Hawaii Technology Development Corporation

521 Ala Moana Blvd, Ste 255 808-539-3806 Honolulu, Hawaii 96813 www.htdc.org

JOSH GREEN, M.D. GOVERNOR SYLVIA LUKE

Written Statement of

Wayne Inouye
Interim Director

Hawaii Technology Development Corporation
before the

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

Thursday, February 1, 2024 1:00 PM State Capitol, Conference Room #229

In consideration of SB2518
RELATING TO GEOTHERMAL ENERGY EXPLORATION

Chair Decoite, Vice Chair Wakai and members of the Committee.

The Hawaii Technology Development Corporation (HTDC) supports SB2518 that appropriates moneys to the Hawaii Technology Development Corporation for geothermal energy exploration. Requires surface and subsurface exploration and community outreach. Declares that the appropriation exceeds the state general fund expenditure ceiling for 2024-2025.

HTDC supports the exploration of both surface and subsurface geothermal exploration. Geothermal is a clean source of energy, with emissions as low as solar, wind, and hydropower. By exploring geothermal energy, HTDC hopes to bring renewable energy sources that produce lower or no greenhouse gas emissions to light, which is critically important in tackling the climate crisis. Geothermal energy can be used to heat structures such as buildings, parking lots, and sidewalks, and its steam can be used to generate electricity. By investing in geothermal energy and outreach, we can reduce our carbon footprint and help create a more sustainable future.

HTDC would also like to acknowledge the cultural sensitivity regarding the study and use of geothermal energy and will take these concerns into account should this bill pass.

Thank you for the opportunity to testify.

HAWAII STATE ENERGY OFFICE STATE OF HAWAII

JOSH GREEN, M.D. GOVERNOR

> SYLVIA LUKE LT. GOVERNOR

MARK B. GLICK

energy.hawaii.gov

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

Testimony of MARK B. GLICK, Chief Energy Officer

before the SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

Thursday, February 1, 2024 1:00 PM State Capitol, Conference Room 229 and Videoconference

Providing Comments on SB 2518

RELATING TO GEOTHERMAL ENERGY EXPLORATION.

Chair DeCoite, Vice Chair Wakai, and Members of the Committee, the Hawai'i State Energy Office (HSEO) respectfully offers comments on SB 2518 which appropriates moneys to the Hawai'i Technology Development Corporation for geothermal energy exploration and community outreach.

Geothermal was identified as both a near-term and mid-term decarbonization opportunity in the *Hawai'i Pathways to Decarbonization Report*, submitted to the 2024 Hawai'i Legislature, and HSEO believes geothermal energy also has the potential to play an extremely significant role in meeting Hawaii's energy objectives of reliability, affordability, and diversification. Geothermal resources provide firm renewable energy; depending on the quantity and location, this could be used for electricity production, excess could be used for the production of hydrogen, and steam could be used directly.

HSEO is currently advocating for and supporting the essential first step of exploration and resource assessment through slim hole resource characterization. Geothermal exploration and identification require upfront capital; it can be costly to confirm the viability of a geothermal. Support for geothermal resource exploration can

¹ Hawaii State Energy Office. *Hawai'i Pathways to Decarbonization*. 2023. https://energy.hawaii.gov/wp-content/uploads/2024/01/Act-238 HSEO Decarbonization Report.pdf

Hawaiʻi State Energy Office SB 2518 - RELATING TO GEOTHERMAL ENERGY EXPLORATION - Comments February 1, 2024 Page 2

help attract private capital for potential development. HSEO supports state funding for such directed efforts, particularly when coordinated with entities such as the University of Hawai'i's Groundwater and Geothermal Resources Center to stimulate private sector investment in for geothermal electricity power generation. Such exploratory activities can also indicate the existence of geothermal for other uses such as direct use of steam from the ground. Data and knowledge gained from exploration can also provide information about resources such as groundwater and about soil composition.

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

Thank you for the opportunity to testify.



Email: communications@ulupono.com

SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM Thursday, February 1, 2023 — 1:00 p.m.

