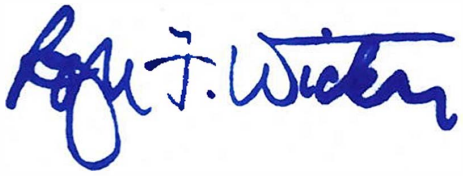

116TH CONGRESS
2D SESSION

S. _____

To amend the Scientific and Advanced-Technology Act of 1992 to further support advanced technological manufacturing, and for other purposes.

IN THE SENATE OF THE UNITED STATES

Mr. WICKER introduced the following bill; which was read twice and referred to the Committee on _____

A BILL

To amend the Scientific and Advanced-Technology Act of 1992 to further support advanced technological manufacturing, 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.

This Act may be cited as the "Advanced Technological Manufacturing Act".

SEC. 2. HARNESSING OUR NATION'S RESEARCH POTENTIAL.

(a) ESTABLISHMENT.—The Director of the National Science Foundation shall conduct multiple pilot programs within the Foundation to expand the number of institu-

tions of higher education (including such institutions that are community colleges), and other eligible entities that the Director determines appropriate, that are able to successfully compete for National Science Foundation grants.

(b) COMPONENTS.—Each pilot program described in subsection (a) shall include at least 1 of the following elements:

(1) A mentorship program.

(2) Grant writing technical assistance.

(3) Targeted outreach.

(4) Programmatic support or solutions for institutions or entities that do not have an experienced grant management office.

(5) Appropriate reduction of administrative burdens.

(6) An increase in the number of grant reviewers from institutions of higher education that have not traditionally received funds from the National Science Foundation.

(c) AGENCY-WIDE PROGRAMS.—Not later than 5 years after the date of enactment of this Act, the Director of the National Science Foundation shall—

(1) review the results of the pilot programs described in subsection (a); and

(2) include agency-wide best practices from the pilot programs when implementing the criteria required under section 203(c) of the Academic Research Facilities Modernization Act of 1988 (42 U.S.C. 1862b(c)).

(d) INSTITUTION OF HIGHER EDUCATION.—In this section, the term "institution of higher education" has the meaning given the term in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001).

SEC. 3. ADVANCED SCIENTIFIC AND TECHNICAL MANUFACTURING.

(a) FINDINGS AND PURPOSE.—Section 2 of the Scientific and Advanced-Technology Act of 1992 (42 U.S.C. 1862h) is amended—

(1) in subsection (a)—

(A) in paragraph (3), by striking "science, mathematics, and technology" and inserting "science, technology, engineering, and mathematics or STEM";

(B) in paragraph (4), by striking "trained" and inserting "educated"; and

(C) in paragraph (5), by striking "scientific and technical education and training" and inserting "STEM education and training"; and

(2) in subsection (b)—

(A) in paragraph (2), by striking "mathematics and science" and inserting "STEM fields"; and

(B) in paragraph (4), by striking "mathematics and science instruction" and inserting "STEM instruction".

(b) MODERNIZING REFERENCES TO STEM.—Section 3 of the Scientific and Advanced-Technology Act of 1992 (42 U.S.C. 1862i) is amended—

(1) in the section heading, by striking "**SCIENTIFIC AND TECHNICAL EDUCATION**" and inserting "**STEM EDUCATION**";

(2) in subsection (a)—

(A) in the subsection heading, by striking "SCIENTIFIC AND TECHNICAL EDUCATION" and inserting "STEM EDUCATION";

(B) in the matter preceding paragraph (1)—

(i) by striking "core education courses in science and mathematics" and inserting "core education courses in STEM fields"; and

(ii) by inserting "veterans and individuals engaged in" before "work in the home";

(C) in paragraph (1)—

(i) by inserting "and study" after "development"; and

(ii) by striking "core science and mathematics courses" and inserting "core STEM courses";

(D) in paragraph (2), by striking "science, mathematics, and advanced-technology fields" and inserting "STEM and advanced-technology fields";

(E) in paragraph (3)—

(i) in subparagraph (A), by inserting "to support the advanced-technology industries that drive the competitiveness of the United States in the global economy" before the semicolon at the end; and

(ii) by striking subparagraph (B) and inserting the following:

