

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

**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](http://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 COMMITTEE ON ENERGY AND INTERGOVERNMENTAL AFFAIRS  
SENATE COMMITTEE ON AGRICULTURE AND ENVIRONMENT**

Tuesday, March 11, 2025  
3:00 PM  
State Capitol, Conference Room 016

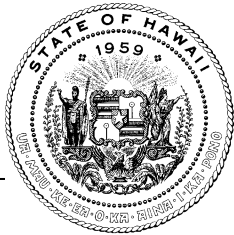
**HB 1020, HD1  
RELATING TO A PROGRAM TO CHARACTERIZE CARBON SEQUESTRATION  
POTENTIAL AND UNDERGROUND WATER RESOURCES STATEWIDE.**

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 House Bill No. 1020, HD1, 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.

Understanding that geothermal power plants have insignificant greenhouse gas (GHG) emissions and that geothermal plays an important role in helping Hawai'i meet 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. HB 1020, HD1 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 AND INTERGOVERNMENTAL AFFAIRS  
AND  
AGRICULTURE AND ENVIRONMENT**

Tuesday, March 11, 2025  
3:00 PM  
State Capitol, Conference Room 016 and Videoconference

In Support of  
**HOUSE BILL NO. 1020 HD1**

## **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 Committee, I am writing in strong support of House Bill No. 1020 HD1, 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 HB1020 HD1 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. HSEO also requests \$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 coordinate 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, the HSEO will engage energy stakeholders at the community level during 2024 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. HB1020 HD1 provides that needed support.

Thank you for the opportunity to testify.



Email: [communications@ulupono.com](mailto:communications@ulupono.com)

SENATE COMMITTEES ON ENERGY AND INTERGOVERNMENTAL AFFAIRS  
& AGRICULTURE AND ENVIRONMENT  
Tuesday, March 11, 2025 — 3:00 p.m.

**Ulupono Initiative strongly supports HB 1020 HD 1, 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 Micah Munekata, and I am the Director of Government Affairs 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 HB 1020 HD 1**, which establishes a Carbon Sequestration and Underground Water Resource Characterization Program via slim hole bores and requires 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

*Investing in a Sustainable Hawai'i*

gathering critical data, ensuring that these activities are conducted responsibly and with 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,

Micah Munekata  
Director of Government Affairs

Attachment

# Beneath the Surface: Support for Geothermal Energy Emerges as Residents See Direct Benefits

For Hawai'i to provide secure, resilient and sustainable electricity for its residents and businesses, we need a diverse mix of renewable energy sources. Geothermal energy can play a greater, vital role in helping our state achieve our renewable and decarbonization goals.

## Geothermal Benefits

### RELIABLE

Unlike other renewables like solar and wind, geothermal provides firm power – meaning it can generate electricity consistently, day or night, regardless of weather conditions. This reliability makes it invaluable in ensuring a stable and continuous energy supply, especially since the electric grids serving each island are not interconnected.

### SMALL FOOTPRINT

According to the U.S. Department of Energy, a geothermal facility is much smaller in size than a fossil-fuel coal plant or a solar farm. For a land-constrained place like Hawai'i, the footprint of a structure significantly affects its community and residents.

### ENVIRONMENTAL BENEFITS

Over its lifetime, a modern geothermal plant produces among the lowest greenhouse gas emissions of any energy source and typically uses less water compared to most other power generation technologies.

## Geothermal in Hawai'i

With only one geothermal energy plant on Hawai'i Island, the state's geothermal potential remains largely untapped, highlighting the need for increased exploration, funding, and communication efforts to understand this resource. In addition, investing in locally produced geothermal energy can ensure that the economic benefits of this sustainable power source remain within the state, contributing to a more resilient and self-sufficient energy future.





