



SB458 SD2 HD2
RELATING TO GEOTHERMAL ROYALTIES
House Committee on Finance

April 3, 2023

2:30 PM

Room 308

The Office of Hawaiian Affairs (OHA) **OPPOSES** SB458 SD2 HD2, which would establish the University Innovation and Commercialization Initiative Special Fund for geothermal royalties. **OHA takes this opportunity to respectfully remind the Legislature that Native Hawaiians maintain significant socio-political-economic-environmental interests related to tūtū Pele and her connection to the geothermal systems of the Hawaiian Islands; interests that have been undermined by the most recent amendment to this measure.**

OHA provides its opposition to the fact that additional funding for Native Hawaiians had been set-aside in contemplation of Native Hawaiian interests and then suddenly removed – OHA asks that the regressive amendment be reversed by removing the following language from Page 4, lines 13-14, which states:

“...subject to Act 178, Session Laws of Hawaii 2006[.]”

OHA notes that the Committee Report SB458_HD1_HSCR1327_ stated that the House Committees on Energy & Environmental Protection and Water & Land amended SB458 SD2 by “ensuring that the portion of geothermal royalties paid to the Office of Hawaiian Affairs is consistent with existing law regarding payment of ceded land revenues to the Office of Hawaiian Affairs.” **OHA wishes to emphasize that the funding sources utilized by OHA to ever-seek the betterment of conditions of Native Hawaiians is NOT solely limited to its Legislatively capped pro rata portion of the ceded lands revenue (which is what Act 178, SLH 2006 addresses).** The Hawai‘i State Constitution states that OHA shall exercise power as provided by law:

“to manage and administer the proceeds from the sale or other disposition of the lands, natural resources, minerals and income derived from whatever sources for [Native Hawaiians] including all income and proceeds from that pro rata portion of the trust[.]¹

The Legislature, in its previous draft, sought to provide additional funding to OHA in fulfilment of the State’s trust obligations to Native Hawaiians through its dedication of 20% of the geothermal royalties consistent with OHA’s constitutional mandate. **Here, this Chamber has removed that dedication of funding, essentially removing that potential for**

¹ Haw. Stat. Con. Article XII, Section 6 (1978).



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OHA to better address the needs of Native Hawaiians. OHA is deeply concerned that Native Hawaiians and OHA, as an agency mandated to serve Native Hawaiians, must fight so hard for justice – in their own homeland.

As the principal public agency in the State responsible for the betterment of conditions of Native Hawaiians,² OHA wishes to emphasize that Native Hawaiian land claims, which include claims to the natural and cultural resources therein, are still outstanding and have yet to be resolved.³ The Legislature, in recognizing the historical special political relationship between the Native Hawaiian people and the United States, as well as understanding the historical injustices that have and continue to create systems of inequity and disparities faced by Native Hawaiians, enshrined, within the Constitution⁴ and statutes of the State, a series of legal frameworks and instruments to identify the State’s trust obligations to the Native Hawaiian people.⁵ These trust obligations extend to compensatory mechanisms for Native Hawaiians, which include legal mandates to a share of the income and proceeds from the public land trust⁶ and proceeds from natural resources, minerals and income derived from whatever other sources for Native Hawaiians.⁷

Native Hawaiians continue to endure inequities and disparities that stem from unresolved historical injustices⁸ – injustices that established systems of oppression and institutions of racism that have yet to be dismantled and which persist in their severing of Native Hawaiians from their ancestral lands, their annihilation of Native Hawaiian presence in the Hawaiian Islands, and their attempted erasure of Native Hawaiian identity.⁹ The State of Hawai‘i, on the condition of its admission to the Union,¹⁰ was obligated with an extra duty

² Haw. Rev. Stat. §10.

³ “Whereas, the indigenous Hawaiian people never directly relinquished their claims to their inherent sovereignty as a people or over their national lands to the United States, either through their monarchy or through a plebiscite or referendum[.]” Pub. Law 103-150 (1993).

⁴ Haw. Stat. Con. Article XII (1978).

⁵ Haw. Rev. Stat. §10H.

⁶ Pub. L. 86-3, 73 Stat. 4; Hawai‘i Admissions Act of 1959; Haw. Stat. Con. Article XII, Sec. 4-6 (1978).

⁷ Haw. Stat. Con. Article XII, Sec. 6 (1978).

⁸ Pub. L. 103-150 (1993), 107 Stat. 1510 “Apology Resolution.”

⁹ “If we are ever to have peace and annexation the first thing to do is to obliterate the past,” stated by Samuel Mills Damon, Vice President of the Provisional Government and Executive Council for the Republic of Hawai‘i, Council of State (Provisional Government of the Hawaiian Islands, 1895). 26 November 1895. Hawaii State Archives Series 424 Vol. 4.