"(B) provide for private sector donations, faculty opportunities to have short-term assignments with industry, equipment loans, and the cooperative use of laboratories, plants, and

other facilities, and provision for state-of-the-art work experience opportunities for students enrolled in such programs; and";

(F) in paragraph (4), by striking "scientific and advanced-technology fields" and inserting "STEM and advanced-technology fields"; and

(G) in paragraph (5), by striking "advanced scientific and technical education" and inserting "advanced STEM and advanced-technology";

(3) in subsection (b)—

(A) by striking the subsection heading and inserting the following: "CENTERS OF SCIENTIFIC AND TECHNICAL EDUCATION.—";

(B) in the matter preceding paragraph (1), by striking "not to exceed 10 in number" and inserting "in advanced-technology fields";

(C) in paragraph (2), by striking "education in mathematics and science" and inserting "STEM education"; and

(D) in the flush matter following paragraph (2), by striking "in the geographic region served by the center";

(4) in subsection (c)—

(A) in paragraph (1)—

(i) in subparagraph (A)—

(I) by striking the matter preceding clause (i) and inserting the following: "The Director shall make grants to eligible partnerships to encourage the development of career and educational pathways with multiple entry and exit points leading to credentials and degrees, and to assist students pursuing pathways in STEM fields to transition from associate-degree-granting colleges to bachelor-degree-granting institutions, through such means as—";

(II) in clause (i), by striking "to ensure" and inserting "to develop articulation agreements that ensure"; and

(III) in clause (ii), by striking "courses at the bachelor-degree-granting institution" and inserting "the career and educational pathways supported by the articulation agreements";

(ii) in subparagraph (B)—

(I) in clause (i), by inserting "veterans and individuals engaged in" before "work in the home";

(II) in clause (iii)—

(aa) by striking "bachelor's-degree-granting institutions" and inserting "institutions or work sites"; and

(bb) by inserting "or industry internships" after "summer programs"; and

(III) by striking the flush text following clause (iv); and

(iii) by striking subparagraph (C);

(B) in paragraph (2)—

(i) by striking "mathematics and science" and inserting "STEM";

(ii) by striking "mathematics and science education" and inserting "STEM education";

(iii) by striking "science and advanced-technology fields" and inserting "STEM and advanced-technology fields"; and

(iv) by striking "agreements with local educational agencies" and inserting "articulation agreements or dual credit courses with local secondary schools"; and

(C) by striking paragraph (3) and inserting the following:

"(3) MENTOR TRAINING GRANTS.—The Director shall establish a program to encourage and make grants available to institutions of higher education that award associate degrees to recruit and train individuals from STEM fields to mentor students who are described in section 33 or 34 of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885a or 1885b) in order to assist those students in identifying, qualifying for, and entering higher-paying technical jobs in those fields.";

(5) in subsection (g), by striking the second sentence;

(6) in subsection (i)—

(A) by striking paragraph (3); and

(B) by redesignating paragraphs (4) and (5) as paragraphs (3) and (4), respectively; and

(7) in subsection (j)—

(A) by striking paragraph (1) and inserting the following:

"(1) the term 'advanced-technology' includes technological fields such as advanced manufacturing, agricultural-, biological- and chemical-technologies, energy and environmental technologies, engineering technologies, information technologies, micro and nano-technologies, cybersecurity technologies, geospatial technologies, and new, emerging technology areas;";

(B) by striking paragraph (2) and inserting the following:

"(2) the term 'associate-degree-granting college' means an institution of higher education (as defined in section 102 of the Higher Education Act of 1965 (20 U.S.C. 1002)) that offers a 2-year associate-degree program or 2-year certificate program;";

(C) in paragraph (3), by striking "as determined under section 101 of the Higher Education Act of 1965" and inserting "as defined in section 102 of the Higher Education Act of 1965 (20 U.S.C. 1002)";

(D) in paragraph (4), by striking "separate bachelor-degree-granting institutions" and inserting "other entities";

(E) by striking paragraph (7);

(F) by redesignating paragraphs (8) and (9) as paragraphs (7) and (8), respectively; and

(G) in paragraph (8), as redesignated by subparagraph (F)—

(i) by striking "mathematics, science, engineering, or technology" and inserting "science, technology, engineering, or mathematics"; and

(ii) by inserting "and cybersecurity" after "computer science".