

111TH CONGRESS
2D SESSION

S. 3630

To improve the commercialization potential of National Science Foundation grants, enhance the metrics used to assess such potential, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 22, 2010

Ms. KLOBUCHAR (for herself and Mr. LEMIEUX) introduced the following bill;
which was read twice and referred to the Committee on Finance

A BILL

To improve the commercialization potential of National Science Foundation grants, enhance the metrics used to assess such potential, 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.**

4 This Act may be cited as the “American Innovation
5 Act of 2010”.

6 **SEC. 2. GRANTEE REPORTS ON COMMERCIALIZATION**
7 **STRATEGY AND RESULTS.**

8 (a) IN GENERAL.—Any institution of higher edu-
9 cation (as such term is defined in section 101(a) of the

1 Higher Education Act of 1965 (20 U.S.C. 1001(a))) that
2 receives 1 or more grants of financial assistance from the
3 National Science Foundation for research shall submit a
4 report to the Foundation at the end of the first year of
5 the grants, and at the end of each subsequent year in
6 which funds are received pursuant to such grants, describ-
7 ing—

8 (1) the institution’s strategy for commer-
9 cializing the results of research supported by such
10 grants;

11 (2) the implementation of the strategy with re-
12 spect to research supported by the grants; and

13 (3) the results of its efforts to realize the com-
14 mercial potential of the research supported by those
15 grants.

16 (b) WEB SITE.—The Foundation shall post reports
17 received under this section on a Web site accessible to and
18 searchable by the public.

19 (c) TRADE SECRET INFORMATION.—An institution of
20 higher education that submits reports to the Foundation
21 under this section shall not reveal confidential, trade se-
22 cret, or proprietary information in such reports.

1 **SEC. 3. NSF GRANTS IN SUPPORT OF SPONSORED POST-**
 2 **DOCTORAL FELLOWSHIP PROGRAMS.**

3 The Director of the National Science Foundation
 4 may utilize funds appropriated to carry out grants to insti-
 5 tutions of higher education (as such term is defined in
 6 section 101(a) of the Higher Education Act of 1965 (20
 7 U.S.C. 1001(a))) to provide financial support for post-
 8 graduate research in fields with potential commercial ap-
 9 plications to match, in whole or in part, any private sector
 10 grant of financial assistance to any post-doctoral program
 11 in such a field of study.

12 **SEC. 4. STEM INDUSTRY INTERNSHIP PROGRAMS.**

13 (a) IN GENERAL.—The Director may award grants,
 14 on a competitive, merit-reviewed basis, to institutions of
 15 higher education, or consortia thereof, to establish or ex-
 16 pand partnerships with local or regional private sector en-
 17 tities, for the purpose of providing undergraduate students
 18 with integrated internship experiences that connect private
 19 sector internship experiences with the students' STEM
 20 coursework. The partnerships may also include industry
 21 or professional associations.

22 (b) INTERNSHIP PROGRAM.—The grants awarded
 23 under section (a) may include internship programs in the
 24 manufacturing sector.

25 (c) USE OF GRANT FUNDS.—Grants under this sec-
 26 tion may be used—

1 (1) to develop and implement hands-on learning
2 opportunities;

3 (2) to develop curricula and instructional mate-
4 rials related to industry, including the manufac-
5 turing sector;

6 (3) to perform outreach to secondary schools;

7 (4) to develop mentorship programs for stu-
8 dents with partner organizations; and

9 (5) to conduct activities to support awareness of
10 career opportunities and skill requirements.

11 (d) PRIORITY.—In awarding grants under this sec-
12 tion, the Director shall give priority to institutions of high-
13 er education or consortia thereof that demonstrate signifi-
14 cant outreach to and coordination with local or regional
15 private sector entities and Regional Centers for the Trans-
16 fer of Manufacturing Technology established by section
17 25(a) of the National Institute of Standards and Tech-
18 nology Act (15 U.S.C. 278k(a)) in developing academic
19 courses designed to provide students with the skills or cer-
20 tifications necessary for employment in local or regional
21 companies.

22 (e) OUTREACH TO RURAL COMMUNITIES.—The
23 Foundation shall conduct outreach to institutions of high-
24 er education and private sector entities in rural areas to

1 encourage those entities to participate in partnerships
2 under this section.

3 (f) COST-SHARE.—The Director shall require a 50
4 percent non-Federal cost-share from partnerships estab-
5 lished or expanded under this section.

