

113TH CONGRESS  
2D SESSION

# H. R. 5812

To support innovation, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

DECEMBER 9, 2014

Mr. CARTWRIGHT (for himself and Mr. RODNEY DAVIS of Illinois) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committees on Education and the Workforce, Energy and Commerce, and Oversight and Government Reform, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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## A BILL

To support innovation, 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; TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the  
5 “Innovate America Act”.

6 (b) TABLE OF CONTENTS.—The table of contents for  
7 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Findings.

TITLE I—EDUCATION

- Sec. 101. Definitions.
- Sec. 102. Increasing funding for STEM secondary schools.
- Sec. 103. Report on STEM programs at secondary schools.
- Sec. 104. Study and report on retaining STEM students.
- Sec. 105. Expanding undergraduate research opportunities.
- Sec. 106. Technology Commercialization Awards Pilot Program.
- Sec. 107. Computer science in the Robert Noyce teacher scholarship program.

#### TITLE II—MANUFACTURING AND EXPORT PROMOTIONS

- Sec. 201. Manufacturing assistance program for small- and medium-sized manufacturers in the United States.
- Sec. 202. Removing barriers for exporting industries in the United States.

#### TITLE III—OFFSETS

- Sec. 301. Limitation on Government printing costs.
- Sec. 302. Eliminating bonuses for poor performance by Government contractors.

### 1 **SEC. 2. FINDINGS.**

2 Congress finds the following:

3 (1) Innovation has historically been a catalyzing  
 4 force in the American economy, driving the produc-  
 5 tion of game-changing technologies, the creation of  
 6 millions of jobs and the opening of countless new  
 7 avenues for growth. In an increasingly competitive  
 8 global economy, our Nation’s continued leadership  
 9 and prosperity will hinge on progress in key innova-  
 10 tive areas, most notably exporting, entrepreneurship,  
 11 research and development, and education in science,  
 12 technology, engineering, and mathematics (STEM),  
 13 including computer science.

14 (2) Technology-based startups play a critical  
 15 role in driving innovation. Increasing the flow of  
 16 capital to these firms would bridge the gap that  
 17 often exists between their initial startup costs and

1 their long-term capital needs, giving the firms the  
2 resources necessary to research, develop, and com-  
3 mercialize new products.

4 (3) Simplifying, expanding, and stabilizing the  
5 tax credits that businesses and institutions of higher  
6 education rely on to offset the cost of research and  
7 would promote greater clarity in the Internal Rev-  
8 enue Code of 1986 and deliver a powerful incentive  
9 for private sector innovation.

10 (4) Increasing the emphasis on STEM edu-  
11 cation in high schools and institutions of higher edu-  
12 cation would ensure that more students have the  
13 skills and training to not only compete for jobs in  
14 a 21st century economy, but also to create the start-  
15 up companies and revolutionary technologies that  
16 will sustain American prosperity for centuries to  
17 come.

18 (5) The United States Bureau of Labor Statis-  
19 tics predicts that in the year 2020, of the 9,200,000  
20 “STEM” jobs there will be in the United States,  
21 half of them will be in computing. With more than  
22 150,000 job openings expected annually in com-  
23 puting, it is one of the fastest growing occupations  
24 in the United States. Increasing the teaching and  
25 learning of computer science in schools would

1 strengthen the American workforce by helping our  
2 students gain the skills and training necessary to  
3 fulfill new computer programming jobs.

4 (6) An effective regulatory climate should pro-  
5 tect consumers and promote transparency without  
6 overburdening the businesses that create jobs. Fed-  
7 eral agencies with rulemaking authority should be  
8 vigilant in assessing the impact of new regulations  
9 on innovation and job creation, particularly in an-  
10 chor industries like manufacturing.

11 (7) The economic impact of a new product or  
12 technology is often dependent on its commercial suc-  
13 cess. To ensure American products can be bought  
14 and sold in markets around the world, the Govern-  
15 ment should identify and remove over burdensome  
16 regulations that create barriers for United States ex-  
17 porting companies.

## 18 **TITLE I—EDUCATION**

### 19 **SEC. 101. DEFINITIONS.**

20 In this title:

21 (1) **DIRECTOR.**—The term “Director” means  
22 the Director of the National Science Foundation.

23 (2) **INSTITUTION OF HIGHER EDUCATION.**—The  
24 term “institution of higher education” means an in-  
25 stitution of higher education, as defined in section

1 101(a) of the Higher Education Act of 1965 (20  
2 U.S.C. 1001(a)).

