Congress a research plan describing how the program authorized pursuant to this section will be undertaken to accomplish the program goals established in subsection (b).

(2) Review of plan

The Secretary shall contract with the National Academy of Sciences to review the research plan developed under this subsection. The Secretary shall transmit the review to Congress not later than 18 months after transmittal of the research plan under paragraph (1), along with the Secretary's response to the recommendations contained in the review.

(d) User facilities and ancillary equipment

Within the funds authorized to be appropriated pursuant to this part, amounts shall be available for projects to develop, plan, construct, acquire, or operate special equipment, instrumentation, or facilities, including user facilities at National Laboratories, for researchers conducting research, development, demonstration, and commercial application in systems biology and proteomics and associated biological disciplines.

(e) Prohibition on biomedical and human cell and human subject research

(1) No biomedical research

In carrying out the program under this section, the Secretary shall not conduct biomedical research.

(2) Limitations

Nothing in this section shall authorize the Secretary to conduct any research or demonstrations—

- (A) on human cells or human subjects; or
- (B) designed to have direct application with respect to human cells or human subjects

(f) Bioenergy research centers

(1) Establishment of centers

In carrying out the program under subsection (a), the Secretary shall establish at least 7 bioenergy research centers, which may be of varying size.

${\bf (2)} \,\, {\bf Geographic} \,\, {\bf distribution}$

The Secretary shall establish at least 1 bioenergy research center in each Petroleum Administration for Defense District or Subdistrict of a Petroleum Administration for Defense District.

(3) Goals

The goals of the centers established under this subsection shall be to accelerate basic transformational research and development of biofuels, including biological processes.

(4) Selection and duration

(A) In general

A center under this subsection shall be selected on a competitive basis for a period of 5 years.

(B) Reapplication

After the end of the period described in subparagraph (A), a grantee may reapply for selection on a competitive basis.

(5) Inclusion

A center that is in existence on December 19, 2007—

- (A) shall be counted towards the requirement for establishment of at least 7 bioenergy research centers; and
- (B) may continue to receive support for a period of 5 years beginning on the date of establishment of the center.

(Pub. L. 109-58, title IX, §977, Aug. 8, 2005, 119 Stat. 903; Pub. L. 110-140, title II, §§232(a), 233, Dec. 19, 2007, 121 Stat. 1537.)

Editorial Notes

REFERENCES IN TEXT

This part, referred to in subsec. (d), was in the original "this subtitle", meaning subtitle G (§§ 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.

AMENDMENTS

2007—Subsec. (a)(1). Pub. L. 110–140, \$232(a)(1), substituted "computational biology, and environmental science" for "and computational biology".

Subsec. (b)(1). Pub. L. 110–140, §232(a)(2)(A), inserted "in sustainable production systems that reduce greenhouse gas emissions" after "hydrogen".

Subsec. (b)(4), (5). Pub. L. 110–140, §232(a)(2)(B)–(D), added par. (4) and redesignated former par. (4) as (5). Subsec. (f). Pub. L. 110–140, §233, added subsec. (f).

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE OF 2007 AMENDMENT

Amendment by Pub. L. 110–140 effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as an Effective Date note under section 1824 of Title 2, The Congress.

\$ 16318. Fission and fusion energy materials research program

(a) In general

Along with the budget request of the President submitted to Congress for fiscal year 2007, the Secretary shall establish a research and development program on material science issues presented by advanced fission reactors and the fusion energy program of the Department.

(b) Administration

In carrying out the program, the Secretary shall develop—

- (1) a catalog of material properties required for applications described in subsection (a);
- (2) theoretical models for materials possessing the required properties;
- (3) benchmark models against existing data; and
- (4) a roadmap to guide further research and development in the area covered by the program

(Pub. L. 109–58, title IX, §978, Aug. 8, 2005, 119 Stat. 904.)

§ 16319. Energy and water supplies

(a) In general

The Secretary shall carry out a program of research, development, demonstration, and commercial application to—