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HEARING
ON
NATIONAL DEFENSE AUTHORIZATION ACT
FOR FISCAL YEAR 2017
AND
OVERSIGHT OF PREVIOUSLY AUTHORIZED
PROGRAMS
BEFORE THE
COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED FOURTEENTH CONGRESS
SECOND SESSION
—
SUBCOMMITTEE ON SEAPOWER AND
PROJECTION FORCES HEARING
ON
**AIR FORCE PROJECTION FORCES
AVIATION PROGRAMS AND CAPABILITIES
FOR FISCAL YEAR 2017**
—

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**AIR FORCE PROJECTION FORCES AVIATION PROGRAMS
AND CAPABILITIES FOR FISCAL YEAR 2017**

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES,
Washington, DC, Tuesday, March 1, 2016.

The subcommittee met, pursuant to call, at 1:03 p.m., in room 2212, Rayburn House Office Building, Hon. J. Randy Forbes (chairman of the subcommittee) presiding.

OPENING STATEMENT OF HON. J. RANDY FORBES, A REPRESENTATIVE FROM VIRGINIA, CHAIRMAN, SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES

Mr. FORBES. Good afternoon. Today, the subcommittee convenes to receive testimony on the fiscal year 2017 Air Force budget request, regarding bomber, tanker, and airlift acquisition programs. The distinguished panel of Air Force leaders testifying before us are Lieutenant General Mike Holmes, Air Force Deputy Chief of Staff for Strategic Plans and Requirements, and Lieutenant General Arnold W. Bunch, Jr., United States Air Force Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition.

Gentlemen, we thank you both for your service to our country and for taking the time to be with us today. The fiscal year 2017 budget request for Air Force projection forces is a good step forward to support our national defense.

I am pleased to see continued investment in recapitalizing the aging bomber and air refueling fleets with the critically needed Long Range Strike Bomber [LRS-B], recently designated the B-21, and the KC-46A tanker.

The budget also takes some steps to modernize the legacy C-130H tactical airlift fleet. That said, I continue to be concerned about the ability of our military to properly provide for our Nation's defense at the proposed fiscal year 2017 budget levels.

As I and many of the members of this subcommittee indicated in a letter to the chairman of the Budget Committee, this year's budget request reduced investment in critical force structure and modernization programs by approximately \$18 billion.

Specifically, I am concerned about the implications of delaying the incremental replacement of the C-130H fleet and the proposed reduction of 27 C-130s. The Air Force has previously assessed that there is moderate risk with reduced C-130 force structure, and another reduction further places our national security at even greater risk.

It seems to me that the budget request will result in a tactical airlift fleet that is smaller and older, a dangerous combination. The Air Force budget rollout indicated “the Air Force is one of the smallest, busiest, and oldest and least ready fleets in our history.”

It is my firm conviction, in light of the higher-end threats posed by China, Russia, Iran, and North Korea, that the Air Force have the resources it needs to fully support—and if possible accelerate—critical recapitalization programs; to include purchasing additional aircraft with each dollar saved, if the war fighting requirements demand it.

With regards to bombers, last week the Air Force designated the Long Range Strike Bomber as the B-21 bomber. I fully support this critical program and am pleased to see that we are, once again, moving forward on this new platform, which will be needed for projecting power over long distances and into denied environments.

With regard to tankers, I am pleased to see that the KC-46A program appears to be on track after overcoming some initial setbacks and is continuing to execute a highly compressed test and certification schedule that has little room for error. I look forward to hearing your thoughts on this program, and whether or not the first 18 aircraft will be delivered in time to meet the August 2017 contract deadline.

Lastly, I am concerned that this budget fails to provide the resources needed to procure the avionics upgrades needed to ensure that the entire fleet of tankers, airlifters, and bombers are able to cooperate safely in compliance with the FAA [Federal Aviation Administration] mandated next-generation air traffic management standards by January 1, 2020.

The civilian aviation sector is rapidly moving toward compliance, and I am concerned that our military aircraft could be shut out of the airspace they need for transit and training.

In sum, while I am pleased that the Air Force fiscal year 2017 budget request makes up some lost ground over last year, I am concerned that the proposed budget forces the Air Force and its sister services to make false choices between capability, capacity, and safety, when the undeniable reality is that our military needs all of the above.

I firmly believe that what this subcommittee and the rest of Congress does about national defense and military readiness will be a defining issue. I firmly believe that we need a strong Air Force, equipped with the most capable aircraft that enable our men and women to carry out their missions effectively and safely.

To do this, we need leadership in national security. We need an unambiguous declaration that our national security is our pre-eminent responsibility.

Once again, I want to thank our witnesses for participating in our hearing this afternoon. And I look forward to discussing these important topics.

And, with that, I turn to my good friend and colleague, the ranking member of the subcommittee, Joe Courtney.

[The prepared statement of Mr. Forbes can be found in the Appendix on page 27.]

**STATEMENT OF HON. JOE COURTNEY, A REPRESENTATIVE
FROM CONNECTICUT, RANKING MEMBER, SUBCOMMITTEE
ON SEAPOWER AND PROJECTION FORCES**

Mr. COURTNEY. Thank you, Mr. Chairman. Thank you for holding this hearing on the 2017 Air Force budget request for projection forces program, under the jurisdiction of our subcommittee. And thank you, as well, to our distinguished witnesses that are here today.

The tankers, bombers, and airlift programs that fall under the projection forces side of our panel's oversight serve as the backbone of our Nation's ability to conduct operations and preserve our Nation's interests around the world.

As we know all too well, however, they all share the common enemy of age. The tankers and bombers in service today are largely legacy aircraft that, in most cases, are much older than the airmen and women who fly them.

As we have heard repeatedly in our hearings over the last year, the need to modernize and recapitalize these aircraft and their capabilities is increasingly critical. Rapidly improving A2/AD [anti-access/area denial] capabilities, long-range weapons, and sensing technologies make upgrading and replacing our legacy fleets that much more important.

In order to meet these challenges, we must make the right investments today to ensure that we stay ahead of these trends. In my view, the 2017 budget we are considering here today makes important investments toward this goal and, on the whole, moves us in the right direction.

Most notably, the budget continues to reflect the high strategic priority placed on two critical recapitalization programs, the KC-46A Pegasus tanker and the newly designated B-21 Long Range Strike Bomber.

Both programs have recently seen important milestones in their progress. For example, a KC-46A successfully conducted an in-flight refueling of an F/A-18 Hornet last month, making the aircraft's first use of the tanker's hose and drogue system.

And the B-21 bomber recently saw the restart of the program, following the conclusion of a protest of the contract award. Together, these developments show continued progress toward rebuilding the essential backbone of our force projection capabilities. And I look forward to an update on the status of these two efforts.

An ongoing area of concern for me is the modernization of our C-130H fleet. The "Flying Yankees" of the 103d Airlift Wing in Connecticut have largely completed their transition to their new C-130H flying mission.

This mission, which ends several years of uncertainty about losing their A-10 mission in BRAC [Base Realignment and Closure] 2005, provides a sustainable and relevant role for our State and an important mobility capability for our Nation.

Until last year, Congress and the Air Force had struggled to move forward on a clear plan to modernize our C-130Hs. Working with Air Force officials that are here, General Holmes, in particular, we included language in the 2016 NDAA [National Defense Authorization Act] to allow the service to move forward with a two-part modernization program to meet near-term FAA and inter-

national airspace mandates that go into effect in 2020 and then focus on the longer-term upgrades, to ensure the viability of the fleet well into the future.

I am pleased that the budget accelerates both modernization efforts, known as AMP 1 [Avionics Modernization Program] and AMP 2, for the C-130H fleet. It is my understanding that, through this budget, the Air Force intends to have most, if not all, of the fleet airspace compliant by the 2020 deadline.

Further, the budget outlines a plan to install 42 Increment 2 upgrades by 2021 and to the rest of the fleet by 2028. I look forward to hearing from the witnesses about ways in which the Air Force, with the support of Congress, can continue to accelerate Increment 2 to meet the enduring need for these workhorses of our Nation's airlift.

Finally, over the last year, Congress has made meaningful and bipartisan progress in limiting the impact of sequestration and the Budget Control Act [BCA]. While partially limiting the across-the-board cuts in 2016 and 2017 was important, the fact remains that our Air Force, like the military at large, remains handcuffed by sequestration in 2018 and beyond.

Ever since passage of the Bipartisan Budget Act [BBA] last fall, several world events have further demonstrated just how important it is for all of us on this committee and our colleagues to work on both sides of the aisle in Congress to come together to make the compromises needed to protect our security and support the needs of our Nation.

I look forward to hearing from our witnesses and our colleagues on the subcommittee.

And, Mr. Chairman, I yield back.

[The prepared statement of Mr. Courtney can be found in the Appendix on page 29.]

Mr. FORBES. Thank you, Mr. Courtney.

And as we indicated at the beginning, we are delighted to have both of you here, and we are looking forward to your testimony. General Bunch, it is my understanding that you are going to go first. So we are looking forward to your remarks. And just so both of you know, we are going to put your written statement in the record in its entirety. So feel free to reference it any way that you may feel appropriate to do.

STATEMENT OF LT GEN ARNOLD W. BUNCH, JR., USAF, MILITARY DEPUTY, OFFICE OF THE ASSISTANT SECRETARY OF THE AIR FORCE FOR ACQUISITION

General BUNCH. Thank you, Chairman Forbes, Ranking Member Courtney, and other distinguished members for this opportunity to address the subcommittee. I greatly appreciate the work you do and the support you provide the warfighter in the United States Air Force.

General Holmes and I did prepare a joint statement, and you have submitted it. I will not go through that here. I will make a few opening remarks, and then I will turn it over to General Holmes.

We are here to discuss the fiscal year 2017 budget we submitted and some of the tough choices we made, as we finalized the budget.

While the members of our Air Force are razor sharp, dependable, and ready as ever, we cannot say the same for many of our mainstay weapons systems.

The United States Air Force has, essentially, been in a wartime posture since 1991. This rate of deployment and constant readiness, spanning a quarter century, has taken its toll. You have heard the phrases used to describe our aircraft so many times that they almost become clichés.

Twenty-one aircraft fleets that would qualify for antique license plates in the State of Virginia, many pilots flying aircraft older than they are, and, in some cases, third-generation pilots flying the same aircraft as their grandfather flew.

In order to maintain an edge against our adversaries, as well as to reverse the trend of the increasing budget drain of operations and sustainment cost for these aging platforms, the Air Force must modernize.

The Air Force has several competing choices, as we continue to modernize and recapitalize our aging fleets, while ensuring an appropriate level of readiness to support today's conflicts. It is imperative we get this balance right to ensure we not only win today's fight, but also stand ready to address tomorrow's threats.

Our bomber, tanker, and mobility fleets are the lynchpins of the Air Force's ability to provide global reach and global power in support of the national military strategy and the combatant commanders.

Two of our top priority recapitalization efforts, B-21 and KC-46A, provide vital future modernized capabilities. We must keep these programs, as well as other modernization efforts, on track to deliver these capabilities. And we must execute all of these efforts in the most cost-effective manner possible, given the budget constraints we live within.

Again, I thank you for this opportunity to testify before the subcommittee, and I look forward to answering your questions. I will stop at this point and allow General Holmes to provide his comments.

[The joint prepared statement of General Bunch and General Holmes can be found in the Appendix on page 31.]

Mr. FORBES. General Holmes, we welcome your remarks.

**STATEMENT OF LT GEN JAMES M. "MIKE" HOLMES, USAF,
DEPUTY CHIEF OF STAFF FOR STRATEGIC PLANS AND RE-
QUIREMENTS, HEADQUARTERS U.S. AIR FORCE**

General HOLMES. Thank you, Chairman Forbes, Ranking Member Courtney, ladies and gentlemen of the committee, and thank you for your continued support of the United States Air Force, our airmen, and their families.

