

# Amazon says FAA drone approval already obsolete

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The approval federal aviation officials gave Amazon.com last week to test a specific drone design outdoors is already outdated, the company's top policy executive said Tuesday in written testimony to a Senate subcommittee.

Paul Misener, Amazon's [vice president](#) of global public policy, said the Federal Aviation Administration approved an older drone design that the company has moved past. The company needs FAA approval for outdoor testing of drones that it hopes to one day deploy to deliver small packages to customers within 30 minutes in a service it has dubbed Prime Air.

"(W)e innovated so rapidly that the UAS approved last week by the FAA has become obsolete," Misener said in testimony submitted to the Senate Subcommittee on Aviation Operations, Safety, and Security. "We don't test it anymore. We've moved on to more advanced designs that we already are testing abroad."

Misener used the example to make the point that U.S. regulators are moving too slowly in rapidly evolving commercial drone development. Amazon has said it's testing drones in countries such as the United Kingdom, where governments have quickly created rules to allow it to conduct extensive research and development.

"Our testing abroad has required but minimal aviation regulatory approval, given the low risk presented by our small UAS designs; the

R&D nature of our flight activity; and our relatively rural test sites," Misener wrote in his testimony.

Misener is one of six witnesses scheduled to testify Tuesday before the subcommittee that's looking into efforts by the FAA to integrate drones into the National Airspace System. It will also explore potential privacy concerns that drone use raises.

In separate written testimony, Margaret Gilligan, associate administrator for aviation safety at the FAA, wrote that the agency is moving quickly while trying to ensure public safety.

"The FAA is safely and steadily integrating (drones) into the largest, most complex aviation system in the world," Gilligan wrote.

She noted that the agency has issued 48 exemptions to aviation rules for commercial drone testing in "low-risk, controlled" environments since 2012.

For Amazon, that's not fast enough. In the "multiple" international locations where Amazon is conducting testing, Misener said the company has never had to wait more than two months to do its research. And he said that foreign regulators have granted outdoor testing permission for a category of drones rather than specific designs, which he said has given Amazon "room to experiment and rapidly perfect designs without being required to continually obtain new approvals" for specific iterations.

Amazon is particularly vexed by rules that prevent it from operating drones beyond the line of sight of its pilots. Misener said the company has developed automated "sense and avoid" technology to prevent crashes, as well as on-board computing to prevent mishaps if communications is lost with the drone.

The FAA restrictions have left Amazon to conduct its U.S. testing in what Misener described as a "large indoor R&D facility in Seattle." The company previously disclosed that it owns a large plot of land in rural Washington state where it hopes to conduct outdoor testing.

Misener pointed out that Amazon has hired top technologists to design and operate its drones, including "team of roboticists, scientists, aeronautical engineers, remote sensing experts, and a former NASA astronaut." Though he didn't name the astronaut, Amazon has hired Neil Woodward, a former mission specialist astronaut at the Johnson Space Center in Houston, as a technical program manager for Prime Air, according to Woodward's LinkedIn page.

In his written testimony, Misener pressed the committee to push regulators to adopt similar approaches to those being developed in Europe or potentially cede drone innovation leadership to other countries.

"(T)he permission the FAA granted is more restrictive than are the rules and approvals by which we conduct outdoor testing in the U.K. and elsewhere," Misener said. "Moreover, obtaining permission took far too long, and certainly much longer - over half a year - than it took in other countries."

Misener's testimony also offered a few new details about Amazon's drone development. The drones, which were first revealed by Chief Executive Jeff Bezos in late 2013 in an interview on CBS's "60 Minutes," will fly below 500 feet and "generally above 200 feet," except for takeoff and landing. The craft will weigh less than 55 pounds. And Misener said the company will be able to operate the drones from distances of 10 miles or more.

Toward the end of his testimony, Misener touched on privacy concerns,

saying the company has no interest in spying on individuals.

"Prime Air is a future delivery service, not a surveillance operation,"  
Misener wrote.

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