

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

**JOSH GREEN, M.D.**  
GOVERNOR

**SYLVIA LUKE**  
LT. GOVERNOR

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

Tuesday, March 25, 2025  
3:01 PM  
State Capitol, Conference Room 016

In consideration of  
**SCR136 / SR115**  
**REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A  
GEOTHERMAL ENERGY WORKING GROUP TO EVALUATE THE REGULATORY  
AND POLICY LANDSCAPE SURROUNDING GEOTHERMAL ENERGY IN HAWAII.**

Chair Wakai, Vice Chair Chang, and members of the Committee:

The Department of Business, Economic Development and Tourism (DBEDT) submits testimony in support of SCR136 / SR115, which requests the Hawaii State Energy Office (HSEO) to convene a Geothermal Energy Working Group to evaluate the regulatory and policy landscape surrounding geothermal energy in Hawaii.

Hawaii's transition to 100% renewable energy by 2045 is not only a statutory mandate but an economic imperative. While solar and wind continue to expand, firm renewable energy sources—such as geothermal—are critical for ensuring grid stability, energy affordability, and energy sovereignty.

Geothermal energy offers Hawaii a unique opportunity. Unlike intermittent renewables, geothermal is a firm, dispatchable energy resource. It can operate 24/7 and provide essential baseload capacity to complement variable renewables like solar and wind. It is especially valuable for neighbor island energy resilience, where energy infrastructure is more isolated, and the cost of imported fuel remains high.

As the Legislature and Governor have emphasized in recent energy policy and executive directives, we must accelerate local, clean energy generation. However, the geothermal industry in Hawaii has long faced challenges—including regulatory

complexity, permitting uncertainty, land use restrictions, and community trust gaps—which have limited its growth.

In 2023 and 2024, DBEDT collaborated with the Hawaii Technology Development Corporation to lay the foundation for a Geothermal Roadmap. This roadmap includes:

- Assessing geothermal resource potential statewide using modern geophysical tools and indigenous knowledge.
- Identifying permitting and land use bottlenecks, with special attention to aligning with cultural and environmental stewardship.
- Coordinating with the Office of Planning and Sustainable Development (OPSD) on appropriate land use designation and long-range planning.
- Exploring how public-private investment can fund infrastructure for geothermal exploration and development.
- Evaluating opportunities for community-led and community-benefiting geothermal models, especially in areas with high energy costs and high potential, such as Hawaii Island.

The intent behind SCR136 / SR115 is aligned with the direction DBEDT and HSEO have already begun exploring. Formalizing a Geothermal Energy Working Group with broad representation across agencies, counties, the utility sector, and the community will ensure a comprehensive and inclusive approach.

DBEDT supports the goals of SCR136 / SR115 and sees this as a necessary step to unlock Hawaii's geothermal potential in a way that meets our renewable energy goals while empowering communities and protecting natural and cultural resources. We look forward to participating actively in this working group and contributing technical, planning, and economic expertise to its success.

Mahalo for the opportunity to testify in support of SCR136 / SR115.

**JOSH GREEN, M.D.**  
GOVERNOR

**SYLVIA LUKE**  
LT. GOVERNOR



**STATE OF HAWAII**  
**PUBLIC UTILITIES COMMISSION**  
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## **Testimony of the Public Utilities Commission**

To the  
Senate Committee on  
Energy and Intergovernmental Affairs

March 25, 2025  
3:01 p.m.

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

**Measure:** S.C.R. 136 / S.R. 115

**Title:** REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A GEOTHERMAL ENERGY WORKING GROUP TO EVALUATE THE REGULATORY AND POLICY LANDSCAPE SURROUNDING GEOTHERMAL ENERGY IN HAWAII.

### **Position:**

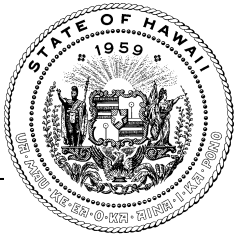
The Public Utilities Commission ("Commission") supports this resolution and offers the following comments and amendments for consideration.

### **Comments:**

The Commission supports the intent of this resolution to form a working group that would evaluate the regulatory and policy landscape surrounding geothermal energy in Hawaii.