6 (g) RESTRICTION.—No Federal funds provided under
7 this section may be used—

8 (1) for the purpose of providing stipends or
9 compensation to students for private sector intern-
10 ships unless private sector entities match 75 percent
11 of such funding; or

12 (2) as payment or reimbursement to private
13 sector entities, except for institutions of higher edu-
14 cation.

15 (h) REPORT.—Not less than 3 years after the date
16 of enactment of this Act, the Director shall submit a re-
17 port to Congress on the number and total value of awards
18 made under this section, the number of students affected
19 by those awards, any evidence of the effect of those awards
20 on workforce preparation and jobs placement for partici-
21 pating students, and an economic and ethnic breakdown
22 of the participating students.

1 **SEC. 5. STUDY TO DEVELOP IMPROVED IMPACT-ON-SOCI-**
2 **ETY METRICS.**

3 (a) IN GENERAL.—Within 180 days after the date
4 of enactment of this Act, the President of the National
5 Academy of Sciences shall initiate a study to evaluate, de-
6 velop, or improve metrics for measuring the potential im-
7 pact-on-society, including—

8 (1) the potential for commercial applications of
9 research studies funded in whole or in part by
10 grants of financial assistance from the National
11 Science Foundation or other Federal agencies;

12 (2) the manner in which research conducted at,
13 and individuals graduating from, an institution of
14 higher education contribute to the development of
15 new intellectual property and the success of commer-
16 cial activities;

17 (3) the quality of relevant scientific and inter-
18 national publications; and

19 (4) the ability of such institutions to attract ex-
20 ternal research funding.

21 (b) REPORT.—Within 1 year after initiating the
22 study required by subsection (a), the Director shall submit
23 a report to the Senate Committee on Commerce, Science,
24 and Transportation and the House of Representatives
25 Committee on Science and Technology setting forth the
26 Director's findings, conclusions, and recommendations.

1 **SEC. 6. SIMPLIFICATION OF TAX CREDIT FOR CONTRIBU-**
 2 **TIONS TO UNIVERSITIES FOR RESEARCH AND**
 3 **DEVELOPMENT PURPOSES.**

4 (a) IN GENERAL.—Subparagraph (A) of section
 5 41(e)(7) of the Internal Revenue Code of 1986 (defining
 6 basic research) is amended by striking “not having a spe-
 7 cific commercial objective”.

8 (b) EFFECTIVE DATE.—The amendment made by
 9 this section shall apply to taxable years beginning after
 10 the date of enactment of this Act.

11 **SEC. 7. FEDERAL LOAN GUARANTEES FOR BUSINESSES**
 12 **COMMERCIALIZING NSF GRANT-FUNDED RE-**
 13 **SEARCH IDEAS.**

14 (a) ESTABLISHMENT.—The Secretary of Commerce
 15 shall establish a program to provide loan guarantees for
 16 obligations to small- or medium-sized businesses to assist
 17 them in making commercial use of products, processes, or
 18 ideas generated by research grants funded by the National
 19 Science Foundation.

20 (b) ELIGIBLE PROJECTS.—A loan guarantee may be
 21 made under the program only for a project that enables
 22 a small- or medium-sized business in the United States—

23 (1) to use an innovative product, process, or
 24 idea that was developed by research funded in whole
 25 or in part by a grant from the National Science
 26 Foundation; and

1 (2) to develop, implement, market, or otherwise
2 make use of that product, process, or idea for com-
3 mercial purposes.

4 (c) ELIGIBLE BORROWER.—A loan guarantee may be
5 made under the program only for a borrower who is a
6 small- or medium-sized business, as determined by the
7 Secretary under the criteria established pursuant to sub-
8 section (m).

9 (d) LIMITATION ON AMOUNT.—A loan guarantee
10 shall not exceed an amount equal to 80 percent of the obli-
11 gation, as estimated at the time at which the loan guar-
12 antee is issued.

13 (e) LIMITATIONS ON LOAN GUARANTEE.—No loan
14 guarantee shall be made unless the Secretary determines
15 that—

16 (1) there is a reasonable prospect of repayment
17 of the principal and interest on the obligation by the
18 borrower;

19 (2) the amount of the obligation (when com-
20 bined with amounts available to the borrower from
21 other sources) is sufficient to carry out the project;

22 (3) the obligation is not subordinate to other fi-
23 nancing;

24 (4) the obligation bears interest at a rate that
25 does not exceed a level that the Secretary determines

1 appropriate, taking into account the prevailing rate
 2 of interest in the private sector for similar loans and
 3 risks; and

4 (5) the term of an obligation requires full re-
 5 payment over a period not to exceed the lesser of—

6 (A) 30 years; or

7 (B) 90 percent of the projected useful life,
 8 as determined by the Secretary, of the asset to
 9 be financed by the obligation.