## Public Perception of Geothermal

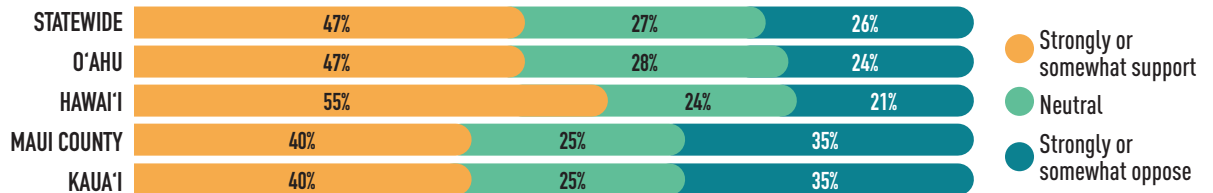


In 2023, Ulupono Initiative commissioned what is believed to be the most extensive and complete public opinion survey on the topic of energy in Hawai'i. The survey was designed to rank how residents perceive various forms of energy technologies, including geothermal.

**Overall, 91% of respondents say they support the expansion of renewable energy resources in Hawai'i.** Below are some highlights from the geothermal-specific survey questions.

**QUESTION:** *In general, how do you feel about a utility-scale geothermal power plant as a way to generate electricity on ...?*

- 47% of respondents say they strongly or somewhat support geothermal energy
- Hawai'i Island is the most supportive of utility-scale geothermal plant in their town



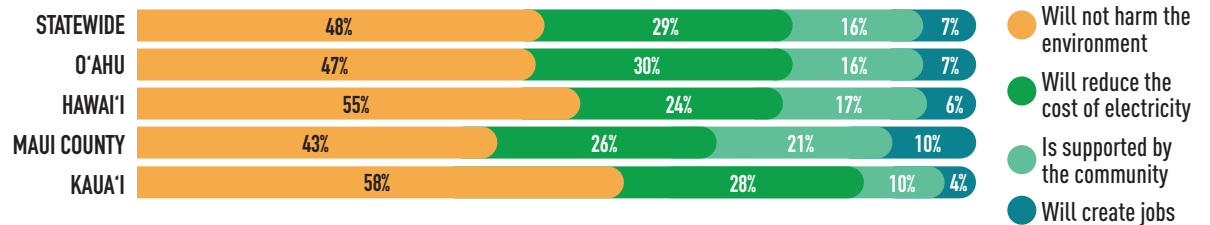
**QUESTION:** *How would you feel about a utility-scale geothermal power plant being built in your town/community if it meant your electricity bill would be, at least \$30/\$65/\$98 lower each month?*

- Support for geothermal rises dramatically when potential electricity bill savings increase

		SUPPORT PERCENTAGE INCREASE				
SAVINGS PER MONTH		STATEWIDE	O'AHU	HAWAI'I	MAUI COUNTY	KAUAI
	\$30	+19%	+36%	+21%	+18%	+21%
	\$65	+30%	+29%	+32%	+30%	+31%
	\$98	+35%	+36%	+40%	+34%	+40%

**QUESTION:** *Which one of the following is most important to you in deciding whether to support a utility-scale geothermal plant in your town/community?*

- Environmental impact was the most important factor in support of geothermal



## Resources

To learn more about Ulupono Initiative's Energy Survey and geothermal, see below:

### Ulupono Initiative's Energy Survey

[ulupono.com/project-list/statewide-energy-survey/](https://ulupono.com/project-list/statewide-energy-survey/)

### Hawai'i State Energy Office

[energy.hawaii.gov/what-we-do/energy-landscape/renewable-energy-resources/](https://energy.hawaii.gov/what-we-do/energy-landscape/renewable-energy-resources/)

### U.S. Department of Energy

[www.energy.gov/eere/geothermal/geothermal-basics](https://www.energy.gov/eere/geothermal/geothermal-basics)



Scan QR code for link to survey results online.



