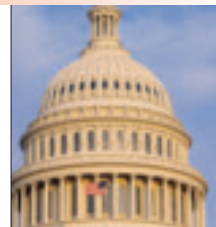


# Gearing up for budgetary battles



WHETHER, AND HOW, U.S. ASTRONAUTS will venture into space in the postshuttle era is rapidly evolving into a head-on dispute between the Obama administration and members of Congress—in both parties—who want NASA to field the nation's next generation of space vehicles.

### Fighting over Constellation

The administration wants to cancel the Constellation program for postshuttle spacecraft. Lawmakers who want Constellation to proceed—including representatives from Florida and Alabama, states containing key NASA sites—are expected to oppose the White House policy vigorously during debate and legislative markup sessions this fall. Between now and October 1, as the differences between the two sides fester, NASA employees and field centers are caught up in a time-warp paradox: Legislation for the current fiscal year authorizes them to work on Constellation's Ares I rocket booster, the Orion crew exploration vehicle, and other hardware. The administration's plan for the new fiscal year calls for them to halt work on nearly all components of the Constellation program.

"It's a strength of government to develop and field the hardware for manned spaceflight," says author and analyst Edward Martin. "Everybody likes the all-American idea of entrepreneurship, but



Sen. Bill Nelson

putting astronauts into orbit may be a task that's beyond private industry."

Those with an opposing view note that in 2005 the private sector launched 18 unmanned spacecraft, and several companies are close to developing vehicles to carry astronauts.

The looming debate is creating rifts, even between close allies. NASA Administrator Charles Bolden was not President Barack Obama's first choice to head the agency, but he got the job because of close ties to Sen. Bill Nelson (D-Fla.). Bolden and Nelson once flew in space together—Nelson is the only serving lawmaker to have been in orbit—and they are friends. But now Bolden is charged with implementing the Obama plan, while Nelson wants to continue developing Constellation.

The shuttle Atlantis, commanded by Navy Capt. Kenneth Ham with six astronauts aboard, landed on May 26 after a 12-day mission (STS-132) that installed a Russian module on the international space station. That left only two more shuttle flights on NASA's official schedule, one each by Endeavour and Discovery. However, NASA plans to keep Atlantis in operating condition in case a rescue mission is needed during the two remaining flights.

Even without an emergency, observers believe Atlantis may be used for another ISS supply flight, if the White House approves the add-on of one last

sortie, which would be the 135th for the shuttle fleet since 1981. Nelson told the Associated Press that he is encouraging one more flight for Atlantis and noted, "There's a good chance the president will approve it." Astronaut Thomas D. Jones predicted on these pages ("Space shuttle: An astronaut looks at its legacy," May, page 16) that we may very well see "several 'final' shuttle launches" before the program wraps up months later than planned.

But even if no more flights are added to the existing schedule, the once-firm cutoff date for shuttle operations, October 1, is now being moved to the right: The last flight by Discovery is slipping to at least November and possibly later.

### Defense authorization debate

It will be a long, hot summer—perhaps even a "nasty" one, suggested one observer—as Congress debates the FY11 defense authorization bill. Defense Secretary Robert Gates is a deficit hawk who says he will trim \$10 billion from planned defense spending. Just where the cut will occur is unclear, and it is a token figure in the view of critics who seek a more significant decrease in Pentagon expenditures.

The secretary faces opposition on the Hill over such issues as an alternate engine for the F-35 Lightning II Joint Strike Fighter and continued production of the C-17 Globemaster III airlifter. He says he will "strongly recommend" that the president veto the DOD budget if it includes the extra engine or more C-17s. Gates also faces legislative opposition to his plan for retiring aging ships and aircraft, a process that would reduce the size of the armed forces but leave some communities without hometown bases.

Altogether, the House of Representatives version of the defense authorization bill would spend \$760 billion, including \$567 billion in the DOD budget and the nuclear weapons programs of the Dept. of Energy, \$159 billion for "overseas contingency operations" (Iraq



NASA Administrator Charles Bolden



Rep. Adam Smith

and Afghanistan), and \$34 billion in overseas commitments left over from last year (including relief work in Haiti). At this writing, the Senate had not passed an authorization bill but was expected to join the House in opposing Gates on key issues.

Those who worry about the U.S. national debt and about deficit spending are attacking Gates from the opposite direction, insisting that the DOD's civilian chief is not being tight-fisted enough.

Gates acknowledges that the U.S. will spend more on defense than the rest of the world's nations combined. When adjusted for inflation, the total is the largest defense outlay since the Korean War. The secretary is "merely seeking to slow the growth of defense spending, not to reduce it in absolute terms," wrote William D. Hartung, director of the Arms and Security Initiative at the New America Foundation. "Everything needs to be on the table, from delay or cancellation of the F-35 to deeper cuts in missile defense spending to elimination of spending for new aircraft carriers and ballistic missile submarines."