Ulupono Initiative <u>supports</u> SB 2518, Relating to Geothermal Energy Exploration.

Dear Chair DeCoite 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 <u>supports</u> **SB 2518**, which appropriates moneys to the Hawai'i Technology Development Corporation for geothermal energy exploration and requires surface and subsurface exploration and community outreach.

Hawaiʻi needs all viable forms of renewable energy to meet the 100% renewable portfolio standard by 2045. Furthermore, the Hawaiʻi State Energy Office in its recently published Hawaiʻi Pathways to Decarbonization Report identifies, among other things, the significant need for additional renewable energy generation to meet broader economy-wide decarbonization goals.¹ Wind and solar alone are not enough. Firm sources, such as geothermal, will also be necessary. Hawaiʻi also faces many competing demands for available land, and geothermal projects use the least amount of land per megawatt of renewable power produced. As reported by Hawaiʻi Public Radio in 2019, "[r]esearch recently presented by graduate student Ted Brennis with the Hawaiʻi Groundwater and Geothermal Resources Center indicates that where resources are available, geothermal is competitive with wind and solar on both cost and land use."²

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

¹ Hawai'i Pathways to Decarbonization Act 238, Session Laws of Hawai'i 2022, Report to the 2024 Hawai'i State Legislature December 2023. https://energy.hawaii.gov/wp-content/uploads/2024/01/Act-238 HSEO_Decarbonization Report.pdf

² https://www.hawaiipublicradio.org/local-news/2019-07-25/unexplored-geothermal-potential-may-offer-solution-to-renewables-reliability-problem. Report cited can be found at https://www.higp.hawaii.edu/hggrc/wp-content/uploads/2019/07/Brennis-Ted-2019.07.23-Thesis-Presentation.pdf



and confirmed. Ulupono supports the work of the Hawai'i Technology Development Corporation to further the discovery and development of geothermal resources.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata Director of Government Affairs



Testimony to the Senate Committee on Energy, Economic Development, and Tourism Thursday, February 1, 2024, at 1PM Conference Room 229

RE: SB2518 Relating to Geothermal Energy

Chair DeCoite, Vice Chair Wakai, and Members of the Committee:

The Chamber of Commerce Hawaii ("The Chamber") **supports SB2518**, which appropriates funds to the Hawaii Technology Development Corporation for geothermal energy exploration.

Geothermal energy exploration is a pivotal step towards our state's resiliency sustainability goals. By harnessing the Earth's natural heat through geothermal optimization, we significantly reduce our reliance on fossil fuels, mitigate environmental impact and increase our island's independence.

Investing in geothermal technology not only promotes renewable and clean energy but also contributes to job creation and energy independence. We support HTDC's efforts in this, as it's a crucial investment for a greener, more resilient future for our state.

The Chamber is Hawaii's leading statewide business advocacy organization, representing about 2,000+ businesses. Approximately 80% of our members are small businesses with less than 20 employees. As the "Voice of Business" in Hawaii, the organization works on behalf of members and the entire business community to improve the state's economic climate and to foster positive action on issues of common concern.

Thank you for the opportunity to testify.



SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

February 1, 2024, 1:00pm Room 229

TESTIMONY IN SUPPORT OF SB 2518

Aloha Chair DeCoite, Vice Chair Wakai, and Committee members:

Blue Planet Foundation **supports SB 2518**, which appropriates funding to the Hawai'i Technology Development Corporation for geothermal energy exploration and community outreach.

Blue Planet Foundation is a Hawai'i-based nonprofit organization committed to help Hawai'i cut its carbon emissions and avoid the worst impacts of climate change. Through our advocacy for renewable energy, energy efficiency, and clean transportation, we seek to make our communities stronger, our energy more secure, our environment healthier, and our economy more robust.

Hawai'i is fortunate to have a variety of clean energy options to meet our 100% renewable portfolio standards by 2045. While solar and wind energy face challenges of intermittency, geothermal has the potential to provide low-carbon, firm renewable energy—expanding and diversifying our local energy system as we move our islands closer to 100%.