## Young Democrats of Hawai'i

**Executive Board:** March 11, 2025

Cori Terayama  
**President**

**RE: Testimony in Support of HB1020 HD2, Relating to Program to Characterize Carbon Sequestration Potential and Underground Water Resources Statewide.**

Cameron Deptula  
**Vice-President**

**Hearing Date: Tuesday, March 11, 2025 at 3:00 PM**  
**Conference Room: 016**

Jimmy Nguyen  
**Secretary**

Aloha e Chair Wakai, Chair Gabbard, Vice Chair Chang, Vice Chair Richards III, Members of the Senate Committee on Energy and Intergovernmental Affairs, and Members of the Senate Committee on Agriculture and Environment,

Isaiah Baclaan  
**Treasurer**

The Young Democrats of Hawai'i (YDHI) **SUPPORTS HB1020 HD2, RELATING TO PROGRAM TO CHARACTERIZE CARBON SEQUESTRATION POTENTIAL AND UNDERGROUND WATER RESOURCES STATEWIDE.**

Cindy Ing  
**Young Democrats of America National Committeewoman**

HB431 HD2 would establish a Carbon Sequestration and Underground Water Resource Characterization Program via slim hole bores and requires a related statewide environmental assessment.

Maria Glodilet Rallojay  
**Membership and Events Director**

YDHI supports this bill because it would advance geothermal exploration in Hawai'i and open the door for commercial development of geothermal energy as a critical component of our future in renewable energy. Reliance on petroleum-based fields for electricity is costly and environmentally unsustainable. By prioritizing geothermal energy development, we have the opportunity to stabilize our grid, enhance the State's energy independence, and make meaningful progress toward our renewable energy goals.

Dave Nagaji  
**Campaign Director**

Beyond environmental benefits, expanding geothermal energy promotes local job creation, attracts investments into the State, and strengthens long-term energy security. With a dependable, locally sourced energy solution, we can reduce volatility in energy costs while ensuring a cleaner and more resilient future for our communities.

Jennifer Tse  
**Policy and Research Director**

This bill is especially important to young adults as we are deeply invested in a sustainable future. We inherit the consequences of today's energy choices, and we strongly support clean, renewable solutions that protect our environment, create long-term job opportunities, and ensure affordable energy for our communities.

YDHI is an organization whose mission is to increase the political strength of young democrats between 18 and 35 years old by providing opportunities for





## Young Democrats of Hawai'i

civic engagement, political advocacy, and participation in the Democratic Party of Hawai'i. YDHI consists of over 1,600 members.

Mahalo nui loa for the opportunity to testify in **SUPPORT** of HB1020 HD2  
RELATING TO PROGRAM TO CHARACTERIZE CARBON  
SEQUESTRATION POTENTIAL AND UNDERGROUND WATER  
RESOURCES STATEWIDE.

**HB-1020-HD-1**

Submitted on: 3/10/2025 11:46:37 AM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Roberta Cabral	Testifying for Innovations Development Group (IDG)	Oppose	Written Testimony Only

## Comments:

I do not support HB1020 in its current version and prefer the bill SB1269 instead. While HB1020 is commendable in its objectives, SB1269 offers a more comprehensive and effective framework for geothermal exploration and development on Hawai‘i Island. This measure, under the leadership of DBEDT in collaboration with UH and Waikā Consulting—a Native Hawaiian-owned entity with a team of world-renowned geothermal experts—focuses not only on exploration but also on delivering commercial outcomes.

SB1269 prioritizes Hawai‘i Island, which possesses the richest geothermal resources in the state. Waikā Consulting brings over a decade of experience in geothermal exploration, including recent work for DHHL, and has established long-standing community relationships. Its parent company, IDG, successfully implemented a community-centered development model in New Zealand for Māori Trusts, ensuring cultural respect and long-term economic benefits. This proven model can be adapted to Hawai‘i to deliver a 50-100 MW power plant at the conclusion of exploration, providing firm renewable energy and reducing dependence on imported fossil fuels.

SB1269’s roadmap for phased exploration and development is the path for the State to follow. This approach includes clear benchmarks and timelines to ensure transparency and measurable outcomes for policymakers while fostering investor confidence. The ultimate goal is to provide relief to Hawai‘i Island residents through lower energy costs, economic growth, and job creation—all of which align with DBEDT’s mission.