The Commission recognizes the potential of geothermal energy to support the state's goal of achieving 100% renewable energy by 2045, as well as the importance of considering such potential in a transparent and coordinated manner. The Commission appreciates this resolution's inclusion of the Commission on its proposed working group and stands ready to participate.

Thank you for the opportunity to testify on this measure.



# HAWAII STATE ENERGY OFFICE STATE OF HAWAII

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Testimony of  
**MARK B. GLICK, Chief Energy Officer**

before the  
**SENATE COMMITTEE ON ENERGY AND INTERGOVERNMENTAL AFFAIRS**

Tuesday, March 25, 2025  
3:01 PM  
State Capitol, Conference Room 016 and Videoconference

Providing Comments on  
**SCR 136**

## **REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A GEOTHERMAL ENERGY WORKING GROUP TO EVALUATE THE REGULATORY AND POLICY LANDSCAPE SURROUNDING GEOTHERMAL ENERGY IN HAWAII.**

Chair Wakai, Vice Chair Chang, and Members of the Committee, the Hawai'i State Energy Office (HSEO) respectfully provides comments on SCR 136 that requests HSEO to convene a geothermal energy working group to evaluate regulatory and policy landscape surrounding geothermal energy in Hawai'i.

The state's energy transition to 100% RPS by 2045 will require more than the intermittent sources of energy that solar and wind provide. Firm and dispatchable resources, such as geothermal, are paramount to our energy reliability and grid stability. Geothermal energy has the potential to have a transformative effect on Hawai'i's energy ecosystem.

Potential roadblocks to advancing geothermal energy development include 1) a lack of data on the geothermal and groundwater resources (resource potential) that exist, as well as uncertainty regarding the regulatory conditions for the permitting and construction of a new geothermal energy production plant. Relating to the understanding of resource potential, in 2024, Governor Josh Green, M.D., allocated \$5 million from the Coronavirus State Fiscal Recovery Fund for slim-hole geothermal resource characterization to identify possible locations for viable geothermal energy

deployment. HSEO is working with the University of Hawai'i's Groundwater and Geothermal Resource Center (HGGRC) to conduct this resource assessment, building on their research and the existing body of knowledge. However, more funding is needed to determine the resource potential statewide. Relating to the uncertain regulatory conditions, a review of policy and regulations leading to actionable recommendations could make the barrier to geothermal energy production more attainable.

HSEO recognizes that, as stated in the resolution, "a coordinated, transparent, and community-inclusive process is essential to evaluating the role of geothermal energy in Hawai'i". Accordingly, HSEO notes that the members listed in the current working group may not adequately represent the Native Hawaiian community. However, HSEO is committed to ensuring that appropriate community organizations are invited to join the working group, as permitted by this resolution.

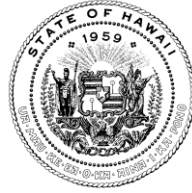
HSEO emphasizes that a key priority of the State, and a foundation of the working group, should be guided by the understanding of the underlying geothermal resource potential. Given the ongoing resource assessment and its associated timeline, HSEO recommends that this working group be convened over two years instead of one.

Accordingly, HSEO respectfully requests one amendment to the bill on Page 4, line 17, to extend the due date of the report of findings, allowing the work to align more closely with the ongoing resource exploration.

BE IT FURTHER RESOLVED that the Hawaii State Energy Office is requested to submit a report of its findings and recommendations, including any proposed legislation, to the Legislature no later than twenty days prior to the convening of the Regular Session of ~~2026~~2027;

This working group could allow HSEO and other stakeholders the ability to find viable solutions for allowing the potential of geothermal energy production to become a larger reality as we move towards our clean energy goals.

Thank you for the opportunity to testify.



**JOSH GREEN, M.D.**  
GOVERNOR | KE KIA'ĀINA

**SYLVIA LUKE**  
LIEUTENANT GOVERNOR | KA HOPE KIA'ĀINA

**STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAI'I**  
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**NADINE Y. ANDO**  
DIRECTOR | KA LUNA HO'OKELE

**DEAN I HAZAMA**  
DEPUTY DIRECTOR | KA HOPE LUNA HO'OKELE

## **Testimony of the Department of Commerce and Consumer Affairs**

**Before the**  
**Senate Committee on Energy and Intergovernmental Affairs**  
**Tuesday, March 25, 2025**  
**3:01 p.m.**  
**Conference Room 016**

**On the following measure:**  
**S.C.R. 136 / S.R. 115, REQUESTING THE HAWAII STATE ENERGY OFFICE TO**  
**CONVENE A GEOTHERMAL ENERGY WORKING GROUP TO EVALUATE THE**  
**REGULATORY AND POLICY LANDSCAPE SURROUNDING**  
**GEOTHERMAL ENERGY IN HAWAII**

Chair Wakai and Members of the Committee:

My name is Michael Angelo, and I am the Executive Director of the Department of Commerce and Consumer Affairs (Department) Division of Consumer Advocacy. The Department provides comments on this resolution.