3 (3) STEM.—The term “STEM” means the  
4 subjects of science, technology, engineering, and  
5 mathematics, including other subjects based on  
6 science, technology, engineering, or mathematics,  
7 such as computer science.

8 (4) STEM SECONDARY SCHOOL.—The term  
9 “STEM secondary school” has the meaning given  
10 the term by the Director, in coordination with the  
11 Secretary of Education, not later than 60 days after  
12 the date of enactment of this Act.

13 (5) STATE EDUCATIONAL AGENCY.—The term  
14 “State educational agency” has the meaning given  
15 the term in section 9101 of the Elementary and Sec-  
16 ondary Education Act of 1965 (20 U.S.C. 7801).

17 **SEC. 102. INCREASING FUNDING FOR STEM SECONDARY**  
18 **SCHOOLS.**

19 (a) PURPOSE.—The purpose of this section is to in-  
20 crease the number of STEM secondary schools in the  
21 United States from approximately 100 to approximately  
22 200.

23 (b) PROGRAM AUTHORIZED.—

24 (1) IN GENERAL.—From amounts appropriated  
25 under subsection (e), the Secretary of Education, in

1 coordination with the Director, shall award grants,  
2 on a competitive basis, to State educational agencies  
3 to enable the State educational agencies to carry out  
4 the purposes of this section by establishing or ex-  
5 panding STEM secondary schools.

6 (2) GEOGRAPHIC DISTRIBUTION.—The Sec-  
7 retary shall award grants under this section in a  
8 manner that ensures geographic diversity, including  
9 awarding grants to State educational agencies serv-  
10 ing rural areas.

11 (c) APPLICATION.—A State educational agency desir-  
12 ing to receive a grant under this section shall submit an  
13 application to the Secretary of Education at such time,  
14 in such manner, and containing such information as the  
15 Secretary may require.

16 (d) USE OF FUNDS.—A State educational agency re-  
17 ceiving funds under this section shall use such funds to  
18 award subgrants, on a competitive basis, to local edu-  
19 cational agencies in the State to enable the local edu-  
20 cational agencies to establish and maintain new STEM  
21 secondary schools, which may include repurposing an ex-  
22 isting secondary school to become a STEM secondary  
23 school.

1 (e) AUTHORIZATION OF APPROPRIATIONS.—There  
2 are authorized to be appropriated to carry out this section,  
3 \$50,000,000 for each of fiscal years 2015 through 2024.

4 **SEC. 103. REPORT ON STEM SECONDARY SCHOOLS.**

5 (a) DATABASE.—The Secretary of Education, in co-  
6 ordination with the Director, shall develop a database to  
7 identify existing STEM secondary schools.

8 (b) REPORT.—Not later than 1 year after the date  
9 of enactment of this Act, the Secretary of Education, in  
10 coordination with the Director, shall submit a report to  
11 Congress with recommendations on how to replicate exist-  
12 ing successful STEM secondary schools.

13 **SEC. 104. STUDY AND REPORT ON RETAINING STEM STU-**  
14 **DENTS.**

15 (a) IN GENERAL.—The Director shall conduct a  
16 study, in coordination with the Secretary of Education, to  
17 make recommendations to Congress on how to improve re-  
18 tention rates of students in STEM programs at institu-  
19 tions of higher education. The study should include an  
20 analysis of existing successful retention programs at insti-  
21 tutions of higher education.

22 (b) REPORT.—Not later than 1 year after the date  
23 of enactment of this Act, the Director shall submit to Con-  
24 gress a report on the study conducted under subsection  
25 (a).

1 **SEC. 105. EXPANDING UNDERGRADUATE RESEARCH OP-**  
2 **PORTUNITIES.**

3 (a) **IN GENERAL.**—Not later than June 1, 2016, the  
4 President shall ensure that not less than 15 percent of  
5 all Federal funds available for a fiscal year for under-  
6 graduate research opportunities at 2-year and 4-year de-  
7 gree granting institutions of higher education shall be  
8 used to fund research opportunities for postsecondary stu-  
9 dents, with emphasis on undergraduate research opportu-  
10 nities occurring during the first 2 academic years of post-  
11 secondary education.

