

HR 4842

Homeland Security Science and Technology Authorization Act of 2010

Congress: 111 (2009–2011, Ended)

Chamber: House

Policy Area: Emergency Management

Introduced: Mar 15, 2010

Current Status: Received in the Senate and Read twice and referred to the Committee on Homeland Security and Government

Latest Action: Received in the Senate and Read twice and referred to the Committee on Homeland Security and Governmental Affairs. (Jul 21, 2010)

Official Text: <https://www.congress.gov/bill/111th-congress/house-bill/4842>

Sponsor

Name: Rep. Clarke, Yvette D. [D-NY-11]

Party: Democratic • **State:** NY • **Chamber:** House

Cosponsors (8 total)

Cosponsor	Party / State	Role	Date Joined
Rep. Lungren, Daniel E. [R-CA-3]	R · CA		Mar 15, 2010
Rep. Thompson, Bennie G. [D-MS-2]	D · MS		Mar 15, 2010
Rep. King, Peter T. [R-NY-3]	R · NY		Mar 16, 2010
Rep. Green, Al [D-TX-9]	D · TX		Apr 13, 2010
Rep. Lujan, Ben Ray [D-NM-3]	D · NM		Apr 13, 2010
Rep. Pascrell, Bill, Jr. [D-NJ-8]	D · NJ		Apr 13, 2010
Rep. Richardson, Laura [D-CA-37]	D · CA		Apr 13, 2010
Rep. Kilroy, Mary Jo [D-OH-15]	D · OH		Apr 15, 2010

Committee Activity

Committee	Chamber	Activity	Date
Homeland Security and Governmental Affairs Committee	Senate	Referred To	Jul 21, 2010
Homeland Security Committee	House	Referred to	Mar 16, 2010
Homeland Security Committee	House	Reported by	Mar 16, 2010
Science, Space, and Technology Committee	House	Discharged From	Jun 25, 2010

Subjects & Policy Tags

Policy Area:

Emergency Management

Related Bills

No related bills are listed.

Homeland Security Science and Technology Authorization Act of 2010 - **Title I: Authorization of Appropriations** - (Sec. 101) Authorizes appropriations to the Under Secretary for Science and Technology of the Department of Homeland Security (DHS) for the Directorate of Science and Technology for FY2011-FY2012.

Title II: Management and Administration - (Sec. 201) Directs the Secretary of DHS (the Secretary) to: (1) establish requirements for how basic and applied homeland security research shall be identified, prioritized, funded, tasked, and evaluated by the Directorate; (2) seek to publicize the requirements for the purpose of informing the federal government, state and local governments, first responders, and the private sector; (3) establish, through the Under Secretary for Science and Technology and the Under Secretary for Management, a mandatory workforce program for the Directorate's customers in DHS to better identify and prioritize homeland security capability gaps that may be addressed by a technological solution; and (4) establish a system to collect feedback from customers of the Directorate on its performance. Requires the Inspector General of DHS to submit a biannual update to the appropriate congressional committees on the status of the implementation of research prioritization, requirements, and activities.

Directs the Secretary to: (1) submit specified information annually, including a national-level risk assessment and a report on Homeland Security Advanced Research Projects Agency activities; (2) report specified information regarding professional development; (3) establish a system to create a formal process for collecting feedback from customers on the effectiveness of the technology or services delivered by the Directorate, develop metrics for measuring customer satisfaction and the usefulness of any technology or service provided by the Directorate, and establish standards and performance measures to be met by the Directorate; and (4) establish a system to monitor the Directorate's progress for research, development, testing, and evaluation activities, including the establishment of initial and subsequent research milestones. Directs the Under Secretary for Science and Technology to report to the appropriate congressional committees, within a year, regarding actions taken and, annually thereafter, describing: (1) research milestones for each large project with a federal cost share greater than \$80 million that have been met or missed; and (2) customer feedback and the Directorate's success in meeting customer service performance measures and standards.

(Sec. 202) Establishes within the Directorate a Testing, Evaluation, and Standards Division. Provides for: (1) a Director of Test, Evaluation, and Standards to be the principal advisor to the Secretary, the Under Secretary of Management, and the Under Secretary for Science and Technology on all test and evaluation or standards activities in DHS; (2) a Deputy Director of Operational Test and Evaluation; and (3) a Standards Executive.

