

112TH CONGRESS  
2D SESSION

# H. R. 6081

To accelerate research, development, and innovation in advanced manufacturing, to improve the competitiveness of American manufacturers, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 9, 2012

Ms. EDDIE BERNICE JOHNSON of Texas (for herself, Mr. COSTELLO, Ms. WOOLSEY, Mr. MILLER of North Carolina, Mr. LIPINSKI, Ms. EDWARDS, Mr. LUJÁN, Ms. SEWELL, Ms. WILSON of Florida, Mr. CLARKE of Michigan, and Ms. BONAMICI) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

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## A BILL

To accelerate research, development, and innovation in advanced manufacturing, to improve the competitiveness of American manufacturers, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Advancing Innovative  
5 Manufacturing Act of 2012”.

1 **SEC. 2. ADVANCED MANUFACTURING TECHNOLOGY CON-**  
2 **SORTIA.**

3 Section 33 of the National Institute of Standards and  
4 Technology Act (15 U.S.C. 278r) is amended to read as  
5 follows:

6 **“SEC. 33. ADVANCED MANUFACTURING TECHNOLOGY CON-**  
7 **SORTIA.**

8 “(a) **AUTHORITY.**—

9 “(1) **IN GENERAL.**—The Director shall carry  
10 out a program to facilitate the development of and  
11 provide support to industry-led consortia that will  
12 identify, prioritize, and address long-term, precom-  
13 petitive industrial research needs in the area of ad-  
14 vanced manufacturing.

15 “(2) **PROGRAM OBJECTIVES.**—The objectives of  
16 the program established under this section include  
17 the following:

18 “(A) To promote collective public-private  
19 efforts to develop key technology platforms and  
20 infrastructure for advanced manufacturing.

21 “(B) To enable the prioritization of public  
22 research portfolios to be more responsive to the  
23 long-term technology development needs of in-  
24 dustry.

1           “(C) To leverage Federal investment in ad-  
2           vanced manufacturing with shared investment  
3           by the private sector.

4           “(D) To increase industrial research and  
5           development investment in precompetitive tech-  
6           nology platforms and infrastructure.

7           “(E) To accelerate technological innovation  
8           in advanced manufacturing.

9           “(F) To foster broad participation by in-  
10          dustry, the Federal Government, institutions of  
11          higher education, and State, local, and tribal  
12          governments in advanced manufacturing re-  
13          search and development.

14          “(b) ACTIVITIES.—As part of the program estab-  
15          lished under this section, the Director shall—

16               “(1) support the formation of industry-led con-  
17               sortia composed of representatives from industry (in-  
18               cluding small- and medium-sized manufacturers), in-  
19               stitutions of higher education, the Federal Govern-  
20               ment, State, local, and tribal governments, and other  
21               entities, as appropriate;

22               “(2) collaborate with consortia participants in  
23               the development of technology roadmaps that iden-  
24               tify research needs in the area of advanced manufac-  
25               turing;

1           “(3) support precompetitive research directed at  
2 meeting the research needs identified in the road-  
3 maps developed under paragraph (2);

4           “(4) promote the transfer of precompetitive  
5 technology platforms and infrastructure resulting  
6 from consortia research to the private sector and fa-  
7 cilitate open access to the intellectual property un-  
8 derpinning those platforms and technology; and

9           “(5) facilitate the development of new tech-  
10 nologies into commercial products.

11       “(c) SELECTION CRITERIA.—In selecting applica-  
12 tions for awards under this section, the Director shall con-  
13 sider, at a minimum—

14           “(1) the degree to which the activities proposed  
15 under the consortia will broadly impact manufac-  
16 turing and increase the productivity and economic  
17 competitiveness of the United States;

18           “(2) the level of technical risk to be addressed  
19 by the consortia;

20           “(3) the potential to produce fundamental new  
21 knowledge; and

22           “(4) the likelihood that the consortia will be-  
23 come self sustaining, if appropriate.

24       “(d) AUTHORIZATION OF APPROPRIATIONS.—There  
25 are authorized to be appropriated for carrying out this sec-

1 tion \$120,000,000 for each of fiscal years 2013 through  
2 2017.”.

3 **SEC. 3. SMALL MANUFACTURER INNOVATION PROGRAM.**

4 The National Institute of Standards and Technology  
5 Act (15 U.S.C. 271 et seq.) is amended—

6 (1) by redesignating section 34 as section 35;

7 and

8 (2) by inserting after section 33 the following:

9 **“SEC. 34. SMALL MANUFACTURER INNOVATION PROGRAM.**

10 “(a) IN GENERAL.—The Director shall carry out a  
11 pilot program to enhance the innovative capabilities and  
12 competitiveness of small- and medium-sized manufactur-  
13 ers through support for research and development that  
14 will promote the field of advanced manufacturing and lead  
15 to the commercialization of new products, processes, or  
16 technologies for use in advanced manufacturing.

