

Commercial Drone Industry May Be Ready For Takeoff Soon

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By 2025, the commercial drone industry is expected to create 100,000 jobs and have an \$82 billion impact on the economy. Many organizations, entrepreneurs, and — of course — lawyers, are taking note of the high-flying commercial potential.

This article provides an overview of the current and upcoming federal rules regarding small unmanned aircraft systems, more commonly referred to as “drones,” which weigh less than 55 pounds.



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Today, there are dozens of commercial applications for drones: sensory data collection, agriculture monitoring and treatment, building inspections, search and rescue missions, disaster response support, anti-poaching efforts, railway and pipeline inspections, mapping of mines, film production, journalism, photography, and many more. In the next five years, drone package delivery likely will be commonplace. In 10 years, 3-D printer drones might autonomously identify and repair damage to structures. As technology rapidly progresses, entrepreneurs will create unimaginable applications that will revolutionize our way of life — the sky is no longer the limit.

Regulators Are Striving to Catch Up to the Burgeoning Technology

The regulatory landscape for commercial drones trails the pace at which drone makers and users are developing and applying the technology. The Federal Aviation Administration currently governs by exemption, but it will soon finalize new drone rules. Over the next several years, federal and state laws will be created, revised and eventually standardized. After common-sense regulations are finally in place, commercial drones will proliferate and become an everyday part of our environment.

Commercial Drone Operations Require a Section 333 Exemption

Under the current law, an exemption is required for nonrecreational flights because the FAA considers all drones to be aircraft. In order to fly commercially, a two-pound quadcopter has to comply with the same FAA regulations as a Boeing 747. For example, one regulation requires every aircraft to carry a specific amount of fuel — most drones are battery powered. To avoid impractical regulations, an exemption is required.

The secretary of transportation has the authority, from Section 333 of the FAA Modernization and Reform Act of 2012, to grant individual drone operators an exemption from specific civil aviation

regulations.

The FAA issued the first Section 333 exemption in September 2014, and, at the time of this article, it has issued 3,314 exemptions. In April 2015, the FAA “streamlined” the process and began using a “summary grant” for requests similar to previously approved exemptions (e.g., film production and data collection). Nevertheless, the FAA still analyzes unique requests and publishes them for comment in the Federal Register.

In addition to streamlining the process, the FAA recently reduced its requirement that operators hold a private pilot certificate. Now, operators only need a recreational or sport pilot license — a certification that is easier to obtain.

For those interested in applying for an exemption, the FAA website provides specific instructions, and publishes many of the exemption requests online. It is advisable for corporations applying for a Section 333 exemption to consult counsel.

Section 333 Exemptions Include Flight Limitations

A Section 333 exemption does not give companies free rein in airspace. Each exemption includes a list of flight limitations, such as requiring a visual observer, a ceiling of 400 feet, and staying at least 500 feet from nonparticipating persons.

In addition to the specific limitations on each exemption, the FAA requires a certificate of waiver of authorization (“COA”) for each operation, which permits a drone to operate in a specific block of airspace. In March 2015, the FAA granted a blanket COA that automatically applies to any pilot with a Section 333 exemption. The blanket COA includes, in part, the following conditions:

1. The drone must operate within the visual line of sight of the pilot;
2. Visual observers must be used at all times;
3. Operations must occur during the day and in good weather (i.e., under visual flight rules);
4. The drone must remain below 200 feet above ground level;
5. The drone must stay 2-5 nautical miles away from airports or heliports, depending on the facility;
6. The drone may not fly in restricted airspace or over major cities.
7. The drone must be registered and display its aircraft registration number as large as possible; and
8. A Notice to Airmen (a notice filed to alert pilots of potential hazards) must be issued for each operation.

If an organization wants to fly outside of the blanket COA, it must apply for a separate COA for that operation. Obtaining a COA can take 60 days, which could inhibit timely business opportunities.

The Section 333 exemption process is far from perfect. It is discretionary, acts as a barrier to entry, and requires a separate COA for flights above 200 feet. However, if your organization needs to get airborne as soon as possible, the Section 333 exemption is the most expedient path.

The FAA’s Proposed Drone Regulations Permit Commercial Operations Without a Section 333 Exemption

In February 2012, Congress mandated that the FAA create rules for the safe integration of drones by Sept. 30, 2015. Although this mandate has not been achieved, the FAA released its notice of proposed

rulemaking for small unmanned aircraft systems in February 2015.

The proposed rules include many restrictions similar to the Section 333 exemption criteria. The restrictions inhibit commercial operations by limiting flights to daytime operations in good weather and within the pilot or observer's visual line of site. Further, the rules prohibit flying over persons not directly involved in the operation.

Most importantly, the proposed rules eliminate the need for corporations to obtain a Section 333 exemption prior to flight. The rules will also ease the burdensome pilot license requirement; the operator will only need to pass an aeronautical knowledge test and obtain an FAA unmanned aircraft systems operator certificate. Under the rules, visual observers will become optional. Further, operations will be permitted up to 500 feet without the need for corporations to apply — and wait — for approval of individual COAs. These rules will be a huge step forward from today's policy of governance by exemption.

Final Rules May Include a Micro Category That Will Permit Operations Over Nonparticipating Persons

In the proposed rules, the FAA announced it is considering a micro UAS category for drones weighing less than 4.4 pounds. Although the FAA did not submit proposed rules for this micro category, it referenced the Canadian micro-UAS rules, which require drones to operate 100 feet away from people. The ability to fly over nonparticipating persons is vital for data gathering, photography, and other business applications. A micro UAS category allowing flight over nonparticipating persons will be a boon to the industry.

The FAA Will — Eventually — Update Regulations as New Technologies Emerge

FAA officials have indicated that the proposed rules will be finalized in 2016. The finalization of the proposed rules is not the end, but rather the beginning, of drone regulations. These regulations will be revised as technology and safety features advance. And, as society becomes more comfortable with the idea of drones in everyday life, regulations will likely allow autonomous flight above nonparticipating persons and beyond visual line of sight. On that day, drones will be a tool for almost every corporation.

State and Local Laws Are the Biggest Obstacle to a Thriving Commercial Drone Industry

While the FAA works to establish an appropriate regulatory framework, state and local laws remain obstacles to a thriving commercial drone industry. Safety and privacy concerns will continue to propagate restrictive state and local drone laws that inhibit commercial use. Accordingly, corporations will have to grapple with a patchwork of laws when operating over several municipalities. In addition to drone-specific legislation, corporations will have to account for existing laws involving privacy, trespass, liability, nuisance and other areas in which drones touch. However, as technology improves, a UAS traffic management system is created, economic potential is realized, federal regulations are updated, and as key issues are litigated, standardization will ultimately prevail.

Drones Will Change the Way We Do Business and Live Our Lives

Drones will radically enhance the way many corporations do business over the next decade. Today, corporations can apply for a Section 333 exemption to fly commercially. Once the proposed rules are finalized — hopefully in 2016 — many companies will no longer need a Section 333 exemption, and the commercial drone industry will be ready for takeoff.

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