



institute of makers of explosives

Drone (Unmanned aircraft Systems/UAS) Safety & Security

Issue: What safety and security concerns about the operation of drones justify federal control and regulation?

Background: The use of drones and advances in UAS technology are on the rise. Currently, drones are beneficially used by a wide range of industries. The explosives industry relies on drones to assess the safety of re-entering post-blast sites at mines and quarries. Critical infrastructure, including explosives manufacturing sites, benefit from the use of drones to inspect process pipes for leaks, examine flare stacks for maintenance issues, and even assess tanks when it would be too dangerous for a person to enter. Drone technology that would safely allow flight beyond the line of sight of operators and use at night are examples of technological advances that would greatly benefit industry.

Despite their potential beneficial uses, there have been numerous incidents of drones conducting unauthorized flights over critical infrastructure. Some fly-overs may be by unknowing hobbyists. However, drones can be used for surveillance or mapping of a critical infrastructure site. Drone video footage of our nation's critical infrastructure has been posted to websites such as YouTube without consent of the owner/operators of the facility. As such, bad actors could use this information for nefarious purposes, including to attack critical infrastructure. There are also real and present safety concerns with unauthorized drones flying over or making contact with a critical infrastructure facility. A drone that crashes, or if it is armed, could cause significant damage and injury.

State legislatures across the country have been actively moving UAS legislation forward. In 2016, at least 38 states considered legislation related to UAS, and 22 states passed legislation or resolutions, or issued executive orders related to UAS. While state engagement is welcome, a patchwork of differing state laws and regulations will ultimately make compliance more difficult—for both UAS manufacturers and users.

Discussion: In response to these concerns and needs, Congress set the stage for a streamlined, national policy approach on the use of drones when it enacted P.L. 114-190, the FAA Extension, Safety, and Security Act of 2016. This legislation streamlines the processing of applications for commercial operation of UAS, sets up procedures for flying beyond line of sight, and a process to restrict airspace over critical infrastructure from unauthorized UAS flights. In the meantime, we are concerned that FAA is falling behind in its implementation of UAS provisions in the act, including how “critical infrastructure” is defined.

Recommendation: We support the safe use of drones and we do not want to limit this new innovative technology. However, as Congress considers legislation for a long-term authorization of the FAA Act, we request three items:

1. Preserve the language included in P.L. 114-190 Sec 2210(c)(2), to direct FAA to use DHS' definition of “critical infrastructure” rather than use scarce resources to invent another competing definition;
2. Ensure that there are appropriate penalties for those who violate restricted airspace above critical infrastructure with UAS overflights; and,
3. Define under what circumstances the owners of critical infrastructure may legally disable rogue drones that are perceived to be a direct threat to the safety of employees or the public.