

TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

BUDGET ITEMS

Unmanned Carrier-Launched Airborne Surveillance and Strike System

The budget request included \$134.7 million in PE 64501N for the Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) system.

The House bill would authorize the budget request.

The Senate amendment would not approve the request in PE 64501N due to contracting delays caused by waiting on the results of the Department of Defense Intelligence Surveillance, and Reconnaissance Strategic Portfolio Review. These delays resulted in the Navy's having excess fiscal year 2015 funds in the program. The Senate amendment would instead provide an additional \$725.0 million in Research, Development, Test and Evaluation, Defense-wide, including \$350.0 million for continued development and risk reduction activities of the Unmanned Combat Air System Demonstration (UCAS-D) aircraft that would benefit the overall UCLASS program, and \$375.0 million to be used for a competitive prototyping of at least two follow-on air systems that move the Department toward a UCLASS program capable of long-range strike in a contested environment.

We believe that the Navy should develop a penetrating, air-refuelable, unmanned carrier-launched aircraft capable of performing a broad range of missions in a non-permissive

environment. We believe that such an aircraft should be designed for full integration into carrier air wing operations—including strike operations—and possess the range, payload, and survivability attributes as necessary to complement such integration. Although the Defense Department could develop land-based unmanned aircraft with attributes to support the air wing, we believe that the United States would derive substantial strategic and operational benefits from operating such aircraft from a mobile seabase that is self-deployable and not subject to the caveats of a host nation.

Therefore, we recommend an increase of \$350.0 million to the UCLASS program and direct the Secretary of Defense to use these funds to conduct competitive air vehicle risk reduction activities that would lead to fielding penetrating, air-refuelable, UCLASS air vehicles capable of performing a broad range of missions in a non-permissive environment.

We direct the Navy to leverage both the lessons learned from the UCAS-D program and the existence of two operational UCAS-D demonstrator aircraft in support of these efforts. We also encourage the Secretaries of Defense and the Navy to consider all appropriate flexible acquisition authorities granted in law and in this Act, including those for rapid prototyping. Finally, we recommend that any contractual arrangements executed with this funding provide the Navy with sufficient technical data rights to support a subsequent competitive prototyping, follow-on development, or future multiple-sourced production efforts.

We look forward to reviewing the results of the Department of Defense Intelligence Surveillance, and Reconnaissance Strategic Portfolio Review and also the report directed in section 217 of the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015.

Integrated personnel and pay system for Army

The budget request included \$136.0 million in PE 65018A for the Integrated Personnel and Pay System—Army (IPPS-A).

The House bill included the full requested amount.

The Senate amendment included \$86.0 million for IPPS-A, a reduction of \$50.0 million.

The agreement authorizes \$121.0 million in PE 65018A for the Integrated Personnel and Pay System—Army (IPPS- A). Elsewhere in this Act, we include a legislative provision that limits obligation of funds for the program, until provision of a required report to Congress on program plans.

SUBTITLE A—AUTHORIZATION OF APPROPRIATIONS

Authorization of appropriations (sec. 201)

The House bill contained a provision (sec. 201) that would authorize the appropriations for research, development, test, and evaluation activities at the levels identified in section 4201 of division D of this Act.

The Senate bill contained an identical provision (sec. 201).

The agreement includes this provision.

**SUBTITLE B—PROGRAM REQUIREMENTS,
RESTRICTIONS, AND LIMITATIONS**

*Centers for Science, Technology, and Engineering Partnership
(sec. 211)*

The Senate amendment contained a provision (sec. 211) that would authorize a program to enhance the Department of Defense laboratories with innovative academic and industry partners in research and development activities.

The House bill contained no similar provision.

The House recedes with a technical amendment.

*Expansion of eligibility for financial assistance under
Department of Defense Science, Mathematics, and Research for
Transformation program to include citizens of countries
participating in The Technical Cooperation Program (sec. 212)*

The Senate amendment contained a provision (sec. 216) that would expand the Department of Defense's Science, Mathematics, and Research for Transformation (SMART) program to include students from the United Kingdom, Australia, New Zealand, and Canada.

