

for, including carryover balances, are subject to the standard reprogramming procedures set forth in section 505 of this act. USPTO is directed to provide, as part of the spending plan required in section 533 of this act, all carryover balances from previous fiscal years, and a description of any changes to the patent or trademark fee structure. Any changes from the spending plan shall also be subject to section 505 of this act. USPTO is directed to submit all reprogramming requests, spending plans, and budget justifications to the Committee through the Department of Commerce.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Appropriations, 2016 .....	\$964,000,000
Budget estimate, 2017 .....	1,014,519,000
Committee recommendation .....	974,000,000

The Committee’s recommendation provides \$974,000,000 for the National Institute of Standards and Technology [NIST]. The recommendation is \$10,000,000 above the fiscal year 2016 enacted level and \$40,519,000 below the budget request. Up to \$9,000,000 may be transferred from the Scientific and Technical Research and Services account to the Working Capital Fund.

NIST’s mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

A description of each NIST account and the corresponding Committee recommendation follows in the subsequent three headings.

SCIENTIFIC AND TECHNICAL RESEARCH AND SERVICES

(INCLUDING TRANSFER OF FUNDS)

Appropriations, 2016 .....	\$690,000,000
Budget estimate, 2017 .....	730,533,000
Committee recommendation .....	700,000,000

The Committee’s recommendation provides \$700,000,000 for NIST research and services. The recommendation is \$10,000,000 above the fiscal year 2016 enacted level and \$30,533,000 below the budget request. The Committee requests a detailed spending plan for NIST’s highest priority laboratory programs describing resources used for each program, project, or activity.

The Committee provides \$75,700,000 for cybersecurity activities within NIST, an increase of \$1,500,000 above the fiscal year 2016 level. This includes \$33,000,000 for the National Cybersecurity Center of Excellence [NCCoE], \$4,000,000 for the National Initiative for Cybersecurity Education to address the need for a well-trained cybersecurity workforce, and \$38,700,000 for cybersecurity research and development.

*National Cybersecurity Center of Excellence.*—The Committee is encouraged by the work conducted to date by the NCCoE and the growing partnerships it is developing with private industry. The NCCoE is a model of collaboration through which the Federal Government, industry, and academia work together to solve daunting cybersecurity challenges. The Committee recommends that NIST continue to work in concert with its public, State, and county part-

ners to encourage co-location of companies involved in NCCoE activities, which will encourage further innovation by leveraging the development of new applications, business use cases, and technology transfer among all stakeholders.

In fiscal year 2016, the Committee directed the NCCoE to absorb the activities and mission of the National Strategy for Trusted Identities in Cyberspace. Not later than 90 days after enactment of this act, the NCCoE shall submit a report to the Committee on how the expanded Center will continue to leverage expertise from both programs to contribute to the greater mission of improving cybersecurity in the public and private sectors.

*Cybersecurity Research and Grants.*—The Committee encourages DOC to fund multidisciplinary programs of study and research that focus on tackling cybersecurity issues on a global scale. When establishing criteria for external grant funding, consideration should only be given to institutions of higher education, including community colleges, designated by the National Security Agency as Centers of Academic Excellence for Information Assurance Education and Centers for Academic Excellence for Information Assurance Research.

*Forensic Science.*—The Committee provides no less than the fiscal year 2016 enacted level for the Forensic Science Center of Excellence. The Committee recommends that NIST continue to work in concert with statisticians and researchers in related scientific fields to bring additional scientific resources and expertise to the practice and application of forensic science. Additionally, within funds provided, NIST is encouraged to work with the forensic science community to establish developmental validation standards for forensic science test methodologies.

*Disaster Resilient Buildings.*—The Committee recognizes the importance of industry and municipal standards to better mitigate the impact of natural disasters and extreme weather events, which can save lives, reduce destruction to property, and enable faster economic recovery. Current building codes often do not provide the necessary protection against natural hazards, particularly with regard to enabling immediate occupancy after a significant earthquake, hurricane, tornado, flood, or other natural disaster. The Committee supports efforts to promote the use of resilient engineering design and construction techniques to improve the resiliency of buildings, homes, and infrastructure, and encourages NIST to partner with academic research institutions and industry stakeholders that have expertise in mitigating the effects of natural disasters to study and recommend best practices for resilient planning and construction.

Of the amounts provided for Disaster Resilient Buildings and Infrastructure, not less than \$5,000,000 shall be distributed through competitive external awards to academic institutions to support the evaluation of potential technologies and architectural design criteria to aid the overall effort for science-based building codes to improve disaster resilience. Additionally, not later than 1 year after the enactment of this act, NIST, in coordination with other relevant agencies and standards development organizations, shall provide to the Committee a plan detailing the basic research, applied research, and implementation activities necessary to develop a new

“immediate occupancy” safety building performance objective for commercial and residential properties, as well as the engineering design principles needed to fulfill this objective.

