HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

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

before the
HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION

Tuesday, March 17, 2026
9:15 AM
State Capitol, Conference Room 325 and Videoconference

In Support of
SENATE BILL NO. 3081, SD1

RELATING TO A PROGRAM TO CHARACTERIZE THE POTENTIAL OF UNDERGROUND ENERGY RESOURCES STATEWIDE.

Chair Lowen, Vice Chair Perruso and Members of the Committee, the Hawai‘i State Energy Office (HSEO) strongly supports Senate Bill No. 3081, SD1 as a priority Administration measure to accelerate Hawai‘i’s energy transition and stimulate economic development throughout the state. If appropriately funded, SB 3081, SD1 would enable the HSEO to administer a statewide Geothermal Resources Characterization Program supported by the Hawai‘i Groundwater and Geothermal Resources Center at the University of Hawai‘i.

Conducting research via slim-hole test wells is a high priority of Hawai‘i's updated energy strategy because of the potential to clearly identify where geothermal resources might exist, with a focus on Maui, Hawai‘i, and O‘ahu. The ultimate goal is to stimulate private sector investment in producing safe, reliable, and affordable firm renewable energy that can make Hawai‘i energy self-sufficient, reduce electricity costs and carbon emissions, and create jobs. HSEO’s updated energy strategy indicates that better understanding of the location of geothermal potential greatly improves the potential to meet the 100% renewable portfolio targets on Maui, Hawai‘i, and possibly even O‘ahu.

The measure will also inform where underground water resources can be found and the longer-term potential for subsurface carbon sequestration. Further provisions provide accountability and transparency through HSEO’s preparation and submission of a progress report to the Legislature with research outcomes and any proposed legislation emanating from the research findings.

To effectively and broadly conduct this research, HSEO requests no less than $6,000,000 to carry out this program, an amount that would enable up to two slim-hole wells.

This measure is informed by HSEO’s analysis of market gaps in firm renewable resources and long duration storage, especially geothermal and pumped hydro. Hawai‘i is fortunate to have subsurface heat from geothermal energy remaining from Earth’s formation that is stored in rocks and fluids. Through deep wells, the heat can be brought to the surface as steam to drive turbines that generate electricity. However, it is not economically feasible to procure geothermal development through the competitive bidding process without first providing evidence of geothermal potential in specific locations. Without such evidence, developers must drill multiple, costly exploration wells with the risk that they may not discover a reliable geothermal resource, if they decide to participate at all. The uncertainty is passed on to ratepayers via a risk premium added to the developer’s bid. This measure would mitigate the risk premium and increase production royalties to Hawai‘i through State-sponsored slim-hole research that first identifies locations where hot water is sufficient for electric power generation.

In addition to the economic development and energy self-sufficiency benefits of geothermal, the Center for Strategic and International Studies credits modern geothermal power plants as having insignificant greenhouse gas (GHG) emissions with life-cycle emissions six to twenty times lower than natural gas and four times lower than solar photovoltaic (PV) energy due to the materials used to construct the plants.

Concurrently, HSEO will engage energy stakeholders at the community level during 2026 and beyond to gain insight on how and where geothermal development can appropriately take place in ways that meaningfully benefit the affected communities.

Given the importance of geothermal in helping Hawai‘i meet its firm renewable needs, government support to identify areas of geothermal potential is an appropriate first step towards incentivizing private sector investment and development of state-of-the-art geothermal resources. With the apporpiate level of funding, SB 3081, SD1 would provide that needed support.

Thank you for the opportunity to testify.

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

JAMES KUNANE TOKIOKA
DIRECTOR

DANE K. WICKER
DEPUTY DIRECTOR

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
KA ʻOIHANA HOʻOMOHALA PĀʻOIHANA, ʻIMI WAIWAI A HOʻOMĀKAʻIKAʻI

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Statement of
JAMES KUNANE TOKIOKA
Director
Department of Business, Economic Development, and Tourism
before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Tuesday, March17, 2026
9:15 AM
State Capitol, Conference Room 325

In Support of
SB3081, SD1
RELATING TO A PROGRAM TO CHARACTERIZE THE POTENTIAL OF UNDERGROUND ENERGY RESOURCES STATEWIDE.