The House bill contained no similar provision.

The agreement includes the provision with an amendment to cap the number of new foreign students entering the program at five per year. We believe that this cap will help to ensure that the majority of the students in the program are U.S. citizens, while also giving the Department the flexibility to include foreign students on a trial basis. We also believe that this cap will allow the Department the opportunity to work out procedures and processes for the potential expansion to include other kinds of foreign students, should the Secretary of Defense determine that is in the national security interest.

Expansion of education partnerships to support technology transfer and transition (sec. 213)

The House bill contained a provision (sec. 221) that would allow institutions that support technology transition or transfer activities, such as business schools or law schools with technology management programs, to participate in education partnerships with Defense laboratories, as authorized in Section 2194 of title 10, United States Code.

The Senate amendment contained no similar provision.

The agreement includes the provision with amendments that would clarify to which institutions such authorities would extend, authorize a sabbatical and internship program for university faculty and students to work in Defense laboratories, and provide additional emphasis on technology transfer and transition projects. We believe that these amendments, taken together, would strengthen the purpose of the provision, which is to ensure that education partnerships are available for those wishing to engage in technology transfer or transition, in addition to traditional research projects.

Improvement to coordination and communication of Defense research activities (sec. 214)

The House bill contained a provision (sec. 231) that would improve the coordination and communication of defense research activities and technology domain awareness. The House bill directs the Secretary of Defense to promote, monitor, and evaluate programs not only among Defense research facilities, but also among other government facilities, as well as commercial and university entities. The House bill would also encourage the Department to achieve full awareness of scientific and technological advancement and innovation throughout the technology domain.

The Senate amendment contained no similar provision.

The Senate recedes with an amendment that would add additional direction to the Secretary of Defense to develop and distribute clear technical communications to all internal and external entities. We believe it is important that the Department more completely and robustly convey successes of Defense research and engineering activities.

The Senate amendment would also direct the Secretary of Defense to ensure that publicly-funded Defense research facilities support national technological development goals and technological missions of other federal agencies, as appropriate. We believe that taxpayer funds used for scientific

research should be used in support of the best interests of the U.S. government as a whole.

Reauthorization of Global Research Watch program (sec. 215)

The Senate amendment contained a provision (sec. 214) that would reauthorize the Global Research Watch program for an additional 10 years. The Senate provision would also expand the responsibilities of the program to include private sector entities, in addition to foreign governments.

The House bill contained no similar provision.

The agreement includes this provision.

Reauthorization of Defense research and development Rapid Innovation Program (sec. 216)

The House bill contained a provision (sec. 211) that would extend the authorization for the Department of Defense to execute activities for the Rapid Innovation Program through 2020.

The Senate amendment contained a similar provision (sec. 213) that would reauthorize the Rapid Innovation Program for 5 years. The Senate provision would also make technical changes to the program's guidelines and reporting requirements.

The agreement contains the Senate provision with a technical edit from the House to extend the program through 2023. We believe that it would be more effective to extend the program in a manner consistent with the end of the next program objective memorandum.

Science and technology activities to support business systems information technology acquisition programs (sec. 217)

The Senate amendment contained a provision (sec. 215) that would mandate the establishment of science and technology activities that would help reduce the technical risk and life cycle costs of major information technology acquisition programs. The provision would require the Department to fund appropriate research, development, and capability-building activities to make it a "smarter buyer" of these programs.

The House bill contained no similar provision.

The agreement includes the provision with an amendment directing the Department to conduct a gap analysis to identify relevant activities that are not being pursued in the current science and technology program.