¹⁰ Pub. L. 86-3, 73 Stat. 4; Hawai‘i Admissions Act of 1959.



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of care to the Native Hawaiian people,¹¹ as a result of these historical injustices. The State reinforced that extra duty of care for the betterment of conditions of Native Hawaiians by enshrining this founding principle within the Hawai‘i State Constitution.¹² The State has continuously acknowledged its extra duty of care to the Native Hawaiian people through additional statutory obligations vested in OHA¹³ and in recognition of Native Hawaiians as the only indigenous, aboriginal, and maoli people of Hawai‘i.¹⁴

Despite the intractable traverse that far-too-many Native Hawaiians must endure, which is most evident in the diasporic conditions¹⁵ that have priced out Native Hawaiians from their homelands,¹⁶ or in the myriad of onerous health disparities faced by Native Hawaiians still hanging on for survival in these islands,¹⁷ this State will occasionally invoke policies and proposals that undermine its extra duty of care to the Native Hawaiian people. **OHA asks the Legislature, as it has done many times before, to recognize and uphold its extra duty of care for the betterment of conditions of Native Hawaiians.**

The majority of Native Hawaiian families, in Hawai‘i, are unable to makes ends meet,¹⁸ with 63% of Native Hawaiians reporting that they are finding it difficult to get by.¹⁹

¹¹ Id. at §5(f).

¹² Haw. Stat. Con. Art. XII, Section 4-7 (1978).

¹³ Haw. Rev. Stat. §10.

¹⁴ Haw. Rev. Stat. §10H-1.

¹⁵ “Hawai‘i has rapidly transformed economically, socially, and politically, creating a place that is unable to support a thriving Native Hawaiian community. This has resulted in a Native Hawaiian diaspora as individuals and families move away from the islands in search of economic and educational opportunities. This diaspora presents a modern challenge to Native Hawaiian identity and culture, bringing separation of people from each other, from the land, and from the ancestral home,” Ciera Pagud, Shawn Kana ‘iaupuni, Wendy Kekahio, *Eia Hawai‘i, he Moku: Exploring Native Hawaiian Migration Patterns Past to Present*, Dec. 2022, p.11.

¹⁶ “Hawai‘i’s economic conditions, specifically job availability and career advancement, play a large role in overall [Native Hawaiian out-migration] decisions; More Native Hawaiian participants seek better paying jobs outside of Hawai‘i as a result of struggling financially than non-Hawaiians,” Ciera Pagud, Shawn Kana ‘iaupuni, Wendy Kekahio, *Shifting Sands and Economic Currents Affecting the Decision to Leave Hawai i*, Dec. 2022, p.2.

¹⁷ “Native Hawaiians have a disturbingly higher rate of chronic diseases than many other ethnic groups and the general population in Hawai‘i and the larger U.S. While the leading causes of death are generally the same, the rates of Native Hawaiians afflicted with chronic diseases are greater and occur a decade earlier. These rates are disturbingly three times greater than for the general population of Hawai‘i.” Department of Native Hawaiian Health, John A. Burns School of Medicine, *Assessment and Priorities for the Health and Well-Being in Native Hawaiians and Pacific Islanders*, 2020, p.9.

¹⁸ Aloha United Way | United for ALICE, *ALICE in Hawai ‘i: 2022 Facts and Figures*, Nob. 2022, p.6.

¹⁹ Id. at 9.



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RELATING TO GEOTHERMAL ROYALTIES
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Native Hawaiians have the lowest household income.²⁰ Native Hawaiians have the highest poverty rates for individuals and families.²¹ Native Hawaiians make less money,²² with lower average earnings for both men and women.²³ Native Hawaiians have the highest rate of using public assistance and homeless services.²⁴ Native Hawaiians are overrepresented among the homeless in Hawai‘i.²⁵ OHA is deeply concerned with Native Hawaiians being driven out of Hawai‘i by economic instability stemming from socio-political-economic upheaval, which has largely disconnected Native Hawaiians from their ‘āina for more than a century. Today, more Native Hawaiians live outside of the Hawaiian Islands, far beyond the boundaries of their own homeland.²⁶

OHA asks the Legislature to take into consideration that this measure would better serve the rights and interests of the Native Hawaiian people by dedicating a fair portion of the proceeds and income from the exploitation of geothermal resources to the Native Hawaiian people. Accordingly, the calculation of this fair portion should be representative of the comparative percentage of the Native Hawaiian population to the total resident population (approximately 38%);²⁷ the Native Hawaiian population should be calculated in its totality, as the “only indigenous, aboriginal, maoli people of Hawai‘i, who should not be counted out for being driven out of these Islands.”²⁸ **Finally, the respective percentages of the income and proceeds from geothermal resource exploitation from public lands should be managed and**

²⁰ Dept. of Business, Economic Development and Tourism, *Demographic, Social, Economic, and Housing Characteristics for Selected Race Groups in Hawaii*, Mar. 2018, p.3.

