I

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.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the ''Innovate America Act''.

(b) TABLE OF CONTENTS.—The table of contents for 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.

SEC. 2. FINDINGS.

Congress finds the following:

(1) Innovation has historically been a catalyzing force in the economy of the United States, driving the production of game-changing technologies, the creation of millions of jobs and the opening of countless new avenues for growth. In an increasingly competitive global economy, our Nation's continued leadership and prosperity will hinge on progress in key innovative areas, most notably exporting, entrepreneurship, research and development, and education in science, technology, engineering, and mathematics (referred to in this section as ''STEM''), including computer science.

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

often exists between their initial startup costs and their long-term capital needs, giving the firms the resources necessary to research, develop, and commercialize new products.

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

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

(5) The Bureau of Labor Statistics predicts that in the year 2020, of the 9,200,000 STEM jobs there will be in the United States, half of them will be in computing. With more than 150,000 job openings expected annually in computing, it is one of the fastest growing occupations in the United States. Increasing the teaching and learning of computer

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

(6) An effective regulatory climate should protect consumers and promote transparency without overburdening the businesses that create jobs. Federal agencies with rulemaking authority should be vigilant in assessing the impact of new regulations on innovation and job creation, particularly in anchor industries like manufacturing.

(7) The economic impact of a new product or technology is often dependent on its commercial success. To ensure American products can be bought and sold in markets around the world, the Federal Government should identify and remove over burdensome regulations that create barriers for United States exporting companies.

TITLE I—EDUCATION

SEC. 101. DEFINITIONS.

In this title:

(1) DIRECTOR.—The term ''Director'' means the Director of the National Science Foundation.

(2) INSTITUTION OF HIGHER EDUCATION.—The term ''institution of higher education'' has the

meaning given the term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)).

(3) STEM.—The term ''STEM'' means the subjects of science, technology, engineering, and mathematics, including other subjects based on science, technology, engineering, or mathematics, such as computer science.

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

(5) STATE EDUCATIONAL AGENCY.—The term ''State educational agency'' has the meaning given the term in section 8101 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801).

SEC. 102. INCREASING FUNDING FOR STEM SECONDARY SCHOOLS.

(a) PURPOSE.—The purpose of this section is to increase the number of STEM secondary schools in the United States from approximately 100 to approximately 200.

(b) PROGRAM AUTHORIZED.—

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

coordination with the Director, shall award grants, on a competitive basis, to State educational agencies to enable the State educational agencies to carry out the purposes of this section by establishing or expanding STEM secondary schools.

(2) GEOGRAPHIC DISTRIBUTION.—The Secretary shall award grants under this section in a manner that ensures geographic diversity, including awarding grants to State educational agencies serving rural areas.

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

(d) USE OF FUNDS.—A State educational agency receiving funds under this section shall use such funds to award subgrants, on a competitive basis, to local educational agencies in the State to enable the local educational agencies to establish and maintain new STEM secondary schools, which may include repurposing an existing secondary school to become a STEM secondary school.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to carry out this section, $50,000,000 for each of fiscal years 2018 through 2027.

SEC. 103. REPORT ON STEM SECONDARY SCHOOLS.

(a) DATABASE.—The Secretary of Education, in coordination with the Director, shall develop a database to identify existing STEM secondary schools.

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

SEC. 104. STUDY AND REPORT ON RETAINING STEM STUDENTS.

(a) IN GENERAL.—The Director shall conduct a study, in coordination with the Secretary of Education, to make recommendations to Congress on how to improve retention rates of students in STEM programs at institutions of higher education. The study should include an analysis of existing successful retention programs at institutions of higher education.

(b) REPORT.—Not later than 1 year after the date of enactment of this Act, the Director shall submit to Congress a report on the study conducted under subsection (a).

SEC. 105. EXPANDING UNDERGRADUATE RESEARCH OPPORTUNITIES.

(a) IN GENERAL.—Not later than June 1, 2018, the President shall ensure that not less than 15 percent of all Federal funds available for a fiscal year for undergraduate research opportunities at 2-year and 4-year degree-granting institutions of higher education shall be used to fund research opportunities for postsecondary students, with an emphasis on undergraduate research opportunities occurring during the first 2 academic years of postsecondary education.

(b) SENSE OF CONGRESS.—It is the sense of the Congress that each Federal agency should restructure the agency's undergraduate student research opportunities for students attending 2-year or 4-year degree-granting institutions of higher education, in order to provide more research opportunities for postsecondary students during the students' first 2 academic years of postsecondary education.

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

(1) a list of all programs and funds available for undergraduate student research under the jurisdiction of the agency; and

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

SEC. 106. TECHNOLOGY COMMERCIALIZATION AWARDS PILOT PROGRAM.

(a) IN GENERAL.—The Director, through the Partnerships for Innovation Program of the National Science Foundation, shall administer a Technology Commercialization Awards Pilot Program through which promising technology advances derived from National Science Foundation research grants shall be eligible for follow-on funding—

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

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

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

(b) COMPETITIVE SELECTION.—The Director shall—

(1) seek from National Science Foundation offices and divisions recommendations on outstanding research funded by the National Science Foundation with clear promise that such research can be advanced close to commercialized in a 3- to 5-year period;

(2) solicit applications from National Science Foundation award grantees who believe that they have qualifying technologies eligible for commercialization; and

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

(c) ADVISORY COMMITTEE.—The Director shall form an Advisory Committee of experts on technology and the technology commercialization process to advise the National Science Foundation on the Technology Commercialization Awards Pilot Program.

