



Highlights of [GAO-11-309](#), a report to congressional committees

Why GAO Did This Study

The 2001 Quadrennial Defense Review called for the Navy to provide more warfighting assets more quickly to multiple locations. Subsequently, the Navy made a preliminary decision to homeport a nuclear-powered aircraft carrier at Naval Station Mayport, Florida, which was affirmed by the 2010 Quadrennial Defense Review.

In House Report 111-491, accompanying a proposed bill for the Fiscal Year 2011 National Defense Authorization Act (H.R. 5136), GAO was directed to develop an independent estimate of the total federal costs for the proposed homeporting. GAO's objectives were to (1) develop an independent estimate of the full life-cycle costs to homeport a nuclear aircraft carrier at Mayport and (2) determine to what extent the Navy's estimate meets the characteristics of a high-quality cost estimate. To do this, GAO worked with a firm experienced in preparing life-cycle cost estimates for major federal acquisitions and compared the Navy's cost estimating practices with the best practices in GAO's *Cost Estimating and Assessment Guide*.

What GAO Recommends

GAO recommends DOD take several actions to improve the quality of its Mayport cost estimate. DOD partially concurred with two recommendations and disagreed with one, generally stating that additional direction or change is not required. GAO believes the recommendations remain valid as discussed in the report.

View [GAO-11-309](#) or key components. For more information, contact Brian Lepore at (202) 512-4523 or leporeb@gao.gov.

DEFENSE INFRASTRUCTURE

Navy Can Improve the Quality of Its Cost Estimate to Homeport an Aircraft Carrier at Naval Station Mayport

What GAO Found

GAO's independent cost estimate suggests that the total one-time cost of homeporting a nuclear-powered aircraft carrier at Naval Station Mayport is expected to be between \$258.7 million and \$356.0 million, in base year 2010 dollars. The Navy's estimate of the one-time cost is \$537.6 million—also in base year 2010 dollars—which is outside the upper range of GAO's estimate. Unlike GAO's estimate, the Navy did not conduct a risk and uncertainty analysis on its one-time costs; as a result, its estimate does not include a range. The largest difference between GAO's estimate of one-time costs and the Navy's estimate is the cost of constructing new facilities at Mayport. Based on the historical costs of constructing similar facilities, GAO estimates at the 65 percent confidence level that the cost for constructing the controlled industrial facility will be \$70.5 million, and the cost for constructing the ship maintenance support facilities will be \$45.6 million. The Navy estimates the construction costs to be much higher at \$139.1 million and \$157.2 million, respectively. Navy officials told GAO the difference is due to the increased cost involved in protecting the buildings from a potential storm surge associated with a Category 4 hurricane. GAO included a hurricane factor in its estimate to account for this increase, but GAO and the Navy used different estimating methods in developing the estimates for the construction costs. GAO used adjusted actual costs from similar construction projects, while the Navy used a detailed engineering estimate. For recurring costs, GAO's independent cost estimate suggests that the total is expected to be between \$9.0 million and \$17.6 million per year. The Navy's estimate of \$15.3 million per year is within GAO's estimated range.

The Navy's estimate did not fully meet any of the four characteristics—comprehensive, accurate, well documented, and credible—for producing a high-quality cost estimate. Specifically, although the estimate included almost all of the life-cycle costs related to homeporting a nuclear aircraft carrier at Mayport, it partially met the criteria for being comprehensive because it does not fully describe the cost-influencing ground rules and assumptions. The estimate was only minimally accurate and well documented in that although many elements of the estimate are based on actual experiences from other comparable programs, it is difficult to say if the cost estimates are the most likely costs since the Navy did not conduct a risk and uncertainty analysis. Further, the estimate contains very little step-by-step description of how the estimate was developed so that a cost analyst unfamiliar with the program could independently replicate it. The Navy had to recreate several portions of the estimate in order to provide GAO with supporting documentation. Further, the Navy's estimate does not meet the GAO best practice for a credible estimate because it does not include a sensitivity analysis and was not compared by the Navy to an independent cost estimate conducted by a group outside the Navy. Without fully meeting the characteristics of a high-quality estimate, the Navy's ability to present a convincing argument of the estimate's affordability and credibly answer decision makers' and oversight groups' questions about the estimate is hampered.