(Sec. 203) Requires: (1) the Under Secretary for Science and Technology to develop and oversee the administration of guidelines for periodic external review of research and development projects or activities; and (2) the Secretary to report to Congress on such review.

(Sec. 204) Establishes in the Directorate an Office of Public-Private Partnerships, headed by a Director, who shall report to the Under Secretary for Science and Technology. Requires the Director, in coordination with DHS's Private Sector Office, to: (1) engage and initiate proactive outreach efforts and provide guidance on how to pursue proposals to develop or deploy homeland security technologies; (2) coordinate with components of DHS to issue announcements seeking unique and innovative homeland security technologies to address homeland security capability gaps; (3) promote interaction between homeland security researchers and private sector companies to accelerate transition research or a prototype into a commercial product and streamline the handling of intellectual property; and (4) conduct technology research assessment and marketplace analysis for the purpose of identifying, leveraging, and integrating best-of-breed technologies and capabilities from industry, academia, and other federal government agencies and disseminate findings

to federal, state, and local governments.

Establishes within the Office a Rapid Review Division, which shall: (1) be responsible for maintaining a capability to perform business and technical reviews to assist in screening unsolicited homeland security technology proposals submitted to the Secretary; and (2) assess the feasibility, scientific and technical merits, and estimated cost of such proposals. Requires the Division to: (1) maintain awareness of the technological requirements of the Directorate's customers; (2) establish and publicize accessible, streamlined procedures allowing a participant to have its technology assessed by the Division; (3) make knowledgeable assessments of a participant's technology after receiving a business plan, a technology proposal, and a list of corporate officers, directors, and employees with technical knowledge of the proposal, within 60 days of submission; (4) review proposals submitted by components of DHS to the Division; and (5) in reviewing proposals submitted to the Secretary, give priority to any proposal submitted by a small business concern. Prohibits the Office from considering or evaluating homeland security technology proposals submitted in response to a solicitation for offers for a pending procurement or for a specific agency requirement.

Authorizes the Under Secretary for Science and Technology, acting through the Director, to establish up to three satellite offices across the country to enhance DHS's outreach efforts. Directs the Secretary to establish rules to prevent the Director or any other Office employee from acting on matters where a conflict of interest may exist. Authorizes appropriations for the Office for FY2011-FY2012.

Title III: Reports - (Sec. 301) Directs the Under Secretary for Science and Technology to prepare a strategic plan for the activities of the Directorate.

(Sec. 302) Requires the Under Secretary to report within 90 days for each current project conducted by the Directorate having a federal cost share greater than \$80 million, and on an ongoing basis thereafter for any new project conducted by the Directorate having a federal cost share greater than \$80 million, providing the appropriate committees a description of: (1) DHS components and customers consulted during the development of the operational and technical requirements associated with the project; and (2) the extent to which the requirements incorporate the input of those components or customers.

Directs the Under Secretary to report within 90 days of enactment for each current project conducted by a DHS component besides the Directorate having a lifecycle cost greater than \$1 trillion, and on an ongoing basis thereafter for any new project conducted by a DHS component besides the Directorate having a lifecycle cost greater than \$1 trillion, providing the appropriate committees detailed operational and technical requirements associated with the project.

(Sec. 303) Directs the Secretary to report on the current role of the venture capital community in funding advanced homeland security technologies and to provide recommendations about creating a nonprofit organization for purposes of delivering advanced homeland security technologies to the homeland security community to further its missions. Encourages the Secretary to use a federally funded research and development center to produce the report. Authorizes appropriations for the report.

Title IV: Directorate of Science and Technology Programs - (Sec. 401) Limits research relevant to DHS to that which directly addresses a prioritized risk to the homeland as identified by a risk analysis.

(Sec. 402) Authorizes appropriations for FY2011-FY2012 to carry out the university based centers program of DHS. Includes within criteria for designation of a college or university as a center for homeland security demonstrated expertise in: (1) medical readiness training and research; (2) community resiliency for public health and healthcare critical infrastructure; and (3) explosive countermeasures or detection.

