











# Most Popular

Several Universities Look to **Unify Startup Investment** Efforts to Support Regional, **State Economic Prosperity** 

States, Feds See High-Speed **Data Infrastructure Key to Economic Growth** 

States Explore Ways to Expand **Computer Science Initiatives** 

Report Provides Evidence of 14 Public Research University Impact on Public Good

**Recent Research: What Makes Economies Resilient? Economic Diversity**, **Experienced Workforce** 

# President's Budget Bets on STEM Education, Manufacturing to Boost American Middle Class



On Monday, President Obama released his \$4 trillion budget request for FY16. His proposal is again unlikely to find support in Congress, but serves as a useful guide to the administration's priorities and a source of new ideas. This year's budget document is being presented as a policy pathway to rebuilding middle class opportunities, embracing "Middle Class Economics for the 21st Century." In embracing this agenda, the administration has included several new programs and significant spending increases for STEM education, manufacturing and R&D, though the proposed funding levels for most offices appear similar to those included in the administration's past budget requests.

This year, SSTI's review of the president's budget request will be shorter than in previous years. The summary below includes proposed spending on initiatives directly related to innovation and economic development.

### A Note on Comparisons

All comparisons in the text below use FY15 enacted levels as their basis, except where otherwise noted.

Highlights for the technology-based economic development community include:

- EDA's Regional Innovation Program, a major SSTI legislative priority, would receive \$25 million (see related article), and EDA would launch a new effort to support economic development strategies in communities impacted by changes in the energy sector.
- NIST would receive \$141 million for the Hollings Manufacturing Extension Partnership (MEP).
- The Departments of Commerce, Defense, Energy and Agriculture together would receive a total of \$350 million in discretionary funds to launch seven new manufacturing institutes within the National Network of Manufacturing Institutes in 2016. An additional \$1.9 billion in mandatory funds is requested to continue progress toward building an eventual network of 45 institutes.
- The Department of the Treasury's State Small Business Credit Initiative would be



# Staff Picks

- Route Fifty: Pittsburgh's 'Inclusive Innovation Week' Is Underway -April 4
- Boston Herald: GE to Give \$25M For Boston Students, \$25M More in Philanthropy - April 4
- Washington Post: Who Really Moves Back Into American Cities -April 1
- SBA: SBA Announces 2nd National Road Tour to Champion STEM Innovation - March 31
- McKinsey & Company: The Global Consumers to Watch in The Urban World - March 31
- Daily Collegian: Happy Valley LaunchBox Officially Open for Businesses - March 31
- Federal Reserve Bank of Kansas City: The Lasting Damage from the Financial Crisis to U.S. Productivity
   March 30
- Charlotte Observer: Duke Energy Donates \$1.4 million to Support NC Job Readiness - March 30
- The Atlantic: Why Technological Innovation Relies on Government Support - March 28
- Washington Post: What Americans Really Think About Free Trade -March 25

- authorized to make \$1 billion in competitive awards and \$500 million in needbased allocations.
- SBA's budget for the Regional Innovation clusters program would be \$6 million, while the Growth Accelerators initiative would receive \$5 million.
- R&D funding across federal agencies would increase by 6 percent, according to an administration release. Federal R&D spending would total \$146 billion, with \$67 billion for basic and applied research.

A more detailed analysis of innovation and economic development funding follows.

## **Entrepreneurship, Regional Innovation and Capital Access**

Nearly all of the proposed funding levels related to economic development within the president's FY16 budget request are similar to the levels requested by the administration last year, though most programs would receive an increase from actual FY15 spending.

The budget request would provide \$273 million (9.2 percent increase) for the **Economic Development Administration** (EDA), including \$227.5 million (6.8 percent increase) for Economic Development Assistance Programs (EDAP). EDA would place a stronger emphasis on its Comprehensive Economic Development Strategy (CEDS) requirements, which aligns federal support behind region-based strategic plans. In addition, EDA would play a central role in coordinating the interagency **Partnerships for Workforce and Economic Revitalization Plus** (POWER+) Plan to support collaborative economic initiatives in regions impacted by changes in the power sector and coal industry.