We recognize and appreciate that the Department does currently engage in some activities that address those described

in this provision and the original report language from the Senate Armed Services Committee. However, we note with dismay the significant gaps in activities and technologies continue to exist. Examples of these gaps include lack of support for business process re-engineering, for lowering costs of customization of commercial software, for lowering maintenance costs, for open architectures, for engagement with management schools and small businesses, and for the conversion of legacy software to modern systems. We remain concerned that such gaps in science and technology activities related to business systems information technology acquisition, if left unaddressed, have the potential to severely hamper the Department's ability to field a modern and efficient information technology enterprise that meets the current and future needs of the Department.

Department of Defense technology offset program to build and maintain the technological superiority of the United States (sec. 218)

The Senate amendment contained a provision (sec. 212) that would establish and initiative within the Department of Defense to maintain and enhance the military technological superiority of the United States. The provision would establish a program to accelerate the fielding of offset technologies, including, but not limited to, directed energy, low-cost high-speed munitions, autonomous systems, undersea warfare, cyber technology, and intelligence data analytics, developed by the department and to accelerate the commercialization of such technologies. The provision would also direct the Secretary to establish updated policies and new acquisition and management practices that would speed delivery of offset technologies into operational use. The provision would authorize \$300.0 million for fiscal year 2016 for initiative, of which \$150.0 million would be authorized specifically for directed energy.

The House bill contained no similar provision.

The agreement includes this provision with an amendment to remove the requirement for a strategy on the development of directed energy technologies.

We are aware of the challenges facing the Department in maintaining technological superiority with regards to potential future adversaries. In authorizing the technology offset program in this provision, we recognize the need for the Department to have sufficient flexibility and resources to make sound strategic decisions for technology investment to respond to a more dire future security environment. We note that the Department has a number of initiatives, such as the Defense

Innovation Initiative, and the Long-Range Research and Development Plan, to help guide those investments.

In particular, the Armed Services Committees of the Senate and the House of Representatives have been focused on the role directed energy weapons will have in our future security environment, and have been proponents of maturing directed energy technologies to transition them to the warfighting community as quickly as possible. We are aware that the Department and the military services have various roadmaps for deploying these technologies, and consider this fund a major forcing function to drive accelerated development and transition.

To better understand how the funds authorized in this section, in combination with other funds for directed energy programs, will be used to identify and transition promising directed energy technologies to the warfighting community, we direct the Secretary of Defense to provide a briefing to the Armed Services Committees of the Senate and the House of Representatives no later than 180 days after the enactment of this Act. This briefing should include:

- 1) A description of a program management process for the identification of directed energy efforts, including prototyping or exercise opportunities, where additional funding may support accelerated transition to urgent operational needs or programs of record;

- 2) A description of coordination mechanisms between services and agencies undertaking directed energy activities, including coordination of science and technology prototyping, and programs of record;

- 3) An identification of challenges from the warfighting community currently impeding the adoption of or confidence in directed energy weapons systems.

- 4) An identification of policy, regulatory, or legislative impediments or challenges that currently constrain accelerated transition to the warfighting community; and

- 5) Recommendations for how to improve the department's ability to transition promising directed energy technology initiatives to the warfighting community.

Limitation on availability of funds for F-15 infrared search and track capability development (sec. 219)

The House bill contained a provision (Sec. 213) that would limit the availability of funds for fiscal year 2016 for the research, development, test, and evaluation of F-15 infrared search and track capabilities until 30 days after the Secretary of Defense submits a specified report.

The Senate bill contained no similar provision.
The Senate recesses.

Limitation on availability of funds for development of the shallow water combat submersible (sec. 220)

The House bill contained a provision (sec. 225) that would require a briefing to the congressional defense committees on the U.S. Special Operations Command (SOCOM) Shallow Water Combat Submersible (SWCS) program.

The Senate amendment contained a provision (sec. 218) that would prohibit the expenditure of more than 25 percent of the funds available for the SWCS program for fiscal year 2016 until the Under Secretary of Defense for Acquisition, Technology and Logistics designates a civilian official within his office responsible for providing oversight and assistance to SOCOM for all undersea mobility programs and, in coordination with the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict, provides the congressional defense committees a report on the SWCS program.

