

108TH CONGRESS
1ST SESSION

S. 461

To establish a program to promote hydrogen fuel cells, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 26, 2003

Mr. DORGAN (for himself, Mr. LIEBERMAN, Mrs. CLINTON, Mr. KERRY, Mr. JEFFORDS, Mr. CORZINE, Mr. CONRAD, and Mr. AKAKA) introduced the following bill; which was read twice and referred to the Committee on Finance

A BILL

To establish a program to promote hydrogen fuel cells, and
for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE AND TABLE OF CONTENTS.**

4 (a) SHORT TITLE.—This Act may be cited as the
5 “Hydrogen Fuel Cell Act of 2003”.

6 (b) TABLE OF CONTENTS.—The table of contents for
7 this Act is as follows:

- Sec. 1. Short title and table of contents.
- Sec. 2. Findings.
- Sec. 3. Purposes.
- Sec. 4. Definitions.

TITLE I—HYDROGEN AND FUEL CELL TECHNOLOGY RESEARCH
AND DEVELOPMENT

- Sec. 101. Definitions.
- Sec. 102. Hydrogen and fuel cell research and development.
- Sec. 103. Coordination and consultation.
- Sec. 104. Advisory committee.
- Sec. 105. Report to Congress.
- Sec. 106. National Academy of Sciences review.
- Sec. 107. Authorization of appropriations for hydrogen production, storage, and transport.
- Sec. 108. Authorization of appropriations for fuel cell technologies.

TITLE II—DEMONSTRATION PROGRAMS

- Sec. 201. Fuel cell vehicle demonstration program.
- Sec. 202. Heavy duty fuel cell vehicle fleet demonstration program.
- Sec. 203. Tribal stationary hybrid power demonstration.
- Sec. 204. Stationary fuel cell grant demonstration program.

TITLE III—FEDERAL PURCHASE PROGRAM

- Sec. 301. Procurement of fuel cell vehicles.
- Sec. 302. Federal stationary fuel cell power purchase program.
- Sec. 303. Establishment of an interagency task force.

TITLE IV—REMOVAL OF REGULATORY BARRIERS

- Sec. 401. Amendments to PURPA.
- Sec. 402. Net metering.
- Sec. 403. Department of Energy study.

TITLE V—TAX INCENTIVES FOR HYDROGEN FUEL CELL
TECHNOLOGY

- Sec. 501. Hydrogen fuel cell motor vehicle credit.
- Sec. 502. Credit for installation of hydrogen fuel cell motor vehicle fueling stations.
- Sec. 503. Credit for residential fuel cell property.
- Sec. 504. Credit for business installation of qualified fuel cells.

TITLE VI—EDUCATION AND OUTREACH

- Sec. 601. Education and outreach.

TITLE VII—TARGETS AND TIMETABLES

- Sec. 701. Department of Energy strategy.

1 SEC. 2. FINDINGS.

2 Congress makes the following findings:

- 3 (1) The United States currently imports ap-
- 4 proximately 55 percent of the oil it consumes.

1 (2) At present trends, reliance on foreign oil
2 will increase to 68 percent by 2025.

3 (3) Nearly all of the cars and trucks run on
4 gasoline, and they are the main reason the United
5 States imports so much oil.

6 (4) Two-thirds of the 20,000,000 barrels of oil
7 Americans use each day is used for transportation.

8 (5) Hydrogen fuel cell vehicles offer the best
9 hope of dramatically reducing our dependence on
10 foreign oil, increasing our energy security, and en-
11 hancing our environmental protection.

12 (6) In the spirit of the Apollo project that put
13 a man on the moon, the United States must commit
14 the necessary resources to develop and commercialize
15 hydrogen fuel cell vehicles, in partnership with the
16 private sector.

17 (7) In developing hydrogen fuel cell vehicles, the
18 United States must also support the development
19 and commercialization of stationary fuel cells to
20 power homes and other buildings, so as to diversify
21 energy sources, better protect the environment, pro-
22 vide assured power, and accelerate implementation
23 of fuel cell technology generally.

24 **SEC. 3. PURPOSES.**

25 The purposes of this Act are—

1 (1) to promote the comprehensive development,
2 demonstration, and commercialization of hydrogen-
3 powered fuel cells in partnership with industry;

4 (2) to increase our Nation’s energy independ-
5 ence, and energy and national security in doing so;

6 (3) to develop a sustainable national energy
7 strategy;

8 (4) to protect and strengthen the Nation’s econ-
9 omy and standard of living;

10 (5) to reduce the environmental impacts of en-
11 ergy production, distribution, transportation, and
12 use; and

13 (6) to leverage financial resources through the
14 use of public-private partnerships.

