

with the Agreement on Subsidies and Countervailing Measures referred to in section 3511(d)(12) of title 19.

(Pub. L. 101-566, §104, Nov. 15, 1990, 104 Stat. 2798; Pub. L. 104-271, title I, §103(a), Oct. 9, 1996, 110 Stat. 3305.)

#### AMENDMENTS

1996—Pub. L. 104-271 amended section generally, substituting present provisions for provisions which stated in subsec. (a) the Secretary was to conduct a research and development program for development of a domestic hydrogen fuel production capability; subsec. (b) attention was to be given to research of critical technical issues; subsec. (c) renewable energy priority; subsec. (d) new technologies; and subsec. (e) gathering and dissemination of information to support research and development efforts.

#### FUEL CELLS

Title II of Pub. L. 104-271 provided that:

“SEC. 201. INTEGRATION OF FUEL CELLS WITH HYDROGEN PRODUCTION SYSTEMS.

“(a) Not later than 180 days after the date of enactment of this section [Oct. 9, 1996], and subject to the availability of appropriations made specifically for this section, the Secretary of Energy shall solicit proposals for projects to prove the feasibility of integrating fuel cells with—

“(1) photovoltaic systems for hydrogen production; or

“(2) systems for hydrogen production from solid waste via gasification or steam reforming.

“(b) Each proposal submitted in response to the solicitation under this section shall be evaluated on a competitive basis using peer review. The Secretary is not required to make an award under this section in the absence of a meritorious proposal. [sic]

“(c) The Secretary shall give preference, in making an award under this section, to proposals that—

“(1) are submitted jointly from consortia including academic institutions, industry, State or local governments, and Federal laboratories; and

“(2) reflect proven experience and capability with technologies relevant to the systems described in subsections (a)(1) and (a)(2).

“(d) In the case of a proposal involving development or demonstration, the Secretary shall require a commitment from non-Federal sources of at least 50 percent of the cost of the development or demonstration portion of the proposal.

“(e) The Secretary shall establish, after consultation with other Federal agencies, terms and conditions under which Federal funding will be provided under this title that are consistent with the Agreement on Subsidies and Countervailing Measures referred to in section 101(d)(12) of the Uruguay Round Agreement Act (19 U.S.C. 3511(d)(12)).

“SEC. 202. AUTHORIZATION OF APPROPRIATIONS.

“There are authorized to be appropriated, for activities under this section [title], a total of \$50,000,000 for fiscal years 1997 and 1998, to remain available until September 30, 1999.”

### § 12404. Demonstrations

#### (a) Requirement

The Secretary shall conduct demonstrations of critical technologies, preferably in self-contained locations, so that technical and non-technical parameters can be evaluated to best determine commercial applicability of the technology.

#### (b) Small-scale demonstrations

Concurrently with activities conducted pursuant to section 12403 of this title, the Secretary

shall conduct small-scale demonstrations of hydrogen technology at self-contained sites.

#### (c) Non-Federal funding

The Secretary shall require a commitment from non-Federal sources of at least 50 percent of the cost of any demonstration conducted under this section.

(Pub. L. 101-566, §105, Nov. 15, 1990, 104 Stat. 2799; Pub. L. 104-271, title I, §104, Oct. 9, 1996, 110 Stat. 3306.)

#### AMENDMENTS

1996—Subsec. (c). Pub. L. 104-271 added subsec. (c).

### § 12405. Technology transfer program

#### (a) Program

The Secretary shall conduct a program designed to accelerate wider application of hydrogen production, storage, utilization, and other technologies available in near term as a result of aerospace experience as well as other research progress by transferring critical technologies to the private sector. The Secretary shall direct the program with the advice and assistance of the Hydrogen Technical Advisory Panel established under section 12407 of this title. The objective in seeking this advice is to increase participation of private industry in the demonstration of near commercial applications through cooperative research and development arrangements, joint ventures or other appropriate arrangements involving the private sector.

#### (b) Information

The Secretary, in carrying out the program authorized by subsection (a) of this section, shall—

(1) undertake an inventory and assessment of hydrogen technologies and their commercial capability to economically produce, store, or utilize hydrogen in aerospace, transportation, electric utilities, petrochemical, chemical, merchant hydrogen, and other industrial sectors; and

(2) develop a National Aeronautics Space Administration, Department of Energy, and industry information exchange program to improve technology transfer for—

(A) application of aerospace experience by industry;

(B) application of research progress by industry and aerospace;

(C) application of commercial capability of industry by aerospace; and

(D) expression of industrial needs to research organizations.

The information exchange program may consist of workshops, publications, conferences, and a data base for the use by the public and private sectors. The Secretary shall also foster the exchange of generic, nonproprietary information and technology, developed pursuant to this chapter, among industry, academia, and the Federal Government, to help the United States economy attain the economic benefits of this information and technology.