The House recesses with an amendment that would modify to 50 percent the amounts available for the SWCS program and modify associated reporting requirements.

Limitation on availability of funds for Medical Countermeasures Program (sec. 221)

The House bill contained a provision (sec. 212) that would limit the obligation and expenditure of 50 percent of the funds made available for the Department of Defense Medical Countermeasures program within the Chemical-Biological Defense Program until the Secretary of Defense provides a report to the congressional defense committees that validates the requirements and conducts an independent cost-benefit analysis to justify funding and efficiencies. This section would also require the Comptroller General of the United States to submit a review of the certification to the congressional defense committees within 60 days after the date on which the Secretary submits his report.

The Senate amendment contained no similar provision.

The agreement contains the House provision with an amendment that would decrease the limitation from 50 percent to 25 percent pertaining only to those funds used for research development test and evaluation (RDT&E) activities in the Advanced Development and Manufacturing facility per se and not all the RDT&E activities associated with the Medical Countermeasures Program.

We further note that Consistent with GAO report 15-257 (June 2015), the Secretary shall report to the congressional defense committees no later than February 28, 2016 on the designation of an individual responsible for managing infrastructure for the Department of Defense Chemical and Biological defense programs, to include shared-use facilities such as those within the Advanced Development and Manufacturing program, in order to minimize duplication of effort within the Department of Defense and other agencies of the federal government. The Secretary of defense shall notify the congressional defense committees of the appointment of such individual no later than 15 days after such designation. Further, we direct the Comptroller General to review the roles and responsibilities of the official designated to be responsible for infrastructure management, and to brief the congressional defense committees no later than March 31, 2016.

Limitation on availability of funds for distributed common ground system of the Army (sec. 222)

The Senate amendment contained a provision (sec. 219) that would limit the amount of funds available to be obligated or expended by the Secretary of the Army to not more than 75 percent of the amounts authorized to be obligated for fiscal year 2016 until a review of the program planning for the distributed common ground system of the Army is submitted to the congressional defense and intelligence committees.

The House bill contained a similar provision (sec. 1624). The House recedes with a clarifying amendment.

Limitation on availability of funds for distributed common ground system of the United States Special Operations Command (sec. 223)

The House bill contained a provision (sec. 1625) that would limit the availability of funds for the Special Operations Command's Distributed Common Ground System to 75 percent of the funds authorized to be obligated by the program until the Commander of U.S. Special Operations Command conducts a review of the program planning and submits the findings of such review to the congressional defense committees and the congressional intelligence committees and the House Permanent Select Committee on Intelligence.

The Senate amendment contained a similar provision (sec. 220) that would limit the availability of research, development, test, and evaluation funds for the distributed common ground system of the U.S. Special Operations Command (SOCOM) until the

Commander of SOCOM submits a report to the congressional defense committees.

The House recesses.

Integrated personnel and pay system for Army (sec. 224)

The agreement includes a provision (sec. 224) that would limit the ability of the Secretary of the Army to obligate more than 75 percent of the total authorized amount of fiscal year 2016 program funds for Integrated Personnel and Pay System-Army (IPPS-A) program until the Secretary of the Army provides a report to the congressional defense committees on the performance of legacy systems, changes in human resources organization and financial system capabilities, and alternatives to the current cost of IPPS-A.

SUBTITLE C—REPORTS AND OTHER MATTERS

Streamlining the Joint Federated Assurance Center (sec. 231)

The Senate amendment contained a provision (sec. 217) that would streamline the Department of Defense's Joint Federated Assurance Center by eliminating an unnecessary layer of bureaucracy between the Center's steering group and its working groups.

The House bill contained no similar provision.

The agreement includes this provision.

Demonstration of persistent close air support capabilities (sec. 232)

The Senate amendment contained a provision (sec. 233) that would require the Secretary of the Air Force, the Secretary of the Army, and the Director of the Defense Advanced Research Projects Agency (DARPA) to jointly conduct a demonstration of the Persistent Close Air Support (PCAS) capability in fiscal year 2016.