Chair Lowen, Vice Chair Perruso and members of the Committee:

The Department of Business, Economic Development and Tourism (DBEDT) **supports** SB3081, SD1 as a priority DBEDT and Administration measure to accelerate Hawaiʻi's energy transition. SB3081, SD1 aligns with DBEDT's Economy for Resilience framework, which prioritizes firm renewable energy, economic diversification, infrastructure readiness, and long-term cost stability for Hawaiʻi residents and businesses. Characterizing underground geothermal and carbon sequestration resources is a foundational investment that strengthens energy security, reduces imported fuel dependency, and supports sustainable economic growth across multiple sectors including agriculture, advanced manufacturing, and the blue economy.
If appropriately funded, SB3081, SD1 would help the state reach its energy self-sufficiency targets and increase affordability by enabling DBEDT to administer a statewide Geothermal Resources Characterization Program through HSEO and supported by the Hawaiʻi Groundwater and Geothermal Resources Center at the University of Hawaiʻi.

Conducting research via slim-hole test wells is a high priority of Hawaiʻi's updated energy strategy because of the potential to clearly identify where geothermal resources might exist, with a focus on Maui, Hawaiʻi, and Oʻahu. The ultimate goal is to stimulate private sector investment in producing safe, reliable, and affordable firm renewable energy that can make Hawaiʻi energy self-sufficient and reduce electricity costs and

carbon emissions. This exploration would inform DBEDT, the Public Utilities Commission, and other policymakers about how far geothermal can take Hawai‘i towards meeting its 100% renewable portfolio targets on Maui, Hawai‘i and O‘ahu. From an economic development standpoint, this initiative reduces exploration risk, improves market transparency, and creates conditions necessary for private capital deployment in firm renewable energy infrastructure. By lowering uncertainty through state-sponsored characterization, Hawai‘i can reduce risk premiums embedded in future power purchase agreements, thereby lowering long-term electricity costs and improving business competitiveness statewide.

The measure will also inform where underground water resources can be found and the longer-term potential for subsurface carbon sequestration. Further provisions provide accountability and transparency through HSEO’s preparation and submission of a progress report to the Legislature with research outcomes and any proposed legislation emanating from the research findings. The data generated through this program also supports broader resilience objectives. Improved understanding of subsurface water temperatures and geological conditions may inform agricultural irrigation planning, food security initiatives, and future industrial applications that rely on reliable energy and water access. This integrated resource mapping strengthens Hawai‘i’s long-term land use and infrastructure planning.

To effectively and responsibly conduct this statewide resource characterization effort, DBEDT supports the appropriation of no less than $6,000,000 from the Energy Security Special Fund, as provided in the measure. This investment is strategic in nature and designed to catalyze significantly larger private sector investment while preserving fiscal discipline by reducing long-term procurement and ratepayer risk.

This measure is informed by HSEO’s analysis of market gaps in firm renewable resources and long duration storage, especially geothermal and pumped hydro. Hawai‘i is fortunate to have subsurface heat from geothermal energy remaining from Earth’s formation that is stored in rocks and fluids. Through deep wells, the heat can be brought to the surface as steam to drive turbines that generate electricity. However, it is not economically feasible to procure geothermal development through the competitive bidding process without first providing evidence of geothermal potential in specific locations. Without such evidence, developers must drill multiple, costly exploration wells with the risk that they may not discover a reliable geothermal resource, if they decide to participate at all. The uncertainty is passed on to ratepayers via a risk premium added to the developer’s bid. This measure would mitigate the risk premium and increase production royalties to Hawai‘i through State-sponsored slim-hole research that first identifies locations where hot water is sufficient for electric power generation. Hawai‘i’s renewable portfolio standard requires not only variable renewable resources such as solar and wind, but also firm, dispatchable renewable energy to stabilize the grid and avoid continued reliance on imported fossil fuels. Geothermal represents one of the few

scalable, in-state firm renewable options available. Advancing characterization now ensures Hawai‘i maintains optionality in its future energy mix.