My good friend, General Bunch, and I grew up about 45 minutes apart. And the people of east Tennessee are either very proud or very surprised to see us here in front of you today.

[Laughter.]

General HOLMES. So thanks for giving us the opportunity.

Mr. FORBES. I am sure they are very proud.

General HOLMES. So thanks for your continued support. To begin the discussion of our 2017 President's budget, it is important to

frame the environment in which our decisions were made. Today's demand for Air Force capabilities continues to grow, as airmen provide America with unmatched global vigilance, global reach, and global power.

Airmen are engaged defending U.S. interests around the globe. Every day, approximately 200,000 airmen directly support combatant commander requirements in response to growing challenges created by an increasingly aggressive Russia, an increasingly capable China, an unpredictable North Korea, and the malign influence of Iran, all in addition to the ever-present counterterrorism mission in the Middle East and around the world.

While our forces have been heavily engaged in deterring or addressing these operational challenges, our adversaries have taken the opportunity to invest in and advance their own capabilities.

For the first time in decades, our adversaries are closing in on our capability advantages. Our efforts to address these increasing challenges have been stymied by reduced and unpredictable budgets.

The limited resources available, since the Budget Control Act of 2011, have hampered our ability to balance readiness, capability, and capacity. The 2017 President's budget trades modernization in the Air Force, particularly F-35 production rate and fourth-generation fighter modifications, but also some C-130J procurement, to sustain the capacity necessary to meet the combatant commanders' urgent needs for air, space, and cyber forces and begin recovering readiness levels after 25 years of continuous combat.

And while we are very grateful for the additional resources the Bipartisan Budget Act provides compared to Budget Control Act caps, we continue to face difficult choices between capacity, readiness, and modernization.

This President's budget works to make every BBA dollar count, by aligning our force structure with Defense Strategic Guidance and making down payments on the Air Force's 30-year strategy, ensuring a credible nuclear deterrent and beginning the recapitalization of our aging nuclear force structure, advancing space and cyber capabilities, maintaining the conventional force capacity required to support current operations, increasing our end strength to begin addressing key personnel shortfalls, and investing in the research and development required to regain our capability advantage in the future.

We continue to fund our top three procurement programs, the B-21, the KC-46A tanker, and the F-35 fifth-generation fighter, although, as I said, we were unable to procure F-35s at previously planned rates.

Together, our nuclear and conventional bombers, in concert with our tanker and mobility aircraft, ensure the global reach and global power required to provide effective deterrents. But both our bomber and mobility fleets are aging, as General Bunch said.

And, in fact, the average age of the B-52 strategic bomber and the KC-135 tanker make them both about as old as I am. And my staff pointed out that I qualified for AARP [American Association of Retired Persons] membership several years ago.

To that end, this budget funds nearly \$20 billion across the FYDP [Future Years Defense Program] for procurement and \$4.2

billion across the FYDP in research, development, and technology for our mobility force.

To support our bomber force, it funds \$2.3 billion across the FYDP for procurement, and \$16.2 billion across the FYDP in research, development, and technology, with most of that \$16.2 billion going into the B-21 program in its early years.

We will continue to invest in and recapitalize these important aircraft. However, we need your support in the form of stable and predictable budgets, if we are going to build the Air Force that ensures the joint force can continue to deter, deny, and decisively defeat any enemy that threatens the United States or our national interests.

Any return to sequestration-level funding will force us to chase short-term requirements at the expense of long-term strategic planning, modernization, and readiness. And our budget problems will only get worse between now and the end of this 5-year plan.

As Deputy Secretary of Defense Work said this week, the Department will need about \$18 billion a year between 2021 and 2035 for nuclear modernization. And that comes at the same time as a huge bow wave of spending required to recapitalize our conventional ships and aircraft.

We look forward to working with you in the years to come to find a solution to that shortfall. We thank you for your kind attention and continued support of our Air Force. And, along with General Bunch, I look forward to your questions.

[The joint prepared statement of General Holmes and General Bunch can be found in the Appendix on page 31.]

Mr. FORBES. General Holmes, thank you.

And, General Bunch, we appreciate your testimony, as well.

We had the Navy testify and present their 2017 budget to us just a short while ago. And we asked them a question we are going to ask you both now. Is this a budget whereby you looked at the threats around the globe and said this is the budget we need to defend and protect the United States from those threats, or is this a budget where you looked at the dollars you had been allocated and said, this is the best resources or the best utilization of the dollars we have been allocated?

The Navy answered that it was the latter. If we pose that question to you, what would your response be to that?

General HOLMES. Thank you, Chairman Forbes. I would say our budget was driven by strategy, but it is budget constrained. We had to make hard choices within the programs that our strategy would drive.

We balanced capacity, capability, and readiness, but, as I spoke, we traded capability to maintain the capacity required for today's threats and to try to move out to regain the readiness that we have given up in 25 years of combat. So it is based on strategy, but it is certainly influenced by the budget limits.

Mr. FORBES. Outside experts, General Holmes, have said that the Air Force needs to buy 170 to 200 new bombers, whereas the Air Force says it is planning to purchase only 100 of the next-generation B-21 stealth aircraft.

What risk does the Nation bear if Congress supports the current program of record? Is 100 Long Range Strike Bombers a COCOM

[combatant command] requirement, needed to fulfill operational plans, or is it a budget-driven affordable number?

General HOLMES. Thank you, Chairman Forbes. You know, our current bomber fleet is just over 150 bombers of the 3 types, of which 96 of those are combat coded. Historically, as the Air Force has looked over the last decade or so at what our numbers should be for the bomber force, we usually end up with a number of between 150 and 200.

And, last week, General Rand spoke of needing somewhere between 170 and 200 bombers total in the fleet. The fleet size of 100 B-21s is appropriate and ensures sustained high-end conventional operations, while also supporting the nuclear triad.

And it is underpinned by extensive analysis and conversations with the COCOMs to make sure that the B-21 fleet will have sufficient numbers to provide the weapons and sensors at range, which are the hard part for us in anti-access and area denial environments.

You have to have enough airplanes to be able to keep enough forward to be able to make a difference. And we think 100 is the right number there. But we also know that our future fleet will be composed of B-21s and some portion of our legacy fleet for quite a while to come. And we will have time to readdress exactly what that right number is, whether it would be additional B-21s or whether it would be some other platform at the end of that buy. Thank you.

Mr. FORBES. So, based on your earlier response that this budget was budget constrained, your response would be that this 100 number is not based upon budget restraints, but rather it is driven by strategy and our COCOM requirements?

General HOLMES. Yes, sir. I believe this number is. But to serve the country well into the future, we also need an appropriate fleet size that won't fiscally overcommit the Air Force within all the other requirements that we have to meet.

So the 100 was our requirement. And, again, we will have to take a look at it in the years to come and see if that requirement changes.

Mr. FORBES. Okay. For both of you gentlemen, DOD [Department of Defense] released a report in June 2015 entitled, "Plan for Modernization or Replacement of Digital Avionic Equipment." The report shows that the Air Force, unlike the Navy and the Army, has not made the investments needed to ensure its aircraft meet the FAA January 1, 2020, ADS-B [Automatic Dependent Surveillance—Broadcast] mandate.

Why is this the case? And how does the Air Force intend to operate after January 1, 2020? If FAA does not provide a waiver to their mandate, what are the fiscal and operational implications for expediting compliance?

General HOLMES. Thanks, again, Mr. Chairman. So, if you look at the Air Force budget since 2012, right after the passage of the BCA, if you compare our budget to the 2012 President's budget, we have lost about \$70 billion in buying power. If you compare it to the enacted 2012 budget and the totals that were predicted at that point, we have lost about \$40 billion in buying power.

So when we had to find a place to absorb that \$40 billion, we looked at this bill. The total bill for the Department is estimated at about \$5.6 billion to equip all DOD aircraft with the required equipment.

The Air Force's portion of that bill is approximately \$4.4 billion, so the lion's share of that bill. And, right now, we are about \$1.2 billion difference in between what we need to accomplish the mandate and what we have committed in our budget.

We have prioritized the airplanes that will be in the densest airspace first. So we prioritized our efforts in our mobility aircraft, and we won't make 100 percent of that requirement by 2020, but with your help, we were able to get to the C-130Hs. And we will work through those airplanes at the front end of the package.

Some of our airplanes, there may not be a cost-affordable solution to implement it, things like the F-22. And we will have to accept some risk in being able to use the most crowded part of national or international airspace.

But the DOD made clear, when the FAA passed the rule, that we would need some kind of accommodation. And, although the FAA didn't apply a specific DOD waiver, the rule does provide for procedures for an aircraft that doesn't meet the ADS-B Out performance requirements to obtain an authorized deviation to operate in that airspace.

So we will be able to operate. We will be able to go where the Nation needs us to go. But we will be accepting some risk and delays, or in extra fuel in some of the densest airspace.

Mr. FORBES. Does the Department of Defense need a waiver?

General HOLMES. We have begun to work that process with the FAA. The first waiver we provided was for the F-22, and we expect that we will need, at least, some kind of memorandum of agreement with the FAA prior to 2020.

Mr. FORBES. And, again, if you would explain for the subcommittee exactly what happens if you don't get that waiver? And, for the planes that are not compliant, what would they have to do? What would that mean?

General HOLMES. So if there is primary radar in that area, Mr. Chairman, my understanding is that the FAA will have the ability to work to bring our airplanes through that area. As the FAA shifts to new technology to monitor, there may be some areas that don't have primary radar. And, in those cases, controllers, based on their workload, will make adjustments to sequence us through.

As we work through our C-130 upgrade plan, we were, fortunately, able to accelerate Increment 1 to where we will get all of those C-130Hs upgraded. And, as we work through the rest of our fleets, we will prioritize the ones that are in the busiest traffic areas in the United States that would face the most limitation.

But we currently have parts of our fleet that don't meet all of the FAA requirements to operate in portions of the airspace. For example, our fighter fleet, the F-15 that I last flew, you can't get above a certain altitude in FAA airspace. You can't file a flight plan above it, but controllers will work you above it.

And, so, we accept some delay, and we accept some higher fuel cost to be able to move airplanes. But we will be able to move the airplanes where we need to go to serve the country, but with some

delay and with some higher fuel costs, if we have to drive around an area to get where we need to go.

Mr. FORBES. My last question, the administration has proposed to reduce the overall inventory of C-130s by another 27 aircraft and has proposed to delay the planned recapitalization of the C-130 fleet. Previously, the Air Force indicated that they had moderate risk in tactical airlift capacity.

In my estimation, the budget request will make our tactical airlift fleet smaller and older. Can you provide an assessment of how the Air Force intends to support, with tactical airlift, if Congress adopts the budget proposals? Could you, General, hit your mic?

General HOLMES. I apologize. Thank you.

Mr. FORBES. We all do that.

General HOLMES. Well, thank you, sir, for your patience. In 2016, we brought a plan forward that would reduce our C-130 fleet down to a combined size of 300. It takes place over time, about eight airplanes a year, as we work through this plan.

The mission capabilities assessment study that was conducted by the Department says that we need 248 C-130s to meet the war-fighting need. And, then, they estimated somewhere between 20 and 70 aircraft above that. So that would be somewhere between about 270 or 320.

We believe the position of 300 is a good position in that risk. And they estimated those extra requirements would be required to do support for civil authorities or other things required outside of the war plans, in a worst-case scenario.

We estimate that that 300 is a good balance in risk, if you compare it to the risk that we are taking in other fleets and across the other parts of the Air Force. And we think a fleet of 275 strategic airlifters built into 479 tankers and 300 tactical airlifters will ensure that we will be able to meet the Nation's mobility needs by making use of that entire fleet.

