

# DEFENSE PROCUREMENT BY PARALYSIS

Costly Mortgages for the Next  
Administration

Working Draft  
13 November 2008

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## Summary

The new administration will face a crisis in US national security planning, programming, and budgeting. This crisis has accelerated sharply over the last eight years and requires a broad restructuring of the US national security effort, defense spending, military manpower, procurement, and readiness. The combined cost of war, steadily rising military manpower costs, the underfunding of operations and maintenance, and a procurement crisis in every service will force the next administration to reshape almost every aspect of current defense plans, programs, and budgets.

A new analysis by Hans Ulrich Kaeser at the Burke Chair, entitled *Defense Procurement By Paralysis – Costly Mortgages for the Next Administration* shows that the outgoing administration will not only leave its successor with two wars and a crisis in military procurement; it will also leave behind the task of awarding contracts possibly worth \$70 billion. These contracts come on top of current procurement and force modernization plans that totaled over \$183 billion in the Fiscal Year 2009 Defense Budget.

The Obama administration will inherit a history of mismanagement of appropriations and procurement processes, incoherent force plans and unrealistic budgets, and legal proceedings. It will have to make unpopular cuts, possibly cancelling programs that have already absorbed billions of dollars in development expenditures. In a time of economic crisis, heavy competition with other procurement programs and a doctrinal rift inside the Department of Defense, this task will guarantee to stir political resistance to some of the new administration's policies.

Four programs – the Army's Armed Reconnaissance Helicopter (ARH), and the Air Force's Transformational Communications Satellite (TSAT), Combat Search and Rescue Helicopter (CSAR) and Aerial Refueling Tanker (KC-X) – involve contracts of almost \$70 billion combined. The next administration will have to make a decision of weighing priorities and allocating the fiercely embattled funds.

The choices President-elect Obama makes will take months or years to be implemented. What is clear, however, is that there will not be enough money available to please everyone. Serious increases in defense spending are unlikely, given the new administration's fiscal priorities. The new defense procurement priorities are still unknown but they will involve trade-offs between major increases in the defense budget and current force plans. Reshaping an affordable and effective procurement program may well take at least the full term of the next President and involve major program cancellations, and further hardship for the defense industry.

This paper shows the scale of the current administration's unfinished business. It shows the impact of the procurement crisis that aggravated over the last eight years and quantifies the challenge for the next administration to get defense budgets in order. The Burke Chair has published a series of reports that give detailed account of the procurement crisis the next administration will inherit. They are available on the CSIS webpage:

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# Introduction

## *The Defense Budget Crisis*

In two months, the new administration will take office and find plenty of challenges to effectuate change. It will face a crisis in US national security planning, programming, and budgeting. This crisis has accelerated sharply over the last eight years and requires a broad restructuring of the US national security effort, defense spending, military manpower, procurement, and readiness.

The real cost of the national security program it inherits is likely to be 20-30% higher than is estimated in current baseline budget requests. At the same time, there is no clear or coherent plan, program, or budget that reflects the fact the nation is at war and no credible mix of force plans, modernization plans, and procurement plans for the future.

Key procurement programs are not fully defined or cannot be implemented, and will require trade-offs between major increases in the defense budget and current force plans. The combined cost of war, steadily rising military manpower costs, the underfunding of operations and maintenance, and a procurement crisis in every service will force the next administration to reshape almost every aspect of current defense plans, programs, and budgets.

Even if the next administration should succeed in reducing the military commitment in Iraq and reduce costs for operations there, reductions might be offset by rising costs of the Afghan conflict, which has long been underfunded.

The cost of the wars is putting increasing pressure on weapons acquisitions, whose costs are spiraling out of control. Work by the GAO shows that the cost of the defense major acquisition portfolio rose from \$790 billion in FY2000 to \$1.6 trillion in FY2007, and outstanding commitments rose from \$390 to \$858 billion. The average cost escalation in RDT&E rose to 40 percent over initial estimates in the eight-year period, and total acquisition costs rose 26 percent. The share of programs facing more than 25 percent cost escalation rose from 37 percent to 44 percent and the average delay in delivering initial capability rose from 16 months to 21 months.<sup>1</sup>

Current budget requests are hollow place holders for costs that will require a major supplemental in FY2009, and much higher spending in the outyears than is provided in the FYDP.

All these problems are likely to escalate steadily in the near-term unless the next administration acts quickly to control them. Reshaping an affordable and effective procurement program may well take at least the full term of the next President and involve major program cancellations, and further hardship for the defense industry. There certainly is a need to establish far more realistic standards for estimating program costs, schedules and deployment times, and effectiveness; far tighter standards of program

management; and far tighter control over the kind of changes in specifications and design that do so much to raise cost and increase program delays.

