

GAO Highlights

Highlights of [GAO-14-778](#), a report to the Committee on Armed Services, House of Representatives

Why GAO Did This Study

The F-35 Lightning II is intended to replace a variety of existing aircraft in the Air Force, Navy, and Marine Corps, while providing the most supportable, technologically advanced, lethal, and survivable aircraft to date. The F-35 is DOD's most expensive weapon system, with estimated sustainment costs of about \$1 trillion. With the military services planning for the ability to deploy and maintain the F-35 within 4 years, DOD is working to develop a sustainment strategy that will be both affordable and executable for the program's life cycle.

GAO was mandated to review DOD's F-35 sustainment planning efforts. This report addresses the extent to which DOD has (1) developed an F-35 sustainment strategy and addressed potential risks related to affordability and operational readiness and (2) developed a reliable O&S cost estimate for the program's life cycle. GAO analyzed documented plans and cost estimates and interviewed DOD and contractor officials.

What GAO Recommends

GAO recommends that DOD develop better informed affordability constraints; address three risks that could affect sustainment, affordability, and operational readiness; and take steps to improve the reliability of its cost estimates. DOD concurred with all but one recommendation and partially concurred with the recommendation to conduct uncertainty analysis on one of its cost estimates, stating it already conducts a form of uncertainty analysis. GAO continues to believe that the recommended analysis would provide a more comprehensive sense of the uncertainty in the estimates.

View [GAO-14-778](#). For more information, contact Cary Russell at (202) 512-5431 or russellc@gao.gov.

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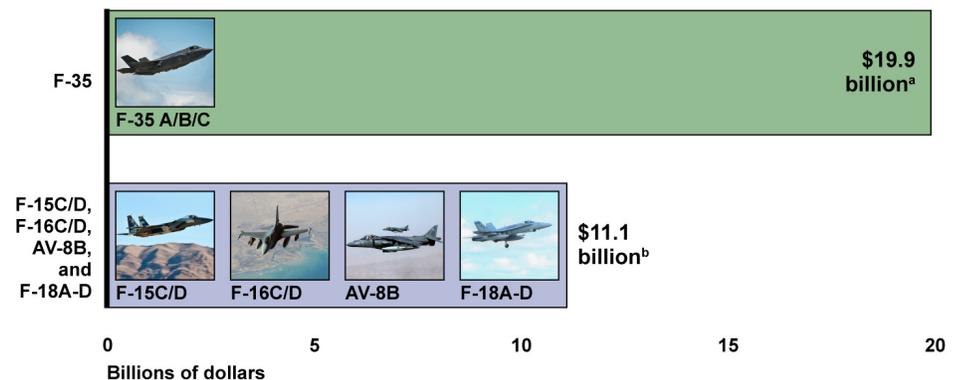
F-35 SUSTAINMENT

Need for Affordable Strategy, Greater Attention to Risks, and Improved Cost Estimates

What GAO Found

The Department of Defense (DOD) currently has or is developing several plans and analyses that will make up its overall F-35 sustainment strategy, which is expected to be complete in fiscal year 2019. The annual F-35 operating and support (O&S) costs are estimated to be considerably higher than the combined annual costs of several legacy aircraft (see fig.). DOD has begun some cost-savings efforts and established sustainment affordability targets for the F-35 program, but DOD did not use the military services' budgets to set these targets. Therefore, these targets may not be representative of what the services can afford and do not provide a clear benchmark for DOD's cost-savings efforts. In addition, DOD has not fully addressed several issues that have an effect on affordability and operational readiness, including aircraft reliability and technical-data rights, which could affect the development of the sustainment strategy.

Comparison of the Annual Estimated F-35 Operating and Support (O&S) Cost at Steady State to Actual Legacy Aircraft O&S Costs in Fiscal Year 2010



Source: GAO presentation of Department of Defense data and Air Force and Marine Corps photos. | GAO-14-778

Notes: For the purposes of this report, GAO defines steady-state operations as the period from 2036 to 2040, when, according to the services' plans, the number of F-35 aircraft and flying hours reaches its highest point and plateaus.

^aThe F-35 cost presented is Cost Assessment and Program Evaluation's (CAPE) estimated total annual operating and support (O&S) cost for 2040 in base year 2012 dollars.

^bLegacy aircraft cost is based on a CAPE analysis of 2010 cost data, representing a high point for aircraft O&S budgets due to contingency operations at that time.

It is unclear whether DOD's O&S cost estimates for the F-35 program reflect the most likely costs that the F-35 program will incur. DOD has two primary F-35 O&S estimates that each total around \$1 trillion over a 56-year life cycle. These cost estimates are comprehensive in that they include all DOD-required program elements and are organized according to a standard O&S cost-estimating structure; however, weaknesses exist with respect to a few of the assumptions, and the estimates did not include all analyses necessary to make them fully reliable. For example, the estimates did not use reasonable fuel burn rate assumptions that reflect the likely future F-35 fuel usage. Further, one of the estimates did not use reasonable assumptions about part replacement rates and depot maintenance. Finally, while DOD took some steps to mitigate the uncertainties inherent in cost estimates, DOD officials did not conduct key analyses to determine the level of risk associated with the estimates.