



Toward a sustainable US defense posture: an option to save \$60+ billion over the next five years

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Abstract: In the coming decade pressure to reduce US defense expenditures will mount. Reducing America's excess capacity for high-intensity conventional warfare offers one means for realizing savings. During FY 2008, US national defense spending will significantly surpass the \$650 billion mark. Since 1998, the nation has allocated about \$4.5 trillion to defense. About \$1.5 trillion of this was due to spending above the 1998 baseline. This increment, together with tax cuts, have added more than \$3 trillion to the gross federal debt – much of it borrowed from social security. Sometime in the middle of the next decade, however, Social Security will stop generating surplus revenues for use elsewhere, and the period of repaying – rather than borrowing from – the trust funds will begin. A plurality of Americans *already believe* that the nation is spending too much on defense – probably because they perceive a decrement in security despite a 75 percent inflation-adjusted increase in spending since 1998. Indeed, military capabilities in some areas have grown beyond manifest requirements. An example is the capacity of America's three air forces to interdict targets from the air. Under current plans, the US capacity to interdict targets from the air will grow to 15 times the level existing on the eve of the 1991 Gulf War – far surpassing the capacities utilized in any of America's recent wars. Significantly, the types of targets for which these capabilities are best suited have been declining in number since the end of the Cold War. The United States does suffer military deficits in some areas – but airborne precision attack is not one of them. Similarly, the United States can make do with fewer large-deck aircraft carriers. Cutting two air force fighter wings and two navy fighter wings (along with their associated aircraft carriers) can save the nation more than \$60 billion over the next five years.

Index

Abstract

1. Introduction: A Budget Reckoning on the Horizon
2. An option for savings: cut 2 Air Force wings, 2 naval wings, and 2 aircraft carriers
 - 2.1 The recent evolution of US air attack capabilities
 - 2.2 Rethinking the demand for aircraft carriers: fewer will do
3. Calculating the savings
 - 3.1 Cut two active USAF “equivalent fighter wings”
 - 3.2. Reduce the planned aircraft carrier fleet and air wings by two

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1. Introduction: A Budget Reckoning on the Horizon

Since the end of the Cold War, successive administrations have been unable to produce a stable consensus on a military posture for which America is willing to actually pay, rather than borrow. Not even the 11 September 2001 attacks were sufficient to prompt such a consensus. Although defense spending rose precipitously following the attacks (and the subsequent Iraq war), so has the level of deficit spending

Annual defense expenditures have risen by 45 percent in real terms since 2002 (and 75 percent since 1998). They stand today at about \$650 billion – not counting an expected supplemental request in September 2007. If we treat the Fiscal Year (FY) 1998 national defense budget as a baseline or “floor”, and look at spending during the subsequent period 1999-2007, we see about \$1.5 trillion in aggregate spending above that baseline. About 80 percent of this “spending above baseline” occurred after 2001. (Total national defense spending during the nine years 1999-2007 amounts to more than 3.9 trillion in “then year” dollars and 4.5 trillion in 2008 dollars).

The post-1998 defense boost has added to debt, rather than taxes, however – thus softening its political impact. Indeed, the Bush administration went further – mating its defense increments with a program of tax cuts, also born of borrowing, that is even more costly. And so, the historic tension between “guns and butter” has been mitigated by adding more than \$3 trillion to the gross federal debt -- much of this borrowed from social security and other “trust” funds. This putative “solution” is not sustainable.

Very soon the amount of cheap credit available to the federal government from social trust funds will begin to decline; then it will disappear – probably around 2015. Thus, some variable in the current spending equation will have to give – and soon: defense spending, other federal spending, tax cuts, or current social security or Medicare benefits. To the extent that government focuses the pinch on variables other than defense – as the Pentagon might prefer – we can expect greater public sensitivity to the size of the Pentagon budget. Put simply: if taxes climb or services decline, the public will begin to feel the burden of the post-1998 defense budget increases.

Characteristically, the US public treats defense spending differently than other types of federal expenditure. The defense budget has a degree of immunity from simple trade-off calculations because (and to the extent that) it is viewed as essential to making secure all our freedoms and enjoyments. *In this light, it is significant that, for the first time since the mid-1990s, a plurality of Americans – 43 percent – feel that the United States is spending too*

much on defense (according to a March 2007 Gallup poll). {1} This, despite the long shadow of the 9/11 attacks and the efforts of the Bush administration to insulate the public from war costs. (The 2007 Gallup poll found that only 20 percent of Americans thought America was spending too little on defense. The split in 1993, following the collapse of the Soviet Union and America's triumph in the 1991 Gulf War, was 42 percent saying "too much" was being spent and 17 percent saying "too little".)

