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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
SENATE COMMITTEES ON
ENERGY AND INTERGOVERNMENTAL AFFAIRS
AND
HIGHER EDUCATION

Tuesday, February 4, 2025
3:00 PM
State Capitol, Conference Room 016 and Videoconference

In Support of
SENATE BILL NO. 993

RELATING TO GEOTHERMAL ENERGY EXPLORATION.

Chairs Wakai and Mercado Kim, Vice Chairs Chang and Kidani, and members of the Committees, HSEO supports Senate Bill No. 993, in its similarity to SB 1339, the preferred bill of the Green Administration and DBEDT. If appropriately funded, SB 993 would enable the Hawai‘i State Energy Office (HSEO) to conduct a statewide environmental assessment for, and subsequently administer, a 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 are a high priority of Hawai‘i’s updated energy strategy because of the potential to clearly identify where geothermal resources might exist 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.

HSEO strongly prefers SB 1339 over SB 993 because it identifies financial resources to conduct at least six slim-hole resource characterization research wells on three islands over a two-year period. Both SB 1339 and SB 993 would amend chapter 196 HRS to include a carbon sequestration and underground water resource

characterization program implemented by HSEO, including a statewide environmental assessment and meetings with nearby counties and communities that are crucial in local determination of how public trust resources like geothermal can be appropriately pursued. Both measures also require HSEO to submit a progress report, findings, and any proposed legislation resulting from the research findings to the legislature.

To effectively and broadly conduct this research, HSEO requests $16,500,000 for fiscal years 2025-2026 and the same sum for fiscal years 2026-2027 to carry out this program. HSEO requests $135,000 for fiscal year 2025-2026 and the same sum for fiscal year 2026-2027 to support one full-time equivalent permanent position to be dedicated to coordinate this program.

In 2023, HSEO analyzed market gaps in firm renewable resources and long duration storage, especially geothermal and pumped hydro, and developed policies and pursued funding opportunities to fill those gaps. Geothermal energy is heat that was generated during the planet’s formation stored in rocks and fluids and brought as steam to the earth’s surface using deep wells. The steam drives turbines to generate electricity. The slim-hole research of water resources through this measure can reveal where hot water sufficient to power electricity generation may be present in key areas throughout the state. This program will also deliver core samples that may reveal the potential for carbon sequestration.

The Center for Strategic and International Studies notes that, like solar and wind energy, modern geothermal power plants have 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 2024 and beyond to gain insight on how and where geothermal development can appropriately take place in ways that meaningfully benefit the affected communities.

Several obstacles have limited Hawai‘i from fully developing its geothermal potential. Geothermal exploration is commercially risky and expensive. Developers have to drill multiple exploration wells before finding a reliable geothermal resource, and sometimes they do not find one at all. Private investors usually cannot mitigate and manage this risk independently.

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 appropriate level of funding, SB 993 would provide that needed support.

Thank you for the opportunity to testify.