15 **SEC. 4. DEFINITIONS.**

16 As used in this Act—

17 (1) the term “critical technology” means a
18 technology that, in the opinion of the Secretary, re-
19 quires understanding and development in order to
20 take the next step needed in the development of hy-
21 drogen as an economic fuel or storage medium or in
22 the development of fuel cell technologies as a trans-
23 portation mode;

1 (2) the term “fuel cell vehicle” means a vehicle
2 that derives all, or a significant part, of its propul-
3 sion energy from 1 or more fuel cells; and

4 (3) the term “Secretary” means the Secretary
5 of Energy.

6 **TITLE I—HYDROGEN AND FUEL**
7 **CELL TECHNOLOGY RE-**
8 **SEARCH AND DEVELOPMENT**

9 **SEC. 101. DEFINITIONS.**

10 As used in this title—

11 (1) the term “advisory committee” means the
12 advisory committee established under section 105;
13 and

14 (2) the term “critical technical issue” means an
15 issue that, in the opinion of the Secretary, requires
16 understanding and development in order to take the
17 next step needed in the development of hydrogen as
18 an economic fuel or storage medium or in the devel-
19 opment of fuel cell technologies as a transportation
20 mode.

21 **SEC. 102. HYDROGEN AND FUEL CELL RESEARCH AND DE-**
22 **VELOPMENT.**

23 (a) PROGRAMS.—

24 (1) HYDROGEN ENERGY RESEARCH AND DE-
25 VELOPMENT PROGRAM.—The Secretary shall, in con-

1 sultation with the private sector, conduct a research
2 and development program relating to the production,
3 storage, distribution, and use of hydrogen energy,
4 including fueling infrastructure, with the goal of en-
5 abling the private sector to demonstrate and com-
6 mercialize the use of hydrogen for transportation, in-
7 dustrial, commercial, residential, and utility applica-
8 tions.

9 (2) FUEL CELL TECHNOLOGY RESEARCH AND
10 DEVELOPMENT PROGRAM.—The Secretary shall con-
11 duct fuel cell technology research and development,
12 with the goal of commercializing fuel cell vehicles
13 and stationary fuel cells. The program shall include
14 advanced materials, interfaces and electronics, lower
15 cost and advanced design, balance of plant, en-
16 hanced manufacturing processes, reforming capa-
17 bility, and analysis and integration of systems.

18 (b) ELEMENTS.—In conducting the programs author-
19 ized by this section, the Secretary shall—

20 (1) initiate or accelerate research and develop-
21 ment concerning critical technical issues that will
22 contribute to the development of more economical
23 and environmentally sound fuel cell vehicles and hy-
24 drogen energy systems, including critical technical
25 issues with respect to—

1 (A) production, with consideration of cost-
2 effective and market-efficient production from
3 renewable energy sources;

4 (B) transmission and distribution;

5 (C) storage, including storage of hydrogen
6 for surface transportation applications; and

7 (D) use, including use in—

8 (i) surface transportation;

9 (ii) fuel cells and components;

10 (iii) fueling infrastructure;

11 (iv) stationary applications; and

12 (v) isolated villages, islands, and com-
13 munities in which other energy sources are
14 not available or are very expensive;

15 (2) give particular attention to resolving critical
16 technical issues preventing the introduction of hy-
17 drogen energy and fuel cell vehicles into the market-
18 place; and

19 (3) survey private sector hydrogen energy and
20 fuel cell research and development activities world-
21 wide and take steps to ensure that such activities
22 under this section—

23 (A) enhance rather than unnecessarily du-
24 plicate any available research and development;
25 and

1 (B) complement rather than displace or
2 compete with the privately funded hydrogen en-
3 ergy or fuel cell research and development ac-
4 tivities of United States industry.

5 (c) FEDERAL FUNDING.—The Secretary shall carry
6 out the research and development activities authorized
7 under this section using a competitive merit review pro-
8 cess.

9 (d) COST SHARING.—

10 (1) IN GENERAL.—The Secretary shall require
11 a commitment from non-Federal sources of at least
12 20 percent of the cost of proposed research and de-
13 velopment projects under this section.

14 (2) REDUCTION OR ELIMINATION.—The Sec-
15 retary may reduce or eliminate the cost sharing re-
16 quirement under subsection (d)(1)—

17 (A) if the Secretary determines that the re-
18 search and development is of a basic or funda-
19 mental nature; or

20 (B) for technical analyses, outreach activi-
21 ties, and educational programs that the Sec-
22 retary does not expect to result in a marketable
23 product.