Blue Planet supports research for geothermal for the following reasons:

Renewable and Sustainable: Geothermal energy is a renewable resource, meaning it can be replenished naturally over time. In Hawaii, where there is significant volcanic activity, geothermal energy provides a continuous and reliable source of power without relying on finite fossil fuels.

Stable and Baseload Power: Geothermal power plants can provide baseload power, meaning they can generate electricity consistently, unlike some other renewable sources like solar and wind, which depend on weather conditions. This stability helps ensure a reliable electricity supply for Hawaii's residents and businesses.

Reduced Greenhouse Gas Emissions: Geothermal energy is a low-carbon energy source, emitting minimal greenhouse gases compared to fossil fuels like coal, oil, and natural gas. By utilizing geothermal energy, Hawaii can reduce its carbon footprint and contribute to mitigating climate change.

Energy Independence: Harnessing geothermal energy helps reduce Hawaii's dependence on imported fossil fuels for electricity generation. This enhances energy security and resilience by diversifying the energy mix and reducing exposure to volatile fuel prices and supply disruptions.

Achieving Hawaii's ambitious clean energy and resilience goals will require a diverse mix of renewable, local energy sources and types. This bill is a first step towards identifying where geothermal energy might be located, so that further exploration and necessary community engagement can follow.

Thank you for the opportunity to submit testimony in support.



TESTIMONY BEFORE THE SENATE COMMITTEE ON ENERGY, ECONOMIC DEVELOPMENT, AND TOURISM

S.B. 2518

Relating to Geothermal Energy Exploration

Thursday, February 1, 2024 1:00 P.M, Agenda Item #3 State Capitol, Conference Room 229 & Video Conference

Greg Shimokawa
Director, Renewable Acquisition
Hawaiian Electric

Chair DeCoite, Vice Chair Wakai, and Members of the Committee:

My name is Greg Shimokawa and I am testifying on behalf of Hawaiian Electric in **support** of S.B 2518, Relating to Geothermal Energy Exploration. This bill seeks to appropriate funds for the continued exploration of geothermal resources in Hawaii and community outreach activities.

Hawaiian Electric supports continued exploration of geothermal resources and community outreach to help accelerate the development of renewable energy projects, support the State's Renewable Portfolio Standards ("RPS") requirements, reduce reliance on imported fossil fuels, stabilize and reduce volatility of customers' bills, reduce greenhouse gas emissions, and assist with post-pandemic economic recovery.

Hawaiian Electric defers to policy makers and those impacted on the appropriateness of funding allocations stipulated in the bill, yet generally supports the

intent of exploring and identifying the State's geothermal resources and renewable energy potential.

Accordingly, Hawaiian Electric supports S.B. 2518. Thank you for this opportunity to testify.

<u>SB-2518</u> Submitted on: 1/30/2024 9:08:33 PM

Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Neil Abercrombie	Individual	Support	In Person

Comments:

I have been a supported of the development for GEOTHERMAL ENERGY sources in Hawaii both as a member of Congress and Governor of Hawaii.

Ryan Matsumoto 1244 Hunakai St. Honolulu, Hawaii 96816

Testimony of Ryan Matsumoto

Before the
Energy, Economic Development & Tourism Committee
Feb 1, 2024 at 1pm
CR 229

SB2518
Relating to Geothermal Energy Exploration

Chair Wakai, Vice Chair Misalucha, and Members of the Energy, Economic Development & Tourism Committee:

I am submitting this testimony in **STRONG SUPPORT** of **SB2518**, relating to **GEOTHERMAL ENERGY EXPLORATION**.

Hawaii is the most oil dependent & energy insecure state in the United States. We rely heavily on imported fossil fuels for our energy needs and pay the highest electricity rates in the country.

The State of Hawaii has made a commitment to changing our energy reality and to become leaders in clean, renewable energy through a bold energy agenda, by achieving 100 percent clean energy by the year 2045. Along with reducing our islands' dependency on fossil fuels and increasing efficiency measures, the clean energy plan will also contribute to the state's economic growth.

