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Navy F/A-18E/F and EA-18G Aircraft Procurement and Strike Fighter Shortfall: Background and Issues for Congress

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Summary

The Navy has been procuring F/A-18E/F Super Hornet strike fighters since FY1997. The Navy in FY2006 also began procuring the EA-18G Growler, an electronic attack (i.e., electronic warfare) version of the Super Hornet. Super Hornets and Growlers were procured in FY2005-FY2009 under a multiyear procurement (MYP) arrangement.

The Navy's proposed FY2010 budget requests about $1.0 billion for the procurement of nine F/A-18E/Fs. The Navy's FY2009 budget had projected that 18 F/A-18E/Fs would be requested in FY2010. The Navy's proposed FY2010 budget also requests about $1.6 billion for the procurement of 22 EA-18Gs. The Navy's proposed FY2010 budget does not request a third MYP arrangement for procuring F/A-18E/Fs and EA-18Gs in FY2010-FY2014. The Navy's FY2010 request for nine F/A-18E/Fs comes in the context of a projected shortfall in Navy and Marine Corps strike fighters.

Some Members of Congress are interested in the option of procuring 18 F/A-18E/Fs in FY2010 (the number projected for FY2010 under the FY2009 budget), rather than nine (the number requested in the FY2010 budget), so as to make a start toward mitigating the projected strike fighter shortfall. Some Members of Congress are also interested in approving a new MYP arrangement for procuring Super Hornets and Growlers in FY2010-FY2014, so as to further mitigate the shortfall and reduce the collective procurement cost of the aircraft.

The House Armed Services Committee, in its report (H.Rept. 111-166 of June 18, 2009) on the FY2010 defense authorization bill (H.R. 2647), recommends approving the Administration's FY2010 procurement funding request for procuring nine F/A-18E/Fs in FY2010, and increasing by $108 million the administration's FY2010 advance procurement funding request for procuring F/A-18E/Fs in future fiscal years, with the additional $108 million to be used for economic order quantity (EOQ) purchases of items for F/A-18E/Fs to be procured under a third multiyear procurement (MYP) arrangement (page 57). Section 124 of H.R. 2647 would authorize a multiyear procurement (MYP) arrangement for F/A-18E/Fs and EA-18Gs beginning in FY2010. Section 133 would require the Department of Defense (DOD) to submit a report to the congressional defense committees on the procurement of "4.5"-generation aircraft, which the provision defines as F-15, F-16, and F/A-18 aircraft equipped with certain radar and electronic upgrades. Section 1051 expresses the sense of Congress that the Navy should include not less than 10 carrier air wings (even if the number of aircraft carriers is temporarily reduced), and that these air wings shall include, in addition to any other aircraft, not less than 44 strike fighters.

The defense authorization bill (S. 1390) as reported by the Senate Armed Services Committee recommends increasing by $560 million the administration's FY2010 procurement funding request for the F/A-18E/F program, so as to support the procurement in FY2010 of 18 F/A-18E/Fs—nine more than the administration requested—and recommends approving the administration's FY2010 advance procurement funding request for the F/A-18E/F program.

A July 16, 2009, news release from Representative John Murtha, the chairman of the Defense subcommittee of the House Appropriations Committee, states that the subcommittee's markup of the FY2010 defense appropriations bill includes "$1.7 billion for the procurement of 18 F/A-18E/F Super Hornet tactical aircraft, $495 million and 9 aircraft above the [Administration's] request. This amount also includes $108 million above the request for a future multi-year procurement of the F-18 aircraft."

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Introduction

The Navy has been procuring F/A-18E/F Super Hornet strike fighters since FY1997. Super Hornets and older F/A-19A/B/C/D Hornets currently account for the majority of the aircraft in the Navy's 10 active-duty aircraft carrier air wings (CVWs)—of the 70 or so aircraft in each CVW, more than 40 typically are Hornets and Super Hornets.

The Navy in FY2006 also began procuring the EA-18G Growler, an electronic attack (i.e., electronic warfare) version of the Super Hornet. Growlers are replacing the older Navy and Marine Corps EA-6B Prowler electronic attack aircraft. Super Hornets and Growlers were procured in FY2005-FY2009 under a multiyear procurement (MYP) arrangement.

The Navy's proposed FY2010 budget requests about $1.0 billion for the procurement of nine F/A-18E/Fs. The Navy's FY2009 budget had projected that 18 F/A-18E/Fs would be requested in FY2010. The Navy has testified that it is planning a total procurement of 506 F/A-18E/Fs, with the final 57 aircraft to be procured in FY2010-2012. The Navy's proposed FY2010 budget also requests about $1.6 billion for the procurement of 22 EA-18Gs. The Navy's proposed FY2010 budget does not request a third MYP arrangement for procuring F/A-18E/Fs and EA-18Gs in FY2010-FY2014.

The Navy's FY2010 request for nine F/A-18E/Fs comes in the context of a projected shortfall in Navy and Marine Corps strike fighters. Estimates of the extent of the shortfall vary, with the peak of the shortfall ranging from 125 aircraft by one estimate to 243 or more aircraft according to other estimates.

Some Members of Congress are interested in the option of procuring 18 F/A-18E/Fs in FY2010 (the number projected for FY2010 under the FY2009 budget), rather than nine (the number requested in the FY2010 budget), so as to make a start toward mitigating the projected strike fighter shortfall. Some Members of Congress are also interested in approving a new MYP arrangement for procuring Super Hornets and Growlers in FY2010-FY2014, so as to further mitigate the shortfall and reduce the collective procurement cost of the aircraft.

The issue for Congress is whether to approve, reject, or modify the Navy's FY2010 funding request for procurement of nine F/A-18E/Fs, and whether to approve a third MYP arrangement for procuring Super Hornets and Growlers in FY2010-FY2014. Congress's decisions on this issue could affect Navy capabilities and funding requirements, and the tactical aircraft manufacturing industrial base.

Background

F/A-18E/F Program

The F/A-18E/F Super Hornet is a Navy strike fighter, meaning a tactical aircraft that can perform both air-to-ground (strike) and air-to-air (fighter) operations. The Super Hornet is a larger, more modern, and more capable version of the earlier F/A-18A/B/C/D Hornet, which is operated by both the Navy and Marine Corps.[1]

The Navy has been procuring F/A-18E/F Super Hornets since FY1997. Hornets and Super Hornets currently form the core of the Navy's aircraft carrier air wings (CVWs)—of the 70 or so aircraft in each CVW, more than 40 typically are Hornets and Super Hornets.

The Navy in FY2010 is also starting to procure the F-35C—the Navy version of the F-35 Joint Strike Fighter (JSF).[2] Navy plans call for phasing Hornets out of service and for CVWs in the future to include a strike fighter mix of Super Hornets and F-35Cs.[3]

As shown in **Table 1**, the Navy through FY2009 has procured a total of 449 F/A-18E/Fs. This total includes three F/A-18E/Fs procured with FY2007 wartime supplemental funding, and 13 F/A-18E/Fs procured with FY2008 wartime supplemental funding. Super Hornets were procured in FY2000-FY2004 under an MYP arrangement,, and both Super Hornets and Growlers were procured in FY2005-FY2009 under a second MYP arrangement.

The Navy's proposed FY2010 budget requests funding for the procurement of nine F/A-1E/Fs. The FY2010 budget estimates the total procurement cost of these aircraft at $1,055.0 million, or an average of about $117.2 million each. These nine aircraft received $45.5 million in prior-year advance procurement funding, leaving $1,009.5 million to be provided in FY2010 to complete their procurement cost. The proposed FY2010 budget also requests $51.4 million in advance procurement funding for F/A-18E/Fs to be procured in future fiscal years, and $2.7 million in funding for initial spares for F/A-18E/Fs, bringing the total amount of procurement funding requested for FY2010 to $1,063.6 million. The Navy's proposed FY2010 budget does not request a third MYP arrangement for procuring F/A-18E/Fs and EA-18Gs in FY2010-FY2014.

The estimated average procurement cost of about $117.2 million for the nine F/A-18E/Fs requested for FY2010 is considerably higher than the estimated average procurement costs of the 37 F/A-18E/Fs procured in FY2008 (about $74.9 million) and the 23 F/A-18E/Fs procured in FY2009 (about $81.0 million). This may reflect the fact that the F/A-18E/Fs procured in FY20008 and FY2009 were procured in higher annual quantities, and that they were procured under an MYP arrangement.

The Navy has testified that it is planning a total procurement of 506 F/A-18E/Fs, with the final 57 aircraft to be procured in FY2010-2012.[4] Subtracting out the nine F/A-18E/Fs requested for

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[1] The F/A-18E is a single-seat aircraft (like the Navy's older F/A-18As and Cs), while the F/A-18E/F is two-seat aircraft (like the Navy's older F/A-18Bs and Ds, is a two-seat aircraft). Some observers describe the F/A-18E/F as an upgraded and larger version of the F/A-18C/D, with increased range and payload capacity and more space and weight for future improvements. Other observers assert that the differences between the baseline Hornet aircraft and the E/F model are so great that they would describe the Super Hornet as an entirely new aircraft.