17 “(b) OBJECTIVES.—The objectives of the program  
18 under this section are—

19 “(1) to accelerate the development of processes  
20 and, as appropriate, incremental innovations that  
21 will improve how goods are designed, produced, or  
22 distributed;

23 “(2) to advance the development and commer-  
24 cialization of novel products and technologies for use  
25 in advanced manufacturing;

1           “(3) to reduce the technical and economic risks  
2 associated with developing new products, processes,  
3 or technologies for use in advanced manufacturing;

4           “(4) to foster cooperative research and develop-  
5 ment between small- and medium-sized manufactur-  
6 ers and research institutions; and

7           “(5) to promote research and development col-  
8 laboration among small- and medium-sized manufac-  
9 turers facing similar technical challenges or obsta-  
10 cles, including collaboration along a supply chain.

11       “(c) PROGRAM.—

12           “(1) AWARD PHASES.—The Director shall  
13 award competitive, merit-reviewed grants, coopera-  
14 tive agreements, or contracts to small- or medium-  
15 sized manufacturers in the United States through a  
16 uniform process having—

17           “(A) a first phase for determining, insofar  
18 as possible, the scientific and technical merit  
19 and feasibility of a proposal; and

20           “(B) a second phase to further develop  
21 proposals, including the development of proto-  
22 types, for which scientific and technical merit  
23 and feasibility was demonstrated in the first  
24 phase.

1           “(2) APPLICATIONS.—A small- or medium-sized  
2           manufacturer seeking an award under this section  
3           shall submit an application to the Director at such  
4           time, in such manner, and containing such informa-  
5           tion as the Director may require.

6           “(d) STAKEHOLDER INPUT.—In carrying out the  
7           program under this section, the Director shall solicit  
8           stakeholder input on how best to carry out the program.

9           “(e) COORDINATION AND NONDUPLICATION.—To the  
10          maximum extent practicable, the Director shall ensure  
11          that the activities carried out under this section are co-  
12          ordinated with, and do not duplicate the efforts of, other  
13          programs within the Federal Government.

14          “(f) REPORT.—Not later than 4 years after the date  
15          of enactment of the Advancing Innovative Manufacturing  
16          Act of 2012, the Director shall transmit a report to Con-  
17          gress assessing the program established under this section.  
18          The report shall include—

19                 “(1) a summary of the activities carried out  
20                 under the program;

21                 “(2) an assessment of whether the program is  
22                 achieving its goals, including a description of the  
23                 metrics used to determine progress in meeting such  
24                 goals;

1           “(3) any recommendations on how the program  
2           may be improved; and

3           “(4) a recommendation as to whether such pro-  
4           gram should be continued or terminated.

5           “(g) AUTHORIZATION OF APPROPRIATIONS.—There  
6           are authorized to be appropriated to the Director to carry  
7           out this section—

8           “(1) \$15,000,000 for fiscal year 2013;

9           “(2) \$25,500,000 for fiscal year 2014;

10          “(3) \$39,750,000 for fiscal year 2015;

11          “(4) \$42,250,000 for fiscal year 2016; and

12          “(5) \$50,000,000 for fiscal year 2017.”.

13   **SEC. 4. INNOVATION VOUCHER PROGRAM.**

14           Section 25 of the Stevenson-Wydler Technology Inno-  
15           vation Act of 1980 (15 U.S.C. 3720) is amended by add-  
16           ing at the end the following:

17           “(d) INNOVATION VOUCHER PROGRAM.—

18           “(1) IN GENERAL.—The Secretary, acting  
19           through the Office of Innovation and Entrepreneur-  
20           ship, shall establish an innovation voucher pilot pro-  
21           gram to accelerate innovative activities and enhance  
22           the competitiveness of small- and medium-sized  
23           manufacturers in the United States. The pilot pro-  
24           gram shall—



1           “(A) foster collaborations between small-  
2           and medium-sized manufacturers and research  
3           institutions; and

4           “(B) enable small- and medium-sized man-  
5           ufacturers to access technical expertise and ca-  
6           pabilities that will lead to the development of  
7           innovative products or manufacturing processes,  
8           including through—

9                   “(i) research and development, includ-  
10                  ing proof of concept, technical develop-  
11                  ment, and compliance testing activities;

12                   “(ii) early-stage product development,  
13                  including engineering design services; and

14                   “(iii) technology transfer and related  
15                  activities.

16           “(2) AWARD SIZE.—The Secretary shall com-  
17           petitively award vouchers worth up to \$20,000 to  
18           small- and medium-sized manufacturers for use at  
19           eligible research institutions to acquire the services  
20           described in paragraph (1)(B).

21           “(3) STREAMLINED PROCEDURES.—The Sec-  
22           retary shall streamline and simplify the application,  
23           administrative, and reporting procedures for vouch-  
24           ers administered under the program.

1           “(4) REGULATIONS.—Prior to awarding any  
2 vouchers under the program, the Secretary shall pro-  
3 mulgate regulations—

4           “(A) establishing criteria for the selection  
5 of recipients of awards under this subsection;

6           “(B) establishing procedures regarding fi-  
7 nancial reporting and auditing—

8           “(i) to ensure that awards are used  
9 for the purposes of the program; and

10           “(ii) that are in accordance with  
11 sound accounting practices; and

12           “(C) describing any other policies, proce-  
13 dures, or information necessary to implement  
14 this subsection, including those intended to  
15 streamline and simplify the program in accord-  
16 ance with paragraph (3).