²¹ Id. at 13.

²² OHA Report, *Affordable Housing for Hawai‘i and Native Hawaiians: Exploring Ideas and Innovation*, Aug. 2020, p.10.

²³ Dept. of Native Hawaiian Health, John A. Burns School of Medicine, *Assessment and Priorities for the Health and Well-Being in Native Hawaiians and Pacific Islanders*, 2020, p.12.

²⁴ Id.

²⁵ Partners In Care, *2022 Point In Time Count*, p.7.

²⁶ “Estimates from the American Community Survey showed that in 2011, there were about 296,400 Native Hawaiians in Hawai‘i and about 221,600 on the continental U.S. Just a decade later, those numbers flipped. In 2021, there were about 309,800 Native Hawaiians in Hawai‘i and about 370,000 in other states,” Hawaii Public Radio, *More Native Hawaiians Flock to mainland cities and leave Hawai‘i*, Jan. 23, 2023, *citing high costs*, citing the US Census Bureau’s American Community Survey 2021.

²⁷ There are approximately 309,807 Native Hawaiians living in the State of Hawai‘i. The total estimated Native Hawaiian population is 680,353. The U.S. Census Bureau 2022 Population Estimates of the State of Hawai‘i is 1,440,196. Based on these numbers, the State population would be 1,810,742 if Native Hawaiians lived in their own homeland. Accordingly, the Native Hawaiian population percentage would be approximately 38%.

²⁸ Haw. Rev. Stat. §10H-1.



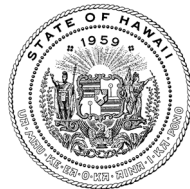
SB458 SD2 HD2
RELATING TO GEOTHERMAL ROYALTIES
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administered by OHA in accordance with the State Constitution.²⁹ The Legislature previously determined that OHA should receive 20% of the geothermal royalties, which OHA now asks the Legislature to restore.

OHA appreciates this opportunity to testify on SB458 SD2 HD2 with the hope that the State will continue to uphold its trust obligations to the Native Hawaiian people, who, due to the ongoing impacts of historical justice, continue to face inequities and disparities at a disproportionately higher rate than all others in the State of Hawai‘i. Mahalo nui loa.

²⁹ Haw. Stat. Con. Art. Sec. 4-6 (1978).

JOSH GREEN, M.D.
GOVERNOR



LUIS P. SALAVERIA
DIRECTOR

SABRINA NASIR
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
Ka 'Oihana Mālama Mo'ohelu a Kālā
P.O. BOX 150
HONOLULU, HAWAII 96810-0150

ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT

WRITTEN ONLY
TESTIMONY BY LUIS P. SALAVERIA
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE HOUSE COMMITTEE ON FINANCE
ON
SENATE BILL NO. 458, S.D. 2, H.D. 2

April 3, 2023
2:30 p.m.
Room 308 and Videoconference

RELATING TO GEOTHERMAL ROYALTIES

The Department of Budget and Finance (B&F) offers comments on this bill.

Senate Bill (S.B.) No. 458, S.D. 2, H.D. 2, adds a new section to Chapter 201, HRS, to: 1) establish the Geothermal Energy Resources Development Special Fund (GERDSF) within the Department of Business, Economic Development and Tourism (DBEDT); 2) set the allowable sources of revenues and uses of funds for the GERDSF; and 3) set reporting requirements for the GERDSF. The bill also amends Section 182-7, HRS, to amend the distribution of geothermal resources royalties received by the State to be 30% to the county in which the mining operations are situated and with certain parameters, 20% to the GERDSF, 30% to the Department of Land and Natural Resources, and 20% to the Office of Hawaiian Affairs.

As a matter of general policy, B&F does not support the creation of any special fund which does not meet the requirements of Section 37-52.3, HRS. Special funds should: 1) serve a need as demonstrated by the purpose, scope of work and an explanation why the program cannot be implemented successfully under the general

fund appropriation process; 2) reflect a clear nexus between the benefits sought and charges made upon the users or beneficiaries or a clear link between the program and the sources of revenue; 3) provide an appropriate means of financing for the program or activity; and 4) demonstrate the capacity to be financially self-sustaining. Regarding S.B. No. 458, S.D. 2, H.D. 2, it is difficult to determine whether the proposed GERDSF will be self-sustaining.

Thank you for your consideration of our comments.