In addition to the economic development and energy self-sufficiency benefits of geothermal, geothermal offers the least land-intensive renewable energy resource option in Hawai‘i and the Center for Strategic and International Studies credits modern geothermal power plants as having insignificant greenhouse gas (GHG) emissions with life-cycle emissions six to twenty times lower than natural gas and four times lower than solar photovoltaic (PV) energy due to the materials used to construct the plants.

Concurrently, HSEO will engage energy stakeholders at the community level during 2026 and beyond to gain insight on how and where geothermal development can appropriately take place in ways that meaningfully benefit the affected communities. DBEDT recognizes that community engagement, cultural consultation, and environmental review under Chapter 343, HRS, are essential components of responsible development. SB3081, SD1 appropriately requires environmental assessment or environmental impact review prior to development activities and mandates annual reporting to the Legislature, ensuring transparency and legislative oversight.

Given the importance of firm renewable energy in achieving Hawai‘i’s decarbonization, affordability, and energy independence goals, government-supported resource characterization is a prudent first step in advancing the State’s Economy for Resilience strategy. With appropriate funding, SB3081, SD1 provides the data-driven foundation necessary to unlock private investment, strengthen grid reliability, and position Hawai‘i for long-term economic stability.

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 HAWAIʻI | KA MOKUʻĀINA ʻO HAWAIʻI
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CIARA W.K. KAHAHANE
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
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CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Testimony of
RYAN K.P. KANAKAʻOLE
Acting Chairperson

Before the House Committee on
ENERGY AND ENVIRONMENTAL PROTECTION

Tuesday, March 17, 2026
9:15 AM
State Capitol, Conference Room 325

In consideration of
SENATE BILL 3081 SENATE DRAFT 1
RELATING TO A PROGRAM TO CHARACTERIZE THE POTENTIAL OF UNDERGROUND ENERGY RESOURCES STATEWIDE

Senate Bill (SB) 3081 Senate Draft (SD) 1 proposes to establish an Underground Energy Resource Characterization Program within the Hawaii State Energy Office (HSEO) to continue supporting geothermal exploration resource characterization via slim-hole characterization wells, in collaboration with the Hawaii Groundwater and Geothermal Resources Center at the University of Hawaii.

The Department of Land and Natural Resources (Department) recognizes the intent of this measure and offers the following comments.

The Department notes that this bill does not specify any target or maximum drilling depths, and wishes to clarify the following from Hawaii Administrative Rules (HAR), Chapter 183 – Rules on Leasing and Drilling of Geothermal Resources:

- Subchapter 2: A geothermal exploration permit is required on state and reserved lands to conduct "drilling of shallow temperature test holes less than five hundred feet in depth, or deeper as may be determined by the board [of Land and Natural Resources]."
- Subchapter 8: Exploration wells that are five hundred feet in depth or deeper and not approved by the board under a geothermal exploration permit are subject to permitting, casing, cementing, blowout prevention, and other requirements set forth in Subchapter 8.

Regarding Section 1 (page 1, lines 7-9) where slim-hole bores are defined as having "a diameter of seven inches or less for over ninety per cent of the depth of the bore": The Department wishes to point out that this diameter configuration may not be possible to achieve

in all locations when drilling for geothermal resources. HAR Chapter 183 requires: “All wells shall be cased in a manner to protect and prevent or to minimize damage to the environment, groundwater resources, geothermal resources, life, health, and property…all casing strings reaching the surface shall provide for adequate anchorage for blowout-prevention equipment, hole pressure control, and protection for all natural resources.”

Additionally, HAR Chapter 183 states that, “Department specifications for casing strings shall be determined on a well-to-well basis.” Casing diameters and depths need to be determined on a well-to-well basis due to many site-specific variations, including:

- groundwater conditions and depths
- permeability and competency of rock formations
- subsurface temperatures and pressures
- target depth and desired bottom-hole diameter for the well

A geothermal well starts out with a large diameter hole close to the surface. Metal casing is cemented inside the hole. As drilling proceeds deeper, smaller and smaller diameter casings are cemented inside the initial casings, extending to deeper depths. Some requirements from HAR Chapter 183, Subchapter 8 for the first casing strings include:

1. Conductor pipe (largest diameter) for the first 50-150 feet of a well closest to the surface
2. Surface casing (next smaller diameter) for the first 500 feet or a minimum depth of ten percent of the proposed total depth of the well, whichever is greater.
3. A second surface casing might be required in some locations
4. Intermediate casing (next smaller diameter)

If applicable, deeper casings will vary depending on the target depth, final diameter, and subsurface conditions. For a geothermal exploration slim-hole bore, the hole drilled for both the conductor pipe and surface casing will typically need to be larger than 7”, and deeper casings may also require holes larger than 7”, depending on the specific site’s subsurface conditions and the total depth and final diameter of the slim-hole bore. The Department wishes to emphasize that these larger diameter casings are essential to provide protection of groundwater resources and anchorage for blowout prevention equipment, and these larger diameter casings might need to extend to depths greater than ten percent of the total well depth.

In locations where geothermal heat exists, any size well can experience a blowout, even small-diameter wells. The well control requirements for small-diameter wells differ from larger diameter wells, but well control still must be evaluated for each drilling situation. The following summary of blowout prevention in geothermal slim holes, one type of small-diameter well, is included in the Hawaii Geothermal Drilling Guide, Circular C-126, published by the Department in 2014:

> 5.4.4 Blowout Prevention in Slim Holes
> Much smaller volumes of drilling fluids are circulated in slim holes than in full-scale production holes. Kicks of any volume in slim holes are therefore of more consequence, and immediate detection of fluid entry, or lost circulation, is critical…In summary, blowout prevention in slim holes requires special training, precise flow metering, real-time data presentation and dynamic kill proficiency.

The Department reviews all geothermal exploration permits and geothermal drilling permits to assess blowout risks and prescribe appropriate casing designs, well control procedures, and blowout prevention equipment.

Therefore, the Department recommends amending the definition of a slim-hole bore (page 1, lines 7-9) to be as having “a diameter of seven inches or less for over ninety per cent of the depth of the bore or over a smaller percentage when required by the permitting agency.”

Regarding Section 2 (b) (page 3, lines 1-5):

(b) Upon finding of a resource that could support the development of geothermal energy, the Hawaii state energy office shall seek funds to conduct an environmental assessment or environmental impact statement for the program's actions pursuant to chapter 343.

The Department suggests clarification on whether “upon finding of a resource” means (1) before drilling, when a drill-site has been selected or (2) after drilling has confirmed a viable geothermal resource. This clarification is important since an environmental assessment or environmental impact statement may be required before drilling, depending on the type of parcel where drilling will occur and the specifications of the proposed drilling program.

Therefore, the Department recommends amending this section to read:

(b) Upon finding of a resource that could support the development of geothermal energy, or before drilling if required by chapter 343, the Hawaii state energy office shall seek funds to conduct an environmental assessment or environmental impact statement for the program's actions pursuant to chapter 343.

Regarding Section 2 (b) (page 3, lines 5-9):

(b)…The assessment or impact statement shall be conducted in collaboration with the appropriate state agencies, including the department of land and natural resources and department of health, and shall include input from Native Hawaiian cultural practitioners.

The Department notes Attorney General Opinion 14-1, which states that the Department of Hawaiian Home Lands has the authority to manage and dispose of geothermal resources on its lands. Therefore, the Department recommends amending this section to add the Department of Hawaiian Home Lands as an appropriate state agency if its lands are intended as potential drilling sites.

Mahalo for the opportunity to comment on this measure.

Related documents:

HAR – Chapter 183 – Rules on Leasing and Drilling of Geothermal Resources:
https://dlnreng.hawaii.gov/geothermal/wp-content/uploads/sites/17/2013/03/CHAP1831.pdf

HRS – Chapter 343 – Environmental Impact Statements
https://www.capitol.hawaii.gov/hrscurrent/Vol06_Ch0321-0344/HRS0343/HRS_0343-.htm

September 2014 – Hawaii Geothermal Drilling Guide Circular C-126 (See Section 5.4.4)
https://dlnreng.hawaii.gov/geothermal/wp-content/uploads/sites/17/2016/01/Circular_C-126_DLNR_DEC2014_sm.pdf

Sustainable Energy Hawai‘i
sustainableenergyhawaii.org
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March 17, 2026

Aloha Chair Lowen and members of the Energy and Environmental Protection Committee:

SB3081 SD1 – SUPPORT

Sustainable Energy Hawaii supports SB3081 SD1, which establishes the Underground Energy Resource Characterization Program within the Hawaii State Energy Office in collaboration with the University of Hawaii's Groundwater and Geothermal Resources Center. This measure directly advances Hawaii's progress toward the 100% renewable portfolio standard by 2045 and aligns with Governor Green's Executive Order 25-01 calling for accelerated renewable energy deployment.