To date, however, no military service has demonstrated that it has leaders that can create affordable procurement programs. Every service has to some extent mortgaged its future by failing to contain equipment costs, and by trading existing equipment and force elements to develop new systems that it may never be able to procure in the numbers planned. These critical failures in cost containment not only constrict Pentagon's and the nation's resources but jeopardize entire procurement programs. The cancellation of multi-billion-dollar procurement programs may alleviate fiscal pressures but is rattling strategic force plans.

Cost containment is the only tool the outgoing administration has left behind for the next administration to deal with mismanaged procurement programs. It is impossible to predict how the Obama administration will use this tool but it is clear that it will cut one way or another. The Obama administration will have to make unpopular cuts, possibly cancelling programs that have already absorbed billions of dollars in development expenditures. In a time of economic crisis, heavy competition with other procurement programs, and a doctrinal rift inside the Department of Defense, this task will guarantee to stir political resistance to some of the new administration's policies.

### ***The \$70 Billion Inheritance***

Cost escalation, however, is only part of the problem. Delays in key procurement programs also present critical challenges. The outgoing administration will not only leave its successor with two wars and a crisis in military procurement; it will also leave behind the task of awarding contracts possibly worth \$70 billion. These contracts come on top of current procurement and force modernization plans that totaled over \$183 billion in the Fiscal Year 2009 Defense Budget.<sup>2</sup>

Spiraling development and production costs, mismanaged procurement processes, unrealistic budgets and significant schedule slips have accrued a number of procurement contracts possibly worth over \$70 billion that have not been awarded as planned within the current administration.

Four programs that were scheduled to be awarded this year have been deferred to the next administration. The reason for the deferral is simply that the programs have been mismanaged to the point where the current administration is incapable of crafting realistic force plans and coalitions to support them in the little time that is left. A new administration will inherit the history of mismanagement of appropriations and procurement processes, incoherent force plans and unrealistic budgets, legal proceedings and the ungrateful task to make decisions that are certain to stir political opposition.

A contract award for these programs was scheduled within this administration. Deferring an award and a bidding process to the next administration will also defer the political

fight for over \$70 billion worth of contracts. It is one challenge to defend the continuation of an ongoing program in the annual defense budget; it is quite another to add such controversial and costly programs to a budget already under pressure from two wars, rising maintenance costs and economic rescue plans.

These four programs – the Army’s Armed Reconnaissance Helicopter (ARH), and the Air Force’s Transformational Communications Satellite (TSAT), Combat Search and Rescue Helicopter (CSAR) and Aerial Refueling Tanker (KC-X) – involve contracts of almost \$70 billion combined. \$40 billion alone are bound in the pending tanker award. TSAT was originally estimated at over \$20 billion, but recently downscaled to \$6.5 billion. Another \$6.5 billion is associated with the Army’s ARH and the Navy’s CSAR helicopter replacement will cost over \$15 billion. In addition, there will be an increasing need for funds to maintain and upgrade aging fleets until the replacements can be fielded. The next administration will have to make a decision of weighing priorities and allocating the fiercely embattled funds.

In addition to these four deferred programs, the next administration will also have to make a decision on F-22 procurement. Currently, the Air Force buys 20 of the air dominance fighters a year, just enough to keep the production line open. However, Secretary Gates deferred to the next administration to decide about the future of the F-22 program.<sup>3</sup> Similarly, the embattled DDG-1000 program is in limbo.<sup>4</sup> The current administration cancelled a third ship in FY2009, but the future of the program will have to be decided by the next administration. Altogether, the new administration faces procurement decisions on \$125 billion in major weapons programs, according to John Young, the Pentagon’s acquisition chief.<sup>5</sup>

The Air Force is particularly affected by these decisions. Secretary Gates’ decision to relieve the service’s top leadership certainly aggravated the procurement paralysis. Chief of Staff General Moseley was replaced by General Schwartz who was given a two-year term by Congress. The replacement for the Secretary of the Air Force, Michael Wynne, will be appointed only after the next administration takes office. Acting Secretary Michael Donley’s mandate will expire at that time. The Air Force effectively put any controversial business on hold and deferred it to the next administration. Even though Schwartz has a two-year term, his decisions could be overruled by the next Secretary of the Air Force and Secretary of Defense. “There is a high likelihood that whatever the Air Force decides will be modified, cut back or simply ignored by a new administration,” defense analyst Loren Thompson commented.<sup>6</sup>

Besides the impressive amount of the funds, the programs in question are crucial components of future force plans or long awaited and direly needed for current operations. The Army’s Armed Reconnaissance Helicopter (ARH) has been in development for 20 years and already cost \$6.9 billion. The program was cancelled in late 2008 due to cost increases of over 40 percent.

Three more procurement programs have been deferred to the next administration by the Air Force. The Transformational Communications Satellite program (TSAT) was

originally estimated between \$20 and \$25 billion before budgetary pressures compressed it to \$6.5 billion. Cost overruns, technological difficulties, and the competition for funds with far more imminent needs sent this program back to the shelf. A contract award is now planned for late 2010.

