JOSH GREEN, M.D. GOVERNOR

> SYLVIA LUKE LT. GOVERNOR

MARK B. GLICK CHIEF ENERGY OFFICER



HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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Testimony of MARK B. GLICK, Chief Energy Officer

before the HOUSE COMMITTEES ON ENERGY & ENVIRONMENTAL PROTECTION AND WATER & LAND

Thursday, March 14, 2024 8:30 AM State Capitol, Conference Room 325 and Videoconference

Providing Comments on SB 2518, SD2

RELATING TO GEOTHERMAL ENERGY EXPLORATION.

Chairs Lowen and Ichiyama, Vice Chairs Cochran and Poepoe, and members of the Committees, the Hawai'i State Energy Office (HSEO) offers comments on SB 2518, SD2, which appropriates moneys to the Hawai'i Technology Development Corporation to 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,¹ and HSEO believes geothermal energy has the potential to play an extremely significant role in meeting Hawai'i'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

¹ Hawai'i State Energy Office. *Hawai'i Pathways to Decarbonization*. 2023. <u>https://energy.hawaii.gov/wp-content/uploads/2022/10/Act-238_HSEO_Decarbonization_FinalReport_2023.pdf</u>

Hawai'i State Energy Office SB 2518, SD2 - RELATING TO GEOTHERMAL ENERGY EXPLORATION - Comments March 14, 2024 Page 2

confirm the viability of geothermal. Support for geothermal resource exploration can help attract private capital for potential development. HSEO supports sate funding for such directed efforts by HTDC, HSEO and other state and county jurisdictions, particularly when coordinated with entities such as the University of Hawai'i's Groundwater and Geothermal Resources Center to stimulate the private sector investment for geotherm 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.



Committee on Energy & Environmental Protection Committee on Water & Land Friday, February 23, 2024, at 10:30AM Conference Room 211

RE: SB2518 SD2 Relating to Geothermal Energy

Aloha Chair, Vice Chair, and Members of the Committee,

The Chamber of Commerce Hawaii ("The Chamber") **supports SB2518 SD2**, 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.



Email: communications@ulupono.com

HOUSE COMMITTEES ON ENERGY & ENVIRONMENTAL PROTECTION AND WATER & LAND Thursday, March 14, 2024 — 8:30 a.m.

Ulupono Initiative <u>supports</u> SB 2518 SD2, Relating to Geothermal Energy Exploration.

Dear Chair Lowen, Chair Ichiyama, 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 <u>supports</u> **SB 2518 SD2**, which appropriates moneys to the Hawai'i Technology Development Corporation for geothermal energy exploration and requires surface and subsurface exploration and community outreach.

Hawai'i needs all viable forms of renewable energy to meet the 100% renewable portfolio standard by 2045. Furthermore, the Hawai'i State Energy Office in its recently published Hawai'i 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. 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. As reported by Hawai'i Public Radio in 2019, <u>"[r]esearch recently presented</u> by graduate student Ted Brennis with the <u>Hawai'i Groundwater and Geothermal Resources Center</u> 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 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

Investing in a Sustainable Hawai'i

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

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



Director of Government Affairs



JOSH GREEN, M.D. GOVERNOR

> SYLVIA LUKE LT. GOVERNOR

Written Statement of Wayne Inouye Interim Director Hawaii Technology Development Corporation before the HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION AND HOUSE COMMITTEE ON WATER AND LAND

Thursday, March 14, 2024 8:30 AM State Capitol, Conference Room #325

In consideration of SB2518 SD2 RELATING TO GEOTHERMAL ENERGY EXPLORATION

Chairs Lowen and Ichiyama, Vice Chairs Cochran and Poepoe, and members of the Committee.

The Hawaii Technology Development Corporation (HTDC) supports SB2518 SD2 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 idea of exploring new energy sources and strives to take part in this initiative. 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 emphasize that the cultural sensitivity regarding the study and use of geothermal energy will not be dismissed. We are committed in taking these concerns into account should this bill pass. We appreciate the opportunity to take part in the geothermal energy exploration.

Thank you for the opportunity to testify.