1 **SEC. 103. COORDINATION AND CONSULTATION.**

2 (a) SECRETARY'S RESPONSIBILITY.—The Secretary
3 shall have overall management responsibility for carrying
4 out programs under this Act. In carrying out such pro-
5 grams, the Secretary, consistent with such overall manage-
6 ment responsibility—

7 (1) shall establish a central point for the coordi-
8 nation of all hydrogen energy and fuel cell research,
9 development, and demonstration activities of the De-
10 partment of Energy; and

11 (2) may use the expertise of any other Federal
12 agency in accordance with subsection (b) in carrying
13 out any activities under this Act, to the extent that
14 the Secretary determines that any such agency has
15 capabilities which would allow such agency to con-
16 tribute to the purposes of this Act.

17 (b) ASSISTANCE.—The Secretary may, in accordance
18 with subsection (a), obtain the assistance of any Federal
19 agency upon written request, on a reimbursable basis or
20 otherwise and with the consent of such agency. Each such
21 request shall identify the assistance the Secretary con-
22 siders necessary to carry out any duty under this Act.

23 (c) CONSULTATION.—The Secretary shall consult
24 with other Federal agencies as appropriate, and the advi-
25 sory committee, in carrying out the Secretary's authorities
26 pursuant to this Act.

1 **SEC. 104. ADVISORY COMMITTEE.**

2 (a) ESTABLISHMENT.—There is hereby established a
3 Technical Advisory Committee to advise the Secretary on
4 the programs under this Act and under title II of the Hy-
5 drogen Future Act of 1996, to remain in existence for the
6 duration of such programs.

7 (b) MEMBERSHIP.—

8 (1) IN GENERAL.—The advisory committee
9 shall be comprised of not fewer than 9 nor more
10 than 15 members appointed by the Secretary, and
11 shall be comprised of such representatives from do-
12 mestic industry, universities, professional societies,
13 Government laboratories, and financial, environ-
14 mental, and other organizations as the Secretary
15 considers appropriate based on the Secretary's as-
16 sessment of the technical and other qualifications of
17 such representatives.

18 (2) TERMS.—

19 (A) IN GENERAL.—The term of a member
20 of the advisory committee shall not be more
21 than 3 years.

22 (B) STAGGERED TERMS.—The Secretary
23 may appoint members of the advisory com-
24 mittee in a manner that allows the terms of the
25 members serving at any time to expire at

1 spaced intervals so as to ensure continuity in
2 the functioning of the advisory committee.

3 (C) REAPPOINTMENT.—A member of the
4 advisory committee whose term expires may be
5 reappointed.

6 (3) CHAIRPERSON.—The advisory committee
7 shall have a chairperson, who shall be elected by the
8 members from among their number.

9 (c) COOPERATION.—The heads of Federal agencies
10 shall cooperate with the advisory committee in carrying
11 out the requirements of this section and shall furnish to
12 the advisory committee such information as the advisory
13 committee considers necessary to carry out this section.

14 (d) REVIEW.—The advisory committee shall review
15 and make any necessary recommendations to the Sec-
16 retary on—

17 (1) the implementation and conduct of pro-
18 grams under this title;

19 (2) the economic, technological, and environ-
20 mental consequences of the deployment of tech-
21 nologies under this title; and

22 (3) means for removing barriers to imple-
23 menting the technologies and programs under this
24 title.

1 (e) RESPONSE TO RECOMMENDATIONS.—The Sec-
2 retary shall consider, but need not adopt, any rec-
3 ommendations of the advisory committee under subsection
4 (d). The Secretary shall either describe the implementa-
5 tion, or provide an explanation of the reasons that any
6 such recommendations will not be implemented, in the re-
7 port to Congress under section 103(b).

8 (f) SUPPORT.—The Secretary shall provide such
9 staff, funds, and other support as may be necessary to
10 enable the advisory committee to carry out its functions.

11 **SEC. 105. REPORT TO CONGRESS.**

12 (a) REPORT.—

13 (1) REQUIREMENT.—Not later than 1 year
14 after the date of enactment of this Act and bienni-
15 ally thereafter, the Secretary shall transmit to Con-
16 gress a detailed report on the status and progress of
17 the programs authorized under this title.

18 (2) CONTENTS.—A report under paragraph (1)
19 shall include, in addition to any views and rec-
20 ommendations of the Secretary—

21 (A) an assessment of the effectiveness of
22 the programs authorized under this Act;

23 (B) recommendations of the advisory com-
24 mittee for any improvements in the program

1 that are needed, including recommendations for
2 additional legislation; and

3 (C) to the extent practicable, an analysis of
4 Federal, State, local, and private sector
5 hydrogen- and fuel cell-related research, devel-
6 opment, and demonstration activities to identify
7 productive areas for increased intergovern-
8 mental and private-public sector collaboration.

