

115TH CONGRESS
1ST SESSION

H. R. 4150

To support innovation, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

OCTOBER 26, 2017

Mr. CARTWRIGHT (for himself, Mr. RODNEY DAVIS of Illinois, and Mr. RYAN of Ohio) 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

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 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 PROMOTION

- 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 economy of the United States, driving
 5 the production of game-changing technologies, the
 6 creation of millions of jobs and the opening of count-
 7 less new avenues for growth. In an increasingly com-
 8 petitive global economy, our Nation’s continued lead-
 9 ership and prosperity will hinge on progress in key
 10 innovative areas, most notably exporting, entrepre-
 11 neurship, research and development, and education
 12 in science, technology, engineering, and mathematics
 13 (referred to in this section as “STEM”), including
 14 computer science.

15 (2) Technology-based startups play a critical
 16 role in driving innovation. Increasing the flow of
 17 capital to these firms would bridge the gap that

1 often exists between their initial startup costs and
2 their long-term capital needs, giving the firms the
3 resources necessary to research, develop, and com-
4 mercialize new products.

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

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

19 (5) The Bureau of Labor Statistics predicts
20 that in the year 2020, of the 9,200,000 STEM jobs
21 there will be in the United States, half of them will
22 be in computing. With more than 150,000 job open-
23 ings expected annually in computing, it is one of the
24 fastest growing occupations in the United States. In-
25 creasing the teaching and learning of computer

1 science in schools would strengthen the workforce of
2 the United States by helping our students gain the
3 skills and training necessary to fulfill new computer
4 programming jobs.

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

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

19 **TITLE I—EDUCATION**

20 **SEC. 101. DEFINITIONS.**

21 In this title:

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

24 (2) INSTITUTION OF HIGHER EDUCATION.—The
25 term “institution of higher education” has the

1 meaning given the term in section 101(a) of the
2 Higher Education Act of 1965 (20 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 Secretary of Education, in coordina-
11 tion with the Director, 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 8101 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 2018 through 2027.

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, 2018, 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 an emphasis on undergraduate research oppor-
10 tunities occurring during the first 2 academic years of
11 postsecondary 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 degree-granting insti-
16 tutions of higher education, in order to provide more re-
17 search opportunities for postsecondary students during
18 the students’ first 2 academic years of postsecondary edu-
19 cation.

20 (c) **IDENTIFICATION OF RESEARCH PROGRAMS.**—Not
21 later than December 31, 2017, the head of each Federal
22 agency shall submit to the President—

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

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

3 **SEC. 106. TECHNOLOGY COMMERCIALIZATION AWARDS**
4 **PILOT PROGRAM.**

5 (a) IN GENERAL.—The Director, through the Part-
6 nerships for Innovation Program of the National Science
7 Foundation, shall administer a Technology Commer-
8 cialization Awards Pilot Program through which prom-
9 ising technology advances derived from National Science
10 Foundation research grants shall be eligible for follow-on
11 funding—

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

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

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

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

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

1 (2) solicit applications from National Science
2 Foundation award grantees who believe that they
3 have qualifying technologies eligible for commer-
4 cialization; and

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

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

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

15 (1) report to the relevant committees of Con-
16 gress on the results of the Technology Commer-
17 cialization Awards Pilot Program; and

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

22 (e) AUTHORIZATION OF APPROPRIATIONS.—There is
23 authorized to be appropriated to carry out this section
24 \$10,000,000 for each of the fiscal years 2018 through
25 2022.

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, computer science, or”;

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

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 goods, including component
21 parts.

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

1 poses of promoting the manufacturing of goods in the
2 United States and enabling those manufacturers to be
3 competitive 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 those 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 goods in the United
16 States.

17 (e) REPORT ON EFFECTIVENESS OF PROGRAM.—Not
18 later than 2 years after the date of the enactment of this
19 Act, the Hollings Manufacturing Extension Partnership of
20 the National Institute of Standards and Technology shall
21 submit to Congress a report on the program established
22 under 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 2018 through
22 2022 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 in-
10 dustries in global markets compared to competitors
11 manufacturing outside the United States;

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

14 (4) identifying measures imposed by foreign
15 governments that impede the access of those indus-
16 tries to foreign markets; and

17 (5) making recommendations with respect to
18 legislative action that could be taken by Congress to
19 reduce barriers identified under paragraph (3) and
20 improve the global competitiveness of those indus-
21 tries in foreign markets.

22 **TITLE III—OFFSETS**

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

24 Not later than 180 days after the date of enactment
25 of this Act, the Director of the Office of Management and

1 Budget shall coordinate with the heads of Federal depart-
2 ments and independent agencies to—

3 (1) determine which Government publications
4 could be available on Government websites and no
5 longer printed and to devise a strategy to reduce
6 overall Government printing costs over the 10-year
7 period beginning with fiscal year 2018, except that
8 the Director shall ensure that essential printed docu-
9 ments prepared for Social Security recipients, Medi-
10 care beneficiaries, and other populations in areas
11 with limited internet access or use continue to re-
12 main available;

13 (2) establish Governmentwide Federal guide-
14 lines on employee printing;

15 (3) issue on the Office of Management and
16 Budget’s public website the results of a cost-benefit
17 analysis on implementing a digital signature system
18 and on establishing employee printing identification
19 systems, such as the use of individual employee
20 cards or codes, to monitor the amount of printing
21 done by Federal employees; and

22 (4) ensure that Federal employee printing costs
23 unrelated to national defense, homeland security,
24 border security, national disasters, and other emer-
25 gencies do 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.

○