Why Resource Characterization Matters Now

Hawaii's 100% RPS target requires firm, dispatchable renewable generation to complement variable solar and wind resources. Geothermal is the only in-state, scalable, firm renewable option currently available. The existing 38 MW Puna Geothermal Venture on Hawaii Island demonstrates the viability of this resource, yet the statewide geothermal potential remains insufficiently documented. Without publicly funded resource data, private developers are faced with prohibitive exploration risk, which translates into higher risk premiums in power purchase agreements and, ultimately, higher electricity costs for ratepayers. State-sponsored slim-hole characterization reduces that uncertainty and creates a foundation for private investment.

The slim-hole boring method specified in SB3081 SD1 (seven inches or less in diameter for over 90% of bore depth) represents one of the least invasive approach to subsurface exploration. Slim-hole boring is scientific characterization, not production drilling. The distinction matters both technically and in terms of community impact.

Key Strengths of SB3081 SD1

We note several provisions that reflect lessons learned from decades of geothermal discussions in Hawaii. First, the bill requires environmental assessment or environmental impact statements under Chapter 343, HRS, before any development activity can proceed from the characterization findings. Second, it mandates input from Native Hawaiian cultural practitioners, acknowledging the deep cultural significance of geothermal resources. Third, the bill requires annual legislative reporting and a public progress report by 2028, ensuring transparency and accountability. Fourth, the program also characterizes carbon sequestration potential and underground water resources, yielding data with broader applications for agriculture, land use planning, and climate resilience.

Community Engagement Is Essential, Not Optional

Sustainable Energy Hawaii recognizes the legitimate concerns raised by Native Hawaiian cultural practitioners and Puna community members who have lived experience with geothermal development since the 1980s.

We urge HSEO and the University of Hawaii to treat community engagement not as a procedural requirement, but as a substantive obligation. Engagement must begin before exploration activities, must meaningfully incorporate place-based and cultural knowledge, and must continue through and beyond project completion. The cultural relationship between Native Hawaiians and subsurface thermal resources is real and must be respected in both process and outcome. We believe SB3081 SD1's provisions for cultural practitioner input and environmental review represent necessary steps, though their effectiveness will depend entirely on implementation.

Fiscal Context

We support funding this program from the Energy Security Special Fund at the level DBEDT and HSEO have recommended ($6 million for one or two additional slim-hole wells). This is a strategic investment that reduces long-term ratepayer costs by de-risking private sector participation. The bill's own findings appropriately acknowledge current fiscal constraints from federal funding changes, making this a measured, data-driven allocation rather than a speculative expenditure.

Recommendation

Sustainable Energy Hawaii respectfully urges the Committee to pass SB3081 SD1. Geothermal resource characterization is a necessary prerequisite to informed energy planning. Hawaii stakeholders cannot accurately evaluate to what degree geothermal can contribute to the 100% RPS without critical subsurface data. This bill provides the framework for responsible, transparent, and culturally informed exploration.

We ask the Committee to ensure that any amendments preserve the bill's environmental review requirements, cultural practitioner consultation mandate, and public reporting obligations. These provisions are not merely bureaucratic overhead, they are foundational of public trust.

Thank you for the opportunity to testify.

Sustainable Energy Hawai'i

Sustainable Energy Hawaii is a statewide 501(c)(3) nonprofit advancing clean energy policies and renewable energy deployment through public education, policy advocacy, and stakeholder engagement. For more information, visit sustainableenergyhawaii.org.

Email: communications@ulupono.com

HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION
Tuesday, March 17, 2026 — 9:15 a.m.

