

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 section \$10,000,000 for each of fiscal years 2008 through 2010.

(Pub. L. 110-69, title V, §5008, Aug. 9, 2007, 121 Stat. 618.)

**§ 16536. Protecting America’s Competitive Edge (PACE) graduate fellowship program**

**(a) Definition of eligible student**

In this section, the term “eligible student” means a student who attends an institution of higher education that offers a doctoral degree in a field relevant to a mission area of the Department.

**(b) Establishment**

The Secretary shall establish a graduate fellowship program for eligible students pursuing a doctoral degree in a mission area of the Department.

**(c) Selection**

**(1) In general**

The Secretary shall award fellowships to eligible students under this section through a competitive merit review process, involving written and oral interviews, that will result in a wide distribution of awards throughout the United States, as determined by the Secretary.

**(2) Criteria**

The Secretary shall establish selection criteria for awarding fellowships under this section that require an eligible student—

- (A) to pursue a field of science or engineering of importance to a mission area of the Department;
- (B) to demonstrate to the Secretary—
  - (i) the capacity of the eligible student to understand technical topics relating to the fellowship that can be derived from the first principles of the technical topics;
  - (ii) imagination and creativity;
  - (iii) leadership skills in organizations or intellectual endeavors, demonstrated through awards and past experience; and
  - (iv) excellent verbal and communication skills to explain, defend, and demonstrate an understanding of technical subjects relating to the fellowship; and
- (C) to be a citizen or legal permanent resident of the United States.

**(d) Awards**

**(1) Amount**

A fellowship awarded under this section shall—

- (A) provide an annual living stipend; and
- (B) cover—
  - (i) graduate tuition at an institution of higher education described in subsection (a); and
  - (ii) incidental expenses associated with curricula and research at the institution of higher education (including books, computers, and software).

**(2) Duration**

A fellowship awarded under this section shall be up to 3 years duration within a 5-year period.

**(3) Portability**

A fellowship awarded under this section shall be portable with the eligible student.

**(e) Administration**

The Secretary, acting through the Director of Science, Engineering, and Mathematics Education—

(1) shall administer the program established under this section; and

(2) may enter into a contract with a non-profit entity to administer the program, including the selection and award of fellowships.

**(f) Authorization of appropriations**

There are authorized to be appropriated to carry out this section—

- (1) \$7,500,000 for fiscal year 2008;
- (2) \$12,000,000 for fiscal year 2009, including nonexpiring fellowships for the preceding fiscal year;
- (3) \$20,000,000 for fiscal year 2010, including nonexpiring fellowships for preceding fiscal years;
- (4) \$20,600,000 for fiscal year 2011;
- (5) \$21,200,000 for fiscal year 2012; and
- (6) \$21,900,000 for fiscal year 2013.

(Pub. L. 110-69, title V, §5009, Aug. 9, 2007, 121 Stat. 618; Pub. L. 111-358, title IX, §902(d), Jan. 4, 2011, 124 Stat. 4045.)

AMENDMENTS

2011—Subsec. (f)(4) to (6). Pub. L. 111-358 added pars. (4) to (6).

**§ 16537. Distinguished scientist program**

**(a) Purpose**

The purpose of this section is to promote scientific and academic excellence through collaborations between institutions of higher education and National Laboratories.

**(b) Establishment**

The Secretary shall establish a program to support the joint appointment of distinguished scientists by institutions of higher education and National Laboratories.

**(c) Qualifications**

To be eligible for appointment as a distinguished scientist under this section, an individual, by reason of professional background and experience, shall be able to bring international recognition to the appointing institution of higher education or National Laboratory in the field of scientific endeavor of the individual.

**(d) Selection**

A distinguished scientist appointed under this section shall be selected through an open, competitive process.

**(e) Appointment**

**(1) Institution of higher education**

An appointment by an institution of higher education under this section shall be filled within the tenure allotment of the institution of higher education, at a minimum rank of professor.

**(2) National Laboratory**

An appointment by a National Laboratory under this section shall be at the rank of the highest grade of distinguished scientist or technical staff of the National Laboratory.

**(f) Duration**

An appointment under this section shall—

- (1) be for a term of 6 years; and
- (2) consist of 2 3-year funding allotments.

**(g) Use of funds**

Funds made available under this section may be used for—

- (1) the salary of the distinguished scientist and support staff;
- (2) undergraduate, graduate, and post-doctoral appointments;
- (3) research-related equipment;
- (4) professional travel; and
- (5) such other requirements as the Secretary determines to be necessary to carry out the purpose of the program.

**(h) Review**

**(1) In general**

The appointment of a distinguished scientist under this section shall be reviewed at the end of the first 3-year allotment for the distinguished scientist through an open peer-review process to determine whether the appointment is meeting the purpose of this section under subsection (a).

**(2) Funding**

Funding of the appointment of the distinguished scientist for the second 3-year allotment shall be determined based on the review conducted under paragraph (1).

**(i) Cost sharing**

To be eligible for assistance under this section, an appointing institution of higher education shall pay at least 50 percent of the total costs of the appointment.

**(j) Authorization of appropriations**

There are authorized to be appropriated to carry out this section—

- (1) \$15,000,000 for fiscal year 2008;
- (2) \$20,000,000 for fiscal year 2009;
- (3) \$30,000,000 for fiscal year 2010;
- (4) \$31,000,000 for fiscal year 2011;
- (5) \$32,000,000 for fiscal year 2012; and
- (6) \$33,000,000 for fiscal year 2013.

(Pub. L. 110-69, title V, §5011, Aug. 9, 2007, 121 Stat. 620; Pub. L. 111-358, title IX, §902(e), Jan. 4, 2011, 124 Stat. 4045.)

AMENDMENTS

2011—Subsec. (j)(4) to (6). Pub. L. 111-358 added pars. (4) to (6).

**§ 16538. Advanced Research Projects Agency—Energy**

**(a) Definitions**

In this section:

**(1) ARPA-E**

The term “ARPA-E” means the Advanced Research Projects Agency—Energy established by subsection (b).

**(2) Director**

The term “Director” means the Director of ARPA-E appointed under subsection (d).

**(3) Fund**

The term “Fund” means the Energy Transformation Acceleration Fund established under subsection (n)(1).

**(b) Establishment**

There is established the Advanced Research Projects Agency—Energy within the Depart-