9 **SEC. 106. NATIONAL ACADEMY OF SCIENCES REVIEW.**

10 Beginning 2 years after the date of enactment of this
11 Act, and every 4 years thereafter, the National Academy
12 of Sciences shall perform a review of the progress made
13 through the programs and activities authorized under this
14 Act and title II of the Hydrogen Future Act of 1996, and
15 shall report to Congress on the results of such reviews.

16 **SEC. 107. AUTHORIZATION OF APPROPRIATIONS FOR HY-**
17 **DROGEN PRODUCTION, STORAGE, AND**
18 **TRANSPORT.**

19 There are authorized to be appropriated to carry out
20 hydrogen production, storage, and transport activities
21 under this title (in addition to any amounts made available
22 for such purposes under other Acts)—

- 23 (1) \$200,000,000 for fiscal year 2004;
24 (2) \$200,000,000 for fiscal year 2005;
25 (3) \$200,000,000 for fiscal year 2006;

- 1 (4) \$200,000,000 for fiscal year 2007;
- 2 (5) \$100,000,000 for fiscal year 2008;
- 3 (6) \$100,000,000 for fiscal year 2009;
- 4 (7) \$100,000,000 for fiscal year 2010;
- 5 (8) \$75,000,000 for fiscal year 2011;
- 6 (9) \$75,000,000 for fiscal year 2012; and
- 7 (10) \$50,000,000 for fiscal year 2013.

8 **SEC. 108. AUTHORIZATION OF APPROPRIATIONS FOR FUEL**
9 **CELL TECHNOLOGIES.**

10 There are authorized to be appropriated to the Sec-
11 retary for fuel cell technology activities under this title—

- 12 (1) \$200,000,000 for fiscal year 2004;
- 13 (2) \$250,000,000 for fiscal year 2005;
- 14 (3) \$250,000,000 for fiscal year 2006;
- 15 (4) \$200,000,000 for fiscal year 2007;
- 16 (5) \$100,000,000 for fiscal year 2008;
- 17 (6) \$100,000,000 for fiscal year 2009;
- 18 (7) \$100,000,000 for fiscal year 2010;
- 19 (8) \$75,000,000 for fiscal year 2011;
- 20 (9) \$75,000,000 for fiscal year 2012; and
- 21 (10) \$50,000,000 for fiscal year 2013.

1 **TITLE II—DEMONSTRATION**
2 **PROGRAMS**

3 **SEC. 201. FUEL CELL VEHICLE DEMONSTRATION PRO-**
4 **GRAM.**

5 (a) PROGRAM.—The Secretary shall establish a cost
6 shared program to purchase, operate, and evaluate fuel
7 cell vehicles in integrated service in Federal, tribal, State,
8 local, or private fleets to demonstrate the viability of fuel
9 cell vehicles in commercial use in a range of climates, duty
10 cycles, and operating environments.

11 (b) COOPERATIVE AGREEMENTS.—In carrying out
12 the program, the Secretary may enter into cooperative
13 agreements with Federal, tribal, State, local agencies, or
14 private entities and manufacturers of fuel cell vehicles.

15 (c) COMPONENTS.—The program shall include the
16 following components:

17 (1) SELECTION OF PILOT FLEET SITES.—

18 (A) IN GENERAL.—The Secretary shall—

19 (i) consult with fleet managers to
20 identify potential fleet sites; and

21 (ii) select 10 or more sites at which to
22 carry out the program.

23 (B) CRITERIA.—The criteria for selecting
24 fleet sites shall include—

25 (i) geographic diversity;

1 (ii) a wide range of climates, duty cy-
2 cles, and operating environments;

3 (iii) the interest and capability of the
4 participating agencies or entities;

5 (iv) the appropriateness of a site for
6 refueling infrastructure and for maintain-
7 ing the fuel cell vehicles; and

8 (v) such other criteria as the Sec-
9 retary determines to be necessary to the
10 success of the program.

11 (C) FEDERAL SITES.—At least 2 of the
12 projects must be at Federal sites.

13 (2) FUELING INFRASTRUCTURE.—

14 (A) IN GENERAL.—The Secretary shall
15 support the installation of the necessary refuel-
16 ing infrastructure at the fleet sites.

17 (B) CO-PRODUCTION OF HYDROGEN AND
18 ELECTRICITY PILOT PROJECTS.—Priority shall
19 be given to pilot projects that integrate—

20 (i) both vehicles and stationary elec-
21 tricity production; or

22 (ii) hydrogen production, storage, and
23 distribution systems with end-use applica-
24 tions.

