



HAWAII COMMUNITY DEVELOPMENT AUTHORITY

547 Queen Street, Honolulu, Hawaii 96813
Telephone: (808) 594-0300 Fax: (808) 587-0299
Web site: <http://dbedt.hawaii.gov/hcda/>

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

STERLING HIGA
CHAIRPERSON

CRAIG K. NAKAMOTO
EXECUTIVE DIRECTOR

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, Kaka'ako Makai

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- Kaka‘ako Makai, Lot C Parking Lot, adjacent to 643 Ilalo Street, Kaka‘ako, Honolulu, HI 96813
Anticipated Start Date: 10/1/2024
Anticipated End Date: 7/31/2027
Island and District: O‘ahu, Honolulu
Tax Map Key(s) and other geolocation means: [1] 2-1-015: 052
All Necessary Permits and Approvals: HCDA Rules Clearance Permit, SMA Minor Approval

NARRATIVE

Describe the action and why it qualifies for the exemption: The HCDA is working with Kanoa Winds, Inc. to temporarily install a 23-foot-tall vertical coaxial wind power generator within an existing parking lot on TMK 2-1-015:052. 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 twin blades are stacked on top of each other and spin in opposite directions, creating conditions for airflow to lift and drag and produce torque. The technology has potential advantages for deployment in Hawaii, including the ability to operate in higher winds, a smaller footprint and operability in more confined spaces (such as urban parks), lower noise emissions, and reduced harm to birds and bats. Additional field data is needed, however, to assess the performance of this technology 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 an area that is approximately 990 square feet and located in an unused portion of the Lot C parking lot at the intersection of Forrest Avenue and Ilalo Street. The site is flat and paved with asphalt. The entire Lot C parking lot is surrounded by a perimeter chain link fence. The fence will serve to define the turbine project area along Ilalo Street and the boundary with Honolulu Harbor. Access to the parking lot is from Ilalo Street. The project site is just inside the parking lot entrance. Nearby uses include the Entrepreneurs Sandbox, John A. Burns School of Medicine, and Kaka‘ako Waterfront Park to the south and east, and Honolulu Harbor to the north and west.

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 checked="" type="checkbox"/> Traffic (Vehicles, Bicycles, Pedestrian)	<input 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 checked="" type="checkbox"/> Noise Emissions	<input 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 checked="" type="checkbox"/> Health and Safety	<input 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 checked="" type="checkbox"/> Visual/Aesthetic	<input 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 Kaka‘ako Makai Area Rules.
- Traffic will be negligible as the only traffic generated will be limited to periodic on-site monitoring and maintenance. The facility will not affect any roadway, bicycle facility, or sidewalk.
- Based on previous demonstrations, noise emissions from the turbine unit are expected to be in the range of 40-dBA, which is lower than ambient noise levels in typical urban environments.
- 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.
- Installation of the turbine would be in accordance with engineering standards for structural integrity and public safety. A chain link panel fence or similar barrier will be installed, both to protect the equipment and to create a buffer from human contact.

- There are no natural, historic, or cultural resources on or surrounding the project site such that the project would not harm Native Hawaiian traditional or customary practices.
- The vertical wind turbine could be as high as 33 feet tall, depending on what type of structural base is used. The novelty of a prominent vertical structure would have the beneficial effect of drawing public attention and possibly encouraging people to examine the installation (where signage would provide educational material). At the same time, there are utility poles scattered throughout the parking lot that provide other vertical elements in the surrounding landscape.
- Security lighting 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: During the demonstration period, fencing and information signage will be provided around the turbine installation, the equipment will be designed for public safety, and 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*