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Highlights

Highlights of GAO-06-1127T, a testimony before the Committee on Science, House of Representatives

NASA

Sound Management and Oversight Key to Addressing Crew Exploration Vehicle Project Risks

Why GAO Did This Study

The National Aeronautics and Space Administration (NASA) plans to spend nearly $230 billion over the next two decades implementing the President's Vision for Space Exploration (*Vision*) plans. In July 2006, GAO issued a report that questioned the program's affordability, and particularly, NASA's acquisition approach for one of the program's major projects—the Crew Exploration Vehicle (CEV). This testimony, which is based upon that report and another recent GAO report evaluating NASA's acquisition policies, highlights GAO's continuing concerns with:

- the affordability of the exploration program;
- the acquisition approach for the CEV, and;
- NASA's acquisition policies that lack requirements for projects to proceed with adequate knowledge.

Although GAO is not making recommendations in this testimony, we previously recommended that NASA modify the CEV acquisition strategy to ensure that a long-term commitment is not made prior to attaining of key knowledge. NASA disagreed and stated that it had sufficient knowledge for proceeding. Subsequent to our report, NASA changed its strategy to lessen the government's fiscal obligation. GAO also made recommendations regarding NASA's acquisition policies. The agency agreed, but has yet to take major actions to implement them.

www.gao.gov/cgi-bin/getrpt?GAO-06-1127T.

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

What GAO Found

NASA's proposals for implementing the space exploration Vision raise a number of concerns:

- NASA cannot develop a firm cost estimate for the exploration program at this time because the program is in its early stages. The changes that have occurred to the program over the past year and the resulting refinement of its cost estimates are indicative of the evolving nature of the program. While changes are appropriate at this stage of the program, they leave the agency unable to firmly identify program requirements and needed resources and, therefore, not in the position to make a long term commitment to the program.

- NASA will likely be challenged to implement the program, as laid out in its Exploration Systems Architecture study (ESAS), due to the high costs associated with the program in some years and its long-term sustainability relative to anticipated funding. As we reported in July 2006, there are years when NASA, with some yearly shortfalls exceeding $1 billion, does not have sufficient funding to implement the architecture; while in other years the funding available exceeds needed resources. Despite initial surpluses, the long-term sustainability of the program is questionable, given its long-term funding outlook. NASA's preliminary projections show multibillion-dollar shortfalls for its exploration directorate in all fiscal years from 2014 to 2020, with an overall deficit through 2025 in excess of $18 billion.

- NASA's acquisition strategy for the CEV was not based upon obtaining an adequate level of knowledge when making key resources decisions, placing the program at risk for cost overruns, schedule delays, and performance shortfalls. These risks were evident in NASA's plan to commit to a long-term product development effort before establishing a sound business case for the project that includes well-defined requirements, mature technology, a preliminary design, and firm cost estimates. NASA adjusted its acquisition approach and the agency included the production and sustainment portions of the contract as options—a move that is consistent with the recommendation in our report because it lessens the government's financial obligation at this early stage. However, risks persist with NASA's approach.

- As we reported in 2005, NASA's acquisition policies lacked major decision reviews beyond the initial project approval gate and lacked a standard set of criteria with which to measure projects at crucial phases in the development life cycle. These decision reviews and development measures are key markers needed to ensure that projects are proceeding with and decisions are being based upon the appropriate level of knowledge and can help to lessen identified project risks. The CEV project would benefit from the application of such markers.