For these reasons, I respectfully urge the Legislature to support bill SB1269 instead of HB1020. This will empower Native Hawaiian leadership in resource management while advancing Hawai‘i’s energy independence and economic resilience.

**HB-1020-HD-1**

Submitted on: 3/10/2025 11:55:16 AM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Al Hackbarth	Testifying for Innovations Development Group (IDG)	Oppose	Written Testimony Only

## Comments:

As an executive of Innovations Development Group (IDG), I support SB1269 instead of HB1020. While HB1020 demonstrates a strong commitment to advancing geothermal exploration and development Statewide, SB1269 presents a more effective and equitable approach, particularly for Hawai‘i Island, the location of proven geothermal resources. It also provides a community-centered, results-driven framework that prioritizes collaboration with Native Hawaiian stakeholders, ensuring the process honors cultural values, safeguards community interests, and delivers real, lasting benefits to those most affected by energy inequities.

SB1269 is spearheaded by the Department of Business, Economic Development, and Tourism (DBEDT), in partnership with the University of Hawai‘i and Waikā Consulting—an esteemed Native Hawaiian-owned firm with internationally recognized expertise in geothermal exploration. Waikā Consulting has a decade of experience conducting exploratory work, including key projects for the Department of Hawaiian Home Lands (DHHL), and has cultivated valuable relationships with the local community. This measure is focused specifically on Hawai‘i Island, the region with the state's richest geothermal resources, and is designed to apply a proven, community-centered model for development. Waikā Consulting’s parent company, IDG, has successfully implemented this model in New Zealand, working with Māori Trusts to maximize the benefits of geothermal resources. This approach ensures that local communities are not only consulted, but are active participants in decision-making, thereby becoming direct beneficiaries of economic growth.

Incorporating the provisions of SB1269 into HB1020 will transform geothermal exploration from a mere resource extraction initiative to a pathway for achieving energy justice. Hawai‘i Island residents, who are burdened with the highest energy costs in the state, are facing financial instability, which contributes to the migration of families seeking more affordable living conditions. The development of a 50-100 MW geothermal power plant—executed through a culturally respectful and community-driven process—has the potential to address these energy inequities, provide reliable renewable energy, and stimulate economic development. This aligns directly with DBEDT’s mission and contributes to Hawai‘i’s broader goals of environmental sustainability and social equity.

For these reasons, I urge lawmakers to support bill SB1269. This will ensure that Native Hawaiian values are centered in the management of Hawai‘i’s natural resources while delivering

meaningful relief to underserved communities and fostering long-term economic and social resilience for the islands.

**HB-1020-HD-1**

Submitted on: 3/7/2025 8:14:41 PM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jacob Wiencek	Individual	Support	Written Testimony Only

Comments:

Aloha Committee Members,

Hawaii is at the frontlines of human-driven climate change. We've got to take strategic measures to protect our state from environmental degradation and the harms associated with climate change. This is a very promising program. I urge the Committee to support this bill!

**HB-1020-HD-1**

Submitted on: 3/8/2025 6:34:50 PM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Ann Chung	Individual	Support	In Person

Comments:

I believe that DBEDT IS THE CORRECT AGENCY FOR GEOTHERMAL. We have spent 50 yrs studying it-we need to look at a COMMERCIAL OUTCOME-which is DBEDT's kuleana. I strongly PREFER SB1269 the Senate version -which I feel holds the most promise for a commercial outcome. We want a power plant on the big island-no more papers or studies!



**HB-1020-HD-1**

Submitted on: 3/9/2025 8:36:44 AM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Alice Kim	Individual	Support	Written Testimony Only

## Comments:

With research experience in Hawaii's groundwater resources and basalt carbon sequestration, the Hawaii Groundwater and Geothermal Resources Center at the University of Hawaii at Manoa should execute the slim-hole resource characterization under the administrative oversight of the Hawaii State Energy Office. Doing so will enable the State to further benefit from HGGRC's research and expertise.