[2] For more on the JSF program, see CRS Report RL30563, *F-35 Joint Strike Fighter (JSF) Program: Background and Issues for Congress*, by Ronald O'Rourke.

[3] The Marine Corps currently operates a combination of Hornets and AV-8B Harriers, which are vertical/short takeoff and landing (VSTOL) aircraft. F/A-18E/Fs are not being procured for the Marine Corps. Marine Corps plans call for phasing the Hornets and Harriers out of service and replacing them with the F-35B – the Marine Corps version of the F-35. The F-35B is a VSTOL version of the F-35.

[4] Statement of Vice Admiral David Architzel, USN, Principal Military Deputy, Research, Development and Acquisition, LTGEN George J. Trautman III, USMC, Deputy Commandant for Aviation, [and] RADM Allen G. Myers, USN, Director of Warfare Integration, before the Seapower and Expeditionary Warfare [sic: Forces] (continued...)

FY2010 leaves another 48 planned for procurement in procured in FY2011-FY2012. The Navy's FY2010 budget-justification materials state that the advance procurement funding requested in FY2010 for the F/A-18E/F program is to support the planned procurement of 24 aircraft in FY2011,[5] which would leave a final 24 aircraft to be procured in FY2012.

The F/A-18E/F was approved for export in June 2001.[6] A sale of 24 to Australia was completed in May 2007. The first of the 24 was accepted by Australia on July 8, 2009, and 12 of the 24 are being wired to provide an option for converting them relatively easily into EA-18Gs.[7] Sales to other countries are possible, and decisions on such sales reportedly could be announced in 2009 and 2010.[8]

EA-18G Program

The EA-18G Growler is an electronic attack (i.e., electronic warfare) aircraft for jamming enemy radars and communications. The EA-18G shares the F/A-18F's airframe and avionics and is built on the same assembly line.[9] The Department of the Navy is procuring EA-18Gs as replacements

(...continued)

Subcommittee of the House Armed Services Committee [hearing] on [The] Department of the Navy's Aviation Procurement Program, May 19, 2009, p. 3.

[5] *Department of the Navy Fiscal Year (FY) 2010 Budget Estimates, Justification of Estimates, May 2009, Aircraft Procurement, Navy, Volume I, Budget Activities 1-4*, Budget Item Justification Sheet P-40, 014500 F/A-18E/F ADVANCE PROCUREMENT, page 1 of 3 (overall page 29 of 138).

[6] "Boeing's Super Hornet Cleared for International Sales," *Defense Daily*, August 7, 2001.

[7] "Australia Accepts First Block II Super Hornet," *Navy News Service*, July 21, 2009.

[8] A July 2, 2009, news article states that Boeing, the maker of the F/A-18E/F,

> is also expecting [F/A-18E/F] orders from allied countries around the globe, and there will be a shift in focus from domestic to international orders over the years, [Bob Gower, company vice-president for F/A-18 and EA-18G programs] said.
>
> "Right now, we have domestic and international [orders]," he said. "I think you'll see that continue for a multitude of years, and at some point, we will primarily become an international line, if I look out there at the end of the next decade."
>
> Boeing has "active campaigns going on in a multitude of countries," he added, including Brazil, India, Denmark, Japan, Greece and four other countries.
>
> Boeing expects Brazil and Denmark to make a decision on Super Hornet buys this year, followed by Greece and India next year.
>
> "I think you'll see many decisions between now and the next 24 months," he said. "The same issues that are facing the United States Navy with aging aircraft are facing our allies as well."
>
> (Dan Taylor, "Boeing Expects Influx of Domestic, Overseas Orders For F-18, EA-18G," *Inside the Navy*, July 20, 2009.)

A June 2009 news report stated that "DOD [Department of Defense] policy prevents Boeing from actively marketing the Super Hornet to countries buying the [F-35 Joint Strike Fighter, or JSF], but the company has been providing information [about the F/A-18E/F] to countries that ask," including Canada, Greece, and countries in the Middle East. (Dan Taylor, "Boeing Talking With Numerous Countries About F/A-18 Super Hornet," Inside the Navy, June 8, 2009.)

On September 4, 2002, the Department of Defense notified Congress of the potential sale of 18 F/A-18Fs to Malaysia (which currently operates the two-seat F/A-18D) as part of a larger $1.48 billion arms deal (see Michael Sirak, "Malaysia Seeks Super Hornets to Augment F/A-18 Fleet," *Jane's Defence Weekly*, September 18, 2002), but no such sale has been completed.

[9] The EA-18G replaces the F-model's cannon with a nose-mounted jamming processor and carry up to five ALQ-99 jamming pods—the same jamming pods currently employed by the EA-6B.

for aging Navy and Marine Corps EA-6B Prowler electronic attack aircraft, which help protect Navy, Marine Corps, and Air Force aircraft operating in hostile airspace.

As shown in **Table 1**, the Navy through FY2009 has procured a total of 56 EA-18Gs. This total includes one EA-18G procured with FY2007 wartime supplemental funding, and three EA-18Gs procured with FY2008 wartime supplemental funding. As mentioned earlier, Super Hornets and Growlers were procured in FY2005-FY2009 under an MYP arrangement.

The Navy's proposed FY2010 budget requests funding for the procurement of 22 EA-18Gs. The FY2010 budget estimates the total procurement cost of these aircraft at $1,658.5 million, or an average of about $75.4 million each. These 22 aircraft received $46.7 million in prior-year advance procurement funding, leaving $1,611.8 million to be provided in FY2010 to complete their procurement cost. The proposed FY2010 budget also requests $20.6 million in advance procurement funding for EA-18Gs to be procured in future fiscal years, and $25.4 million in funding for initial spares for EA-18Gss, bringing the total amount of procurement funding requested for FY2010 to $1,657.8 million. As mentioned earlier, the Navy's proposed FY2010 budget does not request a third MYP arrangement for procuring F/A-18E/Fs and EA-18Gs in FY2010-FY2014.

The Navy has testified that it is planning a total procurement of 88 EA-18Gs.[10] Subtracting the 22 EA-18Gs requested for FY2010 would leave a final 10 aircraft to be procured in FY2011.

In March 2008, it was reported that the Australian government was considering to purchase some number of EA-18Gs for that country's air force.[11] As mentioned earlier, it was reported in July 2009 that 12 of the 24 F/A-18E/Fs purchased by Australia are being wired to provide an option for converting them relatively easily into EA-18Gs.[12]

Table 1. Annual Procurement Quantities of F/A-18E/Fs and EA-18Gs

Fiscal Year	F/A-18E/Fs	EA-18Gs	Total for both types
1997	12	0	12
1998	20	0	20
1999	30	0	30
2000	36	0	36
2001	39	0	39
2002	48	0	48

[10] Statement of Vice Admiral David Architzel, USN, Principal Military Deputy, Research, Development and Acquisition, LTGEN George J. Trautman III, USMC, Deputy Commandant for Aviation, [and] RADM Allen G. Myers, USN, Director of Warfare Integration, before the Seapower and Expeditionary Warfare [sic: Forces] Subcommittee of the House Armed Services Committee [hearing] on [The] Department of the Navy's Aviation Procurement Program, May 19, 2009, p. 4.

[11] Bradley Perrett. "Growler Attraction; Australia confirms F-111s are out, Super Hornets are in and E-18s desirable." *Aviation Week & Space Technology*. March 24, 2008.

[12] "Australia Accepts First Block II Super Hornet," *Navy News Service*, July 21, 2009.

Fiscal Year	F/A-18E/Fs	EA-18Gs	Total for both types
2003	45	0	45
2004	42	0	42
2005	42	0	42
2006	38	4	42
2007	37[a]	9[b]	46
2008	37[c]	21[d]	58
2009	23	22	45
2010 (requested)	9	22	31

Source: Prepared by CRS based on Navy and industry data.

Notes: F/A-18E/Fs procured in FY2000-FY2004 under a multiyear procurement (MYP) arrangement. F/A-18E/Fs and EA-18Gs procured in FY2005-FY2009 under a second MYP arrangement.

a. Includes three aircraft procured with FY2007 wartime supplemental funding.

b. Includes one aircraft procured with FY2007 wartime supplemental funding.

c. Includes 13 aircraft procured with FY2008 wartime supplemental funding.

d. Includes three aircraft procured with FY2008 wartime supplemental funding.

Navy-Marine Corps Strike Fighter Shortfall

The Navy and Marine Corps, which are both part of the Department of the Navy (DON), each operate strike-fighters. Strike-fighters constitute the majority of the aircraft in each of the Navy's 10 active-duty aircraft carrier air wings (CVWs)[13]—of the 70 or more aircraft typically embarked on a Navy aircraft carrier, 44 typically are strike-fighters. Strike-fighters also constitute a significant portion of the Marine Corps' three active-duty Marine air wings (MAWs).[14] Some Marine Corps strike-fighters are assigned to Navy CVWs.