12 (b) **SENSE OF CONGRESS.**—It is the sense of the  
13 Congress that each Federal agency should restructure the  
14 agency’s undergraduate student research opportunities for  
15 students attending 2-year or 4-year institutions of higher  
16 education, in order to provide more research opportunities  
17 for postsecondary students during the students’ first 2  
18 academic years of postsecondary education.

19 (c) **IDENTIFICATION OF RESEARCH PROGRAMS.**—Not  
20 later than December 31, 2015, the head of each Federal  
21 agency shall submit to the President—

22 (1) a list of all programs and funds available  
23 for undergraduate student research under the juris-  
24 diction of the agency; and

25 (2) recommendations regarding how the agency  
26 can best fulfill the requirements of subsection (a).



1 **SEC. 106. TECHNOLOGY COMMERCIALIZATION AWARDS**  
2 **PILOT PROGRAM.**

3 (a) IN GENERAL.—The Director of the National  
4 Science Foundation (referred to in this section as the “Di-  
5 rector”), through the Partnerships for Innovation Pro-  
6 gram, shall administer a Technology Commercialization  
7 Awards Pilot Program through which promising tech-  
8 nology advances derived from National Science Founda-  
9 tion research grants shall be eligible for follow-on fund-  
10 ing—

11 (1) to move the technology through prototype  
12 and demonstration phases;

13 (2) for training for researcher participants in  
14 business plan development, technology transfer, and  
15 commercialization; and

16 (3) for establishing start-up firms based on the  
17 technologies developed.

18 (b) COMPETITIVE SELECTION.—The Director shall—

19 (1) seek from National Science Foundation of-  
20 fices and divisions recommendations on outstanding  
21 research funded by the National Science Foundation  
22 with clear promise that such research can be ad-  
23 vanced close to commercialized in a 3- to 5-year pe-  
24 riod;

25 (2) solicit applications from National Science  
26 Foundation award grantees who believe that they

1 have qualifying technologies eligible for commer-  
2 cialization; and

3 (3) award grants to such National Science  
4 Foundation award grantees based on a merit-based,  
5 competitive selection process.

6 (c) ADVISORY COMMITTEE.—The Director shall form  
7 an Advisory Committee of experts on technology and the  
8 technology commercialization process to advise the Na-  
9 tional Science Foundation on the Technology Commer-  
10 cialization Awards Pilot Program.

11 (d) REPORT.—Not later than 3 years after the first  
12 grant is awarded under this section, the Director shall—

13 (1) report to the relevant committees of Con-  
14 gress on the Technology Commercialization Awards  
15 Pilot Program’s results; and

16 (2) make recommendations on whether and how  
17 such a technology commercialization fund could be  
18 adopted by other Federal research and development  
19 agencies.

20 (e) AUTHORIZATION OF APPROPRIATIONS.—There is  
21 authorized to be appropriated to carry out this section  
22 \$10,000,000 for each of the fiscal years 2015 through  
23 2019.

1 **SEC. 107. COMPUTER SCIENCE IN THE ROBERT NOYCE**  
2 **TEACHER SCHOLARSHIP PROGRAM.**

3 Section 10 of the National Science Foundation Au-  
4 thorization Act of 2002 (42 U.S.C. 1862n-1) is amend-  
5 ed—

6 (1) by striking “and mathematics” and insert-  
7 ing “mathematics, informatics, and computer  
8 science” each place the term appears;

9 (2) in subsection (b)(1)(D)(i), by striking “or  
10 mathematics” and inserting “mathematics,  
11 informatics, or computer science”;

12 (3) in subsection (c)—

13 (A) in paragraph (1)(A), by striking “or  
14 mathematics” and inserting “mathematics,  
15 informatics, or computer science”; and

16 (B) in paragraph (4), by striking “mathe-  
17 matics or” and inserting “mathematics,  
18 informatics, or computer science”;

19 (4) in subsection (d)(4), by striking “mathe-  
20 matics or” and inserting “mathematics, informatics,  
21 or computer science”; and

22 (5) in subsection (i)—

23 (A) in paragraph (5), by striking “or  
24 mathematics” and inserting “mathematics, or  
25 computer science”; and

1 (B) in paragraph (7), by striking “or  
2 mathematics,” and inserting “mathematics,  
3 informatics, or computer science,”.

