

into careers in the natural gas and other petroleum exploration, development, and production science fields;

(B) enhance the teaching of advanced natural gas and other petroleum exploration, development, and production technologies;

(C) aggressively pursue collaboration opportunities with industry and the National Laboratories, including the National Energy Technology Laboratory;

(D) bolster or sustain natural gas and other petroleum exploration, development, and production infrastructure and research facilities of the institution of higher education, such as research and training or laboratories; and

(E) provide tuition assistance and stipends to undergraduate and graduate students.

**(f) Authorization of appropriations**

**(1) Hydrocarbon systems science program expansion grants for institutions of higher education**

There are authorized to be appropriated to carry out subsection (d)—

(A) \$3,500,000 for fiscal year 2008;

(B) \$6,500,000 for fiscal year 2009;

(C) \$9,500,000 for fiscal year 2010;

(D) \$9,800,000 for fiscal year 2011;

(E) \$10,000,000 for fiscal year 2012; and

(F) \$10,400,000 for fiscal year 2013.

**(2) Hydrocarbon systems science competitiveness grants for institutions of higher education**

There are authorized to be appropriated to carry out subsection (e)—

(A) \$3,000,000 for fiscal year 2008;

(B) \$5,500,000 for fiscal year 2009; and

(C) \$8,000,000 for fiscal year 2010.

(Pub. L. 110-69, title V, § 5005, Aug. 9, 2007, 121 Stat. 613; Pub. L. 111-358, title IX, § 902(b), Jan. 4, 2011, 124 Stat. 4044.)

AMENDMENTS

2011—Subsec. (b)(2)(J). Pub. L. 111-358, § 902(b)(1), added subpar. (J).

Subsec. (f)(1)(D) to (F). Pub. L. 111-358, § 902(b)(2), added subpars. (D) to (F).

**§ 16534. Department of Energy early career awards for science, engineering, and mathematics researchers**

**(a) Grant awards**

The Director of the Office of Science of the Department (referred to in this section as the “Director”) shall carry out a program to award grants to scientists and engineers at an early career stage at institutions of higher education and organizations described in subsection (c) to conduct research in fields relevant to the mission of the Department.

**(b) Amount and duration**

**(1) Amount**

The amount of a grant awarded under this section shall be—

(A) not less than \$80,000; and

(B) not more than \$125,000.

**(2) Duration**

The term of a grant awarded under this section shall be not more than 5 years.

**(c) Eligibility**

**(1) In general**

To be eligible to receive a grant under this section, an individual shall, as determined by the Director—

(A) subject to paragraph (2), have completed a doctorate or other terminal degree not more than 10 years before the date on which the proposal for a grant is submitted under subsection (e)(1);

(B) have demonstrated promise in a science, engineering, or mathematics field relevant to the missions of the Department; and

(C) be employed—

(i) in a tenure track-position as an assistant professor or equivalent title at an institution of higher education in the United States;

(ii) at an organization in the United States that is a nonprofit, nondegree-granting research organization such as a museum, observatory, or research laboratory; or

(iii) as a scientist at a National Laboratory.

**(2) Waiver**

Notwithstanding paragraph (1)(A), the Director may determine that an individual who has completed a doctorate more than 10 years before the date of submission of a proposal under subsection (e)(1) is eligible to receive a grant under this section if the individual was unable to conduct research for a period of time because of extenuating circumstances, including military service or family responsibilities, as determined by the Director.

**(d) Selection**

Grant recipients shall be selected on a competitive, merit-reviewed basis.

**(e) Selection process and criteria**

**(1) Proposal**

To be eligible to receive a grant under this section, an individual shall submit to the Director a proposal at such time, in such manner, and containing such information as the Director may require.

**(2) Evaluation**

In evaluating the proposals submitted under paragraph (1), the Director shall take into consideration, at a minimum—

(A) the intellectual merit of the proposed project;

(B) the innovative or transformative nature of the proposed research;

(C) the extent to which the proposal integrates research and education, including undergraduate education in science and engineering disciplines; and

(D) the potential of the applicant for leadership at the frontiers of knowledge.

