

RECORD VERSION

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BEFORE THE

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

**ON EQUIPPING THE INDIVIDUAL SOLDIER AND MARINE: CURRENT AND
FUTURE YEAR ACQUISITION AND MODERNIZATION STRATEGIES AND THE
FISCAL YEAR 2014 BUDGET REQUEST**

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Chairman Turner, Representative Sanchez, and distinguished Members of the Subcommittee on Tactical Air and Land Forces, we thank you for this opportunity to discuss the Fiscal Year 2014 (FY14) budget request for equipping the individual Soldier and Marine. It is our privilege to represent senior Army leaders and America's Soldiers. It is also our privilege to appear before this Subcommittee with our fellow Warfighters from the U.S. Marine Corps. We thank you, Mr. Chairman, and all Subcommittee Members for your sound advice and strong support of the Army as we strive to ensure that all Soldiers are well-trained and well-equipped to undertake any mission in any environment.

Current and Future Individual Warfighter Equipment Modernization Plans and Strategies

History has shown repeatedly our nation cannot successfully accomplish its mission without the commitment of ground troops. This is why Individual Warfighter Equipment modernization is so important. A highly trained and properly equipped Soldier is the crucial and integral component of the successful employment of all Army systems. Program Executive Office (PEO) Soldier is the first organization in Army history to modernize the "Soldier as a System," thereby ensuring that everything the Soldier wears, carries and employs on the battlefield works in an integrated manner. Nearly 12 years at war have demonstrated conclusively that this integrated, comprehensive modernization strategy has saved lives, increased lethality and combat effectiveness, and improved the quality of life for Soldiers during and after their deployments.

In Fiscal Year 2012, PEO Soldier fielded more than 1.4 million items to more than 193,000 Soldiers, including individual weapons, protective equipment, body armor and flame-resistant clothing, fused night vision goggles, weapon-mounted sensors, laser rangefinder and designation systems, and more. We have, without question, the best-equipped, most technologically advanced fighting force in the world, but there are still challenges that we are working to meet. For example, today's All-Volunteer, combat-seasoned Soldier has steadily borne the brunt of increased equipment load necessitating considerable attention to modernization efforts aimed at lightening that burden while maintaining a decisive advantage over any potential adversary. This is an important element of our modernization plan.

The Army's equipment modernization strategy ensures our Soldiers have the right equipment, for the right missions, at the right time by procuring versatile and tailorable equipment that is effective, sustainable, and affordable. We must equip the Army for many missions, under many conditions and evolving threats. The Army's guiding principles include the following:

- **Enhance Soldiers for broad Joint Mission Sets**: Provide improvements by fielding technologies that empower, protect, and unburden Soldiers and formations, thus providing equipment at the earliest time to better accomplish the mission;
- **Remain Prepared for Decisive Action**: Facilitate fleet capabilities to increase lethality and mobility while optimizing survivability and

sustainability. Manage the full suite of capabilities enabling the most stressing Joint war fights.

These principles are prioritized into five Army priorities for the Soldier Portfolio: Network, Lethality, Training and Leader Development, Mobility, and Force Protection.

- **Network**: Army forces require communication systems and devices that allow connectivity for situational awareness across the force and over distances that span the joint operational area.

- **Lethality**: The Army requires the capability to incapacitate or destroy enemy personnel, materiel, and infrastructure across the full spectrum of joint operations.

- **Training and Leader Development**: Training is the critical base of all Army units and proper training is the foundation on which all other enabling technologies are applied. The Soldier must be trained to operate in complex environments, among various cultures, in coordination with host nations and allied partners.

- **Mobility**: Army forces require mobile protected firepower that can maneuver over long distances while maintaining power requirements in austere environments. Reducing the load weight of the Soldier will enhance his/her mobility and further reduce fatigue.

- **Force Protection**: Soldiers require protection to close with and defeat the enemy, conduct effective reconnaissance and security operations, develop the situation through action, and adapt continuously to changing situations. Soldier protection must have tailorable and scalable protection from small arms, IEDs, blast and fragmentation,

the ability to measure and mitigate blast effects in order to reduce incapacitation on the individual Soldier.

