

numbers of marginal oil and natural gas wells to conduct an annual study of low-volume natural gas reservoirs.

**(2) Organization with no GIS capabilities**

If an organization receiving a grant under paragraph (1) does not have GIS capabilities, the organization shall contract with an institution of higher education with GIS capabilities.

**(3) State geologists**

The organization receiving a grant under paragraph (1) shall collaborate with the State geologist of each State being studied.

**(f) Public information**

The Secretary may use the data collected and analyzed under this section to produce maps and literature to disseminate to States to promote conservation of natural gas reserves.

(Pub. L. 109–58, title IX, §966, Aug. 8, 2005, 119 Stat. 893.)

**§ 16297. Complex Well Technology Testing Facility**

The Secretary, in coordination with industry leaders in extended research drilling technology, shall establish a Complex Well Technology Testing Facility at the Rocky Mountain Oilfield Testing Center to increase the range of extended drilling technologies.

(Pub. L. 109–58, title IX, §967, Aug. 8, 2005, 119 Stat. 894.)

PART G—SCIENCE

**§ 16311. Science**

**(a) In general**

The Secretary shall conduct, through the Office of Science, programs of research, development, demonstration, and commercial application in high energy physics, nuclear physics, biological and environmental research, basic energy sciences, advanced scientific computing research, and fusion energy sciences, including activities described in this part. The programs shall include support for facilities and infrastructure, education, outreach, information, analysis, and coordination activities.

**(b) Authorization of appropriations**

There are authorized to be appropriated to the Secretary to carry out research, development, demonstration, and commercial application activities of the Office of Science, including activities authorized under this part (including the amounts authorized under the amendment made by section 976(b)<sup>1</sup> and including basic energy sciences, advanced scientific and computing research, biological and environmental research, fusion energy sciences, high energy physics, nuclear physics, research analysis, and infrastructure support)—

- (1) \$4,153,000,000 for fiscal year 2007;
- (2) \$4,586,000,000 for fiscal year 2008;
- (3) \$5,200,000,000 for fiscal year 2009;
- (4) \$5,814,000,000 for fiscal year 2010;
- (5) \$5,247,000,000 for fiscal year 2011;

- (6) \$5,614,000,000 for fiscal year 2012; and
- (7) \$6,007,000,000 for fiscal year 2013.

**(c) Allocations**

From amounts authorized under subsection (b), the following sums are authorized:

(1) For activities under the Fusion Energy Sciences program (including activities under section 16312 of this title)—

- (A) \$355,500,000 for fiscal year 2007;
- (B) \$369,500,000 for fiscal year 2008;
- (C) \$384,800,000 for fiscal year 2009; and
- (D) in addition to the amounts authorized under subparagraphs (A), (B), and (C), such sums as may be necessary for ITER construction, consistent with the limitations of section 16312(c)(5) of this title.

(2) For activities under the catalysis research program under section 16313 of this title—

- (A) \$36,500,000 for fiscal year 2007;
- (B) \$38,200,000 for fiscal year 2008; and
- (C) such sums as may be necessary for fiscal year 2009.

(3) For activities under the Systems Biology Program under section 16317 of this title such sums as may be necessary for each of fiscal years 2007 through 2009.

(4) For activities under the Energy and Water Supplies program under section 16319 of this title, \$30,000,000 for each of fiscal years 2007 through 2009.

(5) For the energy research fellowships programs under section 16324 of this title, \$40,000,000 for each of fiscal years 2007 through 2009.

(6) For the advanced scientific computing activities under section 976—<sup>1</sup>

- (A) \$270,000,000 for fiscal year 2007;
- (B) \$350,000,000 for fiscal year 2008; and
- (C) \$375,000,000 for fiscal year 2009.

(7) For the science and engineering education pilot program under section 16323 of this title—

- (A) \$4,000,000 for each of fiscal years 2007 and 2008; and
- (B) \$8,000,000 for fiscal year 2009.

**(d) Integrated bioenergy research and development**

In addition to amounts otherwise authorized by this section, there are authorized to be appropriated to the Secretary for integrated bioenergy research and development programs, projects, and activities, \$49,000,000 for each of the fiscal years 2005 through 2009. Activities funded under this subsection shall be coordinated with ongoing related programs of other Federal agencies, including the Plant Genome Program of the National Science Foundation. Of the funds authorized under this subsection, at least \$5,000,000 for each fiscal year shall be for training and education targeted to minority and socially disadvantaged farmers and ranchers.

