



Advanced Manufacturing in Fiscal Year 2017

Prepared by: Samantha Fijacko, ASME Government Relations Representative

Updated: June 7, 2016

<i>In Millions</i>	NIST →	ITS →	DOC-led NNMIs	MEP	DOE EERE →	DOE-led NNMIs	DOD →	DOD-led NNMIs
FY2015 Enacted	\$864	\$138	N/A	\$131	\$1,937	N/A	\$12,252	N/A
FY2016 Requested	\$1,120	\$306	\$149	\$141	\$2,720	\$149	\$12,267	\$137
FY2016 Enacted	\$964	\$155	\$25	\$130	\$2,073	\$0	\$13,251	\$0
FY2017 Requested	\$1,000	\$189	\$47	\$142	\$2,890	\$84	\$12,500	\$137
Senate Appropriations Committee	\$974	\$155	\$25	\$130	\$2,073	\$70	N/A	N/A
House Appropriations Committee	\$865	\$135	\$5	\$130	\$1,825	\$0	N/A	N/A

DOC-led NNMI numbers include the \$5M for coordination

Appropriations Update

Commerce, Justice, and Science Appropriations (House) – May 24, 2016

The House Appropriations Committee approved the Fiscal Year 2017 Commerce, Justice, and Science (CJS) Appropriations Bill on May 24, 2016. The measure is \$279M above the FY16 enacted level and \$1.4B above the President’s budget request. It would allocate \$865M for the National Institute of Standards and Technology (\$109M below the Senate and \$99M below FY2016), \$7.4B for the National Science Foundation (\$57M below FY2016), and NASA would receive \$19.5B (\$223M above FY2016 and \$1.2B above the President’s request).

Within NIST, the House would provide \$135M for Industrial Technology Services, of which \$130M would be for the Hollings Manufacturing Extension Partnership (MEP) and \$5M would be for the National Network for Manufacturing Innovation (NNMI), for coordination activities only. The House’s \$5M for NNMI is \$20M below both the Senate’s allocations and FY2016 levels, and is \$42M below the President’s request.

The House CJS Appropriates Subcommittee’s Ranking Member Michael M. Honda (D-CA) criticized the bill for not fully funding the administration’s request for expanding a network of manufacturing hubs. “Only \$5 million was provided to oversee coordination of this network of industry-led innovation centers,” Honda said. “This is a critical program and I am extremely disappointed that we could not support American manufacturing and industry, and help ensure that the next Silicon Valleys will be right here in the United States,” he added. Further, House Republicans also told Commerce Secretary Penny Pritzker at a hearing in February that it was highly unlikely the administration would receive the nearly \$2 billion in mandatory funding requested for the program.

Defense Appropriations (House) – May 11, 2016

The House Appropriations Subcommittee on Defense passed the FY 2017 Defense Bill out of subcommittee with an accompanying report. While there is no line item for the DOD-led NNMI’s in the

bill, the accompanying report calls out the DOD's focus on the National Network for Manufacturing Innovation (NNMI) by calling for a new NNMI institute focusing on high temperature superconductors:

MANUFACTURING INNOVATION INSTITUTE FOR HIGH TEMPERATURE SUPERCONDUCTORS

The Committee notes that high temperature superconductors offer the potential to reduce the magnetic signature of Navy warships, to accelerate the use of motors and generators for all-electric ships and aircraft, to develop minesweeping magnets, and to create magnetic energy storage systems and rail guns. The Committee urges the Secretary of Defense to consider establishing a Manufacturing Innovation Institute that focuses on high temperature superconductors.

Energy and Water Appropriations (Senate) – April 14, 2016

The Committee Report for the Senate Appropriations Committee's Energy and Water Appropriations bill recommends \$254.2M for advanced manufacturing. The Committee "recognizes the importance of the manufacturing sector to the U.S. economy, which directly generates 12 percent of the gross domestic product and employs nearly 12 million people." Of the \$254.2M, \$70M is to support the five existing Clean Energy Manufacturing Institutes (CEMI), which includes \$14M each for the wide bandgap power electronics institute, the advanced composites institute, and the smart manufacturing institute, and two to-be-announced Institutes from prior year funding opportunities.