Through HGGRC, the state's most prominent earth scientists are researching Hawaii's groundwater resources. HGGRC obtained land access for research from dozens of landowners across the state. For research equipment, HGGRC has access to \$1 million worth of geophysical equipment and a \$3 million drill rig (Notably, Puna Geothermal Venture is the only other geothermal-focused organization in Hawaii that has a suitable drill rig).

HGGRC is now exploring carbon sequestration with Hawaii's basaltic rocks, which make up almost all of Hawaii's land mass. As the first organization in Hawaii to conduct this research, HGGRC is collaborating with research institutions outside of Hawaii. One of them, Lawrence Berkeley National Laboratory, has already developed considerable expertise in this type of carbon sequestration.

Please support HGGRC and UH in facilitating Hawaii's preeminent earth scientists and continuing Hawaii's cutting-edge research in geothermal and carbon sequestration.

**HB-1020-HD-1**

Submitted on: 3/9/2025 12:57:15 PM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Dawn Morais Webster Ph.D.	Individual	Support	Written Testimony Only

## Comments:

I support this bill if amended to incorporate language from SB1269.

HB1020, while laudable in its goals, should incorporate the language of SB1269 which is a better vehicle for the exploration of our underground resources. SB1269, under the auspices of DBEDT, in collaboration with UH, and with a native Hawaiian partner in Waika Consulting, and its world-recognized geothermal experts from New Zealand, is focused not just on exploration but on delivering a commercial outcome after the identification of the most promising sites on Hawai'i island. SB1269 proposes a focused effort on Hawai'i island which has the richest geothermal resources. Waika can apply the community-centered model for development that its parent company, IDG used successfully in New Zealand on behalf of the Maori Trusts that own the geothermal assets. Waika has spent more than a decade conducting exploratory work, most recently on behalf of DHHL. It has been in dialogue with the community for years on this and is better positioned to work with DBEDT to deliver a 50-100W power plant at the end of the exploration. That is what will bring relief to Hawai'i island residents and businesses, slow the exodus of families in search of more affordable places to live, and stimulate economic growth which is DBEDT's mission. For all those reasons, I respectfully request that this bill be amended to incorporate the language of SB1269 and that you pass the amended bill. Mahalo.

**HB-1020-HD-1**

Submitted on: 3/9/2025 3:57:14 PM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Noel Morin	Individual	Support	Written Testimony Only

Comments:

**SUPPORT FOR HB1020 HD1 (RELATING TO A PROGRAM TO CHARACTERIZE CARBON SEQUESTRATION POTENTIAL AND UNDERGROUND WATER RESOURCES STATEWIDE)**

Dear Chairs Wakai and Gabbard, Vice-Chairs Chang and Richards, and members of the Committees,

My name is **Noel Morin**. I support HB1020 HD1, which *establishes a Carbon Sequestration and Underground Water Resource Characterization Program via slim hole bores and requires a related statewide environmental assessment*.

All efforts designed to enable a sustainable and resilient Hawaii must be explored, given the nature of our dependence on imports and the political and economic churn beyond our shores. This measure will help us better understand the valuable resources underground across the state. This includes water, heat, and the ability to capture and store minerals like carbon. We have valuable local resources - people, knowledge, and infrastructure - at UH Manoa Groundwater and Geothermal Resource Center, a group studying these opportunities. This measure will help us understand our groundwater and mineral sequestration opportunities and how they can be leveraged appropriately.

Please pass this bill.

Mahalo for the opportunity to testify.

Noel Morin

Climate, Sustainability, and Resilience Advocate

Hilo, Hawai'i

**HB-1020-HD-1**

Submitted on: 3/10/2025 9:57:49 AM

Testimony for EIG on 3/11/2025 3:00:00 PM

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

Comments:

STRONG SUPPORT!!! GREAT IDEA. MAHALO!



Monday, February 3, 2025, 1:05 pm

Senate Committees on Energy and Intergovernmental Affairs and Agriculture and Environment  
HOUSE BILL 1020 – RELATING TO A PROGRAM TO CHARACTERIZE CARBON SEQUESTRATION POTENTIAL  
AND UNDERGROUND WATER RESOURCES STATEWIDE.