To remove one roadblock to reaching the spending level he seeks, Gates backed away from an issue that Washington observers say is too hot to handle. He initially wanted to cap this year's pay raise for military members at 0.5%, but quickly saw that it couldn't be done. "I want change, but I'm not crazy," he told reporters after a House panel approved a 1.9% pay increase for service men and women. Personnel costs, including "retirement pay," or pensions, make up the

largest chunk of the military spending.

But Gates is not budging on the extra JSF engine or on additional C-17s.

"I believe the defense budget process should no longer be characterized by business as usual, within this building or outside of it," Gates said at a press conference. He added, "We will strongly resist efforts to impose programs and changes on the department that the military does not want and cannot afford, and that take dollars from programs and endeavors the military services do need."

The JSF is under close scrutiny from Congress because of scheduling delays and cost overruns. No aspect of the program is more controversial than the House Armed Services Committee's decision to include \$485 million in continued funding for the aircraft's General Electric/Rolls-Royce F136 engine. The administration wants to proceed with just one engine type, the Pratt & Whitney F135. Rep. John Larson (D-Conn.), in whose state Pratt & Whitney is headquartered, says the House funds should be shifted to the F135.

By supporting the F136, which is more than 70% through development, the House committee is demanding an annual, head-to-head competition for a JSF powerplant, avoiding a decades-long, \$100-billion engine monopoly that otherwise would go to the F135. Rep. Adam Smith (D-Wash.) says the DOD's own study on JSF engine options indi-



Defense Secretary Robert Gates

cates "it would cost no more to reduce operational risk and achieve the benefits of a competitive engine program than to fund a sole-source engine program."

Many supporters of the alternate engine are Republicans like Rep. Roscoe Bartlett (R-Md.), who says a competing engine is "warranted and critical and costs nothing more, according to the Government Accountability Office." The GAO estimates that competition between engine makers could lead to long-term savings of up to 21% for ongoing programs.

### Getting JSF on track

As for the F-35 itself, all parties agree that the aircraft has fallen behind schedule and gone over cost, but supporters say they are taking strong measures to bring the fighter back on its flight path.



There is strong support on the Hill for purchasing additional Super Hornets while waiting for the F-35.

"We're reducing the time it takes to build an F-35 by half," Lockheed Martin's Steve O'Bryan, vice president of business development and customer engagement, tells *Aerospace America*. In addition, says O'Bryan, "We are reducing parts shortages from over 300 to about 10."

He also notes that, despite setbacks, the F-35 delivery schedule "remains unchanged." He says the Air Force, not the planemaker, must decide when to seek initial operating capability (IOC) for the F-35A land-based version. Gen. Norton Schwartz, Air Force chief of staff, has slipped IOC from 2013 to 2015.

The House Armed Services Committee wants to limit current JSF production to just 30 airframes until the Pentagon completes a study certifying progress in the restructured procurement program. Smith told reporters, "It's a critical program. It's replacing almost all of our



Rep. Todd Akin

fighter attack aircraft over the course of the next five to 20 years. We have to make sure that it works and functions."

In addition, sea power panel ranking member Rep. Todd Akin (R-Mo.) points out that "even if JSF suddenly meets schedule and cost, the Navy and Marine

Corps will continue to have a strike fighter shortfall." He describes the shortfall as "closer to five carriers' worth of aircraft," calling that "a pretty big deal" despite Pentagon assurances otherwise. One alternative to the JSF would be further "new build" production of the F/A-18E/F Super Hornet, manufactured in Akin's home state.

Expressing support for continued procurement of the Super Hornets "barring a complete reversal of the development and performance failures in the Joint Strike Fighter program," the House committee added eight additional F/A-18E/Fs to the administration's FY11 request for 22 aircraft. Moreover, the Navy now says that over a period of years it will order 124 additional Super Hornets beyond the 493 that constituted the program of record for many years. It must fill in a projected "fighter gap" on aircraft carrier decks, says the Navy, which also says it is not bucking Obama and his administration or their unwavering commitment to JSF. Rear Adm. Mike Manazir, head of naval aviation programs, says the Navy needs almost 700 F-35s to upgrade aircraft carrier power projection capabilities starting in April 2016.

From its inception, the JSF program was intended as a giant multinational effort to provide more than 5,000-6,000 fighters over 30 years, in three versions, to a dozen countries. A similar program, the F-16 Fighting Falcon, was undertaken in the 1970s, with the Netherlands taking the lead in the plane's overseas development and with all customers offered two engine choices. U.S. forces, among other users, operate F-16s with two different sets of engines.

Now, the Dutch parliament has voted to end participation in the operational test phase of JSF and cancel an earlier order for one aircraft. The Netherlands contributed \$800 million to JSF development and had planned to purchase up to 85 fighters, but political opposition on the home front has always been strong. While observers in Amsterdam were saying that some of the anti-JSF rhetoric is merely election-eve posturing, at press time it appeared that JSF critics would gain strength in June 9 Dutch elections.

**Robert F. Dorr**

robert.f.dorr@cox.net

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