As of early 2009, the Navy operated about 380 F/A-18E/F Super Hornet strike fighters, the Navy and Marine Corps operated a total of about 620 older F/A-18A-D Hornet strike fighters, and the Marine Corps operated about 125 AV-8B Harrier short takeoff, vertical landing (STOVL) attack aircraft.[15] In coming years, the Navy plans to retire its Hornets and shift to a combination of Super Hornets and F-35Cs, while the Marine Corps plans to retire its Hornets and Harriers and shift to strike-fighter force composed entirely of F-35Bs.

The F/A-18A-D Hornets currently operated by the Navy and Marine Corps were originally built for a service life of 6,000 flight hours. This was later extended to 8,000 hours. It is now being extended again, to 8,600 hours, through a High Flight Hour (HFH) inspection effort that closely examines the condition of each aircraft. Extending the Hornets' service lives further, to 10,000 hours, would require significant depot work to rebuild various parts of each aircraft. The cost of

[13] In the abbreviation CVW, CV means aircraft carrier and W means air wing. In addition to the 10 active-duty CVWs, the Navy also operates one reserve tactical air wing.

[14] In addition to the three active-duty MAWs, the Marine Corps operates one reserve MAW.

[15] Source: Congressional Budget Office, *Alternatives for Modernizing U.S. Fighter Forces*, May 2009, Tables 1-1 and 1-2 on pages 2 and 3, which CBO states are based on DOD data. For a CRS report with a table presenting these same figures, see CRS Report RL33543, *Tactical Aircraft Modernization: Issues for Congress*, by Ronald O'Rourke.

such a service life extension program (SLEP) is uncertain, but estimates ranging up to $26 million per aircraft have been mentioned.

DON's inventory of strike-fighters currently falls short of the number that Navy officials state is required to fully support requirements for Navy carrier air wings (CVWs) and Marine Corps air wings (MAWs), and the Navy is projecting that this shortfall will grow in coming years.

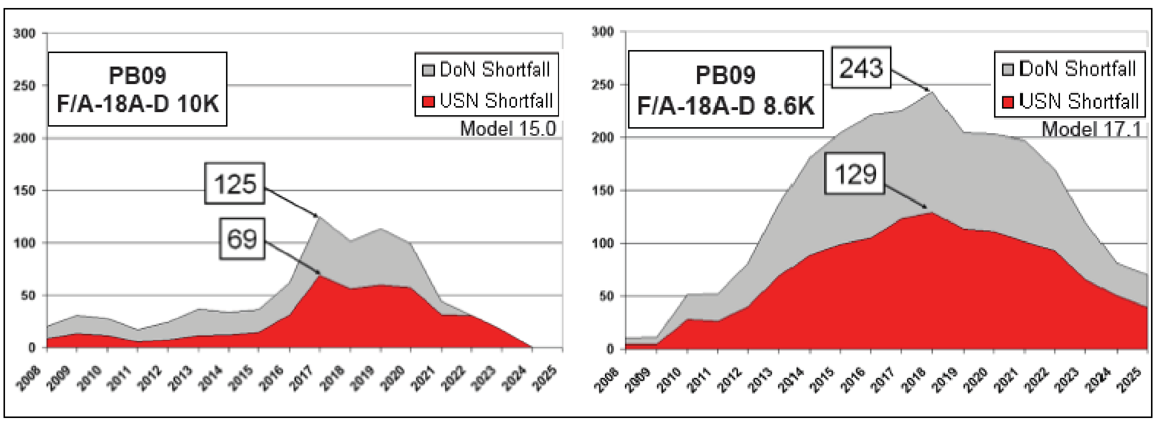
As shown in the left half of **Figure 1**, the Navy has projected that if about 300 older F/A-18A-D Hornets have their service lives extended from 8,600 flight hours to 10,000 flight hours, the strike fighter shortfall would peak in 2017 at 125 aircraft, including a shortfall of 69 in the Navy and 56 in the Marine Corps.

As shown in the right half of **Figure 1**, the Navy has projected that if the 300 or so older F/A-18A-Ds Hornets do not have their service lives extended to 10,000 hours, and are instead removed from service when they reach 8,600 flight hours, the strike fighter shortfall would peak in 2018 at 243 aircraft, including a shortfall of 129 in the Navy and 114 in the Marine Corps.[16]

In June 2009, the Navy testified that strike fighter shortfall might peak sooner than indicated in **Figure 1**—in 2015—because the HFH inspections on the F/A-18A-D Hornets are taking longer to accomplish than was first expected.[17]

Figure 1. Projected Strike-Fighter Shortfall

With (left) and without (right) F/A-18A-D SLEP to 10,000 hours



Source: *Strike Fighter Shortfall Update* OpCit.

The projections in **Figure 1** assume that F-35 procurement will increase from year to year as currently planned and eventually reach a sustained rate of 50 aircraft per year. If F-35 procurement is delayed or if the sustained rate of production is less than assumed—say, for example, 35 aircraft per year vs. 50 aircraft per year—then the projected strike-fighter shortfall would increase above that shown in **Figure 1**.

[16] Navy briefings provided to CRS on April 24, 2008, and industry briefing papers provided to CRS on April 10 and 22, 2008.*Strike Fighter Shortfall Update.* Briefing provided by Department of the Navy to HASC Staff. March 13, 2009.

[17] Dan Taylor, "Myers: Navy Strike Fighter Shortfall Now Expected To Peak in 2015," *Inside the Navy*, June 15, 2009.

Additional information relating to the projected Navy-Marine Corps strike fighter shortfall appears in the **Appendix**.

Issues for Congress

Number of F/A-18E/Fs to Procure in FY2010

One issue for Congress concerns the number of F/A-18E/Fs to be procured in FY2010. Some Members of Congress are interested in procuring 18 F/A-18E/Fs in FY2010—the number projected for FY2010 under the FY2009 budget.

Proponents of procuring 18 F/A-18s in FY2010 (or some number greater than nine) could argue that doing so would start to mitigate the projected Navy-Marine Corps strike fighter shortfall and the operational risks associated with it. Proponents could also argue that increasing the number of F/A-18E/Fs procured in FY2010 to something more than nine could increase economies of scale for the FY2010 F/A-18E/F purchase, reducing the average procurement cost of each FY2010 aircraft.

Opponents of procuring 18 F/A-18s in FY2010 (or some number greater than nine) could argue that in a situation of limited defense funding, they could argue, funding an additional F/A-18E/Fs could require reducing funding for one or more other defense programs, which could lead to operational risks in other area. Opponents could argue that the size of the projected strike fighter shortfall could be affected by decisions to be made in the Quadrennial Defense Review (QDR) currently in progress, and that pending the completion of the QDR, it would be premature to take steps now to mitigate the shortfall.

Whether to Approve a Third MYP Arrangement for FY2010-FY2014

Another issue for Congress is whether to approve an MYP arrangement for procurement of F/A-18E/Fs and EA-18Gs for the period FY2010-FY2014. As mentioned earlier, FY2009 is the final year of the current MYP arrangement for procuring F/A-18E/Fs and EA-18Gs, and the Navy's proposed budget does not request a new MYP arrangement for FY2010-FY2014. Some observers have suggested that a new MYP arrangement for FY2010-FY2014 might involve procuring a total of about 150 F/A-18E/Fs and EA-18Gs over the five-year period, with 30 or so aircraft being procured each year. Such an MYP arrangement would not require increasing the number of F/A-18E/Fs to be procured in FY2010 to something more than nine, since a total of 31 F/A-18E/Fs and EA-18Gs are requested for procurement in the FY2010 budget. On the other hand, such an MYP arrangement could be pursued even if the number of F/A-18E/Fs and EA-18Gs procured in FY2010 were increased to something higher than 31.

Supporters of an MYP arrangement for procuring F/A-18E/Fs and EA-18Gs in FY2010-FY2014 could argue that such an arrangement would take a significant step toward mitigating the projected strike fighter shortfall. They could also argue that using an MYP arrangement would reduce the collective cost of the aircraft being procured by hundreds of millions of dollars, and keep the F/A-18E/F production line open long enough to hedge against the risk of technical or affordability problems in ramping up the F-35C production rate. The F/A-18E/F, proponents could argue, is a very capable aircraft, and one that is consistent with Secretary of Defense Robert

Gates' stated preference for procuring proven platforms and avoiding new-design weapon systems with "exquisite" capabilities that are unaffordable in desired numbers.

Opponents of an MYP arrangement for procuring F/A-18E/Fs and EA-18Gs in FY2010-FY2014 could argue that pending the completion of the QDR, which could affect the projected size of the strike fighter shortfall, it would be premature to enter into an MYP arrangement that would lock the Navy into procuring a certain number of F/A-18E/Fs for the next five years. Opponents could also argue that the F/A-18E/F, while very capable, is not as capable as the F-35, and that in light of potential future operational demands for Navy and Marine Corps forces, it would be preferable to bring F/A-18E/F production to an end at the planned total of 506 aircraft, and concentrate available resources in coming years on procuring F-35Cs for the Navy and F-35Bs for the Marine Corps. They could argue that it would not be affordable to continue procuring two types of aircraft that perform essentially the same general role.