Today, more than ever, Geothermal should be a critical component of Hawaii's sustainable energy future. It is a clean, reliable, mature, firm base-load energy technology that will be key to Hawaii's sustainable energy mix.

I believe in the need for a whole new collaborative approach to energy independence and compliance with the Hawaii Clean Energy Initiative through meaningful policy changes, committed long-term investment by all stakeholders, real cultural protections and equitably shared profits while bringing access to global industry experience, cleaner technologies, enhanced environmental awareness, and a commitment to sustainable energy development & community participation.

The State of Hawaii has a responsibility to all its residents to provide affordable and clean electricity for all by utilizing its natural resources to support the development of clean, safe and affordable

renewable energy. Energy security is a core tenet of life in an island-based economy and for far too long have the residents of Hawaii suffered unnecessarily.

I urge you to pass SB2518 and for Hawaii to finally take the tangible steps needed to clear the way to build an energy secure future, reducing our dependence on fossil fules that is built on firm, baseload renewable energy found in abundance in our islands that is available for all.

I hope I can count on your support.

Submitted on: 1/30/2024 5:29:36 PM

Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Keith Neal	Individual	Support	Written Testimony Only

Comments:

Aloha Chair DeCoite and members of the EET

I strongly support SB25218!

Hawaii must develop it's abundant, ubiquitous geothermal energy resource that is available on every island. Geothermal energy is always available around the clock, around the year, and just below our feet.

The oil market shocks of the Ukraine invasion is a warning that Hawaii must become energy sovereign and resilient. While continuing to add wind and solar generation Hawaii must urgently develop geothermal energy resources. Current blackouts exemplify the need to develop 24 X 7 X 365 local geothermal energy.

Should Hawaii agencies or universities are unable to respond urgently to subsurface geothermal development please seeks out the expertise of the following:

Eavor Inc. 475 Washington Blvd Marina del Ray, CA 90292 1 (650) 690-8759 info@eavor.com

Mahalo,

Keith Neal

Waimea

Statement of

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

Tigershark, LLC Before the

Senate Committee on Energy, Economic Development and Tourism

1 February 2024 1:00 pm State Capitol Conference Room #229 In consideration of SB2518

Relating to Renewable Energy

Chair DeCoite 30 January 2024

Vice Chair Wakai and Distinguished Committee Members:

I stand in strong support to this bill.

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

I have studied and worked with The U.S. Dept. of Energy's National Labs, organizations and companies trying to "electrify" transportation and I have learned a great deal about the complexities of power generation and distribution. When I was at HCATT we designed a microgrid that will be commissioned next month at Hickam. I have learned that the balancing of "firm" power generation (the kind provided by oil, gas or steam powered generators) and "intermittent" power (solar and Wind among others) becomes very difficult when the intermittent generation exceeds 25 % of that mix, and most grid operators consider 30-35% intermittent in the mix is the practical limit using all the modern technologies we have today. Historically, HECO has focused on Solar-PV and large-scale wind with battery storage as a majority of their generation plan, but they are realizing that they will be having serious problems looking to large scale intermittent renewables generation assets and battery storage. Also, I feel they have neglected the actual growth they need to accomplish in generation and distribution that take into account electric and Hydrogen transportation (this includes large and small vehicles, agricultural and industrial specialty vehicles, and heavy government vehicles such as fire, refuse, and maintenance vehicles and trucks). In addition, I don't see much

consideration for the actual needs of Oahu's new rail system. Using several models, I've estimated that HECO will need to, at least, double their current generation capabilities AND expand their transmission system (or better yet, implement many smaller distribute generation systems and the plan to support that distribution as part of their business model!)

