

PMC-ND
(1.08.09.13)

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

**RECIPIENT:**American Wind Wildlife Institute**STATE:** Mult

PROJECT TITLE Evaluating the Effectiveness of a Detection and Deterrent System in Reducing Eagle Fatalities at
 : Operational Wind Facilities

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001554	DE-EE0007883	GFO-0007883-001	GO7883

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:

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.)
B3.2 Aviation activities	Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.
B3.3 Research related to conservation of fish, wildlife, and cultural resources	Field and laboratory research, inventory, and information collection activities that are directly related to the conservation of fish and wildlife resources or to the protection of cultural resources, provided that such activities would not have the potential to cause significant impacts on fish and wildlife habitat or populations or to cultural resources.

Rationale for determination:

The Department of Energy (DOE) is proposing to provide funding to American Wind Wildlife Institute (AWWI) to evaluate the effectiveness of the DTBird system in minimizing the risk of golden eagles colliding with wind turbines. The DTBird system is an automated system for bird monitoring and mortality mitigation for wind turbines.

Proposed project activities would include development, evaluation and revision of the pilot study plan; installation of the DTBird system followed by trained raptor and unmanned aerial vehicles (UAV) flight trials; completion of a year-long controlled experiment and analysis of results; multi-study performance evaluation; and cost analyses. This project does not involve the stoppage or curtailment of wind turbines.

AWWI would coordinate project activities from their offices in Washington D.C. The ecological consultants H.T. Harvey & Associates would use the DTBird data collected from two wind energy facilities to evaluate activity and behavioral responses of golden eagles, and other raptor surrogates from their offices in Fresno and Los Gatos, California. Wind energy facilities participating in this study include the Manzana Wind Power Project in Kern County, California and the Glenrock Wind Energy Project in Converse County, Wyoming.

DTBird systems were installed at the Manzana facility in 2016 and are currently operational. At the Glenrock facility, DTBird systems would be installed on multiple turbine towers. No physical modification of existing facilities are anticipated. The detection and deterrent technology attaches to wind turbine towers with magnets, and no ground disturbance would be required. Equipment modification would be limited to accommodating the transfer of power from the wind turbine to the DTBird systems. DOE has concluded coordination efforts with the US Fish and Wildlife Service with oversight of the Manzana Wind Power Project in California. Activities involved with the installation and operation of the DTBird system or use UAV's of at the Glenrock facility are prohibited until DOE has concluded coordination efforts with the US Fish and Wildlife Service in Wyoming.

The DT Bird system would operate similarly at both sites with the intention of dissuade eagles from approaching the turbines. The system is designed to emit audible sounds when eagles and other birds approach within a defined distance of the turbine. Different sounds would be used for different types of birds. The noise would be intermittent and would have no detrimental effect on local wildlife or facility employees. The sound levels at the source would be adjusted to ensure that the levels at sensitive receptors are within the requirements of the local noise ordinances,

generally not above 65 decibels.

In addition to the golden eagle behavioral response tests at the Glenrock facility, AWWI would conduct flight trials with raptor-sized, fix-winged electric drones and review video footage of the trials via the DTBird website. The drone flights would follow relevant Federal Aviation Administration requirements.

Task 6 would involve conducting trained raptor flight trials at a yet to be identified wind turbine test facility to evaluate the detection system. As a location has not yet been chosen, it is impossible to conduct a meaningful review of these activities at this time. Further NEPA review is required prior to AWWI implementing Task 6.

Based on the review of the proposal, DOE has determined that Tasks 1.0 - 5.0 and Tasks 7.0 - 13.0 at the Manzana Wind Power Project and Tasks 1.0 - 4.0 at the Glenrock Wind Energy Project fit within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 outlined in the DOE categorical exclusion(s) selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410(2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. Tasks 1.0 - 5.0 and Tasks 7.0 - 13.0 at the Manzana Wind Power Project and Tasks 1.0 - 4.0 at the Glenrock Wind Energy Project are categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a conditional NEPA determination for this award, and funding for certain tasks under this award is contingent upon the final NEPA determination.

Insert the following language in the award:

You are restricted from taking any action using federal funds, which would have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE/NNSA providing either a NEPA clearance or a final NEPA decision regarding the project.

Prohibited actions include:

Task 6.0: Conduct Trained Raptor Flight Trials at Test Facility to Evaluate Detection System

Glenrock Wind Energy Project Tasks:

- 5.0: Install DTBird Systems at Wyoming Facility
- 7.0: Expand Review of In Situ Bird Video Footage at California Facility and Conduct UAV Flight Trials at Wyoming Facility
- 8.0: Conduct First Year of Controlled Experiment at Wyoming Facility
- 9.0: Complete Controlled Experiment and Analyze Results
- 10.0: Evaluate Behavioral Responses of Raptors Exposed to Deterrence Signals at WY Facility
- 11.0: Complete Combined Multi-Site Analyses
- 12.0: Prepare systems cost analysis

This restriction does not preclude you from:

Glenrock Wind Energy Project Tasks:

- 1.0: Project Launch and Development of Peer-Reviewed Study Design
- 2.0: Augment Pilot Study with Analysis of False Positives at California Wind Facility
- 3.0: Evaluation of Pilot Study
- 4.0: Expand Evaluation of DTBird Detection and Deterrence Systems

Manzana Wind Power Project Tasks:

- 1.0: Project Launch and Development of Peer-Reviewed Study Design
- 2.0: Augment Pilot Study with Analysis of False Positives at California Wind Facility
- 3.0: Evaluation of Pilot Study
- 4.0: Expand Evaluation of DTBird Detection and Deterrence Systems
- 5.0: Install DTBird Systems at Wyoming Facility
- 7.0: Expand Review of In Situ Bird Video Footage at California Facility and Conduct UAV Flight Trials at Wyoming Facility
- 8.0: Conduct First Year of Controlled Experiment at Wyoming Facility
- 9.0: Complete Controlled Experiment and Analyze Results
- 10.0: Evaluate Behavioral Responses of Raptors Exposed to Deterrence Signals at WY Facility
- 11.0: Complete Combined Multi-Site Analyses
- 12.0: Prepare systems cost analysis
- 13.0: Prepare and Submit Manuscripts on Project Methodology and Results for Publication in Peer-Reviewed Journals

If you move forward with activities that are not authorized for federal funding by the DOE Contracting Officer in advance of the final NEPA decision, you are doing so at risk of not receiving federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:

The recipient is required to submit an additional EQ-1 for DOE NEPA review when a location for Task 6.0 has been identified and study design developed.

DOE will notify the recipient when coordination with US Fish and Wildlife Service has been completed and the proposed project activities at the Glenrock Wind Energy Project are authorized.

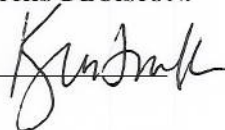
Note to Specialist :

Wind Power Technologies Office
This NEPA determination requires a tailored NEPA provision.
Review completed by Chris Rowe, 4/28/2017

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically Signed By: Kristin Kerwin
NEPA Compliance Officer



Date: 4/28/2017

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: _____