(Pub. L. 101-566, §106, Nov. 15, 1990, 104 Stat. 2799; Pub. L. 104-271, title I, §105, Oct. 9, 1996, 110 Stat. 3306.)

## AMENDMENTS

1996—Subsec. (b). Pub. L. 104-271 inserted at end “The Secretary shall also foster the exchange of generic, nonproprietary information and technology, developed pursuant to this chapter, among industry, academia, and the Federal Government, to help the United States economy attain the economic benefits of this information and technology.”

**§ 12406. Coordination and consultation****(a) Secretary’s responsibility**

The Secretary shall have overall management responsibility for carrying out programs under this chapter. In carrying out such programs, the Secretary, consistent with such overall management responsibility—

(1) shall use the expertise of the National Aeronautics and Space Administration and the Department of Transportation; and

(2) may use the expertise of any other Federal agency in accordance with subsection (b) of this section in carrying out any activities under this chapter,<sup>1</sup> to the extent that the Secretary determines that any such agency has capabilities which would allow such agency to contribute to the purpose of this chapter.

**(b) Assistance**

The Secretary may, in accordance with subsection (a) of this section, obtain the assistance of any department, agency, or instrumentality of the Executive branch of the Federal Government upon written request, on a reimbursable basis or otherwise and with the consent of such department, agency, or instrumentality. Each such request shall identify the assistance the Secretary deems necessary to carry out any duty under this chapter.

**(c) Consultation**

The Secretary shall consult with the Administrator of the National Aeronautics and Space Administration, the Administrator of the Environmental Protection Agency, the Secretary of Transportation, and the Hydrogen Technical Advisory Panel established under section 12407 of this title in carrying out his authorities pursuant to this chapter.

(Pub. L. 101-566, §107, Nov. 15, 1990, 104 Stat. 2800.)

## REFERENCES IN TEXT

This chapter, the first time appearing in subsec. (a)(2), was in the original “this title”, and was translated as reading “this Act” meaning Pub. L. 101-566, to reflect the probable intent of Congress, because Pub. L. 101-566 is not divided into titles.

**§ 12407. Technical panel****(a) Establishment**

There is hereby established the Hydrogen Technical Advisory Panel (the “technical panel”), to advise the Secretary on the programs under this chapter.

**(b) Membership**

The technical panel shall be appointed by the Secretary and shall be comprised of such rep-

resentatives from domestic industry, universities, professional societies, Government laboratories, financial, environmental, and other organizations as the Secretary deems appropriate based on his assessment of the technical and other qualifications of such representatives. Appointments to the technical panel shall be made within 90 days after November 15, 1990. The technical panel shall have a chairman, who shall be elected by the members from among their number.

**(c) Cooperation**

The heads of the departments, agencies, and instrumentalities of the Executive branch of the Federal Government shall cooperate with the technical panel in carrying out the requirements of this section and shall furnish to the technical panel such information as the technical panel deems necessary to carry out this section.

**(d) Review**

The technical panel shall review and make any necessary recommendations to the Secretary on the following items—

(1) the implementation and conduct of programs under this chapter; and

(2) the economic, technological, and environmental consequences of the deployment of hydrogen production and use systems.

**(e) Support**

The Secretary shall provide such staff, funds and other support as may be necessary to enable the technical panel to carry out the functions described in this section.

(Pub. L. 101-566, §108, Nov. 15, 1990, 104 Stat. 2800; Pub. L. 104-271, title I, §102(b), Oct. 9, 1996, 110 Stat. 3305.)

## AMENDMENTS

1996—Subsec. (d)(3). Pub. L. 104-271 struck out par. (3) which read as follows: “comments on and recommendations for improvements in the comprehensive 5-year program management plan required under section 12402 of this title.”

## TERMINATION OF ADVISORY PANELS

Advisory panels established after Jan. 5, 1973, to terminate not later than the expiration of the 2-year period beginning on the date of their establishment, unless, in the case of a panel established by the President or an officer of the Federal Government, such panel is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a panel established by Congress, its duration is otherwise provided for by law. See sections 3(2) and 14 of Pub. L. 92-463, Oct. 6, 1972, 86 Stat. 770, 776, set out in the Appendix to Title 5, Government Organization and Employees.

**§ 12408. Authorization of appropriations**

There is hereby authorized to be appropriated to carry out the purposes of this chapter (in addition to any amounts made available for such purposes under other Acts)—

- (1) \$3,000,000 for the fiscal year 1992;
- (2) \$7,000,000 for the fiscal year 1993;
- (3) \$10,000,000 for the fiscal year 1994;
- (4) \$14,500,000 for fiscal year 1996;
- (5) \$20,000,000 for fiscal year 1997;
- (6) \$25,000,000 for fiscal year 1998;
- (7) \$30,000,000 for fiscal year 1999;

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