The shift in US public opinion that is already underway, together with the tightening of fiscal conditions in the future, will put substantial new political pressure on Pentagon spending. Fortunately, there are ample opportunities for safely achieving new efficiencies in America's military posture, while also reconfiguring it to more closely fit the current and emerging security environment.

In the sections that follow, this memo explores one option for reducing America's conventional military structure:

- Cut two (2) active-component USAF fighter wings, and
- Cut two (2) active-component USN aircraft carriers along with their associated air wings.

The resulting savings in procurement, personnel, and operations costs would amount to approximately \$61 billion (in aggregate) over the next five years. Subsequent savings due to a smaller force structure would be somewhat less: about \$6.65+ billion annually.

The proposed option is only illustrative, however. For several reasons, substantially greater savings should be possible – given strong and clear-headed political leadership.

- First, the proposed option focuses only on tactical combat air capabilities. Similar assessments are warranted across the full spectrum of US military capabilities, including strategic forces, surface and sub-surface naval combatants, air and naval lift, some ground force components, and various supporting structures and activities.
- Second, even with regard to tactical air forces, the proposed option only marginally rolls back some of the overmatch capability that the United States is adding to its arsenals (mostly by means of qualitative improvements to platforms and weapons). A closer look at the match between threats and defense capabilities, and a critical reappraisal of mission objectives, should permit some additional reductions in tactical air power.
- Third, reductions in force structure are associated with direct savings in personnel, procurement, and operations and maintenance. They also make additional savings possible in central support structures and functions – such as basic training, central logistics, and the military base infrastructure. The estimate given above for savings from the proposed cuts only marginally takes the latter type of potential savings into

account because these are likely to be realized only in the case of a more comprehensive program of retrenchment and restructuring.

2. An option for savings: cut 2 Air Force wings, 2 naval wings, and 2 aircraft carriers

America's air and naval power provide the nation with a unique advantage in the military realm – at least as regards symmetrical opponents. The experience of the past 15 years has shown this advantage to be a paradoxical one, however. The capacity of our armed forces to interdict discrete targets from a distance is growing exponentially, while the types of threat vulnerable to such interdiction are declining. And, while America's capacity to quickly clear battlefields of traditional military foes has been amply demonstrated, its ability to translate battlefield victory into positive political outcomes has been cast in doubt.

In both of the US-Iraq wars, American airborne strike assets proved more than sufficient to quickly blunt and disable traditional mechanized forces, although the final destruction of adversary forces – the *coup de grace* – depended on the application of American ground power. And, of course, in the current Iraq war, the defeat of conventional forces did not spell the end of the conflict, but only a transition to irregular warfare. This is a form of war that will not be decided by America's great preponderance of airborne strike assets. Similarly, America's three air forces were able to destroy with virtual impunity a wide variety of deep and strategic targets in the 1999 Kosovo war and the 2001 Afghanistan war. Yet, again, in neither case could air power alone bring closure.

None of America's post-1998 wars have required US commanders to push deployed strike assets to their limits – despite target lists running into the thousands. Moreover: in none of the recent wars has the United States deployed more than one-third the strike assets it had available worldwide. This suggests that we have passed the limit of utility for the sheer aggregation of airborne strike platforms – which today number approximately 2150 fighters and bombers. Our shortfalls in war- and peace-making lie elsewhere.

For several reasons, the United States can afford to reduce its Air Force tactical combat fleet by two wing equivalents and its naval air power assets by two carriers (along with their associated air wings). The relevant considerations are:

1. Dramatic improvements in the target attack capacity of sea- and air-based platforms, relative to the changes in appropriate threats; and
2. New methods for more efficiently and flexibly meeting the needs for sea-based presence abroad.

2.1 The recent evolution of US air attack capabilities

At the time of the 1991 Persian Gulf war, less than 8 percent of America's combat aircraft – USAF, USN, and USMC – had the ability to deliver guided weapons autonomously. Since then, this capability has generalized throughout the combat air fleets, including large bombers. (The capacity of America's fleet of 97 mission-authorized bombers to precision munitions makes it, in this regard, the equivalent of more than 7 wings of tactical aircraft.)