Mr. FORBES. Thank you. Mr. Courtney is recognized for any questions he may have.

Mr. COURTNEY. Thank you, Mr. Chairman. And, again, just at the outset, General Holmes, I just want to again publicly thank you for working with the committee last year as we have an, obviously, high degree of member interest, in terms of this issue of avionics modernization. And your intervention and, you know, just common sense really helped us get to a good resolution. So, thank you for that.

And just to maybe get a quick update on the record, again, you have been pretty positive about your confidence level that we are going to hit that 2020 requirement. I mean, is there a contracting process that is begun? You know, is there enough funds in the budget, in terms of, you know, what you are projecting to accomplish that goal?

General BUNCH. We don't see, at this time, sir, we don't see anything that would preclude us from making that date. Increment 1 is fully funded for the 172 aircraft, and we are tracking that. We see no roadblocks to making that date, at this time.

Mr. COURTNEY. That is good news. And, with regards to Increment 2, again, it looks like the budget that was submitted this year, you moved up the compliance to 2028, which, last year, I

think we were out in the 2030s or 2040s or something, so. So, obviously, that is positive movement.

So what factors, you know, are informing the current installation profile for Increment 2? Is that rate dictated by industrial-based concerns, or is it funding related?

General BUNCH. Sir, we have laid in to get all of them by the mandate. And, so, we think we have met the requirements, and now we are building a plan for which tails we are going to go first. And we are looking at that in a holistic look, as to the age of the fleet and how we go forward.

General HOLMES. And, if I could, Ranking Member Courtney, I would add that, as you look at how fast you are able to complete those Increment 2 kits, one of the considerations is how many airplanes can you take out of use at a time?

And, so, we think we have built it at a rate that we can manage that risk, by taking the airplanes out of use to be able to do that lengthier Increment 2 modification, against our need to get it done as fast as we can.

And, so, we think that schedule is about the right balance of risk between delaying the modernization and making sure that we have enough airplanes available out of that total fleet of 300 to meet the requirement.

Mr. COURTNEY. Great. Then, can I just have one other question, which is about, again, the C-130s, which is the issue of propulsion and propeller upgrades for the C-130s. You know, Congress, obviously, has shown a pretty clear and continued interest in C-130H engine and prop [propulsion/propeller] upgrades that have provided increased efficiency.

What efforts is the Air Force making to program funding to ensure that the entire fleet receives those types of improvements?

General BUNCH. So, right now, sir, and thank you for the question, what the Air Force is doing is we have started an operational assessment. And we are doing that operational utility evaluation of the three propulsion modernization efforts that we had started. We had done each of those incrementally or individually, but we hadn't done those synchronized together in one thing.

So, we are now doing an operation or evaluation with the Air National Guard and the Air Force Reserve Test Center at Tucson. That will complete in July of 2017. And we get through that, we look at the criteria and how it is scored out. Then we will make a determination of whether we continue to fill that across the fleet or how we would go forward.

Mr. FORBES. The gentlelady from Missouri, Mrs. Hartzler, is recognized for 5 minutes.

Mrs. HARTZLER. Thank you. Thank you, Mr. Chairman. And I would have to say, General, that the citizens of Tennessee, no doubt, are very proud of both of you. So quite an accomplishment. Appreciate what you do.

I wanted to follow up, actually, on what the ranking member was questioning about the propellers and the engines. Can you, just going forward, tell us about how fuel efficiency would be impacted by the investment in propeller and engine modernizations?

General BUNCH. Ma'am, I do not have a number in front of me. I know that is one of the factors that we will weigh out in the oper-

ational evaluation, will be to determine how much fuel savings there are, so that we could do the cost capability analysis, but I do not have a number on me. I will take that for the record.

[The information referred to can be found in the Appendix on page 53.]

Mrs. HARTZLER. Okay. Great. But that is very important, and we would be interested to see what your evaluation comes up with in July. As far as the LRS-B program, can you explain the \$3.5 billion reduction across the FYDP for the program?

General BUNCH. Yes, ma'am. The way the program was set up, we had estimated our costs by using a program office estimate. And we had done that up until the point that we got an independent cost estimate by an outside agency from the Air Force Cost—the AFCAA [Air Force Cost Analysis Agency].

And we also had one done by CAPE [Office of Cost Assessment and Program Evaluation] in OSD [Office of the Secretary of Defense]. And the result of that was the new independent cost assessment that we funded to. It was lower than the program office estimate. And the difference across the FYDP was over \$3 billion.

And then we redistributed those dollars out to address other Air Force priorities, ma'am. That is how the number came.

Mrs. HARTZLER. Well, it is refreshing to see that the price comes in lower than we originally expected. That sounds good. And is the C-130H AMP Increment 1 and 2 fully funded to ensure the long-term viability of tactical airlift?

General BUNCH. Yes, ma'am.

Mrs. HARTZLER. Good. All right. Air Force rollup briefing states that the fiscal year 2017 funding gap delays the incremental replacement of the C-130H fleet. So can you elaborate on the impact of this delay, and please explain the risk associated with this budget request?

General HOLMES. Yes, ma'am. If you will allow me, I will answer that part. So we had eight C-130s in last year's program that were beyond the multi-year buy. And this program that we have brought forward this year eliminates those eight C-130s.

And so we would stop at the end of our program multi-year buy. We will do the AMP Inc [Increment] 1 and Inc 2 upgrade to the remaining C-130Hs, and we believe that will give us a fleet of 300 aircraft that are safe, that are compliant, and that are modernized to support them through their life.

In a different budget position, you know, we would love to be able to recapitalize some of the older C-130Hs. At the budget level that we are at now, we can't fit it into the program. But we believe we will provide 300 again, safe, compliant, and modernized airplanes.

Mrs. HARTZLER. And the last question. We appreciate the amount of money that is put in this budget for the defense management system of the B-2. Could you kind of explain this system and how important it is that we get this fully funded?

General BUNCH. Yes, ma'am. It is very vital for the B-2 to continue to have the ability to operate in an anti-access/area denial environment. And it modernizes it to protect that aircraft as the threat has advanced, which it is, because the world has watched as airpower has dominated for many years now.

And they have changed the threats to get us to further out, and they have advanced. And this is just another step in the game to improve the defensive management system so that we can continue operating in an anti-access/area denial environment.

Mrs. HARTZLER. Well, we appreciate your support of that and all the platforms that our men and women in the Air Force need. So, thank you.

I yield back.

Mr. FORBES. And, General, can I just make sure we have corrected, or that you have an opportunity to correct if necessary. You said the program was fully funded. It is my understanding that the AMP 1 program is partially funded and the AMP 2 program is not funded through the FYDP. Am I incorrect on that?

General HOLMES. Sir, I believe that the AMP Inc 1 is completely funded, at last in 2017 and out. We may have to come back and talk about moving some 2016 dollars, but I believe Inc 1 is completely funded.

Inc 2 is funded within this FYDP. And in the 20-year plan that I am responsible to build for the Air Force, we have the money laid out beyond the FYDP to get us through that 2028 date, which is outside of this FYDP.

Mr. FORBES. The gentlelady from Guam is recognized for 5 minutes.

Ms. BORDALLO. Thank you very much, Mr. Chairman, and thank you for calling this hearing.

General Holmes and General Bunch, thank you very much for your service to our country. I guess either one of you might be able to answer this. I asked this question at a previous hearing, but I will repeat it again.

First, I would like to voice my appreciation for the Air Force's diligent work in moving forward with the acquisition process of the Long Range Strike Bomber. The capabilities that this platform will provide are extremely, extremely necessary to maintain the defense of our Nation and our allies.

So, General Bunch, I will begin with you. There has been recent criticism from one of our Senators against the Air Force's proposed use of cost-plus during the early stages of the acquisition program for the Long Range Strike Bomber.

Now, can you please explain why the Air Force prefers a blended, cost-plus, fixed-price approach for this program and what advantages, General, it provides, in this instance, over the traditional acquisition method?

General BUNCH. Well, thank you, ma'am. That is a topic of interest, and I am glad that I get the opportunity to try to address it. Let me start with, there is no one-size-fits-all when it comes to deciding what kind of a contract you want to use on an acquisition program. There are various factors that are weighed out.

On this one, we carefully considered the full spectrum of contract options before a decision was made by the Milestone Decision Authority to go forward with a cost-plus for the engineering, manufacturing, and development.

In reality, over 70% of the program, as it is laid out today, is actually on a fixed-price type contract. It is only the part that is in the EMD [engineering and manufacturing development] phase, is

the only part, right now, that is in a cost-plus environment, but the vast majority of it is in a fixed price.

The key factors that went into the decision to go forward with a cost-plus contract were the risk involved. And when there is technical risk and you don't really—you have never built something before, there is a risk that is out there, and a cost-plus environment is more frequently used in that case.

In this case, we had mature technologies to meet the requirement, and that was good. But now we have to integrate all of those mature technologies together, which carries risk, and we have to build a never-before-built, low-observable, penetrating bomber and integrate those on it. Those are the main technical risk areas that we have focused on.

The other one that you focus on and that we consider is, can the contractor who is doing this kind of work absorb a loss if one were to occur. The example many point to right now is the KC-46 program.

The KC-46 program is gone beyond what the Air Force cap, in the expenses, but Boeing continues to do that and continue that work, because they have a commercial line that they can utilize and they can continue to get benefits from. And the other piece they can do is they can get foreign military sales.

Commercialization of a Long Range Strike Bomber and foreign military sales are not two things that we are looking at. So the ability of any contractor that took this contract to be able to absorb that and not sell it out, that wouldn't be feasible.

And there are many examples that you can go back and look at where we have tried to do fixed-price development programs on new and emerging technologies, and many of those cases have not been very successful. But that is the reason we went down that path.

We realize that one of the big concerns that people have with this strategy is the need to control cost growth, and that is a focus area that we have had from the very beginning of the program.

We have used mature technologies, so we are not worried about developing additional. It is not—you are not developing a system along with the platform, you are just developing the platform. So we have limited some of the risk there. We have an independent cost assessment. It was done outside the program office, and we funded that independent cost assessment, in accordance with the law.

And then, the other one we have on this program are stable requirements. Stable requirements and requirements control and funding with a good cost assessment from the beginning, studies have shown are the two main ways to control, two of the major ways to control, cost growth. So we are stable on our requirements and we feel like we are in a good position for starting the program.

The other piece that we have implemented here is, our requirements control officer for the program is our chief. He has made it crystal clear the requirements are the requirements and no one else is going to change those. So we have a tight control on those, as well.

The final thing I would say we have done to control cost growth is that we have structured the contract with an incentive structure

that incentivizes the contractor in the way we want. If they do not control cost and they do not control schedule, they will, in the end, not get any fee. So we have structured it in a manner to control those cost growths, and we know this is going to be a topic of more discussion, ma'am.

Ms. BORDALLO. Well, thank you very much, General. It answers my question.

And I yield back.

Mr. FORBES. The gentlelady from Indiana is recognized for 5 minutes.

Mrs. WALORSKI. Thank you, Mr. Chairman, and thank you, gentlemen, for being here.

General Bunch, I have a question. What is your assessment of whether Boeing will meet its contractual obligations to deliver 18 KC-46As by August of 2017?

General BUNCH. So, ma'am, we are still cautiously optimistic. Boeing still assesses that they can meet it. They are committed to that date. They have put additional resources to make that date, but we have no schedule margin. And if I am asked why I am cautiously optimistic, we are still early in a test program that we talked about.

We have been successful with meeting our milestone C criteria for an F-16, for the F-18, which was discussed, and also with the KC-46 receiving gas as a refueler. So we have made progress, but we still have a lot of progress to go, ma'am.