The House bill contained no similar provision.

The House recesses with an amendment to strike the phrase "as identified by the United States Air Force Close Air Support Forum" from subparagraph (b)(1). The amendment would also replace all occurrences of the word "shall" with "may," and add a paragraph directing a briefing to the congressional defense committees by December 1, 2016 on the assessment of demonstration results and cost estimates for transition of any desired technologies.

We strongly encourage the three parties to conduct the PCAS demonstration, as the benefits would likely provide a large payoff in increased capability for what is estimated to be minimal resource investment. In response to the challenge of diverse platforms and user populations of the close air support mission, the Joint Requirements Oversight Council, in 2009, in its Close Air Support Capabilities-Based Assessment, recommended that "Platforms should field flexible systems that utilize an improved architecture which migrates the processing of digital messages to a Commercial-off-the-Shelf (COTS) based processor and away from the [aircraft] operational flight programs."

We observe that with repeated Air Force proposals to retire their fleet of A-10 aircraft, the integration of game-changing and relatively inexpensive technologies to improve close air support mission operations and results on other platforms could be beneficial in assuaging concerns of divesting a particular aircraft, even a type with close air support as its primary mission.

We also agree that the Director of DARPA should provide resources to the maximum extent practical to minimize costs borne by the participating Services to accomplish the demonstration activities.

Strategies for engagement with historically black colleges and universities and minority-serving institutions of higher education (sec. 233)

The House bill contained a provision (sec. 222) that would require the Secretaries of the military departments to each develop a strategy for engagement with and support of the development of scientific, technical, engineering, and mathematics capabilities with historically black colleges and universities and minority-serving institutions. The provision would also require the Secretary of Defense to develop a strategy that encompasses the strategies developed by the military departments.

The Senate amendment contained no similar provision.

The Senate recedes with an amendment that ensures that such strategies are developed by all organizations within the Department of Defense that are engaged in basic research, thereby broadening the provision to cover all appropriate Defense entities.

We note that in implementing the requirements of this provision, the Secretary of Defense may seek information from the directorates of the Louis Stokes Alliances for Minority Participation program (LSAMP) and Historically Black Colleges and Universities Undergraduate Program (HBCU-UP) of the National

Science Foundation; the American Association for the Advancement of Science; the Emerging Researchers National Conference in Science, Technology, Engineering, and Mathematics; the University of Florida Institute for African-American Mentoring in Computing Sciences (IAAMCS); the Hispanic Association of Colleges and Universities; the National Indian Education Association; and such other institutions, organizations, or associations as the Secretary deems useful.

Report on commercial-off-the-shelf wide-area surveillance systems for Army tactical unmanned aerial systems (sec. 234)

The House bill contained a provision (sec. 229) that would express the Sense of Congress on the capabilities provided by unmanned aerial systems that use wide area surveillance sensors. The provision would also require the Secretary of the Army to conduct a market survey and flight assessment of commercial-off-the-shelf wide area surveillance sensors suitable for insertion on Army tactical unmanned aerial systems.

The Senate amendment contained no similar provision.

The Senate recedes with an amendment that would remove the sense of Congress, modify the reporting requirements for the market survey, require an assessment of current wide area surveillance systems that are currently used or could be used on Army tactical unmanned aerial systems, as well as require the Secretary of the Army to assess the advisability and feasibility of upgrading wide area surveillance systems for Army tactical unmanned aerial systems.

Report on Tactical Combat Training System Increment II (sec. 235)

The House bill contained a provision (sec. 230) that would direct the Secretary of the Navy and the Secretary of the Air Force to submit a report to the congressional defense committees, not later than January 29, 2016, on the baseline and alternatives to the Navy's Tactical Air Combat Training System Increment II. The provision would also limit the Navy from approving or designating a contract award for the specified system until 15 days after the date of the submittal of the report.

