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Testimony of
MARK B. GLICK, Chief Energy Officer

before the
HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

Thursday, February 1, 2024
9:30 AM
State Capitol, Conference Room 325 and Videoconference

In Support of
HB 2103

RELATING TO LONG DURATION CLEAN ENERGY STORAGE.

Chair Lowen, Vice Chair Cochran, and Members of the Committee, I am writing in support of HB 2103 which relates to long duration clean energy storage.

Longer duration storage technologies will be increasingly important to Hawai'i's energy transition as more renewables are deployed on the grid. At high rates of renewable penetration, such storage enables renewable sources generated during the daytime, such as solar generated power, to be used throughout the night. A long duration clean energy storage investment capital special fund would provide the Hawai'i State Energy Office (HSEO) with seed and venture capital for investments in private sector and federal projects for long duration storage research, development, testing, and implementation.

Long-duration storage, including hydrogen (H₂) and pumped hydroelectric storage, can make renewable energy available in times of need. It further has the potential to act as firm renewable, subject to the storage capacity. Kauai Island Utility Cooperation (KIUC) issued a Power Purchase Agreement (PPA) at \$0.08/kWh PPA for a pumped hydroelectric storage project combining 35MW solar and battery, and 25MW pumped hydro. KIUC estimates project will save over \$150 million compared to fossil fuels for term of PPA.

O'ahu has the potential for pumped hydro at Lake Wilson. Previous estimates show 40MW capacity from Wahiawā, Nu'uānu, and Maunawili reservoirs (USDOE and DBEDT 1981).

The measure as written provides sufficient flexibility to pursue electrochemical, mechanical, thermal, chemical carriers, or any combination that has the potential to meet the necessary duration and cost targets for grid flexibility. The changes also preserve the crucial role of hydrogen pursuant to the original intent of the renewable hydrogen program but broadens it appropriately to include all long duration storage options.

Thank you for the opportunity to testify.