Geothermal is one of only two viable options that I have been able to locate that can get Hawaii to a sustainable, clean and reliable grid (the other being Small Modular Reactors, also known as SMRs, which are modern nuclear reactors like the military uses). If Hawaii plans to support the electrical demands in the future (including data centers and transportation), we cannot ignore the challenges ahead, and doing exploration to determine where we can safely and cleanly install geothermal generation is already "late-to-need"! We do NOT want to repeat the issues encountered by Puna Geothermal Ventures, which was a "pilot project" and not designed using modern geothermal technology, nor was it located in an area that is considered safe for multimegawatt scale geothermal production. We CAN do geothermal on ALL our islands, BUT we need to do our homework to identify the best locations. This bill is critical to that end!!! We cannot afford to kick the can down the road! The Western Governors Association has posted a series of geothermal presentations on their website in a series called "The Heat Beneath Our Feet". I recommend you take the time to look at some of their productions, or you can look on "Rumble" under "OSSUM 44" for some of my work on this topic. Hawaii is perfect for this technology and is one of only two ways I see for Hawaii to grow into the electrical requirements of our future.

Business financers will weed out the companies that don't cut the return on investment (ROI) mustard. Geothermal has a better long-term ROI of ALL other renewable options. The costliest investment is drilling the well (and that is still cheaper than nuclear Cap-Ex in most cases). Let UH lead the way in helping us locate the best options. You will find there are many suitable spots in Hawaii for safe geothermal! Finally, we need to keep the Hawaiian community engaged in all aspects of solving our energy challenges, and we also need to make sure our underserved citizens can afford their energy. That will be difficult with such a huge transition, and dollar for dollar, I think geothermal is the solution.

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

President, Tigershark, LLC

Submitted on: 1/31/2024 10:39:24 AM Testimony for EET on 2/1/2024 1:00:00 PM

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

Comments:

Aloha Sen DeCoite

i am in strong support of funding the exploration and characterization of geothermal sources on Hawai'i Island. We have 5 volcanoes on Hawai'i Island and we will be over the "hot spot" for 1-2 million years.

We are surrounded by water and at a sufficient depth, the heat is converted to free steam, which can turn turbines to generate base power electricity practically forever.

This stable priced electricity can help our farmers produce more food per square foot using modern technology. In addition, the increased usage of Artificial Intelligence will require more electricity to compute and interpret the data.

I was the only person from Hawai'i to attend five Association for the Study of Peak Oil (ASPO) conferences since 2007.. I was Co chair of former Mayor Kenoi's Geothermal Working Group. I visited Iceland. I also produced 4 million lbs of bananas and 1 million pounds of hydroponic tomatoes at full production.

What is at stake is our food security. Small farmers need help. Lower cost electricity relative to the rest of the world will help future generations of Keoki's and Malia's immensely. We must utilize our resources efficiently, we are their ancestors!

Aloha

Richard Ha

Submitted on: 1/31/2024 11:57:20 AM Testimony for EET on 2/1/2024 1:00:00 PM

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

Comments:

Hawaii has a long way to go to reach its 100% renewable source mandate by 2045, and geothermal energy will play an important role in making that happen. As a cost-effective, baseload 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
- As firm renewable energy, provide baseload power and ensure reliability of the electricity grid
- Generate revenues for the betterment of the State of Hawaii
- 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.

The rolling energy blackouts on Oahu in January demonstrated a vulnerability in Hawaii's electricity grid. A power plant going offline amid a storm should not force electricity shut downs in neighborhoods. This incident could have been avoided if Hawaii employed a more diverse energy portfolio and more firm renewable energy. Geothermal can help ensure that Hawaii has a more reliable electrical grid.

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 the University of Hawaii 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.

Hawaii should take advantage of its rich volcanic resources for lower electricity prices, energy security, job and educational opportunities, and sustainability. Please invest in Hawaii's geothermal development.

Submitted on: 1/31/2024 12:03:07 PM Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
David S. De Luz, Jr.	Individual	Support	Written Testimony Only

Comments:

Aloha!

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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 the University of Hawaii 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.

Hawaii should take advantage of its rich volcanic resources for lower electricity prices, energy security, job and educational opportunities, and sustainability. Please invest in Hawaii's geothermal development.

Mahalo for the oppurtunity to share my thoughts/insights!