The Senate amendment contained no similar provision.

The Senate recedes with an amendment striking subparagraph (c) to remove the limitation.

Report on technology readiness levels of the technologies and capabilities critical to the long range strike bomber aircraft (sec. 236)

The Senate amendment contained a provision (sec. 235) that would require the Secretary of Defense to submit to Congress, not later than 180 days after enactment of this Act, a report on the Technology Readiness Levels and capabilities critical to the Long Range Strike Bomber aircraft. The provision would also require the Comptroller General of the United States to review the Secretary's report and submit an assessment to the congressional defense committees.

The House bill contained no similar provision.

The House recedes with an amendment to have the Secretary report to the congressional defense committees.

Assessment of Air-Land Mobile Tactical Communications and Data Network Requirements and Capabilities (sec. 237)

The Senate amendment contained a provision (sec. 231) that would require the Director of Cost Assessment and Program Evaluation (CAPE) to contract with an independent entity to conduct a comprehensive assessment of current and future requirements and capabilities to determine the technological feasibility, achievability, suitability, and survivability of a tactical communications and data network. The provision would also prohibit the Secretary of the Army from obligating more than 50 percent of funds available in Other Procurement, Army for the Warfighter Information Network-Tactical, Increment 2 program subject to the submission of the independent entity's report.

The House bill contained no similar provision.

The House recedes with an amendment that would strike the limitation of funds, and require the Director of CAPE to seek to enter into a contract with a federally funded research and development center to conduct a comprehensive assessment of current and future requirements and capabilities of the Army with respect to air-land ad hoc, mobile tactical communications and data networks, including the technological feasibility, suitability, and survivability of such networks.

We believe the Director of CAPE shall select a federally funded research and development center with direct, long-standing, and demonstrated experience and expertise in program test and evaluation of concepts, requirements, and technologies for joint tactical communications and data networking to perform the assessment. The Institute for Defense Analysis may be such an entity with expertise needed for such a detailed assessment.

Study of field failures involving counterfeit electronic parts (sec. 238)

The Senate amendment contained a provision (sec. 232) that would require the Secretary of Defense to task the Joint Federated Assurance Center (JFAC) to conduct a hardware assurance study to assess the presence, scope, and effect on Department of Defense operations of counterfeit electronic parts that have passed through the Department of Defense supply chain and into fielded systems.

The House bill contained no similar provision.

The agreement includes the provision with an amendment to assign responsibility for the study to the executive agent for printed circuit board technology. We believe that the executive agent is the most appropriate official to conduct such a study. The amendment would also require JFAC to conduct a technical assessment for indications of malicious tampering on any parts assessed that demonstrate unusual or suspicious failure mechanisms. We believe that such follow-up is critical for ensuring maximum impact and benefit of the study.

Airborne data link plan (sec. 239)

The Senate amendment contained a provision (sec. 234) that would require the Under Secretary of Defense for Acquisition, Technology, and Logistics and the Vice Chairman of the Joint Chiefs of Staff to jointly, in consultation with the Secretary of the Air Force and the Secretary of the Navy, to develop a plan on airborne data links between fifth-to-fifth, and fifth-to-fourth generation aircraft. The provision would also limit funding for the TALON HATE and Multi-Domain Adaptable Processing System programs until the plan was briefed to the congressional defense committees.

The House bill contained no similar provision.

The House recesses with an amendment to add a date of February 15, 2016 for the plan briefing, and to strike subsection (c).

Plan for advanced weapons technology war games (sec. 240)

The House bill contained a provision (sec. 223) that would require the Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff, to develop a plan for integrating advanced technologies, such as directed energy weapons, hypersonic strike systems, and autonomous systems into broader title 10 war games to improve socialization with the

warfighter and the development and experimentation of various concepts for employment by the Armed Forces.

The Senate amendment contained no similar provision.

The Senate recesses with some technical amendments.

