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SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON AIRLAND FORCES
UNITED STATES SENATE

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON AIRLAND FORCES
UNITED STATES SENATE

March 19th, 2015

SUBJECT: Fiscal Year 2016 Air Force, Force Structure and Modernization Programs

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I. Introduction

Chairman Cotton, Ranking Member Manchin and distinguished members of the Airland Subcommittee, thank you for the opportunity to provide an update on the United States Air Force's Force Structure and Modernization. Effectively balancing our scarce budget resources across readiness, modernization, and force structure accounts is arguably now more important than ever before. We need your help; without bold leadership today – difficult decisions and a commitment to air, space, and cyberspace investment – America's airpower advantage is increasingly at risk.

The United States Air Force is the most globally engaged air force on the planet. Whether dropping bombs, commanding satellites in space, delivering humanitarian relief, or protecting the homeland with an array of air, space, and cyberspace capabilities, American Airmen are in constant defense of our national interests. Alongside its Sister Services, the Air Force delivers the power, influence, agility, and global reach no other country currently possesses. But 24 years of continual combat operations, coupled with constrained and unstable budgets, has taken its toll. America needs a force ready for a spectrum of operations more global and complex than ever before. Instead, a relentless operations tempo, with fewer resources to fund, coordinate, and execute training and exercises, has left a force proficient in only those portions of the mission necessary for current operations. While the Fiscal Year 2016 President's Budget (FY16 PB) takes a critical step toward recovery, we remain stressed to deliver what the Nation asks of our Air Force. We must reverse this trend.

II. Strategic Approach To Meeting 21st Century Defense Challenges

After more than two decades of nonstop combat operations, dominant trends point to a complex future that will challenge the Air Force in new and demanding ways. Adversaries are emerging in all shapes and sizes, and the pace of technological and societal change is increasing—with a corresponding increase in the demand for airpower. Furthermore, we cannot buy our way out of this one; we realize that it is time for the Air Force to think differently. Accordingly, senior Air Force leaders have developed a single, integrated strategy to guide the

way our service organizes, trains, and equips the force to conduct future operations. Our strategy points the way forward and does not limit us to an intractable view of the future. It is actionable, with clear goals and vectors for implementation, assessment, and revision. A strategy-driven, resource-informed plan that emphasizes strategic agility will enable the Air Force to meet twenty-first century defense challenges.

The Air Force's new strategic framework will guide us as we move forward. Last summer, we released the Air Force's strategic vision in America's Air Force: A Call to the Future. We are about to release the USAF Strategic Master Plan (SMP), which translates the conceptual strategy in A Call to the Future into comprehensive guidance, goals, and objectives. Together these documents will drive the Strategy, Planning, and Programming Process that will arm and empower the Air Force, in collaboration with our partners, to defeat adversaries and defend the nation and our allies in a complex future. An upcoming Air Force Future Operating Concept will further illuminate this strategy by broadly depicting how an agile, inclusive, and innovative Air Force should employ capabilities in the future.

Understanding that we cannot "see" into the future, four emerging trends provide a strategic context for the strategy. The Air Force will need to win in complex battlespaces characterized by: rapidly changing technological breakthroughs, geopolitical instability, a wide range of operating environments, and an increasingly important and vulnerable global commons. These trends will shape the operational environment, and highlight the broader strategic issues for national defense.

The Air Force will be proactive in meeting these challenges. As A Call to the Future states, "We must commit to changing those things that stand between us and our ability to rapidly adapt." Faster adaptation and response—what we call strategic agility—will sustain the Air Force's unique contributions that are critical to the nation. Agility is the counterweight to the uncertainty of the future and its associated rate of change. We will take significant, measurable steps to enhance our ability to wield innovative concepts and advanced capabilities in unfamiliar, dynamic situations.

By embracing strategic agility, the Air Force will be able to move past the twentieth century's industrial-era processes and paradigms and be ready for the globally connected, information-based world of the coming decades. This approach requires an inclusive Air Force culture that fosters diversity of thought and inculcates a multi-domain mindset to solve challenges that span across traditional Air Force mission sets. We will become more agile in the ways we cultivate and educate Airmen and in how we develop and acquire capabilities. Our operational training, employment, organizational structures, and personnel interactions will also become more agile to suit the dynamic security environment.

The soon-to-be released Strategic Master Plan (SMP) describes what we will do to implement strategic agility. It translates strategic vision into action by providing authoritative direction for service-wide planning and prioritization. The SMP includes four annexes—"Human Capital," "Strategic Posture," "Capabilities," and "Science and Technology"—that provide more specific guidance and direction, further aligning the SMP's goals and objectives to future resource decisions. An ambitious and far-reaching undertaking, the base SMP will be updated every two years, with the annexes reviewed annually, to ensure a consistent and relevant connection between today's realities and tomorrow's potential. Certain sections will remain classified to ensure critical elements of the future force stay linked to the overall strategy.

The Air Force strategy and the SMP provide authoritative guidance to planners across the Air Staff and major commands. These planners will align their supporting plans with the goals and objectives of the SMP as they apply their expertise to inform planning and resourcing. The guidance and direction in the SMP are designed to enable better enterprise-wide solutions to challenges and close the gaps that can form in execution. In this more robust strategy-driven environment, commanders and staffs will have proper direction and the necessary authority to reach goals by working discrete but connected actions—epitomizing the balance of centralized control with decentralized execution.