The Air Force's first exclusive Combat Search and Rescue helicopter development program is the third procurement item to be deferred to the next administration. Until last year it occupied the number two spot in the Air Force's procurement priority list but dropped out of the list when the service amended the system requirements for the seventh time in late 2008. A contract award for the \$15 billion contract cannot be expected before mid-2009.

Finally, the Air Force's recapitalization plan for its aging aerial refueling tanker is stuck in a legal battle between the Air Force and the two competitors for the contract. Requirement changes and a mismanaged award process led the Secretary of Defense to announce a cooling-off period. The latest target for a contract award was set to March 2010.

These programs cannot just be cancelled. The example of the tanker has shown that even awarding a contract is not as easy as it may seem. The political stakes are huge and contractors and lobbyists have fought fiercely to win the \$40 billion contract in a time when government spending is under heavy pressure. The strategic importance of the aircraft is evident. Many of the fleet's aircraft date from the Eisenhower era and require increasing funds to be maintained. As a force enabler, the Air Force's global power projection capability relies on a functional refueling tanker fleet.

Similarly, the TSAT program represents a backbone for the doctrine of network-centric warfare. Delays or even cancellation of the program will have significant repercussions on many other DoD-wide modernization programs, particularly on the Army's Future Combat System. The two helicopter programs have been long awaited to replace aging fleets, which reach the end of their service life.

The choices President-elect Obama makes will take months or years to be implemented. What is clear, however, is that there will not be enough money available to please everyone. Serious increases in defense spending are unlikely, given the new administration's fiscal priorities. The new defense procurement priorities are still unknown. Besides two ongoing wars, the outgoing administration will transfer \$70 billion dollars of unfinished procurement business. Setting priorities may not only be a challenge but is also certain to run into heavy opposition.

This paper shows the scale of the current administration's unfinished business. It shows the impact of the procurement crisis that aggravated over the last eight years and quantifies the challenge for the next administration to get defense budgets in order. The Burke Chair has published a series of reports that give detailed account of the procurement crisis the next administration will inherit. They are available on the CSIS webpage:

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## **Armed Reconnaissance Helicopter (ARH)**

The ARH-70 is the second Army helicopter program to fall out of the sky since 2004 when the RAH-66 Comanche stealth helicopter program was cancelled after 20 years of development and \$6.9 billion dollars of expenditures. Cancelling the program at that point was seen as the “best bang for the buck for Army aviation”.<sup>7</sup> The cancelled expenditures of \$14 billion were diverted into upgrading 1970s utility and attack airframes, especially those of reserve units. A large part of the diverted funds was invested in the development of the ARH-70 armed reconnaissance helicopter, “a key component of the Army’s modular force,” according to then-Army Vice Chief of Staff General Richard Cody.<sup>8</sup> At this point, ‘the best bang for the buck’ turns out to be another cancelled program.

### ***Kiowa Replacement***

The Army planned to replace the aging fleet of OH-58D Kiowa armed reconnaissance helicopters. It currently operates 339 Kiowas, which average 40 years of age. The 339 helicopters are dispersed among 10 squadrons, almost half of them are deployed. Replacing the Kiowas is a critical requirement for the Army, according to Lt. Gen. James Thurman. “Our operational tempo, attrition, and losses of six aircraft per year underscore the need to fill this requirement as quickly as possible.”<sup>9</sup>

At the development start in July 2005, the price tag for the program’s baseline was set at \$8.56 million per airframe, including research and development, site construction, and labor. Army estimates of July 2008 set the unit cost at over \$12 million and DoD estimates project the procurement average as high as \$14.48 million, an increase of over 40 percent.<sup>10</sup> A GAO study found a significant increase of research and development cost of over 93 percent between July 2005 and August 2007 and a growth of over 68 percent in total program cost over the same time.<sup>11</sup>

The program comprised a total of 368 aircraft to be delivered between fiscal years 2006 through 2011.<sup>12</sup> Replacement of Kiowa helicopters was slated to start in June 2008, but a year prior to that date it became apparent that this timeline could not be met. As a result, the Army started upgrading the existing 40 year-old Kiowas with updated avionics and safety measures for roughly \$2 million per aircraft.

### ***Nunn-McCurdy Breach***

The cost increase in the program caused a breach of the Nunn-McCurdy Amendment to the Defense Authorization Act of 1982. The law stipulates essentially that cost overruns of more than 15 percent must be explained in a detailed report to the Secretary of Defense.

“If the Secretary concerned - (A) On the basis of a report submitted to him ... determines (i) that the total program unit cost (including an increase for expected inflation) for a

major defense system has increased by more than 25 percent over the total program acquisition unit cost ... then ... no additional funds may be obligated in connection with such system after the end of the 60-day period beginning on the day on which the Secretary makes such determination.”