SB-458-HD-2

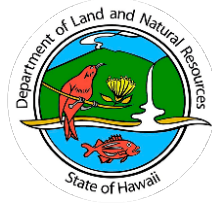
Submitted on: 4/2/2023 10:54:06 AM

Testimony for FIN on 4/3/2023 2:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Russell Tsuji	DLNR	Comments	Remotely Via Zoom

Comments:

Request for zoom link to testify on behalf of DLNR. Joint written testimony (on behalf of DLNR, County of Hawaii, Hawaii State Energy Office, and UH) will be submitted on DLNR's Testimony account and additional staff will be present at the hearing. Thank you!



**HAWAI'I
STATE
ENERGY
OFFICE**



UNIVERSITY of HAWAI'I
SYSTEM

**Joint Testimony of
DEPARTMENT OF LAND AND NATURAL RESOURCES
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT
AND TOURISM – HAWAI'I STATE ENERGY OFFICE**

UNIVERSITY OF HAWAI'I

**Before the House Committee on
FINANCE**

**Monday, April 3, 2023
2:30 PM
State Capitol, Conference Room 308**

**In consideration of
SENATE BILL 458, SENATE DRAFT 2, HOUSE DRAFT 2
RELATING TO GEOTHERMAL ROYALTIES**

Senate Bill 458, Senate Draft 2, House Draft 2 proposes to: (1) establish the geothermal energy resources development special fund; (2) require annual reports to the Legislature; and (3) require that, for royalties from geothermal resources, thirty per cent (30%) be paid to the county where the geothermal mining operations are situated under certain conditions, thirty per cent be paid to the Department of Land and Natural Resources, twenty per cent be paid to the Office of Hawaiian Affairs (OHA), and twenty per cent (20%) be deposited into the Geothermal Energy Resources Development Special Fund. **The Department of Land and Natural Resources (DLNR), the Hawai'i State Energy Office (SEO) of the Department of Business, Economic Development and Tourism, and the University of Hawai'i (UH) jointly offers the following comments, and collectively requests the following amendment.**

DLNR, SEO, and UH (hereinafter referred to as "the Agencies") have come together on Senate Bill 458, Senate Draft 2, House Draft 2 in recognition of the importance of Hawaii Revised Statutes (HRS), Chapter 182 to all entities.

In working together with open and honest dialogue, and an appreciation for the mission and duties of each agency, the Agencies collectively propose the following split of geothermal royalties. Conditioned on the Counties' share being reduced by 7.5% (from the current 30% to 22.5%), DLNR is willing to decrease its share by up to 7.5% (from 50% in the existing HRS Section 182-7 to 42.5%) in the spirit of interagency collaboration and Hawai'i's sustainable future. SEO is willing to seek 15% rather than 20% (from 0% in the existing HRS Section 182-7 to 15%). It is the intent of SEO to transfer the funds to the UH's Hawaii Groundwater and Geothermal Resources Center (HGGRC). The Agencies recognize, respect, and do not seek to change OHA's 20% pro rata share of ceded land revenues, and instead recommend aforesaid reductions to the Counties' and DLNR's shares to meet the 15% share to SEO. We

cannot speak on behalf of any county, and understand Hawai'i County will be submitting its own testimony.

In the alternative, no change could be made to the current HRS Chapter 182, and exploration could be funded by a separate allocation from general funds. The amount of funds needed for geothermal exploration is in the millions and far exceeds what the geothermal royalties could provide. Therefore, if this measure proceeds, and if in future years the Legislature desires to provide higher levels of dedicated geothermal exploration funding to SEO and/or UH, the Agencies recommend creating a new dedicated funded source with a higher annual allocation, and restoring the prior split of 50% to DLNR, 30% to the County, and 20% to OHA.

The Agencies recognize that DLNR, pursuant to HRS Chapter 182, has a statutory obligation to regulate the use of minerals, including geothermal resources, as it is held in public trust. As such, DLNR bears 100% of the costs for processing, regulating, and managing geothermal leases, including oversight and monitoring of well drilling operations for exploration and safe development of the resource. Since Fiscal Year 2008, DLNR's Geothermal Mineral Resources Program costs (not including lease and lease management costs) has roughly equaled DLNR's 50% share of the royalties received during the same period. Decreasing DLNR's share to 42.5% will necessitate DLNR to cover costs by relying on general funds to carry out its mandate.

The Agencies also recognize that where a community is adversely impacted by development, there should be reciprocity, which can happen through county grants and other county or state projects serving the impacted community. Finally, the agencies recognize that UH's HGGRC has the expertise and equipment needed to conduct groundwater and geothermal exploration across the State and has been leading such exploration over past decades.

Mahalo for the opportunity to provide joint testimony with proposed amendments.