Legislative Activity in 2009

FY2010 Defense Authorization Bill (H.R. 2647/S. 1390)

House

The House Armed Services Committee, in its report (H.Rept. 111-166 of June 18, 2009) on H.R. 2647, recommends approving the administration's FY2010 procurement funding request for procuring nine F/A-18E/Fs in FY2010, and increasing by $108 million the administration's FY2010 advance procurement funding request for procuring F/A-18E/Fs in future fiscal years, with the additional $108 million to be used for economic order quantity (EOQ) purchases of items for F/A-18E/Fs to be procured under a third multiyear procurement (MYP) arrangement (page 57).

The committee's report recommends increasing by $56 million the administration's FY2010 procurement funding request for procuring 22 EA-18Gs in FY2010, with the additional $56 million to be used for aircraft support equipment (page 57).

Section 124 of H.R. 2647 would authorize a multiyear procurement (MYP) arrangement for F/A-18E/Fs and EA-18Gs beginning in FY2010.

Section 133 would require DOD to submit a report to the congressional defense committees on the procurement of "4.5"-generation aircraft, which the provision defines as F-15, F-16, and F/A-18 aircraft equipped with certain radar and electronic upgrades.

Section 1051 expresses the sense of Congress that the Navy should include not less than 10 carrier air wings (even if the number of aircraft carriers is temporarily reduced), and that these air wings shall include, in addition to any other aircraft, not less than 44 strike fighters.

The committee's report states:

> The budget request contained $2.7 billion for procurement of 22 EA-18G and 9 F/A-18E/F aircraft, and $4.5 billion for procurement of 20 F-35B/C aircraft for the Department of the

> Navy. This represents a reduction from the fiscal year 2009 program of record of nine F/A-18E/F aircraft and an increase of two F-35B/C aircraft.
>
> The committee is concerned regarding the current and forecasted strike-fighter aircraft inventory of the Department of the Navy. The committee understands that the Department of the Navy has a fiscal year 2009 strike-fighter inventory shortfall of 110 aircraft and predicts a fiscal year 2010 shortfall of 152 aircraft, with a potential peak strike-fighter shortfall of 312 aircraft by fiscal year 2018. The committee believes such drastic shortfalls in strike fighter-inventory are unacceptable.
>
> The committee understands that a variety of factors cause the current and projected strike-fighter shortfall. Those factors include a fiscal year 2002 decision to reduce F/A-18A through D inventory by 88 aircraft, a reduction in the program of record quantity for F-35B/C by 409 aircraft, delays in development of the F-35B/C program, and F/A 18A through D aircraft reaching forecasted service life sooner than expected.
>
> The committee remains unconvinced that naval strike-fighter shortfalls should be viewed against the totality of Department of Defense strike-fighter inventory. The capabilities of the naval strike-fighter force are inherent in the capability of the aircraft carrier as a strike platform and, as such, force structure requirements for naval aviation must be viewed as those required to support sufficient carrier air wings (CVW) to match the number of statutorily mandated aircraft carriers.
>
> The committee supports procurement of additional F/A–18E/F aircraft to mitigate the naval strike-fighter inventory shortfall and believes that procurement of additional F/A-18E/F aircraft through a multi-year procurement contract is more cost effective and prudent than procuring new aircraft through an annual contract or applying $25.6 million of additional fiscal resources per aircraft to extend the service life of the F/A-18A through D fleet. Therefore, the committee includes a provision in title I of this Act that would authorize the Secretary of the Navy to enter into a multi-year procurement contract for the purchase of additional F/A-18E/F and EA-18G aircraft and also includes a provision in title X [Section 1051] of this Act that expresses a sense of Congress that the Department of the Navy should maintain no less than ten carrier air wings with no less than 44 strike-fighters each. Additionally, the committee directs the Director of the Congressional Budget Office to submit a report to the congressional defense committees by February 2, 2010, that evaluates the operational effectiveness and costs of extending and modernizing the service-life of F/A-18A through D aircraft to 10,000 flight hours versus procuring, either through an annual or multi-year procurement contract, additional F/A-18E/F aircraft beyond the current program of record.
>
> The committee recommends an increase of $108.0 million for advanced procurement of economic order quantity items in order to achieve the benefits associated with a multi-year procurement contract and also recommends an increase of $56.0 million for support items associated with the EA-18G aircraft. Lastly, the committee fully expects the Secretary of the Navy to promptly negotiate and enter into a multi-year procurement contract for additional F/A-18E/F and EA-18G aircraft to mitigate the naval strike-fighter shortfall. (Pages 61-62)

The committee's report summarizes sections 124, 133, and 1051 on pages 124, 125, and 393, respectively.

Senate

Division D of S. 1390 as reported by the Senate Armed Services Committee contains the detailed line-item funding tables that in past years have been included in the committee's report on the defense authorization bill. Division D recommends increasing by $560 million the administration's FY2010 procurement funding request for the F/A-18E/F program, so as to support the procurement in FY2010 of 18 F/A-18E/Fs—nine more than the administration requested—and recommends approving the administration's FY2010 advance procurement funding request for the F/A-18E/F program (page 613 of the printed bill).

Division D recommends approving the administration's FY2010 procurement and advance procurement funding requests for the EA-18Gs program (page 613).

The committee's report (S.Rept. 111-35 of July 2, 2009) on S. 1390 states:

> The budget request included $1,009.5 million to purchase nine F/A-18E/F aircraft. This is nine fewer aircraft than the Navy had planned to buy in fiscal year 2010 in the fiscal year 2009 future-years defense program.
>
> The committee has expressed concern that the Navy is facing a sizeable gap in aircraft inventory as older F/A-18A-D Hornets retire before the aircraft carrier variant (F-35C) of the Joint Strike Fighter (JSF) is available. The committee raised this issue in the committee reports accompanying S. 1547 (S.Rept. 110-77) of the National Defense Authorization Act for Fiscal Year 2008 and accompanying S. 3001 (S.Rept. 110-335) of the National Defense Authorization Act for Fiscal Year 2009. The committee is disappointed that the Navy has failed to provide the report comparing single versus multiyear procurement costs mandated by the second of those committee reports.
>
> Last year, the committee received testimony from the Navy of a projected shortfall in Navy tactical aviation. The Navy indicated that, under assumptions current at that time, it would experience a shortfall of 69 tactical aircraft in the year 2017, a number that swells to 125 when requirements of the United States Marine Corps are included. The committee believes that the Navy's projection of this shortfall was, however, based on a series of questionable assumptions.
>
> This year, the Chief of Naval Operations said that the projected gap may be as high as 250 aircraft total for the Department of the Navy. The committee believes that the Navy has failed to present a budget in fiscal year 2010 that takes effective action to deal with this substantially increased projected shortfall in the Department of the Navy's tactical air fleet and is concerned about the potential risk such a shortfall could pose to national security. The committee also notes that this shortfall figure is still predicated on an initial operation capability of the F-35C in 2015 but that achieving this is considered optimistic by many observers. The Navy's delay in taking action causes concern that it: (1) is continuing to accept the substantial security risks associated with the projected shortfall; (2) remains overly reliant on a potentially costly service life extension program (SLEP) for legacy F/A-18s as a means to mitigate the gap until the Joint Strike Fighter achieves full operational capability; and (3) is not adequately considering realistic, fiscally responsible long-range procurement plans to address the carrier strike aircraft shortfall, such as a multiyear procurement of F/A-18E/F aircraft as opposed to a series of single year purchases.
>
> The committee is concerned that, in response to possible further delays, expanding costs and technological immaturity with the JSF, the Navy appears increasingly reliant on its proposal to extend the life of select legacy F/A-18's from 8,600 to 10,000 flight hours through a SLEP currently estimated to cost on average $26.0 million per plane. This life extension would be in addition to the 2,600-hour service life extension that the Navy already plans for most legacy F/A-18s. By the Navy's own testimony, it is unclear how many of the planes are capable of reaching 10,000 flight hours even with a SLEP. The committee is concerned that the cost uncertainties of a SLEP achieving an additional 1,400 flight hours make such a plan

