



## H.R. 1806— America COMPETES Reauthorization Act (Smith, R-TX)

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**FLOOR SCHEDULE:** MAY 20, 2015 UNDER A [STRUCTURED RULE](#) WHICH MADE IN ORDER 12 AMENDMENTS. THE RULE WOULD PROVIDE FOR ONE HOUR OF GENERAL DEBATE.

**TOPLINE SUMMARY:** [H.R. 1806](#) would provide for scientific innovation through the prioritization of basic research and fundamental scientific discovery. This legislation would reauthorize the civilian research programs at the National Science Foundation (NSF), the coordination of Federal STEM education programs, the White House Office of Science and Technology Policy, the National Institute of Standards and Technology, the Department of Energy (DOE) Office of Science, and the DOE's energy supply Research and Development programs. The bill would also authorize changes to improve technology transfer from the DOE's national laboratories to the private sector. The America COMPETES Act would keep overall funding flat with Fiscal Year (FY) 2015 appropriated levels and is consistent with the Budget Control Act discretionary cap levels.

**COST:** The [Congressional Budget Office](#) (CBO) [estimates](#) that implementing this legislation would cost about \$32 billion over the 2016-2020 period.

**CONSERVATIVE CONCERNS:** Some may be concerned this bill would reauthorize the [Hollings Manufacturing Extension Centers](#). [This program](#) subsidizes a network of nonprofit extension centers that provide technical, financial, and marketing services for small and medium-size businesses that are largely available in the private market. The House Republican budget eliminated this program. In addition, conservatives have been critical of some of the research that has been [prioritized by government agencies](#). For example, in Senator Coburn's [2014 Wastebook](#) he highlighted numerous wasteful grants including awarding funding for the study of mountain lions on a treadmill. It is important to note that other conservatives believe that the federal government should play a robust role in funding basic scientific research. This bill would further prioritize funding for basic and fundamental scientific research.

- **Expand the Size and Scope of the Federal Government?** No.
- **Encroach into State or Local Authority?** No.
- **Delegate Any Legislative Authority to the Executive Branch?** No.
- **Contain Earmarks/Limited Tax Benefits/Limited Tariff Benefits?** No.

### DETAILED SUMMARY AND ANALYSIS:

#### Title I: The National Science Foundation

- This bill would authorize for appropriation \$7.597 billion for the National Science Foundation in each of FY 2016 and 2017 to carry out various activities to support basic scientific research and education. This is a 3.4 percent increase over FY 2015 enacted levels.

- In allocating resources, the NSF must follow certain policy objectives which include: (1) renewing and maintaining international leadership in science and technology through specified activities; (2) increasing overall workforce skills; and (3) strengthening innovation by expanding the focus of competitiveness and innovation policy at the regional and local level.
- This section would create greater accountability in awarding federal funding for research by requiring funding to be awarded only if a determination is made, and justification published by the NSF, that the funding is in the national interest and meets specific criteria.
- A sense of Congress is included to convey that essential elements of the NSF Research Traineeship be maintained to provide students with the opportunity to become leaders in science and engineering.
- Merit-based, competitive grants would be awarded for research on programming that engages underrepresented students in kindergarten through eighth grade in STEM (science, technology, engineering, and math). This could include hands-on learning, exposure to role models in the fields, activities to engage parents, and coordination with STEM-rich environments, including nonprofits, universities, and museums.
- The director would be required to review all of NSF's education programs to determine whether there is any duplication in these programs and how these programs are being evaluated and assessed for outcome oriented effectiveness.
- The NSF would be required to establish procedures to ensure grants awarded are not duplicative of work being funded through other federal agencies.
- This section would require the director to place a high priority on designing and administering pilot programs for scientific breakthrough prizes that are consistent with Office of Science and Technology Policy guidelines and are of strategic importance to the national interest.

**Title II: Science, Technology, Engineering, and Mathematics**

- This section would instruct the president to establish a STEMP Education Advisory Panel that would be co-chaired by members of the President's Council of Advisors on Science and Technology. The panel would advise the president and the STEM Education Coordinating Office on matters relating to STEM education and provide general guidance to federal agencies.
- The [America Competes Act of 2010](#) would be amended to require the Committee on STEM Education (CoSTEM) to collaborate with external stakeholders and review the evaluation measures used for Federal STEM education programs.
- The director of the NSF would be required to establish a STEM Education Coordinating Office that would provide technical and administrative support to CoSTEM and Federal agencies with STEM education programs.

