Civil Debate
FAA offers limited commercial unmanned-aircraft opportunity as pressure on the agency rises

Graham Warwick Orlando, Fla.

With frustration growing over its slow progress toward lifting the ban on civil unmanned aircraft, the FAA has offered an olive branch of sorts—the possibility of approving limited commercial operations in specific applications, such as crop spraying, that pose a low risk to those on the ground.

Four industry sectors have approached the agency about using legislation in the 2012 FAA reauthorization act to obtain an exemption from the ban on civil UAS, says Jim Williams, the FAA’s UAS integration office manager. Precision agriculture, film making, pipeline and power-line inspection and oil-and-gas flare stack inspection industries are all interested in using small UAS, and one is close to filing for an exemption, he says.

That request will start the regulatory process within the FAA, he told the Association of Unmanned Vehicle Systems International convention here on May 13. Section 333 of the 2012 legislation allows the FAA to grant exemptions from type design approval and airworthiness certification requirements so as to begin incremental integration of UAS into national airspace.

Williams faced tough questioning at the show over the FAA’s efforts to enforce its ban on civil UAS and the delays in releasing its notice of proposed rulemaking on the long-awaited regulations for certification and operation of small UAS. He hit back by trying to illustrate the dangers of unauthorized flying of unmanned aircraft.

This includes the reported near miss on March 22 between a US Airways Bombardier CRJ200 and a camouflage remotely controlled aircraft at 2,300 ft., 5 mi. northeast of Tallahassee airport in Florida. Williams says the FAA has not been able to identify the aircraft or its operator. He also cited two incidents in Virginia and Australia, where unauthorized small UAS had crashed during public events and injured people.

“Section 333 work to authorize commercial UAS is just beginning,” Williams cautions, emphasizing that certificates of authorization under any exemptions will be for specific, limited and low-risk operations. Remotely piloted helicopters are widely used in Japan for crop monitoring and pesticide spraying, one of the most high-risk uses of manned aircraft, he said. UAS are already used by the film industry on closed sets outside the U.S., while both power-line and flare stack inspections are hazardous for people and could be performed more quickly and safely by UAS.

Williams is not able to give a timetable, but says the regulatory process requires the first exemption request to go through a public comment period. “It can take time,” he says. Although Section 333 allows the FAA to exempt operators from aircraft certification requirements, “there will still have to be a certified pilot with specific training for that type of aircraft,” he says. “We can’t waive that.”

Williams says the FAA is continuing to work with several manufacturers on how to achieve type certification for their aircraft. So far only two UAS, the AeroVironment Puma AE and Insitu ScanEagle, have received restricted-category certification based on rules that allow the FAA to accept Defense Department certification of former military equipment. The ScanEagle flew the first commercial UAS flights in the Arctic in September 2013 and more demonstrations are planned this summer.

The FAA also plans to approve its chosen unmanned-aircraft system test sites to issue experimental airworthiness certificates to help overcome a backlog within the agency and allow initial civil operations to begin at the sites. Initially the six test sites are being granted certificates of authorization to fly UAS as public aircraft operators, but that comes with restrictions because public operator rules have constraints on them, says Williams.

As a public operator, each site is responsible for determining the airworthiness of the aircraft and accreditation of its pilot. Longer term, they want to move into civil operations, but that requires certification of the UAS. “Experimental certification is ideal,” he says, but there is a six-month delay in the FAA issuing certificates. “We want the test sites to be able to issue on behalf of the FAA experimental certificates for flights within their sites.”

The University of California-Davis has tested spraying of vineyards in Napa Valley using Yamaha’s RMAX remotely piloted helicopter.

AVIATION WEEK & SPACE TECHNOLOGY/MAY 19, 2014 45