> risky. In any case, the committee believes such SLEP may be inefficient when compared with the benefits of procuring new F/A-18E/F's, which might cost less than $50.0 million each in 2009 constant dollars under a multiyear procurement acquisition strategy. Normalizing costs for the expected return in additional service life, a SLEP to achieve the additional 1,400 hours would cost approximately $18,571 per flight hour gained, versus $8,333 per flight hour provided by a new F/A-18E/F (at a 6,000 flight hour life, the cost per flight hour of a new F/A-18E/F would fall even further to $5,814 if those planes are similarly extended to 8,600 flight hours as have legacy F/A-18s). In light of such costs, the committee believes the Navy must more carefully evaluate costs and benefits of new F/A-18E/F procurements, compared to investing in a SLEP of legacy aircraft.
>
> The committee further notes that new F/A-18E/F models come equipped with improved technological capabilities over the legacy F/A-18's, including active electronically scanned array radar, modernized avionics, advanced aerial refueling system capability, and added weapon hard points, among other features that would not be part of a SLEP upgrade package for the older aircraft. These factors would tend to increase the benefit of purchasing new F/A-18E/Fs compared to conducting a SLEP on legacy aircraft. The Navy projects that the F/A-18E/F will remain in the fleet until at least 2040, and should be able to use most or all of the full service life of any newly purchased aircraft.
>
> The committee understands that the Department of Defense intends to review the whole issue of tactical aircraft forces in the pending Quadrennial Defense Review. The committee expects the Department to conduct and submit the analysis of multiyear procurement for the F/A-18 as directed in the committee report last year to include cost differentials between single year and multiyear procurement strategies and tradeoffs between a SLEP and new procurements of the F/A-18E/F. The Department should include such information derived from that analysis in deciding how to implement the results on the ongoing Quadrennial Defense Review regarding tactical aviation.
>
> The committee expects that the Department's tactical aviation procurement strategies will be informed by the Quadrennial Defense Review. In light of the significant increase in the strike-fighter shortfall testified to before the committee this year, additional actions to address that shortfall cannot be delayed too long. The committee emphasizes, as it did last year, that if purchasing new F/A–18E/F aircraft proves to be the preferred method of resolving the shortfall, not acquiring those aircraft under a multiyear contract could lead to the loss of ''substantial savings'' to the government—subject to the outcome of required independent cost estimates. The committee notes that a request for a multiyear procurement must fully comply with the requirements of section 2306b of title 10, United States Code, as amended by section 811 of the National Defense Authorization Act for Fiscal Year 2008 (Public Law 110–181).
>
> In the interim, the committee fails to see the wisdom in cutting planned F/A–18E/F procurement with potential shortfalls this large. Therefore, the committee recommends an increase of $560.0 million to buy 18 F/A–18E/F aircraft in fiscal year 2010 as originally planned. (Pages 20-22)

FY2010 Defense Appropriations Bill

House

A July 16, 2009, news release from Representative John Murtha, the chairman of the Defense subcommittee of the House Appropriations Committee, states that the subcommittee's markup of the FY2010 defense appropriations bill includes "$1.7 billion for the procurement of 18 F/A-

18E/F Super Hornet tactical aircraft, $495 million and 9 aircraft above the [Administration's] request. This amount also includes $108 million above the request for a future multi-year procurement of the F-18 aircraft."[18]

FY2009 Supplemental Appropriations Act (H.R. 2346/P.L. 111-32)

House

The House Appropriations Committee, in its report (H.Rept. 111-105 of May 12, 2009) on H.R. 2346, the FY2009 supplemental appropriations bill, stated:

> **F-18 AIRCRAFT**
>
> The Committee believes the Department of Defense and the Congress must seriously come to grips with the looming shortfall in Navy tactical aircraft. Last year, the fiscal year 2009 defense appropriations conference report noted the Navy faced a growing strike fighter shortfall due to the aging of the tactical aircraft fleet and the fact that the F-35 Joint Strike Fighter program will not begin to deliver carrier aircraft in significant quantities for years to come. At that time the Navy identified a shortfall of approximately 69 aircraft. Thus, the conference report encouraged the Navy to budget for a third multi-year procurement of F-18 aircraft beginning in fiscal year 2010.
>
> More recent analysis has identified a Department of the Navy strike fighter shortfall in excess of 200 aircraft. Unfortunately the Navy plans to fund the procurement of only nine F-18 aircraft in fiscal year 2010, with no indication given as to its outyear plans. The Committee believes that the most cost-effective approach to address the Navy's tactical fighter shortfall is to purchase additional F-18 aircraft under a multi-year procurement program. Moreover, the Committee is concerned by the Department's apparent lack of a plan for maintaining a sufficiently robust domestic strike fighter industrial base in the near term. Accordingly, the Committee encourages the Department of Defense to continue to explore initiating an F–18 aircraft multi-year program as soon as possible to mitigate the strike fighter shortfall. (Page 25)

Senate

The Senate Appropriations Committee, in its report (S.Rept. 111-20 of May 14, 2009) on S. 1054, an FY2009 supplemental appropriations bill, stated:

> *F/A-18 Super Hornet*.—The Committee remains concerned about a shortfall in the Navy's strike fighter inventory created by the aging of the older F/A-18 models and the fact that the F–35 Joint Strike Fighter program will not start delivering carrier aircraft in significant numbers for several years. Last year at this time, the estimated shortfall was 69 aircraft. Today, it appears that the shortfall will be at least 129 aircraft; it could be well above that level. The change is due to uncertainty about instituting an inspection regimen to extend the life of the F/A-18 out to 10,000 hours. To ensure that the Navy has sufficient aircraft for the fleet, the Committee requests the Department of Defense to consider submitting a budget

[18] The Honorable John P. Murtha, news release entitled "Murtha Unveils FY10 Defense Appropriations Bill," July 16, 2009, page 2.

amendment to fund a third multi-year procurement of F/A–18s beginning in fiscal year 2010. (Pages 39-40)

Conference

The conference report (H.Rept. 111-151 of June 12, 2009) on H.R. 2346/P.L. 111-32 of June 24, 2009, did not include report language commenting directly on the F/A-18E/F program.

Appendix. May 19, 2009, Hearing on Naval Aviation Programs

This appendix presents material relating to the Navy-Marine Corps strike fighter shortfall and F/A-18E/F procurement from a May 19, 2009, hearing on naval aviation programs before the Seapower and Expeditionary Forces subcommittee of the House Armed Services Committee.

Excerpts from Chairman's Opening Statement

The chairman of the subcommittee, Representative Gene Taylor, stated the following in his opening statement for the hearing:

> I'd like to outline the program and policy issues that, at a minimum, I would like our witnesses to address.
>
> First, the primary policy issue I would like to address is that of the strike fighter inventory for the Navy and Marine Corps. Over the last three years, all four congressional defense committees have had a steady stream of Navy and Marine Corps witnesses testify before them about an impending strike-fighter shortfall. This shortfall is predicted to peak in the middle of the next decade.
>
> Right now, current analysis puts that peak at 243 aircraft in fiscal year 2018, but if you account for the accepted risk that each service has informed Congress that they are currently incurring, the peak shortage of aircraft climbs to 312 in that same year. What is more troubling is that it appears there is a disconnect between the Office of the Secretary of Defense (OSD) and the Department of the Navy.
>
> Officials from OSD have recently briefed this committee that there is no strike fighter shortfall but that the totality of the strike fighter inventory is a matter for analysis in the Quadrennial Defense Review (QDR). In other words, OSD has already predetermined the answer and now they'll use the QDR to build the equation.
>
> I request that the witnesses explain today what the position of the Department of the Navy is regarding the strike fighter shortfall and if they are aware of any new analysis by the Joint Staff or OSD which would contradict what is apparently simple arithmetic. Because, the last time I checked, an aircraft carrier is only worth its weight in gold if it has an embarked air wing. Otherwise, 90,000 tons of American sovereignty becomes 90,000 tons of American helicopter transportation.[19]

Excerpt from Ranking Member's Opening Statement

The ranking member of the subcommittee, Representative Todd Akin, stated the following in his opening statement for the hearing:

> Unfortunately, our Navy faces a significant strike fighter shortfall in the near future, and what good is an aircraft carrier without aircraft? Last year the Chief of Naval Operations

[19] Source: Text of opening statement of Representative Gene Taylor. Representative Taylor's opening statement was read into the record by Representative Joe Courtney.

(CNO) testified to a fighter shortfall of approximately 125 planes for the Department of the Navy by 2017. This year, based on an updated analysis, the Navy has told Congress that a more realistic estimate is a shortfall of over 240 planes. This assumes that the Joint Strike Fighter delivers on time and that the Navy will continue to resource its carrier air wings with fewer aircraft than is called for in the national military strategy. Should the Navy resource to its full strike fighter requirement, the shortfall would be greater than 300 aircraft.

What does all of this mean? Simple math shows that at least five of our eleven carriers would be without fighter aircraft, or we would be forced to severely limit the number of aircraft per carrier and available for training. In either case, the solution would pose a significant strategic risk. I am deeply concerned that this budget actually makes the shortfall worse, by cutting the number of Super Hornets the Navy is buying. Facing a gap of at least 243 planes, the Navy is only asking for nine Super Hornets. In a few months, the Navy has gone from considering another multiyear procurement of Super Hornets, to cutting the buy of F/A-18s in half. This makes no sense. As I told the CNO last week, we either need more planes or fewer carriers, and I do not think anyone in this room believes that fewer carriers are the solution.

Unfortunately, as Congress has tried to wrestle with this issue, the Department of Defense (DOD) has refused to obey the law and has been anything but transparent. The DOD has:

- not delivered a report on costs and benefits of a multi-year procurement of F/A-18's required by law by March 1, 2009;
- not delivered the 30 year aviation plan required by law;
- not delivered a future-years defense program with the budget, as required by section 221 of title 10, United States Code; "and
- has refused to brief Congress on the apparently differing estimates on the size of the fighter shortfall.

Is this the transparency that President Obama promised? Does the Department of Defense consider itself above the law? Let us be clear—the mere existence of a Quadrennial Defense Review (QDR) does not exempt the Department from fulfilling its legal obligations. While I understand that the witnesses this afternoon are not responsible for these decisions to violate the law, let me say at the outset that the Department cannot expect to use the QDR as a get out of jail free card. Our witnesses should understand that this Committee expects and deserves answers, not evasive maneuvers. [20]

First Excerpt from Transcript

AKIN: [21]

Thank you, Mr. Chairman. And I appreciate you all being here today. And there have been a number of themes that we've heard throughout a series of hearings on where we are and probably wouldn't surprise you that we would pick up on one of those.