17           “(5) TRANSFER AUTHORITY.—The Secretary  
18 may transfer funds appropriated to the Department  
19 of Commerce to other Federal agencies for the per-  
20 formance of services authorized under this sub-  
21 section.

22           “(6) ADMINISTRATIVE COSTS.—All of the  
23 amounts appropriated to carry out this subsection  
24 for a fiscal year shall be used for vouchers awarded  
25 under this subsection, except that an eligible re-

1 search institution performing the services described  
2 in paragraph (1)(B) may retain a percentage of any  
3 amount received from the Secretary under this sub-  
4 section to defray administrative costs associated with  
5 the services. The Secretary shall establish a single,  
6 fixed percentage for such purposes that will apply to  
7 all eligible research institutions.

8 “(7) OUTREACH.—The Secretary may use cen-  
9 ters established under section 25 of the National In-  
10 stitute of Standards and Technology Act (15 U.S.C.  
11 278k) to provide information about the program es-  
12 tablished under this subsection and to conduct out-  
13 reach to potential applicants, as appropriate.

14 “(8) REPORTS TO CONGRESS.—

15 “(A) PLAN.—Not later than 180 days  
16 after the date of enactment of this subsection,  
17 the Secretary shall transmit to Congress a plan  
18 that will serve as a guide for the activities of  
19 the program. The plan shall include a descrip-  
20 tion of the specific objectives of the program  
21 and the metrics that will be used in assessing  
22 progress toward those objectives.

23 “(B) OUTCOMES.—Not later than 3 years  
24 after the date of enactment of this subsection,

1 the Secretary shall transmit to Congress a re-  
2 port containing—

3 “(i) a summary of the activities car-  
4 ried out under this subsection;

5 “(ii) an assessment of the impact of  
6 such activities on the innovative capacity of  
7 small- and medium-sized manufacturers re-  
8 ceiving assistance under the pilot program;  
9 and

10 “(iii) any recommendations for admin-  
11 istrative and legislative action that could  
12 optimize the effectiveness of the pilot pro-  
13 gram.

14 “(9) COORDINATION AND NONDUPLICATION.—  
15 To the maximum extent practicable, the Secretary  
16 shall ensure that the activities carried out under this  
17 subsection are coordinated with, and do not dupli-  
18 cate the efforts of, other programs within the Fed-  
19 eral Government.

20 “(10) ELIGIBLE RESEARCH INSTITUTIONS DE-  
21 FINED.—For the purposes of this subsection, the  
22 term ‘eligible research institution’ means—

23 “(A) an institution of higher education, as  
24 such term is defined in section 101(a) of the

1 Higher Education Act of 1965 (20 U.S.C.  
2 1001(a));

3 “(B) a Federal laboratory;

4 “(C) a federally funded research and devel-  
5 opment center; or

6 “(D) a Hollings Manufacturing Extension  
7 Center established under section 25 of the Na-  
8 tional Institute of Standards and Technology  
9 Act (15 U.S.C. 278k).

10 “(11) AUTHORIZATION OF APPROPRIATIONS.—

11 There are authorized to be appropriated to the Sec-  
12 retary to carry out the pilot program in this sub-  
13 section \$5,000,000 for each of fiscal years 2013  
14 through 2017.”.

15 **SEC. 5. ADVANCED MANUFACTURING EDUCATION.**

16 Section 506(b) of the America COMPETES Reau-  
17 thorization Act of 2010 (42 U.S.C. 1862p–1(b)) is amend-  
18 ed to read as follows:

19 “(b) ADVANCED MANUFACTURING EDUCATION.—

20 The Director shall award grants, on a competitive, merit-  
21 reviewed basis, to community colleges for the development  
22 and implementation of innovative advanced manufacturing  
23 education reforms to ensure an adequate and well-trained  
24 advanced manufacturing workforce. Activities supported  
25 by grants under this subsection may include—

1           “(1) the development or expansion of edu-  
2           cational materials, courses, curricula, strategies, and  
3           methods that will lead to improved advanced manu-  
4           facturing degree or certification programs, including  
5           the integration of industry standards and workplace  
6           competencies into the curriculum;

7           “(2) the development and implementation of  
8           faculty professional development programs that en-  
9           hance a faculty member’s capabilities and teaching  
10          skills in advanced manufacturing, including efforts  
11          to understand current advanced manufacturing tech-  
12          nologies and practices;

13          “(3) the establishment of centers that provide  
14          models and leadership in advanced manufacturing  
15          education and serve as regional or national clearing-  
16          houses for educational materials and methods;

17          “(4) activities to enhance the recruitment and  
18          retention of students into certification and degree  
19          programs in advanced manufacturing, including the  
20          provision of improved mentoring and internship op-  
21          portunities; and

22          “(5) other activities as determined appropriate  
23          by the Director.”.

○