SB-458-HD-2

Submitted on: 4/2/2023 11:24:50 AM

Testimony for FIN on 4/3/2023 2:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Douglass S. Adams	Department of Research & Development, County of Hawaii	Support	Written Testimony Only

Comments:

Chair Yamashita, Vice Chair Kitagawa, and Members of the Committee on Finance:

Thank you for the opportunity to testify in support of SB 458 SD2 HD2. The County believes that research regarding the geothermal potential on Hawaii Island will be a key component of the state's decarbonization efforts, while also providing reduced energy costs, more quality jobs, and enhanced equitable economic revitalization. The current bill also continues support for the population in the immediate area of the Puna facility, ensuring that increased geothermal research, while vital, does not disproportionately impact that population.

The County encourages the Committee to move SB 458 SD2 HD2 forward to the House with a POSITIVE recommendation for passage.

very respectfully,

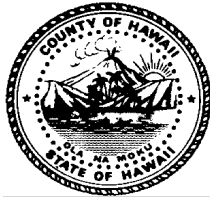
Douglass S Adams

Director, Department of Research and Development

County of Hawaii

Ashley L. Kierkiewicz
County Council District IV

*Policy Committee on Planning,
Land Use and Development – Chair*



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*Policy Committee on Infrastructure
and Assets – Vice-Chair*

HAWAI‘I COUNTY COUNCIL

25 Aupuni Street • Hilo, Hawai‘i 96720

April 3, 2023

House Committee on Finance

Rep. Kyle Yamashita, Chair
Rep. Lisa Kitagawa, Vice-Chair

RE: Support for SB 458 SD2 HD2, Relating to Geothermal Royalties

Aloha, Chair Yamashita, Vice-Chair Kitagawa, and Members of House Committee on Finance:

I write in **support of SB458 SD2 HD2**, which funds geothermal research and development using a portion of royalties paid to the State DLNR. I appreciate efforts in the March 22 CPC hearing to fully restore the County of Hawai‘i’s share of geothermal royalties back to 30% percent.

As the representative for the district where geothermal operations occur, it means a lot that the Legislature heard our concerns with original bill language and made strategic amendments along the way to ensure we continue to receive our fair share of resources as the community directly impacted by geothermal operations.

To date, our County has received nearly \$10.3 million in royalties that we have used to support the Geothermal Relocation and Community Benefits Program, which gives residents impacted by geothermal activities a pathway to permanent relocation, and supports the Lower Puna community through investments in things like infrastructure, public safety, and recreation. Royalties funded 27 household relocations, and has allowed us to build a transfer station in Pāhoā, purchase mass transit buses and an SCBA compressor, secure a County Council Office in Pāhoā, and paid for security at local parks among other things.

Lower Puna is one of the most socio-economically distressed communities in the State. We are still recovering from the 2018 Kīlauea eruption and coronavirus pandemic. We’ve worked hard over the last few years – County and community – to identify projects that will increase resilience, opportunities, improve quality of life, and plan to leverage our share of geothermal royalties to turn these ideas into a tangible reality. The County is more than happy to submit annual reports to the Legislature detailing how we spend our royalties. We are curious to know how other parties that receive royalties use their allocation as previous hearings on this bill raised concerns over how funds are being used (or not) and who benefits.

The County of Hawai‘i supports all efforts to invest in exploration and development of a suite of renewable energy sources to make Hawai‘i energy secure and to combat climate change. As State Legislators passionately advocate for more research and development in the geothermal arena, we are grateful that you would commit State DLNR royalties fund to this endeavor.

Cheers,

Ashley Lehaulani Kierkiewicz
COUNCIL MEMBER, DISTRICT IV - PUNA



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Representative Kyle Yamashita, Chair
Representative Lisa Kitagawa, Vice Chair
Committee on Finance

RE: SB 458 SD2 HD2 - Relating to Geothermal Royalties – In Support
Monday, April 3, 2023; 2:30 P.M.; Agenda #2
Conference room 308 & Videoconference

Aloha Chair Yamashita, Vice Chair Kitagawa, and Members of the Committee:

Servco is in support of SB 458 SD2 HD2, which establishes the geothermal energy resources development special fund; requires annual reports to the Legislature and requires that, for royalties from geothermal resources, thirty per cent be paid to the county where the geothermal mining operations are situated, thirty per cent be paid to the Department of Land and Natural Resources, twenty per cent be paid to the Office of Hawaiian Affairs, and twenty per cent be deposited into the geothermal energy resources development special fund.

Servco supports cost effective geothermal exploration. This measure will help the State move forward with a diversified renewable energy portfolio and help achieve its 100% renewable policy goal by 2045.

Thank you for the opportunity to offer comments in support.

Peter Dames
Executive Vice President



Email: communications@ulupono.com

HOUSE COMMITTEE ON FINANCE
Monday, April 3, 2023 — 2:30 p.m.

Ulupono Initiative supports SB 458 SD2 HD2, Relating to Geothermal Royalties.

