

gas intensity reducing technology study report submitted under subsection (e)(2), and reports under subsection (f)(3), if any, the Committee shall develop recommendations that would provide for the removal of domestic barriers to the commercialization and deployment of greenhouse gas intensity reducing technologies and practices.

**(2) Requirements**

In developing the recommendations under paragraph (1), the Committee shall consider in the aggregate—

- (A) the cost-effectiveness of the technology;
- (B) fiscal and regulatory barriers;
- (C) statutory and other barriers; and
- (D) intellectual property issues.

**(3) Demonstration projects**

In developing recommendations under paragraph (1), the Committee may identify the need for climate change technology demonstration projects.

**(4) Report**

Not later than 18 months after August 8, 2005, the Committee shall submit to the President and Congress a report that—

- (A) identifies, based on the report submitted under subsection (f)(3), any barriers to, and commercial risks associated with, the deployment of greenhouse gas intensity reducing technologies; and
- (B) includes a plan for carrying out demonstration projects.

**(5) Updates**

The Committee shall—

- (A) at the time of submission of the report to Congress under paragraph (4), also make the report available to the public; and
- (B) update the report every 5 years, or more frequently as the Committee determines to be necessary.

**(h) Procedures for calculating, monitoring, and analyzing greenhouse gas intensity**

The Secretary, in collaboration with the Committee and the National Institute of Standards and Technology, and after public notice and opportunity for comment, shall develop standards and best practices for calculating, monitoring, and analyzing greenhouse gas intensity.

**(i) Demonstration projects**

**(1) In general**

The Secretary shall, subject to the availability of appropriations, support demonstration projects that—

- (A) increase the reduction of the greenhouse gas intensity to levels below that which would be achieved by technologies being used in the United States as of August 8, 2005;
- (B) maximize the potential return on Federal investment;
- (C) demonstrate distinct roles in public-private partnerships;
- (D) produce a large-scale reduction of greenhouse gas intensity if commercialization occurred; and
- (E) support a diversified portfolio to mitigate the uncertainty associated with a single technology.

**(2) Cost sharing**

In supporting a demonstration project under this subsection, the Secretary shall require cost-sharing in accordance with section 16352 of this title.

**(3) Authorization of appropriations**

There are authorized to be appropriated such sums as are necessary to carry out this subsection.

**(j) Cooperative research and development agreements**

In carrying out greenhouse gas intensity reduction research and technology deployment activities under this subtitle,<sup>2</sup> the Secretary may enter into cooperative research and development agreements under section 3710a of title 15.

(Pub. L. 102-486, title XVI, §1610, as added Pub. L. 109-58, title XVI, §1601, Aug. 8, 2005, 119 Stat. 1109.)

**Editorial Notes**

REFERENCES IN TEXT

Section 15801(3) of this title, referred to in subsec. (a)(7), was in the original "section 3(3) of the Energy Policy Act of 2005" and was translated as meaning section 2(3) of that Act to reflect the probable intent of Congress, because the Energy Policy Act of 2005 does not contain a section 3 and section 2(3) defines "National Laboratory".

This subtitle, referred to in subsec. (j), appearing in the original, is unidentifiable because title XVI of Pub. L. 102-486, of which this section is a part, does not contain subtitles.

SUBCHAPTER VIII—REDUCTION OF OIL VULNERABILITY

**§ 13401. Goals**

It is the goal of the United States in carrying out energy supply and energy conservation research and development—

- (1) to strengthen national energy security by reducing dependence on imported oil;
- (2) to increase the efficiency of the economy by meeting future needs for energy services at the lowest total cost to the Nation, including environmental costs, giving comparable consideration to technologies that enhance energy supply and technologies that improve the efficiency of energy end uses;
- (3) to reduce the air, water, and other environmental impacts (including emissions of greenhouse gases) of energy production, distribution, transportation, and utilization, through the development of an environmentally sustainable energy system;
- (4) to maintain the technological competitiveness of the United States and stimulate economic growth through the development of advanced materials and technologies;
- (5) to foster international cooperation by developing international markets for domestically produced sustainable energy technologies, and by transferring environmentally sound, advanced energy systems and technologies to developing countries to promote sustainable development;

<sup>2</sup> So in original. See References in Text note below.