(Pub. L. 109–58, title IX, §971, Aug. 8, 2005, 119 Stat. 898; Pub. L. 110–69, title V, §5007, Aug. 9, 2007, 121 Stat. 617; Pub. L. 111–358, title IX, §903, Jan. 4, 2011, 124 Stat. 4045.)

REFERENCES IN TEXT

This part, referred to in subsecs. (a) and (b), was in the original “this subtitle”, meaning subtitle G

<sup>1</sup> See References in Text note below.

(§§971–984A) of title IX of Pub. L. 109–58, Aug. 8, 2005, 119 Stat. 898, which enacted this part and amended section 5523 of Title 15, Commerce and Trade. For complete classification of subtitle G to the Code, see Tables.

Section 976, referred to in subsecs. (b) and (c)(6), is section 976 of Pub. L. 109–58. Subsection (a) of section 976 is classified to section 16316 of this title and subsection (b) of section 976 amended section 5523 of Title 15, Commerce and Trade.

#### AMENDMENTS

2011—Subsec. (b)(5) to (7). Pub. L. 111–358 added pars. (5) to (7).

2007—Subsec. (b)(4). Pub. L. 110–69 added par. (4).

### § 16312. Fusion energy sciences program

#### (a) Declaration of policy

It shall be the policy of the United States to conduct research, development, demonstration, and commercial applications to provide for the scientific, engineering, and commercial infrastructure necessary to ensure that the United States is competitive with other countries in providing fusion energy for its own needs and the needs of other countries, including by demonstrating electric power or hydrogen production for the United States energy grid using fusion energy at the earliest date.

#### (b) Planning

##### (1) In general

Not later than 180 days after August 8, 2005, the Secretary shall submit to Congress a plan (with proposed cost estimates, budgets, and lists of potential international partners) for the implementation of the policy described in subsection (a) in a manner that ensures that—

(A) existing fusion research facilities are more fully used;

(B) fusion science, technology, theory, advanced computation, modeling, and simulation are strengthened;

(C) new magnetic and inertial fusion research and development facilities are selected based on scientific innovation and cost effectiveness, and the potential of the facilities to advance the goal of practical fusion energy at the earliest date practicable;

(D) facilities that are selected are funded at a cost-effective rate;

(E) communication of scientific results and methods between the fusion energy science community and the broader scientific and technology communities is improved;

(F) inertial confinement fusion facilities are used to the extent practicable for the purpose of inertial fusion energy research and development;

(G) attractive alternative inertial and magnetic fusion energy approaches are more fully explored; and

(H) to the extent practicable, the recommendations of the Fusion Energy Sciences Advisory Committee in the report on workforce planning, dated March 2004, are carried out, including periodic reassessment of program needs.

##### (2) Costs and schedules

The plan shall also address the status of and, to the extent practicable, costs and schedules for—

(A) the design and implementation of international or national facilities for the testing of fusion materials; and

(B) the design and implementation of international or national facilities for the testing and development of key fusion technologies.

### (c) United States participation in ITER

#### (1) Definitions

In this subsection:

##### (A) Construction

###### (i) In general

The term “construction” means—

(I) the physical construction of the ITER facility; and

(II) the physical construction, purchase, or manufacture of equipment or components that are specifically designed for the ITER facility.

###### (ii) Exclusions

The term “construction” does not include the design of the facility, equipment, or components.

##### (B) ITER

The term “ITER” means the international burning plasma fusion research project in which the President announced United States participation on January 30, 2003, or any similar international project.

#### (2) Participation

The United States may participate in the ITER only in accordance with this subsection.

#### (3) Agreement

##### (A) In general

The Secretary may negotiate an agreement for United States participation in the ITER.

##### (B) Contents

Any agreement for United States participation in the ITER shall, at a minimum—

(i) clearly define the United States financial contribution to construction and operating costs, as well as any other costs associated with a project;

(ii) ensure that the share of high-technology components of the ITER manufactured in the United States is at least proportionate to the United States financial contribution to the ITER;

(iii) ensure that the United States will not be financially responsible for cost overruns in components manufactured in other ITER participating countries;

(iv) guarantee the United States full access to all data generated by the ITER;

(v) enable United States researchers to propose and carry out an equitable share of the experiments at the ITER;

(vi) provide the United States with a role in all collective decisionmaking related to the ITER; and

(vii) describe the process for discontinuing or decommissioning the ITER and any United States role in that process.

#### (4) Plan

##### (A) Development

The Secretary, in consultation with the Fusion Energy Sciences Advisory Commit-