Ulupono Initiative supports SB 3081 SD1, Relating to a Program to Characterize the Potential of Underground Energy Resources Statewide.

Dear Chair Lowen and Members of the Committee:

My name is Micah Munekata and I am the Vice President of Government Affairs at Ulupono Initiative. We are a Hawai'i-focused impact investment firm that strives to improve the quality of life throughout the islands by helping our communities become more resilient and self-sufficient through locally produced food, renewable energy and clean transportation choices, and better management of freshwater resources.

Ulupono supports SB 3081 SD1, which establishes the Underground Energy Resources Characterization Program to identify the location and characteristics of underground energy resources through the use of slim-hole bores and requires a related environmental assessment or environmental impact statement.

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

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

This bill is a forward-looking initiative that prioritizes scientific research and environmental stewardship. By identifying geothermal and carbon sequestration resources, this measure supports Hawai'i's broader goals of achieving energy resilience and combating climate change. Resource characterization through slim-hole bores offers a minimally invasive method for gathering critical data, ensuring that these activities are conducted responsibly and with

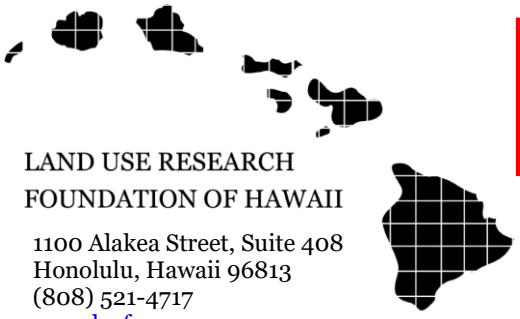
minimal environmental disruption. This approach reflects a commitment to balancing energy development with environmental protection.

As the State advances resource exploration activities, Ulupono believes robust, early and ongoing community engagement must be a foundational element of this work. This engagement must take place in parallel with any exploration activities, as it is also important to understand the scope and potential resources to have a deeper conversation about what is at stake. Meaningful engagement—particularly with Native Hawaiian communities, cultural practitioners, and residents of nearby areas—is essential to ensuring these efforts are grounded in place-based knowledge, cultural awareness, and community priorities. Proactive outreach that clearly explains the purpose of the exploration, listens to concerns, and incorporates local perspectives helps build trust and increases the likelihood that any resulting resource development delivers real, lasting benefits to the people of Hawai‘i rather than unintended impacts. Our support is contingent upon ensuring that exploration efforts stay aligned with community priorities as well as Hawai‘i’s broader renewable energy and sustainability goals for the long-term benefit of its residents.

Thank you for the opportunity to testify.

Respectfully,

Micah Munekata
Vice President, Government Affairs



LATE

LAND USE RESEARCH
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1100 Alakea Street, Suite 408
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March 17, 2026

Representative Nicole E. Lowen, Chair
Representative Amy A. Perruso, Vice Chair
House Committee on Energy and Environmental Protection

Strong Support for SB 3081, SD1, RELATING TO A PROGRAM TO CHARACTERIZE THE POTENTIAL OF UNDERGROUND ENERGY RESOURCES STATEWIDE (Establishes the Underground Energy Resource Characterization Program to identify the location and characteristics of underground energy resources through the use of slim-hole bores and requires a related environmental assessment or environmental impact statement. Requires reports to the legislature. Appropriates funds. Effective 4/19/2042. [SD1])

Tuesday, March 17, 2026, at 9:15 a.m.
State Capitol, Conference Room 425, and VIA VIDEOCONFERENCE

The Land Use Research Foundation of Hawai'i (LURF) is a private research and trade association founded in 1979, whose members include major Hawai'i landowners, developers, utility companies, and land use professionals. LURF's mission is to research, educate, and advocate for reasonable, rational, and equitable land use planning, laws, and regulations that encourage well-planned and sustainable economic growth in agriculture, housing, renewable energy, commercial and industrial uses, and tourism, while safeguarding Hawai'i's significant natural, environmental, historic, and cultural resources, public health, and safety.

LURF is in **strong support of SB 3081, SD1**, whose purpose is to require the Hawaii State Energy Office to continue supporting geothermal exploration resource characterization via slim-hole characterization wells, in collaboration with the Hawaii Groundwater and Geothermal Resources Center at the University of Hawaii.