Independent assessment of F135 engine program (sec. 241)

The House bill contained a provision (sec. 214) that would require the Secretary of Defense to enter into a contract with a federally funded research and development center to conduct an assessment of the F135 engine program, and submit a report to the congressional defense committees not later than March 15, 2016.

The Senate amendment contained no similar provision.

The Senate recesses.

Comptroller General Review of autonomic logistics information system for F-35 Lightning II aircraft (sec. 242)

The House bill contained a provision (sec. 224) that would direct the Comptroller General of the United States to conduct a review and submit a report to the congressional defense committees on the autonomic logistics information system for the F-35 Lightning II aircraft program.

The Senate amendment contained no similar provision.

The Senate recesses with an amendment to make technical corrections to correct typographical errors.

Sense of Congress regarding facilitation of a high quality technical workforce (sec. 243)

The House bill contained a provision (sec. 227) that would express a sense of Congress that the Department of Defense should explore using existing authorities for all Federally Funded Research and Development Centers to help facilitate and shape a high quality scientific and technical workforce that can support the Department's needs. In addition, the provision would make a number of findings, including that the country's scientific and technical workforce is a matter of national security, that the Department's support for technical education programs facilitates the training of the future workforce, and that the highly skilled workforce already employed is qualified to facilitate training of a future workforce.

The Senate amendment contained no similar provision.

The Senate recesses with an amendment that would expand the provision to include all defense laboratories. We believe that the paragraphs of the provision apply to all Defense

laboratories, not only the Federally Funded Research and Development Centers, and that all should be recognized as such.

We find that:

(1) The quality of the future scientific and technical workforce of the United States and the access of the Department of Defense to a high quality scientific and technical workforce are matters of national security concern;

(2) The support of the Department of Defense for science, technology, engineering, and mathematics education programs facilitates the training of a future scientific and technical workforce that will contribute significantly to the research, development, test, and evaluation functions of the Department of Defense and the readiness of the future Armed Forces;

(3) Defense laboratories and federally funded research and development centers sponsored by the Department of Defense employ a highly skilled workforce that is qualified to support science, technology, engineering, and mathematics education initiatives, including through meaningful volunteer opportunities in primary and secondary educational settings and cooperative relationships and arrangements with private sector organizations and State and local governments, and to facilitate the training of a future scientific and technical workforce;

(4) Robust participation in scientific and technical conferences, including industry and international conferences, will strengthen the national security scientific and technical workforce.

LEGISLATIVE PROVISIONS NOT ADOPTED

Report on graduate fellowships in support of science, mathematics, and engineering education

The House bill contained a provision (sec. 226) that would require the Secretary of Defense to submit a report on graduate fellowships in support of science, mathematics, and engineering education.

The Senate amendment contained no similar provision.

The agreement does not include this provision.

Funding for MV-22A Digital Interoperability Program

The House bill contained a provision (sec. 228) that would authorize an increase in funding for MV-22A Digital Interoperability Program of \$75.0 million which included \$64.3 million for Aircraft Procurement, Navy, and \$10.7 million for Research, Development, Test & Evaluation, Navy.

The Senate amendment contained no similar provision, but would increase funding for the MV-22A, based upon the unfunded priority list of the Commandant of the Marine Corps. The Senate amendment would increase funding by a total of \$23.0 million including \$15.0 million for integrated aircraft survivability and \$8.0 million for ballistic protection

The agreement does not include this provision.

The outcome is reflected in section 4101 and 4201 of this Act, and includes funding in line with the Senate amendment.

ITEMS OF SPECIAL INTEREST

Apportionment of small business funds under continuing resolutions

We believe that under a continuing budget resolution (CR), federal agencies remain responsible for assessing the Small Business Innovative Research (SBIR) and Small Business Technology Transition (STTR) set-asides, and executing program support for small business technology innovation. To support Department of Defense access to small business innovation, we believe that Department comptrollers should move expeditiously to calculate the SBIR/STTR assessments, and make those funds available to military services and agency SBIR/STTR programs commensurate with those assessments, on a timeline that supports program effectiveness.

