

# UAS Hearing Before the House Committee on Transportation and Infrastructure's Subcommittee on Aviation

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December 11, 2014

Yesterday, the House Committee on Transportation and Infrastructure's Subcommittee on Aviation held a hearing on "U.S. Unmanned Aircraft Systems: Integration, Oversight and Competitiveness." The discussion centered largely around the regulatory and technical barriers to Unmanned Aircraft Systems (UAS) integration into the national airspace, the feasibility of a risk-based regulatory framework, concerns about UAS companies moving overseas, the UAS test sites, the current state of regulation, and privacy considerations. The tension between the importance of safety to American aviation and desire to exploit the opportunities presented by UAS technology was prevalent throughout the conversation.

Chairman Frank A. LoBiondo (R-NJ) presided over the hearing, which included testimony from six witnesses: Margaret Gilligan, Associate Administrator for Aviation Safety, Federal Aviation Administration (FAA); Matthew E. Hampton, Assistant Inspector General for Aviation, U.S. Department of Transportation (DOT); Dr. Gerald L. Dillingham, Director, Physical Infrastructure Issues, U.S. Government Accountability Office (GAO); Captain Lee Moak, President, Airline Pilots Association (ALPA); Jesse Kallman, Head of Business Development & Regulatory Affairs, Airware; and Dr. Nicholas Roy, Associate Professor of Aeronautics and Astronautics, Massachusetts Institute of Technology. In addition to Chairman LoBiondo, the following Subcommittee and other Members attended the hearing: Cheri Bustos (D-IL), Rick Crawford (R-AR) (a member of the Committee on Transportation and Infrastructure), Rodney Davis (R-IL), Peter A. DeFazio (D-OR), John

## Practice Areas

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Uncrewed Aircraft Systems (UAS)

Duncan (R-TN), Elizabeth H. Esty (D-CT), Blake Farenthold (R-TX), Sam Graves (R-MO), Richard L. Hanna (R-NY), Rick Larsen (D-WA), Sean Patrick Maloney (D-NY), Thomas Massie (R-KY), Mark Meadows (R-NC), Scott Perry (R-PA) (a member of the Committee on Transportation and Infrastructure), Todd Rokita (R-IN) (who will join the Subcommittee next term), Bill Shuster (R-PA), Dina Titus (D-NV), Daniel Webster (R-FL), and Roger Williams (R-TX).

In summary, there was a great deal of interest in the topic, as evidenced by wide Member attendance, including Members from the full Committee and incoming Subcommittee members. While acknowledging the need to ensure safety, Chairman LoBiondo pushed for a less burdensome and speedier process for authorizing civil UAS operations. Though the individual Members raised different concerns, Chairman LoBiondo's views were largely echoed by the other Members.

**Implementation of the Federal Aviation Administration Modernization and Reform Act.** Multiple members voiced concerns about the FAA's progress meeting the milestones prescribed by the Federal Aviation Administration Modernization and Reform Act (FMRA). Mr. Hampton of the DOT's Inspector General Office testified that while the FAA has completed more than half of the 17 statutory requirements, the "FAA is behind schedule on the remaining requirements, many of which are key to UAS integration." The Subcommittee focused heavily on the FAA's Notice of Public Rulemaking (NPRM) on small UAS, which it has not yet issued despite an August 2014 deadline. Dr. Dillingham testified that the delay of the NPRM and the expected high volume of comments will likely "delay UAS integration until 2017 or even later," which would be more than two years past the September 2015 integration deadline. Ms. Gilligan agreed that the NPRM is "delayed beyond what any of us think is appropriate," but reported that the agency has come to a "balanced proposal" that will be issued "soon." In response to Rep. Massie's question about whether the FAA was measuring this time "in the geologic time scale" or "in internet speed," she replied that because the NPRM is currently in executive review, she cannot supply a time frame.

**Risk-Based Regulatory Approaches.** The feasibility of using a risk-based regulatory approach was discussed throughout the hearing. Mr. Kallman and Dr. Roy advocated for a risk-based scheme similar to those that European countries currently employ to allow commercial UAS operations. These frameworks impose fewer regulatory requirements where the operations are less dangerous (for instance, those performed by very small UAS, in remote areas, or within visual line-of-sight (VLOS) of the operator). Rep. DeFazio and others pushed Ms. Gilligan to explain whether the FAA is "seriously pursuing" a risk-based approach. Ms. Gilligan stated that the agency is using a risk-based approach in evaluating Section 333 exemption petitions, certifying UAS systems, and working with the North Dakota test site to develop operations. She further stated that the FAA took a risk-based approach in the NPRM, explaining that "it is the approach we use for all of our standards."

