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HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
UNITED STATES HOUSE OF REPRESENTATIVES

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES
U.S. HOUSE OF REPRESENTATIVES

SUBJECT: Air Force Rotorcraft Programs

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Introduction

Chairman Bartlett, Ranking Member Reyes, and distinguished members of the subcommittee, thank you for calling this hearing, and for the opportunity to provide you with an update on Air Force rotorcraft modernization efforts important to our Air Force and to the Nation. Air Force rotary wing assets are critical to the mission of the Air Force and provide worldwide support to Combatant Commanders. The HH-60G supports the Service's Core Function of Personnel Recovery. Additionally, the UH-1N provides security for Nuclear Operations while also ensuring continuity of government and continuity of operations in the National Capital Region. Another H-1 variant, the TH-1H, provides a modern platform for the rotary wing track of Air Force undergraduate pilot training. Finally, the CV-22 provides US Special Operations Command with a unique long-range vertical lift capability. The Air Force is dedicated to sustaining our capabilities and modernizing as required to ensure we meet the needs of the country.

Combat Search and Rescue (HH-60G)

Air Force Rescue Forces recover isolated personnel in contested areas, marginal weather, and during very-low illumination. The Air Force makes a significant investment to train and equip dedicated Rescue Forces capable of providing Personnel Recovery in support of the Joint Force. Since September 11, 2001, our HH-60G crews have recovered isolated personnel in hostile enemy territory and have repeatedly landed in contested areas to recover injured American and Coalition Soldiers, Sailors, Airmen and Marines. They have also assisted with casualty evacuation (CASEVAC), medical evacuations (MEDEVAC), special operations support, and humanitarian relief missions. Over 12,000 American, coalition, and civilian lives have been affected by the actions of our heroic Rescue Forces over the past 10 years.

Throughout 2011, Air Force Rescue Forces remained fully engaged in Personnel Recovery efforts across the globe. They operated in Afghanistan, Iraq, and in support of operations in Libya. HH-60G crews performed 16 Combat Search and Rescue (CSAR) missions and 2,157

CASEVAC missions. Additionally, Rescue Forces performed tsunami humanitarian relief operations on the Japanese main island of Honshu.

The HH-60G Pave Hawk is a low supply/high demand asset and operated throughout 2011 at a significantly higher deployed utilization rate than over previous years. The HH-60G fleet contains only 99 of the original 112 aircraft program of record, of which only 93 are currently flyable due to unscheduled depot maintenance. Major structural cracks have been found on 66 of the 99 aircraft and 47 aircraft have sustained battle damage in the last two years. These impacts have led to increased aircraft down time due to unscheduled depot maintenance.

Aircraft availability remains a top concern for Air Force Personnel Recovery leadership. Ongoing modification programs are keeping the HH-60G a viable combat search and rescue (CSAR) weapon system until the Air Force's replacement program is complete. The modifications address sustainment issues, safety features, defensive systems, and avionics upgrades that allow the HH-60G to continue operations in a joint/multi-national environment under austere combat conditions.

Aircraft survivability remains a top priority for the Air Force. The HH-60G is currently equipped with infrared/radar missile warning systems and countermeasure dispensers. Additionally, the HH-60G has an infrared missile jammer. In FY12, with significant help from the Navy, the Air Force initiated a program to update its onboard sensors on our deployed aircraft to include a hostile fire indicator (HFI) capability. This capability provides indications of unguided weapons such as some types of bullets and rocket propelled grenades. HFI is currently installed on aircraft deployed to Afghanistan and will be installed on the remaining aircraft as they deploy.

Another survivability concern for our HH-60Gs is operating in degraded visual environments (DVE), especially during landings and take offs in dusty areas. The Air Force is finalizing its testing of an improved altitude hold and hover system that will provide the capability to fly a coupled approach to landing. Additionally, the Air Force is participating in a joint effort that is researching technologies that will provide pilots the ability to "see-through" dust during landings and provide a digitized picture of the landing zone in the cockpit.

The Air Force is procuring replacement rotary wing aircraft based upon currently fielded CSAR capabilities. Two programs address the immediate and long-term needs of the Air Force: HH-60 Operational Loss Replacement (OLR) and the Combat Rescue Helicopter (CRH) program.

The OLR program is a short-term fix to address current availability issues and provide combat capable aircraft to the combatant commanders. The HH-60G is a UH-60A/L with over 25 years of modifications and an off-the-shelf replacement does not exist. The UH-60L is no longer in production and has been replaced by the more modern digitally based UH-60M.

OLR uses an incremental acquisition strategy to deliver replacement aircraft to the warfighter as rapidly as possible. Baseline aircraft are procured using an existing US Army contract. The initial three UH-60M aircraft receive minimal modifications and deliver to a non-combat coded squadron, freeing up three combat capable HH-60Gs to deployed squadrons. The first two aircraft were delivered in September 2011 and the third is scheduled for May 2012.