TESTIMONY BEFORE THE HOUSE COMMITTEES ON ENERGY & ENVIRONMENTAL PROTECTION AND WATER & LAND

SB 2518, SD2 Relating to Geothermal Energy Exploration

Thursday, March 14, 2024 8:30 AM State Capitol, Conference Room 325

Greg Shimokawa Director, Renewable Acquisition Hawaiian Electric

Dear Chair Lowen, Chair Ichiyama, Vice Chair Cochran, Vice Chair Poepoe, and Members of the Committees,

My name is Greg Shimokawa and I am testifying on behalf of Hawaiian Electric in **support** of SB 2518, SD2, Relating to Geothermal Energy Exploration, which 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 SB 2518, SD2. Thank you for this opportunity to testify.



HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION HOUSE COMMITTEE ON WATER AND LAND

March 14, 2024, 8:30 AM Room 325

TESTIMONY IN SUPPORT OF SB 2518 SD2

Aloha Chair Lowen, Chair Ichiyama, and members of the EEP and WAL Committees:

Blue Planet Foundation **supports SB 2518 SD2**, 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 Hawai'i, 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, Hawai'i can reduce its carbon footprint and contribute to mitigating climate change.

Energy Independence: Harnessing geothermal energy helps reduce Hawai'i'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 Hawai'i'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 in our state, so that further exploration and necessary community engagement can follow.

Thank you for the opportunity to submit testimony in support of SB 2518.



3/13/24

Roberta Cabral 5184 Iroquois Ave Ewa Beach, Hawaii 96706

> Testimony of Roberta Cabral of Innovations Development Group, Inc.

> > SB2518 Relating to Geothermal Energy Exploration

Chairs Ichiyama & Lowen, Vice Chairs Poepoe & Cochran, and the Members of the Water & Land and Energy & Environmental Protection Committees:

On behalf of Innovations Development Group, Inc. and myself, 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 is also contributing to the state's economic growth.

Fortunately we are blessed with ample geothermal power on Hawaii island. As you know, we have already invested in a great deal of research into understanding the nature of what Pele has provided and how best to access her energy for the good of all.

This measure promotes geothermal energy as the most reliable & affordable source of FIRM power for Hawaii, and lays a clear foundation to ensure that this source of firm power will be developed in a manner that benefits those who are the legal beneficiaries of the public trust.

Today, we all recognize that geothermal renewable energy resources are "minerals" under State law & as such are assets of the Public Trust. The time has come for the State of Hawaii to prioritize the development of these precious resources in order to ensure that our State can become energy self-sufficient and independent in future years. In addition, the IDG believes that Public Trust energy

resources should be developed in a way that brings direct and tangible benefits to the 'consumers' of our State who also happen to be the beneficiaries of the public trust.

Geothermal energy is an asset of the public trust. It is defined as a mineral by Hawaii statutes, and as such is a public energy resource. Although the State owns the resource, the State has never managed & developed it as a 'trust asset'. Rather, geothermal energy has been developed on private land to the benefit of private parties with the State receiving only mineral royalties. The time has come for the State to prioritize the development of geothermal energy (and all other renewable energy resources of the trust) pursuant to its trust obligation that requires that the State develop these resources for the benefit of the State and its public & native Hawaiian beneficiaries.

The State of Hawaii is facing a serious energy & fiscal crisis. We badly need to expedite the development of our own State renewable resources and to ensure that the manner in which these precious and invaluable resources are developed brings a direct benefit to those who own the resources.

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 urge you to pass SB2518 and finally clear the way for Hawaii to build an energy secure future, reducing our dependence on fossil fules that is built on firm, baseload renewable energy found in abundnace in our islands that is available for all people, from keiki to kupuna, that is culturally appropriate, environmentally sustainable, and economically sensible for present and future generations.



Indigenous Consultants, LLC Mililani B. Trask, Principal P.O.Box 6377 & Hilo, HI 96720 <u>Mililani.trask@gmail.com</u>



Date: Thursday, March 14, 2024 Time: 8:30 am Place: Conference Room 325 Committees: Senate – EEP/WAL

Re: SB 2518 SD1 - Relating to Geothermal Energy Exploration

Aloha Senators,

Indigenous Consultants (IC) is a Hawaii based, indigenous LLC owned and operated by Native Hawaiians. It was created to assist indigenous peoples in developing their renewable energy resources in ways tat are: Culturally appropriate, environmentally green and sustainable, socially responsible and economically equitable and affordable. For several years the IC has worked with Innovations Development Group in New Zealand and indigenous Maori developing geothermal resources, which are trust assets of Maori Land Trusts. In addition, the IC has acted as a consultant to other indigenous people in Hawaii and Asia who are addressing development of their trust renewable energy resources in ways that; directly benefit their people, bring in revenues, create small business opportunities and ensure fair & affordable rates to consumers, including themselves and their communities.