The purpose of this resolution is to request that the Hawaii State Energy Office (HSEO) convene a Geothermal Energy Working Group (Working Group) to evaluate the regulatory and policy landscape surrounding geothermal energy in Hawaii. In addition, the Working Group is requested to: (1) identify key regulatory, policy, and permitting challenges affecting geothermal energy in Hawaii; (2) review best practices from other jurisdictions with successful geothermal energy programs and consider best practices of Pacific island countries such as New Zealand; (3) assess the potential for geothermal expansion and its role in supporting energy resilience and affordability; and (4) provide

recommendations to the Legislature and Governor on policy and regulatory reforms necessary establish a clear and efficient pathway for geothermal energy in Hawaii. Furthermore, HSEO is requested to submit a report of its findings and recommendations, including any proposed legislation, to the Legislature no later than 20 days prior to the convening of the Regular Session of 2026.

The Department appreciates the resolution's intent to advance the State's commitment of achieving 100% renewable energy portfolio standards by 2045 and the recognition that work towards this commitment needs to be accelerated. As stated in the resolution, the Department also views geothermal energy as a form of firm renewable energy resource that can help provide grid stability. The Department also agrees that the development of geothermal energy in the State would be assisted by reviewing and investigating, among other things, methods and processes to establish efficient pathways to advance geothermal energy in the State. The Department's Division of Consumer Advocacy is statutorily mandated to represent, protect, and advance the interests of all consumers of utility services. Accordingly, the Department respectfully recommends that page 3 of this measure be amended to include the "Executive Director of the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, or the Executive Director's designee," as a member of the Working Group.

Thank you for the opportunity to testify on this resolution.



**SENATE COMMITTEE ON ENERGY AND INTERGOVERNMENTAL AFFAIRS**

**MARCH 25, 2025**

**SCR 136/SR 115, REQUESTING THE HAWAII STATE ENERGY OFFICE TO CONVENE A  
GEOTHERMAL ENERGY WORKING GROUP TO EVALUATE THE REGULATORY AND POLICY  
LANDSCAPE SURROUNDING GEOTHERMAL ENERGY IN HAWAII**

**POSITION: SUPPORT**

Coalition Earth supports SCR 136/SR 115, which requests the Hawai'i State Energy Office to convene a geothermal energy working group to evaluate the regulation and policy landscape surrounding geothermal energy in Hawai'i.

According to a report produced by the Hawai'i Climate Change Mitigation and Adaptation Commission, global sea levels could rise more than three feet by 2100, with more recent projections showing this occurring as early as 2060. In turn, over the next 30 to 70 years, approximately 6,500 structures and 19,800 people statewide will be exposed to chronic flooding. Additionally, an estimated \$19 billion in economic loss would result from chronic flooding of land and structures located in exposure areas. Finally, approximately 38 miles of coastal roads and 550 cultural sites would be chronically flooded, on top of the 13 miles of beaches that have already been lost on Kaua'i, O'ahu, and Maui to erosion fronting shoreline armoring.

As we work to reduce carbon emissions and stave off the worst consequences of climate change, we must begin preparing for the adverse impact of sea level rise on our shores. We are now quantifying the speed at which we must act. We cannot continue to develop the 25,800-acre statewide sea level rise exposure area—one-third of which is designated for urban use—without risking massive structural damage and, potentially, great loss of life.

Just two years ago, we witnessed the impact of the climate emergency on our shores. On August 8, 2023, wildfires swept across Maui and killed at least 100 people, making it one of the nation's deadliest natural disasters. The spread of the fires has been attributed to climate change conditions, such as unusually dry landscapes and the confluence of a strong high-pressure system

to the north and Hurricane Dora to the south. The wildfires destroyed over 2,200 structures, including numerous residential buildings, historic landmarks, and school facilities. In September 2023, a report from the United States Department of Commerce estimated the total economic damage of the wildfires to be roughly \$5.5 billion. Investing in renewable energy generation could not be more urgent, given the growing threat of climate catastrophes to our island home.

