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# Highlights

Highlights of [GAO-07-866](#), a report to the Ranking Minority Member, Subcommittee on Seapower and Expeditionary Forces, Committee on Armed Services, House of Representatives

## Why GAO Did This Study

The Navy is investing over \$3 billion to develop technologies for a new type of aircraft carrier—the Ford class—and it expects to spend almost \$11 billion to design and construct the USS *Gerald R. Ford* (CVN 78)—the lead ship of the class. New technologies are to improve the carrier's performance and reduce crew size. The Navy requested authorization of CVN 78 in its fiscal year 2008 budget. GAO was asked to assess the Navy's ability to meet its goals for developing the new carrier. Specifically, this report assesses (1) the extent to which technology development could affect the capability and construction of CVN 78, (2) the status of efforts to achieve design stability, and (3) the challenges to building CVN 78 within budget. To accomplish this, our work includes analysis of test reports, development schedules, and ship progress reviews; interviews with Navy and other officials; and examinations of cost estimates and our own past work.

## What GAO Recommends

GAO recommends that the Department of Defense (DOD) take actions to improve the realism of CVN 78's budget estimate, improve the Navy's cost surveillance capability, and schedule carrier-specific tests of the dual band radar. DOD partially concurred with our recommendations. This report also contains matters for congressional consideration to ensure that CVN 78 is budgeted at the likely cost of the ship.

[www.gao.gov/cgi-bin/getrpt?GAO-07-866](http://www.gao.gov/cgi-bin/getrpt?GAO-07-866).

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 [francispg@gao.gov](mailto:francispg@gao.gov).

## DEFENSE ACQUISITIONS

# Navy Faces Challenges Constructing the Aircraft Carrier *Gerald R. Ford* within Budget

## What GAO Found

Delays in technology development may lead to increases in CVN 78's planned construction costs and potential reductions in the ship's capability at delivery. CVN 78's success depends on on-time delivery and insertion of fully mature and operational technologies in order to manage construction costs and enhance ship capabilities. Technologies that are highly integrated into the construction sequence or provide vital capabilities for the ship to carry out its mission are the most critical in achieving this goal. While the Navy has mitigated the impact of some technologies, such as the nuclear propulsion and electric plant, three systems—the electromagnetic aircraft launch system (EMALS), the dual band radar, and the advanced arresting gear—have faced problems during development that may affect the ship's construction costs.

The Navy has made significant progress in maturing the ship's design. With about 70 percent of the ship design complete, design appears on track to support the construction schedule. A structured design approach and a lengthy construction preparation contract have enabled the program to perform more work prior to construction than on previous carriers. The program, however, may face challenges completing more detailed phases of design because of the tight schedule remaining for development of the ship's critical technologies, which in turn could impede the design process—and construction—of CVN 78.

### Artist's Rendition of CVN 78



Source: Navy.

Costs for CVN 78 will likely exceed the budget for several reasons. First, the Navy's cost estimate, which underpins the budget, is optimistic. For example, the Navy assumes that CVN 78 will be built with fewer labor hours than were needed for the previous two carriers. Second, the Navy's target cost for ship construction may not be achievable. The shipbuilder's initial cost estimate for construction was 22 percent higher than the Navy's cost target, which was based on the budget. Although the Navy and the shipbuilder are working on ways to reduce costs, the actual costs to build the ship will likely increase above the Navy's target. Third, the Navy's ability to manage issues that affect cost suffers from insufficient cost surveillance. Without effective cost surveillance, the Navy will not be able to identify early signs of cost growth and take necessary corrective action.