This program will benefit government agencies, key utilities (electric, gas and water), landowners, businesses, and the public with greater knowledge about underground water, geothermal, and carbon sequestration resources that can support the resource stewardship and security for water, agriculture and food, and renewable energy.

Based on the reasons stated above, LURF is in strong support of SB 3081, SD1, and respectfully requests your favorable consideration of this bill.

Thank you for the opportunity to provide comments in support of this measure.

SB-3081-SD-1
Submitted on: 3/12/2026 4:12:47 PM
Testimony for EEP on 3/17/2026 9:15:00 AM

Submitted By	Organization	Testifier Position	Testify
Johnnie-Mae L. Perry	Individual	Oppose	Written Testimony Only

Comments:

I, Johnnie-Mae L. Perry, Oppose

3081 SB RELATING TO A PROGRAM TO CHARACTERIZE THE POTENTIAL OF UNDERGROUND ENERGY RESOURCES STATEWIDE.

SB-3081-SD-1
Submitted on: 3/12/2026 4:20:18 PM
Testimony for EEP on 3/17/2026 9:15:00 AM

Submitted By	Organization	Testifier Position	Testify
William Caron	Individual	Oppose	Written Testimony Only

Comments:

Aloha Chair, Vice Chair and Members of the Committee,

I am writing today to express my **strong opposition to SB3081**, which would establish an Underground Energy Resource Characterization Program to identify the location and characteristics of underground energy resources through slim-hole bores.

On its face, this bill appears to be a neutral data-gathering exercise. But we must be honest about what it really represents: a legislative green light to expand geothermal energy development in Hawai‘i, regardless of community sentiment.

And the community sentiment is deeply divided on this issue at best. Furthermore, a significant portion of opposition comes from the Native Hawaiian community.

For Native Hawaiians, geothermal development is not simply an abstract policy debate. It is intimately tied to issues of cultural practice, ancestral connection, and sovereignty. The areas most likely to be targeted for geothermal exploration are not empty landscapes. They are ‘āina—living, breathing places with deep cultural and spiritual significance. They are wahi pana, storied places whose names carry generations of memory and meaning.

When the state moves forward with programs like this one without first building genuine consensus within affected communities, it sends a clear message: your cultural connections matter less than our energy goals.

I understand the urgency of transitioning away from fossil fuels. Climate change is an existential threat, and Hawai‘i must pursue every available tool to achieve our renewable energy targets. But urgency does not excuse imposition. There are multiple paths to a renewable future—solar, wind, battery storage, efficiency, and yes, potentially geothermal in places where communities consent. But consent is the key. And consent does not exist here.

SB3081 does not require community consent. It does not require consultation with Native Hawaiian organizations beyond the standard environmental review process, which has proven time and again to be insufficient at capturing the depth of cultural impact. It simply authorizes the state to move forward with characterizing resources, creating a self-fulfilling prophecy: once the data exists, the pressure to develop follows.

We have been down this road before. The history of geothermal development in Hawai‘i is littered with broken promises, community division, and cultural harm. We should not repeat those mistakes simply because the technology has advanced or the climate crisis has deepened.

If the state is serious about geothermal, let it first do the hard work of building trust and consensus. Let it sit with communities, listen to their concerns, and only move forward when there is genuine agreement—not when a bill quietly passes through the legislature under the guise of "characterization."

I urge you to oppose SB3081. Our energy future must be built on justice, not imposition.

Mahalo for the opportunity to testify.

SB-3081-SD-1
Submitted on: 3/12/2026 7:16:23 PM
Testimony for EEP on 3/17/2026 9:15:00 AM

Submitted By	Organization	Testifier Position	Testify
Keoni Shizuma	Individual	Oppose	Written Testimony Only

Comments:

Aloha,

I am testifying in opposition to SB3081.

While I understand the need for Hawai‘i to become less dependent on fossil fuels and create our own energy, I do not believe geothermal is the way we should be going. Any geothermal project will take massive investment and will likely only amount to 1 or 2 additional facilities in Hawai‘i. This will require us to generate the electricity in one central location and transmit said energy to communities across the island or state. This will take massive additional investments to create these transmission routes. The issue with transmitting power is, as we've seen with Lahaina, we are great risk to our environment. Unless we plan on trenching thousands of miles of powerlines on the islands that will have geothermal, we'll continue to be at risk to our weather.

