

**DEPARTMENT OF THE AIR FORCE
PRESENTATION TO THE SUBCOMMITTEE ON STRATEGIC FORCES
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES**

SUBJECT: FISCAL YEAR 2012 AIR FORCE SPACE POSTURE

**STATEMENT OF: THE HONORABLE ERIN C. CONATON
UNDER SECRETARY OF THE AIR FORCE**

MARCH 15, 2011

**NOT FOR PUBLICATION UNTIL RELEASED
BY THE SUBCOMMITTEE ON STRATEGIC FORCES
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES**

Mr. Chairman, Ranking Member Sanchez, members of the Subcommittee, good afternoon; it is good to be here today to talk about the Air Force's space programs and budget. Thank you for everything you do for all servicemembers, particularly our Airmen. This Subcommittee oversees some of the most important aspects of our national security – nuclear weapons, ballistic missile defense and, what we are here to talk about today, our military space programs.

The joint warfighting community, a range of other federal government functions, and broader civilian society rely on the Air Force to deliver world-leading space-based capabilities, to include: space launch and range operations; missile warning; satellite communications; space situational awareness; weather; and positioning, navigation, and timing services. Fiscal Year 2012 (FY12) is a significant year for the Air Force and national security space. With the release of major new policy guidance for our space programs, including the National Space Policy (NSP) and the National Security Space Strategy (NSSS), the Air Force is striving to ensure that our budget reflects the policies and strategies embodied in those documents. The NSSS emphasizes the need to strengthen our capabilities in a space environment that is increasingly congested, contested and competitive. It also highlights the need for increased information sharing and cooperation through our international partnerships, asserts a commitment to help energize our space industrial base within the confines of an evolving fiscal reality, and recognizes that our space-based capabilities are vital to our national defense and, therefore, must be robust and resilient. This strategy will guide the way we think about space, operate in space, and acquire capabilities for space.

In our FY 12 budget submission, we are taking important steps consistent with the NSP and NSSS. For example, we are focusing on international partnerships in our Wideband Global SATCOM (WGS) and Space Fence programs, we are working with other agencies and our industry partners to stabilize the market for National Security Space launch, and we are investing in critical upgrades to our secure communications capability and our Global Positioning Satellite (GPS) constellation.

Current Funding Situation

Before going into detail about the Air Force FY12 budget request for space programs, I want to emphasize to the subcommittee some of the impacts of the funding situation for the current fiscal year (FY11). In short, the operation of the Department of Defense (DoD) under a Continuing Resolution (CR) for FY11 is already causing difficulties in the execution of Air Force space acquisition programs. We have taken actions to mitigate impacts where we can, such as our recent reprogramming of \$80 million in FY10 funds into the GPS IIIA program to avoid costly programmatic delays and contract renegotiation for the first long-lead production option for space vehicles (SV) 3 and 4. However, our success in mitigating CR impacts to GPS IIIA has limited our flexibility to address other detrimental impacts of a prolonged CR.

Additionally, new start limitations prevent the Air Force from carrying out the scheduled award of WGS-7, potentially causing a production break with estimated cost impacts of up to \$50 million if funding is delayed until the start of FY12. The Air Force plan to procure long lead items for Advanced Extremely High Frequency (AEHF)-5 and 6 is also delayed, undermining current efforts to more efficiently acquire this satellite system and protect the space industrial base. The CR limitations also prohibit new start

programs such as Space Surveillance Telescope (SST) and Ballistic Missile Early Warning System (BMEWS), creating delays in critical space capability. At a time when the Air Force is striving for greater efficiency in our space programs, operating under a CR for nearly half the fiscal year undermines those efficiency efforts.

Space Governance and Management Reform

Over the past year, following a thorough review, the Air Force has reorganized our Headquarters Air Force (HAF) space management. Secretary Donley directed the review in December 2009 because so many of the factors on which the Air Force based its 2003 reorganization had changed. The dual-hatting of the Under Secretary as Director of the National Reconnaissance Organization (NRO), for example, ended in 2005 after passage of legislation that reorganized the Intelligence Community. Also in 2005, Milestone Decision Authority for all Acquisition Category (ACAT) 1 programs was transferred to the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OSD (AT&L)), and has remained there for space programs.

The governance study concluded last summer. Following the review, the Secretary reaffirmed that the Under Secretary of the Air Force serves as the focal point for space within the Air Force. As such, I act as the senior Air Force official for space matters to include planning, policy, strategy, and international relations; and I coordinate space acquisition work with these other functions.

The Secretary also assigned the Space Service Acquisition Executive (SAE) function to the Assistant Secretary of the Air Force for Acquisition (SAF/AQ). These steps consolidated all Air Force acquisition functions in one office, streamlining the

structure to support Air Force users and providing a single Air Force interface to OSD (AT&L).

In addition, the Secretary directed creation of an Air Force Space Board to coordinate Air Force positions regarding multi-organization, service, and agency issues. The Space Board is co-chaired by the Vice Chief of Staff and me, and includes senior Air Force space leaders. We meet monthly and have already looked at such important topics as the Evolutionary Acquisition for Space Efficiency (EASE) proposal and the developing acquisition strategy for the Evolved Expendable Launch Vehicle (EELV) program.

Through this study and in light of the 2009 DoD Space Posture Review and the 2009 Quadrennial Defense Review, the Department of Defense also made changes to its space governance structure. First, Deputy Secretary of Defense Lynn revalidated the Secretary of the Air Force as the DoD EA for Space, and charged him with: integrating the DoD overall space program; conducting and overseeing long-term space planning and architecture development; and facilitating increased cooperation with the intelligence community on space issues. Second, the EA now chairs the newly established Defense Space Council (DSC), with representatives from across the DoD and the Intelligence Community. Third, the EA, working through the DSC, was also directed to establish a joint space office to restructure and replace the National Security Space Office (NSSO). The first two of these changes have been implemented; the establishment of a successor to the NSSO is in progress, and is expected to be complete by this summer.

A significant outcome of these governance reviews is that both the Secretary of the Air Force and the Under Secretary carry formal responsibilities for space management: the Secretary as the re-designated DoD EA for Space, and the Under Secretary as the focal point for space at Headquarters Air Force. These updates reflect how seriously the Air Force takes our national security space responsibilities. I am confident that our new headquarters organization will better position DoD and the Air Force to effectively coordinate implementation of space policy and strategy, and it will provide a better framework for development of new national security space capabilities.

Space Acquisition Reform

In tandem with our work to make these organizational changes, the Air Force has also been an active participant in Secretary Gates' efficiencies initiative. The Air Force, DoD, and indeed the Nation, are moving into an era of constrained budgets. Secretary Gates' initiative is born of the recognition that available resources are constrained, even as requirements increase, and therefore, we must find ways to "do more without more." We found efficiencies within Air Force space programs and we also reinvested some of our \$33.4 billion in total Air Force efficiencies into space – notably our launch capabilities.

As the new National Space Policy makes clear, Department of Defense contributions to national security via our space programs are enormous. But the Air Force understands that to be good stewards of the space mission in the emerging budget environment, we have to make our programs more cost-effective. The Air Force is committed to developing a more effective and efficient acquisition approach, which is

why we have already taken steps to improve space acquisition through our EASE strategy and the EELV program.

EASE

The current practice of procuring satellites one-at-a-time and/or on a just-in-time basis has led to increased costs due to production line breaks, parts obsolescence and inefficient use of labor. In order to combat the inefficiency and disruption caused by the status quo approach to procuring satellites, we are seeking congressional support to implement an approach we call Evolutionary Acquisition for Space Efficiency (EASE). EASE is the product of years of study and years of interaction with Congress working to find ways to more effectively and affordably acquire space systems. It is an acquisition strategy designed to drive down costs, improve space industrial base stability, and allow for investments in technology that will lower risk for future programs. EASE is comprised of four basic tenets: block buys of satellites; stable research and development investment; fixed price contracting; and full funding through advance appropriations.

Block buys of satellites will allow us to purchase economic order quantities of critical parts, run production lines more efficiently and reduce non-recurring engineering costs. This approach will result in savings that can be reinvested in research and development that will further improve the performance and lower the cost of follow-on systems. This reinvestment – what we call the “Capability and Affordability Insertion Program,” or CAIP – is an essential component of EASE. A strong commitment to ongoing reinvestment in technology development in concert with steady satellite

production will provide much-needed stability and predictability for a fragile space industrial base.

Fixed price contracts are appropriate for satellite programs that have moved beyond the development phase – where most of the cost and schedule risk resides. At the same time, the costs of buying a two-satellite block of either AEHF or SBIRS are such that the Air Force, the DoD and OMB have concluded that an additional fundamental element of EASE must be full funding through advance appropriations. This spreads acquisition costs across multiple years, while still applying the principles of full funding.

Consequently, the President's FY12 budget request includes a request for Advance Appropriations for AEHF, and we contemplate a similar approach for SBIRS beginning in FY13. The Administration will work with the Congress to ensure the Department has the statutory authorities needed to implement Advance Appropriations for AEHF and SBIRS. We recognize such a change from traditional full funding rules is significant, but so are the implications of continuing with the status quo. Current full-funding budget requirements, coupled with the high costs for individual satellites, make it extraordinarily difficult for the Department to fund many satellite programs in the most efficient and stable way without negatively impacting other mission-critical programs.

Critically, these basic tenets of EASE must be pursued in tandem with a robust examination of contractor costs and aggressive efforts to achieve cost reductions. As part of the Secretary Gates' efficiencies initiative, the Air Force has undertaken a rigorous "Should Cost Review" (SCR) of the AEHF program, led by Mr. David Van Buren, the Air Force Service Acquisition Executive. This review into what the capability

provided through the AEHF program should cost will put the Air Force in a much stronger position to negotiate the costs of AEHF-5 and 6. But the impact of the SCR for AEHF will be much diminished without implementation of EASE, because our industrial partners' incentive to explore such cost reductions is inextricably tied to the stability and commitment afforded to the industrial base by the EASE approach.

With Congress' support, we are confident that the combination of the major elements of EASE – block buys; stable research and development investment; fixed price contracting; and full funding through advance appropriations– in tandem with the rigorous Should Cost Review already underway, will help the Air Force achieve considerable savings in the acquisition of some of our most critical space assets. We look forward to continuing to work with Congress on achieving our shared goals in this area.

EELV

Another area where the Air Force has devoted significant effort to develop a more efficient, cost-effective acquisition strategy is space launch. Given the importance to national security of our space assets, and with the increasingly competitive space environment, it is absolutely crucial that our space launch program be successful. The Evolved Expendable Launch Vehicle (EELV) program, which provides the nation's medium and heavy launch capability with two families of launch vehicles (Atlas V and Delta IV), has delivered mission success, putting our satellites in orbit every single time we launch. The 100 percent launch rate success of EELV demonstrates our determination to deliver assured access to space.

At the same time, the operational success of EELV has in recent years been accompanied by rapidly and substantially increasing costs. We have therefore moved aggressively to scrutinize EELV acquisition, via a blue ribbon external review and an Air Force Should Cost Review (SCR). Both yielded important insights into how we can achieve savings against launch costs, with the SCR producing 84 cost-saving recommendations for the near and mid-term. Air Force Space and Missile Systems Center (SMC) is already working to implement these recommendations, while Air Force acquisition leaders continue to dig deeper into the current cost structure.

In addition, as part of our developing EELV acquisition strategy, the Secretary of the Air Force, the NRO Director, and the National Aeronautics and Space Administration (NASA) Administrator signed a joint Letter of Intent in October 2010 to demonstrate our commitment to launch cooperation and the space industrial base. The Air Force has committed to buy four of the five EELVs that DoD will purchase in FY12 and FY13, and five EELVs per year for the remainder of the Future Years Defense Program. This will have the effect of lowering the cost per booster and contributing to a more stable market for our industrial base. The Air Force FY12 budget request includes \$1.7 billion to fund the EELV program, reflecting an increase of \$400 million over the FY11 request and an important part of where we invested savings realized through the efficiencies initiative.

The Air Force is committed to mission assurance and to competition from vendors with proven capabilities. Our developing EELV acquisition strategy will include clear criteria for new entrants, and will allow for future competition to gain cost benefits, support a broader industrial base, and maintain manifest flexibility.

Overview of Air Force Space Investments

National Security Space programs comprise 10% of the annual Air Force budget and 21% of Air Force investment accounts. The Air Force's space contributions represent just over 80% of overall Department of Defense space funding and more than 90% of the space positions designated under Major Force Program (MFP)-12. The President's Budget Request for FY12 includes a total of \$8.76 billion for RDT&E and procurement of Air Force Space Programs.

Space Program Updates

The Air Force is investing in critical military space capabilities which directly support our warfighters and benefit our Nation's economy, national security, international relationships, scientific discovery and our quality of life. Some of the areas for investment include: satellite communications; advanced missile warning systems; global positioning, navigation and timing; accurate, time-sensitive weather data capabilities; and enhanced space situational awareness.

Our Combatant Commanders and warfighters rely on **satellite communications** for continuous communications around the world. Driven by the escalation of Airborne Intelligence Surveillance and Reconnaissance (AISR) users, the need for these capabilities is growing rapidly. WGS delivers worldwide, high-capacity military satellite communication for deployed forces. Each WGS satellite delivers the equivalent capacity of the entire existing Defense Satellite Communications System constellation. Secure, protected communications for national leadership and nuclear command and control, will be provided by the new AEHF satellite system, the first of which was launched last year. Working together, our legacy systems and the new WGS and AEHF

satellites provide our forces the vital communications needed to remain effectively coordinated, synchronized, and responsive in global operations.

In December 2009, we successfully launched WGS-3, and in June 2010 it was successfully turned over to the U.S. Strategic Command. We have three additional satellites (WGS Block II) scheduled for launch between 2011 and 2013. After OSD completed a Nunn-McCurdy review and OSD (AT&L) certified the program to Congress, OSD (AT&L) approved repeat Milestone C/Full Rate Production Decision and authorized procurement of WGS-7 and 8. The President's Budget Request for FY12 includes a total of \$468.7 million in funds for procurement of the WGS system. This request funds WGS-8 full procurement, and the program office and technical support required to build WGS-7 and 8.

In addition to providing critical communications capabilities, WGS has also become a flagship for our international cooperation measures in space, with Australia funding WGS-6 in return for a portion of the overall bandwidth provided by the WGS constellation. In accordance with the NSSS, other international agreements are being pursued to further expand space-based communication capability through the procurement of a ninth WGS satellite.

AEHF provides secure satellite communications for the President, as well as strategic and tactical forces. It provides ten times the throughput and greater than five times the data rate of the current MILSTAR II Satellite Communication System. After its initial launch anomaly, the first AEHF satellite is well on its way to final orbit, and is expected to reach check-out and operational location by summer 2011. AEHF-2 is in storage and is expected to be available for launch in 2012; AEHF-3 started its Final

Integration Testing in February 2011, with launch availability in Fall 2012; and the program office awarded the AEHF-4 contract in December 2010.

Following the cancellation of the Transformational Satellite (TSAT) program in 2009, DoD directed the procurement of two more AEHF satellites. In the FY12 budget request, we are seeking congressional approval for a block-buy of AEHF-5 and 6 under our proposed EASE strategy. Specifically, we are requesting \$974.5 million in FY12, as well as advance appropriations in FY2013 through FY 2017, for the AEHF program to support an FY12 contract award for both AEHF-5 and 6.

We are also investing in the SBIRS to provide world-class **missile warning**, missile defense, technical intelligence and battlespace awareness capabilities. The SBIRS highly elliptical orbit (HEO)-1 and 2 payloads are currently on-orbit and providing operationally certified missile warning data. And after a long and difficult development process, SBIRS geosynchronous (GEO)-1 was recently approved for shipment to the launch site, and is expected to launch from Cape Canaveral Air Station this spring. Launch of GEO-2 is contemplated 12 months after the GEO-1 launch, and the GEO-3 and 4 satellites and HEO-3 and 4 payloads are budgeted to continue fabrication.

Proposed funding for GEO-5 and 6 in FY12 is focused on non-recurring engineering to address parts obsolescence, long lead parts advance procurement and initial production activities. Ground Segment efforts are centered on completing the ground software required for GEO-1 message certification as well as mobile ground system updates. In total, the FY12 budget request seeks \$996.1 million for the SBIRS program, including \$243.5 million in Advance Procurement, which will be acquired under the EASE strategy.

The Global Positioning System (GPS) is the standard for **positioning, navigation and timing** (PNT), providing highly accurate, real-time, all-weather, passive common-reference grid position and time information to military and civilian users worldwide. The robust GPS constellation includes 31 satellites, seven above the 24 required to maintain the system. The first GPS IIF satellite was launched in May 2010, and the next GPS IIF is scheduled for later this year. The remaining GPS IIF space vehicles are in various stages of production, and we will continue to launch GPS Block IIF satellites to maintain the constellation as a global utility.

The next generation of GPS space vehicles, GPS III, will deliver significant enhancements that include better anti-jam capabilities, a Galileo-compatible L1C civil signal, and improved accuracy, availability and integrity. GPS IIIA received its Milestone C approval on January 31, 2011, following a successful Critical Design Review.

The FY12 budget request includes \$1.6 billion for PNT capability and incorporates continued funding for GPS IIF and GPS III, development of the next-generation operational control segment, and upgraded military user equipment.

Weather and forecasting data is crucial to our forces in peacetime and in conflict. Currently, military weather forecasters use data from the six Defense Meteorological Satellite Program (DMSP) satellites as well as data from non-DoD weather satellites including those maintained by the civil weather agency, the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), to monitor and predict regional and global weather patterns, including the presence of severe thunderstorms, hurricanes and typhoons.

Last year, the Executive Office of the President directed a restructuring of the National Polar-orbiting Operational Environmental Satellite System (NPOESS), a tri-agency environmental satellite program. As a result, DoD approved a plan to modify the existing NPOESS contract to procure two Defense Weather Satellite System (DWSS) spacecraft for the early-morning orbit. This system will replace the DMSP in the early-morning orbit slot, ensuring continuity of detailed overhead weather imagery and sensing information. Two additional DMSP satellites will be put on orbit starting in 2012 to extend the capabilities provided by DMSP until the follow-on DWSS is launched.

For FY12, the budget request includes \$444.9 million to fund a redesign of the NPOESS spacecraft bus to a smaller and lighter version for DWSS, to continue development of DWSS sensors, and to invest in materials, algorithms and DoD-specific elements of the common ground system.

As the NSP and the NSSS both highlight, the increasingly congested space environment creates a pressing need to improve our **Space Situational Awareness (SSA)**. Today we track over 20,000 objects in space – orders of magnitude more than just a few years ago. About 1,100 are active satellites and the rest are essentially debris or inactive satellites. Development and implementation of the Joint Space Operation Center (JSpOC) Mission System (JMS) supports Air Force Space Command's top SSA priority: to provide integrated data that gives real-time, actionable SSA allowing informed, rapid decision-making capability. JMS was a new program element in FY10 that consolidated efforts from the Integrated Space Situational Awareness (ISSA), the Rapid Attack Identification Detection and Reporting System

(RAIDRS) Block 20, and Space Command and Control (C2) programs under a single program element. The FY12 budget request includes \$119.9 million to sustain the foundational JMS infrastructure and enable further planning and development.

