FAA Updates Small UAS Rules
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UPDATES

The Federal Aviation Administration (FAA) published proposed rules on the Operation of Small Unmanned Aircraft Over People on February 13, 2019. The proposed rules would amend the FAA's Part 107 rules to allow for commercial operations of unmanned aircraft systems (UAS) over people and at night. They also would address common scenarios where operators seek waivers, but the proposed rules are noteworthy in that they suggest FAA interest in regulating manufacturers. Comments on the proposal are due April 15, 2019, and the final rule is expected to go into effect after the FAA finalizes its policy concerning remote identification of UAS.

Integrating UAS Into National Airspace

The proposed rules follow the FAA's incremental approach to integrating UAS into the national airspace. When Part 107 went into effect in 2016, operators had to obtain a waiver before conducting flights at night and conducting most flights over people who were not participating in operations. This significantly restricted use of UAS for critical drone operations that often must occur in these conditions, such as disaster response or news gathering. Consequently, as the FAA notes in its proposal, requests to operate at night are the most common type of FAA waiver requests.

While the proposed rules are in line with the FAA's general approach to integrating UAS, they also differ significantly from current rules in that they create standards that potentially apply to UAS manufacturers. Under the current version of Part 107, the burden of ensuring a UAS is safe for flight falls on the operator, not the manufacturer. But the new proposed rules create performance-based standards for manufacturers that wish to certify that their UAS can operate over people. Although the creation of such performance standards and the opportunity for UAS manufacturers to obtain product certification under them is a far cry from the airworthiness certification process that manufacturers of manned aircraft must follow, it does suggest that as FAA regulations allow operations that entail more risk, the FAA may increasingly begin to impose requirements on UAS manufacturers who want to market the capability of their UAS to conduct those operations.

Key Provisions

Below is a detailed overview of some of the key provisions in the proposed rules.

Night Operations. The rule would authorize nighttime flights under two conditions: (1) the operator must complete knowledge testing or training, including new subject matter areas related to operating at night; and (2) the UAS must have an anti-collision light illuminated and visible for at least three statute miles. All nighttime operators must have a remote pilot license and complete updated training on UAS operations regardless of whether they have completed an earlier training prior to the amended rules going into effect.

The FAA specifically invites comments on whether the anti-collision light should be a specific color or type, what effects anti-collision lights could have on human activities, and possible ways to mitigate to these effects.

Operations Over People. The rules propose creating three categories of lawful UAS operations over people, based on the likelihood and severity of injuries that could result from these operations:

- Category 1 operations are entirely weight-based; any UAS that is 0.55 pounds or less is considered low risk by the FAA and may therefore fly over people.
- Category 2 operations involve UAS over 0.55 pounds (but less than 55 pounds) that meet three requirements:

1. "be designed, upon impact with a person, not to result in an injury as severe as the injury that would result from a transfer of 11 ft-lbs. of kinetic energy from a rigid object";
2. does not have exposed rotating parts that could lacerate human skin; and
3. does not have an FAA-identified safety defect.

- Category 3 operations involve UAS over 0.55 pounds (but less than 55 pounds) that present greater risks. A Category 3 UAS must meet three requirements:

1. "be designed, upon impact with a person, not to result in an injury as severe as the injury that would result from a transfer of 25 ft-lbs. of kinetic energy from a rigid object";
2. does not have exposed rotating parts that could lacerate human skin; and
3. does not have an FAA-identified safety defect.

Additionally, unlike Category 1 and 2 UAS, Category 3 UAS are subject to operational restrictions.

Manufacturers of Category 2 and 3 UAS would need to submit evidence of compliance to the FAA (using an FAA-accepted "Means of Compliance") to demonstrate that the aircraft meets the category's injury threshold requirements. In addition to this requirement, manufacturers must:

- display a label on Category 2 or 3 UAS;
- include remote piloting instructions with the UAS;
- be subject to FAA inspection of its facilities, technical data and small UAS;

- establish a process for notifying the public of any safety defects or other issues that would render the UAS unfit for use; and
- maintain certain records for a minimum of two years.

NPRM on External Marking Requirement for Small Unmanned Aircraft

The FAA also released an interim final rule on External Marking Requirements for Small Unmanned Aircraft. This rule would revise the FAA's current small UAS marking standards by requiring the UAS registration number to be marked on the exterior of the aircraft. The rule seeks to address law enforcement and FAA interagency security partner concerns that allowing marking inside of the aircraft—which may contain explosives or other threats to safety—endangers first responders. Comments on the rule must be received by March 15, 2019.

Draft ANPRM on Safe and Secure Operations of Small Unmanned Aircraft Systems

Finally, the FAA released an Advance Notice of Proposed Rulemaking requesting responses to discussion questions on safety and national security concerns related to increased UAS integration. These questions address various topics, such as:

- standards for stand-off distances (the amount of space between a small UAS and the closest person or object);
- payload restrictions (including a prohibition on carrying hazardous materials);
- unmanned traffic management systems (e.g., costs of developing and operating one, and restrictions on possible information sharing for national security and public safety purposes); and
- altitude and other performance limitations.