Expedited approval for attendance at conferences in support of science and innovation activities of Department of Defense and the National Nuclear Security Administration

We note with concern that since the Departments of Defense and Energy have implemented updated conference policies, in response to requirements from the Office of Management and Budget, attendance at science and technology conferences by department personnel has reduced dramatically. According to a report from the Government Accountability Office in March 2015, conference attendance from the Army Research Laboratory declined from about 1300 attendees in 2011 to about 100 attendees in 2013. A similar drop in attendance was reported from Sandia National Laboratories. The report highlights that such a drop in attendance risks a decline in the quality of scientific research, difficulty in recruiting and retaining qualified scientists and engineers, and a diminished leadership role for the two departments within the global science and technology community. The report also notes that the new departmental

policies are not meeting the needs of personnel requesting approval to travel to conferences.

Given the importance of conference attendance for an active exchange of scientific information and for recruiting and retaining high-quality technical talent, and therefore maintaining technological superiority, we are concerned that the conference attendance approval policies are undermining and eroding the science and technology missions of both departments as well as the ability of personnel to engage in cutting-edge research, development, testing, and evaluation. We believe that technical conference participation is especially important to keep program managers aware of new trends in technology, so that they may make better informed decisions on behalf of taxpayers.

To maintain global technology awareness and to support retention of technical staff, we believe that the Departments should strive to follow the best practices of the innovative private and academic institutions in developing management and oversight practices for conference participation. We are concerned that in specific technical fields of interest to defense, such as hypersonics and cybersecurity, the lack of participation in conferences is ceding U.S. leadership to competitor nations.

In response to these findings and concerns, we direct the Secretaries of Defense and Energy to revise current policies within the Department of Defense and National Nuclear Security Administration, respectively, whereby requests for scientific conference attendance are adjudicated within one month, and approvals are granted as appropriate within one month. Further, we direct the Secretaries of Defense and Energy to ensure that any decisions to disapprove conference attendance through these revised policies are made if and only if the appropriate officials determine that the disapproval would have a net positive impact on research and development and on program management quality, and not simply default disapprovals necessitated by a bureaucratic inability to make a timely decision. In addition, we direct that these new policies be implemented no later than 90 days after the enactment of this act.

We recommend that, through these revised policies, laboratory and test center directors be given the authority to approve conference attendance, provided that the attendance would meet the mission of the laboratory or test center and that sufficient laboratory or test center funds are available.

We direct the Secretaries of Defense and Energy each to report to the Senate Armed Services Committee and the House Armed Services Committee on the revised policies from their respective agencies, as well as an assessment of their benefits

and drawbacks, along with measures for tracking the effectiveness of the new policies. We further direct that this report be submitted no later than one year after the enactment of this act.

Protection of advanced technologies

We have concerns that the Department of Defense, while taking necessary steps to pursue and create innovative technologies and to access global sources of innovation, also needs to better protect such technologies against unauthorized disclosure to or theft by potential adversaries. We are concerned that some adversaries have clear strategies (1) to overcome our general technology protection efforts and specific program protection measures, and (2) to mitigate our efforts to increase our technological superiority. For this reason, we believe that the Department would benefit from better technology and program protection planning and more effective cybersecurity measures.

Therefore, we direct the Secretary of Defense to conduct a review of methodologies that potential adversaries are exploiting to gain unauthorized access to technologies and intellectual property, and to circumvent current export control and other technology protection regimes. Additionally, the Department should review structures of business relationships, such as partnerships, mergers and acquisitions, joint ventures, and consortia, to assess the potential that these types of relationships present additional opportunities for exploitation by adversaries. Further, we direct the Secretary to brief the results of the review to the Committees on Armed Services of the Senate and House of Representatives by March 15, 2016, including any recommendations that may necessitate legislative action.