1 (3) PURCHASE OF FUEL CELL VEHICLES.—The
2 Secretary, in consultation with the participating
3 agencies, tribal, State, or local agency, academic in-
4 stitution, or private entity, shall purchase fuel cell
5 vehicles for the program by competitive bid.

6 (4) OPERATION AND MAINTENANCE PERIOD.—
7 The fuel cell vehicles shall be operated and main-
8 tained by the participating agencies or entities in
9 regular duty cycles for a period of not less than 12
10 months.

11 (5) DATA COLLECTION, ANALYSIS, AND DIS-
12 SEMINATION.—

13 (A) AGREEMENTS.—The Secretary shall
14 enter into agreements with participating agen-
15 cies, academic institutions, or private sector en-
16 tities providing for the collection of proprietary
17 and nonproprietary information with the pro-
18 gram.

19 (B) PUBLIC AVAILABILITY.—The Secretary
20 shall make available to all interested persons
21 technical nonproprietary information and anal-
22 yses collected under an agreement under sub-
23 paragraph (A).

24 (C) PROPRIETARY INFORMATION.—The
25 Secretary shall not disclose to the public any

1 proprietary information or analyses collected
2 under an agreement under subparagraph (A).

3 (6) TRAINING AND TECHNICAL SUPPORT.—The
4 Secretary shall provide such training and technical
5 support as fleet managers and fuel cell vehicle oper-
6 ators require to assure the success of the program,
7 including training and technical support in—

8 (A) the installation, operation, and mainte-
9 nance of fueling infrastructure;

10 (B) the operation and maintenance of fuel
11 cell vehicles; and

12 (C) data collection.

13 (d) COORDINATION.—The Secretary shall ensure co-
14 ordination of the program with other Federal fuel cell
15 demonstration programs to improve efficiency, share in-
16 frastructure, and avoid duplication of effort.

17 (e) COST SHARING.—

18 (1) IN GENERAL.—The Secretary shall require
19 a 50 percent financial commitment from partici-
20 pating private-sector companies or other non-Federal
21 sources for participation in the program.

22 (2) COMMITMENTS.—The Secretary may re-
23 quire a financial commitment from participating
24 agencies or entities based on the avoided costs for

1 purchase, operation, and maintenance of traditional
2 vehicles and refueling infrastructure.

3 (f) AUTHORIZATION OF APPROPRIATIONS.—There
4 are authorized to be appropriated to carry out this sec-
5 tion—

6 (1) \$40,000,000 for fiscal year 2004;

7 (2) \$100,000,000 for fiscal year 2005;

8 (3) \$115,000,000 for fiscal year 2006;

9 (4) \$115,000,000 for fiscal year 2007;

10 (5) \$95,000,000 for fiscal year 2008;

11 (6) \$30,000,000 for fiscal year 2009; and

12 (7) \$15,000,000 for fiscal year 2010.

13 **SEC. 202. HEAVY DUTY FUEL CELL VEHICLE FLEET DEM-**
14 **ONSTRATION PROGRAM.**

15 (a) ESTABLISHMENT OF PROGRAM.—The Secretary,
16 in consultation with other Federal agencies, shall establish
17 a program for entering into cooperative agreements with
18 the private sector to demonstrate fuel cell-powered buses,
19 trucks and other heavy duty vehicles.

20 (b) COST SHARING.—The non-Federal contribution
21 for activities funded under this section shall be not less
22 than—

23 (1) 20 percent for fuel infrastructure develop-
24 ment activities; and

1 (2) 50 percent for demonstration activities and
2 for development activities not described in paragraph
3 (1).

4 (c) REPORTS TO CONGRESS.—Not later than 2 years
5 after the date of the enactment of this Act, and not later
6 than October 1, 2009, the Secretary, in consultation with
7 other Federal agencies, shall transmit to the appropriate
8 congressional committees a report that—

9 (1) evaluates the process of developing infra-
10 structure to accommodate fuel cell-powered buses,
11 trucks, and heavy duty vehicles; and

12 (2) assesses the results of the demonstration
13 program under this section.

14 (d) AUTHORIZATION OF APPROPRIATIONS.—There
15 are authorized to be appropriated to the Secretary for car-
16 rying out this demonstration program, to remain available
17 until expended—

18 (1) \$60,000,000 for fiscal year 2004;

19 (2) \$90,000,000 for fiscal year 2005;

20 (3) \$175,000,000 for fiscal year 2006;

21 (4) \$175,000,000 for fiscal year 2007;

22 (5) \$175,000,000 for fiscal year 2008;

23 (6) \$135,000,000 for fiscal year 2009; and

24 (7) \$40,000,000 for fiscal year 2010.