Dear Chair Yamashita and Members of the Committee:

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 supports SB 458 SD2 HD2, which establishes the Geothermal Energy Resources Development Special Fund; requires annual reports to the Legislature; requires that, for royalties from geothermal resources, thirty per cent be paid to the county where the geothermal mining operations are situated, thirty per cent be paid to the Department of Land and Natural Resources, twenty per cent be paid to the Office of Hawaiian Affairs, and twenty per cent be deposited into the Geothermal Energy Resources Development Special Fund.

Hawai'i needs all viable forms of renewable energy to meet the 100% renewable portfolio standard by 2045. Wind and solar alone are not enough. Firm sources, such as geothermal, will also be necessary. Hawai'i also faces many competing demands for available land, and geothermal projects use the least amount of land per megawatt of renewable power produced.

Most residents seem to believe the Big Island is the only place in which geothermal energy can be commercially produced, and yet that assumption has never been thoroughly researched and confirmed. Ulupono supports the work of the Hawai'i Groundwater and Geothermal Resources Center, to further the discovery and development of geothermal resources. This bill will dedicate resources to the staffing and field work necessary for geothermal research into its potential. It makes good sense to use a modest amount of geothermal royalties to see if there is an opportunity to expand this firm, minimal land-impact form of renewable energy.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata
Director of Government Affairs

Investing in a Sustainable Hawai'i

SB-458-HD-2

Submitted on: 4/2/2023 7:30:22 AM

Testimony for FIN on 4/3/2023 2:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Richard Ha	DaRubbahSlippahGroup.	Support	Written Testimony Only

Comments:

Aloha Chair Lowen and Committee members

We support Sb458, SD2, HD2, except for housing the funds with the Hawai'i State Energy Office. It should be housed at the Hawai'i Groundwater and Geothermal Resource Center (HGGRC)

HGGRC are the worldwide experts on the unique geology of Hawai'i geothermal. We should not rely on mainland experts who don't know Hawaiian geothermal

Sincerely

Richard Ha

pres

DaRubbahSlippahGroup



**PO. Box 1058
Pepeekeo, HI 96783-1058**
www.sustainableenergyhawaii.org

COMMITTEE ON FINANCE
Senator Kyle T. Yamashita, Chair
Senator Lisa Kitigawa, Vice Chair

DATE: Monday, April 03, 2023

TIME: 2:30 PM

PLACE: Conference Room 308 & Videoconference

SB458 SD2 HD2 - Relating to Geothermal Royalties

Aloha Chairs Yamashita, Kitigawa and Members of the Committee on Finance,

Sustainable Energy Hawai'i (SEH) supports SB458 SD2 HD2. SEH is 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, locally sourced renewable energy and to that end, the creation of a thriving clean hydrogen economy.

Our support for SB458 stems from our belief that expanded geothermal power generation in the State of Hawai'i is essential to our collective, long-term energy security. We would like to add that stable consistent funding for geothermal research in the millions of dollars should be legislated as 'Essential Hawaii State Energy Policy', reasoned by the following comments.

Comments

Renewable Energy in the Near Term

- Hawaii, via RPS 2045, is pursuing the goal to become the first US state to achieve 100% renewable energy. SEH believes that in this pursuit the State must consider the sustainability, long-term reliability & affordability of the renewable energy systems being built today; solar and wind systems, both of which are intermittent and require battery storage systems to balance grid load and stability over any given day. Relative capacity factors¹ for geothermal are double and triple those associated with wind and solar.

¹ <https://www.energy.gov/ne/articles/what-generation-capacity>

The idea that we need renewable firm, dispatchable, baseload power production is well known but has not been made a public policy priority ... yet.

Our options for that type of renewable energy system in Hawaii are realistically limited to hydroelectric and geothermal systems, the latter of which holds enormous potential in our State. The University of Hawaii & its Hawaii Groundwater & Geothermal Resource Center (HGGRC) is well positioned to bring us closer to realizing this potential if properly funded.

We advocate for HGGRC being named the primary recipient of the State funds allocated to geothermal resource research and exploration.

Sustainability of Renewable Power Systems²

Current trends in the upstream supply chain for intermittents are unreliable:

- All intermittent systems require critical raw materials (CRM) for their manufacture, much of which is mined within the borders of Russia and China.
 - Demand outstrips supply consistently driving prices up year over year.
- These systems have life cycles of between 15 & 25 years resulting in the need for continuous replacement.
- It is reasonable to expect the replacement cost of these systems will far exceed their original price as the entire developed world competes for the limited CRM needed to achieve our needed climate goals. This means the natural resources necessary to economically rely on these systems for more than a single generation is very much in question.

Counting on future technological breakthroughs does not form a credible foundation for present-day public policy. In other words, commercially satisfying the global scale of any future technology cannot be guaranteed by the known availability of the natural resources required supply them³.