Mrs. WALORSKI. I appreciate it. And then, also, I represent Grissom Air Reserve in Indiana, where many of those KC-135s are still successfully flying, thanks to an incredible work of the airmen and airwomen there. So I appreciate your remarks earlier on how old some of these aircraft are.

I am concerned, though, about the program delays impact on the amount of time those aircraft will need to stay flying. Can you provide your outlook on the program more broadly?

General BUNCH. On the KC-46 program, ma'am?

Mrs. WALORSKI. On the KC-135s and the KC-46 program.

General BUNCH. For the KC-135s, ma'am, we do have investment money laid in. We are finishing up the Block 45 upgrade, which is to improve their maintainability and their reliability into more modernized cockpits. And we are counting on those being in the inventory for quite some time.

We have also done the FAA-mandated things, or will have that done by 2020 so that we meet that requirement and they will be able to continue to operate. So on the 135 front, we are continuing to take an older generation of aircraft, older than myself, and continue to keep it flying and viable through investment, smart engineering, and teamwork with all parties involved.

On the KC-46, we are a little behind on when we were going to do some of the initial fielding. We have delayed about 6 months. The first two bases that we were going to field the aircraft at, that has been delayed because the test program was delayed.

And we have not been able to get the spec verification reviewed and accomplished, and it corresponds to that. The aircraft are still being built, so they can continue to make the RAA [required assets available] date. And they are on track to do that, but until we can

get enough of the test data and verify the performance, we can't accept those aircraft, and we can't put them out to the field.

So, the program is progressing. We have been delayed on the test program, and that is one we are watching very closely.

Mrs. WALORSKI. I appreciate it.

Thank you, Mr. Chairman. I yield back.

Mr. FORBES. The gentlelady from Florida, Ms. Graham, is recognized for 5 minutes.

Ms. GRAHAM. Thank you, Mr. Chairman. Good to see you both again. I had, actually, a different question, but something you just said just sparked—first of all, you are young. Very, very young. In terms of maintaining this aircraft, these aircraft, what is the maintenance, what is the process for maintenance that you follow?

One of the things that concern me, I represent Tyndall. And when I went to visit Tyndall one time, I had someone pull me aside and say, the challenges that they faced. And I am sorry if this question has already been asked, if I walked in—the challenges they face with just getting a part, in order to fly the F-22. What challenges, if any, do you all face with the maintenance of the, let me use, the Air Force projection forces? Thank you.

General BUNCH. Yes, ma'am. So, we face challenges on the older aircraft. There is no doubt about it. We are constantly fighting diminishing manufacturing sources and parts obsolescence. It is one that the program offices actually track, so they can determine where they can get parts.

There are certain ways that we will work together, and, in many of our efforts, we will identify where the trends are. And we will make investments in those from a supportability phase, so that we can modernize those components, as time goes forward.

So it is a risk that we run on all the older fleets. What we also find is that we don't know what we don't know sometimes. Sometimes, we will find things as we go into depot maintenance.

Sometimes we will find things out on the frontline that we didn't predict, simply because of the age of the fleet and how they have matured through the use and the extensive use that we have with the platforms.

Ms. GRAHAM. When you need a part, where do you go to get that part?

General BUNCH. The Air Force Sustainment Center, ma'am, runs our supply, and we also work with DLA [Defense Logistics Agency]. And they work through various sources to find those. Some parts for some of our fleet, we actually go to the boneyard, in some cases, and we will pull parts off of aircraft that have been retired for certain of the older aspects.

But the Air Force Sustainment Center is part of Air Force Materiel Command. They run our supply chain, and they are the ones that have to find out the ways to go get the parts and track those down so that we can keep the fleet flying.

Ms. GRAHAM. Great. Thank you. Now I am going to go to the question I was originally going to ask. The chairman has been so wonderful to provide us an opportunity to learn about what is the emphasis behind the budget requests that are in the new budget.

And I know there is different pressures that are on the military. Preaching to the choir, right? It is a Southern saying. But in your

opinion, which decisions stand out as something that you, from a budgetary restriction, as opposed to what we need to be focusing on, which is making sure we are making decisions in the best interest of our strategic needs?

General HOLMES. So, thank you, ma'am, and as we work to balance capability, capacity, and readiness, which is how we think that the way we provide forces to the combatant commanders, in this budget, at this level, we made choices to give up some future capability in order to minimize the risk now for the current fight that we are in.

So the particular items in this budget I would highlight would be the reduction in F-35s from our planned buy. And we were five short from where we had planned to be last year at this time. We are not able to fund all, what we call, fourth-generation mods, the modifications to our older fighter fleet that is required to keep them viable, as they fly longer into their service life, and then, also, make them useful in the increased threat environment.

So we want to upgrade radars. We want to upgrade the radar warning receivers. We want to add new computers to, particularly, the F-15 and the F-16. And we will get after those, but not at the rate that we would like to.

The chairman mentioned, we are reducing the C-130 recapitalization program. So the choices we made reduce our capability for the future, in order to provide capacity and readiness for today's fight.

Ms. GRAHAM. Thank you very much. And I appreciate your answers.

And I yield back, Mr. Chairman.

Mr. FORBES. The gentleman from Oklahoma is recognized for 5 minutes.

Mr. BRIDENSTINE. Thank you, Mr. Chairman. General Bunch, I just want to thank you for your commitment in the President's budget request for AMP 1 and AMP 2. I wanted to ask, is AMP 1 multiple contracts or a single contract covering all of AMP 1?

General BUNCH. So it depends on which exact phase we are talking about, sir. So the answer, I hate to say, it depends.

Mr. BRIDENSTINE. Okay.

General BUNCH. We are using small business for the integration piece of this, and then we are going to be competing the installations. And that will be something that small businesses and a variety of other organizations will be able to compete for. It is a mix.

Mr. BRIDENSTINE. So would the small business, that would be a sole-source kind of set-aside?

General BUNCH. I don't know if we do the set-aside on that, sir. I will take that for the record and get back to you exactly how we set that up. But I was informed it is a small business doing the integration.

[The information referred to can be found in the Appendix on page 53.]

Mr. BRIDENSTINE. So can you share with us when you plan to award AMP 1? You can get back—

General BUNCH. Give me one second, sir. Let me see if I got it on this chart, here. I do not.

Mr. BRIDENSTINE. Okay.

General BUNCH. So I will take it for the record.

[The information referred to can be found in the Appendix on page 53.]

Mr. BRIDENSTINE. Okay. That is good. And then, can you share if it will cover non-recurring engineering and installation, or both? Both, or one or the other, for AMP 1?

General BUNCH. So we fully funded the AMP 1 program to do everything we need to do, put it in the field.

Mr. BRIDENSTINE. Okay.

General BUNCH. And to meet the FAA mandate.

Mr. BRIDENSTINE. Okay. And for AMP 2, is the Air Force going to use non-developmental COTS, commercial-off-the-shelf, for AMP 2, or—

General BUNCH. AMP 2, we are still building the strategy, but we have done that in Increment 1, sir. And we look for those type of activities to try to reduce our cost and to keep a viable supply chain and be able to do that in the most cost-effective and efficient manner that we can.

Mr. BRIDENSTINE. Okay. And I know this is not really the topic of this hearing, but since I had you here, thought I would ask you a question that might be a little off topic. But I asked General Welsh about it yesterday, and I was hoping to maybe get some more clarity. And that was on the Combat Rescue Helicopter.

We have had reports that the Combat Rescue Helicopter is not going to be fielded for Guard units any earlier than 2027, which is 6 years after full-rate production begins. And I was wondering if there was justification for not fielding the Combat Rescue Helicopter concurrently in the Guard and in the Active Component?

General HOLMES. So in this case, Congressman, I will say, let me take that for the record for you and see. And come back and see if we have made a base-by-base plan yet. I am not aware that we have made a base-by-base plan yet, but I will come back to you and let you know.

[The information referred to can be found in the Appendix on page 53.]

Mr. BRIDENSTINE. Okay. Thank you, guys.

I will yield back.

Mr. FORBES. The gentleman from Washington, Mr. Larsen, is recognized for 5 minutes.

Mr. LARSEN. Thank you, Mr. Chairman. I would have questions on the K-46, but other than you all, the folks, good men and women on the line at Boeing, and me, we are all probably living and breathing it every day. And I know what I need to know on the 46. So I won't ask any more questions about that.

I do have a question, just one, Mr. Chairman, on subject matter in your testimony on the B-52 and the length of time we are expecting it to, as a platform, to stick around, and combining that with all the discussion we have on A2/AD environments.

And, so, if you could talk a little bit, maybe more clearly or any more details, specific detail about the B-52's role in the future in an A2/AD environment and from standoff and what we expect to be able to invest in it?

General HOLMES. Thank you, Congressman. I will start and see if Arnie has anything to add.

Mr. LARSEN. Yes.

General HOLMES. You know, we think we can fly the B-52 through about 2050. And we think that we will probably need to. We need a mix in penetrating and standoff platforms in our bomber fleet.

And the B-52, for all the talk we do about its age, is an amazing platform. It has held up and met the test of time. It is a testament to the airmen, both civilian and uniformed, that keep it working in the depot.

We are committing money to upgrade their radar, in the B-52, to make sure it will continue to be useful to us. We are adding a tac [tactical] data link, so it can communicate forward with the other forces that are out there.

We are going to do a crypto modernization program in this budget, and we funded upgrading the simulator to where crews can practice air refueling in that simulator, instead of having to spend money to go out and fly, to do that requirement and do it more often.

So, again, to come back, we think we will need a mix of both standoff and penetrating platforms. And, particularly, for the long-range scenarios out in the vast reaches of the Pacific, the B-52 is going to continue to be valuable for us for quite a while.

Mr. LARSEN. Thanks, General.

General BUNCH. And I will add one item. The other one we are doing is, we are doing an internal weapon bay upgrade to allow it to carry J-series weapons, so that it can have more capability even than it does at this time.

It has the ability to carry those externally, but we are incorporating that into the internal bay, so that it will have more capacity and capability than it even has today. And I am a lover of the B-52. That is the first operational plane I flew, many days ago. So I am happy to see it moving forward.

Mr. LARSEN. So just a followup, can you talk any more specifically about, with regards to those upgrades, about standoff weapons that become more of a—

General BUNCH. Well, any of the J-series weapons that the aircraft can carry will have to go through the certification to ensure that it will clear the weapons bay and everything. But JDAMs [Joint Direct Attack Munitions] or other weapons that we would normally carry externally, we will be able to carry internally. So it is the ones it is already certified to carry. It just gives it more capacity to be able to carry them internal as well as external.

Mr. LARSEN. Yes. Thanks.

Thank you, Mr. Chairman.

Mr. FORBES. Gentleman, thank you. We just have a couple more questions. Then we are going to let you put anything you want on the record to clarify what you have said.

Mr. Larsen was talking about the KC-46A, and you have heard that you feel that that time period will be met to deliver 18 of those by August of 2017. What happens if they are not?

General BUNCH. If Boeing is unable to make that contractual date, then we will go into discussions with them for consideration. And, by consideration, I mean things that we, the Air Force, may want that we do not have in the contract today, that we would ne-

gotiate with them what we would get for any of the delays that occurred.

Mr. FORBES. Okay. And when you negotiate with them, what is the leverage? Obviously, they will say they don't want to give anything. What is the leverage to determine how that is resolved?

General BUNCH. Sir, we have used consideration already in a lot of different areas. It is the teamwork and the discussion about how we are going forward. So——

Mr. FORBES. And it seems to work?

General BUNCH [continuing]. We have successfully done this before.

Mr. FORBES. Good. The last question, and this is not directed to you two. This is something we are going to start for the committee, as a whole, based on some information we were given at a retreat that the Armed Services Committee had last week.

The written statements that you have both submitted to us, as I mentioned, are going to be put in the record. Did you have to submit those written statements to anyone for approval prior to coming here today?

