

PMC-EF2a

(2.04.02)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: Pacific International Center for High Technology Research

STATE: HI

PROJECT TITLE : Hawaii Renewable Energy Development Venture

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-FG36-08GO88146	GFO-0088146-008	GO88146

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

CX, EA, EIS APPENDIX AND NUMBER:

Description:

B5.18 Wind turbines The installation, modification, operation, and removal of a small number (generally not more than 2) of commercially available wind turbines, with a total height generally less than 200 feet (measured from the ground to the maximum height of blade rotation) that (1) are located within a previously disturbed or developed area; (2) are located more than 10 nautical miles (about 11.5 miles) from an airport or aviation navigation aid; (3) are located more than 1.5 nautical miles (about 1.7 miles) from National Weather Service or Federal Aviation Administration Doppler weather radar; (4) would not have the potential to cause significant impacts on bird or bat populations; and (5) are sited or designed such that the project would not have the potential to cause significant impacts to persons (such as from shadow flicker and other visual effects, and noise). Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices. Covered actions include only those related to wind turbines to be installed on land.

Rational for determination:

DOE is proposing to provide federal funding to the Hawaii Renewable Energy Development Venture, sub-recipient Gen-X Energy Development (Gen-X), to design, engineer, develop, build and commission a scalable 100 kW wind turbine connected to a 100 kW battery storage bank running a 100 horsepower variable speed drive and well pump. The off-grid, commercial-scale wind storage platform prototype would pump water from an abandoned well to a small reservoir.

Previous NEPA determination GFO-GO88146-005 (CX A9), signed 10.6.2011, allowed Task 1.0 (project management and contract administration) and Task 2.0 (design and engineering). This NEPA determination applies to the final two tasks: Task 3.0 (testing, shipping and fabrication) and Task 4.0 (assembly, installation and commissioning).

The proposed wind turbine would be a single 100 kW Northern Power 100 wind turbine (480 VAC, 3-PH) measuring a total of 130 feet in height (37 meter hub height, 21 meter rotor diameter). The system would include the following components: wind turbine controls, 100 kW inverter, a lithium titanate battery bank, a 2 kW photovoltaic (PV) array, a variable speed drive and an irrigation pump (100 HP, 480 VAC, 3-PH). The system would be assembled at the proposed site's existing manufacturing facility. Except for the wind turbine and pump motors, the system would be enclosed within a 20 foot shipping container. The 2 kW PV array would be mounted on top of the container.

The proposed site is adjacent to an existing 10 MW wind farm, the Hawi Wind Farm, located at 55-310 Upolu Airport Road, Hawi, Hawaii 96719. The site is located on the North Kohala District of Hawaii near the northern tip of the island and 2.5 miles northwest of the town of Hawi. The proposed site is 3.7 miles from the closest airport.

USFWS concurred with DOE's conclusion that this project may affect, but is not likely to adversely affect the Hawaiian hawk, Hawaiian bat, Hawaiian Petrel or Newell's shearwater. The turbine will not be operated from thirty (30) minutes prior to sunset until 30 minutes after sunrise. This measure is considered part of the proposed action. Any changes to, modifications of or failure to implement this measure may result in the need to reinitiate consultation with the USFWS.

Due to the close proximity to the airport runway, Gen-X has filed a notice to the FAA for the addition of a single turbine to the Hawi Wind Farm. Gen-X has received a No-Hazard Determination from FAA.

Based on review of project information and the above analysis, DOE has determined that the proposed project does not have a significant individual or cumulative impact on the human environment. DOE has determined the proposed project is consistent with the actions contained in DOE categorical exclusion B5.18 (wind turbines) and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Insert the following language in the award:

You are required to:

The recipient shall ensure that Gen-X implements the following conservation measure:

The turbine will not be operated from thirty (30) minutes prior to sunset until 30 minutes after sunrise.

This measure is considered part of the proposed action. Any changes to, modifications of or failure to implement this measure may result in the need to reinitiate consultation with the USFWS.

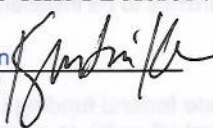
Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

Electronically Signed By: **Kristin Kerwin**
NEPA Compliance Officer



Date: 3/25/2013

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

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

Field Office Manager's Signature: _____

Field Office Manager

Date: _____