Testimony in Strong Support

Hawaii is the most energy insecure State in the Union. Hawaii is currently experiencing a crisis in energy among the many issues affecting our state from water and food security, affordable housing and the devastating impact of the recent fires in Maui. Our energy crisis is due largely to the fact that Hawaii exports billions of dollars a year for fossil fuel and a lack of infrastructure to support firm, renewable generation. These revenues are not being made available for growth and expansion of our economy because they are diverted to pay for fossil fuel despite the fact that Hawaii has a great bounty of indigenous renewable energy, including geothermal energy that is a 'mineral' and an asset of the public trust. The State and its agencies & regulatory bodies, including the PUC, have a trust & fiduciary obligation to inventory & develop these renewable assets in a way that benefits the public and Native Hawaiians who are the beneficiaries of the public trust. One of the primary barriers to Hawaii's energy self-sufficiency is the conflict of interest that exists because the electric utility that owns & manages the grid is also in the business of energy generation using fossil fuels and facilities that can only be run on fossil fuels of their own bio-fuel plants. These facilities cannot interface with geothermal or other renewable energy sources.

Geothermal energy development should be a key component of Hawaii's Renewable energy future. The technology is mature, having been implemented successfully around the world in countries like New Zealand (Aotearoa), Iceland and the Philippines among others. Geothermal is also a clean, renewable, firm power capable of being a baseload for our electricity needs here in Hawaii.

This bill is needed in order to facilitate the immediate exploration of the States geothermal public trust assets in light of the energy needs Hawaii is facing due to the requirements of the Hawaii Clean Energy Initiative. Exploration for geothermal resources capable for energy development is the first step that is needed to determine what can be done here in Hawaii in a safe, responsible and equitable manner. Forty years ago, Hawaii's statutes anticipated that the State of Hawaii would expend millions of dollars testing the viability of our geothermal resources so that the State could then determine which lands were suitable for geothermal development, and thereafter designate these areas as 'geothermal sub-zones' for private sector development. Now is the time to make good on that promise.

Sincere Regards,

ILL_BIM

Mililani B. Trask - Indigenous Consultants LLC

Submitted on: 3/11/2024 7:26:47 PM Testimony for EEP on 3/14/2024 8:30:00 AM

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

Comments:

Aloha legislators,

Please be mindful of the many drawbacks of geothermal.

It requires a lot of fossil fuel to drill wells and build plants, and takes up a lot of land. By contrast, land under solar panels can do double duty, since panels can be put on rooftops and over pastures and crop areas.

Geothermal plants must often be sited in high-risk lava zones, so major power sources can be knocked offline for years, as Puna Geothermal was.

Sulfur dioxide emissions are hazardous and have been poorly regulated by Department of Health. During geothermal drilling in Puna, noise and vibration impact residents all day and all night for weeks on end.

Mahalo for your consideration,

Cory

Submitted on: 3/12/2024 12:03:49 PM Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Comments	Written Testimony Only

Comments:

Because of the arcane way in which this bill is written and my ignorance of the legislative procedure guiding it I cannot say that I understand its true purpose. However I would like to take this opportunity to state my support for State support for geothermal exploration in Hawaii and public outreach to explain the many benefits that properly developed geothermal energy could provide for our people.

Submitted on: 3/12/2024 2:55:09 PM Testimony for EEP on 3/14/2024 8:30:00 AM

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

Comments:

Geothermal energy will help Hawaii reach its 100% renewable source mandate by 2045, and geothermal 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

In January, the rolling energy blackouts during a storm on Oahu demonstrated a vulnerability in Hawaii's electricity grid. Hawaii can avoid future blackouts by employing 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: 3/12/2024 5:07:28 PM Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Keoni Shizuma	Individual	Oppose	Remotely Via Zoom

Comments:

Aloha Chair, Vice Chair, and members of the committee,

I stand in opposition of SB2518.