To accomplish these principles and priorities we must synchronize our requirements, acquisition, sustainment and resourcing processes to ensure that leadership can make informed decisions in a timely manner to meet the needs of our Soldiers.

The Army's strategic modernization planning combines a detailed analysis of investments in science and technology, and materiel development linked to emerging threats and capability gaps across a long-term, 30-year period. This will produce a detailed road map of our future capabilities across the acquisition lifecycle, and link our S&T investments with our Programs of Record, which we linked to our long-term sustainment strategy.

PEO Soldier hosted a detailed process review with key leaders from the Army requirements generation community, various Science and Technology (S&T) organizations and representatives from our user community. The review was the culmination of several months of effort focused on synchronizing schedules and aligning capability gaps to requirements, technology efforts and programs of record to obtain senior leader concurrence for a collaborative process that will support the materiel development, S&T and requirements communities and will result in a strategic Soldier modernization plan.

Other Key Improvement and Integration Efforts

We fielded new body armor that is better fitting and thus more comfortable for female Soldiers. TIME magazine named it one of the “Best inventions of the Year 2012.” A collaborative effort between the Natick Soldier Research, Development and Engineering Center and PEO Soldier resulted in an Improved Outer Tactical Vest (IOTV) designed specifically for women, allowing them to perform their missions more effectively. The 101st Airborne Division’s 1st Brigade is the first unit equipped with the new female body armor in Afghanistan.

It was through our collaboration with our sister Services that we realized the benefit of a tailored combat uniform. Recognizing that the Army is comprised of 14 percent women, we recently completed the evaluation of the Army Combat Uniform-Alternate (ACU-A) to meet their needs. The ACU-A fits the female body better and provides a better fit for some small-statured male Soldiers. A Human Factors study conducted on our new female uniform last year at Fort Polk, LA, found that issues of restriction and discomfort were few in number and feedback on this new uniform is positive. The ACU-A will be introduced as an alternative item into the clothing bag for all Soldiers in May 2013.

We have an initiative underway to develop a potential family of uniform patterns that could provide better concealment by an expeditionary Army in multiple environments worldwide. Perhaps more importantly, we are seeking a single pattern for our Organizational Clothing & Individual Equipment that would work in concert with the

family of uniform patterns. We are working with our sister Services on this initiative for possible DoD-wide use.

In other areas, the Pelvic Protection System (PPS) reflects our commitment to protect the Soldier. In this effort, we worked closely with our British counterparts at the inception of the effort and then extremely close with both the USMC and USSOCOM. The Army has procured more than Pelvic Protection Systems in response to a Warfighter request for increased protection from blast events impacting the pelvis, femoral arteries, and lower abdominal organs. To date, we have fielded more than 60,881 complete sets to units in Afghanistan. The PPS is saving lives.

The Army has developed the Generation II Helmet Sensor as an operational predictive tool to capture data for injury subsequent to a blast event. Some day the medical community can use those data to diagnose, and develop treatments for Mild Traumatic Brain Injuries more effectively. To date, we have fielded 19,000 helmet sensors to deploying Soldiers.

PEO Soldier is a key player to the Army's Operational Energy Initiative. Soldier Power encompasses expeditionary power solutions intended for the most austere operating environment. These solutions include Soldier power generation systems, power scavenging, renewable energy, power distribution, power management, and power storage solutions that are lightweight and Soldier portable or wearable. Soldier Power is a key enabler for dismounted combat operations. Providing energy alternatives to the most disadvantaged Warfighter will allow a small unit to sustain itself throughout

extended missions while reducing battery load and reliance on logistics convoys. These efforts will ultimately allow us to work towards our goal of energy self sufficiency.