General BUNCH. We did.

Mr. FORBES. Who do you have to submit them to?

General BUNCH. We submit them to OMB [Office of Management and Budget] for review. They do a policy review, and then it goes to OMB.

Mr. FORBES. Were any changes made between the original statements that you submitted and the statement that was ultimately submitted to the record?

General BUNCH. I am not aware of any changes that were made——

General HOLMES. I am not aware of any, Mr. Chairman.

Mr. FORBES. Were you given any instructions as to what you could not say to this committee?

General BUNCH. No, sir.

Mr. FORBES. And, General Holmes, same for you. And, again, this is not directed to you two. We are going to start doing it to everybody who testifies before our committee. The final thing that I would ask you is this.

In your individual best professional military judgment, following up on something that Ms. Graham asked you, if you were submitting this budget, and if your sole priority was doing what was in the best interest of the national security of this country, both today and over the next 5 years, and you were not constrained by the budget numbers you currently have, what changes would you make?

General HOLMES. So, Mr. Chairman, thank you for that question. As, you know, almost 35 years in the Air Force, my experience is that I think there are two main things that an independent Air Force provides for a nation.

The first is its portion of a safe, secure, reliable nuclear deterrent. And our Air Force provides what we call three of the four legs of the triad. You know, we provide the air leg, the ground leg, plus the command and control leg, in most of that.

And I believe this budget makes the right investments for this FYDP, in that nuclear, but we are going to have problems again

beginning in 2021, primarily for the Navy, and in 2022 for the Air Force, on how we afford that, along with our conventional forces.

On the conventional side, the next thing that an independent Air Force does for a nation, is it provides freedom of action in the air that makes all joint force operations possible, by controlling the air and space.

And I believe that that is the area that we have given up the most of our capability advantage over the last 20 years, over potential adversaries, is in that air superiority mission that provides freedom of maneuver for the joint force.

And I believe our Nation is going to have to make a continued investment there to regain that capability, or we put all the capabilities of the joint force at risk.

Mr. FORBES. And how would you have changed that in the budget to accomplish that goal?

General HOLMES. So, in this budget, Mr. Chairman, I would say our options are pretty limited. We made a national decision to curtail the F-22 program. I think it is too late to reverse that decision. We are down to 120 combat-coded F-22s.

And our F-15C fleet, we know in the last year we have learned that they are going to require major structural modification to continue to fly. And, so, we will put some money into the longeron part of that.

There is two parts, to make the story short, longerons that we can replace in depot, and then fuselage bulkheads that will be cost prohibitive to do. So we have invested in this FYDP things we needed to do to keep the F-22's edge, but we need to move, I think, as fast as we can, as a nation, into some follow-on for the F-15, first, and for the F-22, eventually.

We are finishing up a study we call "Air Superiority 2030," that we have briefed out the first version to our chief of staff yesterday. And we think that will provide a roadmap for us that we can come back and talk to you next year about where we should invest, to make sure that we guarantee that edge that our Nation depends on.

Mr. FORBES. General Bunch, again, in your best professional military judgment, is there anything you would have changed in this budget, if you were looking strictly at the national security interest of the country, and you weren't constrained by the budget numbers you were given?

General BUNCH. Chairman Forbes, thank you for that question, sir. I agree with "Mobile's" [General Holmes] assessment of the triad. We have made the right investments now. That is one that is coming from an acquisition perspective, that the costs beyond this FYDP that we, as a nation, are going to have to decide what we are going to do.

So that is one that we are going to need everybody's attention on. So we will just lay that out there, but I believe we made the right investments during this FYDP in those areas. The other one I will go back to is one of the things that General Holmes talked about was the cost of some of the legacy fighters and some of the inventory. The quicker we get the F-35 in the field, the better off we are going to be in those areas. And that is one that would help us.

I am happy with the support we have gotten on the Long Range Strike Bomber and that modernization roadmap. The big programs are all going, are all getting great support from all parties. But it is some of the F-35 and some of those decisions that will drive impacts to the legacy fleet that we need to watch out for.

Mr. FORBES. Mr. Courtney and I appreciate you being here. We would like to extend to you now an opportunity for any comments that either of you would like to put on the record, clarification of anything you have said, things we have left out, whatever you think might be important for this record.

General Holmes, we will recognize you first, and then General Bunch.

General HOLMES. Thank you, Mr. Chairman, and, again, Ranking Member Courtney. We are appreciative of the chance just to come and talk in front of you. We are appreciative of your leadership.

Ranking Member Courtney, you talked about the Air Force working to get a solution to the C-130Hs. That would not have been possible without the leadership of you, Chairman Forbes, and you, Ranking Member Courtney.

We look forward to continuing to work with you. I don't have any corrections. For the record, we have some questions that we will take to respond to you and to the members. And we thank you for the opportunity to be here.

Mr. FORBES. General Bunch.

General BUNCH. And, Mr. Chairman and Congressman Courtney, thank you very much, for allowing and for your support. We greatly appreciate it, and we appreciate the questions today. I am glad we got the chance to talk about the B-21, and the way we are going forward, and the KC-46. Those are highlights for us, as an Air Force, as we move forward to modernize and recapitalize.

And I have nothing that I believe I need to correct for the record. And we do have some actions or questions that we will take back to answer. And we appreciate your continued support.

Mr. FORBES. For that, we thank you both for being here, for your service, again, to the country. And with that, Mr. Courtney, we are adjourned.

[Whereupon, at 2:03 p.m., the subcommittee was adjourned.]

A P P E N D I X

MARCH 1, 2016

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

MARCH 1, 2016

**Opening Remarks of the Honorable J. Randy Forbes,
Chairman of the Seapower and Projection Forces Subcommittee,
for the hearing on
Air Force Projection Forces Aviation Programs and Capabilities for the 2017
Budget Request
March 1, 2016**

Today the subcommittee convenes to receive testimony on the fiscal year 2017 Air Force budget request regarding bomber, tanker, and airlift acquisition programs. The distinguished panel of Air Force leaders testifying before us are:

- Lieutenant General Mike Holmes, Air Force Deputy Chief of Staff for Strategic Plans and Requirements; and
- Lieutenant General Arnold W. Bunch, Jr., USAF Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition

Gentlemen, thank you for being with us today.

The fiscal year 2017 budget request for Air Force projection forces is a good step forward to support our national defense. I am pleased to see continued investment in recapitalizing the ageing bomber and air-refueling fleets with the critically-needed Long Range Strike Bomber, recently designated the B-21, and the KC-46A tanker. The budget also takes some steps to modernize the legacy C-130H tactical airlift fleet.

That said, I continue to be concerned about the ability of our military to properly provide for our nation's defense at the proposed fiscal year 2017 budget levels. As I and many of the members of this subcommittee indicated in a letter to the Chairman of the Budget Committee, this year's budget request reduced investment in critical force structure and modernization programs by approximately \$18 billion.

Specifically, I am concerned about the implications of delaying the incremental replacement of the C-130H fleet and the proposed reduction of 27 C-130s. The Air Force has previously assessed that there is moderate risk with a reduced C-130 force structure and another reduction further places our national security at even greater risk. It seems to me that the budget request will result in a tactical airlift fleet that is smaller and older—a dangerous combination.

The Air Force budget rollout indicated "the Air Force is one of the busiest, smallest, oldest and least ready fleets in our history." It is my firm conviction, in light of the higher-end threats posed by China, Russia, Iran, North Korea, that the Air Force have the resources it needs to fully support—and if possible accelerate—critical recapitalization programs; to include purchasing additional aircraft with each dollar saved, if the warfighting requirements demand it.

With regard to bombers, last week the Air Force designated the Long Range Strike Bomber as the B-21 Bomber. I fully support this critical program; and am pleased to see that we are once again moving forward on this new platform, which will be needed for projecting power over long distances and into denied environments.

With regard to tankers, I am pleased to see that the KC-46A program appears to be on track after overcoming some initial setbacks and is continuing to execute a highly compressed test and certification schedule that has little room for error. I look forward to hearing your thoughts on this program and whether or not the first 18 aircraft will be delivered in time to meet the August 2017 contract deadline.

Lastly, I am concerned that this budget fails to provide the resources needed to procure the avionics upgrades needed to ensure that the entire fleet of tankers, airlifters, and bombers are able to operate safely in compliance with the FAA mandated NEXT GEN air traffic management standards by January 1, 2020. The civilian aviation sector is rapidly moving toward compliance, and I am concerned that our military aircraft could be shut out of the air space they need for transit and training.

In sum, while I am pleased that the Air Force's FY2017 budget request makes up some lost ground over last year, I am concerned that the proposed budget forces the Air Force and its sister services to make false choices between capability, capacity, and safety, when the undeniable reality is that our military needs all the above.

I firmly believe that what this subcommittee and the rest of Congress does about national defense and military readiness will be a defining issue. I firmly believe that we need a strong Air Force equipped with the most capable aircraft that enable our men and women to carry out their missions effectively and safely. To do this...we need leadership in national security. We need an unambiguous declaration that our national security is our preeminent responsibility.

**Opening Remarks for Congressman Joe Courtney
Ranking Member
Seapower and Projection Forces Subcommittee
Hearing on Air Force Projection Forces Aviation Programs and Capabilities related
to the 2017 President's Budget Request
March 1, 2016**

Mr. Chairman, thank you for holding this hearing on the 2017 Air Force budget request for the projection forces programs under the jurisdiction of our subcommittee. Thank you, as well, to our witnesses here today.

The tankers, bombers and airlift programs that fall under the “projection forces” side of our panel’s oversight serve as the backbone of our nation’s ability conduct operations and preserve our nation’s interests around the world. As we know all too well, however, they all share the common enemy of age. The tankers and bombers in service today are largely legacy aircraft that, in most cases, are much older than the airmen and women who fly them.

As we have heard repeatedly in our hearings over the last year, the need to modernize and recapitalize these aircraft and their capabilities is increasingly critical. Rapidly improving A2/AD capabilities, long range weapons and sensing technologies makes upgrading and replacing our legacy fleets that much more important. In order to meet these challenges, we must make the right investments today to ensure that we stay ahead of these trends. In my view, the 2017 budget we are considering here today makes important investments toward this goal and, on the whole, moves us in the right direction.

Most notably, the budget continues to reflect the high strategic priority placed on two critical recapitalization programs – the KC-46A Pegasus Tanker and the newly designated B-21 Long Range Strike Bomber. Both programs have recently seen important milestones in their progress. For example, a KC-46A successfully conducted an in-flight refueling of an F/A-18 Hornet last month, marking the aircrafts first use of the tanker’s hose and drogue system. And, the B-21 bomber recently saw the restart of the program following the conclusion a protest of the contract award. Together, these developments show continued progress towards rebuilding the essential core of our force projection capabilities, and I look forward to an update on the status of these two efforts.

An ongoing area of concern for me is the modernization of our C-130H fleet. The “Flying Yankees” of the 103rd Airlift Wing in Connecticut have largely completed their transition to their new C-130H flying mission. This mission, which ends several years of uncertainty after losing their A-10 mission in BRAC 2005, provides a sustainable and relevant role for our state and an important mobility capability for our nation.

Until last year, Congress and the Air Force had struggled to move forward on a clear plan to modernize our C-130Hs. Working with Air Force officials, including

General Holmes who is testifying today, we included language in the 2016 National Defense Authorization Act to allow the service to first move forward with a two-part modernization program to meet near-term FAA and international airspace mandates that go into effect in 2020 and then focus on longer term upgrades to ensure the viability of the fleet well into the future.

I am pleased that the budget accelerates both modernization efforts, known as AMP 1 and AMP 2, for the C-130H fleet. It is my understanding that through this budget, the Air Force intends to have most, if not all, of the fleet airspace compliant by the 2020 deadline. Further, the budget outlines a plan to install 42 increment two upgrades by 2021, and to the rest of the fleet by 2028. I look forward to hearing from the witnesses about ways in which the Air Force, with the support of Congress, can continue to accelerate increment two to meet the enduring need for these workhorses of our nation's airlift.