(Sec. 403) Directs the Comptroller General to initiate a study to assess the university-based Centers for Homeland Security program. Prohibits the Secretary from designating any new university-based centers prior to the completion of the review.

(Sec. 404) Directs the Under Secretary to: (1) support research, development, testing, evaluation, and transition of cybersecurity technology, including fundamental, long-term research to improve the ability of the United States to prevent, protect against, detect, respond to, and recover from acts of terrorism and cyber attacks, with an emphasis on research and development relevant to large-scale, high-impact attacks; and (2) coordinate activities with the Under Secretary for National Protection and Programs, and the heads of other relevant federal agencies.

Amends the Homeland Security Act of 2002 (HSA) to authorize the Secretary to establish a Cybersecurity Preparedness Consortium to: (1) provide training to state and local first responders and officials specifically for preparing and responding to cybersecurity attacks; (2) develop and update a curriculum and training model for state and local first responders and officials; (3) provide technical assistance services to build and sustain capabilities in support of cybersecurity preparedness and response; (4) conduct cybersecurity training and simulation exercises to defend from and respond to cyber attacks; and (5) coordinate all cybersecurity preparedness training activities conducted by DHS.

Authorizes the Secretary to establish a Cybersecurity Training Center to provide training courses and other resources for state and local first responders and officials to improve preparedness and response capabilities. Authorizes appropriations to DHS for FY2011-FY2012 for the cybersecurity research and development activities of the Directorate to prevent, detect, and respond to acts of terrorism and other large-scale disruptions to information infrastructure.

(Sec. 405) Directs the Under Secretary for Science and Technology and the Under Secretary for National Protection and Programs to seek to enter into an agreement with the National Academy of Sciences' National Research Council to conduct a study to assess methods that might be used to promote market mechanisms that further cybersecurity. Authorizes appropriations to DHS for FY2011.

(Sec. 406) Directs the Secretary: (1) working with the heads of other national security and intelligence agencies, to conduct research and determine if the security of federally owned programmable electronic devices and communication networks essential to the reliable operation of critical electric infrastructure has been compromised; and (2) report to Congress.

(Sec. 407) Directs the Under Secretary for Science and Technology to report on the homeland security implications of the dual-use nature of synthetic genomics. Authorizes research in that area.

(Sec. 408) Directs the Under Secretary to: (1) conduct a demonstration project to test and assess the feasibility and effectiveness of certain technologies to enhance the security of underwater public transportation tunnels against terrorist attacks involving the use of improvised explosive devices, including testing of inflatable plugs that may be rapidly deployed to prevent flooding of an underwater public transportation tunnel; and (2) report to Congress.

(Sec. 409) Authorizes the Under Secretary to support research, development, testing, evaluation, and transition of technology: (1) that increases the nation's preparedness against chemical and biological threats and strengthens the nation's preparedness and collective response against those threats through improved threat awareness and advanced surveillance, detection, and protective countermeasures; and (2) to enhance the development of border security technology.

Authorizes the Under Secretary to: (1) conduct research to develop understanding, technologies, and systems needed to

protect against biological attacks on the nation's population or infrastructure; (2) conduct research and development to enhance the protection of the nation's agriculture and food system against terrorist attacks and other emergency events through enhancement of current agricultural countermeasures, development of new agricultural countermeasures, and provision of safe, secure, state-of-the-art biocontainment laboratories for researching foreign animal and zoonotic diseases; and (3) develop technology to reduce the nation's vulnerability to chemical warfare agents and commonly used toxic industrial chemicals.

Directs the Under Secretary to produce risk assessments for biological and chemical threats and to coordinate with the Director of the Domestic Nuclear Detection Office, the Assistant Secretary of the Office of Health Affairs, and the Assistant Secretary of Infrastructure Protection on an integrated risk assessment, including regarding chemical, biological, radiological, nuclear, and explosive threats. Requires the assessments to be used to inform and guide the threat assessments and determinations by the Secretary regarding agents and toxins that shall be listed as "select agents" and to guide prioritization of other homeland defense activities. Directs the Under Secretary to convene an interagency task force of relevant subject matter experts to assess the proposed methodology to be used for each assessment and to provide recommendations as to the adequacy of such methodology.