1 **SEC. 203. TRIBAL STATIONARY HYBRID POWER DEM-**
2 **ONSTRATION.**

3 (a) IN GENERAL.—Not later than 1 year after the
4 date of enactment of this Act, the Secretary, in coopera-
5 tion with Tribes, shall develop and transmit to Congress
6 a strategy for a demonstration and commercial application
7 program to develop hybrid distributed power systems on
8 tribal lands that combine—

9 (1) one renewable electric power generating
10 technology of 2 megawatts or less located near the
11 site of electric energy use; and

12 (2) fuel cell power generation suitable for use in
13 distributed power systems.

14 (b) AUTHORIZATION OF APPROPRIATIONS.—There
15 are authorized to be appropriated for activities under this
16 section—

17 (1) \$1,000,000 for fiscal year 2005;

18 (2) \$5,000,000 for fiscal year 2006;

19 (3) \$5,000,000 for fiscal year 2007;

20 (4) \$4,000,000 for fiscal year 2008;

21 (5) \$3,000,000 for fiscal year 2009; and

22 (6) \$2,000,000 for fiscal year 2010.

23 **SEC. 204. STATIONARY FUEL CELL GRANT DEMONSTRA-**
24 **TION PROGRAM.**

25 (a) SOLICITATION OF PROPOSALS.—The Secretary
26 shall solicit proposals for projects demonstrating hydrogen

1 technologies needed to operate fuel cells in Federal, tribal,
2 State, and local government, and academic, and private
3 stationary applications.

4 (b) COMPETITIVE EVALUATION.—Each proposal sub-
5 mitted in response to the solicitation under this section
6 shall be evaluated on a competitive basis using peer re-
7 view. The Secretary is not required to make an award
8 under this section in the absence of a meritorious pro-
9 posal.

10 (c) PREFERENCE.—The Secretary shall give pref-
11 erence, in making an award under this section, to pro-
12 posals that—

13 (1) are submitted jointly from consortia includ-
14 ing academic institutions, industry, State or local
15 governments, and Federal laboratories; and

16 (2) reflect proven experience and capability with
17 technologies relevant to the projects proposed.

18 (d) NON-FEDERAL SHARE.—

19 (1) IN GENERAL.—Except as provided in para-
20 graph (2), the Secretary shall require a commitment
21 from non-Federal sources of at least 50 percent of
22 the costs directly relating to a demonstration project
23 under this section.

24 (2) REDUCTION.—The Secretary may reduce
25 the non-Federal requirement under paragraph (1) if

1 the Secretary determines that the reduction is ap-
2 propriate considering the technological risks involved
3 in the project.

4 (e) AUTHORIZATION OF APPROPRIATIONS.—There
5 are authorized to be appropriated to carry out this sec-
6 tion—

7 (1) \$45,000,000 for fiscal year 2004;

8 (2) \$85,000,000 for fiscal year 2005;

9 (3) \$95,000,000 for fiscal year 2006;

10 (4) \$95,000,000 for fiscal year 2007;

11 (5) \$65,000,000 for fiscal year 2008;

12 (6) \$50,000,000 for fiscal year 2009; and

13 (7) \$15,000,000 for fiscal year 2010.

14 **TITLE III—FEDERAL PURCHASE**
15 **PROGRAM**

16 **SEC. 301. PROCUREMENT OF FUEL CELL VEHICLES.**

17 (a) TRANSITION PLAN.—Each agency of the Federal
18 Government that maintains a fleet of motor vehicles shall
19 develop a plan for a transition of the fleet to vehicles pow-
20 ered by fuel cell technology, including plans for necessary
21 fueling infrastructure, training, and maintenance and op-
22 eration of such vehicles. Each such plan shall include im-
23 plementation beginning no later than fiscal year 2008.
24 Each plan shall incorporate and build on the results of
25 completed and ongoing Federal demonstration programs,

1 and shall include additional demonstration programs and
2 pilot programs as necessary to test or investigate available
3 technologies and transition procedures.

4 (b) REQUIREMENT.—The Secretary, in collaboration
5 with the General Services Administration and other Fed-
6 eral agencies, shall purchase and place 20,000 hydrogen-
7 powered fuel cell vehicles by 2010 in Federal fleets and
8 the requisite fueling infrastructure.

9 (c) EXCEPTIONS.—The head of an executive agency
10 is not required to procure a fuel cell vehicle under sub-
11 section (c) if—

12 (1) no fuel cell vehicle is available that meets
13 the requirements of the executive agency; or

14 (2) it is not practicable to do so for a particular
15 agency or instance.

