

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



RECIPIENT: NREL

STATE: CO

PROJECT TITLE: NREL-22-008c UAS Flights at King Plains Wind Farm - Garber, Oklahoma

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	GFO-NREL-22-008c	GO28308

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:

B3.2 Aviation activities	Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.
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Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) is proposing to use uncrewed aircraft systems (UAS) to capture high-definition video and photographs of the King Plains Wind Farm located near Garber, Oklahoma.

NEPA REVIEW HISTORY

The flights would be conducted to support the AWAKEN Project, which aims to collect data on wind farm atmospheric interactions and wind turbine response. A NEPA review was completed for the AWAKEN Project and the ND was signed by the DOE NEPA Compliance Officer on February 11, 2022 (see NREL-22-008). A second NEPA review for the project was signed by the DOE NEPA Compliance Officer on August 30, 2022 (see NREL-22-008b). The scope of that review was the use of five portable generators at various monitoring sites.

A UAS flight was proposed as part of the original review, but details about the flights were not available at that time; these details are now available.

UAS AND FLIGHT DETAILS

The UAS that would be used is a DOE-owned Parrot ANAFI. Following a set flight plan, the single UAS would takeoff from various locations within the wind farm and would perform specific flight patterns to take videos and photographs of the site. Flights would occur over multiple days during the fall of 2023 and would occur during daylight hours.

Flights would consist of ascending and descending vertical maneuvers as well as level flight from ground level to 399 feet above ground level. All flights would maintain a speed of less than 20 mph and a minimum horizontal or vertical distance of 25 feet from structures. Workers would maintain a minimum of 6 feet of separation from the UAS when it is powered on.

Visual markings for the take-off and landing area with items such as cones, caution tape, or signage would be implemented. Launch and landing areas would be determined by the Pilot-in-Command (PIC) prior to each flight.

The minimum essential flight crew is the PIC and one visual observer. Mission support staff would accompany the flight team as needed to direct and control staff access during flights and visual observers would be present to help monitor the airspace.

ANALYSIS

Flight activities would be conducted by NREL staff as authorized in accordance with NREL policies, procedures, and safety requirements and under FAA Part 107 regulations. Flights would be conducted in Class G airspace which does not require notifications, authorizations, or permits.

Based on the locations of flights and planned safety measures, no adverse impacts are expected due to the activity.

The UAS would be landed when large birds or bird flocks are present in the flight airspace. Flights would not be conducted over people, adjacent residential housing, or property unless in an emergency.

A risk assessment has been completed for proposed flight activities. Operational parameters, hazards, and controls

are identified and defined in an Aviation Safety Plan that was prepared in consultation with NREL Environment, Safety, and Health staff and the UAS Steering Committee. The Flight Plan for this project has been approved by the Golden Field Office's Aviation Manager. The Aviation Manager determined that the identified flight risks for the project "have been adequately identified and mitigated to low risk per the DOE Risk Assessment. If flight conditions change or the documented mitigation factors are unable to be implemented the mission will need to be paused so a reevaluation of hazards can occur."

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

NREL
Nicole Serio, 9/19/2023

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.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically
Signed By: Matthew Blevins

NEPA Compliance Officer

Date: 9/20/2023

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: _____

Field Office Manager

Date: _____