



Week in Regulation

Final Drone Regulations

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The Federal Aviation Administration's (FAA) latest drone rules could cost \$2.5 billion (high-end scenario). Released on Tuesday, the measure's expected economic impact vastly exceeds initial estimates from the proposed rule: \$5.35 million in costs and 12,915 paperwork hours. At 624 pages, it stands as the most comprehensive and expensive FAA rule of 2016.

Breakdown

- Proposed Rule Cost: \$5.35 million (\$320,000 annual)
- Final Rule Cost: \$2.5 billion (\$510 million annual)
- Proposed Rule Paperwork: 12,915 hours
- Final Rule Paperwork: 10.3 million hours

Analysis

From proposed to final, these drone regulations represent perhaps the sharpest increase from an economic impact perspective. The proposed version was [not considered](#) major and strangely, the final version, despite annual burdens exceeding \$100 million, is also [not a major rule](#); the text of the measure offers no explanation on its status under the Congressional Review Act.

For costs, using FAA's low-case scenario, "initial new pilot" burdens comprise the vast majority. During the next five years, the agency estimates these burdens will cost drone operators \$279 million or 79 percent of total costs. New remote pilots will need to pay \$150 to obtain an FAA certificate. There are also associated costs with recurrent tests (\$42 million) and anti-collision lighting (\$29 million).

The high-end paperwork costs are large; at 10.3 million hours, they would, if accurate, easily eclipse the most burdensome paperwork collection in 2016...by 36 percent. To monetize this figure at the average wage rate of a compliance officer (\$33.26) yields more than \$342 million in annual costs. Yet somehow, this rule is not considered major.

There are safety benefits, if the regulation is effective at preventing drone strikes with aircraft, but FAA focused primarily on benefits to pilots. In its low-case scenario, it calculated more than \$785 million in total consumer surplus during the next five years (compared to \$353 million in costs). This consumer surplus represents the difference between what price the consumer pays for a product and the value they derive from purchasing and using the product. FAA argues that this action will reduce the price paid for drones and thus total consumer surplus will increase, resulting in benefits to society. On the high-end, total benefits could exceed \$9.3 billion, compared to \$2.5 billion for costs during the next five years.

FAA was required to conduct a small business analysis under the Regulatory Flexibility Act (RFA). However, "it expects this final rule will have a significant positive economic impact." The rationale is that new business will grow because there is finally a regulatory apparatus around drone aircraft. FAA also speculates that a manufacturing support industry will grow as a result of the rule.

For those that follow drone innovation, it was not surprising to see Amazon listed several times in the final rule text. The company raised concerns about the incremental approach to regulation. They also argued there are already some instances where the FAA permits certain commercial operations without an air carrier certificate, and in many cases there are low risks to the public. In response, FAA has adopted a hybrid approach that allows exceptions for "limited transport of property for compensation." This must be in a confined area and in compliance with other regulations. However, "air carriers" engaged in "air transportation" will be required to register and pay necessary fees.

FAA defines "air transportation" broadly as interstate movement, including operating in the District of Columbia. To qualify for the exemption, "pilots" must carry only a *de minimis* volume of property. In addition, small operators must generally operate within a "visual line of sight." This limits drone operation to roughly a 1-mile radius around the pilot.

Conclusion

Not surprisingly, FAA paints a rosy picture of its debut regulation of commercial and recreational drone use. Although there are some exceptions for the latter, they are incredibly narrow. It is odd that the agency provided little discussion of the safety benefits

of the measure and instead focused on how a new regulation would lead to billions of dollars in consumer surplus. Individuals worried about drones colliding into low-flying aircraft probably don't have consumer surplus concerns. In sum, this rule's impact on innovation and growth in the drone industry will have to wait until full implementation.