Position: Support Intent; seek clarification of Senate's understanding.

Me ke Aloha, Chairs Wakai and Gabbard, Vice-Chairs Chang and Richards, and Members of the  
Committees on Energy and Intergovernmental Affairs and Agriculture and Environment.

HB1020 has a rather confusing title and purpose. Previous testimony appropriately responded to the likely real purpose, which is to explore for geothermal resources. As a matter of general knowledge, carbon sequestration is a major deposition of processed carbon capture, an absurd idea for Hawaii, as carbon capture is a particularly expensive technology using large amounts of energy derived from fracking and producing excessive greenhouse gases to the atmosphere. Moreover deposition is also energy intensive and extremely technical and problematic. Details available upon request.

Water resources in Hawaii are well-known and a substantial database is available to every driller.

Geothermal resources, on the other hand, were explored in the early 1970s, finding that while warm spots proliferate, none are commercially feasible except near the active volcano. Commercial geothermal has not advanced to the point of harnessing weak hotspots, so while the stated purpose may have value, it is not supported by likely capital ventures.

Solar, wind, and battery storage, on the other hand, have been racing into the future and becoming cheaper by the day, therefore attracting Hawaii's most likely capital ventures.

As a 25-year alumnus of the Water Commission (Hydrologist, retired), and an intern at DPED (as it was called then) before that, as well as having terms with the Department of Health and at the Legislature itself, I have the advantage of having watched these developments over several decades.

You are surely aware that drilling 7-inch holes are potential sources of contamination to our precious drinking water aquifers, and are therefore regulated under State law, ensuring that potential environmental impacts are fully examined and that proper sealing is done immediately upon completion of gathering data.

Recent geothermal prospecting on Lāna'i is a very recent example of definitive results for commercial consideration. It should be used as a guide for evaluating the utility of this bill.

Mahalo for the opportunity to address this issue,

/s/ Charley Ice, Hoa'āina, Waimalu, O'ahu;

retired Hydrologist, Commission on Water Resource Management (25 years) and Planner at DHHL (10 years);

former Chair of O'ahu Democratic Party Region 5 ('Aiea-Pearl City);

**HB-1020-HD-1**

Submitted on: 3/10/2025 11:59:32 AM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Mililani Trask	Individual	Oppose	Written Testimony Only

## Comments:

While HB1020 represents a laudable initiative in the realm of geothermal exploration and development, I am compelled to express my preference for the passage of SB1269, as it presents a more comprehensive, equitable, and community-centered framework that more effectively addresses the distinctive needs of Hawai‘i Island, led by DBEDT, the State agency providing oversight for economic development for Hawaii. SB1269 places significant emphasis on collaboration with Native Hawaiian stakeholders, ensuring that the process upholds cultural values, protects the interests of local communities, and delivers meaningful benefits to those who have been disproportionately impacted by energy inequities.

This measure is specifically focused on Hawai‘i Island, which harbors the state’s most abundant geothermal resources, and proposes the implementation of a proven, community-driven model for development, while having the highest cost of electricity statewide. The proposed framework ensures that local communities are not merely consulted, but are actively engaged in decision-making and serve as direct beneficiaries of the resulting economic opportunities.

The incorporation of SB1269’s provisions into HB1020 would transform geothermal exploration from a simple resource extraction endeavor into a mechanism for advancing energy justice. Residents of Hawai‘i Island already bear a disproportionate burden in terms of high energy costs, which exacerbates financial instability and drives many families to seek more affordable living options elsewhere. A 50-100 MW geothermal power plant, developed through a culturally respectful and community-driven process, holds the potential to mitigate these inequities, provide reliable renewable energy, and foster economic growth. This aligns with DBEDT’s mission and further advances Hawai‘i’s overarching goals of environmental sustainability and social equity.

In consideration of the foregoing, I respectfully urge lawmakers to prioritize SB1269 over HB1020. Passage of SB1269, in its entirety, will ensure that Native Hawaiian voices remain integral to the management of Hawai‘i’s natural resources while delivering meaningful relief to underserved communities and cultivating long-term resilience for the islands.