However, the amendment provides for a number of exemptions, if:

- (A) “such a system is essential to the national security;
- (B) there are no alternatives to such system which will provide equal or greater military capability at less cost;
- (C) the new estimates of the total program acquisition unit cost or procurement unit cost are reasonable; and
- (D) the management structure for such major defense system is adequate to manage and control total program acquisition unit cost or procurement unit cost.”<sup>13</sup>

There are currently no wartime replacement aircraft for the aging Kiowa and no alternative programs are being developed. There is also no reason to believe that estimates are reasonable, given that the cost increases are primarily due to a sequence of largely inaccurate projections. The latter point raises doubts about the management structure, which has been criticized in various GAO reports assessing DoD’s major acquisitions programs.<sup>14</sup> Although it can be debated how essential the ARH-70 is to national security, it is difficult to argue that its function warrants such significant cost increases.

The program could qualify to be continued on behalf of a lack of alternatives (point B) but the law leaves the Secretary of Defense a large margin of interpretation. Furthermore, the Nunn-McCurdy Act has been applied anything but rigorously to current and recent procurement programs.

### ***Failed Recapitalization***

It is unclear why the ARH program of all programs that are over budget was cancelled by the Nunn-McCurdy Amendment. But there is no doubt that unit costs are spiraling out of control left and right. The Army is also struggling with the production and fielding of the Future Combat System while the Navy’s unrealistic budgets and plans jeopardize its strategy and the Air Force proves incapable of developing an affordable recapitalization plan of its aging fleets.<sup>15</sup>

“We need an ARH,” Army General Richard Cody said in July, shortly before he retired on 1 August. “We only have 340 Kiowa Warriors. We need over 368 today and we need 520 to fill out our reorganization and modernization.”<sup>16</sup> Cody leaves the Army with a fleet of over-used and combat-worn Kiowa Warriors. There is no long-term strategy to replace the Kiowa. A mid-term bridging strategy consists of safety enhancements for the existing aircraft and will cost more than \$800 million, according to Lt. Gen. Ross Thompson, the Army’s acquisition chief.<sup>17</sup>

## **Transformational Satellite Program (TSAT)**

The Pentagon decided to shelve the procurement plan for the Transformational Communications Satellite program for at least two more years. As of October 2007, the Air Force has invested over \$2 billion for research, development, and risk reduction activities.<sup>18</sup> Citing technological difficulties in the development of the system, cost overruns and schedule slips, the program was paused to learn the lessons of past mistakes and come up with a new approach for the development and acquisition of the satellite system. The current wars and aging aircraft fleets have swept space-based programs from the Air Force's list of procurement priorities.

The decision to task the next administration with a contract award will not only delay the system development but jeopardize the program's future altogether. The new administration faces rising maintenance costs to reset a war-torn Army, a DoD-wide procurement crisis, and out-of-control supplemental funding. It is unlikely to produce the spare change to support a \$10 billion space project. Should TSAT be continued, it will not be before the FY2010 budget. A communications backbone of the military's new vision of network-centric warfare, delays or a cancellation of the program will also have serious repercussions on other communications programs and the Army's Future Combat System in general.

### ***TSAT and Network-Centric Warfare***

The TSAT system consists of a five-satellite constellation with one spare satellite and provides high rate connectivity between the constellation and ground network components. At a total worldwide capacity of 36.3 Gbps, it will support a broad range of users across ground, air and space.<sup>19</sup> Its capability is a core doctrinal element of the Future Combat System and supports mission areas such as land, air and naval warfare, special operations, and space operations and intelligence.

Besides creating a virtually jam-proof environment and providing much larger bandwidth, the TSAT's internet protocol routing will connect end users through a network instead of the traditional and limiting point-to-point connections. This capability will make it the hub of joint communications architecture in the future.

The TSAT program is a follow-on to the Advanced Extremely High Frequency (AEHF) program and is capable of providing vastly greater capacity by operating at much higher optical frequencies. It will replace the DoD's current satellite system and complete the AEHF system.

### ***Cost Overruns***

AEHF and TSAT have experienced considerable cost overruns and become controversial. In the case of the AEHF, cost overruns resulted in a reduction of planned satellite

procurement. Instead of five, the Pentagon decided to buy only three in 2002.<sup>20</sup> This number might become insufficient as TSAT incurs further cost increases and delays.