The additional OLR aircraft will be modified to the current HH-60G configuration. The Air Force plans to utilize existing modifications to limit development and test which reduces schedule risk. Non-recurring engineering will combine several existing modifications into one streamlined modification. The fourth OLR aircraft is scheduled to begin receiving modifications by the end of 2012 with an anticipated delivery in mid to late 2013.

The Air Force's commitment to Personnel Recovery is rooted in our resolve to bring every one of our men and women home from combat, regardless of Service. Modernizing the HH-60G fleet preserves our high end rescue capability to meet Combatant Commanders requirements.

The Combat Rescue Helicopter (CRH) program (formerly known as HH-60 Recapitalization) is a full and open competition intended to replace the entire CSAR fleet. The Joint Staff approved the requirements in July 2010. The program will procure an existing aircraft configured by the contractor with non-developmental mission equipment to meet the approved requirements. A request for proposal is scheduled for May 2012 with a contract award planned for the 3rd Quarter

of 2013. The FY13 PB supports the procurement of the initial two aircraft and the initiation of the required integration. At Initial Operating Capability (IOC) in FY18, the Air Force will have a minimum of four training aircraft and four operational aircraft.

Nuclear Security and Continuity of Government (UH-1N)

The UH-1N “Huey” is a versatile helicopter whose service in our Air Force has spanned five decades. Entering the USAF inventory in 1970 for its search and rescue capabilities, the UH-1N mission set has expanded and transformed over the years to include nuclear security support, continuity of government/continuity of operations (COG/COOP), Foreign Internal Defense support, formal training, senior leader airlift, test/range support, and survival/evasion/resistance/escape (SERE) training. The UH-1N helicopters assigned at the following locations: Maryland, Wyoming, Montana, North Dakota, Washington, Florida, New Mexico, and Japan.

The two primary missions conducted by the UH-1N are nuclear security support and COG/COOP. The nuclear security support mission includes emergency security response and nuclear convoy support. During an emergency security response mission, UH-1N helicopters provide timely transport of a tactical response force to defend/protect a missile site. Once at the site, the helicopters conduct overhead surveillance and communications support for the tactical response force. Nuclear convoy support missions require the UH-1Ns to transport an airborne convoy response force, provide convoy communications support, and conduct overhead surveillance to ensure the security of the nuclear convoy.

The Air Force is also tasked under three operations plans for national level COG/COOP missions. These National Capital Region emergency evacuation plans require 27 UH-1Ns to ensure enough aircraft are on alert 24 hours a day, 7 days per week, 365 days per year, while still addressing scheduled and unscheduled maintenance, training, senior leader airlift, MEDEVAC, search and rescue, and Defense Support of Civil Authorities requirements. The 1st Helicopter

Squadron, at Andrews AFB, MD, currently has 19 UH-1N helicopters to support the COG/COOP missions.

In FY 2009, the Air Force began the Common Vertical Lift Support Platform (CVLSP) program to replace the 62 UH-1N helicopters with 93 non-developmental, off-the-shelf helicopters with mission-essential speed, range, payload, endurance, and survivability capabilities. The modernization effort focused on addressing the capability gaps that had developed between the UH-1N and its assigned missions during the past 40 years. Due to fiscal constraints, the FY 2013 President's Budget eliminates funding for the CVLSP platform, allowing the Air Force to take a strategic pause and explore more cost-effective strategies to address the nuclear security and COG/COOP mission capability gaps.

While the missions UH-1N helicopters support have changed and expanded over the past 40 years, the helicopter has not. Today, we ask our UH-1N pilots to fly an aircraft at night with night vision goggles, but without the benefit of a night vision compatible cockpit and without crashworthy seats. Several UH-1N safety and obsolescence modifications, including the installation of night vision compatible cockpits and crashworthy seats, are being considered to address these near term issues. Additionally, upgrades to training systems that will decrease the UH-1N flying hour requirements, while still ensuring a high readiness for the COG/COOP missions, will allow the UH-1N fleet to more effectively conduct their missions.

In the long-term, the UH-1Ns are entering uncharted territory in terms of their age, much like the KC-135 fleet. There is still a validated requirement to replace the UH-1N fleet, which does not meet the requirements of the DoD Nuclear Weapons Security Manual 5210.41M, and is deficient in numbers and performance for the COG/COOP mission. Specifically, the UH-1N lacks night all-weather capability, and crew command and control situational awareness, in addition to the aforementioned lack of adequate carrying capacity, speed, range, endurance, and survivability. Additionally, the UH-1N has its sustainment and obsolescence issues. Until a replacement is possible, the USAF is exploring a number of strategies to mitigate the capability gaps in the nuclear security and COG/COOP mission areas. These include revised tactics, techniques, and procedures; sustainment modifications to UH-1N aircraft; and increasing force structure through

excess defense articles. In fact, the Air Force is already pursuing the transfer of up to 22 UH-1Ns from the United States Marine Corps between FY 2012 and FY 2014.

