

National Defense Authorization Act

2024 WINS

1) U.S. Replacement of Foreign Engines for Aerial Targets

Increased funding in Army RDT&E, line 165 of \$14.9m to remove and replace the foreign engines in our aerial targets.

2) HTPEM APU “Silent Watch”

To provide a safer operating environment to our Warfighters in the battlefield the use of a High Temp Proton Exchange Membrane, HTPEM, Fuel Cell that uses thermal management to reform the same JP8 fuel for the propulsion of the diesel engine, can constantly provide battery recharging and vehicle electrical loads with “NO NOISE” effectively extending “Silent Watch” capability a multiple of 10x or more.

3) Infantry Squad Vehicle Procurement

Support the Infantry Squad Vehicle (ISV) budget request and provide an additional \$10 million in the Fiscal Year (FY) 2025 Defense Appropriations bill and National Defense Authorization Act for FY25 to procure vehicles for two additional infantry brigade combat sets. This request will help accelerate ISV production and fielding for multiple U.S. Army regiments, optimize production efficiencies for enhanced tactical mobility and accelerate fielding of a critically needed modernized transport capability for Soldiers.

4) Marine Corps Procurement - Maritimization of the Long-Range Tactical (LRT) SUAS

Airborne ISR is a critical capability for modern naval vessels, but existing unmanned aircraft suffer from several challenges in the maritime environment, including:

- Complicated deck logistics and storage
- Heavy and bulky catapult launchers and Recovery Cranes
- High kinetic energy approach profiles next to sensitive ship equipment
- Unreliable flight operations and sensitivity to sea conditions
- Dangerous manual handling requirements (e.g. tail sitters) during launch and recovery

5) Enhancement of M&S tools at the US Army Combat Capabilities Development Command (CCDC) Ground Vehicles Systems Center (GVSC) for rapid fielding of emerging technology

The \$9 million would support the second year of a MSU-Army Ground Vehicle Systems Center initiative to build a prototype of a lightweight autonomous vehicle platform -- fusing different technologies into an entire system. The prototype combines advanced all-terrain sensors and collision avoidance technologies, novel battery chemistry and packaging design and the use of advanced polymer composite materials with embedded health monitoring sensors.

The results of this research initiative will enhance U.S. defense preparedness and directly support the modernization and soldier protection priorities of the U.S. Army. The systems driven approach to creating the prototype will provide a critical framework for designing and manufacturing the next generation of lightweight autonomous military vehicles. This approach, along with the technologies tested and refined in the prototype, will also drive new innovations in the commercial automotive industry.

6) Fielding C-UAS Capabilities to Brigade Combat Teams

Our adversaries recognize the lethality of using small drones. Drones continue to become more capable and more dangerous, requiring soldiers to “look up” for the first time in more than seven decades. The Army must field proven C-UAS capabilities to protect its tactical formations. The Committee provide Report Language: (1) Encouraging the Army to accelerate fielding a single-vehicle Counter Unmanned Aircraft Systems (C-UAS) capability for maneuver Brigade Combat Teams at the tactical level; and (2) Require the Army report on its plan to meet the urgent needs of tactical formations requesting these capabilities.

7) Stryker Modernization

That the Congress authorize and appropriate an additional \$23 million in Stryker Improvement funding that would help to leverage Army RCCTO investment and jump start the effort to integrate transformative next generation Stryker capabilities and place them in the hands of Soldiers at an accelerated pace.

8) Abrams NextGen DECU – Abrams Upgrade Program

Authorizing and appropriating additional funding for the development, testing, and finalization of the J8 Digital Engine Control Unit (DECU) for the M1 Abrams Main Battle Tank is necessary to address the ever-growing obsolescence and supply chain challenges of the existing DECU. Absent funding, the Abrams fleet readiness, Army lethality, and national security are at risk of significant degradation due to the manufacturability of the J7 DECU.