10 (f) PENALTY FOR RELOCATION OUTSIDE OF UNITED
 11 STATES.—The loan agreement shall contain a provision
 12 that requires that, if the recipient of the loan relocates
 13 more than 25 percent of the business activities for which
 14 the loan was received outside the United States during the
 15 term of the loan, the recipient is required to repay the
 16 remainder of such loan—

17 (1) with interest at a penalty rate determined
 18 by the Secretary before the issuance of the loan and
 19 in consultation with the lender to deter the recipient
 20 of the loan from relocating such activities outside
 21 the United States; and

22 (2) for a duration determined by the Secretary
 23 in consultation with the lender.

24 (g) DEFAULTS.—

25 (1) PAYMENT BY SECRETARY.—

1 (A) IN GENERAL.—If a borrower defaults
2 (as defined in regulations promulgated by the
3 Secretary and specified in the loan guarantee)
4 on the obligation, the holder of the loan guar-
5 antee shall have the right to demand payment
6 of the unpaid amount from the Secretary.

7 (B) PAYMENT REQUIRED.—Within such
8 period as may be specified in the loan guar-
9 antee or related agreements, the Secretary shall
10 pay to the holder of the loan guarantee the un-
11 paid interest on and unpaid principal of the ob-
12 ligation as to which the borrower has defaulted,
13 unless the Secretary finds that there was no de-
14 fault by the borrower in the payment of interest
15 or principal or that the default has been rem-
16 edied.

17 (C) FORBEARANCE.—Nothing in this sub-
18 section precludes any forbearance by the holder
19 of the obligation for the benefit of the borrower
20 which may be agreed upon by the parties to the
21 obligation and approved by the Secretary.

22 (2) SUBROGATION.—

23 (A) IN GENERAL.—If the Secretary makes
24 a payment under paragraph (1), the Secretary
25 shall be subrogated to the rights, as specified in

1 the loan guarantee, of the recipient of the pay-
2 ment or related agreements including, if appro-
3 priate, the authority (notwithstanding any other
4 provision of law)—

5 (i) to complete, maintain, operate,
6 lease, or otherwise dispose of any property
7 acquired pursuant to such loan guarantee
8 or related agreement; or

9 (ii) to permit the borrower, pursuant
10 to an agreement with the Secretary, to
11 continue to pursue the purposes of the
12 project if the Secretary determines that
13 such an agreement is in the public interest.

14 (B) SUPERIORITY OF RIGHTS.—The rights
15 of the Secretary, with respect to any property
16 acquired pursuant to a loan guarantee or re-
17 lated agreements, shall be superior to the rights
18 of any other person with respect to the prop-
19 erty.

20 (3) NOTIFICATION.—If the borrower defaults
21 on an obligation, the Secretary shall notify the At-
22 torney General of the default.

23 (h) TERMS AND CONDITIONS.—A loan guarantee
24 under this section shall include such detailed terms and
25 conditions as the Secretary determines appropriate—

1 (1) to protect the interests of the United States
2 in the case of default; and

3 (2) to have available all the patents and tech-
4 nology necessary for any person selected, including
5 the Secretary, to complete and operate the project.

6 (i) CONSULTATION.—In establishing the terms and
7 conditions of a loan guarantee under this section, the Sec-
8 retary shall consult with the Secretary of the Treasury.

9 (j) FEES.—

10 (1) IN GENERAL.—The Secretary shall charge
11 and collect fees for loan guarantees in amounts the
12 Secretary determines are sufficient to cover applica-
13 ble administrative expenses.

14 (2) AVAILABILITY.—Fees collected under this
15 subsection shall—

16 (A) be deposited by the Secretary into the
17 Treasury of the United States; and

18 (B) remain available until expended, sub-
19 ject to such other conditions as are contained in
20 annual appropriations Acts.

21 (3) LIMITATION.—In charging and collecting
22 fees under paragraph (1), the Secretary shall take
23 into consideration the amount of the obligation.

