



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

PND Number: NREL-PND-07

Title: Unmanned Aircraft System Flight Activities at NREL's South Table Mountain (STM) Campus, South Table Energy Park (STEP) Campus, and Flatirons Campus (FC)

The Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) periodically operates unmanned aircraft systems (UAS) to further the laboratory's research and operations. UAS could be flown by NREL or 3rd party contracted pilots. Flight activities listed below would originate from and be conducted onsite at NREL's STM, STEP, and/or FC Campuses. UAS would be limited to commercial off-the-shelf units less than 55 pounds or, in coordination with the DOE aviation manager, custom-built/modified UAS. Flights would be conducted in accordance with Federal Aviation Administration (FAA) regulation 14 CFR Part 107 (*Small Unmanned Aircraft Systems*) or a Certificate of Waiver or Authorization (COA) and the NREL PROC 600-26 (*Uncrewed Aircraft Systems*). All flight activities conducted at the STM, STEP, and/or FC Campuses must include an approved Aviation Safety Plan (ASP).

The following flight activities are authorized by an ASP that is reviewed and approved annually:

- Photography and videography flights
- Training flights (FC only), such as: 1) non-qualified pilots-in-command (PICs), pilots, and visual observers (VOs) that are gaining experience or demonstrating skills to meet UAS program requirements, 2) qualified and current PICs, pilots, and VOs that are conducting practice flights to enhance skills, 3) qualified PICs, pilots, and VOs that are conducting flights to meet currency requirements
- Test flights (FC only), such as 1) flight testing new off-the-shelf equipment to verify operability and develop pilot familiarity with UAS systems and characteristics, 2) flight testing existing equipment after maintenance to verify operability, 3) flight testing custom-built UAS or components to verify operability and flight/control characteristics

The following flight activities are authorized by a flight-specific ASP that is reviewed and approved at the time the flight activity is proposed:

- Research that does not have the potential to cause public concern or controversy, or potential for harassing/impeding wildlife (e.g., weather monitoring, calibration, lifting tools or equipment to a location, turbine blade inspection, etc.);
- Equipment inspections and evaluations;
- Environmental monitoring, such as wildlife, vegetation, water, or site conditions; and
- Demonstration flights to exhibit capabilities or operational protocols.

Campus-Specific Flight Requirements and Restrictions:

STM and STEP: All flights will maintain a speed of less than 20 miles per hour. All flights will maintain a minimum horizontal or vertical distance of 25 feet from structures. Flights may occasionally extend of adjacent non-residential property for short durations of time provided no people are present. Flights over adjacent residential housing, property, or above vehicles on public roadways are not authorized.

FC: All flights will maintain a speed of less than 20 miles per hour. All flights will maintain a minimum horizontal or vertical distance of 25 feet from structures. Flights may occasionally extend of adjacent non-residential property for short durations of time provided no people are present. Flights over the substation are not authorized.

Activities Not Covered:

These activities are specifically excluded from this determination and require additional NEPA review:

1. Recreational flights;
2. Offsite flights;
3. Flights not conducted in accordance with applicable Federal Aviation Regulations, FAA Certificate of Waiver or Authorization, other authorizations or waivers, or internal requirements; and
4. Flights without an approved Aviation Safety Plan.

Categorical Exclusion(s) Applied:

B3.2

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of 10 CFR Part 1021.

Rationale:

DOE has determined that the proposed actions are consistent with the actions contained in the DOE categorical exclusion listed above and meet the conditions listed in DOE 10 CFR Part 1021 NEPA Implementing Procedures Appendix B. These actions do not have a significant effect on the human environment, nor do they exhibit known extraordinary circumstances that would affect the significance of the environmental effect of these covered activities. The activities have not been segmented to meet the definition of a categorical exclusion.

Determination:

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Policy 451.1), I have determined that the proposed action fits within the specified class(es) of action, the

other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer:
Date Determined:

The DOE Golden Field Office will revisit this Programatic NEPA Determination annually and update as warrented.

NEPA Compliance Officer:	Date Reviewed:	Updated version number or N/A for no revision made:
Lisa Jorgensen	5/19/2023	
Matt Blevins		V2.2