[20] Source: Text of opening statement of Representative Todd Akin. Representative Akin's opening statement was read into the record by Representative Roscoe Bartlett.

[21] Representative Todd Akin, the ranking member of the subcommittee.

And that is the situation with the lack of aircraft, particularly, because of the planes having to be retired with over 8,000 hours on them. And I understand that the 10,000 hours doesn't really work; that it costs too much to try to take care of the—changing the different parts that would be stressed.

So that resulted, this year, in an estimate of—instead of 120- some aircraft shortfall on our aircraft carriers, to about 240-some. I guess my question—and everybody is saying—and I guess really what they're saying is give us more time to figure this out. But what they're saying is "we've got to do this quadrennial review."

Well, it isn't like this is too complicated. We say we're going to have 11 aircraft carriers. For a certain brief window, we're going to be down to 10. You got 44 aircraft on an aircraft carrier. If you're 240-some aircraft short, you got five aircraft carriers with no planes on them.

So my question is: One, first of all, how does that affect the number of missions that you have to fly just to practice? Because I was watching night landings of these things. It looked to me like it was pretty tricky business. And I would think you would want to have plenty of practice for your pilots. And if you've got fewer planes, then I would think it would affect your training schedule. That's the first question.

Second question would be: Let's say that you can't have 44 aircraft on an aircraft carrier. Is an aircraft carrier just about as good if you've got 20 aircrafts? You could split the aircraft half and half? If that's not the case—let's just answer those first two question.

MYERS:[22]

Akin, I'd like to take the first stab at that. First of all, to go back to your numbers. Last year in PB '09, I briefed that we were forecasting in the later teens, starting in 2016 through 2018, a Strike Fighter shortfall with the U.S. Navy of 69 aircraft, and the Department of Navy, 125.

That was assuming that all of our legacy F-18s, A through D, could get to 10,000 hours. So that was sort of a bookend. The other bookend was if none of those aircraft got past 8,600 hours, that it'd be 125 and a 243 shortfall.

Now, that was last year and what I'd like to do is talk to you for a few minutes and outline what's changed.

AKIN:

OK, it's got to be pretty short because—so just a minute—just get to the number, that'd be...

TAYLOR: [23]

I want to remind the ranking member that, as the ranking member, you have all the time you want.

[22] Rear Admiral Allen G. Myers, USN, Director of Warfare Integration.

[23] Representative Gene Taylor, the chairman of the subcommittee.

AKIN:

Well, OK, shoot, then.

Well, proceed then.

MYERS:

OK. Those were the bookends. And what we've discovered since then is that doing the analysis for the service life extension—has informed us that there are a number of areas that we want to be focused on when we open these aircraft up when they go to the depot.

To cut to the end, we're not sure exactly the number of aircraft that we're going to be able to get through. And the reason we're not sure...

AKIN:

Between about 142 and 240—it’s somewhere between there, would be your guess?

MYERS:

We're not sure right now, Representative Akin. And the reason is because we're still discovering a lot by looking at these aircraft when they go through the depot. We've had 39 aircraft that have gone through the depot, to date. We thought there was about 159 focus areas, or areas of interest, on the airplane.

We've got about nine that have come through the depot. And what we found is there were 50 additional areas. Each airplane is going to be a little bit different. But as we go through a three-phase process to determine what the limits are on service life extension, we're going to be able to refine the technical baseline, and understand more.

Now, currently today, the Navy has the—currently has the aircraft necessary to fulfill the missions that the COCOMs have laid upon us. So we have the aircraft we need today. So the focus is, how do we get through the next summer? What are the levers that we need to look at to understand, not only what the Strike Fighter shortfall is, but how to mitigate it?

And there’s four ways to mitigate it. One is to maintain our continued, unwavering support for the Joint Strike Fighter. Second is to maintain our buys of F-18 EFs. Third is to maintain the funding, in terms of logistics, or our current legacy aircraft—our Strike Fighters. And fourth is to understand how many of these F-18s, A through Ds, we can get through this lev (ph) process.

And it’s going to take time. Now, you had another question about the number “44” on our carriers. Forty-four is the requirement for the Navy for Strike Fighters on our aircraft carriers. Forty-four represents the number that the combatant commanders are expecting when those carriers show up overseas to provide the necessary backs (ph), for everything from contingency ops, to major combat operations. And it also represents the most effective use of a Nimitz class size flight deck. So 44 is a number that’s required for our aircraft carriers, and that’s what we intend to do.

AKIN:

So—then following up, you are saying, you would not deploy a carrier that had significantly number less than 44 planes on it. You'd want to keep that number pretty close if you had a carrier that size. Is that what you're saying?

MYERS:

Congressman, what I'm saying is that 44 is the requirement. And that's what we're basing—from the Navy staff and from a programming perspective, that's what we program towards.

AKIN:

OK. So if you had a shortfall, then you're saying you would rather have some aircraft carrier left behind then to have one with half the planes on it or something? You wouldn't consider that probably. Or are you saying that you just don't know, or...

MYERS:

That's a fleet commander decision on exactly how he loads out a carrier airwing. We understand the requirement. We understand the way that we're deploying ships and our aircraft carriers and their airwings today. But how that would be done in the future would depend on the needs of the combatant commander and the fleet commander.

But currently, the requirement is for 44, and that's what we're doing right now.

AKIN:

Right. Now, what I heard you say, though—you gave me a lot of detail. But what I heard you say was still the shortfall is probably going to be between the 125 number and the 243 number. Because 243 was worst case. That's assuming you can't get any more than 8,600 hours. And the 125 was assuming that you could get 10,000 hours. And you're saying until you actually look at the planes, you won't know exactly how many of them fit into which category. But it's going to fall in that number. Is that correct?

MYERS:

There's a possibility that some of them could fall outside that number. And that's part of the analysis. The second phase of the analysis—it's ongoing right now that NAVAIR is doing. And working with their depots to understand exactly the extent of whether or not it's going to be exactly in that...

AKIN:

... in that bracket even?

MYERS:

Yes, sir.

AKIN:

You're not even sure that bracket—is what you're saying?

MYERS:

The bracket is the best information that we have at this moment, but we've still got work to do, Congressman.

AKIN:

Now, what would it cost—let's say that you find some aircraft that are 8,600 hours and they're going to need some repairs. Do we have any idea of what that would cost? I have—my understanding was it was prohibitive to do that; that it would be cheaper just to get some news ones. Is that true? Or not necessarily? Or do we know?

MYERS:

It's not necessarily true. What we know is that a center barrel costs about $5 million. And a center barrel is going to be required on the earlier lot aircraft, meaning lot 16 and earlier. What we know is that the inner wing could cost as much as $4 million or $5 million. What we know is that the inner wing is a focus area of the aircraft that have gone through the depot, in terms of the additional hot spots we're focused—but what we don't know is whether or not all of the aircraft that go through are going to need all of those repairs.

So it could be expensive, and it might not. And right now, that's what the second phase...

AKIN:

So we don't have a current cost estimate of what it would take—if we wanted to extend the service life on them? We don't really know what that number is, is what you're saying? Depends on the individual plane—is that what you're basically saying?

MYERS:

Yes, sir. It depends on the plane. We have programmed some monies, because we do know about the center barrel replacements. And the analysis that will go on through the summer, and is expected to finish in the March 2010 timeframe, is set to be a palm (ph) 12 [sic: POM 12][24] issue, and that's the way we've set up the analysis—to feed into palm (ph) 12 [sic: POM 12]. And that would be—give us enough time to buy the equipment and make sure that we programmed in place everything we need in the depots or the SLEP [Service Life Extension Program].

AKIN:

I think the Navy has completed its analysis of the benefits of the multiyear procurement of the F-18As. What's the minimum number of aircraft required to be purchased over the contract period that would result in a savings of at least 10 percent, as required by law? Is there some particular number that you've got to get? Because we saved, what, a billion dollars on that before on multi-year two?

[24] This is a reference to the Program Objective Memorandum for the FY2012 defense budget. The POM is an internal DOD document that provides guidance for the preparation of a budget.

ARCHITZEL: [25]

Sir, if I could take that question. You're correct on the—on the multiyear on the Hornets, that have been two. The first multiyear was for 210 aircraft. It resulted in about a $710 million savings. It was a five-year program. We followed that with a multiyear two, which just ended in ‘09. That saved about $1.1 billion over the same five-year period.

To make a multiyear value, we need economic ordered quantities, which means we have to have volume. We've also got to have a lengthy of period of time. It wouldn't do us any good to give volume, and put it in one or two or three years. We need to have some length of time to get that return on investment. So to answer your question, if we look at multiyear one, we had about a 7.5 or 6 percent savings. That equates to multiyear two, about 11 percent savings.