Submitted on: 1/31/2024 12:29:44 PM Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Peter Sternlicht	Individual	Support	Written Testimony Only

Comments:

I strongly support this legislation.

Hawaii has a long way to go to reach its 100% renewable source mandate by 2045, and geothermal energy will play an important role in making that happen. As a cost-effective, baseload 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
- As firm renewable energy, provide baseload power and ensure reliability of the electricity grid
- Generate revenues for the betterment of the State of Hawaii
- Increase the self-sustainability of the Hawaiian islands and reduce the import of oil
- Create local professional jobs

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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 the University of Hawaii 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.

Hawaii should take advantage of its rich volcanic resources for lower electricity prices, energy security, job and educational opportunities, and sustainability. Please invest in Hawaii's geothermal development.

Respectfully, Peter Sternlicht Pepeekeo, HI 96783

<u>SB-2518</u> Submitted on: 1/31/2024 1:10:48 PM

Testimony for EET on 2/1/2024 1:00:00 PM

Submitte	ed By	Organization	Testifier Position	Testify
Malama So	olomon	Individual	Support	Written Testimony Only

Comments:

I am speaking for the future of Hawaii and I am in strong support of SB2518. Please pass this bill.



Submitted on: 1/31/2024 8:34:55 PM

Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
clara loprinzi	Testifying for Na Iwi Kupuna	Oppose	In Person

Comments:

As an Indigenous Keeper of Birth Knowledge I have worked with a Hawaiian woman who lived next door to PGV and exposed to geothermal, the effects were damaging to her development throughout her life, every orifice in her body was crusted and her hair everywhere turned white. She was not able, like the rest of her friends to get pregnant or hold the pregnancy, we did a couple years of healing through plants and customary traditional and cultural practices, at birth we will relieved the baby was healthy but she was unable to breastfeed because her nipples were deformed and could not get into the mouth, geothermal is not what we need for the above reason and also because it is the grave affect it has (711-1107) physical damage not just to waiala (mom) but to Pele. This is desecration of a public place that is also revered. Keoluole oppose this bill, me ka haahaa clare

<u>SB-2518</u> Submitted on: 1/31/2024 8:08:38 PM

Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Krysel Kaiwi	Testifying for Individual citizen	Oppose	In Person

Comments:

Aloha,

my main concern that I have is that girls that live near geothermal could not pregnant, or will have plenty of deformities. As a mother myself, I cannot imagine putting myself in those situations



Submitted on: 1/31/2024 8:10:03 PM

Testimony for EET on 2/1/2024 1:00:00 PM



Submitted By	Organization	Testifier Position	Testify
Keliyah Kimitete-Pias	Individual	Oppose	In Person

Comments:

Aloha. My name is keliyah kimitete - pias, I am a Hawaiian descentdant and Hawaiian cultural practitioner and a Hawaiian mother.

I'm concerned for the environmental effects that geothenermal energy will have on papahonua our Mother Earth as a cultural practitioner it puts my life at risk!

January31, 2024

Testimony for SB 2518 Relating to Geothermal Energy Exploration

He Mele komo a he mele aloha no na kupuna o ke au i hala Aloha mai kakou.

Aloha,

My name is Cindy Freitas and I'm a Native Hawaiian descended of the native inhabitants of Hawai'i prior to 1778 and born and raised in Hawai'i.

I am also a practitioner who still practice the cultural traditional customary practices that was instill in me by my grandparents at a young age from mauka (MOUNTAIN TO SEA) to makai in many areas.

I'm in OPPOSITION to SB 2518 for the following reasons;

The State of Hawaii in the sum of \$6,000,000. for fiscal year 2024-25 for geothermal energy exploration in Hawaii and community out reach activities in affected areas and shall include both surface and subsurface exploration is unacceptable.

The State of Hawaii should be using that \$6,000,000. giving out the free technology solar power to the people of low or medium income who qualify.

Most of the time when there is an exploration done on any Hawaiian Island there is significant perhistoric and Historic History that has to do with the Hawaiian Culture.

