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

RECIPIENT: NREL

STATE: CO

PROJECT TITLE: NWTC Siemens-Camp Six Turbine Testing using UAV; NREL Tracking No. 17-021

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-17-021	GO28308

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:

B3.2 Aviation activities	Aviation activities for survey, monitoring, or security purposes that comply with Federal Aviation Administration regulations.
B5.15 Small-scale renewable energy research and development and pilot projects	Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. 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.

Rationale for determination:

The U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL), in collaboration Siemens Corporation and Camp Six Labs, Inc., proposes to demonstrate advancements in wind turbine blade inspections and to measure lighting protection system resistance.

Work would be conducted at NREL's National Wind Technology Center (NWTC), located southeast of the intersection of Colorado Highway (CO) 93 and CO-128, in Jefferson County, Colorado. The NWTC is a federally-owned facility that consists of 305 acres and is primarily utilized for wind energy research, development, and testing. Project activities would take place exclusively with the Siemen's 2.3 MW research turbine at Site 4.4.

Camp Six would provide the operators, drones (UAV), and proprietary robotics which have been specifically designed to inspect, clean and repair turbine blades. Camp Six's UAVs are registered as required by FAA's Part 107 regulations (14 CFR Part 107). Three Camp Six operators would be manning the UAVs and are FAA certified pilots. They each have 50+ hours of flight experience on commercial drone platforms and have developed, flight-tested, and tuned their drones themselves, through 500+ hours of indoor and outdoor flight tests. NREL staff would host Camp Six staff while visiting the site and throughout the operation of the UAVs.

Project activities would occur in June 2017. Activities would need to take place before 7:00 am due to airspace regulations. The proposed flight plan would include takeoff, landing, the proposed flight track and altitude, and lost comms waypoints. The project plan is to fly the UAVs beneath the Siemen's turbine blade hailing a line until it loops over the fixed blade and then descend to the ground with the line. The Camp Six robotics would then be attached to the line and hoisted up to the blade and tested for functionality. Camp Six is proposing to test this on two to three turbine blades, as time permits.

Project activities would not affect cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands. No construction or ground disturbing activities are being proposed. By following the provisions of the DOE's FAA Certificate of Authority (COA), no impact to aviation airspace would occur.

Based on the review of the proposal, DOE has determined the proposal fits 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. This proposal 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 the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is 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:
  Operations during Class D airspace conditions are prohibited. These conditions are between 07:00am to 10:00pm, during daylight savings time.

  Note to Specialist :

  NEPA review completed by Laura Margason on June 26, 2017

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin   Date: 6/26/2017
            NEPA Compliance Officer

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: _____   Date: _____
         Field Office Manager