9) Integrated Visual Augmentation System (IVAS) and Squad Immersive Virtual Trainer (SiVT) Funding and Language

The Integrated Visual Augmentation System (IVAS) remains one of the Army’s highest priority modernization programs. The program includes a Heads Up Display (HUD), a Squad Immersive Virtual Trainer (SiVT), Terrain and Intelligence services, and Hyper-scale Cloud services that combine navigation, targeting, situational awareness, communications, and advanced thermal and night vision capabilities. With these assets, our troops are already achieving step-change improvements in their mission planning, tactical maneuvering, and find, fix, and finish capabilities in training exercises. In combat, these advances are intended to significantly increase the likelihood of mission success while reducing potential military and civilian casualties. IVAS 1.2 development is ahead of schedule, and we are grateful for the feedback received from soldiers during the first User Assessment. We will continue to use this feedback to deliver on the requirements of the program.

IVAS 1.2 Phase 1 focused on form factor, night vision sensors, reliability, and addressing human factors concerns such as nausea. We received positive feedback across each deliverable and signed a contract to continue into Phase 2 this past September. In Phase 2 we will continue to refine the system with additional focus on producibility and manufacturing readiness as we move toward Operational Test in early 2025. As part of our deliverables for the IVAS Program, Microsoft is committed to creating an open and extensible platform that will facilitate partner collaboration on the platform and increasingly bring new and cutting-edge capabilities for our warfighters.

10) Armored Multi-Purpose Vehicle (AMPV)

Add funding to WTCV and RDT&E to maintain current production levels at 197 AMPVs per year (1.5 BDE Sets) and provide RDT&E funding for continuous improvements.

11) M917A3 Heavy Dump Truck

The U.S. Army requires an additional \$30 million in the FY 2025 budget to optimize procurement of its M917A3 Heavy Dump Truck and ensure readiness of engineer units across the Active Army, Army National Guard and Army Reserve.

12) MQ-9 Modernization and Sustainment

The USAF is embarked on a MQ-9 modernization program titled MQ-9 Multi-Domain Operations (M2DO). It is composed of the following aircraft component modifications: a new Open Mission Systems (OMS) architecture; an on-board Link-16; an integrated electronics unit (IEU) for advanced processing of EO/IR imagery; an increased power capacity to host advanced podded capabilities; an anti-jam GPS (AJGPS) capability; and an enhanced command and control (C2) capability via Low Earth Orbit (LEO) communications connectivity.

Together, this upgrade provides an open architecture framework enabling the rapid integration and subsequent employment of the most current and advanced sensing capabilities in spectrum challenged environments. The capability will provide increased wide-area surveillance, target identification and tracking as well as collection of signals of interest for which we currently have little data and which will satisfy unmet COCOM and National priority intelligence requirements.

13) F-15EX Procurement

Appropriates additional funding for the procurement of the F-15EX aircraft

14) HMMWV ABS/ESC

Add funding to the ABS/ESC program to enable maximum rate of production of kits thus mitigating the rollovers of HMMWVs CONUS and OCONUS

15) Autonomous Vehicles: A Systems Engineering Approach to Advancing Autonomous Ground Vehicles

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16) Briefing on USAF A-10 Divestment Timeline

USAF maintenance depots are having to maintain A-10s while also managing other aircraft. Several of these depots are slated to have additional 5th generation aircraft assigned, but can't move forward until the A-10s are retired. This base text is asking the USAF to brief the committees on the planned divestment timeline.

17) U.S. Replacement of Foreign Engines for Aerial Targets

Increased funding in Army RDT&E, line 165 of \$14.9m to remove and replace the foreign engines in our aerial targets. Decrease funding for Other Procurement, Army, line 145 of Modification of In-SVC Equipment (OPA-3) of same amount.

18) Artificial Intelligence for National Security

AI is developing quickly and there are few guardrails on it. This DRL directs the Chief Digital and AI Officer to submit a report regarding appropriate controls that should be placed on AI systems within the Department.

