Updates
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FAA Issues Much-Anticipated Drone Rules

The holidays came a bit late this year for stakeholders in the uncrewed aircraft industry when, on December 28, 2020, the Federal Aviation Administration (FAA) released its long-awaited rules on Remote ID, operations over people and moving vehicles, and night operations.

These rules represent almost two years of work in which the FAA considered tens of thousands of comments on proposed rules from commercial and recreational drone pilots, government organizations, and industry associations.

As uncrewed aircraft (colloquially "drones") are increasingly tapped for a diverse range of operations, the new rules shape the costs and time for regulatory compliance facing many companies that operate drones, as well as imposing requirements for manufacturers and other suppliers. Below are some key takeaways from these new regulations.

Key Takeaways for Remote ID

The FAA describes Remote ID as "a digital license plate" for drones, and its potential impacts are extensive. Remote ID will play an important part in addressing lingering safety and security issues that must be resolved for drones to be fully integrated into the National Airspace System (NAS), thereby enabling more complex operations. The final Remote ID rule departs from the proposed rulemaking in some key respects, including that the FAA will not require the transmission of information over the internet—a concern raised by many comments on the rule the FAA initially proposed.

Summary of Regulation

Once in place, all drones covered by the Remote ID rule must capable of remotely identifying the operator. The FAA created two primary options, "Standard Remote ID Unmanned Aircraft" and "Unmanned Aircraft with Remote ID Broadcast Module," for complying with the new Remote ID rules, as well as a third category that is exempt from these rules.

Both reporting options require similar categories of information and use similar transmission technologies. For example, both require flight information (e.g., longitude, latitude, altitude, and velocity) and operator/controller data. Additionally, the FAA requires that users of both approaches broadcast their signals via radio frequency (Wi-Fi and Bluetooth technologies were suggested by the FAA) in a form compatible with most personal wireless devices. Such radio frequency devices will be separately required to be certified by the Federal Communications Commission (FCC) before they can be sold, marketed or used in the field. The FAA requirements are performance based, allowing manufacturers the flexibility to establish their own means of compliance, subject to FAA approval.

The Broadcast Module approach allows the transmitter to be a separate device attached to the drone, enabling operators to bring their existing drones into compliance. However, an important limitation of this option is that drones must remain in their operator's visual line of sight—a restriction not applicable to drones using Standard Remote IDs.

The third approach provides a narrow carve-out to these rules, primarily for hobbyists and educational institutions operating drones within visual line of sight and inside the boundaries of FAA-Recognized

Identification Areas.

Key Takeaways for Expanded Drone Operations

The Operations Over People and at Night rule is another important step towards integrating drones into the NAS. FAA data indicates that operations over people and at night were the two waiver categories applied for—and granted—most frequently under the current Part 107 waiver-based regulatory scheme. Removing this waiver requirement from operators in compliance with the new rules streamlines what was a time- and resource-consuming process for both operators and regulators.

These rules reflect the FAA's approach to responding to changes in the industry; the agency uses Part 107 waivers for new or complex operations until the technology matures or best practices are identified, at which point the FAA codifies those waivers into regulation." The regulations will appear in a new subpart D to 14 CFR Part 107, meaning that they only apply to drone operations falling under Part 107, which allows for the commercial operation of drones below 55 pounds.

Summary of Regulations: Operations Over People and Vehicles

When Part 107 was first issued, it did not allow flight over individuals who were not directly participating in the operation unless they were under cover or in a stationary vehicle that could protect them. The new regulations create four categories of permitted operations for flying over people and moving vehicles, differentiating drones based on the level of risk their operations present. The four categories are summarized in more detail here.

Summary of Regulations: Operations at Night

Prior to the new rule, operations that qualified under Part 107 needed a waiver to fly outside "daylight" hours, from 30 minutes before official sunrise to 30 minutes after official sunset. Now, pilots who receive additional training will have a longer window to fly, provided they equip their drones with anti-collision lights "that can be seen for 3 statute miles and have a flash rate sufficient to avoid a collision." This will be especially beneficial for operators using drones for rescue and humanitarian applications.

Takeaways

Both new rules represent a shift in the FAA's regulatory approach. Unlike past rulemakings, which focused on ensuring safety largely through operational limitations rather than imposing requirements on drone manufacturers, these new rules shift much of the burden of compliance away from operators to drone manufacturers—an important step given the rapid growth and dynamism of the industry.

Authors

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