

PMC-ND

(1.08.09.13)

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



RECIPIENT: NREL

STATE: CO

PROJECT TITLE: NREL-21-001 UAS Test Flights - Flatirons Campus

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-21-001	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.

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 conduct test and training flights with UAS to ensure equipment operability, expected flight characteristics, and flight crew competency.

Test flights would occur at the Flatirons Campus (formally called the National Wind Technology Center) located in Jefferson County, Colorado and are expected to occur over a period of four days between November 16th, 2020 and February 15th, 2021. Flights would be limited to Flight Area 1 located north of the intersection of the main road and Row 1 road and is an unmarked area approximately 340' x 340'. Specific launch/landing areas within Flight Area 1 would be determined by the pilot-in-command (PIC) prior to each flight. Test flights would consist of: 1) flight testing of existing off-the-shelf equipment to verify operability and develop pilot familiarity with UAS systems and characteristics, 2) flight testing existing equipment after periods of disuse to verify operability and 3) training flights to provide flight crew competency. Both autonomous and manual flight controls would be used. Flights would consist of ascending/descending and forward/backward as well as standard box, pivot circle, figure eight, and site scan grid maneuvers. Flights of new or recently repaired aircraft would be conducted under a written test plan approved by the Flight Operations Manager.

All flights would maintain a minimum horizontal or vertical distance of 25' from structures. Measures would be taken to visually demarcate the launch/landing area with items such as cones, caution tape, or signage. Launch/landing areas would be determined by the PIC prior to each flight. Mission support staff would accompany the flight team when required to direct and control staff access during flights. Road closures may be necessary during flights and would be coordinated with the Traffic AHJ and Security. The UAS would be landed when large birds or bird flocks are present in the flight airspace. Visual observer(s) would be in attendance to monitor airspace. There are no aerial hazards within 300' of Flight Area 1.

Flight Area 1 is Class G airspace below 700 ft. AGL. Flights would be conducted below 400 ft AGL, in winds less than 25 mph steady (30 mph gusts), within Class G airspace, which requires no notifications, authorizations, or permits. Flight activities would be conducted by NREL staff as authorized in accordance with OPP 650-7, "Unmanned Aircraft Systems" and under FAA Part 107 regulations. Flights would adhere to and take place in accordance with NREL policies, procedures, and safety requirements for conducting UAS missions on DOE facilities. Based on the locations of flights and planned safety measures, no adverse impacts are expected due to the activity.

A risk assessment has been completed for flight activities. Operational parameters, hazards, and controls are identified and set forth in an Aviation Safety Plan that was drafted in consultation with NREL Environment, Safety, and Health staff and the UAS Steering Committee. The Flight Plan for this project has been submitted and approved by the Golden Field Office's Aviation Manager and Office Director. Per the aviation manager, "the identified flight risks for the CSP and UAS test/training flights have been adequately identified and mitigated to low risk per the DOE-GFO 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:

[NEPA review completed by Casey Strickland on November 16, 2020.](#)

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: Casey Strickland
NEPA Compliance Officer

Date: 11/16/2020

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: _____