

THE VIEWS AND ESTIMATES
OF THE
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
FOR FISCAL YEAR 2017

In 2016, the House Committee on Science, Space, and Technology will continue to oversee, legislate, and implement a Constitutionally-based Federal focus on open and transparent taxpayer-supported science, basic research in the national interest, and mission-supporting technology development. It is this core focus, coupled with tax and regulatory reform, border security, and a budget on a path to balance, that is required for robust entrepreneurial economic growth, the creation of millions of good-paying, skilled private sector jobs, faster technological innovation, higher productivity gains, and enhanced international competitiveness and security.

During the first session of the 114th Congress, fully consistent with the Science Committee's Views and Estimates submitted on February 20, 2015 (which can be found [here](#)), the Science Committee acted to authorize, direct, and constrain programs, projects, and agencies within its jurisdiction for Fiscal Year (FY) 2017. House-passed H.R. 1806, the America COMPETES Reauthorization Act of 2015, covers the National Science Foundation (NSF), the Commerce Department's National Institute of Standards and Technology (NIST), the Department of Energy (DOE), and the White House Office of Science and Technology Policy (OSTP). House-passed H.R. 1561 prioritizes weather research and forecasting innovation in the Commerce Department's National Oceanic and Atmospheric Administration (NOAA). The Science Committee reported H.R. 2039, the NASA Authorization Act for 2016 and 2017. And Committee legislation authorizing Department of Transportation (DOT) surface transportation research and development (R&D) was included in P.L. 114-94, the new highway law.

To build on the Science Committee's FY 2016 funding progress toward Federal prioritization of basic research and fundamental scientific discovery, and in fulfillment of last year's Views and Estimates blueprint and justification, further policy and program changes implementing Science Committee authorizations should be made in FY 2017 Budget and appropriations bills. These are presented below and will be further pursued in additional Committee legislation during the upcoming Congressional session, including DOT Federal Aviation Administration (FAA) R&D reauthorization, EPA science reform, and possible Department of Homeland Security Science and Technology Directorate (DHS S&T) reorganization.

National Science Foundation (NSF)

- Increase NSF Research and Related Activities account funding to the level authorized for Fiscal Year 2017 in House-passed H.R. 1806. This \$6.186 billion, a 2.5% increase of \$153 million, should be allocated as specified in H.R. 1806's legislative language which prioritizes basic research in the Mathematical and Physical Sciences Directorate, the Engineering Directorate, the Computer and Information Science and Engineering Directorate, and the Biological Sciences Directorate. This Budget Function 250 increase can be offset by cuts provided below to DOE in Function 270.
- In addition to requiring NSF Research funding be appropriated at the Directorate level, each and every NSF grant should be required to meet National Interest criteria as prescribed in section 106 of House-passed H.R. 1806.
- Learning disability science, and specifically dyslexia research, should be funded by NSF as directed in House-passed H.R. 3033, the READ Act.

National Institute of Standards and Technology (NIST)

- Increase Function 370 NIST Scientific and Technical Research and Services account generic innovation funding to the level authorized for Fiscal Year 2017 in House-passed H.R. 1806. This \$745 million, a 7.9% increase of \$55 million, can be offset by reducing the NIST Industrial Technology Services account and the NIST Construction of Facilities account to the levels authorized in H.R. 1806, saving \$90 million.
- No further NIST funding should be allocated in Function 370 for the National Network for Manufacturing Innovation (NNMI) in Fiscal Year 2017 since the \$25 million authorized in P.L. 113-235 for NIST in FY 2016-2020 (\$5 million annually) was all appropriated in Fiscal Year 2016. Any further NNMI funding must come by way of transfer from DOE's Energy Efficiency and Renewable Energy account in Function 270 as required by P.L. 113-235.

Department of Energy (DOE)

- Sustain DOE's Fiscal Year 2016 Office of Science account funding level of \$5.35 billion in Function 250, consistent with the Fiscal Year 2017 authorization in House-passed H.R. 1806. As with NSF Directorate-level funding, allocate DOE Science National Laboratories funding by basic research Program as specified in H.R. 1806's legislative language which prioritizes Basic Energy Sciences and Advanced Scientific Computing Research. Increase Fusion Energy Sciences by \$50 million to the \$488 million authorized in H.R. 1806 by reducing Biological and Environmental Research to the authorized level of \$550 million.
- Reduce Energy Efficiency and Renewable Energy R&D funding to the level authorized in House-passed H.R. 1806, \$1.2 billion, saving \$610 million in function 270. Reduce ARPA-E funding to the level authorized in House-passed H.R. 1806, \$140 million, saving \$151 million in function 270.

- Nuclear Energy R&D funding should reflect the research infrastructure priorities and private-sector innovation program blueprint of Committee-reported H.R. 4084, the Nuclear Energy Innovation Capabilities Act. Analytical examination of issues associated with nuclear safety and development of advanced reactor technologies in collaboration with the Nuclear Regulatory Commission is the goal.

Office of Science and Technology Policy (OSTP)

- Reduce White House Office of Science and Technology Policy funding to \$4.56 million, the authorized level in H.R. 1806, saving \$1 million in Function 800.