Therefore, **our state should take steps to hasten our transition to a clean energy economy and continue our fight against climate change, including by investing in the potential of geothermal resources, a nearly unlimited source of renewable energy.** The Earth's inner core is as hot as the surface of the sun. As that heat radiates, it heats the rocks and water just beneath the Earth's surface and the steam that process generates can be used to generate heat and electricity. Harnessing geothermal energy can be accomplished at any time, since geothermal resources are reliably available 24 hours a day, 365 days a year.

The United States leads the world in geothermal electricity capacity and generation. Yet, the U.S. has tapped less than 0.6 percent of its available geothermal electricity resources. The National Renewable Energy Laboratory estimates that there is enough geothermal potential under our nation's grounds to constantly produce 4,248,879 megawatts of energy. Notably, geothermal energy presents an opening for an almost seamless transition of investment, technology, and personnel away from fossil fuels. While the needed capital investment for geothermal ranges from \$3,000 to \$6,000 per kilowatt—as compared to solar and terrestrial wind, which run just \$1,700 to \$2,100 per kilowatt—this cost is declining as investments in new technology are being made. In terms of both economic and clean energy generation, we cannot afford to miss out on these opportunities.

Our state needs to establish a framework for expanding geothermal exploration and the development of utility-scale geothermal initiatives, goals that can be further accelerated through partnerships with research institutions like the University of Hawai'i's Groundwater and Geothermal Resources Center. Doing so would stimulate further possibilities for aligning public funding and private sector investment for geothermal power generation. Geothermal energy was also identified as both a near-term and mid-term decarbonization pathway in the Hawai'i State Energy Office's *Hawai'i Pathways to Decarbonization Report*, released in 2024.

We must avoid environmental risks when exploring geothermal energy. Relatedly, we should not engage in any geothermal expansion on Hawaiian homelands without beneficiary support. Yet, we would be remiss not to investigate the significant geothermal potential that resides, quite literally, within our island home. As the World Resources Institute has stated, "Next-generation geothermal as a promising path to a zero-carbon power grid. It's a clean, cost-effective way to fill supply gaps when solar and wind aren't available." In that way, geothermal has the capacity to play a major role in strengthening energy resilience for our state.

*Coalition Earth is a nongovernmental organization that works to preserve the well-being of people and our planet. We champion policies that advance climate resilience, clean energy, public health, and economic fairness for working families. **Contact us at [info@coalitionearth.org](mailto:info@coalitionearth.org).***

Comments before  
March 23, 2025 Senate Committee on  
Health and Human Services

**OPPOSING**  
**Senate Concurrent Resolution 136 and**  
**Senate Resolution 115**  
Relating to Geothermal Expansion

Mike Ewall, Esq.  
Founder & Executive Director  
Energy Justice Network  
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[www.EnergyJustice.net](http://www.EnergyJustice.net)

Aloha Honorable Committee members. Energy Justice Network is a national organization supporting grassroots groups working to transition their communities from polluting and harmful energy and waste management practices to clean energy and zero waste solutions. In Hawai'i, we've been working with residents who first sought our support in 2015. Since mid-2022, we have supported residents in forming the Hawai'i Clean Power Task Force and Kokua na Aina to address numerous energy and waste issues in the state.

**Please oppose SCR 136 and SR 115.**

Geothermal has consistently ranked among the most [expensive](#) forms of electric power production, right up there with trash and tree burning and nuclear power. This is based on the latest data from the U.S. Energy Information Administration.<sup>1</sup> Capital cost and fixed operations and maintenance costs (O&M) are among the most expensive options – far more expensive than using solar with storage to meet firm energy needs.