Authorizes the Under Secretary to develop technology, in coordination with the Commissioner of Customs and Border Protection (CBP), to gain effective control of the international land borders of the United States within five years of this Act's enactment, ensuring coordination and integration between new technologies and those already utilized by CBP.

(Sec. 410) Directs the Secretary to establish capabilities for conducting global marine domain awareness and maritime security technology, test, evaluation, and transition, to: (1) direct activities in furtherance of border and maritime security; and (2) evaluate such technology in diverse environments.

(Sec. 411) Directs the Secretary: (1) to require the Under Secretary to assess whether the development of screening capabilities for pandemic influenza and other infectious diseases should be undertaken by the Directorate to support entry and exit screening at ports of entry; and (2) if the Under Secretary determines that development should be undertaken, to initiate development of safe and effective screening methods.

(Sec. 412) Directs the Secretary to develop: (1) a public awareness campaign to enhance preparedness and collective response to a radiological attack; and (2) a plan for post-event recovery from such an attack.

(Sec. 413) Directs the Under Secretary to conduct research intended to assist state, local, and tribal leaders and the private sector in developing the tools and methods to enhance preparation for, and response and resilience to, terrorist events and other incidents.

(Sec. 414) Expresses the sense of Congress that: (1) video surveillance systems that operate over the Internet are an emerging homeland security technology that has the potential of significantly improving homeland security forensic and analytical capability; (2) there should be interoperability standards for such technology; (3) the Directorate should encourage the private sector to develop such standards; and (4) such efforts will help the federal government in detecting, deterring, preventing, and responding to terrorist attacks.

(Sec. 415) Amends HSA to direct the Secretary, acting through the Under Secretary, to establish a Homeland Security Science and Technology Fellows Program, under which the Under Secretary shall facilitate the temporary placement of scientists in relevant scientific or technological fields for up to two years in components of DHS with a need for scientific and technological expertise.

(Sec. 416) Authorizes the Under Secretary to implement an assay equivalency program for biological threat assays.

(Sec. 417) Directs the Secretary: (1) in coordination with the National Science Foundation (NSF), to commission a study by a nonprofit research institution to determine the feasibility and potential benefit of expanding the Federal Cyber Service Scholarship for Service Program or establishing a parallel program as methods to create a new cybersecurity or information assurance capacity building track at institutions of higher education that are not currently designated as a National Center of Academic Excellence in Information Assurance Education or a National Center of Academic Excellence in Research; and (2) report to Congress.

(Sec. 418) Expresses the sense of Congress that centers of excellence have the potential to: (1) be a very useful tool in developing defensive countermeasures to secure critical infrastructure and prevent terrorism; and (2) play a key role in DHS's efforts to research and develop new technologies to secure the homeland.

(Sec. 419) Authorizes the Under Secretary to: (1) assess what technologies are available to mitigate the threat of small vessel attack in secure zones of ports; and (2) conduct research, testing, and evaluation of new technologies that might be capable of tracking small vessels.

(Sec. 420) Extends through September 30, 2012 the Secretary's authority to make expenditures to carry out basic, applied, and advanced research and development projects through nonstandard acquisitions procedures, as opposed to procedures under the Federal Acquisition Regulation (other transaction authority). Requires an annual report to Congress regarding the exercise of other transaction authority. Directs the Secretary to develop a training program for acquisitions staff to ensure the appropriate use of other transaction authority.

(Sec. 421) Authorizes the National Urban Security Technology Laboratory (formerly the Environmental Measurements Laboratory) within the Directorate for FY2011-FY2012.

(Sec. 422) Amends HSA to establish a science and technology advisory committee within DHS to make recommendations regarding activities of the Under Secretary.

Title V: Domestic Nuclear Detection Office - (Sec. 501) Authorizes appropriations for the Domestic Nuclear Detection Office of DHS for FY2011-FY2012.

(Sec. 502) Expresses the sense of Congress that the Directorate should conduct basic and innovative research and nondevelopmental testing on behalf of the Office to advance next generation nuclear detection technologies. Requires the Director of the Office, the Under Secretary for Science and Technology, and the heads of all operational components of DHS that own, operate, or maintain nuclear or radiological detection equipment to: (1) begin an internal review of the methodology by which research, development, testing, and evaluation is identified, prioritized, and funded within DHS; and (2) report to Congress. Directs the DHS Inspector General to submit annual updates on the status of this section's implementation and activities in support of such implementation.