There is nothing in the verbiage that PROTECT our per-historic and historic sights.

Therefore this SB 2518 should change to PROTECT our Cultural Traditional Practices. See Act 50 and Article 12 section 7.

Mahalo,
/s/
Cindy Freitas

Submitted on: 2/1/2024 10:39:48 AM

Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Wai'ala Ahn	Individual	Oppose	Written Testimony Only

Comments:

Aloha,

I am Wai'ala Ahn a former resident of Lani Puna Gardens, Pohoiki and one of longest/closest residents of PGV until my 'ohana was relocated by the state through the geothermal relocation fund. As a resident of lower Puna, a kanaka maoli (native Hawaiian), a mother, keiki o kā 'āina of Hawai'i Nei, Pele practitioner, and someone whose lived a first hand experience the reality of geothermal energy here on Hawai'i (which isn't done like it is done here anyone where else in the world), I adamantly opposed SB2518 relating to geo exploration, for Health and Safety Reasons, for Cultural and sacrilegious reasons, for Environmental/ecological/conservation reasons, and finally for the lack/negligence of cooperate agency PGV/state/government follow through/transparency or regulation in regards to health/safety concerns/recommendations presented by the EPA in the 90's more with 19 actions needed for community safety that were NEVER implemented! that a third party report on toxic gases/contaminants from the drilled wells/ponds/etc were still and are still in use, even after 30 years. When all other geothermal operations retire wells after 20-25 years per safety/regulation. Also, that there still isn't proper monitoring or a community monitoring system with alarms/text/notification for concerned citizens. Even after countless lawsuits, settlements, medical records, and deaths. The state/government and the foreign cooperation who own/operate PGV need to do their due-diligence for the community, and environment by implementing the previous safety recommendations made by third parties like the EPA, they need to do listen/accommodate the concern community and organizations that have dedicated their lives to protecting lower Puna and Hawai'i Nei from the devastating and tragic realities of geothermal in Hawai'i; before any occupying entity asks for any exploratory drilling on this island or across Hawai'i Nei. The health and safety concerns of the past 30+ years have never been adequately addressed or a go faith effort put into working with the community on the damage that's already been done - which is an exhaustive list that no one should have to traumatically live again by having to repeat them over and over again at each county council/senate meeting or court room to get people to listen to our concerns and implement action. The legacy of Geothermal in Hawai'i is divisive, tragic, mobilizing and steeped in dangerous extractive capitalism that has and will continue to turn communities against one another for a false "Green future" that has already costed the land, people, environment and culture so much - all for the price for a few megawatts that shut off when the grid goes down, but that wouldn't shut off during the 2018 eruption, endangering the community even though the plant is by law/design/regulation supposed to be shut off during increased earth quake activitie - not to mention the toxic/explosive gases that went un-accounted for during 2018 and during the whole timeline of operation. Why isn't

there more transparency and notification for cornerning issues? Due to this short list of concerns condensed here, and many many more unsaid by myself and others, I strongly oppose bill SB2518 or any other bill in regards to geothermal exploration/expansion now or in the future. Geothermal has become an example of asking or paying for forgiveness versus asking for permission in the past. Nows the opportunity for permission to be denied and not extended in anyway until previous and current health/safety, environmental and cultural concerns are met.

I urge you with the voice of my ancestors and for the health and safety for our keiki futures to Oppose SB2518. Due diligence must be done before this bill is ever even entertained. Mahalo for your time and consideration, please listen to the people who have been pleading, fighting and standing for over 30+ years to protect Hawai'i Nei.

Sincerely,

Wai'ala Ahn



Submitted on: 1/31/2024 11:37:48 PM Testimony for EET on 2/1/2024 1:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Cory Harden	Individual	Comments	Written Testimony Only

Comments:

Aloha legislators,

Please require that any geothermal development avoid the impacts of past projects: hazardous hydrogen sulfide emissions, day-and-night drilling noise, lack of emergency planning, and vulnerabilty to disruption by lava flows and changes in conditions underground. mahalo, Cory Harden