Commission Orders on the Island Agricultural Product Discount, the Legislature passed HB2644 HD2, SD1, CD1 in the 2012 Legislative session, which the governor signed into law as Act 232 (SLH 2012), formally including this type of discount within the Commission's statutes.



**Testimony to
The Committee on Commerce and Consumer Protection & Transportation and Culture and
the Arts
March 19, 2024
9:35 AM
Conference Room 229 & Videoconference, Hawaii State Capitol**

HB 1997

Chair Keohokalole, Vice Chair Fukunaga, Chair Lee, Vice Chair Inouye and members of the committee,

Hawaii Gas **offers comments** on HB 1997, which authorizes the Public Utilities Commission to establish a discounted rate by tariff for water carriers that engage in the interisland transport of hydrogen.

Since 1904 Hawaii Gas has been a pioneer in the gas industry. Hawaii Gas is again at the leading edge of our industry given our integration of both Renewable Natural Gas (RNG) and hydrogen into our fuel supply mix and distributing it through our utility pipeline system. Hawaii Gas plays a vital role in Hawaii's energy portfolio by providing clean, reliable, and cost-effective energy to over 70,000 customers on all islands all of whom depend on the company for water heating, cooking, drying, and other commercial and industrial applications. Hawaii Gas continues to look toward new, innovative, and economic ways to incorporate renewable energy sources while also reducing our greenhouse gas emissions.

Hawaii Gas supports the integration of hydrogen as an energy source due to its alignment with the state's renewable energy goals. As an isolated island chain heavily reliant on imported fossil fuels, Hawaii faces unique energy challenges, including high energy costs and vulnerability to supply disruptions. Hydrogen presents a promising solution as it can be produced locally through renewable resources mitigating the state's dependence on imported fuels and reducing greenhouse gas emissions. By investing in hydrogen infrastructure and technologies, Hawaii can foster a more resilient and environmentally friendly energy ecosystem for the islands.

Thank you for the opportunity to testify.



To: The Senate Committee on Commerce and Consumer Protection (CPN)
and
The Senate Committee on Transportation and Culture and the Arts (TCA)
From: Sherry Pollack, 350Hawaii.org
Date: Tuesday, March 19, 2024, 9:35am

In opposition to HB1997 HD1

Aloha Chairs Keohokalole and Lee, Vice Chairs Fukunaga and Inouye, and members of the CPN and TCA committees,

I am Co-Founder of the Hawaii chapter of 350.org, the largest international organization dedicated to fighting climate change. 350Hawaii.org **opposes HB1997 HD1** that would authorize the Public Utilities Commission to establish a discounted rate by tariff for water carriers that engage in the interisland transport of hydrogen.

Investing in hydrogen at this time is a poor use of our limited resources. It is important to note that hydrogen is an inefficient use of clean electricity. It is always more efficient to use renewable power directly than to convert renewable energy to hydrogen for use as an energy source.

In addition, hydrogen fuel cells cost much more and are far less efficient than battery-electric cars. To protect our climate and future, we need to focus ambitious efforts to electrify our transportation sector wherever we can, as quickly as we can, and avoid harmful diversions.

Moreover, it was noted in testimony by Young Brothers for each of the previous hearings on this measure that implementing this bill would result in **safety challenges and likely mean increased rates for other ratepayers**. It is alarming that the testimony from a key stakeholder has been ignored, particularly when safety concerns have been raised.

Regarding safety, hydrogen has **major safety issues**. Hydrogen is a leaky gas that has a warming potential around 37.3 times greater than emitted CO₂ over a 20-year time period.¹ It is highly flammable. It can be ignited by cell phones or by electrical storms located miles away. Leaks pose a significant fire hazard, particularly because they are hard to detect. Furthermore, hydrogen burns nearly invisibly, and people have unwittingly stepped into hydrogen flames. Moreover, hydrogen can cause many metals, including the carbon steel widely used in gas pipelines, to become brittle. In addition, any high-pressure storage tank presents a risk of rupture.² These are just some of the documented safety risks.

¹ <https://www.nature.com/articles/s43247-023-00857-8>

² <https://issues.org/romm-hydrogen-clean-energy/>

We urge you to **HOLD HB1997 HD1.**

Mahalo for the opportunity to testify.

Sherry Pollack
Co-Founder, 350Hawaii.org

Statement of
Brigadier General Stanley J. Osserman Jr. (USAF Ret.), President
Tigershark, LLC
Before the
Senate Committee on Commerce and Consumer Protection
And
Senate Committee on Transportation and Culture and the Arts
19 March 2024
9:35 am
State Capitol Conference Room #229
In consideration of
HB1997, HD1
Relating to Long Duration Clean Energy Storage

15 March 2024

Chair Jarrett Keohokalole

Vice Chair Fukunaga and Distinguished Committee Members:

Chair Chris Lee

Vice Chair Inouye and Distinguished Committee Members:

I stand in strong support to this bill.

As the former director of the Hawaii Center for Advanced Transportation Technologies (HCATT; 2013 to 2019), Hawaii Department of Business, Economic Development and Tourism (DBEDT). My HCATT Director position was designated by the legislature as the “Hydrogen Implementation Coordinator for the state of Hawaii”. I continue to serve our state by promoting clean, renewable energy solutions. This testimony is NOT being given for compensation of any kind, commercial, political or private. I am presenting to you today as a concerned “Life-Long” citizen of the State of Hawaii with extensive professional experience in energy systems, retail and wholesale business, military matters, international commerce, aviation, construction, maritime operations, and public safety, among others. My goal is to help our government leaders make good strategic choices.

For over a decade, I have advocated that Hydrogen will play a significant role in, not only ground transportation, but commercial Air transportation and cargo and tanker shipping, as well as grid storage and even in agriculture, farm equipment, material handling and too many other areas to list. When I started at HCATT in 2013, I knew more than most about the potential for hydrogen in the energy sector, and I’m happy to report that hydrogen, although not a common

household topic, is rapidly developing, worldwide, into all the areas that were predicted a decade or more ago, particularly large scale transportation and long term grid energy storage.

Creating clean hydrogen, known as “Green Hydrogen” will most likely begin at scale in Hawaii County. This production will support adoption of hydrogen by the rest of the state as the other counties “catch up” with geothermal power generation and generating their own Green Hydrogen. This will require economical transport between islands for many years to come. It starts with enabling the economical movement of hydrogen across our state as we transition to a fossil fuel free economy. Bills like HB 1997 HD 1 make sense and it needs your support to get through crossover and to the governor’s desk.

Most of you know me and maybe you saw me on the 4th Floor at the Sustainable Energy Hawaii table. The Big Island will lead the way in Hydrogen production, and thanks to your efforts, Hydrogen is becoming a big part of the solution for our state in its transition away from fossil fuels. The transition is not a “switch”, it is a transition that is connected closely to Hawaii’s overall economic stability and growth, so a well-developed and comprehensive plan to make the transition is critical. Thanks for your help in making this possible!

Brigadier General, Stanley J. Osserman Jr. (USAF Ret.)

President, Tigershark, LLC

HB-1997-HD-1

Submitted on: 3/17/2024 6:45:12 AM

Testimony for CPN on 3/19/2024 9:35:00 AM

Submitted By	Organization	Testifier Position	Testify
Glen Kagamida	Individual	Support	Written Testimony Only

Comments:

THE MORE OPTIONS FOR HELPING CLEAN ENERGY DEVELOPMENT, THE BETTER.

MAHALO!