The controversial nature of TSAT program is mostly due to its history of cost overruns and Congress' mistrust in the current acquisition system's ability to accommodate the risks associated with the transformational technology. In May 2003, the Defense Science (DSB) and Air Force Scientific Advisory Board (AFSAB) concluded in a report that "cost has replaced mission success as the primary driver in managing acquisition processes, creating excessive technical and schedule risk; the space acquisition system is strongly biased to produce unrealistic low cost estimates."<sup>21</sup>

As a result, funds have been cut repeatedly from the TSAT program. The House Armed Services Committee has directed that the focus of the TSAT program shift to technology development rather than acquisition in 2006. It cut \$400 million out of the same year's request, effectively halving it.<sup>22</sup> The next blow to the system's budget came in FY2008, when DoD issued a program decision memorandum that reduced the program's funding by another \$232 million.<sup>23</sup>

In FY2009, the program's funding for the FYDP 2009-2013 period was cut by 40 percent. After these budgetary blows, defense expert Loren Thompson believes the end of the program is near. Funds have been diverted to terrestrial programs to the point that "[i]t's abundantly obvious that we're not going to have a space radar constellation. It's looking increasingly likely that we're not going to have a TSAT capability either." Competing aircraft modernization programs of the Air Force – whose budget includes most space procurements – "crowd out" space advancement, according to Thompson.<sup>24</sup>

### ***Block-Building***

Schedule slips of over a decade and budget cuts of over 40 percent make for the experts' skepticism about the program's survival. But Air Force sources take issue with the pundits. General Robert Kehler, who oversees the US Air Force Space Command (AFSP) in Colorado Springs, says he wants more time to better articulate a so-called block approach. Instead of funding and developing the entire program, the Air Force now wants to develop the system in phases and redefine requirements for each phase. "This isn't about not getting to the requirements. This is about how you block-build your way to get to them."

It is clear that block-building will delay the program further, and expose an already trimmed budget over a protracted period of time to increased budgetary pressure and competition from other Air Force priorities. The Air Force cites missteps of changing requirements and chronic underfunding in the past as the reasons for the pause in the program, but budget pressures make it clear that the organization can simply not afford to fund the entire program.

### **Satellites on a Budget**

The Pentagon's acquisition chief John Young struck a more realistic tone. Since the US has failed "for more than a decade to produce a cutting-edge space-based radar system," it must now look for "attainable near-term options by deploying low cost, less complex" alternatives from domestic or foreign contractors.<sup>25</sup> Budget pressures and a Department of Defense that is more focused on winning two counterinsurgency wars are a more compelling reason to shelve a complex communications system that will not be operational for another ten years.

Much of the Air Force's prioritization is also due to organizational politics and the secondary importance of unmanned space vehicles in the Air Force that results from it. There are few incentives for advocates of such programs in an organization that is run by fighter pilots and exhibits a reward structure strongly biased towards the latter career track. It is clear that the Air Force's leadership does not recognize the importance of such a critical strategic joint capability. In similar fashion, the Air Force has shown itself reluctant to take on the mission of UAVs and failed to grasp the strategic importance of such assets in joint warfare.

TSAT is a critical enabler of the military's vision of network-centric joint warfare. This includes the Army's *Communications on the Move* (COTM) and *Future Combat System* concepts, as well as the Navy's *Sea Power 21* vision and fleet *FORCENet/FORCEview* concepts.

The TSAT award is now planned for the fourth quarter of 2010. Initial DoD plans scheduled a contract award worth over \$6.5 billion for December 2008. Original estimates of the TSAT award ranged upward of \$20 billion, before the program was scaled back repeatedly.<sup>26</sup> Even if the program should survive, schedule slips and delays can cost lives on the ground, according to experts. "...we're going to see warfighters killed because of lack of connectivity. ... There are some very special things that TSAT was going to do for warfighters that we already need today."<sup>27</sup> Current plans do not conceive launching the system before 2019.

### **Star Wars vs. Counterinsurgency**

Often the question about investing in space capabilities is led in terms of: what do our adversaries have? Are China or India becoming threats to our space capabilities? China, India and Russia have all made significant advances in space technology. Yet no nation comes close to providing similar space-based services like the United States. And no nation or other entity comes close to threaten US space assets or competing with them. However, this debate is conducted in too narrow a context and does not reveal the real cost of cancelling such a system.

TSAT could provide the US warfighter with capabilities that critically enhance joint warfare. The importance of space capabilities becomes clear only when seen in the larger context of joint network-centric warfare. Space capabilities are far more than just a

response to other nations' space capabilities and can be pivotal for joint warfare, even against an asymmetric adversary without any space capabilities.

The next administration will have to make a decision about a strategically vital capability that affects the entire process of force modernization. It will have to do so in an environment where far more current needs take priority in the allocation of funds. There will have to be cuts and unpopular decision. The only alternative is a significant increase in defense spending, which in turn will compete with increasing pressure from mandatory government spending and economic rescue plans.

TSAT procurement must be embedded in a well-conceived strategic plan. A large space program in isolation will not garner the political support it needs in times when the US warfighter is concerned about protection from road-side bombs. As a critical enabler of the Army's Future Combat System, the Air Force's satellite program must be decided upon in the context of joint future warfare. This requires the Pentagon's acquisition officials to fully grasp the interplay of systems in joint network-centric warfare and take into account the repercussion a decision will have on the entire system of systems and its other components. Procuring individual components of an interlinked system of systems may inflate these components' price tag if they will not be able to operate in conjunction with the other planned components of the system.