(Sec. 503) Directs the Secretary to submit to the appropriate committees a report containing: (1) a strategic plan for the global nuclear detection architecture to deter and detect the transport of nuclear or radioactive materials by all means possible, with specific focus on establishing the goals, objectives, and cost projections for the next five years; and (2) an analysis of overall budget allocations that determines whether government-wide nuclear detection resources clearly align with identified priorities to maximize results and minimize duplication of efforts.

(Sec. 504) Expresses the sense of Congress that the Director must attempt to identify viable alternatives to the use of

advanced spectroscopic portal monitors for primary screening and report to Congress.

(Sec. 505) Authorizes appropriations to the Director for the Securing the Cities Initiative for FY2011-FY2012.

Title VI: Clarifying Amendments - (Sec. 601) Authorizes a federally funded research development center to perform independent analysis of homeland security issues and reports its findings to the appropriate committees and the Secretary, at the request of the chairman and ranking minority member of an appropriate congressional committee. Encourages such centers, upon such a request, to provide to the committee a copy of any report it produces for DHS or any of its components.

Directs: (1) the Secretary to review and revise DHS policies relating to personnel conflicts of interest to ensure that such policies specifically address employees of federally funded research and development centers who are in a position to make or materially influence research findings or agency decisionmaking; and (2) each such center to transmit to the Secretary and appropriate congressional committees an annual report on the center's activities.

(Sec. 602) Repeals provisions regarding the establishment of a Homeland Security Institute.

(Sec. 603) Directs the Comptroller of the United States to: (1) conduct a study to assess the implementation of the statutory relationship between DHS and the Department of Energy (DOE) national laboratories, as established under HSA; and (2) submit recommendations to the appropriate committees for improvements to that relationship.

(Sec. 604) Amends HSA to repeal a provision that includes within the mission of the Domestic Nuclear Detection Office to conduct a transformational research and development program to generate and improve technologies to detect and prevent the illicit entry or potential use within the United States of a nuclear explosive device or fissile or radiological material and to coordinate with the Under Secretary for Science and Technology on research and development efforts relevant to the mission of both organizations.

Title VII: Commission on the Protection of Critical Electric and Electronic Infrastructures - (Sec. 701) Establishes the Commission on the Protection of Critical Electric and Electronic Infrastructures to: (1) assess vulnerabilities of electric and electronic infrastructures; (2) provide a clear and comprehensive strategy and specific recommendations for protecting such infrastructures; and (3) test, evaluate, and report on specific mitigation protection and recovery devices or methods. Directs the Commission to give particular attention to threats that can disrupt or damage critical electric and electronic infrastructures.

Requires the Commission to address: (1) the quantification of specified threats (i.e., cyber attacks or unintentional cyber disruption, electromagnetic phenomena such as geomagnetically induced currents, intentional electromagnetic interference, and electromagnetic pulses caused by nuclear weapons, and other physical attacks, acts of nature, or accidents) to the U.S. electric and electronic infrastructure; (2) the roles, missions, and structure of all relevant federal, state, and local government agencies with responsibilities for ensuring protection and reliability for electric and electronic infrastructures; (3) the roles, missions, and structure of all relevant private sector entities with responsibilities for ensuring protection and reliability for such infrastructures; (4) interagency coordination between and among those government and private sector entities; and (5) recommendations for protections and recovery devices and measures.

Requires the Commission to report annually to the President and Congress on its findings, conclusions, and recommendations for protection and recovery measures for electric and electronic infrastructures as agreed to by a majority of Commission members. Authorizes appropriations for Commission activities for FY2011-FY2012.

Title VIII: Border Security Technology Innovation - (Sec. 801) Directs the Under Secretary for Science and Technology to ensure that any federal interagency or intra-agency agreement entered into by the Under Secretary to develop and transition new technology explicitly characterizes the requirements, expected use, and concept of operations for that technology.

