



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**
KA 'OIHANA HO'OMOHALA PĀ'OIHANA, 'IMI WAIWAI
A HO'OMĀKA'IKAI

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

JAMES KUNANE TOKIOKA
DIRECTOR

DANE K. WICKER
DEPUTY DIRECTOR

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804
Web site: dbedt.hawaii.gov

Telephone: (808) 586-2355
Fax: (808) 586-2377

Statement of
JAMES KUNANE TOKIOKA
Director
Department of Business, Economic Development, and Tourism
before the
**SENATE COMMITTEES ON
ENERGY AND INTERGOVERNMENTAL AFFAIRS
AND
AGRICULTURE AND ENVIRONMENT**

Thursday, February 6, 2025
3:10 PM
State Capitol, Conference Room 016 and Videoconference

In support of
SB 1339
**RELATING TO A PROGRAM TO CHARACTERIZE CARBON SEQUESTRATION
POTENTIAL AND UNDERGROUND WATER RESOURCES STATEWIDE.**

Chairs Wakai and Gabbard, Vice Chairs Chang and Richards, and Members of the Committees.

The Department of Business, Economic Development and Tourism (DBEDT) supports its priority Senate Bill No. 1339, a Governor Green Administration Package Bill. This bill establishes a statewide underground water and carbon sequestration characterization program via slim hole bores and a related statewide environmental assessment.

This measure serves to overcome obstacles that have limited Hawai'i from fully developing its geothermal potential. It takes into consideration that geothermal exploration is commercially risky and expensive, with developers investing in multiple exploration wells before finding a reliable geothermal resource, often without success. Since private investors usually cannot mitigate and manage this risk independently without first having confidence in where such resources can be found, the absence of that knowledge means that the geothermal resource will continue to not be developed outside of the few areas in Puna where tests have proven it exists. Therefore, DBEDT feels the funding requested in this bill is appropriate and justified.

Understanding that geothermal power plants have insignificant greenhouse gas (GHG) emissions and that geothermal plays an important role in helping Hawai'i meet

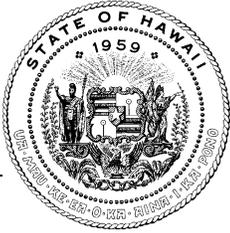
DBEDT Testimony

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its firm renewable needs, DBEDT believes government support to identify areas of geothermal potential is an appropriate first step toward incentivizing private sector investment and development of state-of-the-art geothermal resources. SB 1339 provides that needed support.

Thank you for the opportunity to support this measure.



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone:
Web:

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARK B. GLICK
CHIEF ENERGY OFFICER

(808) 587-3807
energy.hawaii.gov

Testimony of
MARK B. GLICK, Chief Energy Officer

before the
**SENATE COMMITTEES ON
ENERGY & INTERGOVERNMENTAL AFFAIRS
AND
AGRICULTURE & ENVIRONMENT**

Thursday, February 6, 2025
3:10 PM
State Capitol, Conference Room 016 and Videoconference

In Support of
SENATE BILL NO. 1339

RELATING TO A PROGRAM TO CHARACTERIZE CARBON SEQUESTRATION POTENTIAL AND UNDERGROUND WATER RESOURCES STATEWIDE.

Chairs Wakai and Gabbard, Vice Chairs Chang and Richards, and members of the Committees, I am writing in strong support of Senate Bill No. 1339, a Green Administration and DBEDT Priority Bill which conducts statewide research to identify the location and temperature of underground water resources as well as the potential for carbon sequestration.

Such slim-hole test wells are a high priority of Hawai'i's updated energy strategy because of the potential to clearly identify where geothermal resources might exist on Maui, Hawai'i, and O'ahu. The ultimate goal is to stimulate private sector investment in producing safe, reliable and affordable firm renewable energy that can make Hawai'i energy self-sufficient.

The Hawai'i State Energy Office (HSEO) supports SB 1339 as our preferred bill on slim-hole resource characterization research. This bill amends chapter 196 HRS to include a carbon sequestration and underground water resource characterization program implemented by HSEO, including a statewide environmental assessment and

meetings with nearby counties and communities that are crucial in local determination of how public trust resources like geothermal can be appropriately pursued.

This measure also requires HSEO to submit a progress report, findings, and any proposed legislation resulting from the research findings to the legislature. To effectively and broadly conduct this research, HSEO requests \$16,500,000 for fiscal years 2025-2026 and the same sum for fiscal years 2026-2027 to carry out this program. SB 1339 also includes HSEO’s request for \$135,000 for fiscal year 2025-2026 and the same sum for fiscal year 2026-2027 to support one full-time equivalent permanent position to be dedicated to coordinating this program.

In 2023, HSEO analyzed market gaps in firm renewable resources and long duration storage, especially geothermal and pumped hydro, and developed policies and pursued funding opportunities to fill those gaps. Geothermal energy is heat that was generated during the planet’s formation stored in rocks and fluids and brought as steam to the earth’s surface using deep wells. The steam drives turbines to generate electricity. The slim-hole research of water resources through this measure can reveal where hot water sufficient to power electricity generation may be present in key areas throughout the state. This program will also deliver core samples that may reveal the potential for carbon sequestration.

The Center for Strategic and International Studies notes that, like solar and wind energy, modern geothermal power plants have insignificant greenhouse gas (GHG) emissions with life-cycle emissions six to twenty times lower than natural gas and four times lower than solar photovoltaic (PV) energy due to the materials used to construct the plants.

Concurrently, HSEO will engage energy stakeholders at the community level during 2025 and beyond to gain insight on how and where geothermal development can appropriately take place in ways that meaningfully benefit the affected communities.

