

Military transport looks for a lift

With an ever-changing strategic environment and a greater need for global mobility, the U.S. military needs airlift more than ever. Strategic and theater transport fleets are heavily taxed by ongoing global conflicts and new emergencies.

Yet the Dept. of Defense shows few signs of prioritizing resources for this requirement. And competition for funding between rival lift manufacturers and users looks set to worsen.

The resource fight

There is no mistaking the utility of lift. The Army is now reshaping itself into a “modular” brigade structure, with lighter forces that are largely deployable by air. This is a major change from its traditional structure, that of a heavy armored core force and a smaller number of lighter divisions that can be airlifted. The global war on terror means a requirement for more force projection into a greater number of theaters. Meanwhile, homeland security requirements also call for lift to deliver rescue personnel and supplies, a need illustrated by September’s Hurricane Katrina on the Gulf Coast.



The Quadrennial Defense Review (QDR) will rationalize and prioritize resources for all these missions. Yet whichever defense scenarios receive priority under the review, lift will be essential, and requirements can only increase. This QDR planning document will accompany the next defense budget, scheduled for release in February.

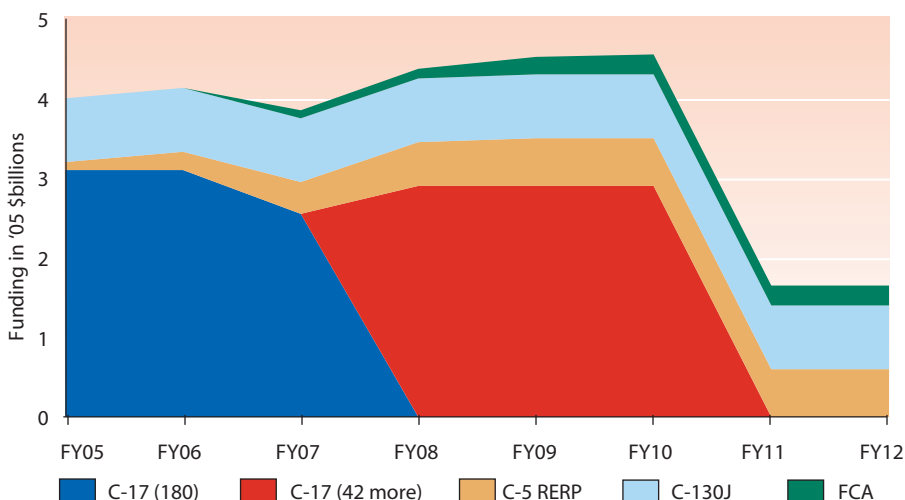
The fundamental problem with force transformation is that it is difficult to fund when the basic tools of war need recapitalization. Lift is the best illustration of this.

The FY06 budget submission promised nothing good. It attempted to kill Lockheed Martin’s C-130J theater lifter, an effort rescinded only when it became clear that there were onerous termination costs associated with killing a multiyear procurement (MYP) contract. In May, Defense Secretary Donald Rumsfeld announced that the decision had been reversed, and procurement resumed at a 12-aircraft annual pace.

Meanwhile, although the FY06 budget funded the final two years of Boeing’s C-17 MYP, there was no mention of a follow-on buy, despite talk of requirements for at least 42 more. This means the production line could close in 2009, with the supplier base starting to shut down in 2007-2008. Of course, the Air Force might be gambling that Congress will intervene in an election year to save a production line (and the associated jobs).

Also, DOD’s stated funding plans for future long-range lift look dismal. Even if the C-5A Reliability Enhancement Re-engining Program (RERP) is funded and C-17 procurement is extended to 222 aircraft, U.S. transport funding still declines markedly after 2010. This is not because of a priority shift in favor of new transport research programs such as the C-X, which resulted in the C-17. There are no planned “transformational” lift efforts that would

U.S. FIXED-WING MILITARY LIFT PROCUREMENT



need research cash in the current planning horizon. Also, defense procurement spending is expected to rise through 2011, but military airlift's share of that budget is declining.

A related variable concerns tankers, a key airlift and combat aircraft "enabler" force that will require recapitalization in the coming years. The KC-X program will start to ramp up around 2010, with anticipated annual peak spending of over \$3 billion. This helps explain the lift market drop-off. But there are so many variables associated with the KC-X—the tanker's size, the number of bidders, whether it will enjoy budget priority—that the program's timing cannot be guaranteed with any certainty. Since the Air Force has procured only 60 tankers in the last 35 years, it clearly is not a budget priority.

If KC-X is deferred and the C-17 line closes, we would have a declining market for a capability that is vitally needed. This would be a very unusual situation for any market. It would also imply a failure of strategic planning in the current QDR process.

Saving the C-17

On the positive side, the C-17 has no direct competitors. A decision to provide additional funds for strategic lift would therefore directly improve the plane's fortunes. But C-17 supporters are also looking to expand its budget position at the expense of the smaller C-130J.

Boeing's C-17A+ proposal is designed to give the aircraft better short-field performance, on a par with the C-130J's. The new version would have improved landing gear, redesigned flaps, and more powerful engines, giving it the ability to land on a strip the same length as a C-130J's, but with about four times the C-130J's payload.

