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Client Alert Commentary

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FAA to Begin Integrating Small Unmanned Aircraft Systems into the National Airspace

The FAA's draft rule opens up the possibility of using so-called small "commercial drones" in the National Airspace, thus encouraging the emerging UAS industry.

Introduction

Since 2007, Congress has been calling upon the Federal Aviation Administration (FAA) to act on small unmanned aircraft systems (UAS) integration. The economic opportunities of UAS have been well documented, and other countries like Japan and Australia have already capitalized on their broad applications. After eight years, on February 15, 2015, the FAA has finally revealed its Notice of Proposed Rulemaking and draft rule (the 2015 small UAS rule) regarding the operation of *small UAS* for non-recreational — *i.e.*, commercial — purposes.[1] The 2015 small UAS rule would allow, subject to restrictions, private individuals to operate only *small UAS* in the National Airspace without a Special Airworthiness Certification. The FAA considers this draft rule as its first cautious step forward in the process of integrating UAS into the National Airspace. Concurrently, President Obama issued a Presidential Memorandum in which he addressed various privacy and civil liberties issues raised by UAS use of the National Airspace. The FAA contends that privacy issues fall outside the scope of the FAA's proposed rulemaking and instead will be addressed through the Department of Commerce. How the privacy issues will be harmonized with the FAA's current operational rulemaking is left unanswered. This omission suggests a lengthy and potentially contentious process.

The FAA has tolerated the *non-commercial* "hobby use" of UAS that met certain weight and flight specifications,[2] but the commercial use of any UAS, large or small, required permission from the FAA that, in practical terms, was never granted.[3] Large-scale commercial opportunities have not yet materialized, and hopes for year-end 2015 comprehensive rules to allow for the integration of commercial UAS into the National Airspace System have faded away. Nonetheless, the FAA has yielded to considerable Congressional and public pressure by taking at least a small step forward with its first proposed commercial "small UAS" rule.

Once the FAA publishes the proposed rule in the Federal Register in the coming weeks, a lengthy comment and approval process will begin; the FAA likely will take until 2016 or 2017 to finalize its rule. In this proposed rulemaking, the FAA is only considering *small UAS* — those weighing under the hobby model aircraft threshold of 55 pounds. The proposed rulemaking would also limit small UAS commercial uses to:

- Daylight operations
- Confined areas
- A speed limit of 100 miles per hour
- A maximum altitude of 500 feet
- Visual line-of-sight[4]

These restrictions are generally consistent with the decades-old Model Aircraft Standards. Unlike model aircraft operators who still enjoy the traditional regulatory exemption, small UAS commercial operators will need to be tested and to obtain an FAA "unmanned aircraft operator certificate with a small UAS rating." [5] Fears that FAA would require a UAS operator to have a commercial or private pilot's license did not materialize, at least for now. Additionally, the UAS will need to be registered and marked just like other commercial aircraft.[6]

Likely the industry will have to wait several more years before the FAA will announce proposed rules regarding large commercial UAS above 55 pounds.

Regulatory Background

For almost a decade, the FAA — which controls "aircraft" and the use of the National Airspace — has prohibited any person from operating a UAS commercially in the National Airspace System without specific authority.[7]

In 2012, with the FAA Modernization and Reform Act, Congress pushed the FAA to integrate UAS into the national economy. At the time, an individual could legally operate a UAS in one of three ways: (i) public agencies had to obtain a Certificate of Authorization from the FAA; (ii) private entities had to obtain a Special Airworthiness Certificate from the FAA; or (iii) private entities had to operate the UAS consistent with the Model Aircraft Standards discussed above.[8]

The Proposed Rule

The FAA's draft rule would amend current regulations to allow for the routine, non-recreational, commercial use of small UAS.[9] The amendments thus would not eliminate any existing options for FAA authorization to use large or small UAS, nor would the amendments eliminate the Model Aircraft Standards;[10] rather, the amendments would offer a fourth option allowing for the lawful use of commercial UAS if they meet size restrictions, flight specifications and operator qualifications.