Several obstacles have limited Hawai‘i from fully developing its geothermal potential. Geothermal exploration is commercially risky and expensive. Developers have to drill multiple exploration wells before finding a reliable geothermal resource, and sometimes they do not find one at all. Private investors usually cannot mitigate and manage this risk independently.

Given the importance of geothermal in helping Hawai‘i meet its firm renewable needs, government support to identify areas of geothermal potential is an appropriate first step towards incentivizing private sector investment and development of state-of-the-art geothermal resources. SB1339 provides that needed support.

Thank you for the opportunity to testify.

**BOARD OF WATER SUPPLY
KA 'OIHANA WAI
CITY AND COUNTY OF HONOLULU**

630 SOUTH BERETANIA STREET • HONOLULU, HAWAII 96843
Phone: (808) 748-5000 • www.boardofwatersupply.com

RICK BLANGIARDI
MAYOR
MEIA

ERNEST Y. W. LAU, P.E.
MANAGER AND CHIEF ENGINEER
MANAKIA A ME KAHU WILIKI

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February 6, 2025

The Honorable Glenn Wakai, Chair
and Members
Senate Committee of Energy and Intergovernmental Affairs
Hawaii State Capitol, Room 016
Honolulu, Hawaii 96813

The Honorable Mike Gabbard, Chair
and Members
Committee on Agriculture and Environment
Hawaii State Capitol, Room 016
Honolulu, Hawaii

Dear Chair Wakai, Chair Gabbard and Members:

Subject: Senate Bill 1339: Relating to a Program to Characterize Carbon Sequestration Potential and Underground Water Resources Statewide

The Honolulu Board of Water Supply (BWS) offers the following comments to Senate Bill (SB) 1339:

The Hawaii State Energy Office should consult with the State Department of Health Underground Injection Control Program, the Commission on Water Resource Management – Ground Water Regulation Branch and the various County Departments or Boards of Water Supply on the evaluation of water resources and siting of carbon sequestration wells. We understand that the injection of CO₂ can reduce the porosity of basalt formations which could impact the yields of proposed saltwater wells for desalination. If porosity is decreased because of chemical reactions from pumping CO₂ into a basalt formation, saltwater well yields can drop significantly. The siting of CO₂ injection wells must not be in proximity to existing or proposed salt water extraction wells for desalination.

Thank you for the opportunity to testify and provide comments to SB 1339.

Very Truly Yours,


ERNEST Y.W. LAU, P.E.
Manager and Chief Engineer



Email: communications@ulupono.com

SENATE COMMITTEES ON ENERGY AND INTERGOVERNMENTAL AFFAIRS &
AGRICULTURE AND THE ENVIRONMENT
Thursday, February 6, 2025 — 3:10 p.m.

Ulupono Initiative strongly supports SB 1339, Relating to a Program to Characterize Carbon Sequestration Potential and Underground Water Resources Statewide.

Dear Chair Wakai, Chair Gabbard, and Members of the Committees:

My name is Mariah Yoshizu, and I am the Government Affairs Associate at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy and clean transportation choices, and better management of freshwater resources.

Ulupono strongly supports SB 1339, which establishes a statewide underground water and carbon sequestration resource characterization program via slim hole bores and a related statewide environmental assessment.

Hawai'i needs all viable forms of renewable energy to meet the 100% renewable portfolio standard by 2045. New data underscores the widespread support among residents for this transition. Between October 2023 and January 2024, Ulupono Initiative partnered with Anthology Research to conduct a statewide public opinion survey on energy in Hawai'i involving 1,985 surveys across all four counties. With a margin of error +/- 2.21%, this is arguably the most extensive and comprehensive study on the topic to date. The findings are compelling.

A staggering 91% of respondents expressed their support for the expansion of renewable energy resources throughout the islands. Moreover, the importance of developing Hawai'i's own energy resources was emphasized across all counties by the residents. This resounding endorsement from the community validates the strong support for continued investment and advancement in renewable energy solutions to meet our collective energy goals.

This bill is a forward-looking initiative that prioritizes scientific research and environmental stewardship. By identifying geothermal and carbon sequestration resources, this measure supports Hawai'i's broader goals of achieving energy resilience and combating climate change. Resource characterization through slim-hole bores offers a minimally invasive method for gathering critical data, ensuring that these activities are conducted responsibly and with

Investing in a Sustainable Hawai'i



minimal environmental disruption. This approach reflects a commitment to balancing energy development with environmental protection.

The bill also emphasizes robust community engagement, which is essential for building trust and ensuring that local concerns and priorities are considered throughout the program. Engaging with counties, individuals, and civic organizations allows for the incorporation of valuable insights, ensuring the program aligns with community needs and aspirations. This commitment to collaboration can foster public support, create opportunities for education about renewable energy and carbon sequestration, and pave the way for sustainable resource management. Effective community engagement has been shown to enhance the success of similar initiatives by promoting transparency and inclusivity.

Finally, the legislation's provision for progress and final reports to the legislature, as well as making findings publicly accessible, highlights its dedication to accountability and knowledge-sharing. The use of mapping software and publicly available data ensures that the information gathered will be a resource for policymakers, researchers, and the public. This transparency will strengthen public confidence in the program and provide a foundation for informed decision-making. The proposed funding and staffing allocations are essential to make certain that the program is adequately supported, enabling Hawai'i to advance its renewable energy and sustainability goals effectively for the benefit of its residents.

Thank you for the opportunity to testify.

Respectfully,

Mariah Yoshizu
Government Affairs Associate