While I recognize the potential of utilizing geothermal energy as an energy source, which could theoretically lower the cost of energy in the area that it is being done in, I stand in opposition of this bill for 3 reasons:

- 1. Financially, this is not a good time to provide \$6 Million for exploration
- 2. It disregards the cultural beliefs of the Hawaiian people
- 3. There are better alternatives to clean energy that align with the host culture of Hawaii

Due to the recovery from the Lahaina wildfires, as well as housing and serving the victims of the wildfire, the budget for the next 5 years will be extremely tight, and \$6 million could, and should, go to the effort in caring for our people there.

There is absolutely no precedent in Hawaiian culture or history of drilling into Papahanaumoku, our female deity whose body form is the land below us, which would make this acceptable to our host culture. Papahanaumoku, our land, should be treated with respect and reverence. The heat within the Earth's crust, below Papahanaumoku, is often associated with Pelehonuamea, our goddess of the volcano. Hawaiians have many beliefs and many akua (gods) for various aspects of our environment, and even though they are different than those of this capitalistic world that we live in, those beliefs should be respected. To disregard these beliefs is disrespectful to the host culture of these islands.

The State of Hawaii has already disrespected and disregarded Hawaiian culture when they allowed Puna Geothermal to drill into the earth previously, as was witnessed by the many protests that occurred then. The State of Hawaii should not continue to disrespect and disregard the host culture of these islands by passing this bill and further exploring geothermal energy.

There are many other non-invasive, non-intrusive, and non-destructive forms of green energy, which can be done in alignment with Hawaiian cultural beliefs. Solar, wind, and wave technology all have the potential to provide a clean and sustainable energy source, while not being invasive and not disrespecting Hawaiian cultural values and beliefs.

Please do not repeat these done harms to Hawaiians and Hawaiian culture. There are better alternative ways that we should be pursuing clean energy production for the people of Hawaii.

Mahalo nui loa for your time and consideration.

Keoni Shizuma

March 13, 2024

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

Chairs Ichiyama & Lowen, Vice Chairs Poepoe & Cochran, and the Members of the Water & Land and Energy & Environmental Protection Committees:

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 abundnace in our islands that is available for all.

I hope I can count on your support.

SB2518 Relating to Geothermal Energy Exploration

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

Hawaii has every reason to be proud of its commitment to moving to <u>100 percent renewable energy by</u> <u>2045</u>. But we have much to do to get there. The recent blackouts throughout Oahu once again highlight Hawaii's need to supplement the availability of another firm renewable energy power source.

Fortunately we are blessed with ample geothermal power on Hawaii island. As you know, we have already invested in a great deal of research into understanding the nature of what Pele has provided and how best to access her energy for the good of all.

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.

To achieve that understanding we must have a robust community outreach campaign that gives everyone a chance to listen, learn and voice their concerns. The community needs to know that we understand and will be properly responsive to any concerns they might raise.

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 finally clear the way for Hawaii to build an energy secure future, reducing our dependence on fossil fules that is built on firm, baseload renewable energy found in abundnace in our islands that is available for all people, from keiki to kupuna, that is culturally appropriate, environmentally sustainable, and economically sensible for present and future generations.

Submitted on: 3/13/2024 10:17:24 AM Testimony for EEP on 3/14/2024 8:30:00 AM

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

Comments:

Aloha Chairs Lowen and Ichiyama, Vice chairs Cochran and Poepoe, and members of the EEP/WAL

I strongly support SB2518

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 clear warning that Hawaii must become energy sovereign and resilient. While continuing to add wind and solar generation, Hawaii must urgently develop it's geothermal energy resources. Current blackouts exemplify the need to develop 24 X 7 X 365 local geothermal energy.

Mahalo,

Keith Neal

Waimea

Submitted on: 3/13/2024 12:54:28 PM Testimony for EEP on 3/14/2024 8:30:00 AM

Submitted By	Organization	Testifier Position	Testify
Dave Kisor	Individual	Comments	Written Testimony Only

Comments:

I've had chronic fatigue from hydrogen sulfide as a result of PGV's failed equipment ever since Iselle put them out of commission during Iselle, I'm not at all thrilled about the waythey do geothermal in Hawaii.I'm no cellular biologist, but my mitochondria is probably going to be all fouled up for the rest of my life. It is my reccomendation that your boreholes not be within seven miles of human habitation. Being a relative nobody, you couldn't care less about me, but if some big cheese got hit with what happened to me, you'd snap to attention and get something remedied. You want something that coould either injure of kill someone. I could appreciate geothermal, as long as it's far away from me.