

En Bloc Amendments to H.R. 4435
National Defense Authorization Act for Fiscal Year 2015
 Wednesday, May 7, 2014

Intelligence, Emerging Threats and Capabilities		
En Bloc # 1		
Log #	Sponsor	Description
016	Mr. Wilson	Amends the authority of Defense Advanced Research Projects Agency to use other transactions authority for contracting.
021	Mr. Nugent	Directs the Secretary of the Navy to brief the committee on the performance of the Laser Weapon System after its deployment aboard the USS <i>Ponce</i> .
059	Mr. Cook	Clarifies the subject matter of the required briefing by the National Geospatial Intelligence Agency regarding combat forces operating in disadvantaged environments to specify the impact of currently available software tools.
067r2	Ms. Shea-Porter	Directs the Assistant Secretary of Defense for Research and Engineering to brief the committee on the technical capability of the Department to study military-relevant turbulent boundary layer phenomena and identify any gaps in those capabilities.
104	Mr. Lamborn	Directs the Chairman of the Joint Chiefs of Staff to provide a briefing on the need for a near-term counter-electronics capability.
107	Mr. Lamborn	Directs the Chairman of the Joint Chiefs of Staff to conduct a review of the Air Force Network Centric Solutions II contract to evaluate its ability to met joint force IT needs.
129r1	Mr. Lamborn	Directs the Army to provide a plan on the future of High Energy Laser Mobile Demonstrator to include the feasibility of operational testing.
133r1	Mr. Maffei	Directs the Assistant Secretary of Defense for Nuclear, Chemical and Biological programs to brief the committee on the status of the development of a vaccine for equine encephalitis.
174	Ms. Gabbard	Directs U.S. Cyber Command to provide a plan for improving Department of Defense cyber situational awareness tools.
183r1	Mr. Johnson	Directs a briefing on improving the Department's participation with <u>Historically Black Colleges and Universities</u>
184	Mr. Johnson	Increases funding to <u>Historically Black Colleges and Universities</u> by \$10 million.
219	Mr. Carson	Removes the requirement in 10 USC 2364 for the Secretary of Defense to make part of the record of an acquisition program any technological report issued by a Defense research facility related to that program.
230	Mr. Thornberry	Strikes section 1062 from the Bill.

En Bloc Amendments to H.R. 4435
National Defense Authorization Act for Fiscal Year 2015
Wednesday, May 7, 2014

Log #	Sponsor	Description
234r2	Ms. Sanchez	Requires the Under Secretary of Defense for Acquisition, Technology, and Logistics to brief the committee on research and development of high-efficiency conventional missile propulsion

AMENDMENT TO H.R. 4435
OFFERED BY MR. WILSON OF SOUTH CAROLINA

At the appropriate place in title VIII, insert the following new section:

1 **SEC. 8___ . AMENDMENT RELATING TO AUTHORITY OF THE**
2 **DEFENSE ADVANCED RESEARCH PROJECTS**
3 **AGENCY TO CARRY OUT CERTAIN PROTO-**
4 **TYPE PROJECTS.**

5 Section 845(a)(1) of Public Law 103-160 (10 U.S.C.
6 2371 note) is amended by striking “weapons or weapon
7 systems proposed to be acquired or developed by the De-
8 partment of Defense, or to improvement of weapons or
9 weapon systems in use by the Armed Forces” and insert-
10 ing the following: “enhancing the mission effectiveness of
11 military personnel and the supporting platforms, systems,
12 components, or materials proposed to be acquired or devel-
13 oped by the Department of Defense, or to improvement
14 of platforms, systems, components, or materials in use by
15 the Armed Forces”.