This summer, the Air Force will release a new Air Force Future Operating Concept that will further inform strategic planning by describing how we will use future Air Force forces to accomplish our five core missions across the range of military operations. A natural companion

to the SMP, this document will provide an innovative portrayal of how an agile, multi-domain Air Force will operate in 20 years' time. It will describe future integrated operations in terms of broad capabilities and the key competencies we desire in future Airmen, and explain how these capabilities and competencies will address anticipated challenges in the future environment. The concept will depict a desired future Air Force that is the product of two decades of successful evolution in strategy-informed planning and resourcing; furthermore, it will serve as a baseline for continued concept development, experimentation, and refinement.

Because strategy is not prescient, it must be adaptive as it seeks to balance the present with the future. There are no easy choices, and there is no time to lose—but the Air Force must make the right prioritization decisions now in order to be prepared to respond in the face of uncertainty. Our strategy-driven, resource-informed approach will enable us to achieve the strategic agility we need to meet twenty-first century defense challenges in a complex world.

III. Operations Update

The Air Force flies and fights in air, space, and cyberspace—globally and reliably—as a valued member of our Joint and Coalition teams. Approximately 205,000 Total Force Airmen are "committed in place" supporting daily Combatant Command (COCOM) operations to defend the homeland, provide command and control of our nuclear forces, operate remotely piloted aircraft, provide rapid global mobility, and many other requirements. Approximately 23,000 Airmen are deployed across the globe, including more than 16,000 in the U.S. Central Command Area of Responsibility. The Air Force is an active partner in Department of Defense planning that will shift our emphasis from today's wars to a broader range of challenges and opportunities. The Department of Defense is currently reassessing the strategic guidance issued last year, but we anticipate continued emphasis on and planning for a rebalance to the Asia Pacific region. Our challenge is to provide those who deploy in support of our global commitments an Air Force that is capable, agile, flexible, ready, and technologically advanced.

During 2014, Air Force aircraft flew over 87,000 sorties in support of Overseas Contingency Operations (OCO). On the home front, Air Force fighter, air refueling, and early

warning aircraft have flown over 67,000 total sorties supporting Operation Noble Eagle since September 11, 2001. As a testament to the capability of our Total Force, the Air National Guard and Air Force Reserve have flown more than 65 percent of these sorties.

Today, the Air Force is actively engaged in two major efforts; providing training and operational support to strengthen the Afghan Security Forces and Afghan Air Force in Afghanistan as part of Operation Freedom Sentinel (OFS) and the United Nations' International Security Assistance Force (ISAF) Resolute Support mission, and conducting operations against the Islamic State (ISIL) in Iraq and Syria as part of Operation Inherent Resolve (OIR).
Our objectives as part of OFS are a Counter-Terrorism (CT) mission against the remnants of al-Qaeda and the NATO Resolute Support Train, Advise, and Assist (TAA) mission in support of Afghan security forces. The CT and TAA efforts are concurrent and complementary. While the U.S. and Afghan forces continue to attack the remnants of al-Qaeda, we are also building the Afghan National Defense & Security Forces (ANDSF) so that they can secure the Afghan people and contribute to stability throughout the region. Both of these efforts will contribute to a more secure and productive Afghanistan and prevent the re-emergence of terrorist safe havens.
The U.S. Air Force has helped develop the Afghan Special Mission Wing (SMW), which provides the Afghan Special Security Forces (ASSF) with the operational reach and manned Intelligence, Surveillance, Reconnaissance (ISR) capability to support counter terrorism and counter narcotics missions. The SMW is now executing long-range, full-mission profiles in low illumination. Working together with the ASSF, the commando units and SMW are consistently running unilateral direct action missions against insurgent leaders and facilitators.

The ISAF Resolute Support mission provides training, advice and assistance in eight key areas: multi-year budgeting; transparency, accountability and oversight; civilian oversight of the Afghan Security Institutions; force generation; force sustainment; strategy and policy planning, resourcing and execution; intelligence; and strategic communications. U.S. Air Force advisors work to develop the Afghan Air Force across their entire air enterprise—from fixed and rotary wing operations and maintenance, to engineering and logistics, to force development and helping them build a budget. The Afghan Air Force operates the Mi-17 transport helicopter, Mi-35 attack helicopter, Cessna 208B basic trainer and light lift aircraft, MD-530 light attack helicopter

and the C-130 medium lift Hercules. Additional efforts are underway to include the A-29 Super Tucano light air support fighter, with future Afghan pilots currently in training in the U.S. In the last year, the Afghan Air Force has taken over much of the mission, providing casualty evacuation and aerial attack in support of Afghan ground forces and are providing the majority of helicopter and much of the fixed wing maintenance.

Our objectives as part of OIR are to support Iraqi and Kurdish forces on the ground as they take the fight to ISIL and to disrupt ISIL's use of Syria as a safe haven and degrade its ability to sustain itself via resupply, finance, and command and control. U.S. Airpower has already achieved positive effects in Iraq and Syria. By virtue of the pressure we're putting on ISIL from the air, we've changed their tactics and the way they communicate: they've dispersed, they're hiding among the population more, they aren't as free to operate as they once were. In Iraq and Kobani, Syria, airstrikes and resupply efforts have helped Iraqi and Kurdish forces to retake and hold key territory, although the situation on the ground remains dynamic. In Syria, airstrikes have attacked ISIL command and control (ex: headquarters buildings), logistics (training camps & vehicle staging areas), and revenue sources (modular oil refineries), making it harder for ISIL to sustain itself as a fighting force.

The U.S. Air Force takes great care in everything from our intelligence collection and analysis to our choice of weapons used for targeting to minimize the chance of harming civilians. No other military in the world takes the responsibility to protect civilians more seriously than we do. In addition, the U.S. Air Force has alleviated civilian suffering in Iraq through delivery of 131,000 meals, 58,000 gallons of water, and other vital supplies via airdrops in the vicinity of Mt. Sinjar and Amirli—and, more importantly, by providing advice and training that have enabled the Iraqi air force to continue independent humanitarian relief and operational resupply efforts.

Despite differences, the U.S. and our International Coalition partners are united over the long term against the common threat posed by ISIL. More than a dozen nations are supporting air operations against ISIL, where they are responsible for more than 20 percent of all sorties and more than 15 percent of all strikes. More than 40 nations have expressed willingness to

participate in the effort against ISIL, and more than 30 nations have indicated their readiness to offer military support. All 22 nations of the Arab League have adopted a resolution calling for comprehensive measures to combat ISIL.

Despite these successes, we recognize there are limits to what U.S. Airpower can accomplish. Airstrikes alone will not achieve our full military objectives. The forces that matter most are indigenous ground forces. We have an Iraq-first strategy: air operations in Syria help shape conditions in Iraq. This is going to be a long, difficult struggle that requires strategic patience.

IV. Force Structure and Modernization

Fighters

Air Force fighter force structure is dependent on both fighter aircraft and rated manning. Four years ago, the Air Force determined through extensive analysis that a force structure of 1,200 primary mission aircraft and 2,000 total aircraft was required to execute the NMS with increased operational risk. Three years ago, based on the 2012 Defense Strategic Guidance (DSG) and fiscal constraints, the Air Force rebalanced our force structure across core functions. Analysis showed the Air Force could decrease fighter force structure by approximately 100 aircraft with higher risk, resulting in the current fighter requirement of 1,100 primary mission aircraft and 1,900 total aircraft. The 2014 Quadrennial Defense Review (QDR) report also advances an updated national defense strategy that embodies and builds on the DSG priorities. The Chairman's assessment of the QDR strategy states we will continue to need capabilities that can operate effectively in contested environments. During the build of the Fiscal Year 2015 Presidents Budget, fiscal constraints led to a plan for force structure divestments of 334 fighters, leaving a fighter force structure significantly below the 1900 total aircraft requirement. Fiscal pressures continue to drive these tough choices—balancing today's needs against tomorrows—and accepting near-term risk today to be ready and viable tomorrow.

The Air Force's fighter fleet is approaching an average age of 30 years—the oldest in the history of the Air Force. At 55 combat coded squadrons, moving to 49, it is also our smallest force ever -- by comparison, there were 134 combat coded fighter squadrons in Operation Desert Storm. Beyond this capacity shortfall, this primarily fourth-generation fleet also lacks the combat capability to prevail in future contested environments. Accordingly, across the FY16 PB, we pursue efforts to recapitalize with new fifth-generation aircraft, and modernize and extend the service life of select aircraft in the existing fleet. This includes recapitalization through procurement of the F-35 Lightning II, and modernization programs like F-22 Increments 3.2A and 3.2B and F-16 and F-15 avionics upgrades.

Unfortunately, even with funding assigned to these critical investments, the President's budget funding levels do not provide the resources to retain aircraft force structure capacity needed to execute all COCOM requirements without risk to our ability to execute the defense strategy." Furthermore, beyond this "risk to mission," or operational risk, our aircraft capacity shortfalls also present "risk to force" challenges, risks to the management of our rated force. Currently well short of our total fighter aircraft manning requirement, projections under current funding levels indicate this deficit will continue to grow, deficits that degrade vital air-operations, test and training expertise.

The Active Component Air Force is currently 520 fighter pilots short of the total fighter pilot manning requirement and our projections indicate this will worsen in the future. This shortfall is predicated on multiple factors, to include issues such as force structure changes and airline hiring. The Air National Guard and Air Force Reserve also have fighter pilot shortages which are helped by airline hiring. However, both Reserve components have an aged fighter pilot inventory and the new pilots affiliating now are replacing this older inventory. The impact of airline hiring is still being analyzed and these estimates will be refined. The shortfall evolved from force structure reductions that cut active duty fighter squadrons and fighter training squadrons to a number that cannot sustain billet requirements. As a result, the Air Force is currently unable to produce and experience the required number of fighter pilots across the total force. The Air Force is prioritizing overall available rated manpower to fill our operational cockpits, at significant risk to institutional requirements. Projected impacts include reductions in

air-operations expertise during the development of war plans and a gradual erosion of fighter pilot experience in test and training. Without these fighter pilots, the Air Force will be very challenged to continue to provide the air supremacy upon which all our other forces depend.

A-10

The A-10 provides our Joint Force Commanders with responsive, lethal, precise and persistent firepower for close air support and combat search and rescue. It has been a steady, stellar performer in all recent conflicts. Nevertheless, the A-10 is simply unaffordable in today's fiscal environment. Consistent with Fiscal Year 2015 Department of Defense Fiscal Guidance favoring multi-role aircraft to satisfy the DSG, the FY16 PB again reflects the difficult decision to divest the A-10. Divesting the entire A-10 fleet frees up $4.7 billion across the Future Years Defense Program (FYDP), funding higher priority capacity, capability and readiness needs. Additionally, the A-10 cannot survive or operate effectively in a highly contested environment where there are more advanced aircraft or air defenses. Other weapon systems, from multi-role fighters to B-1 bombers to remotely piloted aircraft, demonstrated in Iraq and Afghanistan that they can provide effective Close Air Support (CAS). These decisions, however, do come with certain risks and potential impacts to the mission. One of the impacts to using other platforms for CAS is that use of these platforms for CAS must be balanced with their other missions, putting stress on the force in certain scenarios. Divesting the entire fleet enables us to harvest savings we could then apply to efforts that allow us to be ready and viable tomorrow.

The FY16 budget does not fund future modernization efforts for A-10 aircraft; however, we will continue to sustain the aircraft and keep it operationally viable until 2019.

F-16

The F-16, the Air Force's primary multi-role fighter aircraft, comprises 50 percent of our fighter fleet. The FY16 PB invests $1.0 billion across the FYDP for F-16 modernization and service life extension, meeting critical warfighter needs beyond 2025. This investment funds key investments like avionics software enhancements for the integration of new weapons, avionics

and improved targeting pods. Unfortunately, there are important capabilities we were not able to fund. These include major upgrades like the F-16 Combat Avionics Programmed Extension Suite (CAPES) program originally planned to upgrade 300 aircraft, and a Service Life Extension Program (SLEP) to extend by approximately 25 percent, from 8,000 hours to over 10,000 hours, the airframe structural service life for 300 F-16s, adding eight to ten years of service life to the Block 40-52 fleet. To partially mitigate the impact of terminating CAPES, the Air Force will upgrade the F-16's electronic attack pod, bringing self-protection capability in line with current and emerging threats. While the FY16 PB resumes many of the highest priority F-16 modernization efforts, the absence of the aforementioned modernization programs will adversely impact the F-16's effectiveness in future contested environments.

F-15 C/D

Presently, we project the F-15C/D fleet will remain viable until at least 2040, with the potential for an airframe service life extension following full-scale fatigue testing concluding in 2015. The FY16 PB invests approximately $1.7 billion across the FYDP for F-15C/D fleet modernization and sustainment. This investment continues modernization of the F-15C/D with Active Electronically Scanned Array (AESA) radars, a more capable aircraft mission computer, a new electronic warfare self-protection suite, and the Eagle Passive/Active Warning Survivability System (EPAWSS). While the EPAWSS is crucial to ensuring F-15C/D operations in future contested environments, fiscal constraints forced a two year delay in FY16 PB. Nevertheless, we believe currently funded modernization and sustainment programs will facilitate safe and effective operations for all 196 F-15C/D aircraft through at least 2040, pending results of the full-scale fatigue test.

F-15E

The Air Force expects the F-15E to be an integral part of the Nation's force through at least 2040. Similar to the F-15C program, a full-scale fatigue test, due for completion in 2016, will provide insight into the need for, and feasibility of, a service life extension program. The FY16 PB invests approximately $2.2 billion across the FYDP for F-15E modernization and

sustainment. This includes integration of the latest precision weapons, a helmet mounted cueing system for all front seat cockpits, a state-of-the-art AESA radar system to advance target identification, a more capable aircraft mission computer, and a self-protection electronic warfare system (EPAWSS). As with the F-15C/D, the EPAWSS is crucial to ensuring F 15E operations in future contested environments.

Fifth Generation Fighters

The F-22 and F-35 aircraft are absolutely essential to America's global superiority, ensuring air, sea and ground force's freedom of action. Each aircraft possesses exclusive, complimentary and indispensable capabilities that provide synergistic effects across the spectrum of conflict. As future adversaries modernize, the F-22 and F-35 will become even more critical as legacy fourth generation aircraft will have increasingly limited capability to operate in contested environments.

Our Air Force must rapidly re-capitalize our tactical fighter fleet with sufficient capacity in fifth generation capability in order to maintain our ability to execute our National Defense Strategy in the near to midterm, and begin looking even further into the future at further modernization efforts that ensure continued dominance of American Airpower.

F-22

The F-22 attributes of stealth, super cruise, integrated avionics and sensors combine to deliver the Raptor's unique operational capability, and F-22 modernization will counter advancing threats that specifically target the F-22. The F-22 is operating safely across the globe, averaging about 26,000 flying hours per year since its return to flight in September 2011. It has been over 36 months since the last unknown-cause hypoxia-like event occurred. Notably, the retrofit of the Automatic Back-up Oxygen System to the entire fleet is on track for completion by mid-April 2015.

Focused on maintaining operational superiority against the evolving threat, the FY16 PB includes $403.2 million in Research, Development, Testing and Evaluation (RDT&E) and $202.4 million in procurement for F-22 modernization. Increment 3.1 is fielding now and is scheduled for completion in FY17; it is designed to deliver advanced air-ground capabilities including Synthetic Aperture Radar (SAR) ground mapping, threat geolocation, and a Small Diameter Bomb (SDB) carriage. Increments 3.2A and 3.2B remain on track for fielding in 2015 and 2018, respectively. These increments will deliver advanced electronic protection and combat identification, AIM-120D and AIM-9X missile capability, and significantly-improved ground threat geolocation.

F-35

During Fiscal Year 2016, the Air Force will continue to manage risk across the global precision attack portfolio by prioritizing investment in fifth-generation aircraft while sustaining legacy platforms as a bridge to the F-35 Joint Strike Fighter.

The multi-role F-35A is the centerpiece of future fighter precision attack capability. In addition to complementing the F-22's world class air superiority capability, the F-35A is designed to penetrate air defenses and deliver a wide range of precision munitions. This modern, fifth-generation aircraft also brings the added benefit of increased allied interoperability and cost-sharing across the Services and eight partner nations. The FY16 PB includes $4.9 billion for continued development and procurement of 44 F-35A, conventional take-off and landing (CTOL) aircraft. The program continues to make steady progress in overcoming software development delays and technical issues and is on track to meet its Initial Operational Capability (IOC) in 2016.

The F-35 program reached several training milestones in 2014. May 28, 2014 marked delivery of the 26th and final F-35A CTOL to Eglin Air Force Base, making the 58th Fighter Squadron the first complete Air Force F-35 unit. Earlier in the year, the Pilot Training Center at Luke Air Force Base received its first F-35A, and through the end of 2014, Luke's inventory included 17 U.S. F-35A aircraft. On July 24, 2014, AU-1, Australia's first F-35A rolled off

Lockheed Martin's Fort Worth assembly line. AU-2 was delivered in late 2014, joining AU-1 in the inventory at Luke. On August 7, 2014, the inaugural F-35A Crew Chief Mission Ready Airman class graduated nine airmen, paving the way for thousands of future F-35 maintainers. Like every developmental program over the past 50 years, the F-35 program has made discoveries during test and development that have been and continue to be addressed and corrected. This is to be expected, and the Air Force remains confident in the program, as it continues to make solid and steady progress toward fielding the required capabilities to meet the Air Force's IOC criteria in 2016. In May 2014, the test team completed an AIM-120 weapons delivery accuracy test that was the first live fire Advanced Medium Range Air to Air Missile (AMRAAM) mission for the F-35B STOVL and the first dual AIM-120 launch for any variant. Also in May, the program completed its first test missions with Block 3i software, a critical step for Air Force IOC. In late Summer 2014, the first F-35A night CAS tests occurred at the National Training Center at Fort Irwin. A Joint Terminal Attack Controller (JTAC) used a laser designator to interact with the F-35 electro-optical targeting system, and the JTAC communicated with the F-35 pilots via electronic and voice messaging systems, successfully identifying ground targets. This successful demonstration of CAS capability was a major step toward IOC. To close out 2014, the test team successfully conducted multiple Joint Direct Attack Munition (JDAM) and AMRAAM weapons delivery accuracy tests and accomplished multiple SDB I weapons releases during a single delivery pass, a first for the program.

While the program achieved substantial development and test progress in 2014, the test program experienced delays due to an engine anomaly at Eglin Air Force Base in June. Throughout the summer and into the fall, the Joint Program Office, Service System Commands and industry worked diligently to analyze the problem, prioritize test assets and return to flying status in a safe, methodical fashion. The program was subsequently able to determine root cause and developed an interim solution: a "pre-trenched" rub material that will be implemented in the field later this year. Pratt and Whitney has agreed to cover the costs for the repairs to engines in the field and the cut-in of the solution to the production line, while the program office will pay for the design activity as per the development contract. The program continues its work on a long-term fix to the engine and expects to review and select from the design solutions this spring,

followed by design and qualification testing, and finally, incorporation of the solution into the production line. This work is expected to be completed in 2015.

Today, the program is on the road to IOC for the Air Force, and we expect the warfighter to be able to declare IOC as planned in 2016. Flight test for Block 2B is nearing completion and is underway for Block 3i, formal training operations at Luke Air Force Base are set to begin in May, and first aircraft arrival is projected for Hill Air Force Base in August. The first two F-35A aircraft are in place at Nellis Air Force Base to support tactics development for the warfighter, and we project over 25 more F-35A aircraft to deliver through the end of 2015, including the first deliveries for our Norwegian and Italian partners. Going forward, we will continue to closely monitor progress toward IOC, including completion of development and flight test for Block 2B/3i, final resolution to the engine issue, and continued maturation of Autonomic Logistics Information System (ALIS), a system that is critical to F-35 operations at home and abroad. The Air Force will also continue to watch progress for Block 3F (full warfighting capability), currently projected to complete 4-6 months later than planned. In FY16, the Air Force plans to procure 44 F-35A CTOL aircraft. Sequestration did not affect Air Force procurement quantities in 2015. Affordability remains a major priority, and the F-35 program continues to make great strides on this front. The price of F-35s continues to decline steadily Lot after Lot. For example, the price of a Lot 7 F-35A was 4.3 percent less than a Lot 6 F-35A aircraft and a Lot 8 F-35A aircraft was 3.6 percent less than a Lot 7 F-35A, including the engine and profit for both contractors. Reductions are expected to continue into the future, leveraging the program's on-going affordability initiatives. By 2019, the expected price of an F-35A, with an engine and including profit, is expected to be between $80 and $85 million, in 2019 dollars.

Air-to-Surface Weapons

All three air-to-surface weapon mission areas -- Stand-Off, Direct Attack, and Penetrator -- are short of inventory objectives. Joint Air-to-Surface Standoff Missile (JASSM) and SDB weapons, employed by Low Observable platforms, provide unsurpassed force multiplier capability in a highly contested environment. In the event of a conflict, insufficient inventory of these weapons could result in the inability to target adversary critical capabilities, increasing aircraft attrition and driving a higher level of effort to attack critical targets.

Combat operations and support for our coalition partners in Iraq and Syria are reducing the direct attack munitions (JDAM) inventories faster than we are procuring them. These combat operations are expected to continue long term (3+ years). Combat expenditures have been being replaced under OCO funding, however it takes over three years before the assets make it back to the Air Force inventory. Direct attack munition shortages drive the use of non-preferred munitions with decreased effectiveness and resulting in increased time and Air Force attrition to accomplish Combatant Commander objectives.

JASSM and JASSM-ER

JASSM and JASSM-ER (Extended Range) are currently the nation's only stealthy, conventional, precision, launch-and-leave, standoff missiles capable of fighter and bomber aircraft employment. Both are capable of penetrating next generation enemy air defenses to strike high value, hardened, fixed, or mobile targets. The JASSM (baseline) has a range greater than 200nm while the JASSM-ER has a range greater than 500nm.

The JASSM (baseline) weapon is in full rate production; the 13th production contract for 100 baseline missiles is expected to be awarded in March 2015. FY16 represents the last JASSM (baseline) buy, a total procurement of 2,034 missiles. JASSM-ER will start Full Rate Production in FY15 with a March 2015 contract award for 115 JASSM-ER. The combined JASSM production line transitions to JASSM-ER only at the maximum and most efficient rate of 360 missiles per year. The last JASSM-ER procurement is planned for FY23, culminating a total JASSM ER buy of 2,866 missiles.

SDB I and II

SDB I is a legacy weapon planned to help achieve mandated cluster munition reduction by 2019. In FY16, the Air Force plans to procure an additional 1,960 SDB I weapons utilizing OCO funding; FY15 OCO replenishes 268 weapons expended in combat. The follow-on SDB II weapon will be capable of attacking mobile targets at standoff ranges in any environment. SDB II will increase the number of targets an individual platform can attack per sortie while

inherently limiting collateral damage. SDB II will provide a four-fold payload increase and allow a more limited number of combat forces to achieve operational objectives early in future conflicts. SDB II is an Acquisition Category (ACAT) ID program, with the Air Force as the lead service, in partnership with the Navy. Initial aircraft integration of the SDB II is planned for the F-15E, F-35B & C, F/A-18E/F and AC-130W.

Currently, SDB II is in Engineering, Manufacturing and Development with an LRIP decision planned by the end of this fiscal year. In Fiscal Year 2015, SDB II will continue developmental testing, complete live fire testing, and conduct government confidence test shots. FY15 procurement plans are to buy 144 weapons with deliveries starting in FY17, and total planned procurement for SDB II is 12,000 weapons. Current projections call for SDB II fielding on the F-15E in January 2017.

Air-to-Air Weapons

AIM-120 Advanced Medium Range Air to Air Missile (AMRAAM) and the AIM-9X enable the joint force to achieve Air Superiority by providing a first look, first kill capability. The current shortage of Air-to-Air missiles may increase the number of days it takes to gain and maintain Air Superiority in any future conflict. Meanwhile, adversary capabilities and capacity continue to challenge the Joint Force's historical advantage in the air superiority arena.

AIM-120D AMRAAM

The AIM-120D AMRAAM is the Department of Defense's premier beyond-visual-range missile to counter existing and emerging air vehicle threats, operating at high or low altitude with electronic attack capabilities. AMRAAM is a key enabler for gaining air superiority and providing F-15, F-16, F/A-18, F-22 and eventually F-35 aircraft the ability to achieve multiple kills per engagement. The latest evolution of AMRAAM is the AIM-120D, which delivers increased range, improved targeting, and an enhanced two-way data link for improved accuracy and lethality at range. AIM-120D is an ACAT 1C joint program, with the Air Force as lead service in partnership with the Navy. The AIM-120D completed operational testing in July 2014.

The Navy fielded the missile and declared IOC for the F/A-18E/F on January 7, 2015. The Air Force fielding decision was released on January 26, 2015 for the F-15, F-16, and F-22 aircraft, with IOC expected 3QFY15. Total procurement for FY15 is 200 units with increases in future procurement quantities for both the Air Force and Navy. The program will continue to update the AMRAAM technical data package to ensure a viable, producible design through the expected production life of the AMRAAM program.

Space

We view our national security as inextricably dependent on space-enabled capabilities. Space is no longer simply an enabler for other domains; it directly impacts the calculus of national security. At the same time, space has become contested, congested and competitive, with our space capabilities today facing advanced, demonstrated, and evolving threats, which require fundamental changes in the way we organize, train, and equip our forces. Congestion has increased the complexity of maintaining space situational awareness. There are over 60 active space-faring nations, nine of which have indigenous space launch capability. Almost any nation or state actor can access space services globally and globalization has made the latest technology available to our competitors and enemies.

Legacy space acquisitions relied on packing as much as possible into few systems making them critical vulnerabilities. Budget realities have driven reliance on legacy systems, with few new acquisition programs employing the latest technologies, while warfighter demands have driven the need for more capable systems.

Future acquisitions should focus on providing capabilities/services cheaper, faster, and more resilient. We must provide space capabilities that assure performance of military space functions, regardless of the hostile action or adverse condition. We must invest smartly in the highest payoff capabilities that enhance space domain mission assurance to include resilience, defense operations, and reconstitution of our space systems and architectures to ensure U.S. and Allied use of space through all phases of conflict. We seek to balance military and commercial systems and leverage international partner capabilities to allow the U.S. to share the cost of space

power; provide additional coverage in areas the U.S. requires assistance in, and create a coalition structure that can promote deterrence.

We recognize a conflict in space would hurt world economies and global stability; therefore, to address growing space threats, we are focusing on sustaining our space capabilities, deterring threatening activity, and if necessary, pursuing means to mitigate counterpace threats.

Cyber

The Air Force is building its Cyber Mission Forces. We must continue to execute defense plans, adding manpower for offensive and defensive cyber operations, but we are doing more. We will ensure cyber forces are equipped with the right capabilities to ensure effective operations. We are building a standard cyber mission platform to simplify training and enable full-spectrum operations. We are investing in converged cyber and electronic warfare capabilities. We are working with others across the Department of Defense to build a persistent training environment, consisting of jointly-interoperable ranges, dedicated operating forces, and supporting structures. We are enhancing our capacity to test our critical weapon, intelligence, and business systems for survivability in the increasingly hostile cyber environment.

Further we are leading the effort, in partnership with the other Services and Department of Defense agencies, to build Joint Regional Security Stacks. When fielded, this defensive boundary will provide global insight into activity, enabling rapid, coordinated Joint defensive operations. The standardized approach will enable sharing of Tactics, Techniques, and Procedures (TTP) across the Department of Defense, so that detection of an attack on one Service, and the resultant mitigations, can be seamlessly applied across the entire Department of Defense. This reduces operational response times and mission impact. No individual service could have afforded this level of capability with its own resources; it’s only by pooling funding across the entire department can we get the level of capabilities we require to counter the growing cyber threats. This new defensive boundary is the foundational step toward a trustworthy, efficient Joint Information Environment.

In short, we are on the path to put Cyber on par with Air and Space forces to achieve a multi-domain approach to mission accomplishment.

Airborne Electronic Attack

The Air Force is committed to providing airborne electronic attack capability in support of operations across all operational warfighting domains. The decision to divest half of the fleet of EC-130H COMPASS CALL's in FY16 was a difficult decision driven by U.S. Air Force topline reductions and the need to balance current capacity against the need to modernize. The EC-130H COMPASS CALL is required in multiple war plans; the divesture incurs and accepts the risk of nonsupport to all but the current operations. The Air Force will continue to investigate alternatives for airborne electronic attack capabilities in support of the Joint Airborne Electronic Attack Family of Systems concept.

Rapid Global Mobility and Personnel Recovery

The Rapid Global Mobility fleet continues to pursue capability enhancements balanced by recapitalization and required modifications to operate in international airspace and avoid diminishing manufacturing source issues. The KC-46A Pegasus tanker acquisition program is fully funded and the first 18 of 179 tankers are slated for delivery in FY17. Production of the C-130J continues; we plan to field 142 total aircraft. Our C-130H is being outfitted with FAA and European compliance modifications to ensure the tactical airlift fleet is able to respond to future tasking's. The strategic airlift fleet of C-5s and C-17s is capable of supporting the million ton miles per day metric established in our most stressed response scenarios.

To meet our Personnel Recovery mission, the Combat Rescue Helicopter program of record of 112 aircraft will replace our aging HH-60G fleet. Four test aircraft are on contract with IOC targeted in 2021, and full operational capability in 2029.

Air Force efforts toward acquisition reform to ensure the best value for the American taxpayer The Air Force Acquisition community is committed to providing winning warfighter

capabilities while being mindful of limited resources and being responsible stewards of American taxpayers. The acquisition community has been challenged to achieve five priorities: get programs right, increase transparency to external stakeholders, own the technical baseline, continue our efforts on Better Buying Power (BBP), and build our systems towards a future Air Force. All of these initiatives contribute to a stronger, cost conscious acquisition community.

The Air Force Acquisition community has a commitment to getting programs right and exhibiting strong program management is the lynchpin of what we do. While our top three acquisition programs, F-35 Joint Strike Fighter, KC-46 Tanker, and Long Range Strike Bomber (LRS-B), continue to receive the most attention and scrutiny, we remain committed to keeping all of our programs on track. Effective execution of these programs, along with stable funding will keep us from having to make difficult tradeoffs such as delivering reduced capabilities or reduced quantities.

Under our transparency initiative, we are working with OSD (AT&L) to delegate Milestone Decision Authority to the Air Force Service Acquisition Executive on ACAT ID programs where appropriate, increasing our efficiency and streamlining requirements. The Air Force is also engaged in a new initiative, Bending the Cost Curve (BTCC), which facilitates strategic agility in our acquisition efforts. Its hallmark is a collaboration with our industry partners to identify, evaluate, and implement transformational cost saving reforms.
Owning the technical baseline requires the government to understand and exert leadership in the technical aspects of its programs, therefore enabling it to be a more effective weapons system acquirer. This is not to be confused with or limited to government-owned data rights as we know our industry partners need to own their intellectual property to remain profitable. But by working together to strengthen our technical capabilities within our program offices, we are helping ourselves become better stewards of taxpayers' dollars.

BBP is the Office of the Secretary of Defense (Acquisition, Technology & Logistics)'s compilation of tools and best practices designed to strengthen the Department of Defense's buying power, productivity, and affordability, while improving capabilities for the warfighter. One of our many success stories from BBP, which is currently in its third iteration, is our

adoption of Should Cost Management. Should Cost is a management tool designed to proactively target cost reduction and drive productivity improvement into programs. The Air Force's FY14 Realized Savings were $1.4 billion. While that is a tremendous start, we will continue to challenge all PEOs and Program Managers to seek out additional Should Cost opportunities. The fifth priority is to continue building our systems for the future Air Force. The Air Force Acquisition 20 year Flight Plan is fully aligned with "America's Air Force: A Call to the Future", General Welsh's 30 year strategy. In our Flight Plan, we are guiding, facilitating, and resourcing workforce initiatives across the acquisition enterprise. At the core of our mission is our workforce – our world-class workforce is paramount to achieving and maintaining acquisition excellence. To accomplish these ends, we heavily rely on the Defense Acquisition Workforce Development Fund established by Congress.

A number of legislative initiatives are underway to achieve these priorities. In concert with Congress and OSD (AT&L), we are reviewing statutory requirements imposed on acquisition programs with a focus on streamlining them while trying to maintain their original intent. By reducing unnecessary bureaucracy and red tape, we hope to eliminate redundant requirements for information, and enable tailored reviews and documentation while emphasizing sound planning and risk reduction. We are also working to ensure the delegation of acquisition authority to the lowest appropriate level, modifying requirements for specific contract types for major development programs, and requiring acquisition strategies for each Major Defense Acquisition Program (MDAP). Together, we believe these efforts will ensure the acquisition community remains committed to providing essential capabilities to the warfighter while respecting the taxpayer.

Industrial Base

When considered in its entirety, the nation's aerospace industrial base is a bright spot in the economy with a favorable trade balance in 2014 of $61.2 billion. However, this success is primarily due to the commercial aircraft sector. The concerns and challenges we expressed in our testimony last year over the future of the aerospace industrial base supporting the Air Force remain. If anything, the nation is one year closer to abdicating its historic role as the global

technical leader in military aerospace. As a nation, we can no longer take for granted the widespread availability of engineering and design teams, production workers, facilities, and equipment required to meet emergent national security requirements. The observations made by Secretary James and General Welsh in the Air Force Posture Statement concerning the capability and capacity of our Air Force apply as well to the aerospace industrial base supporting the Air Force.

The result of the difficult decisions driven by budget reductions and fiscal uncertainties is that as a nation, we have been giving up industrial capacity to design, develop, produce, and sustain the next generation of military aerospace systems while attempting to maintain some level of capability in those areas. In a few areas, we have accepted risk and have allowed a gap between former and future capability. One highly visible example is the nation's use of the Russian-made liquid rocket engine on one of the vehicles that launches defense satellites, but this will not come without significant technological challenges. Simply replacing the Russian-made RD-180 with a new engine is not the answer. We know from our prior experience in developing rockets throughout the past several decades that a rocket engine and its associated launch vehicle must be designed concurrently. In essence, we build the rocket around the engine. Further complicating this effort, we will also attempt to maximize competition in an environment where the inventory of our current provider's most cost competitive launch vehicle is limited. One of the Air Force's top priorities has been to reinvigorate competition in the launch arena by reaching our ultimate goal of two domestic commercially viable launch service providers able to support the entire National Security Space manifest. We are refining a four-step approach to meet this goal, and the $220 million addition in the FY15 NDAA for a new rocket propulsion system will help to transition off of the RD-180. In other areas, for example advanced turbine engines, Air Force investments to maintain capacity and develop future capability have continued. In the case of advanced turbine engines, our investments are cost shared with industry, prudently leveraging our limited resources.

Our strategy-based FY16 budget submission supports investments in key programs (KC-46, F-35 and Long Range Strike Bomber), in the critical requirements of the Combatant Commanders and in capabilities for Intelligence, Surveillance and Reconnaissance, nuclear,

space and command and control. These focused investments, while propping up elements of the aerospace industrial base, do not fully address the national commitment required to sustain our global aerospace leadership.

V. Conclusion

The Air Force continues to be the world's finest across the spectrum of conflict, but the gap is closing. A return to sequestration-level funding would result in a less ready, less capable, less viable Air Force that is unable to fully execute the defense strategy. At FY15 Balanced Budget Act level funding, the Air Force has some ability to manage risk in supporting the strategy, but significant challenges will remain. In order to defeat advancing threats, the Air Force must continue investments in top recapitalization and key modernization programs, and gain and maintain full-spectrum readiness.

Our sister services and allies expect the Air Force to provide critical warfighting and enabling capabilities. We remain focused on delivering Global Vigilance, Reach and Power, through our core missions of Air Superiority, Space Superiority, Global Strike, Rapid Global Mobility, Intelligence, Surveillance and Reconnaissance and Command and Control. We look forward to working closely together as we address the challenges of near-term uncertainty and risk to provide the ability to deliver combat air power for America when and where we are needed.