April 24, 2015

BY ELECTRONIC MAIL
The Honorable Michael P. Huerta
Administrator, Federal Aviation Administration
U.S. Department of Transportation
800 Independence Avenue, SW
Washington, DC 20591
Electronic Address: http://www.regulations.gov (Docket No. FAA-2015-0150)

Re: Comments on FAA's Proposed Operation and Certification of Small Unmanned Aircraft Systems Rule

Dear Administrator Huerta:

The U.S. Small Business Administration's (SBA) Office of Advocacy (Advocacy) submits the following comments on the Federal Aviation Administration's (FAA's) *Proposed Operation and Certification of Small Unmanned Aircraft Systems (Small UAS) Rule*.[1] FAA's proposed Small UAS rule would amend FAA's regulations to allow the operation of small UAS (less than 55 lbs.) for non-hobby and non-recreation uses in the National Airspace System (NAS).[2] The proposed rule would specifically address the operation of small UAS, the testing and certification of operators, UAS registration, and the display of registration markings. While the proposed rule would reduce barriers for small UAS use for commercial, private, and research purposes, it also includes significant operational restrictions that are a concern for small business.[3] The proposed rule would not require airworthiness certification for small UAS covered by the proposed rule. The proposed rule also considers whether FAA should adopt a special category of micro-UAS (less than 4.4 lbs.) and would prohibit model aircraft from endangering the safety of the NAS.[4]

Office of Advocacy

Advocacy was established pursuant to Pub. L. 94-305 to represent the views of small entities before federal agencies and Congress. Advocacy is an independent office within SBA, so the views expressed by Advocacy do not necessarily reflect the views of SBA or the Administration. The Regulatory Flexibility Act (RFA),[5] as amended by the Small Business Regulatory

[1] 80 Fed. Reg. 9544 (February 23, 2014).
[2] *Id.*
[3] Some of these restrictions include operation limited to visual line-of-sight of operator or visual observer, no operation over any persons not directly involved in the operation, daylight-only operations, maximum airspeed of 100 mph (87 knots), maximum altitude of 500 feet above ground level, minimum weather visibility of 3 miles from control station, no operations from a moving vehicle or aircraft (except from a watercraft on water). See, 80 Fed. Reg. 9457.
[4] 80 Fed. Reg. 9544. For additional information about FAA's proposed rule, see FAA's website at www.faa.gov/uas/.
[5] 5 U.S.C. § 601 et seq.

Enforcement Fairness Act (SBREFA),[6] gives small entities a voice in the rulemaking process. For all rules that are expected to have a significant economic impact on a substantial number of small entities, federal agencies are required by the RFA to assess the impact of the proposed rule on small business and to consider less burdensome alternatives. Moreover, Executive Order 13272[7] requires federal agencies to notify Advocacy of any proposed rules that are expected to have a significant economic impact on a substantial number of small entities. Further, both Executive Order 13272 and the RFA[8] require the agency to include in any final rule the agency's response to any comments filed by Advocacy and a detailed statement of any change made to the proposed rule as a result of the comments.

Small Entities Have Expressed Concern With FAA's Proposed Rule

Advocacy commends FAA for its "first step" in the process of integrating small UAS operations into the NAS and for the agency's stated intention to accommodate new technologies, capabilities, and procedures in future rulemakings. Advocacy is mindful of the difficult task FAA has in balancing risk with the large potential benefits UAS can bring to small businesses and society in terms of safety and economic opportunity.[9]

Following publication of FAA's proposed rule, a number of small business representatives contacted Advocacy and expressed both support for, and concerns about, the proposed rule. Many or most of these small businesses and their representatives want the rulemaking to proceed, but believe the proposed rule is too restrictive and will not allow many beneficial UAS operations. Most of these operational restrictions are included because FAA finds that current technology is not reliable enough to overcome the "see and avoid" and "loss of positive control" concerns that FAA has proposed in order to the limit the risk of UAS to other aircraft and to persons and property on the ground.

In order to obtain input about the proposed rule from small businesses and their representatives, Advocacy hosted a small business roundtable on April 9, 2015 to discuss FAA's proposed rule. Representatives from FAA and the Department of Transportation also attended the roundtable to provide an overview of the proposed rule and answer questions about it. The following comments are reflective of the issues raised during the roundtable and in other discussions with small businesses and their representatives. Advocacy recommends that FAA carefully consider any comments it receives from small business and incorporates those concerns in any final rule.

1. **FAA should articulate and quantify the framework or parameters for assessing risk.** Small businesses and their representatives stated that they would like FAA to issue a final rule as quickly as possible in order to allow some commercial UAS operations that are currently prohibited. They also stated that FAA's approach should be "risk-based" and

[6] Pub. L. 104-121, Title II, 110 Stat. 857 (1996) (codified in various sections of 5 U.S.C. §601 et seq.).
[7] Executive Order 13272, *Proper Consideration of Small Entities in Agency Rulemaking* (67 Fed. Reg. 53461) (August 16, 2002).
[8] See, 5 U.S.C. 604(a)(3)
[9] Some of the likely beneficial UAS uses envisioned include as crop monitoring and inspection, research and development, educational and academic uses, power-line and pipeline inspection, construction, tower and antenna inspections, search and rescue operations, bridge inspections, aerial surveying and photography, wildlife nesting area evaluations, etc.