National Oceanic and Atmospheric Association (NOAA)

- Increase priority public safety NOAA Weather Research in the Office of Oceanic and Atmospheric Research to the House-passed Fiscal Year 2017 authorized level in H.R. 1561 of \$120 million, an increase of \$17 million in Function 300. Saving lives and protecting property must be NOAA's primary mission.
- Provide the remaining \$6 million authorized in House-passed H.R. 1561 for the NOAA Commercial Weather Data Pilot project out of existing funding in the NOAA Procurement, Acquisition, and Construction account.
- Make NOAA's Polar Follow-On satellite funding contingent on certification of no feasibility of commercial data or satellite alternatives.

National Aeronautics and Space Administration (NASA)

- Maintain the overall level of investment for NASA in the Fiscal Year 2016 omnibus funding bill of \$19.3 billion.

- Reduce Fiscal Year 2017 NASA Earth Science funding to \$1.45 billion, the level authorized in Committee-approved H.R. 2039, and reallocate the resulting \$471 million to Planetary Science, Heliophysics, the Orion Space Exploration Multi-purpose Crew Vehicle, and Exploration R&D, and Exploration Ground Systems.
- Reject any proposed cut to the Space Launch System funding that would delay a launch of Exploration Mission 1 (first non-crewed launch to lunar orbit) beyond calendar year 2018 or Exploration Mission 2 (first crewed launch to lunar orbit) beyond calendar year 2021.
- No NASA resources should be provided or permitted for planning and development of technologies unique to an Asteroid Redirect Mission (ARM). Instead, pre-formulation studies should be conducted for a Mars flyby mission. Near Earth Object (NEO) survey, detection, and characterization are not unique to ARM, and additional NASA resources could be used to help NASA meet the long-standing goals of the Congressionally-mandated George E. Brown, Jr. NEO Survey Program.

Federal Aviation Administration (FAA) Research and Development

- On November 25, 2015, the President signed H.R. 2262, the House Majority Leader's Commercial Space Launch Competitiveness Act, into law as P.L. 114-90. This important Science Committee legislation supports the continued growth of the commercial space launch industry while requiring the Administration to provide important metrics for the development of the industry and to foster an environment of innovation without burdensome regulations. Implementing P.L. 114-90 is not expected to increase the Fiscal Year 2017 activities of the FAA Office of Commercial Space Transportation above those of Fiscal Year 2016.

- The Science Committee will soon reauthorize the FAA's Function 450 Research, Engineering, and Development (RED) account to become part of overall FAA authorization legislation. The Administration has consistently proposed the FAA RED portfolio increase funding on environmental sustainability programs, while neglecting safety, economic competitiveness, and mission support programs. Instead, FAA R&D should be a balance of periodic testing and evaluation, verification and validation, and sustainment of the FAA's full spectrum of aviation systems, and the development of scientific solutions to current and future air transportation safety challenges by conducting applied research and development. FAA R&D must also support FAA certification of new technologies, particularly unmanned aerial systems (UAS), into the national airspace system (NAS).

Department of Transportation (DOT) Surface Transportation Research and Development

- On December 4, 2015, the President signed into law a five-year highway bill, Fixing America's Surface Transportation (FAST) Act, as P.L. 114-94. Among its provisions, the law authorizes funding for two technology deployment programs that cost \$80 million annually to be paid partially from highway research programs that are authorized at \$225 million a year. This will result in a one-third cut to highway R&D, effectively slashing future innovation in exchange for current infrastructure implementation. While not opposing technology deployment, doing so at the expense of R&D funds, without which there will be less transformational technology to deploy, is ill-advised.

Environmental Protection Agency (EPA) Science

- Function 300 EPA funding should be made contingent on the EPA Administrator certifying that all scientific and technical information and data relied on to support a risk, exposure, or hazard assessment; criteria document; standard; limitation; regulation; regulatory impact analysis;

or guidance has been made publicly available. This requirement is fully consistent with and would enforce House-passed H.R. 1030, the EPA Secret Science Reform Act of 2015.

- Given the number of serious allegations concerning inappropriate contact by EPA employees with outside special interest groups, as well as potential violations of anti-lobbying statutes, robust funding of the EPA Inspector General Office of Investigations is warranted.

Department of Homeland Security Science and Technology (DHS S&T)

- R&D plays a critical role in supporting DHS' mission and the DHS S&T Directorate needs to be reorganized and reformed to better and more quickly support DHS component efforts to detect, prevent, mitigate, respond to, and recover from terrorist attacks. The DHS Domestic Nuclear Detection Office combines R&D with acquisition and deployment in effectively carrying out its mission to address nuclear terrorism. That model deserves serious consideration regarding chemical, biological, explosives, cybersecurity, border security, and lone wolf threats.

U.S. Global Change Research Program (USGCRP)

- The United States Global Change Research Program (USGCRP) is an interagency accounting of over \$2 billion of spending on climate change research. Involving NASA, NSF, NOAA, NIST, DOE, EPA, and even the Department of Interior's U.S. Geological Survey, much is duplicative and poorly defined based on the Science Committee's oversight of these agencies under its jurisdiction. Given this fiscal irresponsibility, any funding that is part of the USGCRP should only be available contingent on a finding by the U.S. Government Accountability Office (GAO) that it is not duplicative or wasteful based on a government-wide GAO review of climate change research.