Yet despite the C-17A+ effort, DOD is locked into the C-130J, not just because of its MYP contract but because of the C-130J's other applications. The Marines rely on the KC-130J as their primary aerial refueler, and the Coast Guard is taking HC-130Js for maritime rescue and logistics. Ending Air Force C-130J procurement



would make production for KC-130, HC-130, and other missions problematic. Also, despite the C-17A+ proposal, the C-130J has capabilities and economics that almost guarantee it a place in the U.S. procurement market.

C-17 funding is also slightly complicated by the need to upgrade the C-5 fleet. The RERP program may include just the 50-strong C-5B fleet, or the 70 older C-5As as well. If RERP is applied to the entire fleet, the aircraft will be modified at a rate of 12-18 a year, with the last completed in 2016.

The first test C-5 RERP aircraft was scheduled to fly with new engines in October, with first deliveries in 2007. Current plans call for a RERP decision on C-5B to be made in late 2007, and another on C-5A to follow in late 2009.

A C-5A RERP cancellation would have a very limited impact on the C-17's fortunes. The total cost of the C-5A RERP would cover just slightly over a year of C-17 production, about 15-18 planes. And RERP funding is spread over 10 years.

If DOD fails to prioritize cash for continued C-17 procurement, there are few alternatives to a line shutdown. In theory, the Air Force has agreed to sell earlier production C-17s, and to use the proceeds from these sales to pay for new planes. Boeing estimates that for every two used aircraft sold, one could be purchased new, but there are few prospective buyers. Conceivably, the U.K. could buy several more (the RAF already has four), and Italy has expressed interest in leasing two. But

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there is little hope for more than a handful of new planes financed in this manner.

Boeing has also pursued commercial freight applications for the C-17 under the BC-17X program. After more than a decade of trying (originally under the MD-17 program), the company has had no indications of any serious customer interest. While the BC-17 would have impressive outsize cargo capabilities, the economics of a military design are simply too distant from commercial operators' needs.

In short, if DOD wants additional strategic lift, it needs to spend its own cash. And it needs to find the money within the next three years, before the C-17 line closes.

Air Force vs. Army

The Army presently has no meaningful organic fixed-wing lift fleet, relying instead on a large and capable force of transport rotorcraft—primarily medium-sized Sikorsky UH-60 Blackhawks and large Boeing CH-47 Chinooks.

Both are now in production, in modernized form, as the UH-60M and CH-



47F. However, if the service decides to support its increasingly mobile force structure with its own fixed-wing planes, the Future Cargo Aircraft (FCA) program might provide a conduit.

Right now, the FCA goal is 33 planes, a modest effort to replace the Army's C-23 Sherpa and C-12 King Air light transports as well as its C-26 surveillance plane. But the Army has also mooted plans to expand FCA procurement to 145 aircraft, the largest fleet of transports it has operated in decades. One rationale for the larger fleet would be to relieve pressure on the overburdened CH-47 force. But fixed-wing lift is an Air Force mission.

The primary candidates for FCA are the CN-235/C-295 from EADS North America/Raytheon and the C-27J from Alenia/L-3. These twin turboprops are considerably larger and more capable than the Sherpa. The Army will decide the winner and award a contract in 2006.

The initial buy of 33 planes could serve as a wedge, opening the door to a considerable expansion of Army tactical lift capabilities. A force of 145 such aircraft would definitely constitute

an organic fixed-wing lift capability. If the 145 FCA purchase proceeds unchallenged, and if the Army likes the operational effects of this organic fixed-wing capability, there would be few brakes on additional aircraft buys.

So, even before the initial FCA contract, there may be a challenge from the Air Force, whose leaders have already questioned the need for the Army to duplicate a USAF mission.

This situation is reminiscent of the debate over close-support aircraft, more or less resolved by the Key West Agreement of 1948. Key West effectively mandated that the Army surrender the fixed-wing ground-attack mission to the Air Force, but the Army was permitted to develop attack helicopters as an organic adjunct.

In fact, the Key West agreement also restricted Army aviation assets to reconnaissance and medical evacuation uses. While the Army could argue that its present force of 50 Sherpas fell roughly within those confines, a fleet of 145 larger aircraft would imply a violation of Key West.

The Army's FCA selection will provide a guideline for the service's intentions. The C-27J is more capable and expensive than the competition. It is basically a half-sized C-130J, with the same engines and many identical systems. While the CN-235/C-295 family comprises smaller, more economical aircraft, the C-27J is clearly a militarized, tactical airlifter, similar to one found almost exclusively in Air Force use.

If there is a battle over FCA, it will be about more than just interservice rivalries. Rather, it will reflect a battle over resources for a scarce and useful commodity. By some accounts, the Air Force budget will be the primary loser in the QDR process, with the Army the primary winner. If that proves true, the Air Force will likely argue that the Army should use its enhanced budget power solely for new ground combat capabilities, not to annex an Air Force domain.

Of course, from the Army's standpoint, there is no guarantee that the Air Force will provide the necessary resources for lift acquisition. The current debate over C-17 funding may well provide an indicator of the service's intentions.

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