



HAWAII COMMUNITY DEVELOPMENT AUTHORITY

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TO: 1. HCDA-Maintained Public Files for Chapter 343 HRS Exemption Determinations
2. Environmental Review Program, Office of Planning and Sustainable Development
3. Kanoa Winds, Inc.

FROM: Craig K. Nakamoto, Executive Director, HCDA

SUBJECT: Exemption Notice for Vertical Wind Turbine Demonstration Project, Kalaeloa

DATE: October 23, 2024

AGENCY OR APPLICANT ACTION

Check applicable box

- This exempted action is an agency action as defined by Section 343-5(b), Hawai'i Revised Statutes (HRS), and Section 11-200.1-8, Hawai'i Administrative Rules (HAR),
- This exempted action is an applicant action as defined by Section 343-5(e), HRS, and Section 11-200.1-9, HAR

EXEMPTION TYPE

- The Exemption Notice for the action described below is based on the general types enumerated in Section 11-200.1-15(c), Hawai'i Administrative Rules (HAR), Exemption Type **5, Basic data collection, research, experimental management and resource and infrastructure testing and evaluation activities that do not result in a serious or major disturbance to an environmental resource**.
- As applicable, the exemption for the action described below is also supported by the Exemption List for the [name of agency], reviewed and concurred to by the Environmental Council on [date of concurrence].
- Exemption List Class ____.
 - Item Number ____.
 - Applicable language from the exemption list:

DESCRIPTION OF ACTION

Proposing Agency or Applicant: Hawaii Community Development Authority
Project Name & Address/Location: Vertical Wind Turbine Demonstration Project, Kalaeloa, Kalaeloa Heritage Park, 91-1940 Coral Sea Rd, Kapolei, HI 96707
Anticipated Start Date: 10/1/2024
Anticipated End Date: 7/31/2027
Island and District: O`ahu, `Ewa
Tax Map Key(s) and other geolocation means: [1] 9-1-013: 069
All Necessary Permits and Approvals: HCDA Rules Clearance Permit

NARRATIVE

Describe the action and why it qualifies for the exemption: The HCDA's lessee, Kalaeloa Heritage and Legacy Foundation (KHLF), has granted a right-of-entry to Kanoa Winds, Inc. to temporarily install a single 23-foot-tall vertical coaxial wind power generator on an existing concrete pad at the western end of the Kalaeloa Heritage Park (TMK 9-1-013:069). The generator uses a technology that is different from conventional turbines using propeller designs that are more common to Hawaii. The vertical coaxial contra-rotating blades are stacked on top of each other and spin in opposite directions, creating conditions for airflow to create lift and drag which produces torque. The technology has potential advantages for deployment in Hawaii, including the ability to operate in higher winds, a smaller footprint, and the ability to setup and operate in remote areas where connections to the existing electrical grid may be more challenging. However, additional field data is needed to assess the technology's performance under actual environmental conditions. Demonstration and testing will occur over approximately 3 years. This short-term project is consistent with the actions identified in Exemption Class 5, specifically where the intent is data collection and infrastructure testing.

RECEIVING ENVIRONMENT

Describe the site, including any impacts on the receiving environment: The vertical wind turbine will be installed in the lightly used, western end of the Kalaeloa Heritage Park. This area is located between the Kalaeloa airfield to the west and Coral Sea Road to the east. Lowland scrub and dryland forest vegetation is a dominant element of the landscape, including invasive plants, such as kiawe, koa haole, and grasses. Throughout the park there are Native Hawaiian sites with habitation and agricultural structures, as well as historic sites related to former military use. The site where the turbine will be installed is flat; it is outside the tsunami evacuation zone and is not at risk of flooding. Although located near the Kalaeloa Airport, the turbine height of 23 feet is well under the FAA air navigation height restriction of 150 feet above ground level (174 feet above sea level). Public access will be restricted because the project is location is inside the park boundary.

ENVIRONMENTAL ANALYSIS

I have considered the potential effects of the proposed project and all related activities against the criteria checked below:

	Not Applicable
<input checked="" type="checkbox"/> Land Use and Zoning Conformance	<input type="checkbox"/>
<input type="checkbox"/> Traffic (Vehicles, Bicycles, Pedestrian)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Infrastructure (Roads, Buildings, Utilities)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Air Quality Pollutant Emissions	<input checked="" type="checkbox"/>
<input type="checkbox"/> Noise Emissions	<input checked="" type="checkbox"/>
<input type="checkbox"/> Solid, Hazardous, and Liquid Waste Management	<input checked="" type="checkbox"/>
<input type="checkbox"/> Social	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Economic	<input type="checkbox"/>
<input type="checkbox"/> Health and Safety	<input checked="" type="checkbox"/>
<input type="checkbox"/> Recreation	<input checked="" type="checkbox"/>
<input type="checkbox"/> Public Beach Access	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Cultural Resources and Practices	<input type="checkbox"/>
<input type="checkbox"/> Visual/Aesthetic	<input checked="" type="checkbox"/>
<input type="checkbox"/> Environmental Justice	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Rare, Threatened, and/or Endangered Species	<input type="checkbox"/>
<input type="checkbox"/> Surface and Ground Water Resources	<input checked="" type="checkbox"/>
<input type="checkbox"/> Wetlands	<input checked="" type="checkbox"/>
<input type="checkbox"/> Floodplains	<input checked="" type="checkbox"/>
<input type="checkbox"/> Riparian/Coastal Resources	<input checked="" type="checkbox"/>
<input type="checkbox"/> Other	<input checked="" type="checkbox"/>

Comments/summary of impact analysis:

- Land use and zoning was considered in approving the HCDA Rules Clearance permit. The proposed project is consistent with the Kalaeloa Community Development District Rules.
- The outcome of testing and data collection is information that would be used to determine and improve the economic feasibility and scalability of this technology to supply alternative energy.
- The turbine location will not affect any historic or cultural resources on or surrounding the project site such that the project would not harm Native Hawaiian traditional or customary practices.
- Any lighting associated with the turbine installation will be shielded and designed in accordance with guidance provided by the Hawaii Division of Forestry and Wildlife to mitigate potential impacts on overflying seabirds.

MITIGATION

Describe all mitigation measures and best management practices planned to address impacts during the project activities and after project completion: Lighting will be designed to mitigate effects on birdlife. After the demonstration and testing period ends, all equipment will be removed and the site will be restored to pre-existing conditions.

CONSULTATION

The following parties have been consulted about this declaration exemption:
Shichao Li, Hawaii Coastal Zone Management Program, Office of Planning and Sustainable Development, 9/17/2024

EXEMPT DECLARATION

The direct, cumulative, and potential impacts of the action described above have been considered pursuant to Chapter 343, Hawai'i Revised Statutes and Chapter 11-200.1, Hawai'i Administrative Rules. I declare that the action described above will have minimal or no significant impact on the environment and is therefore exempt from the requirement to prepare an environmental assessment.

Craig Nakamoto

Signature of Director or Delegate

10/23/2024

Date

This document is to be kept on file in the agency's records and made available for public review

- Please check here if this document is being submitted to the Office of Planning and Sustainable Development for voluntary publication in *The Environmental Notice*