To replace and improve the SSA capabilities of the Air Force Space Surveillance System (AFSSS), which has a planned end-of-life in 2015, the Air Force is developing the Space Fence program to provide uncued surveillance of small objects in low and medium earth orbit. The ground-based radar sites that will comprise the Space Fence will provide timely information on launch detection, maneuvers and breakups to support protection of space assets. On January 26, 2011, two contracts were awarded to Lockheed Martin and Raytheon for the Preliminary Design Review portion of Phase A development. The Air Force and Phase A contractors will continue to leverage development of the Navy's AMDR S-band program, which may share certain key technologies with the Space Fence.

The FY12 budget request includes \$235.5 million in RDT&E funding for the Space Fence, and we anticipate award of the final contract in the last quarter of the fiscal year. This program is another in which we are seeking international cooperation through establishment of an SSA partnership with Australia by jointly employing and operating a space object detect and track radar in Australia. This system will provide better understanding of the current and future strategic space environment and establish a foundation for continuing nation-to-nation cooperation.

The FY12 budget request does not include funds for the previously-proposed follow-on to the Space-Based Space Surveillance (SBSS) Block 10. SBSS Block 10 was successfully launched on September 25, 2010, and is already delivering timely

detection and tracking of space objects and events in deep space, substantially advancing our SSA capabilities. The timing of the SBSS launch and the magnitude of initial cost estimates for the proposed SBSS follow-on led to the decision not to include funding for this effort. The Air Force and DoD are currently studying alternatives to provide a follow-on capability to SBSS.

Beyond these major programs, the FY12 budget request reflects several other Air Force initiatives consistent with the NSP and NSSS. Such initiatives include the **Operationally Responsive Space** (ORS) program, established to pursue innovative capabilities that can be rapidly developed and fielded in months rather than years to respond to Combatant Commanders' immediate space requirements. The budget request includes \$86.5 million for the ORS program.

The budget also supports the Spacelift Range System (SLRS)/Launch & Test Range System (LTRS), the major modernization, sustainment and transformational initiatives at our ranges to ensure public safety and mission assurance at lower costs. The FY12 budget request for RDT&E and procurement of SLRS/LTRS is \$135.9 million. The budget request includes \$79.7 million to support the Air Force Satellite Control Network (AFSCN) that provides tracking, telemetry, commanding, mission data dissemination, and satellite recovery/anomaly resolution in support of more than 150 DoD, classified, Allied and civil space systems. And finally, the Rocket Systems Launch Program (RSLP) that supports cost-reimbursable launch services for government flight tests using refurbished missile motors is included in the FY12 budget, with a request of \$158.1 million in RDT&E.

Each of the space programs we are developing and sustaining is designed to support the NSSS and NSP by leveraging emerging opportunities to strengthen the United States' national security space posture while maintaining and enhancing the advantages gained from space capabilities.

Conclusion

In conclusion, the Air Force has been, and continues to be, committed to excellence in the space enterprise, both as a core function of this Service and on behalf of DoD. Our efforts in refining the space governance structure, our acquisition reform and efficiency initiatives, and our work to modernize and recapitalize the space architecture exemplify our dedication to supporting the Nation's national security space objectives. The FY12 budget request reflects this commitment as we seek to maintain critical space capabilities for our nation and our warfighters. With Congress' help, the Air Force believes that the updates and reforms we are pursuing will strengthen our space capabilities and better enable our warfighters to navigate with accuracy, communicate with certainty, and strike with precision. Thank you for the opportunity to be here, and I look forward to answering your questions.