4 **TITLE II—MANUFACTURING AND**  
5 **EXPORT PROMOTIONS**

6 **SEC. 201. MANUFACTURING ASSISTANCE PROGRAM FOR**  
7 **SMALL- AND MEDIUM-SIZED MANUFACTUR-**  
8 **ERS IN THE UNITED STATES.**

9 (a) DEFINITIONS.—In this section:

10 (1) SECRETARY.—The term “Secretary” means  
11 the Secretary of Commerce.

12 (2) SMALL- AND MEDIUM-SIZED DOMESTIC  
13 MANUFACTURERS.—The term “small- and medium-  
14 sized domestic manufacturers” means businesses—

15 (A) with not more than 500 employees;

16 and

17 (B) with facilities located in the United  
18 States that mechanically, physically, or chemi-  
19 cally transform materials, substances, or com-  
20 ponents into new products, including component  
21 parts.

22 (b) ESTABLISHMENT.—Not later than 180 days after  
23 the date of enactment of this Act, the Secretary shall es-  
24 tablish a manufacturing assistance program for small- and  
25 medium-sized domestic manufacturers for the purposes of

1 promoting the manufacturing of goods in the United  
2 States and enabling those manufacturers to be competitive  
3 in the global economy by—

4 (1) identifying and reducing regulatory burdens  
5 on those manufacturers under subsection (c); and

6 (2) providing those manufacturers with infor-  
7 mation and other assistance under subsection (d).

8 (c) REDUCTION OF REGULATORY BURDENS.—The  
9 Secretary shall—

10 (1) identify any regulatory requirements appli-  
11 cable to small- and medium-sized domestic manufac-  
12 turers that—

13 (A) impose an unnecessary burden on  
14 those manufacturers; and

15 (B) may be eliminated or reduced in order  
16 to promote the manufacture of goods in the  
17 United States;

18 (2) take appropriate action to eliminate or re-  
19 duce the regulatory requirements identified under  
20 paragraph (1); and

21 (3) not later than 1 year after the date on  
22 which the Secretary establishes the program re-  
23 quired by subsection (b), submit to Congress a re-  
24 port that makes recommendations with respect to  
25 action by Congress that may be necessary to elimi-

1       nate or reduce the regulatory requirements identified  
2       under paragraph (1).

3       (d) ASSISTANCE.—The Secretary shall assist small-  
4       and medium-sized domestic manufacturers by providing  
5       the manufacturers with information with respect to—

6             (1) how small- and medium-sized domestic  
7       manufacturers can comply efficiently with regula-  
8       tions applicable to those manufacturers;

9             (2) recently proposed and recently prescribed  
10       regulations likely to have an effect on small- and  
11       medium-sized domestic manufacturers; and

12            (3) how small- and medium-sized domestic  
13       manufacturers can express their views and provide  
14       input with respect to any policy developments relat-  
15       ing to the manufacture of products in the United  
16       States.

17       (e) REPORT ON EFFECTIVENESS OF PROGRAM.—Not  
18       later than 2 years after the date of enactment of this Act,  
19       the Hollings Manufacturing Extension Partnership of the  
20       National Institute of Standards and Technology shall sub-  
21       mit to Congress a report on the program established under  
22       subsection (b) that includes—

23            (1) an assessment of the extent to which the  
24       program has been effective—

1 (A) in identifying and reducing regulatory  
2 burdens on small- and medium-sized domestic  
3 manufacturers under subsection (c);

4 (B) in providing information and other as-  
5 sistance to small- and medium-sized domestic  
6 manufacturers under subsection (d); and

7 (C) in promoting the manufacturing of  
8 goods in the United States and enabling small-  
9 and medium-sized domestic manufacturers to be  
10 competitive in the global economy;

11 (2) detailed information with respect to the na-  
12 ture, location, and duration of any jobs created as  
13 a result of the program established under subsection  
14 (b) and a description of the methodology used to  
15 compile that information; and

16 (3) any recommendations with respect to con-  
17 tinuing or improving the program established under  
18 subsection (b).

19 (f) AUTHORIZATION OF APPROPRIATIONS.—There  
20 are authorized to be appropriated to the Secretary  
21 \$15,000,000 for each of the fiscal years 2015 through  
22 2019 to carry out the program established under sub-  
23 section (b).