*Helmet Safety.*—The Committee is aware of scientific data that demonstrates a correlation between football-related collisions and concussions, as well as other traumatic brain injuries that can lead to debilitating neural diseases such as dementia and chronic traumatic encephalopathy. The Committee encourages NIST to investigate an effective national testing standard to better scientifically understand the inadequacies of football helmets while exploring future product designs that can safely reduce the neural risk of playing football. A number of academic institutions have substantial capabilities and knowledge of these issues and NIST should work cooperatively with the academic community by funding research for advanced helmets and equipment and in developing new testing standards to ensure player safety.

*Metals-Based Additive Manufacturing.*—The Committee provides up to \$5,000,000 for competitive external grants for academic institutions to support research, development, and workforce training to overcome barriers to high-volume additive manufacturing of metals. While the Committee is aware of recent breakthroughs in metals-based additive manufacturing, major technical barriers still exist to dramatically improving build rates that would enable commercial markets to benefit from high-volume, metals-based additive manufacturing. In addition, NIST is directed to support partnerships and research opportunities with academic institutions in the advanced manufacturing of plastics and polymers and to explore ways to further reduce inefficiencies in the polymer manufacturing and extrusion process.

*Biomanufacturing.*—The Committee provides NIST’s full requested level for biomanufacturing activities.

*Regenerative Medicine Standards.*—The Committee recognizes the important role of standards in spurring the discovery and development of new and innovative therapies in regenerative medicine, cell therapy, and gene therapy, and commends NIST’s ongoing work with its Federal partners and the stakeholder community to coordinate development of technical process standards. The Committee directs NIST to continue its work with regenerative medicine, cell therapy, and gene therapy product developers, contract manufacturers, private standard setting bodies, the FDA, and other stakeholders to establish a strategic plan for the successful establishment and launch of a standards coordinating body for regenerative medicine to help develop and disseminate such standards, including a plan for its governance and activities.

*Spectrum Challenge Prize.*—The Committee encourages NIST, subject to the availability of funds, to conduct prize competitions to dramatically accelerate the development and commercialization of technology that improves spectrum efficiency and is capable of cost-effective deployment. NIST is encouraged to work with the Defense Advanced Research Projects Agency, the Federal Communications Commission, and other relevant Federal agencies to assist in the design of the prize competitions.

*Urban Dome Program.*—The Committee notes the value of NIST’s Urban Dome program and the importance of accurate meas-

urement science for environmental monitoring and human health, as more than half the world's population is living in urban areas, and this concentration is expected to intensify over the coming decades. The Committee provides no less than the fiscal year 2016 amount for the Office of Special Programs to maintain and expand the number of urban dome locations in fiscal year 2017.

#### INDUSTRIAL TECHNOLOGY SERVICES

Appropriations, 2016 .....	\$155,000,000
Budget estimate, 2017 .....	188,991,000
Committee recommendation .....	155,000,000

The Committee provides \$155,000,000 for Industrial Technology Services. The recommendation is equal to the fiscal year 2016 enacted level and \$33,991,000 below the budget request. Supporting the Nation's manufacturers, especially small businesses, is critical to keeping America innovative in a global marketplace.

*Hollings Manufacturing Extension Partnership Program [MEP].*—The Committee provides \$130,000,000 for MEP. The Committee supports MEP's focus on strengthening the existing network of MEP centers and providing additional support to centers based on the documented performance of the center's activities and the manufacturing capacity of the area served by the center.

*MEP Cost Share.*—The Committee is aware of concerns regarding the MEP's current cost-share structure. This matter is still being considered by the Committee on Commerce, Science, and Transportation. NIST is directed to expeditiously submit the report mandated by the Committee in fiscal year 2016.

*National Network for Manufacturing Innovation.*—The Committee provides \$25,000,000 for NIST's activities in the National Network for Manufacturing Innovation [NNMI], to include funding for center establishment and up to \$5,000,000 for coordination activities. NIST shall follow the direction of the Revitalize American Manufacturing and Innovation Act of 2014 (Public Law 113–235), which requires open competition to select the technological focus areas of these industry-driven institutes.

#### CONSTRUCTION OF RESEARCH FACILITIES

Appropriations, 2016 .....	\$119,000,000
Budget estimate, 2017 .....	94,995,000
Committee recommendation .....	119,000,000

The Committee provides \$119,000,000 for construction of research facilities. The recommendation is equal to the fiscal year 2016 enacted level and \$24,005,000 above the budget request.

*Building 245.*—The Committee provides \$60,000,000 for the continued renovation of NIST's radiation physics laboratories. NIST is directed to proceed with an aggressive construction and funding schedule in future budget requests, targeting a completion and occupancy date not later than fiscal year 2023.