

Congress and the FAA Ease the Way for Use of Drones by the Energy Industry

The Federal Aviation Administration (FAA) recently issued regulations permitting the use, with certain limitations, of small unmanned aircraft systems (small drones) for non-hobby and non-recreational purposes. On July 13, 2016, Congress passed several provisions specific to drone use by the energy industry as part of the reauthorization bill for the FAA.

FAA Reauthorization

On July 13, 2016, Congress passed the “FAA Extension, Safety, and Security Act of 2016 (the Bill)”. [The Bill](#), which authorizes a short-term extension of the funding for the FAA, includes several provisions covering the operation of unmanned aircraft systems (*i.e.*, drones). Of particular interest to the energy industry, Congress--

- Amends section 331 of the FAA Modernization and Reform Act of 2012. This particular statute previously defined “small unmanned aircraft” as weighing less than 55 pounds. The Bill amends this definition to clarify that the 55-pound limit “includ[es] everything that is on board or otherwise attached to the aircraft.¹”
- Requires the Secretary of Transportation to establish a process within 180 days to allow applicants to petition the FAA to prohibit or restrict the operation of an unmanned aircraft “in close proximity to a fixed site facility.” A “fixed site facility”² includes energy production, transmission, and distribution facilities and equipment, oil refineries, and chemical facilities.
- Requires the FAA to allow a person to apply to operate an unmanned aircraft system during the day or at night beyond the visual line of sight of the individual operating the aircraft as long as the operator is conducting the unmanned aircraft operation to ensure compliance with (1) federal or state regulatory requirements including surveys associated with permit applications for new pipelines; (2) the pipeline safety regulations (49 C.F.R. Parts 192 and 195); or (3) the requirement of any federal, state, or local regulatory body or industry standard related to the construction, ownership, operation, maintenance, repair, or replacement of “covered facilities.”³ Operators may also apply to operate the unmanned aircraft without visual line of sight if the operation is related to inspection, construction, maintenance or repair activities after a pipeline or electric energy infrastructure incident or the response or preparation for a natural disaster or severe weather event. Congress required the FAA to submit a certification within 90 days of enactment of the Bill demonstrating that a process has been established to facilitate these types of applications.
- Directs the FAA, Radio Technical Commission for Aeronautics (RTCA), and the National

1. See The Bill at § 2201.

2. *Id.* at § 2209.

3. “Covered facilities” include pipelines or pipeline systems, an electric energy generation, transmission, or distribution facility, an oil or gas production, refining, or processing facility, or any other critical infrastructure facility.



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Institute of Standards and Technology to develop consensus standards for identifying operators and owners of unmanned aircraft systems. Ultimately, the stakeholders should determine if it is feasible to create a publicly accessible online database of unmanned aircraft and their associated operators. The FAA has one year to report the status of these efforts to Congress and another year to develop guidance or regulations introducing these identification standards.

The Bill has been sent to President Barack Obama to be signed into law.

FAA Rule

On June 28, 2016, the FAA published a [Final Rule](#) permitting the operation of small drones in the National Airspace System (49 C.F.R. Part 107).⁴ The FAA defined a small drone as a “small unmanned aircraft (which, as defined by statute, is an unmanned aircraft weighing less than 55 pounds).”⁵

In this Final Rule, FAA allows small drone operations for many non-hobby, non-recreational uses without requiring an airworthiness certificate, exemption, or certificate of waiver or authorization (COAs), as previously required. This Final Rule is critical for the energy industry because it provides an opportunity to use drones to conduct inspection and maintenance activities more safely and efficiently. **The new regulations take effect on August 29, 2016.**

Possible Uses

FAA envisions that operators could use small drones to monitor crops; inspect pipelines, power-lines, bridges, or antennas; aid certain rescue operations; or conduct aerial photography and wildlife nesting evaluations.

Applicability

Part 107 sets forth personnel, equipment, and operational safety requirements for small drones.

Operator Standards

The regulations set forth specific operating limitations and responsibilities of the “remote pilot in command,” “person manipulating the flight controls,” “visual observer,” and anyone else that may be directly participating in the operation. A small drone may be operated, in unregulated airspace and in certain regulated airspaces with prior authorization from Air Traffic Control, by a remote pilot in command duly licensed and trained pursuant to Part 107 certification requirements. A small drone may also be operated by an unlicensed person manipulating the controls with the direct supervision of a remote pilot in command.

Visual Line of Sight

A key requirement that raised considerable public comment to the Notice of Proposed Rulemaking was the “visual line of sight” requirement, which dictates that the remote pilot in command or person manipulating the controls must be able to see, without the aid of any device, the small drone at all times during flight. This requirement addresses FAA’s main safety concern, which is whether a person operating a drone would be able to “see and avoid” other aircraft. As a result, the small drone must be close enough to the remote pilot in command or person manipulating the controls to ensure the Part 107 visibility requirements are met. The regulations anticipate the use of a visual observer used to assist the pilot in command or person manipulating the controls to ensure that the small drone has a safe flight

4. FAA released the [pre-publication](#) version of this Final Rule on June 21, 2016.

5. As stated above, on July 13, 2016, Congress passed the FAA Extension, Safety, and Security Act of 2016. The Bill amended the statutory definition of a small unmanned aircraft to clarify that the 55-pound limit includes “...everything that is on board or otherwise attached to the aircraft.” See Final Rule at page 42065.

path. The visual line of sight requirements apply to the visual observer as well. There is a minimum weather visibility requirement of three miles from the control station.