**Title III: Office of Science and Technology Policy**

- This bill would authorize for appropriation \$4.55 million for the Office of Science and Technology Policy (OSTP) for each of FY 2016 and 2017. This is an 18 percent decrease from FY 2015 enacted levels.
- The director of the Office of Science and Technology policy would be directed to establish a working group to be responsibilities for reviewing federal regulations affecting research and research universities. The working group would be required to take into account input and recommendations from non-federal stakeholders.
- Federal science agencies would be given the authority to conduct pilot programs to validate alternative research funding models such as through scientific breakthrough prize programs and obtaining non-federal funds through crowd source funding.
- This section would amend Title II of the National Science and Technology Policy, Organization, and Priorities Act of 1976 by adding a section that designates the presidentially appointed U.S. Chief Technology Officer (USCTO) to be one of the Associate Directors of OSTP.

- The OSTP would be directed to enter into an agreement with the National Research Council to conduct a study to identify and review technologies employed at institutions of higher education to provide notifications during emergencies.

#### **Title IV: National Institute of Standards and Technology**

- This bill would authorize for appropriation \$933,700,000 for the National Institute of Standards and Technology for each of FY 2016 and 2017. Specifically, \$744.700,000 would be for scientific technical research and services laboratory activities, \$59,000,000 would be for the construction and maintenance of facilities, and \$130,000,000 would be for industrial technology services activities of which \$125,000,000 for the Manufacturing Extension Partnership program and \$5,000,000 for the Network for Manufacturing Innovation program. In total, this is a 8.1 percent increase over FY 2015 enacted levels.
- This section would amend Section 2 of the [National Institute of Standards and Technology Act](#) by adding language stating that the Director of NIST is authorized to serve “as the President’s principal adviser on standards policy pertaining to the Nation’s technological competitiveness and innovation ability.”
- The director would be allowed to award research fellowships and other forms of assistance directly to college students and teachers who show promise as contributors to the NIST mission and to United States citizens performing research and technical activities relevant to NIST. A post-doctoral fellowship program would be established for at least 20 fellows per fiscal year.
- The National Institute of Standards and Technology Act with regard to the [Hollings Manufacturing Extension Centers](#). The objective of these centers is to enhance competitiveness, productivity, and technological performance in U.S. manufacturing. This section would allow the Secretary to provide financial support to a center; however, it must not be more than 50 percent of the capital and annual operating and maintenance funds required to create and maintain the center. **The House-passed budget would eliminate the Hollings Manufacturing Extension Centers and calls it “some of the worst cases of corporate welfare in the federal government.”**
- This section contains a sense of Congress that partnerships that facilitate basic scientific research between the United States and Israel advance technology development and innovation and are beneficial to both nations.

#### **Title V: Department of Energy Science**

- The section would authorize for appropriation \$5,339,800,000 to the secretary at the Department of Energy for the Office of Science for each of FY 2016 and 2017. This represents a 5.3 percent increase over FY 2015 enacted levels.
- This section would direct the director to carry out research and development to advance computational and networking capabilities to predict complex phenomena related to the development of new energy technologies.
- The director would be instructed to carry out a program on biological systems science prioritizing fundamental research on biological systems and genomics science. However, the director would not be allowed to approve new climate science-related initiatives to be carried out through the Office of Science without ensuring the work is not duplicative.
- This section would require the director to carry out a program to discover, explore, and understand all forms of nuclear matter, including a program for the production of isotopes.

#### **Title VI: Department of Energy Applied Research and Development**

- This section would authorize for appropriation activities within the DOE including the Office of Electricity at \$113,000,000; Nuclear Energy at \$504,600,000; Energy Efficiency and Renewable Energy \$1,198,500,000; Fossil Energy at \$605,000,000; and ARPA-E at \$140,000,000 for each of FY 2016 and 2017.
- This section would direct the secretary to promote crosscutting research and leverage existing programs to accomplish goals such as modernizing the electric grid and cybersecurity. Prioritization would be

given to activities that promote utilization of all affordable domestic resources and programs that may be more effectively left to the states or nongovernmental organizations.

- The secretary would be directed to establish a comprehensive research, development, and demonstration program to ensure the reliability, efficiency, and environmental integrity of electrical transmission and distribution systems.
- The secretary would be directed to carry out research and development programs for small modular reactors.
- A nuclear energy standards committee would be established by the Director of the National Institutes of Standards and Technology to facilitate the development or revision of technical standards for new and existing nuclear power plants and advanced nuclear technologies.
- The secretary is directed to conduct programs of energy efficiency research and development that increase energy efficiency and reduce the environmental impact.
- The Next Generation Lighting Initiative research and development program and the Secondary Electric Vehicle Battery Use research and development program would be repealed.
- The [Renewable Energy in Public Buildings Demonstration Program](#) and the Concentrating Solar Power Research Program would be repealed.
- The secretary would be directed to carry out a program of research and development for advanced clean coal technologies.

