

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Western EcoSystems Technology, Inc.**STATE:** IN

PROJECT TITLE: A Multi-Sensor Approach for Measuring Bird and Bat Collisions with Offshore Wind Turbines

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001924	DE EE0008734	GFO-0008734-001	

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:

A9 Information gathering, analysis, and dissemination Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Western EcoSystems Technology, Inc. (WEST) to design, develop, and test a multi-sensor system for quantifying bird and bat collision rates at offshore wind facilities. The project would further develop an existing detection system, with the goal of improving detection accuracy, image processing, and detection quantification. The system would be installed on existing turbines at land-based and offshore wind energy projects.

The project would be completed over two Budget Periods (BPs), with a Go/No-Go Decision Point in between each BP. A number of testing locations have not yet been selected. Site selection would be based on research and negotiations to be carried out during early stages of the project. Accordingly, this NEPA Determination will only apply to Tasks 1, 2 and Subtask 3.1. Subtask 3.2 and Tasks 4 and 5 are conditioned on further NEPA review. Additional NEPA review will be completed for the conditioned subtask and tasks once all relevant information has been provided by the Recipient.

Proposed project activities analyzed in this NEPA review are as follows:

Task 1: Initial engineering tests would be performed in coordination with the Energy Research Centre of the Netherlands (ECN)/The Netherlands Organisation for Applied Scientific Research (TNO) at their combined laboratory/research facilities in Petten, Netherlands. Activities would include a market/technical review of sensor technologies, development of engineering and test plans (this task would include participation by the University of Dayton Research Institute (UDRI) and the National Renewable Energy Laboratory (NREL)), procurement and assembly of vibration sensor/camera technology, and validation testing using stationary blades at ground level.

Task 2: The focus of this task would be the installation of sensor technology on a utility-scale turbine and refinement of detection system performance at the National Wind Technology Center (NWTC) at DOE's Flatirons Campus in Boulder, CO. Activities would include development of an installation and testing plan, installation of vibration sensors

and cameras on a utility-scale turbine, and collision detection testing using objects of various sizes and weights (e.g. tennis balls and sand bags). Collision detection testing would not involve any live animals. The detection system would be left in place for one year for testing and data analysis.

Subtask 3.1: This subtask would consist of the development of an installation and testing plan for field testing of the detection system on a barge in Lake Erie and at an onshore location near the barge. Installation of the detection system would not occur until a site is selected and further NEPA review is completed. This subtask would simply allow for the necessary preparatory work in order to complete installation at a future date.

No modifications to existing facilities, ground disturbing activities, or changes to the use, mission, or operation of existing facilities would be required to perform project activities. Likewise, no additional permits would be required.

Certain health and safety risks are inherent to the installation of any equipment on constructed turbines. WEST and its project partners would adhere to established health and safety guidelines when completing installation activities. All personnel participating in these activities would receive appropriate training and would be required to follow all relevant health and safety protocols. System components would only be installed on turbines that have been approved for operational use and have obtained all required permits. WEST and its project partners would adhere to all Federal, state, and local health, safety, and environmental regulations.

NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

Task 1: Initial engineering tests at the ECN/TNO premises in the Netherlands to define the most suited system approach

Task 2: Installation of WT-Bird® on a utility-scale turbine and refinement of system performance at NWTC

Subtask 3.1: Development of Barge and Onshore Bird and Bat Detection Test Plan

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

Subtask 3.2: Implementation of Barge and Onshore Bird and Detection Test Plan

Task 4: Validation of the next generation WT-Bird® system on a land-based turbine

Task 5: Implementation of the next generation WT-Bird® system on offshore turbines

Include the following condition in the financial assistance agreement:

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

Notes:

Wind Energy Technologies Office

This NEPA determination requires a tailored NEPA Provision.

NEPA review completed by Jonathan Hartman, 06/14/2019

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or

invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

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. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

DOE has determined that work to be carried out outside of the United States, its territories and possessions is exempt from further review pursuant to Section 5.1.1 of the DOE Final Guidelines for Implementation of Executive Order 12114; "Environmental Effects Abroad of Major Federal Actions."

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  _____ Date: 6/14/2019
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