**HB-1020-HD-1**

Submitted on: 3/10/2025 12:03:13 PM

Testimony for EIG on 3/11/2025 3:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Ryan Matsumoto	Individual	Oppose	Written Testimony Only

## Comments:

Although HB1020 represents a positive step toward geothermal exploration and development, I believe SB1269 offers a more comprehensive, equitable, and community-focused approach that more effectively addresses the specific needs of Hawai‘i Island. SB1269 emphasizes collaboration with Native Hawaiian stakeholders, ensuring the process respects cultural values, safeguards community interests, and delivers tangible benefits to those most impacted by energy disparities.

SB1269 is being led by the Department of Business, Economic Development, and Tourism (DBEDT), in partnership with the University of Hawai‘i and Waikā Consulting, a Native Hawaiian-owned company with globally recognized expertise in geothermal exploration. With over a decade of experience in the geothermal sector, Waikā Consulting has built meaningful, long-term relationships with the local community.

This initiative specifically targets Hawai‘i Island, home to the state's most significant geothermal resources, and applies a proven, community-centered model of development. Waikā Consulting’s parent company, Innovations Development Group (IDG), has successfully implemented this model in New Zealand, benefiting Māori Trusts that own geothermal assets. This approach ensures that local communities are not only consulted but are actively involved in decision-making and become direct beneficiaries of the resulting economic opportunities.

Integrating SB1269 into HB1020 would ensure that geothermal exploration is not simply a resource extraction initiative but rather a means of advancing energy justice. Hawai‘i Island residents, who already bear the disproportionate burden of high energy costs, face financial instability, driving many families to seek more affordable living conditions elsewhere. A 50-100 MW geothermal power plant, developed through a culturally sensitive and community-driven process, has the potential to reduce these inequities, provide reliable renewable energy, and stimulate economic growth. This aligns with DBEDT’s objectives and supports Hawai‘i’s broader goals of environmental sustainability and social equity.

For these reasons, I strongly urge lawmakers to support SB1269 in place of HB1020. Adopting SB1269 would ensure that Native Hawaiian voices and values remain central in the management of Hawai‘i’s natural resources, while providing meaningful relief to underserved communities and fostering long-term energy security and resiliency for our island State.



# Sustainable Energy Hawai'i

sustainableenergyhawaii.org  
info@sustainableenergyhawaii.org

**LATE**

March 11, 2025

## TESTIMONY in SUPPORT of HB1020 HD1

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

Dear Chairs Wakai, Gabbard , Vice Chairs Chang, Richards and members of the committees,

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

**SEH supports HB1020 HD1**, which *"Establishes a Carbon Sequestration and Underground Water Resource Characterization Program via slim hole bores and requires a related statewide environmental assessment."*

Hawai'i likely has accessible water and geothermal resources statewide. According to the Hawai'i Groundwater and Geothermal Resource Center (HGGRC) at UH Manoa, the detailed characterization of its subsurface geology remains virtually unknown outside of Hawai'i Island's East Rift Zone. Historically, this has been due to lack of financial support. If passed, HB1020 HD1 will fund some, but not all, of the data acquisition needed to inform development decisions in Hawaii. We encourage our state legislature to appropriate this funding furthering our progress toward developing water and geothermal resources. The collecting of subsurface geophysical data, such as temperature, subsurface composition, and the presence of water will further inform geothermal development decisions in Hawai'i.

Additionally, SEH supports a broad statewide policy for the funding of cost effective, qualified geophysical and geothermal research entities such as HGGRC to characterize our subsurface and geological resources for the purpose of effectively supporting commercial development.

Hawaiian self-sufficiency in regard to water, food, and energy is an urgent goal, one that will benefit all who call Hawai'i home for generations to come.

Thank you for this opportunity to testify.

Respectfully,

Keith Neal  
Policy Lead  
Sustainable Energy Hawai'i