16 (d) PROCUREMENT PLANNING.—The head of an ex-
17 ecutive agency shall incorporate into the specifications for
18 all designs and procurements, and into the factors for the
19 evaluation of offers received for the procurement, criteria
20 for fuel cell vehicles that are consistent with vehicle pur-
21 chasing requirements.

22 (e) AUTHORIZATION OF APPROPRIATIONS.—There
23 are authorized to be appropriated to carry out this sec-
24 tion—

25 (1) \$10,000,000 for fiscal year 2005;

- 1 (2) \$15,000,000 for fiscal year 2006;
- 2 (3) \$50,000,000 for fiscal year 2007;
- 3 (4) \$150,000,000 for fiscal year 2008;
- 4 (5) \$175,000,000 for fiscal year 2009;
- 5 (6) \$170,000,000 for fiscal year 2010;
- 6 (7) \$110,000,000 for fiscal year 2011;
- 7 (8) \$65,000,000 for fiscal year 2012; and
- 8 (9) \$55,000,000 for fiscal year 2013.

9 **SEC. 302. FEDERAL STATIONARY FUEL CELL POWER PUR-**
10 **CHASE PROGRAM.**

11 (a) PROGRAM.—The Secretary shall establish a pro-
12 gram within 1 year after the date of enactment of this
13 Act for the acquisition by Federal agencies of—

14 (1) up to 200 megawatts of commercially avail-
15 able fuel cell power plants;

16 (2) up to 200 megawatts of power generated
17 from commercially available fuel cell power plants;
18 or

19 (3) a combination thereof, by 2006 and annu-
20 ally thereafter for use at federally-owned or -oper-
21 ated facilities, Federal residences, and Federal port-
22 able applications. The Secretary shall provide fund-
23 ing for purchase, site engineering, installation, start-
24 up, training, operation, and maintenance costs asso-

1 ciated with the acquisition of such power or power
2 plants, along with any other necessary assistance.

3 (b) DOMESTIC ASSEMBLY.—All fuel cell systems in
4 power plants acquired, or from which power is acquired,
5 under subsection (a) shall be assembled in the United
6 States.

7 (c) SITE SELECTION.—In the selection of federally-
8 owned or -operated facilities as a site for the location of
9 power plants acquired under this section, or as a site to
10 receive power acquired under this section, priority shall
11 be given to sites with 1 or more of the following attributes:

12 (1) Location (of the Federal facility or the gen-
13 erating power plant) in an area classified as a non-
14 attainment area under title I of the Clean Air Act.

15 (2) Computer or electronic operations that are
16 sensitive to power supply disruptions.

17 (3) Need for a reliable, uninterrupted power
18 supply.

19 (4) Academic institution.

20 (5) Rural or remote location, or other factors
21 requiring off-grid power generation.

22 (6) Critical manufacturing or other activities
23 that support national security efforts.

1 (d) AUTHORIZATION OF APPROPRIATIONS.—There
2 are authorized to be appropriated to carry out this sec-
3 tion—

- 4 (1) \$5,000,000 for fiscal year 2004;
- 5 (2) \$10,000,000 for fiscal year 2005;
- 6 (3) \$15,000,000 for fiscal year 2006;
- 7 (4) \$50,000,000 for fiscal year 2007;
- 8 (5) \$75,000,000 for fiscal year 2008;
- 9 (6) \$85,000,000 for fiscal year 2009;
- 10 (7) \$75,000,000 for fiscal year 2010;
- 11 (8) \$50,000,000 for fiscal year 2011;
- 12 (9) \$25,000,000 for fiscal year 2012; and
- 13 (10) \$10,000,000 for fiscal year 2013.

14 (e) LIFE CYCLE COST BENEFIT.—Any life cycle cost
15 benefit analysis undertaken by a Federal agency with re-
16 spect to investments in fuel cell products, services, con-
17 struction, and other projects shall include an analysis of
18 environmental, power reliability, and oil dependence fac-
19 tors.

20 **SEC. 303. ESTABLISHMENT OF AN INTERAGENCY TASK**
21 **FORCE.**

22 (a) ESTABLISHMENT.—Not later than 120 days after
23 the date of enactment of this Act, the Secretary shall es-
24 tablish an interagency task force led by the Secretary's
25 designee and comprised of representatives of—

- 1 (1) the Office of Science and Technology Policy;
- 2 (2) the Department of Transportation;
- 3 (3) the Department of Defense;
- 4 (4) the Department of Commerce (including the
- 5 National Institute of Standards and Technology);
- 6 (5) the Environmental Protection Agency;
- 7 (6) the National Aeronautics and Space Admin-
- 8 istration; and
- 9 (7) other Federal agencies as appropriate.