SEH sees these facts alone as justification to modernize Hawaii's long-term energy policies with the intent to incentivize the investment needed to develop robust geothermal power systems; systems with proven multi-generational time spans and whose construction relies primarily on base metals, not CRM.

Economic History of Geothermal

Geothermal power development in Hawaii has historically been faced a gauntlet of socio-economic and regulatory challenges. Huge up-front costs within a small grid-based market and

² https://vimeo.com/manage/videos/763183483?embedded=true&source=vimeo_logo&owner=8689699

³ (<https://smi.uq.edu.au/event/session/11743>)

virtually no growth opportunities while needing to navigate a permitting process that pushes investment away from Hawaii.

With the advent of an emerging global hydrogen economy, the ability to produce hydrogen 24-7-365 should demonstrate the economic growth potential needed to attract that investment. What also needs to accompany this is a modernized regulatory environment that reflects the urgency developing a fossil fuel free energy paradigm requires.

Sustainable Energy Hawaii is prepared to offer additional data and policy options in support of future legislation at your convenience.

Mahalo for the opportunity to testify,

A handwritten signature in black ink, appearing to read "Peter Sternlicht". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Peter Sternlicht
Member, Board of Directors
Sustainable Energy Hawaii
peter@sustainableenergyhawaii.org

SB-458-HD-2

Submitted on: 4/2/2023 10:45:21 AM

Testimony for FIN on 4/3/2023 2:30:00 PM

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

Comments:

Dear Chair Yamashita, Vice Chair Kitagawa, and Committee members,

I SUPPORT SB458 SD2 HD2 and offer a recommendation.

SB458 SD2 HD2 “Establishes the geothermal energy resources development special fund. Requires annual reports to the Legislature. Requires that, for royalties from geothermal resources, thirty per cent be paid to the county where the geothermal mining operations are situated; thirty per cent be paid to the Department of Land and Natural Resources; twenty per cent be paid to the Office of Hawaiian Affairs; and twenty per cent be deposited into the geothermal energy resources development special fund.”

Geothermal energy is vital for our long-term energy independence - it represents a sustainable clean energy source. While existing renewable energy solutions are invaluable in the near term, they depend on periodic replenishment. In a future where global competition for minerals puts into question our ability to meet global renewable energy needs in a timely manner, we must find ways to maximize our indigenous energy resources.

Access to our gift of sustainable renewable geothermal energy will allow Hawai‘i to accelerate the decarbonization of its energy systems (power and transportation) and enable a scalable green hydrogen economy. Importantly, based on early research by Hawai‘i Ground Water and Geothermal Resource Center (HGGRC), we have geothermal energy generation potential across several locations.

Our ability to efficiently expand our geothermal energy production will be facilitated with increased and sustained funding for the HGGRC, a team with the expertise and resources required to conduct much-needed research into our geothermal resources. HGGRC's research efforts will allow us to speed up our geothermal discovery and development efforts. It will also enable Hawai‘i to continue to build critical knowledge and expertise in our geothermal resources.

Since HD2 does not clearly define how HGGRC would avail of royalties, I ask that it be clarified so that the funding pathway is explicitly specified.

Respectfully,
Noel Morin

Climate, Sustainability, and Resilience Advocate
Hilo, Hawai'i

SB-458-HD-2

Submitted on: 4/2/2023 1:41:51 PM

Testimony for FIN on 4/3/2023 2:30:00 PM

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

Comments:

As the State of Hawaii should encourage further discovery and development of geothermal resources, I support the intent of SB458 with the proposed compromise by most of the government agencies in the bill. This compromise proposes that Hawaii’s geothermal royalties should be distributed to the state agencies as follows:

- Office of Hawaiian Affairs - 20%
- Hawaii State Energy Office (with funding committed to the Hawaii Groundwater and Geothermal Resources, University of Hawaii at Manoa) - 15%
- County of Hawaii - 22.5%
- Department of Land and Natural Resources - 42.5%

This compromise demonstrates Hawaii state agencies collaborating to enable geothermal exploration and Hawaii’s 100% renewable energy. While geothermal research will need more funding than geothermal royalties can, or SB458 will, provide, SB458 can demonstrate to federal funding agencies that Hawaii is committed to pursuing its rich geothermal resources.

As Hawaii is the only U.S. state without an official geological survey, the University of Hawaii (UH) contributed a bulk of what we know about Hawai‘i’s geology. Since producing Hawai‘i’s first geothermal well (HGP-A) in the 1970s, UH has led Hawaii’s geothermal research. From the 1980s to now, UH contributed to two statewide geothermal resource assessments.

Where possible, the funding should go directly to UH's Hawaii Groundwater and Geothermal Resources Center (HGGRC) because it is well equipped for geothermal exploration. Through HGGRC, the state’s foremost experts in earth sciences are researching Hawaii’s geothermal 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.