Case No.	Technology	Description	Net Nominal Capacity (kW)	Net Nominal Heat Rate (Btu/kWh)	Capital Cost (\$/kW)	Fixed O&M Cost (\$/kW-year)	Variable O&M Cost (\$/MWh)	Nitrogen Oxide (NO <sub>x</sub> ) (lb/MMBtu)	Sulfur Dioxide (SO <sub>2</sub> ) (lb/MMBtu)	Carbon Dioxide (CO <sub>2</sub> ) (lb/MMBtu)
1	USC Coal without Carbon Capture – Greenfield	1 x 735 MW Gross	650	8,638	\$4,103	\$61.60	\$6.40	0.06	0.09	206
2	USC Coal 95% Carbon Capture	1 x 819 MW Gross	650	12,293	\$7,346	\$86.70	\$13.73	0.06	0.09	10.3
3	Aeroderivative CTs – Simple Cycle	4 x 54 MW Gross	211	9,447	\$1,606	\$9.56	\$5.70	0.0075	0.00	117
4	CTs – Simple Cycle	1 x H-Class	419	9,142	\$836	\$6.87	\$1.24/MWh, \$23,100/Start	0.0075	0.00	117
5	CC 2x2x1	2 x 1 H Class	1,227	6,266	\$868	\$12.12	\$3.41	0.0075	0.00	117
6	CC 1x1x1, Single Shaft	1 x 1 H Class SS	627	6,226	\$921	\$15.51	\$3.33	0.0075	0.00	117
7	CC 1x1x1, Single Shaft, with 95% Carbon Capture	1 x 1 H Class SS	543	7,239	\$2,365	\$24.78	\$5.05	0.0075	0.00	6
8	Biomass Plant with 95% Carbon Capture	1 x BFB	50	19,965	\$12,631	\$261.18	\$9.65	0.08	<0.03	10.3
9	Advanced Nuclear (Brownfield)	2 x AP1000	2,156	10,608	\$7,861	\$156.20	\$2.52	0	0	0
10	Small Modular Reactor Nuclear Power Plant	6 x 80 MW Small Modular Reactor	480	10,046	\$8,936	\$121.99	\$3.19	0	0	0
11	Geothermal	Binary Cycle	50	N/A	\$3,963	\$150.60	\$0.00	0	0	0
12	Hydroelectric Power Plant	New Stream Reach Development	100	N/A	\$7,073	\$33.54	\$0.00	0	0	0
13	Onshore Wind – Large Plant Footprint: Great Plains Region	200 MW   2.8 MW WTG	200	N/A	\$1,489	\$33.06	\$0.00	0	0	0
14	Onshore Wind – Repowering/Retrofit	150 MW   1.5 - 1.62 MW WTG	150	N/A	\$1,386	\$38.55	\$0.00	0	0	0
15	Fixed-bottom Offshore Wind: Monopile Foundations	900 MW   15 MW WTG	900	N/A	\$3,689	\$154.00	\$0.00	0	0	0
16	Solar PV with Single-Axis Tracking	150 MW <sub>AC</sub>	150	N/A	\$1,502	\$20.23	\$0.00	0	0	0
17	Solar PV with Single-Axis Tracking and AC-Coupled Battery Storage	150 MW <sub>AC</sub> Solar 50 MW   200 MWh Storage	150	N/A	\$2,175	\$38.39	\$0.00	0	0	0
18	Solar PV with Single-Axis Tracking and DC-Coupled Battery Storage	150 MW <sub>AC</sub> Solar 50 MW   200 MWh Storage	150	N/A	\$2,561	\$39.24	\$0.00	0	0	0
19	BESS	Lithium Ion, 150 MW   600 MWh	150	N/A	\$1,744, (\$436/kWh)	\$40.00	\$0.00	0	0	0

On top of the high cost to ratepayers are the costs to our environment and the community.

<sup>1</sup> U.S. Energy Information Administration, “Capital Cost and Performance Characteristics for Utility-Scale Electric Power Generating Technologies,” January 2024, Table 1-2 (page 24). [https://www.eia.gov/analysis/studies/powerplants/capitalcost/pdf/capital\\_cost\\_AEO2025.pdf](https://www.eia.gov/analysis/studies/powerplants/capitalcost/pdf/capital_cost_AEO2025.pdf)

Geothermal is only used in the state in Puna by [Puna Geothermal Ventures](#) (PGV), an Israeli company (Ormat) that has run an inconsistent and harmful operation in Puna with numerous environmental [violations](#). While many support it as a renewable energy source, the lived experience of those living near the facility raises many concerns.