**Pilot Certification.** Chairman LoBiondo revealed that there are several licensed pilots on the Subcommittee, including Rep. Graves, Rep. Perry, Rep. Hanna, Rep. Rokita, and one of the Subcommittee's counsel. Reps. Shuster and Davis both expressed concern over requiring UAS operators to obtain commercial pilot licenses, citing the difference in skills required to fly UAS vs. manned aircraft and the onerousness on potential operators such as rural farmers, respectively. Captain Moak described the ALPA's concern with the threat UAS

pose to manned aircraft, and asserted that such certification was essential to ensuring the safety of UAS operations. Rep. Shuster pushed back on this assertion, claiming that some parts of the current curricula used to train pilots of manned aircraft are "irrelevant" to UAS operation, and further that these curricula lack UAS-specific training. Ms. Gilligan declined to comment on what the NPRM would require vis-a-vis pilot certification.

**Technical Requirements for Commercial UAS Use.** Dr. Roy argued that even if all of the regulatory pieces were in place, there are large technical gaps preventing widespread commercial use. He cited low demand in countries such as Japan which already allow commercial operations, and asserted that "another wave of technology is required to scale up" UAS operational capabilities. Mr. Kallman, Dr. Roy, and Mr. Hampton all emphasized the need to develop sense-and-avoid technologies and protect against lost link scenarios. Kallman and Roy both asserted that these technological improvements combined with a risk-based regulatory structure could allow the U.S. to safely permit operations beyond VLOS, which Rep. Shuster feared would be prohibited under the upcoming NPRM.

**Exemption Requests.** The FAA has received over 160 exemption requests, and granted 11. Reps. DeFazio and Farenthold urged the FAA to speed up the exemption process. Rep. DeFazio noted that even after receiving an exemption, the applicants would need to apply for a Certificate of Waiver or Authorization (COA). Ms. Gilligan stated the FAA is looking at how it can streamline the exemption processes. In addition, for applicants seeking to conduct research flights, the FAA is encouraging them to use a research certification for the UAS, rather than seeking an exemption.

**Moving UAS Operations Abroad.** Several witnesses contended that the onerousness of the current regulatory framework, the lack of research opportunities, and the prohibition on commercial applications except by exemption petition have caused companies to move their operations abroad. Countries discussed at the hearing that currently permit commercial operations include the United Kingdom, Australia, Japan, France, and Canada. Chairman LoBiondo expressed concern about this, citing recent news reports that applicants for exemption are taking their operations overseas. Ms. Gilligan said that the FAA is working with these applicants and recommending ways to streamline the process—for instance, by using a special airworthiness certificate for research in lieu of an exemption petition. Dr. Roy explained that the lack of domestic UAS opportunities not only slows the growth of domestic UAS companies and other domestic industries that could benefit from UAS operations, but also could cause the exodus of the nation's best engineers and scientists in the UAS field if educational and career opportunities do not improve.

**UAS Test Sites.** While the FMRA-mandated test sites are all currently operational, Dr. Dillingham and others described several shortcomings, including confusion on-site as to what data should be collected, a lack of industry interest, and complicated processes for authorization. Ms. Gilligan assured the Subcommittee that the FAA is working to improve these issues, through actions such as conference calls and visits to the site, identifying FAA's research needs, and placing designees at all of the sites (a process which only the Nevada site has begun). She noted that federal law prevents her from directing the site operators to conduct certain research without compensation. Ms. Gilligan explained that the FAA has encouraged the sites to draft

proposals for broader COAs as well as to become Designated Airworthiness Representatives, which would facilitate conducting research at the test sites, and that a main priority is attracting the industry to conduct research at these sites without jeopardizing intellectual property or needing to encountering onerous regulatory hurdles.

**Lack of UAS Regulation.** Rep. Farenthold expressed concerns about the growing number of hobbyists, commenting that "tens of thousands" of UAS that will be purchased during the holidays. Captain Moak brought a DJI Phantom quadcopter he had purchased online to the hearing, explained the extent of its capabilities, and showed pictures of damage to a military plane caused by a small UAS. Rep. DeFazio proposed creating a system with registration, licensure, and user fees that would "help deal with the deficiencies" in the FAA's budget. He suggested varying the license according to use, weight, and capability of the UAS so that the requirements would not be overly burdensome on the user. Dr. Dillingham testified that, until the FAA creates a regulatory scheme for UAS, people will operate in the shadows of the law, illegally and dangerously. Ms. Gilligan said "the FAA can and will take enforcement action against anyone who operates a UAS in a way that endangers the national airspace." Rep. Farenthold expressed concern that "there are a lot of fine-line distinctions" between legal and illegal use of UAS, especially in the area of hobbyists, and that it will be difficult to educate the public about the grey areas.

**Privacy.** Rep. Massie raised the issue of privacy, which was discussed briefly. Dr. Roy described UAS privacy as "a moving target." Mr. Kallman testified that while manufacturers are engaged in what Rep. Massie referred to as "privacy by design," ultimately privacy is "independent of the type of technology that's collecting the information." Dr. Roy called for more clarity on what information is being collected by UAS to help inform the privacy debate.

*Sara M. Luxenberg, a Wiley Rein LLP law clerk, contributed to the drafting of this alert.*