## **Combat Search and Rescue Helicopter**

The replacement for the Air Force's Sikorsky HH-60G Pave Hawk combat search and rescue vehicle has been dropped from the organization's procurement priority list, although it held second place just one year ago. Yet, no tangible progress has been made to replace the 105 existing aircraft, most of which reached the end of their intended service life in 2003.

The current fleet of Pave Hawks has an average age of 18 years with its oldest aircraft reaching 27 years. Many of the older models have long surpassed the 7,000 flying-hour mark and cannot meet mission requirements anymore.

### ***A Moral and Ethical Imperative***

The Air Force Special Operations Command has a need for a medium-lift vertical take-off and landing aircraft that is quickly deployable with all-weather and night mission capabilities. Requirements also include protection against nuclear, biological, and chemical attacks and an air refueling capability. The CSAR-X aircraft's mission is to recover US evaders during combat operations. "Our ability to return isolated personnel to safety is a moral and ethical imperative, so we've made procurement of this new CSAR aircraft one of our highest weapon system procurement priorities," then-Chief of Staff of the Air Force General Michael Moseley stated in 2006.<sup>28</sup>

The CSAR-X program is the Air Force's first own program to develop this type of aircraft. Current fleets of Pave Hawks and UH-1s are modifications of models that were developed for the Army.

### ***Seven Amendments***

The Air Force originally planned for Initial Operating Capability (IOC) of the CSAR-X in 2007 and solicited proposals in 2000. By June 2001 an Air Force study found that a medium-lift helicopter, such as Lockheed Martin/Augusta Westland's US101 and Sikorsky's S-92, was the most cost-effective solution to meet future requirements. The Air Force decided to buy 132 medium-lift helicopters, starting delivery in 2010.<sup>29</sup>

A first delay of two years to the acquisition process occurred in mid-2002 when the CSAR mission passed from the Air Combat Command to Air Force Special Operations Command. As a consequence, the contract was planned to be awarded in 2006 and IOC slipped to 2014.

The contract was then awarded in November 2006 to Boeing for their HH-47 helicopter. The other competitors filed a protest with the GAO, which was sustained. After the Air Force modified the requirements for a new award, the GAO sustained another protest by the competitors. According to an ABC news report, AFSOCOM officials changed a key performance parameter of the aircraft but labeled it as an administrative change to avoid

oversight processes that could have delayed the program another six months or more. The GAO recognized that a protest would incur further delays but decided nonetheless to sustain the protest and recommended that the competitors be reimbursed their costs for filing and pursuing their protests.<sup>30</sup>

A seventh amendment to the long list of changes in the contract, announced on 22 October, killed any prospect of an award within the current administration. An audit of the program requested by the Senate Armed Services Committee found that the Air Force followed procedures and received approval by the Joint Chief of Staff for the requirement changes, according to a draft report. Although this removes hurdles from a contract award, the Inspector-General's report has not been finalized and may still recommend changes in the award process.

Yet, the contract is unlikely to be awarded before the current administration leaves office. Any further delays in fielding the aircraft "will affect combat search operations because of critical shortfalls" in the current fleet, according to combat rescue officials.<sup>31</sup> Clearly affected by the lengthy and costly refueling tanker controversy, DoD acquisition chief John Young declared his disappointment with the CSAR-X process but stated that he has the mandate and power to do what is necessary to ensure that acquisition programs run on schedule and budget.

This power and mandate were not issued to Mr. Young as a consequence of the CSAR-X process. But with the air refueling tanker program still stuck in a legal morass, Pentagon leaders have become weary to let the Air Force slide into a similar situation with the helicopter contract. In an October 22 statement, following the announcement of the seventh amendment to the contract, the Air Force stated that "the purpose of the amendment is to further clarify how the Air Force will make its source selection decision." Clearly, this was a message that a second tanker situation should be avoided. Mr. Young may not be in charge to oversee the award of the contract, which will happen no earlier than mid-2009.

### ***Costly Delay***

In 2004, four risk/schedule reduction contracts were issued to at an estimated cost of \$1.25 million, each. The program was expected to involve \$1.5 billion in development cost and up to \$10 billion in production cost.<sup>32</sup> The latest estimates of the entire program costs are at \$15 billion.<sup>33</sup> In addition to the procurement cost, the repeated delays have incurred up to \$100 million for updates to the existing HH-60 helicopters. Given their age and limited operational capability, the current fleet will be in use until beyond the FY09 FYDP. Further maintenance and upgrade costs are not projected or figured in to any budgets but are likely to increase until the replacement aircraft can be fielded. Former Air Force Chief of Staff Michael T. Moseley said that delays in fielding the CSAR-X aircraft cost the Air Force over \$800 million and over a year and a half of operational time.<sup>34</sup>

The Air Force's combat search and rescue mission depends exclusively on the HH-60 capability. There is no alternative and the aging fleet has reached retirement age. Due to the age of the existing aircraft and the changing enemy combat capabilities, mission

requirements have grown to include all-weather, adverse condition, and night capabilities. The HH-60 is not able to fulfill these requirements anymore. Upgrades will add significantly to maintenance costs that increase as a consequence of the aircraft's age. Delays in the CSAR-X procurement put pressure on airmen who have to fly an aircraft that is not up to its mission as well as on maintenance budgets.