Training (TH-1H)

The TH-1H, a modernized version of the UH-1H, is used by the Air Force for its undergraduate helicopter pilot training track conducted at Fort Rucker, Alabama. In modifying a UH-1H to the TH-1H or “Huey II” configuration, the aircraft receives new main and tail rotors, drive train, tail boom, and avionics as well as upgraded engines. When the modification program is complete in late 2013, the Air Force will have a fleet of 28 TH-1H helicopters that will provide 20 years of usable life for rotary wing pilot training. The TH-1H provides a cost effective solution for Air Force rotary wing pilot training requirements and ensures graduates are well prepared for assignment to operational systems.

Special Operations (CV-22)

Air Force Special Operations Command (AFSOC) uses the CV-22 Osprey’s unique long range, speed, and vertical take-off and landing (VTOL) characteristics to provide US Special Operations Command warfighters with specialized air mobility. The Air Force Doctrine Document 1 defines specialized air mobility as “the conduct of rapid, global infiltration, exfiltration, and resupply of personnel, equipment, and materiel using specialized systems and tactics. These missions may be clandestine, low visibility, or overt and through hostile, denied, or politically sensitive airspace.” The benefits of long range VTOL were demonstrated on June 1, 2010 in Afghanistan, when two CV-22s conducted an 800-mile round trip combat search and rescue mission when severe dust storms and mountain ranges sidelined all other aircraft. The CV-22s flew over the mountain range and through very low visibility to recover the crew and passengers in less than four hours.

The CV-22 is worldwide deployable and has deployed in support of Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF) and other contingencies. One AFSOC squadron is currently supporting operations in Afghanistan. In order to successfully meet the CV-22

combat and training mission taskings, the Air Force continues to fully support the program of record. The current CV-22 fleet stands at 23 aircraft with the final buy scheduled in FY14. Declaration of full operational capability will be made following the delivery of the last CV-22 in FY16.

The Joint V-22 Program Office is developing improvements to CV-22's capabilities and is focused on improving the aircraft's reliability, availability, and reducing operating costs. Improvements are currently being implemented to increase aircraft readiness. Many of these efforts are promising mean time between failure improvements of 100% or more. Particular emphasis is being placed on improving CV-22 engine time-on-wing. These development efforts will address sand ingestion problems that severely degrade engine performance and necessitate costly engine removals and repairs, a particular problem for the CV-22 which has been operating and training in harsh desert environments.

Improvements to the CV-22 are being made in block increments and each block includes a number of modification upgrades installed as they become available. Block 10/B retrofit modifications are underway to bring the oldest CV-22s to the common baseline configuration. Production CV-22s now include some of the upgrades associated with the Block 20/C configuration (e.g. line of site communications modification and the MV-22 Block C modifications). Initiated in FY 2011, the Block 20 retrofit modification program will begin retrofitting CV-22s with modifications that will improve operational safety, suitability, and effectiveness; correct deficiencies identified in testing and operations; improve reliability/maintainability; and enhance self-deployment capabilities.

Given the CV-22 mission, survivability is an important consideration. The CV-22 Block 10/B aircraft contain an advanced directed infrared countermeasure (DIRCM) system, a suite of integrated radio frequency countermeasures (SIRFC) that detects and jams radio frequency weapons, missile warning capability, and chaff and flare dispensers. SIRFC upgrades, which increase jamming effectiveness, are being tested as part of the CV-22 Block 20/C modifications. Additionally, helmet mounted displays, which assist with situational awareness in degraded visual environment, and main landing gear fire suppression system are in development. Future

planned survivability modification efforts include DIRCM upgrades, to include hostile fire indication (HFI) capability.

Future modifications and improvements to the CV-22 will make the aircraft even more reliable, productive, and cost-effective; ensuring AFSOC's long range VTOL capability is available and able to provide specialized air mobility when required.

Closing

In FY13, two-thirds of the Air Force's rotary wing platforms will be in some form of modernization. CV-22s are reaching the end of their planned procurement program, while still upgrading their systems to ensure USSOCOM has a transformational long-range, vertical lift asset. Additionally, the Combat Rescue Helicopter program is scheduled to release its request for proposal this year to replace the entire CSAR fleet. Finally, the Air Force continues to participate in the DoD-wide Future Vertical Lift effort to ensure a joint roadmap informs future modernization efforts. While fiscal constraints may have required us to reassess the timing of some rotary wing modernization efforts, the Air Force's commitment to rotary wing modernization remains strong.