As we drawdown from more than a decade of conflict, it is imperative that we incorporate lessons learned from combat, emerging threats, and an assessment of where commercial technologies and capabilities are headed. We must firmly ground our efforts to pursue priority capabilities that will enable the Soldier to have decisive overmatch on the battlefield. These include both “game changers” and other areas where public investment can have the most valuable effect.

Joint Army and Marine Corps Coordination

The Army and the Marine Corps collaborate closely in providing our Warfighters with the best equipment in the world. The Army, Marine Corps and Special Operations Command conducted a detailed review of our portfolios and determined common programs and requirements that could facilitate closer collaboration in the future. These programs include protective equipment, small arms and expeditionary power to name a few. One of the major outcomes of this session revealed how closely we have been working together over the past decade and that we will work even more closely in the future.

Whenever possible, we conduct our development, testing or procurement efforts in collaboration with the other military Services and organizations to increase efficiencies across the Department of Defense (DoD). With the camouflage uniform,

helmet improvements, night vision devices and our weapons systems, we collaborate across the Department.

Perhaps the greatest area of collaboration exists in finding ways to advance weight reduction for our Warfighters. While an individual equipment load is mission-dependent, a rifleman in a squad can carry a typical load of 110lbs. The largest increase in Soldier load is because of the Outer Tactical Vests and ballistic inserts. This Soldier load weight increase is greater in the mountains of Afghanistan.

The Army, in cooperation with the Marine Corps, has sought ways to reduce weight and the support equipment burden from nearly every angle. Examples of successful modernization include lighter body armor. The Outer Tactical Vest (OTV), which, with plates, weighed 33.5 pounds for a size medium, was replaced by the Improved Outer Tactical Vest, which not only weighs approximately four pounds less than the OTV it replaced, but provides a better fit through side adjustments. The Soldier Plate Carrier System further reduces weight by approximately eight pounds depending on size and configuration achieved by reducing soft armor coverage. This lighter weight system provides field commanders with the ability to select the level of body armor needed to support the specific mission. Soldiers in Afghanistan now have flame-resistant combat uniforms and combat shirts pre-treated with insect repellent and in an appropriate camouflage pattern for the terrain. They also have two pairs of mountain combat boots and a machine gun that is nine pounds lighter.

In Soldier Power, we are developing ways to provide lightweight power solutions. Soldiers now carry equipment that requires increasing amounts of power. The

Conformal Battery is an ergonomic Soldier-worn battery. It provides a central source of power for a variety of capabilities. The ergonomic engineering of the Conformal Battery provides Soldiers with a lightweight power that shares space with existing equipment on the Soldier's combat uniform.

We developed body armor to provide the best protection for the least weight. We designed it with the optimum set of ballistic materials and layering structures to ensure our Soldiers are survivable from current and future threats. Our next generation personal protective equipment, the Soldier Protection System (SPS), will challenge industry to reduce weight while maintaining or improving ballistic protection for our Soldiers. Our night vision and precision targeting devices are providing unparalleled capability for our Soldiers to see in low- and no-light conditions with accuracy and at greater ranges. The Army has now integrated and fused the functions of the thermal sensors and Image Intensification to provide increased capabilities in a small profile system called the Enhanced Night Vision Goggle. We continue to improve the Soldier's situational awareness to help ensure his dominance on the battlefield.

The Nett Warrior program is another example of how we have adapted to meet this weight challenge. Based on valuable Soldier feedback, we revised the Nett Warrior program to achieve substantial cost-savings and additional weight reduction that now provides superior situational awareness and understanding to ground combat leaders and small unit operations for faster and more accurate decisions in the tactical fight. Due to these adaptations and improvements, the Marine Corps is now expressing renewed interest in the Nett Warrior program.

At PEO Soldier, we strive to give our Warfighters a decisive edge to ensure they are dominant on the battlefield. With the combination of our equipment improvements as well as our increased collaboration with the Marine Corps and across the Department of Defense, our industry partners, and academia, we will ensure that our Warfighters maintain dominance on the battlefield. While certain materiel solutions may be different among the services due to slightly different mission requirements, we maintain close collaboration via joint S&T efforts, shared test events and data, and participation in each other's source selection evaluations.