Finally, over the last year Congress has made meaningful and bipartisan progress in limiting the impact of sequestration and the Budget Control Act. While mitigating the across the board cuts in 2016 and 2017 was important, the fact remains that our Air Force, like the military at large, remains handcuffed by sequestration in 2018 and beyond. Even since passage of the Bipartisan Budget Act last fall, several world events have further demonstrated just how important it is for all of us on this committee and our colleagues on both sides of the aisle in Congress, to come together to make the compromises needed to protect our security and support the needs of our nation.

I look forward to hearing from our witnesses and our colleagues on the subcommittee.

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON SEAPOWER AND PROJECTION FORCES
U.S. HOUSE OF REPRESENTATIVES

SUBJECT: HEARING ON AIR FORCE BOMBER/TANKER/AIRLIFT ACQUISITION
PROGRAMS - HASC SEAPOWER AND PROJECTION FORCES

STATEMENT OF: Lt Gen James M. "Mike" Holmes, USAF
Deputy Chief of Staff
(Strategic Plans and Requirements)

Lt Gen Arnold W. Bunch, Jr., USAF
Military Deputy, Office of the Assistant Secretary
of the Air Force (Acquisition)

March 1, 2016

Introduction

Chairman Forbes, Ranking Member Courtney, distinguished members of the subcommittee, thank you for the opportunity to provide you with an update on U.S. Air Force acquisition programs. The nuclear enterprise remains our number one priority and the Air Force's nuclear capable bombers represent one of three critical Air Force contributions to the Nation's nuclear triad. Together, our nuclear and conventional bombers in concert with our tanker aircraft ensure global reach and global power to ensure an effective deterrence. But both of these important fleets are aging. The average ages of the B-52 strategic bomber and the KC-135 tanker both exceed 50 years of age. Our bomber and tanker fleets require recapitalization to ensure our ability to project power and provide global deterrence. Rapid Global Mobility is also a vital Air Force core mission and provides the foundation that makes us unique among the world's Air Forces. On any given day, the Air Force's mobility aircraft deliver critical personnel and cargo to airfields all over the world and provide airdrop of time-sensitive supplies, food, and ammunition when and where it's needed. We are committed to providing the most effective and robust tanker, bomber and fighter force to the nation. That is why our top three acquisition priorities remain the KC-46A aerial tanker, the Long Range Strike Bomber (LRS-B), and the F-35A Joint Strike Fighter.

Long Range Strike Bomber

The LRS-B program remains the Air Force's number one investment in research, development, test and evaluation (RDT&E) with \$1.4 billion for Engineering and Manufacturing Development (EMD) in the Fiscal Year 2017 President's Budget. This aircraft will form the backbone of our future strategic deterrence and strike capability and restore critical capabilities eroded by the proliferation of modern air defenses. LRS-B will achieve initial operational

capability in the mid-2020s to provide a conventional capability to employ a wide mix of direct attack and standoff weapons across the full spectrum of conflict. Nuclear certification will be completed within 2 years of conventional initial operational capability declaration.

In February 2011, SECDEF directed streamlined acquisition of the LRS-B program and assigned it to the Air Force Rapid Capabilities Office. The program office has established a highly credible and stable program and performed extensive tradeoffs to establish disciplined achievable requirements that provide desired mission capability. Those requirements have remained unchanged since approval by the Air Force Chief of Staff and the Joint Requirement Oversight Council (JROC) in May 2013

Establishing achievable requirements at the start of the program is crucial, but so too is holding them stable until threat environment changes necessitate re-evaluation. Requirements stability allowed the program office and our industry partners to move out aggressively on aircraft design – achieving what we believe to be a remarkable level of fidelity for this point in a new aircraft program.

From the onset of the LRS-B program, the requirements have been set at levels which provide the desired capability while minimizing development risk. This allows for the use of mature systems and technologies to help reduce development challenges experienced on past programs. We have completed Preliminary Design Reviews and Manufacturing Readiness Reviews to establish a higher level of technology maturity than any new developmental aircraft program to date. Platform designs are complete at the subsystem level: this provides substantial fidelity and confidence in the areas of overall structure, electronics, hydraulics, engines, air data systems and low-observable technology.

From the beginning of the program we have embraced the responsibility to focus not just on acquiring the right technology but also on the platform's lifecycle costs. These efforts ensure we can not only afford to acquire this critical capability but also operate and employ it in support of the National Military Strategy. The requirement for an Average Procurement Unit Cost (APUC) of \$550 million, in base year 2010 dollars for 100 aircraft, defined requirements and technology tradespace and was very important in balancing design with system cost. The Air Force's Service Cost Position has estimated that the APUC is \$511 million in base year 2010, equating to \$564 million in base year 2016. The total cost estimated for EMD is estimated at \$23.5 billion in base year 2016. The stable requirements and mature platform design imbue cost confidence in the program.

Underpinned by extensive analysis, scrutinized by Department of Defense and Air Force leadership and informed by affordability, the Air Force determine the requirements for the program. The LRS-B aircraft will be the backbone of the bomber fleet with ability to survive and penetrate enemy air defenses well into the 21st century. Currently, only 12% of our 159 aircraft bomber fleet has the survivability to penetrate and survive current enemy defenses. A fleet size of 100 LRS-Bs is appropriate to ensure sustained high-end conventional operations while supporting the nuclear triad as a visible and flexible deterrent that will continue to assure allies and partners and deny sanctuary to our enemies.

Sustainment of this aircraft during its service life of 30+ years is a key element of the acquisition strategy, which is why the LRS-B is being designed to have open system architecture as its cornerstone. By implementing Modular, Open Systems Architecture (MOSA) methods, development cycle times for future upgrades are shortened; enabling the platform to rapidly adapt as the threat and/or technology changes. MOSA also facilitates sustained competition

throughout the LRS-B lifecycle, enhancing long-term affordability and supportability. With MOSA requirements included from the very beginning, we consider LRS-B to be a flagship program for this approach.

All of these elements offer greater confidence in development program outcomes and ensure the Air Force delivers critical system capabilities reliably and affordably. We recognize that significant integration work still lies ahead but we remain confident we have the right talent, acquisition strategy, and budget realism to effectively and affordably bring LRS-B into the Air Force inventory.

On October 27, 2015, the Air Force awarded Northrop Grumman the LRS-B contract for the EMD phase, its associated training and support systems, and initial production lots. This represents approximately one-fifth of the 100 aircraft fleet which are typically the most expensive aircraft in the production phase of the program. On November 6, 2015, The Boeing Company filed a protest with the Government Accountability Office (GAO) challenging the Air Force's decision. On 16 February 2016, the GAO released the outcome decision for the protest. In its statement denying Boeing's protest, GAO sites that the challenges to the selection decision raised by Boeing had "no basis to sustain or uphold the protest." Through this decision GAO "concluded that the technical evaluation, and the evaluation of costs, was reasonable, consistent with the terms of the solicitation, and in accordance with procurement laws and regulations."

The Air Force was steadfast that the source selection team followed a deliberate, disciplined and impartial process to determine the best value for the warfighter and the tax payer. With this decision, we will proceed without any further delay with the development and fielding of the LRS-B aircraft to provide the warfighter the capability needed to meet our national security objectives and requirements.

Until LRS-B is fielded, we will continue to modernize our legacy bomber fleet in order to maintain the ability of our Air Force to accomplish the mission to provide Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack.

B-1

The B-1B is a long-range, air refuelable multirole bomber capable of flying intercontinental missions with the largest payload of guided and unguided weapons in the Air Force inventory.

The Integrated Battle Station upgrade (FY17 PB FYDP - \$317 million) will provide enhanced situational awareness and precision engagement capabilities and is the B-1B's largest modernization effort since its production. The first aircraft with this upgrade was delivered in January 2014 and a total of 15 B-1s were delivered by December 2015. Ten additional aircraft are planned for delivery by December 2016. The B-1B will complete this modernization effort in 2019.

Other efforts to update the navigation and radar systems completed in early 2016. These efforts will improve reliability and maintainability of these critical systems. Additionally, the Air Force is pursuing funding to provide a Service Life Extension Program (SLEP) for B-1 engines. This funding will replace parts that have been degraded by nearly 15 years of combat and restore B-1 engines to their original specifications. Finally, ongoing testing is validating the B-1B's structural integrity to ensure that it remains viable through 2040. Additional modernization efforts are envisioned to sustain the B-1B's combat-proven capability.

The B-1B is the Air Force threshold platform for early operational capability of the Long Range Anti-Ship Missile which is transitioning from a Defense Advanced Research Projects

Administration (DARPA) demonstration to the Navy-led Offensive Anti-Surface Warfare Program. Integration of this weapon, coupled with the B-1B's long range, high speed and large payload, will posture the B-1B for an important role in 'Pivot to the Pacific' scenarios.

B-2

The B-2 is the only long-range strike aircraft capable of penetrating and surviving advanced Integrated Air Defense Systems to deliver weapons against heavily defended targets. Its unique attributes of intercontinental range, precision strike, large conventional or nuclear payloads, ability to penetrate defenses, and low observable profile allow it to execute Nuclear Deterrence Operations, Nuclear Response, Global Strike, and Global Precision Attack missions. The Air Force will continue to modernize the B-2 to ensure it remains effective as enemy defensive systems advance. Current efforts to modernize the Defensive Management System (\$1,564.5 million within the FYDP) will ensure the B-2 can continue to counter sophisticated air defense networks and operate in highly contested environments. The Air Force will continue development efforts to re-host the Stores Management Operational Flight Program software in the Flexible Strike program (\$66 million remaining within the FYDP, total program \$212.3 million), enabling the B-2 to take advantage of advanced digital weapon interfaces such as those used by the B61-12. The Air Force will continue development efforts to field the Common Very-Low-Frequency / Low Frequency (VLF/LF) Receiver program (\$55 million remaining within the FYDP, total program \$186 million). It provides the B-2 with a VLF/LF receiver for secure, survivable strategic communications capability. The Air Force will advance fielding the Extremely High Frequency Satellite Communications and Computer Increment 1 program, a mid-life avionics upgrade to the flight management computers and digital storage and data buses (\$0.2 million remaining within the FYDP, total program \$540.4 million). Finally, the Air Force

will continue to pursue a number of B-2 sustainment initiatives to improve aircraft supportability and increase aircraft availability.

B-52

The last B-52 Stratofortress entered service in the United States Air Force in 1962, and it remains our nation's oldest and most versatile frontline long-range strategic bomber. Because we expect to continue operating the B-52 for many years to come, the Air Force continues to invest in modernization programs to keep the platform operationally relevant and updated with state-of-the-art capabilities. Major modernization efforts include the Combat Network Communications Technology (CONNECT) (\$408 million FYDP), and 1760 Internal Weapons Bay Upgrade (IWBU) programs (\$109 million FYDP). CONNECT provides an integrated communication and mission management system as well as a machine-to-machine interface for weapons retargeting for the entire fleet of 76 B-52Hs. The digital infrastructure and architecture provided by CONNECT is the backbone for the 1760 IWBU and future modification efforts. The 1760 IWBU provides internal J-series weapons capability through modification of Common Strategic Rotary Launchers (CSRLs). Both increments of this program are fully funded and, when complete, will significantly increase the B-52's capability to store and deliver the Joint Direct Attack Munition (JDAM); Laser-JDAM; Joint Air-to-Surface Standoff Missile (JASSM) and its extended range variant; and the Miniature Air Launched Decoy (MALD) and its jamming variant. The Air Force is committed to modernization of the B-52 using modern technology to ensure the aircraft remains relevant through 2040 as an important element of our nation's defenses.