In addition, the eXtended Reality (XR) training landscape – where Virtual Reality (VR) enables a fully immersive training environment and Augmented Reality (AR) and Mixed Reality (MR) provide a digital layer on the physical world – offers a versatile and efficient way to deliver novel training and a wide spectrum of content cheaply to a dispersed population. Directs the Secretary of the Air Force to develop an eXtended Reality (XR) investment and deployment strategy and brief the congressional defense committees.

19) Impact of People’s Republic of China Support for Russian War Effort in Ukraine

President Putin is in the PRC for a state visit. Ties between the countries have never been closer, and present a danger to the United States. This briefing seeks to understand the level of cooperation between the PRC and Russian Federation.

20) Next Generation Combat Vehicle Software Architecture

Report from PEO-GCS regarding how the Army Program Office is applying lessons learned to regarding vehicle autonomy and on-vehicle software architecture in order to modernize our combat vehicles

21) Impact of Cutting Undersea Cables on INDOPACOM

Intercontinental data flows pass through undersea cables that line the ocean floor. This DRL seeks to understand the impact of destroying these cables would have on INDOPACOM, and the PRC’s ability to destroy undersea cable assets.

22) Strategy for Iron Dome Production

Bill text requesting Sec. Def to submit a strategy for increasing Iron Dome launcher & interceptor production within 180 days.

23) Currently Available Destruction and Disposal Methods for Aqueous Film Forming Foam (AFFF) and Other Material Containing Per- and Polyfluorinated Substances (PFAS)

Briefing from the Assistant Secretary of Defense for Energy, Installations, and Environment on currently available methods for the destruction or disposal of AFFF and other materials containing PFAS.

24) Active Protection for the Abrams Main Battle Tank

Stressing importance of Active Protection System deployment on Army combat vehicles and requests a briefing from the Sec. of Army on procurement & deployment plan for APS.

25) Importance of Continued Defense Cooperation with the Hashemite Kingdom of Jordan

DRL requesting briefing from Sec. Def on increasing C-UAS capacity in Jordan for regional security.

26) Modeling and Simulation to Support Brigade Combat Team Advancement

Briefing to HASC from the Army regarding M&S activities to support brigade combat team formations

27) Tabletop exercise for USINDOPACOM under extreme weather

Creates a first of its kind tabletop exercise to stress-test our abilities to combat China and DPRK while under extreme weather conditions. This reviews C2, troop mobility, urban warfare, and existing infrastructure. Notes earthquakes, high intensity rainfall, mudslides, and other volatile weather conditions that without training, impacts our mission sets.

28) Study on SOF testosterone depletion and long-term healthcare implications

Study on SOF requirements that lead to long-term health implications, including high-intensity training, sleep deprivation, periods of starvation, and highly stressful environments. Data suggest this is causing reductions in testosterone levels among special forces, which can create sleep apnea, intense weight gain, depression, and increased red blood counts. This impacts readiness and the quality of life for our SOF.

29) Extending Energy Resilience Readiness Exercise Requirements

DoD is currently required by statute to perform threat informed risk assessments, namely black starts, through 2027. Amendment extends till 2032.

30) Update Reporting Timeline for Energy Resilience & Security Measures on Military Installations

10 U.S.C. §2920 requires DoD installations by end of FY2030 to ensure that 100% of energy load requirements for critical missions have a 99.9% level of availability, meaning there can be almost zero risk of mission failure due to losing access to electricity. Amendment moves up the interim reporting deadline from 2029 to 2027 and requires briefing the Committee by the end of fiscal year 2025 on the status on meeting the 2030 goal.

31) Leveraging DPA to Support Electrical Transformer Supply Chains

DRL that directs the Sect. of Defense to provide both a report and briefing to HASC on supply chain and domestic production shortcomings related to transformers and critical grid components and offer actionable solutions to further close energy resilience gaps and ensure installation and personnel readiness.

32) Briefing on Quality-of-Life Standards at Al Udeid Air Base, Qatar

Briefing from Sec. of Air Force on quality-of-life standards and facility conditions at Al Udeid.