

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: University of Hawaii at Manoa

STATE: HI

PROJECT TITLE: Economic Feasibility of Wave-Powered Offshore Kanpachi Fish Farming

Notice of Funding Opportunity Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-003097	DE-EE0011690	GFO-0011690-001	GO11690

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

B3.6 Small-scale research and development, laboratory operations, and pilot projects Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

B3.16 Research activities in aquatic environments Small-scale, temporary surveying, site characterization, and research activities in aquatic environments, limited to: (a) Acquisition of rights-of-way, easements, and temporary use permits; (b) Installation, operation, and removal of passive scientific measurement devices, including, but not limited to, antennae, tide gauges, flow testing equipment for existing wells, weighted hydrophones, salinity measurement devices, and water quality measurement devices; (c) Natural resource inventories, data and sample collection, environmental monitoring, and basic and applied research, excluding (1) large-scale vibratory coring techniques and (2) seismic activities other than passive techniques; and (d) Surveying and mapping. These activities would be conducted in accordance with, where applicable, an approved spill prevention, control, and response plan and would incorporate appropriate control technologies and best management practices. None of the activities listed above would occur within the boundary of an established marine sanctuary or wildlife refuge, a governmentally proposed marine sanctuary or wildlife refuge, or a governmentally recognized area of high biological sensitivity, unless authorized by the agency responsible for such refuge, sanctuary, or area (or after consultation with the responsible agency, if no authorization is required). If the proposed activities would occur outside such refuge, sanctuary, or area and if the activities would have the potential to cause impacts within such refuge, sanctuary, or area, then the responsible agency shall be consulted in order to determine whether authorization is required and whether such activities would have the potential to cause significant impacts on such refuge, sanctuary, or area. Areas of high biological sensitivity include, but are not limited to, areas of known ecological importance, whale and marine mammal mating and calving/pupping areas, and fish and invertebrate spawning and nursery areas recognized as being limited or unique and vulnerable to perturbation; these areas can occur in bays, estuaries, near shore, and far offshore, and may vary seasonally. No permanent facilities or devices would be constructed or installed. Covered actions do not include drilling of resource exploration or extraction wells.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the University of Hawai'i (UH) at Manoa for wave energy research and turbine testing.

Design and computer modeling would take place at UH Manoa in Honolulu, Hawai'i. Turbines would be 3D printed and tested using both seawater and air at the Hawai'i Ocean Science Technology Park in Kailua-Kona, HI. Buoys to passively measure wave energy potential would be deployed at the Blue Ocean Mariculture Offshore Yard, an operational fish farm located just offshore from the Kona airport (19.743056, -156.061389). All proposed buoys would replace existing surface buoys and be connected to existing moorings.

Deployment of scientific measuring buoys falls under the U.S. Army Corps of Engineers' Nationwide Permit #5. Any other necessary permits would be obtained prior to commencing activities. Award recipients would adhere to established health and safety policies and procedures when performing project work, and would observe all applicable federal, state, and local health, safety, and environmental regulations.

Based on report data acquired from U.S. Fish and Wildlife Service's Information for Planning and Consultation database and correspondence with National Oceanic and Atmospheric Administration (NOAA) staff, the following federally listed species have the potential to occur at the project area: (1) the band-rumped storm-petrel; (2) the Hawaiian petrel; (3) the short-tailed albatross; (4) the Newell's shearwater, (5) the hawksbill sea turtle; (6) the Hawaiian monk seal; (7) the insular false killer whale; (8) the oceanic whitetip shark; and (9) the giant manta ray. Additionally, NOAA identified critical habitat for two species (Hawaiian monk seal and false killer whale) at this location.

Research buoys would be attached to existing mooring lines during routine operation of the aquaculture facility and deployed for a maximum of 1 year. There is no recent documentation of the aforementioned federally listed species occurring at the project site. DOE staff concludes the substitution of a surface buoy with a research buoy would have no effect on federally listed species because: (1) aquatic habitat conditions at the project would remain unchanged from current conditions, and (2) there is a probable absence of federally listed species at the project site.

Essential Fish Habitat (EFH) occurs at the project site and includes habitat for the Hawai'i Bottomfish, Hawai'i Crustaceans, and Pelagic Fisheries. DOE staff concludes the substitution of a surface buoy with a research buoy would have no effect on EFH because aquatic habitat conditions at the project would remain unchanged from current conditions.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources which would be considered significant or require DOE to consult with other agencies or stakeholders.

For Categorical Exclusion Determinations:

- The proposal fits within a class of actions that is listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures (June 30, 2025). To fit within the classes of actions listed in Appendix B to 10 CFR Part 1021, or Appendix B of DOE's NEPA Implementing Procedures, a proposal must satisfy the conditions that are integral elements of the classes of actions in Appendix B of both 10 CFR Part 1021 and DOE's NEPA Implementing Procedures.
- There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.
- The proposed action has not been segmented to meet the definition of a categorical exclusion.
- The proposed action is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Water Power Technologies Office
NEPA review completed by Andrew McClellan, 20 November 2025

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  _____ Date: 1/7/2026
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
- Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager