

technology into the transportation fuel sector of the economy.

(B)(i) Specific goals for producing ethanol from biomass shall be to—

(I) reduce the cost of alcohol to 70 cents per gallon;

(II) improve the overall biomass carbohydrate conversion efficiency to 91 percent;

(III) reduce the capital cost component of the cost of alcohol to 23 cents per gallon; and

(IV) reduce the operating and maintenance component of the cost of alcohol to 47 cents per gallon.

(ii) Specific goals for producing methanol from biomass shall be to—

(I) reduce the cost of alcohol to 47 cents per gallon; and

(II) reduce the capital component of the cost of alcohol to 16 cents per gallon.

(5) Other technologies

The Secretary shall submit to the Congress, as part of the first report submitted under section 12006 of this title, recommendations for specific cost goals and other pertinent goals for 1995 for Department of Energy research, development, and demonstration programs in Biofuels Energy Systems, Biodiesel Energy Systems, Hydrogen Energy Systems, Solar Buildings Energy Systems, Ocean Energy Systems, Geothermal Energy Systems, Low-Head Hydro, and Energy Storage Systems.

(b) Amended goals

Whenever the Secretary determines that any of the goals established under this section is no longer appropriate, the Secretary shall notify Congress, as part of a report submitted under section 12006 of this title, of the reason for the determination and provide an amended goal that is consistent with the purpose stated in section 12001(b) of this title.

(c) Authorizations

There are authorized to be appropriated to the Secretary for the following renewable energy research, development, and demonstration programs: the Wind Energy Research Program, the Photovoltaic Energy Systems Program, the Solar Thermal Energy Systems Program, the Biofuels Energy Systems Program, the Hydrogen Energy Systems Program, the Solar Buildings Energy Systems Program, the Ocean Energy Systems Program, and the Geothermal Energy Systems Program—

(1) not to exceed \$113,000,000 for fiscal year 1991, of which—

(A) not to exceed \$39,000,000 shall be available for the Photovoltaic Energy Systems Program;

(B) not to exceed \$19,000,000 shall be available for the Geothermal Energy Systems Program; and

(C) not to exceed \$4,000,000 shall be available for the Hydrogen Energy Systems Program; and

(2) not to exceed \$121,000,000 for fiscal year 1992, of which—

(A) not to exceed \$40,000,000 shall be available for the Photovoltaic Energy Systems Program;

(B) not to exceed \$20,500,000 shall be available for the Geothermal Energy Systems Program; and

(C) not to exceed \$5,000,000 shall be available for the Hydrogen Energy Systems Program.

Each of the President's annual budget requests submitted to Congress after December 11, 1989, shall include as separate line items each of the categories of renewable energy programs described in this subsection.

(Pub. L. 101-218, § 4, Dec. 11, 1989, 103 Stat. 1860; Pub. L. 102-486, title XII, § 1202(b), title XXI, § 2125(1)-(3), Oct. 24, 1992, 106 Stat. 2958, 3085.)

AMENDMENTS

1992—Subsec. (a)(4), (5). Pub. L. 102-486, § 1202(b)(1), added par. (4), redesignated former par. (4) as (5), and inserted "Biodiesel Energy Systems," after "Biofuels Energy Systems,".

Subsec. (c)(3). Pub. L. 102-486, § 2125(1)-(3), struck out par. (3) which read as follows: "not to exceed \$124,000,000 for fiscal year 1993, of which—

"(A) not to exceed \$40,000,000 shall be available for the Photovoltaic Energy Systems Program;

"(B) not to exceed \$23,000,000 shall be available for the Geothermal Energy Systems Program; and

"(C) not to exceed \$6,000,000 shall be available for the Hydrogen Energy Systems Program."

§ 12004. Energy efficiency authorizations

There are authorized to be appropriated to the Secretary for the following energy efficiency research, development, and demonstration programs: transportation, industrial, buildings and community systems, multi-sector, and policy and management—

(1) not to exceed \$201,100,000 for fiscal year 1991, of which—

(A) not to exceed \$68,300,000 shall be available for the transportation program; and

(B) not to exceed \$53,500,000 shall be available for the industrial program; and

(2) not to exceed \$210,600,000 for fiscal year 1992, of which—

(A) not to exceed \$71,000,000 shall be available for the transportation program; and

(B) not to exceed \$54,700,000 shall be available for the industrial program.

(Pub. L. 101-218, § 5, Dec. 11, 1989, 103 Stat. 1862; Pub. L. 102-486, title XXI, § 2125(4)-(6), Oct. 24, 1992, 106 Stat. 3085.)

AMENDMENTS

1992—Par. (3). Pub. L. 102-486 struck out par. (3) which read as follows: "not to exceed \$225,000,000 for fiscal year 1993, of which—

"(A) not to exceed \$73,900,000 shall be available for the transportation program; and

"(B) not to exceed \$56,900,000 shall be available for the industrial program."

§ 12005. Demonstration and commercial application projects

(a) Purpose

The purpose of this section is to direct the Secretary to further the commercialization of renewable energy and energy efficiency technologies through a five-year program.