Puna residents have been speaking up for many years with concerns about air releases of hydrogen sulfide and other chemicals brought up in the process (toxic metals, radon...), [health impacts](#) when the community has been exposed to these gases, drilling impacts (noise, well blowouts, underground fracturing, not plugging wells), reinjection of toxic chemicals into the group (PGV claims they're "closed loop" but that is not true), [cultural concerns](#), and the challenges when a lava flow risked igniting 60,000 gallons of pentane stored on-site, which needed help from the governor's emergency order to [evacuate](#) the chemicals from the danger zone.

If geothermal can be done in a closed-loop fashion, and further from residents, that would alleviate some concerns, but would make it even more expensive and it is likely that solar with energy storage can meet energy needs more safely and at least four times cheaper.

The objective of this working group seems to be to explore how to weaken regulations to smooth the path for this industry. No legislative environmental committee should be party to working to weaken or "streamline" regulations that are often inadequate to begin with, as evidenced by the poor operating track record of PGV.

Please vote 'no' on these resolutions.

**LATE**

**SCR-136**

Submitted on: 3/24/2025 3:33:35 PM

Testimony for EIG on 3/25/2025 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Ann Chung	Individual	Support	Written Testimony Only

Comments:

I stand in strong support of creating this working group for geothermal.

Mahalo!

AC

**SCR-136**

Submitted on: 3/24/2025 4:08:15 PM

Testimony for EIG on 3/25/2025 3:01:00 PM

**LATE**

Submitted By	Organization	Testifier Position	Testify
Ryan Matsumoto	Testifying for Waika Consulting	Support	Written Testimony Only

## Comments:

I would like to submit this testimony in support of SCR136 for the State to convene a geothermal energy working group to evaluate the regulatory and polciy landscape surrounding geothermal in Hawaii. Successfully addressing these issues with key stakeholders and the community will be critical in supporting the process of renewable energy development in Hawaii to meet the requirements and goals of the Hawaii Clean Energy Initiative.

**LATE**



# Environmental Caucus of The Democratic Party of Hawai'i

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March 24, 2025

## **Testimony in Opposition to SCR136/SR115 - Geothermal Energy Working Group**

**To:** Chair Glenn Wakai, Vice Chair Stanley Chang, and Members of the Committee on Energy and Intergovernmental Affairs

**Date:** Tuesday, March 25, 2025, **Time:** 3:01 p.m.

**Place:** Conference Room 016 & Videoconference

### **Dear Chair Wakai, Vice Chair Chang, and Members of the Committee:**

The Environmental Caucus of the Democratic Party of Hawaii submits this testimony in strong opposition to SCR136/SR115, which requests the Hawaii State Energy Office to convene a geothermal energy working group to evaluate the regulatory and policy landscape surrounding geothermal energy in Hawaii.

### **Key Points in Opposition:**

1. **Land Subsidence:** Land subsidence, the gradual sinking or settling of the Earth's surface, is a documented risk associated with geothermal energy extraction. Geothermal operations, such as those at Wairakei in New Zealand and Larderello in Italy, have caused significant subsidence rates, damaging infrastructure and natural landscapes. These risks are especially concerning for Hawaii, given its delicate coastal ecosystems and unique geographical features.
2. **Release of Harmful Gases:** Geothermal facilities can emit harmful gases such as hydrogen sulfide (H<sub>2</sub>S), carbon dioxide (CO<sub>2</sub>), and ammonia (NH<sub>3</sub>). Hydrogen sulfide, a toxic gas, has been linked to health problems like respiratory issues and headaches. Communities near geothermal plants, such as in Iceland and Italy, have expressed concerns over air quality impacts.
3. **Ecosystem Disruption:** Geothermal energy extraction can disrupt ecosystems by altering water tables, releasing pollutants, and fragmenting habitats. Thermal pollution from geothermal facilities, as observed in Iceland, has impacted vegetation and wildlife, highlighting potential risks to Hawaii's biodiversity.
4. **Neighboring Community's Opposition to Puna Geothermal Venture (PGV):** The Puna Geothermal Venture, Hawaii's only commercial geothermal plant, has faced

longstanding opposition from neighboring communities. Residents have reported health issues related to hydrogen sulfide emissions, expressed frustration over noise pollution, and raised environmental concerns, including groundwater contamination. Additionally, Native Hawaiians have voiced cultural objections, viewing the plant as disrespectful to Pele, the volcano deity. The 2018 Kīlauea eruption, which surrounded PGV with lava flows, heightened safety concerns, demonstrating the risks of operating geothermal plants in geologically active areas.