Beyond expanding the knowledge of Hawaii’s geothermal resources, HGGRC has also provided students and new professionals hands-on, collaborative research experiences and educational opportunities. Over the years, HGGRC sponsored employment of dozens of employees, and HGGRC scientists provided academic advising for undergraduate and graduate students.

Hawaii still has a long way to go in terms of reaching its 100% renewable source mandate by 2045, and geothermal energy will play an important role in making that happen. As a cost-

effective, base-load renewable energy source, geothermal energy production benefits the people of Hawaii by offering the following:

- Lower the cost of electricity
- Greatly reduce carbon emissions involved with creating energy
- Generate revenues for the betterment of Native Hawaiians
- Increase the self-sustainability of the Hawaiian islands and reduce the import of oil
- Create local professional jobs

The state should further tap this firm, renewable energy source.

Currently, the Kilauea East Rift Zone on Hawaii Island is the only geothermal system in the Hawaiian archipelago from which geothermal electric power is being produced. Preliminary research by HGGRC shows that all of the major Hawaiian Islands hold geothermal potential and that much of Hawaii's geothermal resources is unknown. More research is needed to uncover these geothermal resources. Please support this research by supporting HGGRC, Hawaii's leader in geothermal research.

Thank you for considering my testimony.

SB-458-HD-2

Submitted on: 4/2/2023 1:44:57 PM

Testimony for FIN on 4/3/2023 2:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Nicole C. Lautze	Individual	Comments	Written Testimony Only

Comments:

SB458 has undergone various amendments since initially proposed. I support the bill as initially proposed and ultimately with the multi-agency compromise expected as testimony herein. According to this compromise, Hawai'i's current geothermal royalties would be distributed to agencies as follows:

- Office of Hawaiian Affairs - 20%
- Department of Land and Natural Resources - 42.5%
- County of Hawai'i - 22.5%
- Hawai'i State Energy Office (to UH's Hawai'i Groundwater and Geothermal Resources) - 15%

A key intent of this compromise is to demonstrate a multi-agency commitment to geothermal exploration.

While it is true that Hawai'i's geothermal exploration warrants significantly more dollars of dedicated funding (as others have testified), one short-term benefit of SB458 will be to demonstrate to federal funding agencies that Hawai'i is serious about its pursuit of geothermal.

I also agree with testimony stating that **when possible, state funding should go directly to UH's HGGRC**. HGGRC hosts the expertise, equipment, and relationships to move forward geothermal in Hawai'i. HGGRC scientists led two statewide geothermal resource assessments, which involved obtaining land access from dozens of landowners across the state, positive engagement with local communities, and use of the group's ~\$1 million of geophysical equipment and ~\$3 million drill rig. Beyond expanding the knowledge of Hawai'i's geothermal resources, this work provided students and new professionals hands-on, collaborative research experiences and educational opportunities.

Benefits of geothermal for electricity production include:

- firm, *always on* but flexible renewable electricity generation. No battery storage needed.
- lowest land use
- lowest levelized cost of renewable
- no carbon emission
- revenue to state through royalties

- local professional jobs
- increased energy independence and resiliency of the Hawaiian Islands

Geothermal will play an important role in displacing fossil fuels to achieve Hawai'i's 2045 100% renewable mandate, AND offers the State possibilities in the space of electricity-consumptive processes such as carbon capture, hydrogen production, and desalinization.

HGGRC remains committed to responsibly moving forward geothermal in Hawai'i and appreciates the intent of SB458 to provide the first dedicated state funding to do so.

Thank you for this opportunity to offer testimony. The opinions expressed above are mine alone and do not reflect an official position of the University of Hawai'i.

SB-458-HD-2

Submitted on: 4/3/2023 1:05:14 PM

Testimony for FIN on 4/3/2023 2:30:00 PM

Submitted By	Organization	Testifier Position	Testify
Leah Gouker	Individual	Comments	Written Testimony Only

Comments:

Aloha kākou,

I strongly urge this committee to require annual reports from all recipients of Geothermal Royalties, as now explicitly required for the County. OHA, DLNR, and this new geothermal exploration entity should have accountability and transparency required in statute. This establishes a critical precedent for all green energy development, royalties, and revenues received by our government.

Please consider the intent of Royalties. The Puna community surrounding this industrial power plant bears the burden of dangerous gases and health hazards. There should be compensation for us. We most definitely can use it, as we are currently the most socio-economically disadvantaged community in all of Hawaii, in spite of this multi-million dollar annual royalty revenue source. We must be pono in our efforts to go green, and provide just, transparent accountability for these funds that are intended to be reparations for the host community.

Mahalo,

Leah Gouker