You have those kinds of savings when you go five years and get economic order quantity buy. We want to have a significant savings which is on the order of 10 percent, or $500 million would be the kind of bookends, if you were using that term here, that we'd seek to get in a multiyear procurement, sir.

AKIN:

Well, I still didn't hear the answer to my question. I guess the question is: What number do you have? Let’s say we're say we're starting 2010, right now.

ARCHITZEL:

Yes, sir.

AKIN:

And let’s see, JSF is scheduled to be ready to go at 2015. Are we sure that, that’s going to happen on time? That gives you five years, right—10 to 15?

ARCHITZEL:

Yes, sir.

AKIN:

So let’s assume JSF actually is there at 2015. So you do have the five years. So what would the number be to get to the 10 percent? Have you figured that?

ARCHITZEL:

Sir, let me—FY ‘10 is a single year buy of Hornets. As you know, the Growler (ph), we put into the multiyear for multiyear two. And we were able to take advantage of that. With the single year buy, we don't have the economic order quantity to do it. So ‘10 is in the books. We don't have that ability to incorporate that into a multiyear now.

[25] Vice Admiral David Architzel, USN, Principal Military Deputy, Research, Development and Acquisition.

AKIN:

So we're talking ‘11 now—'11 to ‘15?

ARCHITZEL:

Yes, sir.

AKIN:

Are you sure that we're going to have JSF in ‘15?

ARCHITZEL:

I know—I can speak to the IOCs we have today, which is for the Marine Corps. and the Navy and say that, on plan we have today, we will, sir. I mean, we're developing those programs to go forward on those timelines. But I also will say that we will have to wait to find out what the department’s direction is on aircraft. We need to know the numbers, so we can get that common quantity, and timeframe involved, before we can enter into a multiyear. But if we were to—but the multiyear is certainly something we do aggressively go after when we can—and multiple programs, as you're aware. B22 is an example—60 Romeo (ph), 60 Sierras (ph)—so we definitely want to get multiyears when we have them there.

AKIN:

Yes, I'm having a hard time getting anything. I feel like I'm trying to mail jello to a wall, gentlemen. You know, I'm asking for a time for a multiyear. And you're saying, “No, we really don't know what the requirements are.” I thought we were looking at 125, and then 243. Now, you're saying, “Yes, but it could be this other way.” Somewhere along the line, we got to make a plan as to what we're going to do. I mean, maybe JSF could be there 2015. And that’s obviously something that’s very important. I know the Marine Corps. has a keen interest in the Stovall (ph) [sic: STOVL, meaning short takeoff and vertical landing] version because you're kind of putting all your eggs in that basket; where the Harriers, I guess, are getting older and older.

But somewhere along the line, we've got to be able to do some planning. And it seems like no matter how you look at the numbers, you're coming out short on fighter planes. So I guess that’s the reason we're having the hearing—is, where are we?

MYERS:

Yes, sir. Congressman, for the record, just want to correct the correct number that we should be referring to is “69 to 129” for the U.S. Navy. And that’s what I briefed last year. That—those were the bookends of 10,000 hours for 300 aircraft and 8,600 no aircraft SLEP'ed. So that gives you about a 70 aircraft shortfall. And...

AKINS:

But let’s start with 70. If you had 70 additional aircraft over a five-year period, would you get 10 percent then?

ARCHITZEL:

Sir, I'm not trying to be anything but direct in answering. If I can, from an acquisition standpoint, if we were to get to—two things, we need to have an economic order quantity. We need to have an economic rate of production, which would be—the minimum sustained rate for the—is about 24 aircraft to go through. The economic requirement is somewhere between 30 and 36, depending on the numbers we have.

So if you can generate on the order, 30 per year for five years, you would be able to enter into a multiyear that would produce 10 percent savings.

MYERS:

But...

AKINS:

You're saying 30 per year, so that'd be 150 then?

ARCHITZEL:

If they—in the scenario of a multiyear, that's what would happen, sir, regardless of what aircraft we're dealing with. When you can get those types of quantities and be able to produce them to allow economic order quantity buys, or some significant period of time, then you will definitely get savings in a multiyear. That's why—that's the only reason we're allowed to enter multiyears is if we can assure significant savings.

AKINS:

So are you saying the minimum you'd have to buy is about 150 over five years today in order to get that 10 percent?

ARCHITZEL:

Sir, under the scenario you presented to me, yes, sir, that would be what we'd have to do. I would say that. But again, we—I don't set the requirements. This is from an acquisition standpoint. You asked me to give you the numbers as they applied to multiyear, and that's what I've done, sir.

MYERS:

And to reinforce Admiral Architzel, the requirement is 44 Strike Fighters on our carrier wings and based on the PB '09 data, the shortfall for U.S. end (ph) is still about 70 aircraft, best case, right now. But we still have some discovery to do this summer as we go through SLEP and we still have some levers to pull.

AKINS:

The numbers was higher because you had Marine Corps F-18s that you were including also? Is that correct?

MYERS:

What I gave you was an inclusive Department of Navy and U.S. Navy before. The 69, 129 is a U.S. Navy number. And the 125, 243 is a Department of Navy number. It included Navy and Marine Corps and that was what was briefed last year—yes, sir.

ARCHITZEL:

Sir, if I may comment? Maybe help with the variables that are involved here. First of all, the PB '09 numbers are no longer relevant to this discussion, in my opinion. For example, if the program purchases more point (ph) [sic: Joint] Strike Fighters than we did in PB '09, which it does, the Strike Fighter shortfall would come down by a commensurate number of F-35, both B and C models.

Secondly, this issue of the service life assessment program and the service life extension program—is very much filled with variability at this point. We're are part way through phase B of a three-phase process of examining these airplanes to decide how many of the 623 existing A through D hornets can be extended.

By talking to NAVAIR as recently as Friday, there are approximately 330 A through Ds, which she identified as "prime candidates" to be extended. And so, we will extend by bureau number by bureau number, making wise business case decisions associated with the choices that will have to be made to extend those aircraft going forward.

AKIN:

So you say you've identified 130...

ARCHITZEL:

Three hundred thirty.

AKIN:

... A through D? Oh, 330.

ARCHITZEL:

Three hundred thirty of the 623 existing are prime candidates for extension. There are no technical impediments to extension at this point.

AKIN:

So are you saying that this means you wouldn't have to put more money in them? Or they would be prime candidates to put more money into them to get them to 10,000?

ARCHITZEL:

You said it right, sir...

AKIN:

The second time?

ARCHITZEL:

Yes, sir. Putting more money into them on a case by case basis to decide how much would need to be extended. But even that has variability. For example, the majority of the interest areas are in the center barrel. That’s the majority interest area. We already have $1.14 billion in the budget to pay for 417 center barrels to be replaced. Second most are in the wings. There are options with regard to the wings. One is repair. Two is to remove and replace. And the admiral gave you the cost of a new wing. But the third is to take wings out of AMOR (ph) which we're doing right now, and replace those wings with wings that are essentially free.

And then the third large area that we're concerned about, as we go through the assessment program, is in the aft-end (ph) of the A through Ds. That’s probably where most of the uncertainty lies now with regard to the cost.

Second Excerpt from Transcript

AKIN:

Yes, I had just a couple more questions.

General Trautman, my understanding is that the Marine Corps currently has four F/A 18 fighter squadrons that are supposed to have 40 aircraft allocated to them, but actually have no aircraft allocated to them. And the Marine Corps does not apparently include those in the shortfall. And if so, why did you not include them in the shortfall?

TRAUTMAN: [26]

Sir, about three years ago we made a proactive decision to cadre two active and two reserve fighter attack squadrons. We did this in anticipation of the arrival of the Joint Strike Fighter.

We learned when we transitioned to the V-22 from our large medium-lift population of CH-46s that one thing you need to do when you have a large population changing as our tactical aircraft are going to change beginning in 2012, is to create a manpower pool from which you can draw because, particularly when you're changing from a 46 to a V-22 or from a Legacy Hornet to a Joint Strike Fighter, it’s not a lightswitch. It’s a rheostat and you have to have time to train and prepare both air crew and maintainers.

So we set aside those cadre personnel and now thank goodness we did because over the last few months we picked the squadron commander for our first fleet readiness squadron, the VMFAT-501, which will stand up beginning this summer.

We picked the first six aviators that will go into that squadron. We're detailing the maintainers that will go into that squadron. And beginning in 2012 and 2013, we'll bring back those two active cadre squadrons as Joint Strike Fighter squadrons and that’s been our plan.

[26] Lieutenant General George J. Trautman III, USMC, Deputy Commandant for Aviation.

With regard to the two reserve cadre squadrons, we'll bring them back three, four, five years into the Joint Strike Fighter transition about the time that reserve aviators and maintainers are looking for a place to go if they decide to remain engaged in the Marine Corps via the Reserves.

So we think we've got this laid out right, and that’s why we did what we did.

AKIN:

So in a sense your strategic decision of three years ago was while you started with four squadrons, you're going to go down to two, so in the transition you've got just less aircraft available to you so you realize that you are at a lesser strength and you accept that risk because you're transitioning from one aircraft to another. That’s what I think I'm hearing you say.