Operational Limitations

The proposed rule requires small commercial UAS to weigh less than 55 pounds, fly less than 100 miles per hour, operate during daylight, stay within 500 feet of the ground and not overfly people uninvolved in the UAS operations.[11] The rule still requires UAS to operate within the operator's visual line-of-sight.[12] Under the proposed amendments, an operator may work with one or more "visual observers" to maintain constant visual contact with the UAS. However, "daisy chaining" with multiple observers to break the operator's line-of-site is forbidden.[13] The operator and visual observers need not remain in close physical proximity but may communicate via radio or other communication-assisting device.[14]

Despite the proposed visual-line-of-sight requirement, the FAA is seeking comment on whether its final rule fails to account for all available technologies and thus should allow an operator to use a small UAS beyond his or her line-of-sight and, if so, what the appropriate limits should be.[15]

The FAA's potential expansion of the traditional line-of-sight limitation that originated from model aircraft illustrates some FAA openness to new safety technology. The main challenge for entities and individuals in support of beyond-line-of-sight operations, however, appears to rest in the FAA's ability to gauge the safety implications. Yet to be decided is whether and to what extent beyond-line-of-sight operations are appropriate and under what circumstances.

Even if the FAA does not finalize a rule permitting beyond-visual line-of-sight UAS operations during this immediate rulemaking process, the FAA's willingness to consider the possibility certainly hints that the FAA likely will continue to consider the issue as technology and the UAS industry advance.

Notably, the new FAA rule would not allow *commercial* air carrier operations, external load and air towing, international operations or foreign-owned UAS.[16]

No More Airworthiness Certifications for Small UAS

The biggest news to come from the draft 2015 small UAS rule is that small commercial UAS will not need to go through the gauntlet known as FAA Special Airworthiness Certification process. That cumbersome process stymied commercial integration and has been the topic of open and notorious revolts in some quarters, where UAS risk-takers have been balancing cutting-edge applications with the risk of FAA enforcement.

Today, the FAA hopes to expand the use of UAS to various new industries by no longer requiring airworthiness certificates.[17] For example, the FAA notes logical applications of small UAS in agricultural operations, wildlife and forest conservation, aerial surveying, patrolling, weather control and other areas where cumbersome certifications should not be warranted.[18] The FAA also notes the use of UAS makes sense in lieu of risking manned aircraft under hazardous conditions.[19] Rather than keeping a rigid aircraft certification process in place, the FAA appears more focused on the UAS operator's qualifications.

Eliminating the traditional airworthiness certification pathway would greatly increase the ease and ability of an operator to fly a small UAS for commercial purposes, especially because the FAA almost never granted an airworthiness certificate for any commercial purpose. In the past, the FAA permitted only a handful of *public agencies* to use UAS and rarely, if ever, granted authorization to a private entity for commercial use; instead, the FAA occasionally authorized research and educational purposes.[20] With the proposed amendments, private entities seeking to use UAS for broad commercial purposes would no longer need to apply for special authorization — knowing the FAA would hold onto the application for years without action. The proposed rule would reduce the undue regulatory burden on emerging industries, and until the FAA issues its final rule, the FAA has already begun to authorize UAS use for certain commercial purposes on a case-by-case basis.[21]

New UAS Operator Airman Certification Program

The proposed rule may eliminate FAA certification regarding the UAS themselves, but the rule nevertheless imposes restrictions on who may operate small UAS. Pilots of small UAS would be considered "operators," and the FAA would require operators to obtain an unmanned aircraft operator certificate with a small unmanned aircraft systems rating.[22] A new category of certification would thus be created. This certification process would require the applicant to pass a recurrent aeronautical "knowledge test" every 24 months, be at least 17 years old and conduct preflight checks to ensure the UAS is in proper condition.[23] No actual flight testing would be required, but the FAA is open to comments on this topic as well.

Potential applicants may reasonably worry that the new operator certification process will be burdensome or lead to the saturation of UAS applications and, thus, block the efficient licensing of new operators. However, the FAA contends that the new airman certification process would not be the same as that for private or commercial pilots and will impose less burden on the small UAS applicants.[24] The applicant would apply for the "new category" of airman certificate by taking the aeronautical "knowledge test" every two years.[25] Furthermore, the FAA anticipates fewer than 8000 operator applicants nationwide and 17,000 newly registered small UAS, so the FAA theorizes that the National Airspace is not likely to become over-populated with small UAS.[26]

Benefits and Costs of the Proposed Rule

The FAA not only hopes its proposed small UAS rule will result in more efficient and safer methods for performing certain commercial tasks (*e.g.,* taking aerial photographs), but the FAA also aims to promote new business and industry. The FAA has recognized small UAS operations are an emerging industry, which the agency aims to do a better job addressing and accommodating while maintaining its emphasis on aviation safety.[27]

Nonetheless, privacy concerns will accompany any regulation that could expand the use of small UAS. The FAA has remarked that most privacy concerns are beyond the scope of its rulemaking, yet it plans to participate in a multi-stakeholder engagement process with the National Telecommunications and Information Administration. NTIA will lead the privacy, accountability, and transparency discussions of using UAS in the National Airspace.[28] This will take time to work through.