5. **Cultural Sensitivity:** Hawaii's geothermal resources are often located on lands considered sacred by Native Hawaiians. Developing these resources without meaningful collaboration risks perpetuating cultural harm. Respect for traditional ecological knowledge must be a priority.
6. **Lack of Community Engagement:** Establishing a working group without broad and inclusive representation, particularly from Native Hawaiian organizations and local communities, undermines trust and fails to consider critical perspectives.
7. **Exploration of Alternative Renewables:** Hawaii has abundant renewable energy resources such as solar, wind, and ocean energy. These options present less risk to cultural sites and ecosystems and should be prioritized.
8. **Premature Policy Development:** Evaluating geothermal energy policy prematurely could lead to recommendations unsupported by comprehensive scientific, environmental, and cultural studies.

In light of these concerns, we strongly urge the committee to reject SCR136/SR115 and focus on energy initiatives that align with Hawaii's values of cultural respect, environmental stewardship, and community well-being.

Mahalo for the opportunity to provide this testimony.

Sincerely,

Melodie Aduja and Alan Burdick

Co-chairs, Environmental Caucus of the Democratic Party of Hawaii

**LATE**

**SCR-136**

Submitted on: 3/25/2025 5:21:58 AM

Testimony for EIG on 3/25/2025 3:01:00 PM

Submitted By	Organization	Testifier Position	Testify
Kaylan Bray	Individual	Oppose	In Person

Comments:

As your constituent, I strongly urge you to **oppose SR115**, which is requesting the hawaii state energy office to convene a geothermal energy working group to evaluate the regulatory and policy landscape surrounding geothermal energy in Hawaii.

Our community deserves policies that protect our 'āina. For far too long, the state has refused to create these policies to safeguard the 'āina. There are now significant legal contributions highlighted in ILO Convention 169 [the Indigenous and Tribal Peoples' Convention of 1989], emphasizing the right to self-determination. If this bill passes, it will constitute a clear human rights violation against Kanaka 'Ōiwi. Under the UN resolution, all states are required to guarantee the rights of Indigenous peoples. Article 7 states: "The peoples concerned shall have the right to decide their own priorities for the process of development as it affects their lives, beliefs, institutions, and spiritual well-being, as well as the lands they occupy or otherwise use, and to exercise control, to the extent possible, over their own economic, social, and cultural development. In addition, they shall participate in the formulation, implementation, and evaluation of plans and programs for national and regional development that may affect them directly."

These bills utilize narratives to support the market and create social and environmental value for companies, allowing for monetization in financial markets while prioritizing everything and everyone above Kanaka 'Ōiwi. If passed, this will lead to a violation that will be documented and filed with the ILO Convention 169.

This bill threatens Kanaka 'Ōiwi's continued ability to protect their public trust land, water, and ocean resources from environmentally destructive activities. It severely undermines core protections for Native Hawaiian rights and cultural practices, as well as Hawaii's foundational environmental law, potentially leading to substantial and irreversible environmental and cultural harm. This solution fails to incorporate Kanaka Maoli insight and perpetuates the history of erasure and oppression of Kanaka Maoli. Furthermore, it only considers Kanaka Maoli successful if they meet the standards set by their colonizers, preventing a future where cultural and economic autonomy can coexist.

These proposals take seriously the questions of "energy for what and for whom," aiming to transform away from extractivism and exploitation toward social and environmental justice. The so-called "green" or "sustainable" mining is insufficient to address the multifaceted problems associated with mining and is much more likely to result in increased greenwashing. This is especially true when standards rely on self-regulation by the mining industry and industry-

defined corporate social responsibility or human rights standards. Not only do these legitimize continued extraction, but they also enable companies to profit further by marketing what should be basic requirements for doing business as "value-added." Instead, we need solutions that fundamentally transform power and economic structures and address environmental and social harms that extend far beyond the mining site. This can only be achieved through Kanaka Maoli cultural, religious, legal, and agricultural practices that have historically aligned with environmental protection. To be clear, these solutions must come from Kanaka 'Ōiwi themselves, not from haole elite politicians who co-opt Indigenous ways, nor from Hawaiian politicians who subsume Hawaiian well-being under the need for profit. Such politicians cannot be true leaders, nor can they claim to possess mana, as kumu Haunani-Kay Trask noted. As Trask also pointed out, these politicians and the OHA do not represent all Hawaiian communities and never have. It is absolutely disheartening that this Senate Resolution has even made it this far, especially given the language used within it, which completely ignores and diminishes Kanaka Maoli presence, humanity, navigational skills, and overall cultural sophistication.