C-17

The C-17 is the only aircraft that combines tactical capability with strategic range to operate from austere airfield environments. The fleet of 222 was completed in September 2013 and provides our nation unmatched flexibility to conduct direct delivery, airdrop, aeromedical, and special operations airlift missions. In order to increase budget and schedule predictability, our plan is to bundle modernization and sustainment activities. Agile and efficient software and hardware updates will pace timely readiness, safety, and capability improvements as this premier airlift platform helps to achieve our national security objectives.

The Air Force intends to use \$45 million in FY17 funding to continue critical modifications and upgrades to the C-17 fleet. This includes Identify Friend or Foe (IFF) Mode 5+ upgrades to provide increased memory and throughput to system computers, as well as Next Generation Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to provide Automatic Dependent Surveillance – Broadcast (ADS-B) Out capability to meet mandated civil airspace requirements. Additionally, \$70 million of FY17 funding will be utilized to upgrade 36 C-17 Large Aircraft Infrared Countermeasures (LAIRCM) systems from Block 20 to Block 30, which provides more capability to detect, track, and jam incoming infrared missiles. Our request of \$12.4 million in FY17 RDT&E funding will address obsolescence and flight safety issues. The development of a replacement Heads Up Display (HUD) will address obsolescence of the current C-17 HUD and improve the system's availability, reliability, and maintainability. Integration of an On-Board Inert Gas Generating System (OBIGGS) Filter Fire Mitigation will alert aircrews to potential fires, increasing in-flight safety. Finally, the Beyond Line-Of-Sight (BLOS) effort modernizes multi-channel voice and data communication subsystems to ensure the C-17 keeps pace with changes in DoD communication infrastructures.

The Air Force continues to modernize and enhance 52 legacy C-5 aircraft to a common configuration to ensure fleet viability to 2040. The C-5 Reliability Enhancement and Re-engineing Program (RERP or C-5M) is a comprehensive effort to improve aircraft performance, reliability, maintainability, availability, and payload capability/cargo throughput. FY15 was the last year of funding for installation of the remaining C-5 RERP kits. As of 5 February 2016, 33 aircraft have been modified to the C-5M configuration, another 10 are currently undergoing modification, and the final aircraft is projected to be complete by the spring of 2018. In FY16, C-5M aircraft continue to demonstrate significantly improved mission performance due to the RERP enhancements. During support of a recent large mobility operation, the C-5M flew 41 missions from 6 Dec 15 to 2 Jan 16 achieving a 90.5% mission capable rate (MCR). In like missions since 2010, the C-5M has steadily shown increased MCR from 77.8% to the recent high of 90.5%. Pre-RERP MCR rates were usually in the low- to mid-60%.

The FY17 PB requests \$24.2 million in procurement funds, predominately for C-5 core mission computer/weather radar (CMC/WxRdr) system equipment, along with \$66.1 million in RDT&E funding to support CMC/WxRdr and CNS/ATM development requirements. CMC/WxRdr replaces a radar system with severe Diminishing Manufacturing Source (DMS) issues and upgrades the processor of the CMC. CNS/ATM was a FY16 new start required to meet US and international civil aviation mandates for 2020.

Tankers

Comprised of 396 KC-135 Stratotankers and 59 KC-10 Extenders, our tanker fleet provides the backbone of rapid U.S. global operations. Delivery of 179 KC-46 Pegasus aircraft by 2028 will replace less than half of the current tanker fleet and will leave the Air Force with

over 200 aging KC-135s awaiting recapitalization. Tankers are the lifeblood of our joint force's ability to respond to crises and contingencies and are essential to keeping our Air Force viable as a global force.

KC-135 and KC-10

The average KC-135 is 55 years old; KC-10's are an average of 31 years old. Both fleets are frequently challenged by parts obsolescence and DMS. However, with the help of both organic Air Force depots and industry, we are able to maintain these platforms as effective and safe weapon systems for our warfighter. We are executing several key modernization initiatives to ensure the aircraft remain viable through 2045.

The FY17 PB requests \$64.2 million to continue KC-135 modernization efforts and \$4.6 million to support KC-10 service bulletins and sustainment. Ongoing KC-10 modifications include the production and installation of CNS/ATM kits. The primary modernization effort for KC-135 is the Block 45 program, which addresses supportability, reliability, and maintainability issues. Block 45 is an avionics modification that integrates a digital flight director, autopilot, radio altimeter, and electronic engine instrument display. Continuation of Block 45 production and installation across the FYDP will reduce operations and maintenance costs while increasing aircraft capability.

KC-46

While we continue to sustain our current capability, recapitalizing our tanker fleet remains one of our top acquisition priorities. The KC-46 EMD contract is now over 73% complete (as of December 31, 2015) with no requirement changes to date. First flight of the KC-

46 aircraft successfully occurred on September 25, 2015, and first transferred fuel to a F-16 on January 24, 2016. We are looking forward to the program's Milestone C decision this spring.

In the FY17 PB, the Air Force requests \$261.7 million for the ongoing KC-46 EMD effort and \$2.9 billion to procure 15 KC-46 aircraft. Key items supported in the requested EMD funding include aircrew and maintenance training systems and execution of the integrated flight test program.

The KC-46 Formal Training Unit (FTU) will be located at Altus AFB, Oklahoma, with Main Operating Base (MOB) #1 at McConnell AFB, Kansas, and MOB#2 at Pease Air National Guard Base, New Hampshire. Last fall, we announced Seymour-Johnson AFB, North Carolina, as the Preferred and Reasonable Alternative for MOB#3, with a final decision expected later this year. We anticipate MOB #4 announcement in late 2016.

We recognize the Nation's fiscal challenges and appreciate the subcommittee's efforts to ensure our vital KC-46 program is authorized the funding needed to meet contractual obligations and program requirements. Stability of requirements and funding are the keys to KC-46 program success and will enable the Air Force to deliver this new tanker, ready for employment on day one.

C-130

The C-130 fleet is comprised of legacy C-130H and C-130J aircraft. The C-130Hs and C-130Js are medium-size transport aircraft capable of completing a variety of tactical airlift operations across a broad range of mission environments. The fleet delivers air logistic support for all theater forces, including those involved in combat operations.

The Air Force is modernizing the C-130H fleet through a four-phased approach emphasizing aircraft safety, compliance, modernization and recapitalization. First, we are ensuring that the C-130H is safe to operate by keeping the aircraft structurally sound through programs such as center wing replacement. Second, we will focus on meeting U.S. and foreign airspace compliance mandates through the C-130 Avionics Modernization Program (AMP) Increment 1. The FY17 PB accelerates this program to deliver 172 airspace compliant aircraft by December 2019, before the FAA 2020 deadline. Third, C-130 AMP Increment 2 will improve the fleet's maintainability and reliability by providing a new avionics suite, enhanced communications, and electrical improvements. It also solves pending obsolescence and DMS issues. The FY17 PB accelerates AMP Increment 2 to complete installations in 2028. Finally, the Air Force will continue to recapitalize the C-130H fleet through procurement of new C-130Js.

The C-130J aircraft provides extra cargo carrying capability, longer range, and better fuel efficiency for our combat delivery mission, compared to legacy C-130Hs. Special mission variants of the C-130J conduct airborne psychological operations and offensive electronic warfare (EC-130J), weather reconnaissance (WC-130J), search and rescue (HC-130J), and special operations (MC-130J and AC-130J). Current modification efforts include center wing replacement, LAIRCM, and the ADS-B Out capability to meet mandated civil and international airspace requirements as part of the C-130J Block 8.1 upgrade. The FY14 National Defense Authorization Act authorized multi-year procurement for the C-130J. As part of the multi-year contract, the Air Force is procuring 72 C-130Js (all variants) through FY18.

Conclusion

The Air Force remains committed to ensuring our global reach programs continue to reflect the needs of our Nation. In the midst of the challenges ahead we will aim to keep these programs on track and deliver these systems not only as a vital capability to our forces, but also as a best value to our taxpayer. These systems will provide the future capabilities necessary to operate effectively in the national security environment of tomorrow.

LIEUTENANT GENERAL JAMES M. "MIKE" HOLMES

Lt. Gen. James M. "Mike" Holmes is Deputy Chief of Staff for Strategic Plans and Requirements, Headquarters U.S. Air Force, Washington, D.C. In support of the Chief of Staff and Secretary of the Air Force, General Holmes leads the development and integration of the Air Force strategy, long-range plans and operational capabilities-based requirements. He directs and coordinates activities ensuring the Air Force builds and employs effective air, space and cyber forces to achieve national defense objectives.

General Holmes entered the Air Force through Officer Training School in 1981 after receiving a degree in electrical engineering from the University of Tennessee. He has commanded the 27th Fighter Squadron, the 14th Operations Group, the 4th Fighter Wing and the 455th Air Expeditionary Wing. He has served in the Office of the Secretary of Defense and on headquarters staffs of the United States Air Force, U.S. European Command and Pacific Air Forces. Prior to his current position, he was the Vice Commander, Air Education and Training Command, Joint Base San Antonio-Randolph, Texas responsible for the recruiting, training and education of Air Force people, including the Air Force Recruiting Service, a numbered air force and Air University. He is a command pilot with more than 4,000 hours, including more than 500 combat hours in the F-15A/B/C/D/E, and has also flown the T-38, T-37 and T-1A.

EDUCATION

1981 Bachelor of Science degree in Electrical Engineering, University of Tennessee, Knoxville
 1986 F-15 Fighter Weapons Instructor Course, U.S. Air Force Fighter Weapons School, Nellis AFB, Nev.
 1987 Squadron Officer School, Maxwell Air Force Base, Ala.
 1993 Air Command and Staff College, Maxwell AFB, Ala.
 1993 Master of Arts degree in History, University of Alabama, Tuscaloosa
 1994 Master of Airpower Arts and Sciences degree, School of Advanced Airpower Studies, Air University, Maxwell AFB, Ala.
 1995 Armed Forces Staff College, Norfolk, Va.
 2000 Air War College, by correspondence
 2001 Master's degree in national defense studies, Naval War College, Newport, R.I.
 2006 National Defense Studies Fellow, Maxwell School of Citizenship and Public Affairs, Syracuse University, N.Y.
 2007 Joint Force Air Component Commander Course, Air University, Maxwell AFB, Ala.
 2010 AFSO21 Executive Leadership Course, University of Tennessee, Knoxville.
 2011 Coalition Force Maritime Component Commander Course, Naval War College, Bahrain
 2013 Joint Flag Officer Warfighting Course, Air University, Maxwell AFB, Ala.