Although the Government Accountability Office (among others) have challenged the most ambitious claims made for precision-guided munitions (PGMs), a non-controversial conclusion is that they allow a five- to eight-fold reduction in bomb expenditure to achieve a target effect similar to that achieved by the best non-guided methods. (The advantage may be somewhat less for area targets.) Also contributing to increased combat capability since 1991 has been the generalization of night-fighting and all-weather capabilities throughout the combat air fleets and significant improvements in target acquisition and data fusion and sharing.

In light of the advances in US air attack capability, it is not surprising that the 2003 Iraq war involved only one-third as many combat aircraft sorties as its predecessor and less than nine percent as many air-delivered munitions. Notably: the proportion of air-delivered munitions that were precision-guided grew from 8 percent to 68 percent. The number of fighters and bombers deployed by the United States declined from approximately 1,100 for the 1991 Gulf War to 655 for the 2003 war. And deployed aircraft were worked much harder in 1991 than in 2003: about 1.3 sorties per day per plane versus 0.9.

Looking forward to 2010, the advances in US guided-weapon attack capability will continue as the combat air fleets add all-weather munitions of substantially longer range, smaller size, and greater accuracy with more numerous and “smarter” submunitions. Over the next five years we will see the introduction of (or more general use of) extended-range, jam-resistant JDAMs, the Sensor Fused Weapon, the Wind-Corrected Munitions Dispenser, Joint Air-to-Surface Stand-off Missiles, and the Low-Cost Autonomous Attack System. Perhaps most significant is the introduction of the GBU-39 Small Diameter Bomb (SDB) which, as noted by *Defense Industry Daily*, will “dramatically increase the strike capability of every combat aircraft in the US inventory.” Indeed, theoretically, the SDB will increase the PGM carrying capacity of America's combat air fleets five-fold – from 8,000 weapons to 40,000.

In 2010, America's combat aircraft will possess twenty times the interdiction capability -- on average and unit for unit, as their 1990 counterparts. Currently planned US air forces will be smaller, however – resulting in an aggregate capability somewhat less than 15 times greater than in 1990.

By comparison, traditional conventional adversaries have not nearly kept pace with US developments. Already in 1997, the Defense Intelligence Agency had noted a 20 percent reduction in armor threats. More generally: the United States moved from spending only 80

percent as much on defense as its potential adversaries did in 1985 to spending 250 percent as much in 2001. Since then the gap has widened further. Today the United States accounts for more than 60 percent of all military modernization spending worldwide, while Russia and China, for instance, together account for less than ten percent.

The dramatic growth in the capability of US combat aircraft does not imply that a commensurate reduction in fleet size is advisable, however. Quantity of platforms remains an important factor in that flexibility increases with the size of air fleets and risk declines. The United States would not want to put its “eggs” in too few baskets. Still, some significant reduction from the presently planned fleet size is possible.

How much is enough? We can gain some insight from America's recent wars. During the past 15 years, the United States deployed air armada's of various sizes to fight its wars: 1,100 combat aircraft in 1991; 300 for Operation Allied Force (plus 200 allied); approximately 250 for Operation Enduring Freedom; and 655 for the main combat phase of Operation Enduring Freedom. The average number of combat sorties flown each day varied widely: 1,400 for Desert Storm, 140 for Allied Force, 82 per day for the first 78 days of Enduring Freedom, and 700 for Iraqi Freedom.

Given current capabilities and those new ones now emerging and being introduced, the United States might handle comparable contingencies with combat air packages comprising 200 to 500 fighters and bombers. With a future all-service force of 1,920 mission-assigned fighters and bombers, the United States could surge as many as 1,250 combat aircraft at one time – a sufficient number to handle multiple war and deterrence tasks. And this total is consistent with the proposed rollback in numbers of USAF and USN air wings.

2.2 Rethinking the demand for aircraft carriers: fewer will do

The proposed reductions affect not just aircraft, but aircraft carriers as well – and this deserves a closer look. Among US air power assets those that are carrier-based have a special role. Where access to land bases is limited, aircraft carriers can bring tactical air power within reach of enemy bastions. Together with other sea-based strike assets and long-range bombers, carriers can help overcome the anti-access challenge. But this fact should not exclude them from consideration for reduction. In fact, the United States has more of this asset than it reasonably requires. And, it is important to remember that sea-based air power is relatively vulnerable and expensive. Indeed, sortie for sortie, it costs more than twice as much as land-based tactical air – all things considered.