Industry Partners

We are reminded daily of the hard work and dedicated efforts of our industry partners. As mentioned earlier, in Fiscal Year 2012, PEO Soldier fielded more than 1.4 million separate equipment items to deploying Soldiers. This includes fielding to Air Force and Navy Warfighters who deploy with Army units. This equipment included everything from socks to thermal sights. Our equipment modernization strategy relies on commercial technologies available now and the ability to work with industry to integrate mature incremental improvements while investing in new technologies in the future. A couple of examples include:

- Thermal Weapon Sight – We used Army acquisition procedures to reduce significantly the cost of new 17-micon sights and field them faster. Compared to the 25-micron sights, the 17 micron TWS will provide an average 15 percent

reduction in weight, 41 percent average increase in range performance across all variants, and an average battery-life improvement of 7 percent.

- ACH – The Advanced Combat Helmet (ACH) is a protective helmet consisting of a ballistic protective shell, pad suspension system, and four-point chinstrap/nape strap retention system. We test the ACH to ensure it provides ballistic and fragmentation protection for the Soldier. We use new testing protocols alongside legacy testing protocols to ensure the ACH provides Soldiers dependable head protection. Many ACH helmets include the Generation II Helmet Sensor, which records blast overpressure and forces that affect the Soldier's head during vehicle accidents, explosions or other violent incidents. The Lightweight ACH (LtWt ACH) will provide the same level of protection as the ACH but with 8 percent less weight. The ACH weighs 3.06 points while the LtWt ACH 2.81 lbs. We plan production contract awards for the Lightweight ACH in June 2013 with first deliveries expected in June 2014. We will field the LtWt ACH through attrition of older ACH helmets.
- ENVG – We reduced costs by increasing competition. We are also looking at some innovative approaches that may result in significant reductions in the cost of fused technology goggles.
- PEO Soldier is working with our industry partners to ensure we have the right equipment at the right place at the right time, and we recognize that our industry partners stand shoulder to shoulder with us as we meet the individual equipment needs of our Soldiers.

The Better Buying Power (BBP) initiative started by now Deputy Secretary of Defense Ashton Carter and Under Secretary of Defense (Acquisition, Technology and Logistics) Frank Kendall embraces a “cost-conscious culture” across the Department. This drive for efficiency enables the Army to implement management approaches that protect our ability to deliver needed Soldier capabilities—now and into the future.

For example, we are amending the acquisition strategies for the Thermal Weapon's Sights (TWS), the M4, and the Enhanced Night Vision Goggle (ENVG) to increase competition, thereby reducing the unit cost for each item. Additionally, we revised the test plan for the ENVG to make better use of existing data and reduce overall test costs.

Contracting is one area, in particular, where we have made significant strides over the last couple of years. We have taken significant steps to incentivize productivity and efficiency, including dedicated efforts to secure multiple awards that lower unit costs. The Army has embraced BBP's call for renewed emphasis on sensible contracting strategies that support best value to the Soldier.

The long-term nature of the reduction in the discretionary caps presents challenges to the Army's investment priorities. We must continue to meet our contingency requirements, along with our efforts to carefully balance readiness and modernization.

Our senior acquisition leaders continue an open dialogue with industry. Now, perhaps more than ever, it is clear that we must work together to identify appropriate courses of action to minimize negative impacts on our plans, programs, and partners.

Summary

Chairman Turner, Representative Sanchez, and distinguished Members of the Subcommittee, we wish to thank you again for your strong support of our Soldiers and the Army. We are part of a Joint force, constantly working to enhance the safety and security for our Warfighters. Our brave men and women in uniform display unrelenting tenacity, steadfast purpose, quiet confidence, and selfless heroism. We cannot let them down. Your wisdom and guidance is deeply appreciated as we work to ensure that our Soldiers have the right equipment, for the right missions, at the right time to successfully accomplish their missions and return home safely.