1 **SEC. 202. REMOVING BARRIERS FOR EXPORTING INDUS-**  
2 **TRIES IN THE UNITED STATES.**

3 Not later than 180 days after the date of the enact-  
4 ment of this Act, the Under Secretary for International  
5 Trade of the Department of Commerce shall submit to  
6 Congress a report—

7 (1) identifying the 20 industries in the United  
8 States that export the most goods or services;

9 (2) evaluating the competitiveness of those 20  
10 industries in global markets compared to competi-  
11 tors manufacturing outside the United States;

12 (3) identifying domestic regulatory and policy  
13 barriers to increasing exports by these industries;

14 (4) identifying foreign barriers that impede the  
15 access of these industries to foreign markets; and

16 (5) making recommendations with respect to  
17 legislative action that could be taken by Congress to  
18 reduce those barriers and improve the global com-  
19 petitiveness of these industries in foreign markets.

20 **TITLE III—OFFSETS**

21 **SEC. 301. LIMITATION ON GOVERNMENT PRINTING COSTS.**

22 Not later than 180 days after the date of enactment  
23 of this Act, the Director of the Office of Management and  
24 Budget shall coordinate with the heads of Federal depart-  
25 ments and independent agencies to—



1           (1) determine which Government publications  
2           could be available on Government Web sites and no  
3           longer printed and to devise a strategy to reduce  
4           overall Government printing costs over the 10-year  
5           period beginning with fiscal year 2015, except that  
6           the Director shall ensure that essential printed docu-  
7           ments prepared for Social Security recipients, Medi-  
8           care beneficiaries, and other populations in areas  
9           with limited Internet access or use continue to re-  
10          main available;

11          (2) establish Governmentwide Federal guide-  
12          lines on employee printing; and

13          (3) issue on the Office of Management and  
14          Budget's public Web site the results of a cost-benefit  
15          analysis on implementing a digital signature system  
16          and on establishing employee printing identification  
17          systems, such as the use of individual employee  
18          cards or codes, to monitor the amount of printing  
19          done by Federal employees, except that the Director  
20          of the Office of Management and Budget shall en-  
21          sure that Federal employee printing costs unrelated  
22          to national defense, homeland security, border secu-  
23          rity, national disasters, and other emergencies do  
24          not exceed \$860,000,000 annually.

1 **SEC. 302. ELIMINATING BONUSES FOR POOR PERFORM-**  
2 **ANCE BY GOVERNMENT CONTRACTORS.**

3 (a) **GUIDANCE ON LINKING OF AWARD AND INCEN-**  
4 **TIVE FEES TO OUTCOMES.**—Not later than 180 days after  
5 the date of enactment of this Act, each Federal depart-  
6 ment or agency shall issue guidance, with detailed imple-  
7 mentation instructions (including definitions), on the ap-  
8 propriate use of award and incentive fees in department  
9 or agency programs.

10 (b) **ELEMENTS.**—The guidance under subsection (a)  
11 shall—

12 (1) ensure that all new contracts using award  
13 fees link such fees to outcomes (which shall be de-  
14 fined in terms of program cost, schedule, and per-  
15 formance);

16 (2) establish standards for identifying the ap-  
17 propriate level of officials authorized to approve the  
18 use of award and incentive fees in new contracts;

19 (3) provide guidance on the circumstances in  
20 which contractor performance may be judged to be  
21 excellent or superior and the percentage of the avail-  
22 able award fee which contractors should be paid for  
23 such performance;

24 (4) establish standards for determining the per-  
25 centage of the available award fee, if any, which con-  
26 tractors should be paid for performance that is

1       judged to be acceptable, average, expected, good, or  
2       satisfactory;

3           (5) ensure that no award fee may be paid for  
4       contractor performance that is judged to be below  
5       satisfactory performance or performance that does  
6       not meet the basic requirements of the contract;

7           (6) provide specific direction on the cir-  
8       cumstances, if any, in which it may be appropriate  
9       to roll over award fees that are not earned in one  
10      award fee period to a subsequent award fee period  
11      or periods;

12          (7) ensure that the Department or agency—

13           (A) collects relevant data on award and in-  
14      centive fees paid to contractors; and

15           (B) has mechanisms in place to evaluate  
16      such data on a regular basis; and

17          (8) include performance measures to evaluate  
18      the effectiveness of award and incentive fees as a  
19      tool for improving contractor performance and  
20      achieving desired program outcomes.

21      (c) RETURN OF UNEARNED BONUSES.—Any funds  
22      intended to be awarded as incentive fees that are not paid  
23      due to contractors' inability to meet the criteria estab-  
24      lished by this section shall be returned to the Treasury.

○