Many commenters argued that current technologies, such as first-person-view technology, obviate the need for the visual line of sight requirement. Essentially, these commenters contend that a remote pilot in command or person manipulating the controls does not need to physically see the small drone to safely operate that device with the advent of navigation and control technologies such as onboard geo-fencing and autonomous flight technology. Accordingly, commenters supported relaxed visual line of sight requirements if the flight is conducted in a pre-defined area, such as a pipeline right-of-way, and the remote pilot in command is able to safely operate the small drone. In response, FAA stated that it does not currently have sufficient data to ensure such technologies would enable safe operation of a small drone without visual line of sight. However, an operator can apply for a certificate of waiver to permit operations without visual line of sight. FAA would review the use of geo-fencing or other technology during the waiver process to determine if a consistent level of safety exists.

As noted above, in the Bill,⁶ Congress requires the FAA to create a process by which operators of pipelines and other critical infrastructure could apply to use unmanned aircraft for the purposes of complying with federal or state regulations or responding to an incident without the visual line of sight requirement.

Daylight Use

A small drone cannot be operated at night, which is defined as the time between the end of evening civil twilight and the beginning of morning civil twilight.⁷ In response to the concern that much of Alaska could not conduct small drone flights for a large portion of the year, FAA has authorized twilight operations. When twilight operations, as defined in the Air Almanac, are conducted the small drone must be equipped with anti-collision lights capable of being visible for at least three miles. Like the visual line of sight requirements, FAA holds the authority to waive or relax these Part 107 limitations through the waiver process. As noted above, in the Bill,⁸ Congress requires the FAA to create a process by which operators of pipelines and other critical infrastructure could apply to use unmanned aircraft at night for the purposes of complying with federal or state regulations or responding to an incident.

Flight Limitations

Part 107 sets forth flight speed, height, and visibility limitations. Importantly, a small drone cannot be flown higher than 400 feet above ground level (or 400 feet above and in radius of a structure). Part 107 also prohibits the use of a small drone directly over a person not involved in the flight who is not under a safe cover, such as a structure or stationary vehicle. This requirement may result in a severe limitation on operations. The small drone must yield the right of way or “see and avoid” all other aircraft. Part 107 prohibits operation of a small drone from a moving vehicle whether on land or in water. However, there is one notable exception. FAA will allow use of a small drone in sparsely-populated areas.⁹ FAA holds the authority to waive or relax these Part 107 prohibitions through the waiver process.

Maintenance, Registration, Inspection, and Accident Reporting

All small drones must be properly maintained and registered as specified in Part 107. Prior to flight, the regulations

6. The Bill was passed by Congress on July 13, 2016. It will need to be signed by President Barack Obama before it becomes law.

7. Civil twilight is a period of time that, with the exception of Alaska, generally takes place 30 minutes before official sunrise and 30 minutes after official sunset. The Air Almanac defines civil twilight for Alaska.

8. *Id.*

9. This exception is not applicable to transportation of property of another for hire.

require the remote pilot in command conduct an assessment of the operating environment, assess local weather conditions, perform equipment inspections, and hold crewmember briefings. All small drones are subject to FAA inspection, and certain defined accidents must be reported to FAA.

Waivers

FAA has concluded that the agency does not have sufficient data related to navigation and control technologies to justify across-the-board use of small drones without visual line of sight and other operational limitations. Instead, FAA will rely upon waiver applications to evaluate potential operations outside of the requirements of the Final Rule.

To date, FAA has not specified the data needed to qualify for a particular waiver exemption but the agency has stated that it will post the Certificate of Waiver application on its website. FAA has indicated that it will strive to adjudicate all waiver submittals in 90 days, but anticipates that the time required for a determination will vary depending upon the complexity of the waiver request. It is also important to note that FAA has stated that a waiver may be conditionally granted or granted with limitations.

What's Next?

According to the FAA, the Final Rule is only one step in a broader approach to integrate drones into the National Airspace System. For example, FAA has indicated that it will initiate a separate rulemaking to consider a performance-based standard that would allow certain drone operation over people. Prior to the issuance of additional regulations enabling widespread drone use, FAA anticipates the waiver process to serve as a bridging mechanism for new or advanced technologies. The waiver process will enable FAA to test emerging technologies on a case-by-case basis prior to future rulemakings.

Please contact us for further information about the application of these regulations to your operations.



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Led by three former Pipeline and Hazardous Materials Safety Administration (PHMSA) attorneys, our Pipeline and Hazardous Materials Safety practice group counsels pipeline and midstream companies, gas utilities, terminal operators, investors, trade associations, and other stakeholders, throughout the United States. James Curry, Keith Coyle and Brianne Kurdock together have more than 25 years of experience with a multitude of pipeline safety issues. They partner with client engineering and legal personnel to address day-to-day compliance questions and develop business and regulatory strategies.