President Obama, in his concurrent Presidential Memorandum, *Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems*, declares that the federal government will take steps to ensure that UAS integration will account for privacy, civil rights and civil liberty concerns.[29] In the memorandum, President Obama orders federal agencies to comply with the Privacy Act of 1974 when they employ UAS to collect information.[30] Agencies must also ensure they use UAS in a manner consistent with the Constitution and provide notice to the public of specific areas where agencies are authorized to operate in the National Airspace.[31]

In addition to the federal protections enumerated in the Presidential Memorandum, existing state law provides some general protection of individual privacy and recourse for an individual whose privacy has been violated. Still, state legislatures anticipate wider public use of small UAS and, thus, have begun considering legislation specific to the potential privacy issues raised by more and more UAS applications.

Conclusion

The FAA's proposed 2015 small UAS rule represents a cautious step toward broader general public commercial uses of UAS and a meaningful step away from the FAA's once impenetrable stance against operating any commercial UAS in the National Airspace. If adopted, the proposed rule would maintain restrictions on the extent of commercial UAS usage, impose operational flight restrictions similar to the well-known hobby aircraft standards, and impose a "new category" of operator licensing and certification. Eight years after Congress demanded the FAA to act, the agency is seeking to relax certain criteria for small UAS commercial operations to promote emerging industries and make UAS operations more accessible to US companies and entrepreneurs.

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Endnotes

1 FAA Notice of Proposed Rulemaking, "Operation and Certification of Small Unmanned Aircraft Systems," Docket No.: FAA-2015-0150; Notice No. 15-01 (Feb. 15, 2015) (2015 small UAS rule).

2 Since June 9, 1981, the FAA has followed a policy in favor of "recreational use of airspace by model aircraft" through FAA Advisory Circular 91-57, which defined certain "Model Aircraft Operating Standards" — typically aircraft weighing less than 55 pounds and operating at low levels of less than 400 feet above ground surface. Congress formalized these model aircraft standards and provided a recreational "safe harbor" in Section 339 of the FAA Modernization and Reform Act of 2012, Public Law 112-95, which provided that the model aircraft (1) must weigh less than 55 pounds; (2) must not interfere with and must give way to manned aircraft; (3) cannot be flown within five miles of an airport; and (4) must be flown within the line-of-sight of the operator.

3 The FAA charitably estimated three to five years to obtain agency permission for any commercial UAS application and admitted that time exceeded the typical technology's useful life. *See supra* note 3, at 24–25.

4 2015 small UAS rule, at 10–11.

5 *Id.* at 11–13.

6 *Id.* at 12, 15.

7 "Unmanned Aircraft Operations in the National Airspace System," 72 Fed. Reg. 6689, 6690 (Feb. 13, 2007).

8 *Id.*

9 2015 small UAS rule, at 10.

10 *Id.* at 45–46.

11 *Id.* at 11.

[12] *Id.* at 10.

[13] *Id.* at 13–14.

[14] *Id.*

[15] *Id.* at 31.

[16] *Id.* at 39–40, 43.

[17] *Id.* at 12, 144.

[18] *Id.* at 26.

[19] *Id.* at 144.

[20] *See* FAA Fact Sheet–Unmanned Aircraft Systems (UAS) (Jan. 6, 2014), *available at* http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14153; FAA Order 8130.34, "Airworthiness Certificates of Unmanned Aircraft Systems" (Mar. 27, 2008); *Looser FAA Regulations to Help Drone Expansion at Universities*, THE DRONE PROJECT (Mar. 18, 2013).

[21] Daniel Wilson, *FAA Releases Long-Awaited Draft Rule for Small Drone Use*, LAW360 (Feb. 17, 2015).

[22] 2015 small UAS rule, at 156.

[23] *Id.* at 12.

[24] *Id.* at 96–97.

[25] *Id.* at 12, 97.

[26] *Id.* at 157, 160.

[27] *Id.* at 144–45.

[28] *Id.* at 36.

[29] Presidential Memorandum, *Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems*, Office of the Press Secretary (Feb. 15, 2015).

[30] *Id.*

[31] *Id.*