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

(1) report to the relevant committees of Congress on the results of the Technology Commercialization Awards Pilot Program; and

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

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

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

Section 10 of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1) is amended—

(1) by striking ''and mathematics'' and inserting ''mathematics, informatics, and computer science'' each place the term appears;

(2) in subsection (b)(1)(D)(i), by striking ''or mathematics'' and inserting ''mathematics, informatics, or computer science'';

(3) in subsection (c)—

(A) in paragraph (1)(A), by striking ''or mathematics'' and inserting ''mathematics, informatics, or computer science''; and

(B) in paragraph (4), by striking ''mathematics or'' and inserting ''mathematics, informatics, computer science, or'';

(4) in subsection (d)(4), by striking ''mathematics or'' and inserting ''mathematics, informatics, computer science, or''; and

(5) in subsection (i)—

(A) in paragraph (5), by striking ''or mathematics'' and inserting ''mathematics, or computer science''; and

(B) in paragraph (7), by striking ''or mathematics,'' and inserting ''mathematics, informatics, or computer science,''.

TITLE II—MANUFACTURING AND EXPORT PROMOTION

SEC. 201. MANUFACTURING ASSISTANCE PROGRAM FOR SMALL- AND MEDIUM-SIZED MANUFACTURERS IN THE UNITED STATES.

(a) DEFINITIONS.—In this section:

(1) SECRETARY.—The term ''Secretary'' means the Secretary of Commerce.

(2) SMALL- AND MEDIUM-SIZED DOMESTIC MANUFACTURERS.—The term ''small- and medium-sized domestic manufacturers'' means businesses—

(A) with not more than 500 employees; and

(B) with facilities located in the United States that mechanically, physically, or chemically transform materials, substances, or components into new goods, including component parts.

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

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

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

(2) providing those manufacturers with information and other assistance under subsection (d).

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

(1) identify any regulatory requirements applicable to small- and medium-sized domestic manufacturers that—

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

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

(2) take appropriate action to eliminate or reduce the regulatory requirements identified under paragraph (1); and

(3) not later than 1 year after the date on which the Secretary establishes the program required by subsection (b), submit to Congress a report that makes recommendations with respect to action by Congress that may be necessary to elimi-

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

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

(1) how small- and medium-sized domestic manufacturers can comply efficiently with regulations applicable to those manufacturers;

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

(3) how small- and medium-sized domestic manufacturers can express their views and provide input with respect to any policy developments relating to the manufacture of goods in the United States.

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

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

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

(B) in providing information and other assistance to small- and medium-sized domestic manufacturers under subsection (d); and

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

(2) detailed information with respect to the nature, location, and duration of any jobs created as a result of the program established under subsection (b) and a description of the methodology used to compile that information; and

(3) any recommendations with respect to continuing or improving the program established under subsection (b).

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary $15,000,000 for each of the fiscal years 2018 through 2022 to carry out the program established under subsection (b).

SEC. 202. REMOVING BARRIERS FOR EXPORTING INDUSTRIES IN THE UNITED STATES.

Not later than 180 days after the date of the enactment of this Act, the Under Secretary for International Trade of the Department of Commerce shall submit to Congress a report—

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

(2) evaluating the competitiveness of those industries in global markets compared to competitors manufacturing outside the United States;

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

(4) identifying measures imposed by foreign governments that impede the access of those industries to foreign markets; and

(5) making recommendations with respect to legislative action that could be taken by Congress to reduce barriers identified under paragraph (3) and improve the global competitiveness of those industries in foreign markets.

TITLE III—OFFSETS

SEC. 301. LIMITATION ON GOVERNMENT PRINTING COSTS.

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

Budget shall coordinate with the heads of Federal departments and independent agencies to—

(1) determine which Government publications could be available on Government websites and no longer printed and to devise a strategy to reduce overall Government printing costs over the 10-year period beginning with fiscal year 2018, except that the Director shall ensure that essential printed documents prepared for Social Security recipients, Medicare beneficiaries, and other populations in areas with limited internet access or use continue to remain available;

(2) establish Governmentwide Federal guidelines on employee printing;

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

(4) ensure that Federal employee printing costs unrelated to national defense, homeland security, border security, national disasters, and other emergencies do not exceed $860,000,000 annually.

SEC. 302. ELIMINATING BONUSES FOR POOR PERFORMANCE BY GOVERNMENT CONTRACTORS.

(a) GUIDANCE ON LINKING OF AWARD AND INCENTIVE FEES TO OUTCOMES.—Not later than 180 days after the date of enactment of this Act, each Federal department or agency shall issue guidance, with detailed implementation instructions (including definitions), on the appropriate use of award and incentive fees in department or agency programs.

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

(1) ensure that all new contracts using award fees link such fees to outcomes (which shall be defined in terms of program cost, schedule, and performance);

(2) establish standards for identifying the appropriate level of officials authorized to approve the use of award and incentive fees in new contracts;

(3) provide guidance on the circumstances in which contractor performance may be judged to be excellent or superior and the percentage of the available award fee which contractors should be paid for such performance;

(4) establish standards for determining the percentage of the available award fee, if any, which contractors should be paid for performance that is

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

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

(6) provide specific direction on the circumstances, if any, in which it may be appropriate to roll over award fees that are not earned in one award fee period to a subsequent award fee period or periods;

(7) ensure that the Department or agency—

(A) collects relevant data on award and incentive fees paid to contractors; and

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

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

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

○