(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 nonprofit 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 Department to overcome the long-term and high-risk technological barriers in the development of energy technologies.

(c) Goals

(1) In general

The goals of ARPA-E shall be—

(A) to enhance the economic and energy security of the United States through the development of energy technologies that result in—

(i) reductions of imports of energy from foreign sources;

(ii) reductions of energy-related emissions, including greenhouse gases; and

(iii) improvement in the energy efficiency of all economic sectors; and

(B) to ensure that the United States maintains a technological lead in developing and deploying advanced energy technologies.

(2) Means

ARPA-E shall achieve the goals established under paragraph (1) through energy technology projects by—

(A) identifying and promoting revolutionary advances in fundamental and applied sciences;

(B) translating scientific discoveries and cutting-edge inventions into technological innovations; and

(C) accelerating transformational technological advances in areas that industry by itself is not likely to undertake because of technical and financial uncertainty.

(d) Director

(1) Appointment

There shall be in the Department of Energy a Director of ARPA-E, who shall be appointed by the President, by and with the advice and consent of the Senate.

(2) Qualifications

The Director shall be an individual who, by reason of professional background and experience, is especially qualified to advise the Secretary on, and manage research programs addressing, matters pertaining to long-term and high-risk technological barriers to the development of energy technologies.

(3) Relationship to Secretary

The Director shall report to the Secretary.

(4) Relationship to other programs

No other programs within the Department shall report to the Director.

(e) Responsibilities

The responsibilities of the Director shall include—

(1) approving all new programs within ARPA-E;

(2) developing funding criteria and assessing the success of programs through the establishment of technical milestones;

(3) administering the Fund through awards to institutions of higher education, companies, research foundations, trade and industry research collaborations, or consortia of such entities, which may include federally-funded research and development centers, to achieve the goals described in subsection (c) through targeted acceleration of—

(A) novel early-stage energy research with possible technology applications;

(B) development of techniques, processes, and technologies, and related testing and evaluation;

(C) research and development of advanced manufacturing process and technologies for the domestic manufacturing of novel energy technologies; and

(D) coordination with nongovernmental entities for demonstration of technologies and research applications to facilitate technology transfer;

(4) terminating programs carried out under this section that are not achieving the goals of the programs; and

(5) pursuant to subsection (c)(2)(C)—

(A) ensuring that applications for funding disclose the extent of current and prior efforts, including monetary investments as appropriate, in pursuit of the technology area for which funding is being requested;

(B) adopting measures to ensure that, in making awards, program managers adhere to the purposes of subsection (c)(2)(C); and

(C) providing as part of the annual report required by subsection (h)(1) a summary of the instances of and reasons for ARPA–E funding projects in technology areas already being undertaken by industry.