Amendment Offered by Mr. Nugent

H.R. 4435—National Defense Authorization Act for Fiscal Year 2015

In the appropriate place in the report, insert the following:

Briefing on the Navy Laser Weapon System

The committee directs the Secretary of the Navy to brief the House Committee on Armed Services by March 2, 2015, on the performance of the Navy Laser Weapon System (LaWS) after deployment aboard the USS Ponce. The Committee requests the following development groups be represented at this brief: Directed Energy and Electric Weapons, Office of Naval Research; Naval Surface Warfare Center; Ship Command of the USS Ponce while testing LaWS; the actual operators of LaWS aboard the USS Ponce; and any other briefers the Secretary deems appropriate. This brief shall include: the preparation of the weapon system for deployment at sea, structural and power accommodations on the USS Ponce, any special training for the officers and crew, performance of LaWS from the perspective of the operators, recommendations for future pre-deployment training, and an assessment on the feasibility of near-term deployment of a directed energy ship defense system across the Navy.

Amendment Offered by Rep. Cook

H.R. 4435—National Defense Authorization Act for Fiscal Year 2015

In the appropriate place in the report, insert the following:

Geospatial Intelligence for Disadvantaged Users

At the end of the first paragraph and insert “for software tools.” In the second paragraph, following “a joint plan to address the relevant combat forces requirements”, insert, “for software tools.”

Amendment Offered by Rep. Carol Shea-Porter

H.R. 4435—National Defense Authorization Act for Fiscal Year 2015

In the appropriate place in the report, insert the following:

Capabilities to experimentally study militarily-relevant High Reynolds Numbers

In Department of Defense Directive 4180.01, issued on April 16, 2014, the Department provides policy and guidance on energy planning, use, and management, and establishes an energy policy to “enhance military capability, improve energy security, and mitigate costs in its use and management of energy.” One of the means to achieve these ends will include “improv[ing] the energy performance of weapons systems, platforms, equipment, and products, and their modifications.”

The committee notes that mitigating turbulent boundary layer drag, which forms along the surfaces of all aircraft and marine platforms and produces a shear force that opposes the motion of the vehicle, is central to the goals of reducing fuel consumption and optimizing performance of military platforms, such as ships, submarines, and transport and fighter aircraft. Despite the critical and pervasive impact of these so-called “High Reynolds Number” turbulent boundary layers, the committee is concerned that only limited domestic capability exists to experimentally study them, though such studies are critical to developing and applying advanced computational techniques and empirical models to enhance the energy efficiency and performance of military platforms.

Therefore, the committee directs the Assistant Secretary of Defense for Research and Engineering to provide a briefing to the House Armed Services Committee on the Department's technical capabilities to experimentally study military relevant High Reynolds Number turbulent boundary layers and any gaps in the capability to carry out such studies by February 1, 2015.

Amendment Offered by Rep. Doug Lamborn **H.R. 4435—National Defense Authorization Act for Fiscal Year 2015**

In the appropriate place in the report, insert the following:

Validation of Near-Term Counter-Electronics Capability

The committee is aware that the Air Force and the Department of Defense completed a Joint Concept Technology Demonstration (JCTD) for a high-powered microwave cruise missile in 2012. The Counter-electronics High power microwave Missile Project (CHAMP) JCTD demonstrated a multi-shot and multi-pulse high power microwave warhead integrated into an existing cruise missile which is capable of delivering low-collateral damage attacks against electronic systems in facilities. The committee understands that such systems still require development to provide capabilities in a small form-factor and in a reusable platform, as well as additional modeling and simulation to better characterize effects and battle damage assessment.

Furthermore, the committee is aware that the Air Force is conducting an analysis of alternatives to determine if there is a need to develop a program of record for an enduring capability that would refine the technology demonstrated during the CHAMP JCTD, or look at other technologies to provide non-kinetic counter-electronic effects. As noted in Section 267 of the National Defense Authorization Act for Fiscal Year 2014, CHAMP (or a variant thereof) “should be considered among the options for a possible materiel solution in response to any near-term joint urgent operational need, joint emerging operational need, or combatant command integrated priority for a non-kinetic counter-electronic system.”