On April 14, 2016, the Senate began consideration of H.R. 2028 with an amendment in the nature of a substitute consisting of the text of S. 2804, the Senate's version of the bill.

Energy and Water Appropriations (House) – April 19, 2016

The Committee Report for the House Appropriations Committee's Energy and Water Appropriations bill did not include any funding recommendations for advanced manufacturing. Instead, the report shows the chamber's concern with DOE-led National Network for Manufacturing Innovation Institutes, stating:

The Committee remains concerned with the Department's continual proposals to establish new research centers reliant on out-year funding commitments subject to future appropriations. In fiscal year 2017, the Department proposed funding two new Clean Energy Manufacturing Innovation Institutes ... The funding of institutes constitutes a growing portion of the Department's budget and represents a significant out-year investment. ... The Committee reiterates its previous direction for the Department to explicitly include in future budget justifications for all centers, hubs, institutes, facilities, and any other persistent, location-based grantees current and proposed funding levels, expected out-year commitments, and details on their programmatic and technical goals.

Commerce, Justice, and Science Appropriations (Senate) – April 19, 2016

The Senate Appropriations Committee's Commerce, Justice, and Science Appropriations bill includes \$155M for industrial technology services (ITS), of which \$130M is for the Hollings Manufacturing Extension Partnership (MEP). The bill's accompanying Committee Report recommends \$25M of the \$155M allocated to ITS be used for the National Network for Manufacturing Innovation (NNMI).

The President's Budget Request – February 9, 2016

National Network for Manufacturing Initiatives (NNMI)

The President's Budget provides resources to launch new manufacturing institutes and sustain those underway, investing \$268M in discretionary resources to create and sustain manufacturing innovation institutes, and an additional \$1.9 billion in mandatory spending proposal to build out the remaining 27 institutes over the next ten years.

NNMI Discretionary Spending

In total, the President's Budget includes discretionary funding for five new institutes:

- \$42M for two new Commerce-led NNMI, and \$5M for coordination efforts.
- \$84M for six DOE-led NNMI, which includes \$70M for the five existing DOE institutes and \$14M for one new Clean Energy Manufacturing Innovation Institute.
- \$137M for six DOD-led NNMI, which includes funding for two new institutes.

NNMI Mandatory Spending

The Budget also includes a mandatory spending proposal of \$1.9 billion to complete the remaining 27 institutes and create a national network of 45 manufacturing institutes over the next ten years.

Hollings Manufacturing Extension Partnership (MEP)

The President's Budget Request includes \$142M for MEP, a \$12M increase from FY2016. This amount includes \$1M for inflation.

MEP is a federal-state-industry partnership that provides U.S. manufacturers with access to technologies, resources, and industry experts. The program consists of 58 MEP Centers that work directly with their local manufacturing communities to strengthen the competitiveness of our nation's domestic manufacturing base. MEP supports the mission of NIST and the Department of Commerce to promote U.S. innovation and competitiveness and enable economic growth for American industries, workers, and consumers. Services provided by MEP are grounded in technology related activities, sustainability, efficiencies through continuous improvement, and new product development and market diversification.

The House of Representatives Funding Views and Estimates – February 20, 2016

The majority on the House Committee on Science, Space, and Technology submitted their views and estimates for FY 2017 to the House Budget Committee on February 20, 2016. The document gives insight into the Committee's priorities in 2016 and desired funding levels for FY2017. The Committee's Democratic members will develop their own views and estimates document outlining their priorities, though the minority position has little influence on the Committee's agenda.

The document put out by the majority suggested increasing funding for the NIST's Scientific and Technical Research and Services (STRS) account with proposed offsets from its Industrial Technology Services (ITS) account, which is where NNMI and MEP are funded. The Committee suggested matching NIST's ITS funding to levels laid out in the America COMPETES Reauthorization Act, which would put ITS at \$135M, which is \$20M below FY16 enacted amounts. Further, \$130M of the \$135M would be for MEP and only \$5M would be put towards NNMI.