EDA's **Partnership Planning Program**, which provides support to local organizations to engage in long-term planning and outreach to the economic development community, would receive the largest increase with \$39.5 million (27.4 percent increase). The **Regional Innovation Strategies Program** would receive \$25 million (150 percent increase) to support regional economic development strategies and coordinate federal support for communities (see related article). Another \$53 million (17.7 percent increase) would be allotted for **Economic Adjustment Assistance**.

The Small Business Administration (SBA) would receive \$701.3 million (4.3 percent decrease) under the proposed FY16 budget. SBA's Entrepreneurial Development programs would receive \$206.3 million (6.3 percent decrease). Despite the overall decrease for Entrepreneurial Development, funding for the Regional Innovation Clusters program would hold steady at \$6 million and support for Entrepreneurship Education would grow to \$11 million (80.8 percent increase). The Regional Innovation Clusters program increase would including funding to conduct a program evaluation, while the Entrepreneurship Education program would launch a new initiative to help high-potential businesses scale up their operations. SBA would also receive \$5 million (25 percent increase) for the Growth Accelerators program, which supports accelerators and regional entrepreneurship ecosystems.

The president's request proposes a new authorization of \$1.5 billion for a second round of the **State Small Business Credit Initiative** (SSBCI) through the Department of the Treasury. Of this amount, \$1 billion would be competitively awarded to states that demonstrate their ability to build a healthy regional entrepreneurial ecosystem, while the remaining \$500 million would be awarded according to a need-based formula.

## **Recent Tweets**

- SSTI Weekly Digest This week's Digest is now available! With a Special Announcement about the 2016 Awards Program https://t.co/qThUki8iEc
- RT @ChiefMuse: Powerful panel:role of innovation & entrepreneurship in Econ Dev @kathleendwarner @ssti\_org @MayorSwearengin @US\_EDA https://t.co/7kn3yFIU2J
- Focusing on both #startups (4/7) and #broadband (4/8) as drivers of economic growth, @ssti\_org leaders will moderate 2 sessions at #EDA2016
- .@SteveCase, plugging
   @ThirdWaveBook, mentions our
   #VentureCapital Useful Stats in the
   @WSJ https://t.co/bcNkUFtBwvhttps://t.co/xaMC620UV2
- .@avanagtmael policy recs: better metrics, match workforce to industry, basic research, incentives for longterm investments #SmartestPlaces

More

The proposed FY16 budget would permanently extend the **New Markets Tax Credit** program, allowing up to \$5 billion in qualifying investment each year beginning in 2015. The NMTC could offset the Alternative Minimum Tax liability. Treasury's **Community Development Financial Institution (CDFI) Bond Guarantee Program** would be extended until FY17, with \$1 billion in commitment authority to provide long-term credit for economic development projects.

#### Manufacturing

Manufacturing again occupies a central role in the president's budget request, this time as part of the budgets slate of "middle class economics" initiatives.

The proposed FY16 budget would further expand the **National Network of Manufacturing Institutes** (NNMI), providing funding for seven new institutes in 2016 beyond the nine already funded through 2015. The **National Institute of Standards and Technology** (NIST) would receive \$10 million to coordinate the cross-agency effort and \$140 million to fund two institutes for five years. An additional \$1.9 billion mandatory proposal is included to continue progress toward the creation of a national network of 45 institutes.

NIST's budget would grow to \$1.1 billion (29.6 percent increase), including \$754.7 million (11.7 percent increase) for Scientific and Technical Research and Services, \$306 million (121.6 percent increase) for Industrial Technology Services, and \$59 million (17.3 percent increase) for Construction of Research Facilities. The large increase for Industrial Technology Services is mostly attributable to the additional funding for NNMI. The Hollings Manufacturing Extension Partnership (MEP) would be allocated \$141 million, while the Advanced Manufacturing Technology Consortia (AMTech) program would receive \$15 million.

SBA would launch a new program under the proposed budget to help advanced manufacturing technologies move from prototype to commercial-scale facilities. The **Scale Up Manufacturing Investment Funds** (SUMIF) program would receive \$1.3 billion in mandatory authority for a subsidy to be spread out over five years. The administration plans to invest \$5 billion in public funds and a matching amount of private funds to help small, advanced manufacturing startups bridge the funding gap.