Therefore, the committee directs the Chairman of the Joint Chiefs of Staff, in coordination with the combatant commanders, to provide a briefing to the House Armed Services Committee by February 15, 2015 on the need for a near-term counter-electronics capability. This briefing should examine the combatant command integrated priority lists for each of the geographic and functional combatant commands to determine if there is an urgent or emerging need for CHAMP or a similar system that should be addressed within the next two to three years. If such needs exist, the briefing should also include a determination of whether or not a joint urgent operational need statement, or a joint emerging operational need statement, will be submitted by the affected combatant commands.

AMENDMENT TO H.R. 4435**OFFERED BY MR. LAMBORN OF COLORADO**

At the appropriate place in title VIII, insert the following new section:

1 **SEC. 8___ . CERTIFICATION OF EFFECTIVENESS FOR AIR**
2 **FORCE INFORMATION TECHNOLOGY CON-**
3 **TRACTING.**

4 (a) **REVIEW REQUIRED.**—The Chairman of the Joint
5 Chiefs of Staff shall conduct a review of the Air Force
6 Network-Centric Solutions II (NETCENTS II) contract
7 to ensure that it can effectively meet the requirements of
8 the joint force when providing time- and task-critical in-
9 formation technology resources for hardware, applications,
10 and services related to the warfighting mission area. The
11 review shall examine—

12 (1) the effectiveness of contracting for
13 warfighting mission areas, such as nuclear command
14 and control, space situational awareness, or inte-
15 grated threat warning, with effectiveness determined
16 by the ability to consistently access domain experts
17 and respond to emerging requirements in a timely
18 manner; and

1 (2) the efficiency of contracting for the
2 warfighting mission area, with efficiency measured
3 by the amount of time to get new task orders on
4 contract.

5 (b) CERTIFICATION.—Based on the findings of the
6 review required by subsection (a), the Chairman of the
7 Joint Chiefs of Staff shall provide a certification to the
8 Committees on Armed Services of the Senate and the
9 House of Representatives that the Air Force's
10 NETCENTS II contract is effective in delivering informa-
11 tion technology capabilities for the joint force. In pro-
12 viding this certification, the Chairman of the Joint Chiefs
13 of Staff shall also provide the complete findings of the re-
14 view required by subsection (a).



log 129 r1

Amendment Offered by Rep. Doug Lamborn
H.R. 4435—National Defense Authorization Act for Fiscal Year 2015

In the appropriate place in the report, insert the following:

Operational Testing of HEL-MD

The committee believes that the High Energy Laser Mobile Demonstrator (HEL-MD) is of great value to the Army and to the Department of Defense's efforts to develop directed energy weapons. The committee is concerned that the Army does not have a clear plan for the future of the HEL-MD. Therefore, the committee directs the Secretary of the Army to provide a briefing on the plan for the future of the HEL-MD to the House Armed Services Committee by December 1, 2014. This plan shall include an analysis on the feasibility of operational testing of the HEL-MD, including the possibility of operational testing of the HEL-MD in international locations such as Israel.

Amendment Offered by Rep. Dan Maffei

H.R. 4435—National Defense Authorization Act for Fiscal Year 2015

In the appropriate place in the report, insert the following:

Vaccine Research for Equine Encephalitis

The committee is aware that equine encephalitis is a serious health hazard with potentially fatal consequences that is prevalent in North, Central and South America, as well as the Caribbean. Because equine encephalitis is naturally occurring, but has also been investigated as a potential biological weapon, the Department of Defense is developing a vaccine for equine encephalitis that remains in Investigational New Drug Status. The committee also notes that while equine encephalitis is a high priority for the development of medical countermeasures for the Department of Defense, it has not been a priority for the Department of Health and Human Services due to the relatively small number of occurrences within the continental United States. The committee acknowledges that such an investigational new drug might have application for the civilian population, but the process for making a determination to use these vaccines in cases of civilian emergency is not well defined.