Aside from transmission issues, the issue with any centralized technology is that we will dependent on one central power creation. As we've seen in the past with our weather (localized high winds, heavy rains) or even our geology (earthquakes), one large event can bring down the whole system, has been the case. Heavy winds bring down lines or require HECO to emergency shut-off the power, Oahu suffered an island wide power outage with the large earthquake, and heavy rains can cause flooding which cause long power outages affecting large areas.

We need to be doing research into decentralized systems. We should use the money appropriated for "underground energy resources" instead to research decentralized energy production systems, similar those that are in other countries around the world. If communities have their own power supply – say a mid-scale wind or solar generation, then when another communities power supply goes down, their system won't be affected.

Decentralized energy systems will create safety and stability in Hawai‘i and help improve our reliance on energy importation. We need decentralized systems. Please either amend this measure to reflect decentralized energy systems (instead of underground energy resources – which will never be decentralized), or oppose this measure.

Mahalo for your consideration,
Keoni Shizuma

SB-3081-SD-1
Submitted on: 3/13/2026 4:27:43 PM
Testimony for EEP on 3/17/2026 9:15:00 AM

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

Comments:

Aloha Chairs Lowen & Peruso and committee members. I support SB3081. I believe that geothermal energy is the best candidate for cheap, inexhaustible, locally sourced, and carbon-free production of electricity to power our future. I believe that exploration to locate potental production sites logically precedes environental studies and community engagement that must occur prior to production. I believe that the bill might be improved by adding a stipulation by stipulating that exploratory drilling must be conducted at a defined minimum distance from any communities or residences to allay any concerns that residents might have that production facilities could be built close to people's homes, as occured with PGV - a mistake that continues to threaten the development of geothermal energy throughout the state. Mahalo for your consideration of my viewpoint.

SB-3081-SD-1
Submitted on: 3/15/2026 2:51:00 AM
Testimony for EEP on 3/17/2026 9:15:00 AM

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

Comments:

TESTIMONY IN SUPPORT OF SB3081 SD1

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

My name is Noel Morin. I support SB3081 SD1.

Hawai‘i's path to 100% renewable energy by 2045 requires firm power, not just solar, wind, and storage. Geothermal is the only in-state resource that can deliver clean firm power. However, our statewide resource is largely uncharacterized. Without publicly funded resource data, developers face prohibitive exploration risk.

SB3081 SD1 will fund slim-hole characterization wells, an important step in understanding our geothermal resource, de-risking exploration, and managing the ratepayer impact.

Please support SB3081 SD1.

Mahalo for the opportunity to testify.

Noel Morin

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

SB-3081-SD-1
Submitted on: 3/15/2026 1:24:25 PM
Testimony for EEP on 3/17/2026 9:15:00 AM

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

Comments:

As I support geothermal resource development and carbon sequestration, the Hawaii Groundwater and Geothermal Resources Center (HGGRC) should execute the geothermal resource characterization. Through this University of Hawaii research unit, the State of Hawaii's most prominent earth scientists are researching Hawaii's groundwater resources. HGGRC obtained land access for research from dozens of landowners across the state. For research equipment, HGGRC has access to $1 million worth of geophysical equipment and a $3 million drill rig (Notably, Puna Geothermal Venture is the only other geothermal-focused organization in Hawaii that has a suitable drill rig). The State can further benefit from HGGRC and UH's research, expertise, and resources.

SB-3081-SD-1
Submitted on: 3/15/2026 7:37:26 PM
Testimony for EEP on 3/17/2026 9:15:00 AM

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

Comments:

Aloha Committeemembers,

Our renewable energy transition is in trouble. Our state is more vulnerable than ever to external energy market shocks. These two realities necessitate that we maximize our own energy development, to ensure to our quality of life, environment and economic development. This legislation moves us in a positive direction towards these ends. I **STRONGLY** urge the committee to continue **SUPPORTING** this legislation!