Proposed funding for the Department of Energy - Energy Efficiency and Renewable Energy Office includes \$404 million (102 percent increase) for **Advanced Manufacturing**. This amount would support the deployment of two additional Clean Energy Manufacturing Innovation Institutes, along with continued funding for four existing institutes.

#### Science, Technology and Research

The Office of Science and Technology Policy (OSTP) estimates that the budget request includes \$145.7 billion in federal R&D, an increase of 5.5 percent over FY15 as enacted. This figure includes \$32.7 billion for basic (2.6 percent increase) and \$34.1 billion for applied research (3.8 percent increase) Both defense and non-defense R&D would increase with non-defense R&D receiving \$73.6 billion (4.2 percent increase) and defense R&D receiving \$72.1 billion (6.9 percent increase).

Advanced manufacturing R&D across all agencies would receive \$2.4 billion, according to OSTP. Specifically, the proposed budget includes \$350 million in additional discretionary funds to launch seven new manufacturing innovation institutes in 2016 and provide continued support for the nine institutes already funded through 2015. The proposal also would provide \$1.9 billion in mandatory spending to fund another 29 institutes in the network.

The proposed budget includes a \$215 million to launch the Precision Medicine Initiative -

a multi-agency research effort that will support advances in genomics, emerging methods for managing and analyzing large data sets while protecting privacy, and health information technology to develop prevention, diagnostic and treatment approaches tailored to individual patients.

Federal research agency highlights include (comparisons are to enacted FY15 funding except where noted):

- National Institutes of Health \$31.3 billion (1.9 percent increase)
- National Science Foundation \$6.3 billion (5.2 percent increase)
- DOE Office of Science \$5.3 billion (5.4 percent increase)
- NASA Science \$5.3 billion (0.8 percent increase)
- Defense Advanced Research Projects Agency \$2.9 billion (1.9 percent increase)
- U.S. Geological Survey \$1.2 billion (14.3 percent increase)
- DHS Science and Technology Directorate \$779 million (36.2 percent decrease from revised enacted FY14)
- EPA Science and Technology \$769 million (4.7 percent increase)
- NASA Space Technology \$724.8 million (21.6 percent increase)
- NIST Intramural Laboratories \$663 million (8.6 percent increase)
- USDA Agriculture and Food Research Initiative \$450 million (42.4 percent increase from enacted FY14)
- Advanced Research Projects Agency-Energy \$325 million (16.1 percent increase)

Funding for multi-agency research initiatives include:

- U.S. Global Change Research Program \$2.7 billion
- National Nanotechnology Initiative \$1.5 billion
- A new government-wide effort to combat antibiotic-resistant bacteria \$1.2 billion
- Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative \$135 million

The proposed budget includes \$7.4 billion for government-wide clean energy technology programs.

To boost private sector investment in research, the administration is again proposing to expand, simplify and make permanent the **Research and Experimentation tax credit**.

## **STEM and Workforce Training**

The budget includes several initiatives related to high-tech education and training. The administration is proposing a \$3 billion investment in STEM education, including a \$125 million competitive program to promote the re-design of American high schools around approaches and technologies that improve science and technology education. The competition would place a priority on designing STEM-themed high schools that expand opportunities for women and other underrepresented groups. The budget would also provide funding for the president's tuition-free community college initiative (see previous coverage).

The budget would also launch a new program to expand job training opportunities through community colleges and other training providers. The Departments of Education and Labor would expand on their collaboration through the Trade Adjustment Assistance Community College and Career Training Grants to create a new American Technical Training Fund. The budget would provide \$200 million for the effort, which would expand partnerships between training providers and employers.

federal budget, federal agency, white house

Read more »

The State Science & Technology Institute (SSTI) is a national nonprofit organization dedicated to improving initiatives that support prosperity through science, technology, innovation and  614.901.1690  Contact us by email Staff	bout	Join SSTI
entrepreneurship.		Member Benefits Join SSTI Member List