(Sec. 802) Directs the Under Secretary to enter into an arrangement with the National Research Council for a one-year assessment of the basic science research needs in the border and maritime security domain.

(Sec. 803) Requires the Secretary and the Director of the Joint Planning and Development Office to research and develop technologies to permit routine operation of unmanned aerial vehicles, including autonomously piloted drones, within the national airspace for border and maritime security missions without any degradation of existing levels of safety for all national airspace system users.

Directs the Secretary to coordinate with the Administrator of the Federal Aviation Administration (FAA) and the Director of the Joint Planning Office to enter into pilot projects in sparsely populated, low-density Class G air traffic airspace to conduct experiments and collect data in order to accelerate the safe integration of unmanned aircraft systems into the national airspace system as part of research activities of the Joint Planning and Development Office.

(Sec. 804) Directs: (1) the Under Secretary to research and develop technologies to permit detection of near surface voids, such as tunnels, with an emphasis on technologies with real time capability; and (2) the Secretary to coordinate with other appropriate federal agencies and ensure the integration of such activities with relevant efforts of such other agencies and DHS's Centers of Excellence Program.

(Sec. 805) Requires the Under Secretary: (1) in coordination with the Director of the National Institute of Standards and Technology (NIST), to conduct a research and development program on document security, validation, and authentication technologies and standards; and (2) in carrying out the program, to coordinate with other federal agencies engaged in similar activities. Directs the Under Secretary and the Director of NIST to report to specified committees detailing their actions under this section.

(Sec. 806) Directs the Under Secretary to study and report to Congress on the need for next generation global position system technology as it relates to border security.

(Sec. 807) Requires: (1) the Under Secretary, in coordination with the Commissioner of CBP, to establish a research program on the use of mobile biometric technology at the nation's borders between the ports of entry and report to Congress; and (2) the Secretary to ensure that the research program is coordinated with other biometric identification programs within DHS.

(Sec. 808) Authorizes appropriations.

Actions Timeline

- **Jul 21, 2010:** Received in the Senate and Read twice and referred to the Committee on Homeland Security and Governmental Affairs.
- **Jul 20, 2010:** Ms. Clarke moved to suspend the rules and pass the bill, as amended.
- **Jul 20, 2010:** Considered under suspension of the rules. (consideration: CR H5760-5775)
- **Jul 20, 2010:** DEBATE - The House proceeded with forty minutes of debate on H.R. 4842.
- **Jul 20, 2010:** Passed/agreed to in House: On motion to suspend the rules and pass the bill, as amended Agreed to by voice vote.(text: CR H5760-5770)
- **Jul 20, 2010:** On motion to suspend the rules and pass the bill, as amended Agreed to by voice vote. (text: CR H5760-5770)
- **Jul 20, 2010:** Motion to reconsider laid on the table Agreed to without objection.
- **Jun 25, 2010:** Committee on Science and Technology discharged.
- **Jun 25, 2010:** Placed on the Union Calendar, Calendar No. 292.
- **Jun 18, 2010:** House Committee on Science and Technology Granted an extension for further consideration ending not later than June 25, 2010.
- **May 18, 2010:** Reported (Amended) by the Committee on 111-486, Part I.
- **May 18, 2010:** Referred sequentially to the House Committee on Science and Technology for a period ending not later than June 18, 2010 for consideration of such provisions of the bill and amendment as fall within the jurisdiction of that committee pursuant to clause 1(o), rule X.
- **Apr 15, 2010:** Committee Consideration and Mark-up Session Held.
- **Apr 15, 2010:** Ordered to be Reported (Amended) by the Yeas and Nays: 26 - 0.
- **Mar 16, 2010:** Forwarded by Subcommittee to Full Committee (Amended) by Voice Vote .
- **Mar 16, 2010:** Referred to the Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology.
- **Mar 16, 2010:** Referred to the Subcommittee on Border, Maritime, and Global Counterterrorism.
- **Mar 16, 2010:** Subcommittee Consideration and Mark-up Session Held.
- **Mar 16, 2010:** Forwarded by Subcommittee to Full Committee by Voice Vote .
- **Mar 15, 2010:** Introduced in House
- **Mar 15, 2010:** Referred to the House Committee on Homeland Security.