

GAO Highlights

Highlights of [GAO-16-765T](#), a testimony before the Subcommittee on Aviation, Committee on Transportation and Infrastructure, House of Representatives

Why GAO Did This Study

The U.S. commercial space launch industry has changed considerably since the enactment of the Commercial Space Launch Amendments Act of 2004. FAA is required to license or permit commercial space launches; however, to allow space tourism to develop, the act prohibited FAA from regulating crew and spaceflight participant safety before 2012—a moratorium that was extended to 2023. The U.S. Commercial Space Launch Competitiveness Act, enacted in November 2015, addressed other aspects of the commercial space launch industry.

This testimony summarizes and updates findings from GAO's 2015 report, specifically industry developments and FAA challenges, including FAA's launch licensing workload and budget. For its 2015 report, GAO reviewed FAA's guidance on its launch permit, licensing, and safety oversight activities; interviewed FAA officials, industry stakeholders, and experts who were selected on the basis of their knowledge of FAA's oversight of the commercial space launch industry; and visited spaceports where two 2014 launch mishaps occurred. To update this information GAO reviewed FAA information on the industry and FAA's budget request.

What GAO Recommends

In 2015, GAO recommended that FAA, in its budget submissions, provide more detailed information about the Office of Commercial Space Transportation's workload. FAA agreed with the recommendation. GAO is not making new recommendations in this testimony.

View [GAO-16-765T](#). For more information, contact Gerald L. Dillingham, Ph.D. at (202) 512-2834 or dillinghamg@gao.gov

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COMMERCIAL SPACE

Industry Developments and FAA Challenges

What GAO Found

In 2015, GAO reported that during the last decade, U.S. commercial space launch companies conducted fewer orbital launches in total than companies in Russia or Europe, which are among their main foreign competitors. However, the U.S. commercial space launch industry has expanded recently. In 2015, U.S. companies conducted eight orbital launches, compared with none in 2011. In addition, in 2015, U.S. companies conducted more orbital launches than companies in Russia, which conducted five, or Europe, which conducted six.

In 2015, GAO reported that the Federal Aviation Administration (FAA)—which is responsible for protecting the public with respect to commercial space launches, including licensing and permitting launches—faces challenges. According to FAA officials and industry stakeholders, FAA faces an increasing workload licensing and permitting launches for transporting cargo, and in the future, crew for NASA's commercial space programs, space tourism, and potentially launching small satellites. FAA also faces the challenges of whether and when to regulate the safety of crew and spaceflight participants—in 2015 Congress extended the moratorium to 2023—and overseeing new types of vehicles and technologies. (See figure for commercial space launch vehicles.) Challenges also include updating FAA's method to calculate maximum probable loss—the amount above which the federal government indemnifies the industry for catastrophic loss.

Virgin Galactic's SpaceShipTwo and SpaceX's Falcon 9



Source: Virgin Galactic. | GAO-16-765T

GAO reported in 2015 that FAA's budget requests for its commercial space launch activities generally were based on the number of projected launches, but that in recent years the actual number of launches was much lower than FAA's projections. GAO also reported that, according to FAA officials, more detailed information was not provided in FAA's budget submissions because the agency lacked information on its workload overseeing commercial space launch activities. In addition, GAO reported that the Office of Commercial Space Transportation did not track the amount of time spent on various activities. FAA has taken steps to implement GAO's recommendation that it provide more detailed information in its budget submissions regarding commercial space transportation activities. In its 2017 budget submission, FAA provided workload indices regarding authorizations under which companies conduct one or more launches; on-site inspections; licensing of spaceports; and staffing levels since 2006.