Drones in the roofing industry

The FAA has issued its final rule

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On June 21, the Federal Aviation Administration (FAA) issued its long-awaited final rule addressing the commercial and educational use of small unmanned aircraft systems (UAS), commonly referred to as drones. The new rule goes into effect Aug. 29. NRCA believes the final FAA drones rule is reasonable, and future use of drones will be an enormous benefit to the roofing industry.

Background

A drone, or UAS, is an aircraft without a human pilot onboard controlled remotely by an operator on the ground. Flying a drone for fun or recreational purposes requires registration with the FAA for most drones and compliance with flight-safety rules.

In February 2015, FAA originally proposed operating and certification requirements permitting drones for what FAA categorizes as nonhobby and nonrecreational use (commercial and educational purposes). FAA currently accommodates commercial use of drones with special certificates, exemptions, authorizations and waivers that can be cumbersome to apply for and receive. In its announcement, the FAA stressed it is seeking to enable the use of drones for commercial and educational purposes while protecting public safety and privacy concerns.

> Future use of drones will be an enormous benefit and could have a transformational effect on the roofing industry

NRCA's comments to the original rulemaking proposal suggested drones could have a transformational effect on the roofing industry from a technical and worker-safety perspective. NRCA noted drones would:

- Enhance—and replace—current imaging technology currently in use, which involves capturing literally millions of roof images from airplane-originated photography.
- Allow for more accurate assessments of a roof system's condition, better enabling homeowners and building owners to make informed decisions about roof system repair and replacement.
- Enable insurance claims adjusters to better assess roof damage after a weather-related incident such as a hailstorm.
- Allow roofing professionals to conduct thermal assessments of roofs that can lead to better solutions for energy conservation in homes and buildings.
- Have a dramatic—and positive—effect on roofing industry safety by reducing worker exposures to fall hazards.

Final provisions

The most significant aspect of the final drones rule involves the person at the controls of a drone. The rule establishes a "remote pilot in command" position that requires a person operating the flight controls of a drone to either hold a remote pilot certificate with a small unmanned aircraft rating or be under the supervision of a person who holds such a rating.

The FAA believes the supervision provision ensures safe operation of a drone by a person who does not possess an airman certificate as long as the remote pilot in command (supervisor) retains the ability to immediately take direct control of the drone. To qualify for the remote pilot certificate, a person must demonstrate aeronautical knowledge by:

- Passing an initial aeronautical knowledge test at an FAA-approved testing center or holding a Part 61 (for certain manned aircraft operations) pilot certificate other than student pilot, complete a flight review within the previous 24 months and complete a small UAS online training course provided by the FAA
- Be vetted by the Transportation Security Administration
- Be at least 16 years old

Remote pilots in command also have reporting responsibilities in the event of injury or property damage of $500 or more; must conduct pre-flight inspections of the drone and submit the drone for an FAA inspection if requested; and must ensure the drone is properly registered.

In addition to the certification requirements, some operational limitations are provided by the new rule, including the following:

- A drone must weigh less than 55 pounds.
- A drone must remain within the operator's visual line of sight.
- Drones may not be operated over any persons not directly participating in the operations nor under a covered structure.
- Drones only may be operated during daylight or civil twilight (30 minutes before sunrise and 30 minutes after sunset) provided they have anti-collision lighting.
- Maximum drone groundspeed is 100 mph.
- Maximum drone altitude is 400 feet above ground level, or if higher than 400 feet, the drone must remain within 400 feet of a structure.

- There must be minimum weather visibility of 3 miles from the control station.
- No drone operations are allowed from a moving vehicle unless they are over sparsely populated areas.

A key provision of this rule is a waiver mechanism to allow individual operations to deviate from many of the operational restrictions of this rule if the FAA finds the proposed operation can safely be conducted under the terms of a certificate of waiver. For example, the FAA has provided for a waiver application for nighttime drone use rather than an outright prohibition. The FAA also is developing an online mechanism to facilitate the waiver process.

A successful outcome

NRCA commented extensively during the rulemaking process, individually and as part of a coalition called the Property Drone Consortium. In addition, NRCA staff met with representatives of the FAA in Washington, D.C., to discuss the potential role of drone operations in the roofing industry and where NRCA believed the original proposed rule could be safely and effectively revised. Overall, NRCA is pleased with the rule and glad some of its comments resulted in changes incorporated into the final version.

For more information about the FAA's drones rule, contact Harry Dietz, NRCA's director of enterprise risk management, at (847) 493-7502 or hdietz@nrca.net or visit www.faa.gov.

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