#### **Title VII: Department of Energy Transfer**

- This section would authorize the Secretary to continue until October 31, 2017 a pilot program to institute agreements between national laboratories and third-party entities. These agreements, known as ACT agreements, provide national laboratories with increased authority to negotiate contract terms, including intellectual property rights, payment structures, performance guarantees, and multiparty collaborations.
- This section would exempt for a 6-year trial period universities and nonprofit institutions from the 20 percent cost-share requirement for applied research and development grants.

#### **Title VIII: Sense of Congress**

- This section includes a sense of Congress that climate change is real.

#### **OUTSIDE GROUPS SUPPORT:**

- [Citizens Against Government Waste](#)
- [Coalition letter](#)

**COMMITTEE ACTION:** This bill was introduced by Representative Smith on April 15, 2015, and referred to the Committee on Science, Space, and Technology, in addition to the Committees on Education and the Workforce, and Oversight and Government Reform. On April 22, 2015, the Committee on Science, Space, and Technology held a [mark-up](#) and the bill was reported out by a vote of [19-16](#). Read the committee report, [here](#).

**ADMINISTRATION POSITION:** The [administration](#) strongly opposes House passage of H.R. 1806, the America COMPETES Reauthorization Act of 2015. If the president were presented with H.R. 1806, his senior advisors would recommend that he veto the bill.

**CONSTITUTIONAL AUTHORITY:** According to the sponsor, Congress has the power to enact this legislation pursuant to the following: "Article I, Section 8, Clause 18: The Congress shall have power to make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department of Officer thereof."

## AMENDMENTS MADE IN ORDER:

1. [Amendment #36](#) (Smith, R-TX): The Manager's Amendment would make technical changes including changes to the specific allocations of funding outlined in section 101.
2. [Amendment #6](#) (Foster, D-IL): This amendment would strike section 106 which would provide for greater accountability in federal funding for research at the National Science Foundation. Section 106 would require federal funding for new research grants to display how the funding would be used to promote the progress of science and is in the national interest.
3. [Amendment #20](#) (Jackson Lee, D-TX): This amendment would create state and regional workshops to train K-12 teachers in science and technology project-based learning. It would also encourage the collaborative efforts between public and private sector entities to provide STEM efforts at schools located in areas with unemployment rates that exceed the national average by one percent or more.
4. [Amendment #15](#) (Esty, D-CT): This amendment would instruct the National Science Foundation's Innovation Corps to promote a strong innovation system by investing in and supporting female entrepreneurs.
5. [Amendment #7](#) (Crowley, D-NY; Serrano, D-NY; Lujan, D-NM; Hurd, R-TX; Curbelo, R-FL): This amendment would require the director of the National Science Foundation to establish a program to award STEM grants for Hispanic-serving institutions as [authorized](#) by the America COMPETES Act of 2007.
6. [Amendment #16](#) (Griffith, R-VA): This amendment would allow the Speaker of the House and the Majority Leader of the Senate to appoint members to the Advisory Panel which would advise the president, Committee on STEM Education, and the STEM Education Coordinating Office on matters relating to STEM education. Three members of the panel would be appointed by the speaker, two members would be appointed by the majority leader, and the remaining would be appointed by the secretary. The total number of members on the advisory committee would be 15.
7. [Amendment #28](#) (Kelly, R-PA): This amendment would increase the authorized funding for the [Manufacturing Extension Partnership](#) by \$5 million, while decreasing the authorized funding level for the Office of Energy Efficiency and Renewable Energy by \$5 million.
8. [Amendment #13](#) (Lowenthal, D-CA): This amendment would remove the requirement that no new climate science-related initiatives to be carried out through the Office of Science without making a determination that the work is unique and not duplicative of work in other federal agencies. In addition, it would remove the requirement of the comptroller general to submit a report to Congress identifying climate initiatives that may be duplicative.
9. [Amendment #30](#) (Grayson, D-FL): This amendment would establish Energy Innovation Hubs to conduct and support collaborative research of advanced energy technologies such as technology that produced energy from solar, wind, ocean or other renewable energy resources.
10. [Amendment #25](#) (Bonamici, D-OR; Smith, D-WA; Peters, D-CA): This amendment would allow the DOE to partner with the Department of Defense to produce biofuels for the military.

11. [Amendment #40](#) (DeSaulnier, D-CA; Beyer, D-VA): This amendment would strike the goal of enhancing the economic and energy security of the United States as a priority of the Advanced Research Projects Agency-Energy (ARPA-E).
12. [Amendment #11](#) (Johnson, D-TX): This is a full-substitute amendment that would provide for increased spending across federal agencies focused on science.

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