DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
HOUSE ARMED SERVICES COMMITEE
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 (CONECT) ($408 million FYDP), and 1760 Internal Weapons Bay Upgrade (IWBU) programs ($109 million FYDP). CONECT 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 CONECT 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.

C-5

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-engining 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.