Below is the NIST text from the committee's views and estimates document:

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 \$745M, a 7.9% increase of \$55M, 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 \$90M.

No further NIST funding should be allocated in Function 370 for the National Network for Manufacturing Innovation (NNMI) in Fiscal Year 2017 since the \$25M authorized in P.L. 113-235 for NIST in FY 2016-2020 (\$5M 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.

FY2017 NNMI Funding Requests by Agency

Department of Commerce

NNMI FY2016 Request: \$149M

NNMI FY2016 Enacted: \$25M

NNMI FY2017 Request: \$47M

NIST NNMI Funding	<i>In Millions</i>
FY2015 Enacted	N/A
FY2016 Requested	\$149
FY2016 Enacted	\$25
FY2017 Requested	\$47
Senate Appropriations Committee Recommendation	\$25
House Appropriations Committee Recommendation	\$5

The Senate Appropriations Committee did not appropriate any funding for a new Commerce-led NNMI institute, as requested in the President's Budget (outlined below). The Senate Appropriations Committee did include \$25M to support the existing Commerce-led institute and to carry out coordination efforts.

The House Appropriations Committee did not appropriate any funding for a new Commerce-led NNMI institute, as requested in the President's Budget (outlined below) or any funds to support the existing Commerce-led institute. The House Appropriations Committee only approved \$5M in funding for coordination efforts.

FY2017 President's Budget Request for Commerce-led NNMI:

The President's Budget Request including \$42M to launch two new Commerce-led institutes and continue the operations of Commerce's first institute slated for launch later in FY2016. It also includes an additional \$5M for NIST to coordinate the activities of the current and future institutes.

Department of Energy

NNMI FY2016 Request: \$149M, \$140M for two new NNMI and \$9M for existing DOE institutes

NNMI FY2016 Enacted: \$0

NNMI FY2017 Request: \$84M, \$70M for the five existing DOE institutes and \$14M for one new DOE institute

DOE EERE Funding (Under which the NNMI funding request fell)	<i>In Millions</i>
FY2015 Enacted	\$1,937
FY2016 Requested	\$2,720
FY2016 Enacted	\$2,073
FY2017 Requested	\$2,890
Senate Appropriations Committee Recommendation	\$70

The Senate Appropriations Committee met the President's Budget request (outlined below) \$70M to support the five existing DOE NNMI institutes, but did not meet any of the President's Budget Request of \$14M for a new DOE-led institute.

FY2017 President's Budget Request for DOE-led NNMI:

The President's Budget Request includes \$84M for DOE-led NNMI; \$70M for the five existing DOE institutes and \$14M for one new Clean Energy Manufacturing Innovation Institute. In FY2017, the program will fund:

- Wide Bandgap Power Electronics Institute (\$14M, started FY2013);
- Advanced Composite Materials and Structures Institute (\$14M started FY2014);
- Smart Manufacturing Institute (\$14M, started FY2015);
- Two Clean Energy Manufacturing Innovation Institutes (\$28M started in FY2016); and
- One new Clean Energy Manufacturing Innovation Institute (approximately \$14M starting in FY2017).

Department of Defense

NNMI FY2016 Budget Request: \$137M for its six NNMI institutes

NNMI FY2016 Enacted: \$0

NNMI FY2017 Request: \$137M

DOD Science and Technology Funding (Under which the NNMI funding request fell)	<i>In Millions</i>
FY2015 Enacted	\$12,252
FY2016 Requested	\$12,267
FY2016 Enacted	\$13,251
FY2017 Requested	\$12,500

FY2017 President's Budget Request for DOD-led NNMI's:

The President's Budget Request includes \$137M to support six DOD-led NNMI's, including funding to establish two additional institutes, which will satisfy the DOD requirement for eight institutes in support of the President's National Network for Manufacturing Innovation plan and the National Economic Council's manufacturing goals.