Therefore, the committee directs the Assistant Secretary of Defense for Nuclear, Chemical and Biological Defense Programs to provide a briefing to the House Committee on Armed Services by December 31, 2014, on the coordination between the Department of Defense and the Department of Health and Human Services through the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE). This briefing should discuss the mechanisms by which medical countermeasures, which are developed by the Department of Defense could be made available to the civilian population should the need arise, with emphasis on vaccines that may only exist in the Department of Defense stockpile. The briefing should also include any obstacles to employing such a process.

Plan for improving cyber situational awareness

The committee is aware that the Department of Defense has embarked on an ambitious, multi-year effort to improve its cybersecurity posture. That process was begun in 2010 with the establishment of United States Cyber Command, with the responsibility as a sub-unified combatant command to plan, coordinate, integrate, synchronize, and conduct activities to direct the operations and defense of specified Department of Defense information networks. It has continued with the creation of a cyber mission force that will defend Department of Defense networks, conduct cyber operations missions to protect the homeland, and to support combatant commander requirements for cyber operations support. Even the single security architecture for the Joint Information Environment represents a change of approach that integrates security seamlessly into network operations.

The committee is concerned, though, that the focus of the Department of fielding and training a cyber workforce has far outpaced the ability of that workforce to have all of the tools necessary to operate effectively on the network. In particular, the committee is concerned that the tools supporting cyber situational awareness do not provide a comprehensive, fused common operational picture. The committee believes such tools are vital to empower a skilled, trained and experienced workforce to fight the network as effectively as any land, sea or air component commander.

Therefore, the committee directs the Commander of United States Cyber Command, in coordination with the Undersecretary of Defense for Acquisition, Technology and Logistics, to provide a plan for improving cyber situational awareness tools to the congressional defense committees by March 1, 2015. This plan should include the following:

- (1) Development of a common, open cyber situational awareness architecture, including the capability to rapidly integrate new privacy and civil liberty protections into the architecture based on changes directed by the Secretary or the administration;
- (2) Identification of current tools for providing cyber situational awareness, as well as an assessment of gaps in current capabilities;
- (3) Assessment of new tools or processes that might be incorporated into a cyber situational awareness architecture, such as net flow data, host-based monitoring, anomaly detection, audit logs and agent-based algorithms, including identification of any potential issues related to current privacy and civil liberties protection policy;
- (4) Integration of current tools into the Joint Information Environment single security architecture; and
- (5) Assessment to testing resources, including funding and ranges, that may be necessary in the future to support developmental and operational testing.

Log 183r1

Amendment Offered by Mr. Johnson of Georgia

H.R. 4435—National Defense Authorization Act for Fiscal Year 2015

In the appropriate place in the report, insert the following:

[Minority Science and Technology Programs]

The committee recognizes that the Department of Defense has been working for many years to strengthen its role with Historically Black Colleges and Universities (HBCUs) and Minority Serving Institutions (MIs), which not only support a broad range of research, but also creates a diverse pool of talented scientists and engineers that can support academic, industrial and federal research needs. The Committee also commends the Department for expanding partnerships with non-profit organizations that have a history of providing scholarship, mentoring and career advancement support to minorities pursuing science and technology careers consistent with Department mission and needs. The committee applauds the former Assistant Secretary of Defense for Research and Engineering for issuing guidance in December 2011 to reinvigorate the Department's relationship with HBCU/MIs. In particular, this memo reiterated that "[t]hese institutions offer a talented science, technology, engineering, and mathematics (STEM) workforce that can benefit the research and educational efforts of the DoD and the nation." This memo focused on four areas of focus for action, including information collection to:

- (1) Develop and maintain statistics on HBCU/MI success rates in response to competitive funding opportunities under broad agency announcements and other solicitations;
- (2) Ensure that HBCU/MIs are made of aware of the opportunity for participation in all Department of Defense sponsored activities that invite participation of institutions of higher education;
- (3) Encourage the use of Inter-governmental Personnel Act agreements or other personnel-detail mechanisms with HBCU/MIs;
- (4) Ensure that emphasis is placed on recruiting and selecting HBCU/MI faculty to serve on Department of Defense STEM scholarship, fellowship, and research review panels and HBCU/MI students are informed of and encouraged to apply to STEM scholarship, fellowship and internship programs.