Geothermal energy in Hawaii has been "hindered" (as stated in the resolution text) due to immense opposition from Kanaka Maoli. This is evident from all the written testimony submitted on February 11, 2025, by Kanaka 'Ōiwi in opposition to HB 1307 HD1, which seeks to allocate funds to the Department of Hawaiian Home Lands (DHHL) for water well development aimed at geophysical investigation, exploration, and identification of geothermal resources on Hawaiian homelands. Out of 75 written testimonies submitted, 67 were in opposition to this bill.

Now, let's examine the "public opinion survey" used to justify this resolution. Within the resolution, it states, "Ninety-one percent of respondents in a statewide public opinion survey on energy in Hawaii expressed their support for the expansion of renewable energy resources throughout the State, with the importance of developing Hawaii's own energy resources emphasized by respondents across all counties." Reviewing the process and results of this public opinion survey reveals that the conclusions drawn stem from a non-representative sample, skewing research results that lead to inaccurate conclusions and recommendations. On February 18, 2025, in her written testimony supporting bill SB 1269, SD1 relating to geothermal resources, Mariah Yoshizu, Government Affairs Associate at Ulupono Initiative, stated:

"Hawaii needs all viable forms of renewable energy to meet the 100% renewable portfolio standard by 2045. New data underscores the widespread support among residents for this transition. Between October 2023 and January 2024, Ulupono Initiative partnered with Anthology Research to conduct a statewide public opinion survey on energy in Hawaii, involving 1,985 surveys across all four counties. With a margin of error of +/- 2.21%, this is arguably the most extensive and comprehensive study on the topic to date. The findings are compelling: a staggering 91% of respondents expressed their support for the expansion of renewable energy resources throughout the islands. Moreover, the importance of developing Hawaii's own energy resources was emphasized across all counties by residents. This resounding endorsement from the community validates the strong support for continued investment and advancement in renewable energy solutions to meet our collective energy goals. Emphasizing and including strong community engagement is essential for building trust and ensuring that local concerns and priorities are considered throughout the program. Collaboration with counties,

individuals, and civic organizations allows for the incorporation of valuable insights, ensuring the program aligns with community needs and aspirations.”

All four counties, during the time of this survey, had a total population of 1,426,535. They concluded their study after three months with a sample of 1,985 respondents across all four counties. Out of ONE MILLION FOUR HUNDRED TWENTY-SIX THOUSAND FIVE HUNDRED THIRTY-FIVE residents, they only collected a sample of 1,985. That is NOT a representation of the community. Their conclusion that “this resounding endorsement from the community validates the strong support for continued investment and advancement in renewable energy solutions to meet our collective energy goals” is completely false. This type of statistical analysis is unacceptable due to the intentional skewing of research results and the drawing of inaccurate conclusions from their findings.

**I strongly urge you to not pass SR115.**

Mahalo,  
Kaylan Bray



**LATE**

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

SENATE COMMITTEE ON ENERGY AND INTERGOVERNMENTAL AFFAIRS

Tuesday, March 25, 2025 — 3:01 p.m.

**UluPono Initiative supports SR 115/SCR 136, Requesting the Hawaii State Energy Office (HSEO) to Convene a Geothermal Energy Working Group to Evaluate the Regulatory and Policy Landscape Surrounding Geothermal Energy in Hawaii.**

Dear Chair Wakai 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 SR 115/ SCR 136**, which requests that the HSEO convene a working group to evaluate the regulatory and policy landscape surrounding geothermal energy in Hawaii.

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

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

In order to ensure a transparent and responsible state approach, this resolution seeks to convene a working group of energy experts across the public and private sector to pave the way forward for future geothermal energy development throughout the State. Having a coordinated effort across all agencies and stakeholders will be key to the success of any geothermal program. We hope that this working group can allow for all those involved to be aligned and well-equipped with pertinent information and direction.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata  
Director of Government Affairs

*Investing in a Sustainable Hawai'i*