24 (k) RECORDS.—

1 (1) IN GENERAL.—With respect to a loan guar-
2 antee under this section, the borrower, the lender,
3 and any other appropriate party shall keep such
4 records and other pertinent documents as the Sec-
5 retary shall prescribe by regulation, including such
6 records as the Secretary may require to facilitate an
7 effective audit.

8 (2) ACCESS.—The Secretary and the Comp-
9 troller General of the United States, or their duly
10 authorized representatives, shall have access to
11 records and other pertinent documents for the pur-
12 pose of conducting an audit.

13 (l) FULL FAITH AND CREDIT.—The full faith and
14 credit of the United States is pledged to the payment of
15 all loan guarantees issued under this section with respect
16 to principal and interest.

17 (m) REGULATIONS.—The Secretary shall issue final
18 regulations before making any loan guarantees under the
19 program. The regulations shall include—

20 (1) criteria that the Secretary shall use to de-
21 termine eligibility for loan guarantees under this sec-
22 tion, including—

23 (A) whether a borrower is a small- or me-
24 dium-sized business; and

1 (B) whether a borrower demonstrates that
2 a market exists for the product or that the
3 process will prove commercially successful;

4 (2) criteria that the Secretary shall use to de-
5 termine the amount of any fees charged under sub-
6 section (j), including criteria related to the amount
7 of the obligation;

8 (3) policies and procedures for selecting and
9 monitoring lenders and loan performance; and

10 (4) any other policies, procedures, or informa-
11 tion necessary to implement this section.

12 (n) AUDIT.—

13 (1) ANNUAL INDEPENDENT AUDITS.—The Sec-
14 retary shall enter into an arrangement with an inde-
15 pendent auditor for annual evaluations of the pro-
16 gram under this section.

17 (2) COMPTROLLER GENERAL REVIEW.—The
18 Comptroller General of the United States shall con-
19 duct a biennial review of the Secretary's execution of
20 the program under this section.

21 (3) REPORT.—The results of the independent
22 audit under paragraph (1) and the Comptroller Gen-
23 eral's review under paragraph (2) shall be provided
24 directly to the Committee on Science and Tech-
25 nology of the House of Representatives and the

1 Committee on Commerce, Science, and Transpor-
2 tation of the Senate.

3 (o) REPORT TO CONGRESS.—Concurrent with the
4 submission to Congress of the President’s annual budget
5 request in each year after the date of enactment of this
6 Act, the Secretary shall transmit to the Committee on
7 Science and Technology of the House of Representatives
8 and the Committee on Commerce, Science, and Transpor-
9 tation of the Senate a report containing a summary of
10 all activities carried out under this section.

11 (p) COORDINATION AND NONDUPLICATION.—To the
12 maximum extent practicable, the Secretary shall ensure
13 that the activities carried out under this section are co-
14 ordinated with, and do not duplicate the efforts of, other
15 loan guarantee programs within the Federal Government.

16 (q) MINIMIZING RISK.—The Secretary shall promul-
17 gate regulations and policies to carry out this section in
18 accordance with Office of Management and Budget Cir-
19 cular No. A-129, entitled “Policies for Federal Credit
20 Programs and Non-Tax Receivables”, as in effect on the
21 date of enactment of this Act.

22 (r) DEFINITIONS.—In this section:

23 (1) COST.—The term “cost” has the meaning
24 given such term under section 502 of the Federal
25 Credit Reform Act of 1990 (2 U.S.C. 661a).

1 (2) LOAN GUARANTEE.—The term “loan guar-
 2 antee” has the meaning given such term in section
 3 502 of the Federal Credit Reform Act of 1990 (2
 4 U.S.C. 661a). The term includes a loan guarantee
 5 commitment (as defined in section 502 of such Act
 6 (2 U.S.C. 661a)).

7 (3) OBLIGATION.—The term “obligation”
 8 means the loan or other debt obligation that is guar-
 9 anteed under this section.

10 (4) PROGRAM.—The term “program” means
 11 the loan guarantee program established in sub-
 12 section (a).

13 (s) AUTHORIZATION OF APPROPRIATIONS.—

14 (1) COST OF LOAN GUARANTEES.—There are
 15 authorized to be appropriated such sums as are nec-
 16 essary for each of fiscal years 2011 through 2015 to
 17 provide the cost of loan guarantees under this sec-
 18 tion.

19 (2) PRINCIPAL AND INTEREST.—There are au-
 20 thorized to be appropriated such sums as are nec-
 21 essary to carry out subsection (g).

○