America's requirement for big-deck aircraft carriers can be divided into a “surge” requirement for crisis response and a peacetime requirement for continuous forward presence. Relevant to the surge requirement is the actual experience of recent wars.

Three or four aircraft carriers were directly engaged in Afghan operations at any one time during October-December 2001. During the first phase of the 2003 Iraq war, four or five were engaged. During the 1999 Kosovo war, one.

In none of these wars were the engaged carriers employed to their fullest, however. For instance, during the first month of Operation Iraqi Freedom, naval fighters flew an average of 0.8 sorties per day. They are capable of flying two, at least – and the Navy claims they can do more, in a pinch. Looking to the future: The target attack capability of each air wing will increase significantly with the addition of smaller, longer-range, and more accurate PGMs. In 2005 Senate testimony, then Chief of Naval Operations, Admiral Vernon Clark, asserted that the number of targets that a carrier air wing could attack per day would increase from 700 to more than 1,000 by 2010 – having already risen substantially from 200 in 1997. Implicit in this is the option to reduce the overall number of carriers and wings.

In its FY 2007 budget, the Navy asserts that, given an 11 carrier fleet, it can surge six carriers for war within 30 days and another within the next 60 days. This, as a result of its new Fleet Response Plan (FRP). This implies an emergency or “surge” utilization rate of 63 percent. A somewhat higher rate could be achieved through changes in homeporting arrangements, rotations of crews, further reorganization of maintenance schedules, and reduced utilization of carriers for simple presence missions. Some reform along these lines would allow a 9-carrier, 8-wing fleet to surge “five plus one” for crisis response. In 2010, these six carriers, fully utilized and equipped with weapons now being fielded or procured, should be able to strike well over twice as many targets per day as the five that deployed for Operation Iraqi Freedom.

Supplementing the future offshore strike capability of US carriers would be the long-range attack capability of America’s bomber force – able in the future to carry five times as many PGMs as today (on average). Also supplementing carrier power would be the rest of the Navy’s surface fleet and the four Trident submarines that have been reconfigured for conventional missions. The surface fleet is equipped with approximately 8,000 Vertical Launch Systems, which can fire Tomahawk missiles – as can the Tridents. The Navy is building its stock of conventional land-attack Tomahawks up towards a total of 6,000 or so. (Approximately 800 were used in Operation Iraqi Freedom.) Finally, the Navy will have mini-carriers to call on as well, once the new class of LHA(R) amphibious assault ships are commissioned. Among other aircraft, these will carry 20 F-35s.

With only eight active and one reserve big-deck carriers in the fleet, the Navy would not be able to keep more than 2.5 of them continuously “on station” during peacetime – even given recent FRP innovations. However, homeporting one more overseas would increase this number, as would a crew rotation scheme. At any rate, peacetime naval presence abroad need not center on aircraft carriers. This much is recognized in the Navy’s new Global Concept of Operations, which allows for greater flexibility in assembling naval groups. Today, these include not only Carrier Battle Groups but also Expeditionary Strike Groups (built around amphibious assault ships), Surface Strike Groups (built around surface

combatants), and independent operations by the Trident cruise-missile subs. These smaller, more varied, and more numerous groups allow for greater flexibility and more thorough coverage.

3. Calculating the savings

Cut two (2) active-component USAF FWEs (fighter wing equivalents)

- Steady state savings (long-term average annual): \$2.65 billion per year;
- Average annual for FYDP period: \$5.25 billion annually; and
- FY 2008: ~\$4 billion

Cut two (2) active-component USN aircraft carriers and associated air wings

- Steady state savings (long-term average annual): ~\$4 billion
- Average annual for FYDP period: \$6.95 billion.
- FY 2008: ~\$5 billion.

3.1 Cut two active USAF “equivalent fighter wings”

- This reduction would incur more than \$1.65 billion in operations and supports savings annually – that is: savings from the personnel and the operations and maintenance accounts. (Savings per wing would be half this sum).
- Steady-state modernization savings (encompassing procurement and research and development) would slightly exceed \$1 billion per year – or about \$500 million per wing per year on average. About 60 percent of this sum would derive from cuts in planned procurement of aircraft. The remainder would derive from a wide assortment of equipment and material (mostly ammunition and missiles) used to enable the squadrons’ operations.