(6) to consider the comparative environmental and public health impacts of the energy to be produced or saved by the specific activities;

(7) to consider the obstacles inherent in private industry's development of new energy technologies and steps necessary for establishing or maintaining technological leadership in the area of energy and energy efficiency resource technologies; and

(8) to consider the contribution of a given activity to fundamental scientific knowledge.

(Pub. L. 102-486, title XX, §2001, Oct. 24, 1992, 106 Stat. 3057.)

PART A—OIL AND GAS SUPPLY ENHANCEMENT

**§ 13411. Enhanced oil recovery**

**(a) Program direction**

The Secretary shall conduct a 5-year program, in accordance with sections 13541 and 13542 of this title, on technologies to increase the recoverability of domestic oil resources to—

- (1) improve reservoir characterization;
- (2) improve analysis and field verification;
- (3) field test and demonstrate enhanced oil recovery processes, including advanced processes, in reservoirs the Secretary considers to be of high priority, ranked primarily on the basis of oil recovery potential and risk of abandonment;
- (4) transfer proven recovery technologies to producers and operators of wells, including stripper wells, that would otherwise be likely to be abandoned in the near term due to declining production;
- (5) improve enhanced oil recovery process technology for more economic and efficient oil production;
- (6) identify and develop new recovery technologies;
- (7) study reservoir properties and how they affect oil recovery from porous media;
- (8) improve techniques for meeting environmental requirements;
- (9) improve data bases of reservoir and environmental conditions; and
- (10) lower lifting costs on stripper wells by utilizing advanced renewable energy technologies such as small wind turbines and others.

**(b) Program goals**

**(1) Near-term priorities**

The near-term priorities of the program include preserving access to high potential reservoirs, identifying available technologies that can extend the lifetime of wells and of stripper well property, and developing environmental field operations for waste disposal and injection practices.

**(2) Mid-term priorities**

The mid-term priorities of the program include developing and testing identified but unproven technologies, and transferring those technologies for widespread use.

**(3) Long-term priorities**

The long-term priorities of the program include developing advanced techniques to recover oil not recoverable by other techniques.

**(c) Accelerated program plan**

Within 180 days after October 24, 1992, the Secretary shall prepare and submit to the Congress a plan for carrying out under this section the accelerated field testing of technologies to achieve the priorities stated in subsection (b). In preparing the plan, the Secretary shall consult with appropriate representatives of industry, institutions of higher education, Federal agencies, including national laboratories, and professional and technical societies, and with the Advisory Board established under section 13522 of this title.

**(d) Proposals**

Within 1 year after October 24, 1992, the Secretary shall solicit proposals for conducting activities under this section.

**(e) Consultation**

In carrying out the provisions of this section, the Secretary shall consult representatives of the oil and gas industry with respect to innovative research and development proposals to improve oil and gas recovery and shall consider relevant technical data from industry and other research and information centers and institutes.

**(f) Authorization of appropriations**

There are authorized to be appropriated to the Secretary for carrying out this section, including advanced extraction and process technology, \$57,250,000 for fiscal year 1993 and \$70,000,000 for fiscal year 1994.

(Pub. L. 102-486, title XX, §2011, Oct. 24, 1992, 106 Stat. 3057.)

**§ 13412. Oil shale**

**(a) Program direction**

The Secretary shall conduct a 5-year program, in accordance with sections 13541 and 13542 of this title, on oil shale extraction and conversion, including research and development on both eastern and western shales, as provided in this section.

**(b) Program goals**

The goals of the program established under this section include—

- (1) supporting the development of economically competitive and environmentally acceptable technologies to produce domestic supplies of liquid fuels from oil shale;
- (2) increasing knowledge of environmentally acceptable oil shale waste disposal technologies and practices;
- (3) increasing knowledge of the chemistry and kinetics of oil shale retorting;
- (4) increasing understanding of engineering issues concerning the design and scale-up of oil shale extraction and conversion technologies;
- (5) improving techniques for oil shale mining systems; and
- (6) providing for cooperation with universities and other private sector entities.

**(c) Eastern oil shale program**

(1) As part of the program authorized by this section, the Secretary shall carry out a program on oil shale that includes applied research, in