ASSIGNMENTS

1. September 1981 - August 1982, Student, undergraduate pilot training, Columbus AFB, Miss.
2. September 1982 - November 1982, Student, fighter lead-in training, Holloman AFB, N.M.
3. November 1982 - April 1983, Student, F-15 conversion training, Luke AFB, Ariz.
4. May 1983 - December 1985, F-15 Instructor Pilot and Assistant Squadron and Wing Weapons Officer, 71st Tactical Fighter Squadron, Langley AFB, Va.
5. January 1986 - May 1986, Student, USAF F-15 Fighter Weapons Instructor Course, Nellis AFB, Nev.
6. May 1986 - May 1989, F-15 Chief of Weapons and Tactics, 44th Tactical Fighter Squadron, Kadena Air Base, Japan
7. May 1989 - June 1992, F-15 Chief of Weapons and Tactics, Assistant Chief of Wing Weapons and Tactics, Flight Commander and Assistant Operations Officer, 7th Tactical Fighter Squadron and 9th Fighter Squadron, Holloman AFB, N.M.
8. July 1992 - June 1993, Student, Air Command and Staff College, Air University, Maxwell AFB, Ala.
9. July 1993 - June 1994, Student, School of Advanced Airpower Studies, Air University, Maxwell AFB, Ala.
10. July 1994 - October 1996, Air Operations Officer and Crisis Action Planner, Operations Directorate, Headquarters U.S. European Command, Stuttgart-Vaihingen, Germany

11. October 1996 - December 1997, Assistant Operations Officer, 27th Fighter Squadron, Langley AFB, Va.
12. January 1998 - May 1999, Operations Officer, 71st Fighter Squadron, Langley AFB, Va.
13. May 1999 - July 2000, Commander, 27th Fighter Squadron, Langley AFB, Va.
14. July 2000 - July 2001, Student, Naval War College, Newport, R.I.
15. July 2001 - August 2002, Chief, Strategy, Concepts and Doctrine Division, Directorate of Operational Plans and Joint Matters, Headquarters U.S. Air Force, Washington, D.C.
16. August 2002 - July 2004, Commander, 14th Operations Group, Columbus AFB, Miss.
17. August 2004 - September 2006, Commander, 4th Fighter Wing, Seymour Johnson AFB, N.C.
18. September 2006 - June 2007, Chief, Checkmate, Directorate of Operational Plans and Joint Matters, Headquarters U.S. Air Force, Washington, D.C.
19. July 2007 - December 2007, Director of Strategic Plans, Programs and International Affairs, Headquarters Pacific Air Forces, Hickam AFB, Hawaii
20. December 2007 - March 2008, Special Assistant to the Director of Operational Planning, Policy and Strategy, Deputy Chief of Staff for Operations, Plans and Requirements, Headquarters U.S. Air Force, Washington, D.C.
21. March 2008 - April 2009, Commander, 455th Air Expeditionary Wing, Bagram Air Base, Afghanistan
22. April 2009 - July 2009, Special Assistant to the Assistant Vice Chief of Staff, and Director, Air Staff, Headquarters U.S. Air Force, Washington, D.C.
23. July 2009 - August 2011, Principal Director for Middle East Policy, Office of the Under Secretary of Defense for Policy, Office of the Secretary of Defense, the Pentagon, Washington, D.C.
24. August 2011 - January 2012, Director, Strategic Planning, Deputy Chief of Staff for Strategic Plans and Programs, Headquarters U.S. Air Force, Washington D.C.
25. January 2012 - July 2013, Assistant Deputy Chief of Staff for Operations, Plans and Requirements, Headquarters U.S. Air Force, Washington, D.C.
26. August 2013 - July 2014 Vice Commander, Air Education and Training Command, Joint Base San Antonio-Randolph, Tex.
27. August 2014 - present, Deputy Chief of Staff for Strategic Plans and Requirements, Headquarters U.S. Air Force, Washington, D.C.

SUMMARY OF JOINT ASSIGNMENTS

1. July 1994 - October 1996, Air Operations Officer and Crisis Action Planner, Operations Directorate, Headquarters U.S. European Command, Stuttgart-Vaihingen, Germany, as a major
2. March 2008 - April 2009, Commander, 455th Air Expeditionary Wing and Senior Airfield Authority, Bagram AB, Afghanistan, as a brigadier general
3. July 2009 - Aug 2011, Principal Director for Middle East Policy, Office of the Under Secretary of Defense for Policy, Office of the Secretary of Defense, the Pentagon, Washington, D.C., as a brigadier and major general

FLIGHT INFORMATION

Rating: command pilot

Flight hours: more than 4,000

Aircraft flown: F-15A/B/C/D/E, T/AT-38, T-37 and T-1A

MAJOR AWARDS AND DECORATIONS

Distinguished Service Medal
 Defense Superior Service Medal
 Legion of Merit with oak leaf cluster
 Bronze Star Medal
 Defense Meritorious Service Medal
 Meritorious Service Medal with two oak leaf clusters
 Air Medal with three oak leaf clusters
 Aerial Achievement Medal with three oak leaf clusters
 Air Force Commendation Medal with oak leaf cluster
 Army Commendation Medal

EFFECTIVE DATES OF PROMOTION

Second Lieutenant Aug. 28, 1981

First Lieutenant Aug. 28, 1983

Captain Aug. 28, 1985

Major May 1, 1993

Lieutenant Colonel Jan. 1, 1998

Colonel July 1, 2002

Brigadier General May 2, 2008

Major General Jan. 28, 2011

Lieutenant General Aug. 2, 2013

(Current as of October 2014)

LIEUTENANT GENERAL ARNOLD W. BUNCH JR.

Lt. Gen. Arnold W. Bunch, Jr., is the Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, the Pentagon, Washington, D.C. He is responsible for research and development, test, production, and modernization of Air Force programs worth more than \$32 billion annually.

General Bunch was commissioned in 1984 as a graduate of the U.S. Air Force Academy. He completed undergraduate pilot training in 1985. He completed operational assignments as an instructor, evaluator and aircraft commander for B-52 Stratofortresses. Following graduation from the Air Force Test Pilot School, General Bunch conducted developmental testing in the B-2 Spirit and B-52 and served as an instructor in each. Additionally, he has commanded at the squadron, group and wing levels. Prior to his current assignment, he was the Commander of the Air Force Test Center, headquartered at Edwards Air Force Base, California.

EDUCATION

1984 Bachelor of Science degree in civil engineering, U.S. Air Force Academy, Colorado Springs, Colo.
 1991 Squadron Officer School, Maxwell AFB, Ala.
 1994 Master of Science degree in mechanical engineering, California State University Fresno
 1996 Army Command and General Staff College, Fort Leavenworth, Kan.
 2000 Master of Science degree in national security strategy, National War College, Fort Lesley J. McNair, Washington, D.C.

ASSIGNMENTS

1. July 1984 - July 1985, Student, undergraduate pilot training, Columbus Air Force Base, Miss.
2. August 1985 - December 1985, Student, B-52 Combat Crew Training School, Castle AFB, Calif.
3. January 1986 - June 1990, Standardization and Evaluation Instructor Aircraft Commander, 325th Bomb Squadron, Fairchild AFB, Wash.
4. July 1990 - June 1991, Student, USAF Test Pilot School, Edwards AFB, Calif.
5. July 1991 - June 1992, Test Pilot, 6512th Test Squadron, Edwards AFB, Calif.
6. July 1992 - June 1995, Test Pilot, 420th Test Squadron, Edwards AFB, Calif.
7. June 1995 - June 1996, Student, Army Command and General Staff College, Fort Leavenworth, Kan.
8. July 1996 - July 1999, Chief, B-1 Test and Evaluation, B-1 System Program Office, Wright-Patterson AFB, Ohio
9. August 1999 - June 2000, Student, National War College, Fort Lesley J. McNair, Washington, D.C.
10. June 2000 - July 2002, Commander, 419th Flight Test Squadron, Edwards AFB, Calif.
11. August 2002 - April 2003, Chief, Senior Officer Management, Air Force Materiel Command, Wright-Patterson AFB, Ohio
12. April 2003 - June 2004, Deputy Chief, Combat Forces Division, the Pentagon, Washington, D.C.
13. June 2004 - January 2006, Director, Munitions Directorate, Air Force Research Laboratory, Eglin AFB, Fla.
14. January 2006 - May 2008, Commander, 412th Test Wing, Edwards AFB, Calif.
15. June 2008 - March 2010, Vice Commander, Air Armament Center, Eglin AFB, Fla.
16. March 2010 - June 2011, Director and Program Executive Officer for the Fighters and Bombers Directorate, Aeronautical Systems Center, Wright-Patterson AFB, Ohio
17. June 2011 - June 2012, Commander, Air Force Security Assistance Center, AFMC, Wright-Patterson AFB, Ohio
18. June 2012 - June 2015, Commander, Air Force Test Center, Edwards AFB, Calif.
19. June 2015 - present, Military Deputy, Office of the Assistant Secretary of the Air Force (Acquisition)

FLIGHT INFORMATION

Rating: command pilot
 Flight hours: more than 2,500 hours
 Aircraft flown: B-52, B-2, KC-135, F-16, T-38 and others

MAJOR AWARDS AND DECORATIONS

Legion of Merit with two oak leaf clusters
 Meritorious Service Medal with five oak leaf clusters
 Aerial Achievement Medal with oak leaf cluster
 Air Force Commendation Medal
 Air Force Achievement Medal
 Combat Readiness Medal
 National Defense Service Medal with oak leaf cluster
 Global War on Terrorism Service Medal

EFFECTIVE DATES OF PROMOTION

Second Lieutenant May 30, 1984
 First Lieutenant May 30, 1986
 Captain May 30, 1988
 Major Dec. 1, 1995
 Lieutenant Colonel Sept. 1, 1998
 Colonel June 1, 2004
 Brigadier General May 7, 2010
 Major General Aug. 23, 2013
 Lieutenant General June 24, 2015

(Current as of June 2015)

**WITNESS RESPONSES TO QUESTIONS ASKED DURING
THE HEARING**

MARCH 1, 2016

RESPONSE TO QUESTION SUBMITTED BY MRS. HARTZLER

General BUNCH. A 2011 Air Mobility Command Business Case Analysis states that engine cell testing has shown the T-56 3.5 engine modification to conservatively yield an overall 7.9 percent improvement to the fuel consumption rate. The Air Force has not conducted a fuel savings analysis for the eight-bladed propeller upgrade. The Air Force plans to conduct an Operational Utility Evaluation (OUE) to test the T-56 3.5 engine modification in combination with the eight-bladed propellers and the Electronic Propeller Control System (EPCS) from January 2017 to July 2017. The OUE's data and final test report will support a fielding recommendation based on operational effectiveness, suitability, and affordability of these propulsion system upgrades. [See page 12.]

RESPONSES TO QUESTIONS SUBMITTED BY MR. BRIDENSTINE

General BUNCH. The C-130H AMP Increment 1 Acquisition Strategy separates design, integration, and kit production from kit installation. Design, integration, and kit production, specifically for the Automatic Dependent Surveillance—Broadcast (ADS-B) Out and Enhanced Mode S elements of Increment 1, will be competitively awarded as a Small Business Set-Aside. Kit installations will be competitively awarded through the Air Force Sustainment Center Contract Field Team (CFT) contract, which offers lower costs. CFT contractors have proven track records for similar C-130 modifications and have demonstrated flexibility to meet schedule requirements. The scope of the installation effort is anticipated to be within the CFT contract vehicle's Small Business Set-Aside pool, and all efforts will be made to competitively award the installation to a small business on the CFT contract. [See page 17.]

General BUNCH. The Air Force plans to award the design, integration, and kit production, specifically for the Automatic Dependent Surveillance—Broadcast (ADS-B) Out and Enhanced Mode S elements of Increment 1 in the second quarter of fiscal year 2017. The Request for Proposal was formally released to industry on 7 Mar 2016. [See page 18.]

General HOLMES. The contractual bed down sequence was determined to capitalize on the two issues described below. In order to get the most accurate costs, the delivery locations were written into the Firm Fixed Price contract.

First, the throughput of HH-60W conversion and initial aircrew training is largely dependent on active duty manpower at the Kirtland AFB training unit. Earlier transition of ARC units would limit the available pool of active duty instructors eligible for rotation through Kirtland AFB, stifling the production of HH-60W crewmembers and extend unit conversion timelines. In addition, the ARC units require higher crew ratios to support the same number of helicopters. Thus training the Active Duty first will provide the fastest throughput of ready HH-60Ws.

Second, the current plan will maximize HH-60W availability for deployment based on established dwell standards. Earlier transition of ARC units will prematurely limit the rate that HH-60W assets can be tasked from a redline dwell rate of 1:1 to 1:4, forcing aging active duty HH-60G assets to fulfill more contingency taskings into the late 2020s.

The United States Air Force remains committed to the CRH program and plans to have the entire fleet fielded by FY29. [See page 18.]