## **KC-X Air Refueling Tanker**

The Pentagon's plans to recapitalize the aging aerial refueling tanker fleet consisting mostly of KC-135s, were postponed to the next administration on 10 September 2008. After a heated and politically charged legal process, Secretary of Defense Robert Gates decided to introduce a "cooling-off" period and defer the \$40 billion contract to the next administration.<sup>35</sup> A new target was set to March 2010 in an October 31 memorandum by Deputy Defense Secretary Gordon England to senior Pentagon officials.<sup>36</sup> The Air Force, however, is unlikely to fly a new tanker in this decade.

The US tanker program affects a critical mission in global power projection. It also affects a mission area with aircraft that have one of the oldest average ages of any key mission category. Some aircraft were built in 1956. Unfortunately, tanker modernization has also become the most troubled single aspect of US military aircraft modernization. Efforts to lease new aircraft from Boeing produced the worst single procurement scandal in recent decades.

A grossly mismanaged procurement effort, and award of the KC-X tanker contract to EADS/Northrop Grumman, forced cancellation of the award and was followed by major delays to restarting the competition. "Over the past seven years, the process has become enormously complex and emotional – in no small part because of the mistakes and missteps along the way by the Department of Defense," Secretary Gates stated addressing the House Armed Services Committee. "It is my judgment that in the time remaining to us, we can no longer complete a competition that would be viewed as fair and objective in this highly charged environment."<sup>37</sup>

### ***The Boeing versus Northrop/EADS Controversy***

The near terms challenges in creating an effective tanker procurement program are easily as great as those in shaping the overall modernization effort. On 29 February 2008, the Air Force awarded the \$40 billion contract to the EADS/Northrop Grumman team. Boeing Co. promptly submitted a formal protest against the contract award decision with the Government Accountability Office (GAO) on 11 March.

The Air Force's award of the contract to Northrop Grumman /EADS spurred a politically and emotionally charged debate, and a fierce public lobbying campaign by the two competitors. The GAO sustained Boeing's protest on 19 June 2008. It found that, "the Air Force had made a number of significant errors that could have affected the outcome of what was a close competition between Boeing and Northrop Grumman. The errors included not assessing the relative merits of the proposals in accordance with the evaluation rules and criteria identified in the solicitation, not having documentation to support certain aspects of the evaluation, conducting unequal and misleading discussions with Boeing, and having errors or unsupported conclusions in the cost evaluation."<sup>38</sup>

The GAO's recommendation to the Air Force reads as follows:

“GAO recommends that the Air Force reopen discussions with the offerors, obtain revised proposals, re-evaluate the revised proposals, and make a new source selection decision, consistent with this decision. If the Air Force believes that the solicitation does not adequately state its needs, the agency should amend the solicitation prior to conducting discussions with the offerors. If Boeing's proposal is selected for award, the Air Force should terminate the contract awarded to Northrop Grumman. GAO also recommended that Boeing be reimbursed the reasonable costs of filing and pursuing the protest, including reasonable attorney's fees.”<sup>39</sup>

### ***The \$100 Billion Modernization Plan***

The goal for the KC-X program has been to replace the aging KC-130 and KC-135 fleet only by 2045, if the program succeeds on schedule. The legacy tanker will, by that time, be 80 years old. Even today, maintaining an aging fleet that is in constant service throughout the world, and which is a key “enabler” to US forces, is affected by the increasing scarcity of spare parts. Overhauls and replacements of equipment are becoming more costly. Operation and maintenance costs also generally involve more personnel for older equipment. Maintaining an older fleet, as opposed to procuring newer more complex systems, thus entails more work to keep fewer planes less ready.<sup>40</sup>

Passing the buck to the next administration, the Secretary said that “part of my concern was, frankly, I didn't like the smell of approving a potentially \$100 billion contract... in the last day or two of being on the job.”<sup>41</sup> The \$40 billion contract in question covers the first 179 aircraft of a phased recapitalization plan for the entire 600-plane fleet over 40 years. The complete recapitalization effort could total above \$100 billion. Gates also expressed his hopes that the next administration move forward “very quickly” with a new tanker competition. Given budgetary pressures and other competing procurement priorities, let alone the political controversy of the tanker deal, there seem to be significant obstacles in the way of a swift process in the new administration.