TRAUTMAN:

That’s exactly right, sir. These transitions are challenging and that’s why we take the decision that we took to set aside that manpower pool to make it right.

AKIN:

Right. And as long as the other plane comes online, you're saying we can live with being at half strength for some—a few years to make that transition. If they're not on line in time, then that becomes increasingly problematic, I suppose.

TRAUTMAN:

Well, it does. The good news is that we are—we're meeting our current obligations with the force structure that we have. The challenge is, of course, that Marine TacAir is at a higher op tempo than either the Navy or the Air Force TacAir, and so in some ways we're playing out the risk on the backs of our Marines and we don't like to do that.

But we think it’s a proactive step that was worth taking in order to get to the Joint Strike Fighter in 2012 and ‘13.

AKIN:

Yes, OK, so those 40 are not counted in the shortfall then that we were talking about before.

TRAUTMAN:

Well, they're not really a shortfall sir. For example, if we decided to have those squadrons up and we didn't want to take the manpower, we could take the 30 Lot (ph) 10 and 11 F-18Cs that we're putting into preservation. We could have those round out those squadrons in the near term if we chose to do so. I think that would not be a very wise decision, though. I prefer the decision we made.

AKIN:

You're saying there are aircraft around, but they're just old?

TRAUTMAN:

Lot (ph) 10 and 11, that's right.

AKIN:

Yes. OK. And you also mentioned the idea of reworking some of the F-18s. You're saying that's a possibility depending on the analysis of what those look like. The numbers we're seeing in that is you're looking at about $15 million if you got to put that rework in and that gets you, whatever it is, 1,000, 500 hours or something.

It seems like to me that's almost costing you twice the cost per hour and a lot less capability than if you just got a new F-18. Is that—would you ever look at doing that?

TRAUTMAN:

I was advised that putting any kind of number on the cost of extending a Hornet from 8,000 to 10,000 at this point would be premature. As I said, we're only half way through phase B of a three- phase process. Until we get through that process, there are too many variables associated to put a number on it.

I haven't heard a number as high as $15 million. That's a new one to me. I've heard lower numbers.

AKIN:

I thought that was—what's the engine? About five? Or is it 10? What was the engine, the central component? What was it? I forgot.

TRAUTMAN:

The center barrel?

AKIN:

Yes.

TRAUTMAN:

Yes, sir. We already have $1.1 billion in the budget. It's already paid for to do 417 center barrels. So the good news is that's a risk mitigator against the challenge that we face in order to do the service life expansions. And as I said, most of the areas of interest are in the center barrel area.

AKIN:

It still costs money though whether it's—right?

TRAUTMAN:

No doubt, sir. You're exactly right, and we'll have to make wise case-by-case, bureau number-by-bureau number assessments and then decisions about how to expend our scarce resources.

AKIN:

If you had to do a center barrel and you had to do the wing sections, what are you talking actual dollars to do that on a plane?

TRAUTMAN:

Well, for example, if we already have the center barrel budgeted, if we went to AMARC as we're doing this year to get 24 wings out, we could do both of those for no additional dollars.

If we had to buy a center wing, I'm not sure what the current cost of that is. I'll have to defer to Admiral Architzel or to Admiral Myers.

ARCHITZEL:

Sir, I'll give Admiral Myers a second too, but so that the whole, what you have to do with the center barrel, that's Lot (ph) 17 and prior. If you did a center barrel replacement, which we funded in the first lot (ph), it would take about 6,000 hours.

That's for those number of Hornets and I think the number is somewhere around 400-plus numbers we have there. That's funded in the budget when we go forward. That runs at about, just for the center build, about $2.5 billion—$2.5 million excuse me. So if you would then add in...

AKIN:

OK. So $2.5 million for a center barrel and then you've got the—let's say you had to do the wings.

ARCHITZEL:

Well, the number I have is 2.5, and so we'll have to get back to you then. They're being quoted 4.5 here so—but the center if you hit the wing sections and the center fill, it's just about $5 million for those.

Now as General Trautman says, if you take wings off an existing aircraft, (inaudible) you still have to rework those wings. So I mean you're going to have some cost involved. You're absolutely right, sir.

If you want to look at where we go to get above to the 8,600 hours and you want to go past that to 10,000, we have a high-flying hour inspection. That inspection alone is running around—up more than $75 million.

That's—you get to the point where you can open, inspect and look at the airplanes to see what you have. And I agree with General Trautman, we don't know what we'll have in those airplanes. Probably in those where we designed into the center barrel on that Lot (ph) 18 and beyond, we should not expect to replace center barrels.

But in those areas that are fatigued hot points on the aircraft, we have to do—and we have to do extensive work or maybe, depending on what we have, some fatigue stress cracking or issues on the empanage or tail and then on top of that you also have to do system work on the airplane.

So that's I think—the quandary comes in is what is the exact cost of each aircraft, and you won't know until you open them up and find out what you have, sir.

AKIN:

Basically I think you've made it clear to me today that you don't really know what the fighter aircraft shortfall is. You're saying it's somewhere and I thought it was variable between two numbers. You said that you can't even count on that. When will you know for sure what your shortfall is? When will you actually have a number?

MYERS:

The shortfall right now is about 70 aircraft and that's based on the analysis that I brought to you.

TAYLOR:

Would the gentleman yield?

AKIN:

Yes, sir.

TAYLOR:

Seventy aircraft when, Admiral, give me your...

MYERS:

It peaks in the 2016 to 2017 timeframe.

TAYLOR:

OK. And when does your shortfall kick in, what year?

MYERS; Shortfall starts to develop in the mid- to later-2013 timeframe, now that's, Chairman and Congressman, that's based on the analysis that was brought last year. What's ongoing right now is, as General Trautman mentioned, we're in the second phase of a three-step process and we're refining the technical baseline and cost estimates to see exactly what we want that's left and what is in the realm of the possible.

What we knew last year was conceptually what the cost would be and a preliminary estimate on what it would take, and that's why we gave bookends. What we're starting to do now is better understand.

Last year when we came to you, the 8,600 and 10,000 numbers, the 69 and 129 was based on 295 aircraft being able to be SLEP'd. Right now the number is about 330 aircraft that we think might be candidates or are targeted to be SLEP'd, but through the summer we're going to have a lot more information and the second phase is set to complete next March.

We've got lots of work to do, and I want to make sure that everybody understands that it's not just the SLEPing of the aircraft that is our focus on mitigating the shortfall. It also means that we maintain our buy of the JSF. It means that we maintain the logistics support of the current fleet, and it also means that we maintain the current buy of our F/A -18E/Fs.

TAYLOR:

I appreciate the gentleman yielding, please continue.

AKIN:

Well that brief—I mean I've got a chart here that shows the number you're talking about 69 it says here for '17. I think that was the Navy, if I'm correct.

MYERS:

Yes, sir.

AKIN:

The total number is 125. And then I think the chart also says what happens if you can't get to the 10,000 hours and then that jumps it to 129 and 243. Have you seen this?

MYERS:

Yes, sir.

AKIN:

That's what I was pulling my numbers off of, was this chart.

MYERS:

Yes, sir, and...

AKIN:

Are these numbers still the best we know for the moment?

MYERS:

Those numbers have not been officially changed and updated. We are currently doing analysis and looking at assumptions that might impact those numbers and that's also ongoing. We're taking a look at...

AKIN:

And so the answer to when we'll know pretty sure is going to be a year or next March. Would that—would we have a pretty good handle on it at that point?

MYERS:

We will know a lot more through the summer, sir, and through the summer we'll also be able to better understand what the assumptions are if it will go into that model in terms of our productive ratio or the efficiencies that we used on the air wings that are not deployed.

There's a lot of things that go into the model besides just 44 and the Marine Corps requirement, and that's one of the things that the Marines and the U.S. Navy are currently undergoing is some understanding of ways that we can more efficiently get aircraft out to the warfighter.

TRAUTMAN:

Congressman, if I could add to Admiral Myers excellent answer about the variability. That chart that you held up last year is no longer relevant. It is not an accurate depiction at this point, and I can just give you the simplest example I can is if we have decided to buy additional F-35Bs and Cs compared to last year, which we have done, that changes all of those equations, just for example.

AKIN:

You could picture yourself in our shoes. We got this information from you in March, and I'm hearing you say that it's increasingly irrelevant right now. That's hard for us to get a number. I'm just saying when are we going to have something that we can understand what we're planning?

TRAUTMAN:

We owe you better and more current information. And in March, sir, that was the best that we had.

AKIN:

Right.

TRAUTMAN:

And we owe you the benefit of understanding what we think the future is going to hold in terms of F-35 production and in terms of the ongoing SLAP [Service Life Assessment Program] and SLEP analysis.

AKIN:

So are you saying then at the end of this summer you think we're going to have some pretty reliable numbers? Or is it going to be March of next year? I mean where are we going to be within plus or minus 10 percent on the number?

TRAUTMAN:

I'll have to get back to you, sir, and take that back to our leadership not only in the fleet, but also in the Systems Command to make sure that we get you...

AKIN:

Well, we're trying to put budgets together. We've got to have something to work with. Thank you very much.

TRAUTMAN:

Yes, sir.

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