**(f) Diversity requirement**

**(1) In general**

In awarding grants under this section, the Director shall endeavor to ensure that the grant recipients represent a variety of types of

institutions of higher education and nonprofit, nondegree-granting research organizations.

**(2) Requirement**

In support of the goal described in paragraph (1), the Director shall broadly disseminate information regarding the deadlines applicable to, and manner in which to submit, proposals for grants under this section, including by conducting outreach activities for—

(A) part B institutions, as defined in section 1061 of title 20; and

(B) minority institutions, as defined in section 1067k of title 20.

**(g) Report on recruiting and retaining early career science and engineering researchers at National Laboratories**

**(1) In general**

Not later than 90 days after August 9, 2007, the Director shall submit to the Committee on Science and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report describing efforts of the Director to recruit and retain young scientists and engineers at early career stages at the National Laboratories.

**(2) Inclusions**

The report under paragraph (1) shall include—

(A) a description of applicable Department and National Laboratory policies and procedures, including policies and procedures relating to financial incentives, awards, promotions, time reserved for independent research, access to equipment or facilities, and other forms of recognition, designed to attract and retain young scientists and engineers;

(B) an evaluation of the impact of the incentives described in subparagraph (A) on—

(i) the careers of young scientists and engineers at the National Laboratories; and

(ii) the quality of the research at the National Laboratories and in Department programs;

(C) a description of barriers, if any, that exist with respect to efforts to recruit and retain young scientists and engineers, including the limited availability of full-time equivalent positions, legal and procedural requirements, and pay grading systems; and

(D) the amount of funding devoted to efforts to recruit and retain young researchers, and the source of the funds.

**(h) Authorization of appropriations**

There is authorized to be appropriated to the Secretary, acting through the Director, to carry out this section \$25,000,000 for each of fiscal years 2008 through 2013.

(Pub. L. 110-69, title V, § 5006, Aug. 9, 2007, 121 Stat. 615; Pub. L. 111-358, title IX, § 902(c), Jan. 4, 2011, 124 Stat. 4045.)

AMENDMENTS

2011—Subsec. (h). Pub. L. 111-358 substituted “2013” for “2010”.

CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science,

Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

**§ 16535. Discovery science and engineering innovation institutes**

**(a) In general**

The Secretary shall establish distributed, multidisciplinary institutes (referred to in this section as “Institutes”) centered at National Laboratories to apply fundamental science and engineering discoveries to technological innovations relating to—

(1) the missions of the Department; and

(2) the global competitiveness of the United States.

**(b) Topical areas**

The Institutes shall support scientific and engineering research and education activities on critical emerging technologies determined by the Secretary to be essential to global competitiveness, including activities relating to—

(1) sustainable energy technologies;

(2) multiscale materials and processes;

(3) micro- and nano-engineering;

(4) computational and information engineering; and

(5) genomics and proteomics.

**(c) Partnerships**

In carrying out this section, the Secretary shall establish partnerships between the Institutes and—

(1) institutions of higher education—

(A) to train undergraduate and graduate science and engineering students;

(B) to develop innovative undergraduate and graduate educational curricula; and

(C) to conduct research within the topical areas described in subsection (b); and

(2) private industry to develop innovative technologies within the topical areas described in subsection (b).

**(d) Grants**

**(1) In general**

For each fiscal year, the Secretary may select not more than 3 Institutes to receive a grant under this section.

**(2) Merit-based selection**

The selection of Institutes under paragraph

(1) shall be—

(A) merit-based; and

(B) made through an open, competitive selection process.

**(3) Term**

An Institute shall receive a grant under this section for not more than 3 fiscal years.

**(e) Review**

The Secretary shall offer to enter into an agreement with the National Academy of Sciences under which the Academy shall, by not later than 3 years after August 9, 2007—

(1) review the performance of the Institutes under this section; and

(2) submit to Congress and the Secretary a report describing the results of the review.

**(f) Authorization of appropriations**

There is authorized to be appropriated to provide grants to each Institute selected under this