



Highlights of GAO-06-349, a report to Congressional Committees

# DEFENSE ACQUISITIONS

## The Expeditionary Fighting Vehicle Encountered Difficulties in Design Demonstration and Faces Future Risks

### Why GAO Did This Study

The Marine Corps' Expeditionary Fighting Vehicle (EFV) is the Corps' number-one priority ground system acquisition program and accounts for 25.5 percent of the Corps' total acquisition budget for fiscal years 2006 through 2011. It will replace the current amphibious assault craft and is intended to provide significant increases in mobility, lethality, and reliability. We reviewed the program under the Comptroller General's authority to examine (1) the cost, schedule, and performance of the EFV program during system development and demonstration; (2) factors that have contributed to this performance; and (3) future risks the program faces as it approaches production.

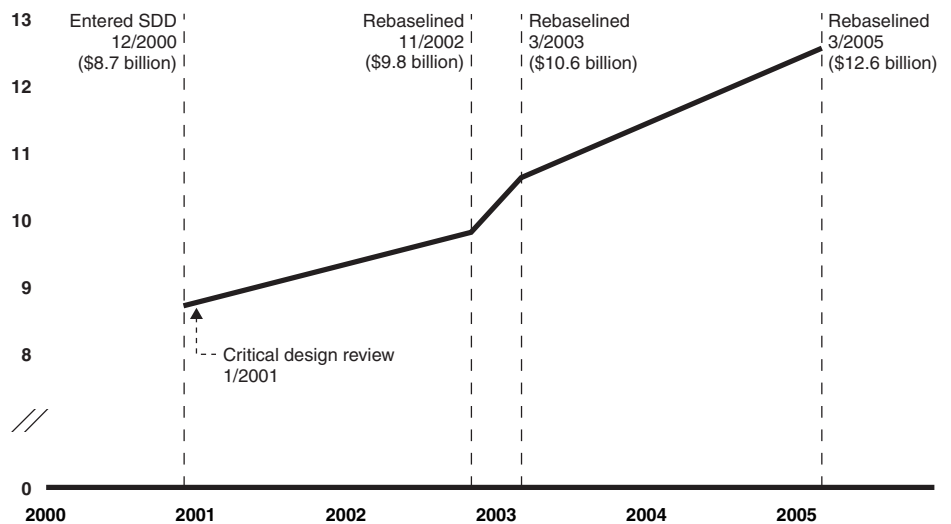
### What GAO Recommends

GAO is making recommendations in this report to the Secretary of Defense that (1) the EFV program delay Milestone C until design maturity and other conditions are achieved, and (2) draw lessons from the EFV experience that can be applied to other acquisition programs. DOD agreed with our recommendations.

### What GAO Found

Although the EFV program had followed a knowledge-based approach early in development, its buying power has eroded during System Development and Demonstration (SDD). Since beginning this final phase of development in December 2000, cost has increased 45 percent as shown in figure 1.

**Figure 1: EFV Acquisition Cost Growth Since the Start of SDD**  
Dollars in billions



Source: GAO analysis of program office data.

Unit costs have increased from \$8.5 million to \$12.3 million. The program schedule has grown 35 percent or 4 years, and its reliability requirement has been reduced from 70 hours of continuous operation to 43.5 hours. Program difficulties occurred in part because not enough time was allowed to demonstrate maturity of the EFV design during SDD. The SDD schedule of about 3 years proved too short to conduct all necessary planning and to incorporate the results of tests into design changes, resulting in schedule slippages. In addition, several significant technical problems surfaced, including problems with the hull electronic unit, the bow flap, and the hydraulics. Reliability also remains a challenge.

Three areas of significant risk remain for demonstrating design and production maturity that have potential significant cost and schedule consequences. First, EFV plans are to enter low-rate initial production without requiring the contractor to demonstrate that the EFV's manufacturing processes are under control. Second, the EFV program will begin low-rate initial production without the knowledge that software development capabilities are sufficiently mature. Third, two key performance parameters—reliability and interoperability—are not scheduled to be demonstrated until the initial test and evaluation phase in fiscal year 2010—about 4 years after low-rate initial production has begun.

[www.gao.gov/cgi-bin/getrpt?GAO-06-349](http://www.gao.gov/cgi-bin/getrpt?GAO-06-349).

To view the full product, including the scope and methodology, click on the link above. For more information, contact Paul Francis at (202) 512-4841 or francisp@gao.gov.