"technology neutral" so as not to lock-in any particular technology. Because the rulemaking process is likely to lag behind technological innovation, small businesses and their representatives would like FAA to define the risk framework or risk parameters so that innovators know what level of risk is acceptable (or to what level of "safety" they need to design). This is particularly important in the context of technologies needed to resolve the "see and avoid" and "loss of positive control" problems, which are the key barriers to more advanced UAS operations.

Small businesses and their representatives believe that technological innovation is likely to resolve these problems faster than FAA can react. For example, they stated that autonomous "sense and avoid" technology is developing at a rapid pace and could soon make the "visual line of sight" restriction unnecessary. Similarly, the "loss of positive control" issue is being resolved by technology that automatically directs the UAS to safely hover, land, or return to base if the data link is lost or disrupted. However, innovators cannot design suitable technologies to resolve these problems unless they know and understand FAA's risk framework and risk parameters. One option might be for FAA to evaluate risk relative to some other objective, such as safety benefits. For this reason, Advocacy recommends that FAA articulate and quantify the framework or parameters for assessing risk going forward so that innovators can design and build to achieve that level.

2. **FAA should reassess its consideration of alternatives in the current proposed rule.** The RFA requires federal agencies to consider significant alternatives to their regulatory proposals that meet their statutory objectives while minimizing the costs to small entities. Costs include not only compliance costs but also the loss of safety and economic benefits that prohibitions impose (i.e., opportunity costs). While the certification and testing provisions in the proposed rule seem reasonable, small businesses and their representatives raised concerns about the operational restrictions in the proposed rule - driven mainly by the "see and avoid" and "loss of positive control" barriers of the proposed rule.

   In considering alternatives, an agency should clearly define the standard under which it is regulating. In this instance, FAA's objective is safety, but the agency does not clearly define the parameters of that standard, making the evaluation of alternatives difficult. Small businesses and their representatives stated that some of the operational restrictions (e.g., the 500 foot limit, no night-time flight, prohibition of flights over people, ban on operation from a moving vehicle, etc.) seem arbitrary. Since some or many of these operational barriers can be overcome by technology or behavioral changes, FAA should anticipate that these operational barriers are temporary. It may be that if FAA more clearly articulated and quantified the risk parameters it is using, it could relax some of these restrictions without a significant increase in risk. As such, Advocacy recommends that FAA reassess the safety risk parameters it is using and determine whether some of the operational restrictions in the proposed rule can be relaxed without a significant rise in risk. FAA should also release any safety data it has in order to facilitate the public's evaluation of FAA's assessment of risk.

3. **FAA should provide timely mechanisms for approvals, waivers, or exemptions from the final rule.** If FAA is unable to articulate an adequate risk framework or risk parameters for technological innovation, FAA should at least provide timely mechanisms for approvals, waivers, and exemptions from any operational restrictions in the final rule. Small businesses and their representatives have stated that UAS operators should be able to apply for and obtain authorization to deviate from the final rule for operations or classes of operations that the operator can demonstrate are adequately safe. Some of the examples that have been mentioned include operations in remote areas with few aircraft, low population density areas, operations above one's own property or over easements and rights of way, or operations where people on the ground are aware of the UAS operation (such as above one's own employees on a work site). It may be feasible for FAA to develop some kind of risk matrix where operations could be assessed based on their potential risk and benefits.

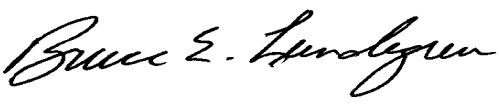
   Because technology and innovation are likely to advance rapidly, FAA should anticipate that technology may resolve the "see and avoid" and "loss of positive control" problems faster than FAA is able to respond through rulemaking. For this reason, Advocacy recommends that FAA provides timely mechanisms for approvals, waivers, or exemptions from the final rule where an operator can demonstrate adequate safety.

Conclusion

Thank you for the opportunity to comment on FAA's proposed Small UAS rule. One of the primary functions of the Office of Advocacy is to assist federal agencies in understanding the impact of their regulatory programs on small entities, and we hope these comments are helpful and constructive. Please feel free to contact me or Bruce Lundegren (at (202) 205-6144 or bruce.lundegren@sba.gov) if you have any questions or require additional information.

Sincerely,

Claudia R. Rodgers
Acting Chief Counsel for Advocacy



Bruce E. Lundegren
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Copy to: The Honorable Howard Shelanski, Administrator
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