The committee directs the Assistant Secretary of Defense for Research and Engineering to provide a briefing to the House Armed Services Committee by December 15, 2014 on the measures and metrics used by the Department to better understand how the Department is fulfilling the guidance from the December 2011 memo. In addition to demonstrating the Department's progress against the four goals above, this briefing should also examine what minority science and technology workforce, professional development, and technical assistance programs exist that could benefit from increased participation with HBCU/MIs, as well as what non-profit organizations exist have a history of assisting minorities and HBCU/ minority-serving institutions in expanding their participation in DOD programs, including the leveraging of both Defense and NPO scholarship funds to achieve these purposes.

AMENDMENT TO H.R. 4435

OFFERED BY MR. JOHNSON OF GEORGIA

In section 4201 of division D, relating to research, development, test, and evaluation, Defense-wide, increase the amount for Historically Black Colleges and Universities/Minority Institutions, by \$10,000,000.

In section 4201 of division D, relating to research, development, test, and evaluation, Defense-wide, reduce the amount for advanced innovative analysis and concepts (PE 63289D8Z), by \$10,000,000.



AMENDMENT TO H.R. 4435
OFFERED BY MR. CARSON OF INDIANA

At the appropriate place in title II, insert the following:

1 **SEC. 2___. REVISION OF REQUIREMENT FOR ACQUISITION**
2 **PROGRAMS TO MAINTAIN DEFENSE RE-**
3 **SEARCH FACILITY RECORDS.**

4 (a) REVISION OF FUNCTIONS OF DEFENSE RE-
5 SEARCH FACILITIES.—Subsection (b) of section 2364 of
6 title 10, United States Code, is amended—

7 (1) in paragraph (3), by adding “and” after the
8 semicolon;

9 (2) in paragraph (4)—

10 (A) by adding “and issue” between “posi-
11 tion” and “papers”;

12 (B) by striking “combatant commands”
13 and inserting “components of the Department
14 of Defense”; and

15 (C) by striking “; and” and inserting a pe-
16 riod; and

17 (3) by striking paragraph (5).

18 (b) DEFINITIONS.—Subsection (c) of such section is
19 amended to read as follows:

Log 219

1 “(c) DEFENSE RESEARCH FACILITY DEFINED.—In
2 this section, the term ‘defense research facility’ means a
3 Department of Defense facility which performs or con-
4 tracts for the performance of—
5 “(1) basic research; or
6 “(2) applied research known as exploratory de-
7 velopment.”.



AMENDMENT TO H.R. 4435
OFFERED BY MR. THORNBERRY OF TEXAS

Strike section 1062.



Log 234r2

Amendment Offered by Ms. Loretta Sanchez of California

H.R. 4435—National Defense Authorization Act for Fiscal Year 2015

Directive report language

In the appropriate place in the report, insert the following:

High-efficiency, conventional missile propulsion

The committee notes that munitions to support contingency plans in the various combatant command areas of responsibility may require long-range munitions to ensure adequate penetration of anti-access, area-denial environments. The committee is aware that technology for high-efficiency, conventional missile propulsion subsystems necessary for such strike requirements is limited and may require further research and development. Therefore, the committee encourages the Department of Defense to adequately resource efforts to mature high-efficiency conventional missile propulsion subsystems, and directs the Under Secretary of Defense for Acquisition, Technology, and Logistics to provide a briefing to the House Armed Services Committee by August 1, 2014 on current research and development efforts in this area.