### ***Slashed Funds Through 2012***

The Air Force has described the KC-X program as the first of three potential efforts to recapitalize the tanker fleet. “About 2023, the Air Force plans to contract for a second batch of tankers, dubbed KC-Y, and in 2033, it will go for the third or KC-Z batch, ultimately retiring all KC-135s along the way. The entire modernization plan could well exceed contracts worth \$100 billion.

These modernization plan calls for tanker purchases not to exceed \$3 billion a year. It also indicates that the Air Force expects to be able to buy between 12 and 18 tankers per year, replacing the entire tanker fleet over 40 years.”<sup>42</sup> It should be noted, however, that the plan potentially calls for either two additional tanker types or major modifications of the KC-X. Given the problems with the KC-X, this is a further illustration of the need for fundamental reforms the way senior leaders and officers manage aircraft development and procurement.

The GAO has criticized key aspects of the plan because, “the Air Force did not conduct a comprehensive business case analysis that fully considered life cycle costs in deciding its approach. Instead, the acquisition strategy was based primarily on budgetary constraints – including limited available near-term funding for system development and a \$3 billion ceiling on future annual procurements.”<sup>43</sup> In an October 31 memo, Deputy Defense Secretary Gordon England ordered the Air Force to shift \$3.3 billion for the tanker procurement through 2012 to other programs.<sup>44</sup>

A protracted debate around the KC-X contract could further delay and raise the cost of the entire program. Former Air Force Chief of Staff Michael T. Moseley cited similar costs increased because of a protest regarding the CSAR-X helicopter in which the Air Force “lost \$800 million ... and over a year and a half of operational time because of not being able to field an airplane.”<sup>45</sup> Indeed, the 2008 NDAA allows the Air Force to retire the remaining 37 KC-135Es only upon the award of the KC-X contract and after any subsequent protests are settled favorably.<sup>46</sup> None of the Air Force’s budgets or procurement plans includes adjustments to increased maintenance plans of older aircraft due to delays in the KC-X program.

There also are questions about research and development funding. Appropriators cut the requested funds for RDT&E twice in FY07 and FY08 from requested \$204 million to \$152 million and from requested \$314 million to \$114 million.<sup>47</sup> New requirements and a reopened bidding process might drive these numbers up as well. Finally, the latest revelations about the tanker controversy show a \$3 billion difference between the two contractors’ proposals for the first 68 aircraft.<sup>48</sup> Applied to the entire KC-X contract the difference could be as high as \$8.7 billion.

### ***Implications: Flying 80 Year-Old Aircraft***

In practice, this controversy, and the impact of the faulty procurement process on the US force posture, has been far more important than the technical differences between the two products. Even though the GAO report stated that differences in fuel burn rate could make a significant change in life cycle costs (not addressed in protest but recommended by GAO), and there were significant technical differences in size and capability, the end user of the aircraft did not regard them as important.

General Arthur Lichte, who runs the Air Mobility Command, recently stated “I don’t care which tanker wins. I just need a new tanker.”<sup>49</sup> He made it clear that further delays in production and procurement of a new tanker will have a much more significant impact on the Air Force. General Lichte mentioned that another year of delays would mean that the Air Force had to fly some of its current fleet beyond 2040, making those planes over 80 years old.

The stakes are high in the tanker deal. “It is crucial to the health of our nation’s defense industrial base,” said Representative Duncan Hunter of California, the ranking Republican on the House Armed Services Committee.<sup>50</sup> Commensurate with the stakes involved in the tanker contract for all participants, the defense industrial base, the Air Force, and the tax payer, the Air Force’s acquisition team and leadership must assume responsibility for a sound award process. Without clear requirements, criteria for the award, and a rigorous and consequential selection process, the services will expose their acquisition programs to a broad range of interest groups. Politicization and fierce competition between the contractors will eventually obstruct the services’ recapitalization efforts.

Secretary Gates’ cooling-off initiative will give the competitors more time to develop a competitive bid that lives up to the Air Force’s requirements. So far, the Air Force was incapable of communicating clear requirements, which set off the legal process in the first place. A cooling-off period will also give the Pentagon’s acquisition team time to provide the framework for a fair and competitive awards process that will produce a contract which makes the best use of taxpayer dollars. However, the cooling-off also erases all estimates of how much the modernization plan will cost. A new set of requirements might drive prices up again.

The Air Force has spent “a vast amount of time and energy to produce virtually nothing,” commented defense expert Loren Thompson. Whether the contract can be awarded in March 2010, and actually produce planes, is uncertain and only a projection at this point. It is clear however, that the tanker’s IOC will not be reached in 2014, as the current Air Force budget calls for.

The new administration will have to move swiftly to select a competitor for the contract to reduce rising maintenance costs of keeping the aging fleet operational. It is impossible at this point to know how much the contract will be worth. What can be said with certainty is that awarding \$40 billion for a controversial project at a time when defense budgets are expected to be cut will be a real challenge for the new administration.

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## Notes

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