An equivalent fighter wing comprises 72 Primary Authorized Aircraft. Associated with this are at least 40 spares, trainers, and test aircraft. Thus, cutting two air wings involves a reduction of approximately 224 aircraft in the currently planned fighter fleet.

Specifically: the proposed reductions would involve capping the planned F-22 fleet at 122 aircraft for a reduction of 57, which is 1.5 equivalent squadrons. Additionally, the planned F-35 purchase would be reduced by 167 aircraft (or 4.5 equivalent squadrons). Total modernization savings due to these reductions would be approximately \$16 billion, and all might be realized between 2008 and 2011. Additionally, \$200 million per wing might be saved every year due to reduced demand for other equipment and material.

Calculated in terms of “steady state” costs, the total savings from cutting two wings would exceed \$2.65 billion per year – or \$1.325 billion per wing. Against current plans, however, most of the procurement savings will be realized in the next four or five years – as noted above. The actual average annual savings for these years will be approximately \$5.25 billion annually – or \$2.625 billion per wing. Looking at FY 2008 alone, however: only \$4 billion in savings can be realized this year.

3.2. Reduce the planned aircraft carrier fleet and air wings by two

- “Steady state” (or long-term average) annual savings would be approximately \$4 billion (or \$2 billion per aircraft carrier and associated air wing.)
- Average annual savings for the next five years would be approximately \$6.95 billion. (This is a substantially greater sum than the “steady-state” figure because substantial ship and aircraft procurement costs will occur during the next five years under current plans.)
- Savings in FY 2008 would amount to approximately \$5 billion. (FY 2008 savings are lower than the estimated average for the next five years because acquisition costs for the next CVN-21-class carrier have not yet begun to register substantially.)

The estimated savings from reducing the number of carriers and associated air wings involve three broad categories of expenditure: personnel, operations and maintenance, and modernization (including research, development, and procurement).

- Annual personnel savings for each carrier and associated air wing reduced would be \$375 million; for the two carriers and air wings, the savings would be \$750 million yearly. Commensurate with this, active-component US Navy end strength would decline by 11,000 personnel, approximately.
- Operations and maintenance savings would be \$800 million per carrier (including associated naval air wing) per year – or \$1.6 billion for two carriers and air wings per year.

Not included in this estimate are reduced costs for recruitment, training, or central administration and support. Potential savings in these areas might easily and significantly exceed \$100 million per year, under this proposal. However, realizing this additional savings would require a separate “infrastructure reform” effort. Thus, the estimated additional savings are not included here.

Modernization savings involve not only the carriers themselves and their associated aircraft, but also a wide variety of other equipment and material not included in operations and maintenance budgets. Steady-state annual modernization costs are \$858 million per carrier

and associated wing. Thus, reducing the fleet by two of each results in a greater than \$1.7 billion reduction in steady-state requirements.

In terms of ship building requirements: the United States could forgo the next two in the CVN-21 series for a potential savings of \$26 billion over 9 years. Although most of these savings would be realized during the period 2010-2017, \$200 million in savings might be realized in FY 2008.

The estimated cost of planned air wings (including spares and training aircraft) is \$6.29 billion each – or almost 12.6 billion for the two wings. The USN's evolving carrier air wings include, minimally: 44 fighter-attack aircraft, 10 electronic warfare and command and control aircraft, and 11 helicopters serving a variety of purposes. In addition to primary mission aircraft, the Navy purchases spares and trainers, which can increase the lot by as much as 80 percent.

With fewer air wings, the Navy would have a reduced requirement for purchases of F/A-18E/F and F-35 combat aircraft. The F/A-18 buy could be reduced by 65 aircraft for a savings of \$4 billion. The F-35 buy could be delayed and reduced by 92 aircraft for a savings of \$4.5 billion. The balance of savings in aircraft acquisition would involve the E-2C/D Hawkeye, SH-60R Seahawk, and EA-18G Growler programs.

Notes

Joseph Carroll, "Perceptions of "Too Much" Military Spending at 15-Year High," *Gallup News Service*, 02 March 2007;

<http://www.galluppoll.com/content/Default.aspx?ci=26761&pg=1&VERSION=p>.