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LITTORAL COMBAT SHIP

Actions Needed to Improve Operating Cost Estimates and Mitigate Risks in Implementing New Concepts

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Highlights

Highlights of GAO-10-257, a report to the Subcommittee on Readiness and the Subcommittee on Seapower and Expeditionary Forces, Committee on Armed Services, House of Representatives

Why GAO Did This Study

The Navy plans to spend about $28 billion to buy 55 Littoral Combat Ships (LCS) and at least 64 interchangeable mission packages to perform one of three missions—mine countermeasures, antisubmarine warfare, and surface warfare—in waters close to shore. The Navy has been developing two different LCS seaframes and plans to select one for production in 2010. Due to the small 78-person crew size—40 core crew, 23 for aviation detachment, and typically 15 for mission packages—the Navy is developing new concepts for personnel, training, and maintenance. GAO was asked to assess the extent to which DOD has (1) estimated LCS long-term operating and support costs and (2) developed plans to operate and support LCS. To do so, GAO compared Navy cost estimates to DOD guidance and GAO best practices; and analyzed Navy plans to implement its concepts for personnel, training, and maintenance and the extent these plans included assessments of program risk.

What GAO Recommends

GAO recommends, among other things, that DOD develop an estimate of the long-term operating and support costs which fully reflects best practices and use this estimate in making key program decisions, and conduct and consider the results of a risk assessment before committing to buy LCS ships in the future. DOD generally agreed with the recommendations.

View GAO-10-257 or key components.
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What GAO Found

The Navy estimated operating and support costs for LCS seaframes and mission packages in 2009, but the estimates do not fully reflect DOD and GAO best practices for cost estimating and may change due to program uncertainties. GAO's analysis of the Navy's 2009 estimates showed that the operating and support costs for seaframes and mission packages could total $84 billion (in constant fiscal year 2009 dollars) through about 2050. However, the Navy did not follow some best practices for developing an estimate such as (1) analyzing the likelihood that the costs could be greater than estimated, (2) fully assessing how the estimate may change as key assumptions change, and (3) requesting an independent estimate and comparing it with the program estimate. The estimates may also be affected by program uncertainties, such as potential changes to force structure that could alter the number of ships and mission packages required. The costs to operate and support a weapon system can total 70 percent of a system's costs, and the lack of an estimate that fully reflects best practices could limit decision makers' ability to identify the resources that will be needed over the long term to support the planned investment in LCS force structure. With a decision pending in 2010 on which seaframe to buy for the remainder of the program, decision makers could lack critical information to assess the full costs of the alternatives.

The Navy has made progress in developing operational concepts for LCS, but faces risks in implementing its new concepts for personnel, training, and maintenance that are necessitated by the small crew size. Specifically, the Navy faces risks in its ability to identify and assign personnel given the time needed to achieve the extensive training required. GAO's analysis of a sample of LCS positions showed an average of 484 days of training is required before reporting to a crew, significantly more than for comparable positions on other surface ships. Moreover, the Navy's maintenance concept relies heavily on distance support, with little maintenance performed on ship. The Navy acknowledges that there are risks in implementing its new concepts and has established groups to address how to implement them. However, these groups have not performed a risk assessment as described in the 2008 *National Defense Strategy*. The Strategy describes the need to assess and mitigate risks to executing future missions and managing personnel, training, and maintenance. If the Navy cannot implement its concepts as envisioned, it may face operational limitations, have to reengineer its operational concepts, or have to alter the ship design. Many of the concepts will remain unproven until 2013 or later, when the Navy will have committed to building almost half the class. Having a thorough risk assessment of the new operational concepts would provide decision makers with information to link the effectiveness of these new concepts with decisions on program investment, including the pace of procurement.