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113TH CONGRESS
2D SESSION

H. R. 5526

To emphasize manufacturing in engineering programs by directing the National Institute of Standards and Technology, in coordination with other appropriate Federal agencies including the Department of Defense, Department of Energy, and National Science Foundation, to designate United States manufacturing universities.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 18, 2014

Ms. ESTY (for herself and Mr. COLLINS of New York) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

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A BILL

To emphasize manufacturing in engineering programs by directing the National Institute of Standards and Technology, in coordination with other appropriate Federal agencies including the Department of Defense, Department of Energy, and National Science Foundation, to designate United States manufacturing universities.

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

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Manufacturing Universities Act of 2014''.

SEC. 2. MANUFACTURING UNIVERSITIES.

(a) DEFINITIONS.—In this section:

(1) DIRECTOR.—The term ''Director'' means the Director of the Institute of Standards and Technology.

(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) MANUFACTURING INDUSTRY.—The term ''manufacturing industry'' means an industry defined in North American Industry Classification System codes 31, 32, and 33.

(4) UNITED STATES MANUFACTURING UNIVERSITY.—The term ''United States manufacturing university'' means an institution of higher education that receives a designation from the Director under subsection (b)(1).

(b) MANUFACTURING UNIVERSITY PROGRAM.—

(1) AUTHORIZATION.—The Director is authorized to establish a program to designate an institution of higher education as a United States manufacturing university. The Director, in coordination with the heads of other Federal agencies (including the Secretary of Defense, the Secretary of Energy, and the Director of the National Science Founda-

tion), shall designate not more than 25 institutions of higher education as United States manufacturing universities. The Director shall award designations not earlier than January 1, 2015, and not later than March 31, 2015.

(2) FUNDS PROVIDED.—An institution of higher education that receives a designation under paragraph (1) shall be awarded $5,000,000 for each fiscal year for a 4-year period beginning in the fiscal year in which the institution of higher education receives the designation under paragraph (1).

(3) USE OF FUNDS.—Funds provided to an institution of higher education under this subsection shall be used to carry out the goals and meet the targets described in subsection (c)(2)(B).

(c) APPLICATION.—

(1) IN GENERAL.—An institution of higher education desiring a designation under subsection (b)(1) shall submit an application to the Director at such time, in such manner, and accompanied by such information as the Director may reasonably require.

(2) CONTENTS.—Each application submitted pursuant to paragraph (1) shall—

(A) submit data describing, as of the date of submission of the application—

(i) the engineering programs offered by the institution of higher education, including any focus on manufacturing engineering and curricula related to manufacturing industries;

(ii) current joint projects relating to engineering between firms in the manufacturing industry and the institution of higher education;

(iii) the percentage of students in the engineering program of the institution of higher education who participated in for-credit internship, cooperative education, or other similar programs with manufacturing firms in the most recent academic year for which information is available;

(iv) the percentage of students enrolled at the institution of higher education who received a bachelor's degree, a master's degree, or a doctoral degree in engineering in the most recent academic year for which information is available, and a description of which engineering discipline each recipient of such degree studied;

(v) the amount and purpose of research and development funding that manufacturing firms have provided to the institution of higher education for each of the 3 years preceding the date of submission of the application;

(vi) the percentage of recent master's degree or doctoral degree graduates of the institution of higher education who have begun careers related to manufacturing and a description of—

(I) the institution's involvement in manufacturing startups; and

(II) any new manufacturing businesses created by recent master's degree or doctoral degree graduates in the 3 years preceding the date of submission of the application; and

(vii) the extent and a description of other programs at the institution of higher education related to manufacturing and entrepreneurship; and

(B) submit a plan, including specific targets and goals to be achieved not later than 4

years after the date of designation under subsection (b)(1), describing—

(i) how the engineering programs offered by the institution of higher education will be improved to emphasize manufacturing engineering and curricula related to manufacturing industries;

(ii) how the institution of higher education will increase the number of joint projects relating to engineering between manufacturing firms and the institution of higher education;

(iii) how the institution of higher education will increase the number of students in the engineering program of the institution who participate in for-credit internship, cooperative education, or other similar programs in manufacturing firms;

(iv) how the institution of higher education will increase the number of students who are United States citizens or permanent residents enrolled at the institution who receive a bachelor's degree, a master's degree, or a doctoral degree in engineering or applied science, in particular disciplines

related to manufacturing, including chemical, electrical, mechanical, industrial, mechatronics, computer, biomedical, and nano engineering, as well as materials science, computer science, and applied mathematics;

(v) how the institution of higher education will cover the costs of equipment and facilities related to its proposal and how it will increase funding from industry for research and development related to manufacturing;

(vi) how the institution of higher education will increase the number of students who receive a degree from the institution of higher education who launch a new manufacturing business, as defined by the Bureau of Economic Analysis as the North American Industry Classification System code 3111 to 3399;

(vii) how the institution of higher education will oversee interdisciplinary programs relating to advancing manufacturing productivity and innovation across various

university colleges, departments, and programs;

(viii) how the institution of higher education will designate an appropriate individual to oversee and coordinate the activities committed to as a part of the universities outlined ''manufacturing university'' plan who may be designated as a ''Chief Manufacturing Officer'';

(ix) how the manufacturing engineering program can positively impact local and regional economic development; and

(x) how the participating institutions and departments, particularly within engineering and business, will recognize and reward faculty, including through decisions of tenure, for developing innovative new means to increase interactions with manufacturing companies.

(d) ADMINISTRATION OF PROGRAM.—

(1) GENERAL POLICIES.—The Director shall establish and publish general policies regarding—

(A) review of applications;

(B) criteria for selection of institutions of higher education to receive a designation under subsection (b)(1);

(C) procedures and criteria for the review required in paragraph (2); and

(D) such other matters as the Director may prescribe.

(2) REVIEW.—

(A) IN GENERAL.—Not later than 2 years after the date an institution of higher education receives a designation under subsection (b)(1), the Director shall conduct a review of the progress the institution of higher education has made toward the targets and goals described in subsection (c)(2)(B). If the Director determines that the institution of higher education is making adequate progress toward such targets and goals, funds provided under subsection (b)(1) shall continue for the remainder of the designation period.

(B) PROGRESS REPORT.—Each institution of higher education receiving a designation under subsection (b)(1) shall submit a report each year that includes information on the progress the institution is making toward the

targets and goals described in subsection (c)(2)(B).

(C) RENEWAL.—An institution of higher education receiving a designation under subsection (b)(1) shall not be eligible to receive funds under subsection (b)(2) after the expiration of the 4-year period.

(3) REPORT REQUIRED.—Not later than September 30 of each year, the Director shall submit to Congress a report that includes—

(A) a list of the institutions of higher education that have received a designation under subsection (b)(1); and

(B) a description of the progress such institutions of higher education have made toward the targets and goals described in subsection (c)(2)(B).

(e) ASSISTANCE FOR SMALL BUSINESSES.—Not later than 6 months after the date of enactment of this Act, the Director, in cooperation with the Administrator of the Small Business Administration, shall make recommendations on how the programs established under Phase III of the Small Business Act (15 U.S.C. 638), can be adapted to provide assistance to small businesses that collaborate with United States manufacturing universities.

(f) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated $125,000,000 for each of fiscal years 2015, 2016, 2017, and 2018 to carry out the provisions of this section.

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