10 (b) DUTIES.—The task force shall develop a plan for
11 carrying out titles II and III.

12 (c) AUTHORIZATION OF APPROPRIATIONS.—There
13 are authorized to be appropriated such sums as may be
14 necessary to carry out the requirements of this section.

15 **TITLE IV—REMOVAL OF** 16 **REGULATORY BARRIERS**

17 **SEC. 401. AMENDMENTS TO PURPA.**

18 (a) ADOPTION OF STANDARDS.—Section 113(b) of
19 the Public Utility Regulatory Policies Act of 1978 (16
20 U.S.C. 2623(b)) is amended by adding at the end the fol-
21 lowing:

22 “(6) DISTRIBUTED GENERATION.—Each elec-
23 tric utility shall provide distributed generation, com-
24 bined heat and power, and district heating and cool-
25 ing systems competitive access to the local distribu-

1 tion grid and competitive pricing of service, and
2 shall use simplified standard contracts for the inter-
3 connection of generating facilities that have a power
4 production capacity of 250 kilowatts or less per unit.

5 “(7) DISTRIBUTION INTERCONNECTIONS.—No
6 electric utility may refuse to interconnect a gener-
7 ating facility with the distribution facilities of the
8 electric utility if the owner or operator of the gener-
9 ating facility complies with procedures adopted by
10 the State regulatory authority and agrees to pay the
11 costs established by such State regulatory authority.

12 “(8) MINIMUM FUEL AND TECHNOLOGY DIVER-
13 SITY STANDARD.—Each electric utility shall develop
14 a plan to minimize dependence on 1 fuel source and
15 to ensure that the electric energy it sells to con-
16 sumers is generated using a diverse range of fuels
17 and technologies, including renewable and high-effi-
18 ciency technologies.

19 “(9) PROHIBITED RATES AND CHARGES.—No
20 electric utility shall charge the owner or operator of
21 an on-site generating facility an additional standby,
22 capacity, interconnection, or other rate or charge.”.

23 (b) TIME FOR ADOPTING STANDARDS.—Section 113
24 of the Public Utility Regulatory Policies Act of 1978 (16

1 U.S.C. 2623) is further amended by adding at the end
2 the following:

3 “(d) SPECIAL RULE.—For purposes of implementing
4 paragraphs (6), (7), (8), and (9) of subsection (b), any
5 reference contained in this section to the date of enact-
6 ment of the Public Utility Regulatory Policies Act of 1978,
7 shall be deemed to be a reference to the date of enactment
8 of this subsection.”.

9 **SEC. 402. NET METERING.**

10 (a) ADOPTION OF STANDARD.—Section 111(d) of the
11 Public Utility Regulatory Policies Act of 1978 (16 U.S.C.
12 2621(d)) is amended by adding at the end the following:

13 “(11) NET METERING.—(A) Each electric util-
14 ity shall make available upon request net metering
15 service to any electric consumer that the electric
16 utility serves.

17 “(B) For purposes of implementing this para-
18 graph, any reference contained in this section to the
19 date of enactment of the Public Utility Regulatory
20 Policies Act of 1978, shall be deemed to be a ref-
21 erence to the date of enactment of this paragraph.

22 “(C) The Commission shall implement the
23 standards set out in this section not later than 1
24 year after the date of enactment of this paragraph.

25 Notwithstanding subsections (b) and (c) of section

1 112, a State may adopt alternative standards or pro-
2 cedures regarding net metering as defined in this
3 section; provided that net metering service, pursuant
4 to standards and procedures adopted by the Com-
5 mission, shall be available to any electric consumer
6 within any State notwithstanding the adoption by
7 any State of such alternative standards or proce-
8 dures.

9 “(D) Notwithstanding subsections (b) and (c)
10 of section 112, each State regulatory authority shall
11 consider and make a determination concerning
12 whether it is appropriate to implement the standard
13 set out in subparagraph (A) not later than 1 year
14 after the date of enactment of this paragraph.”.

15 (b) SPECIAL RULES FOR NET METERING.—Section
16 115 of the Public Utility Regulatory Policies Act of 1978
17 (16 U.S.C. 2625) is amended by adding at the end the
18 following:

19 “(i) NET METERING.—

20 “(1) RATES AND CHARGES.—An electric util-
21 ity—

22 “(A) shall charge the owner or operator of
23 an on-site generating facility rates and charges
24 that are identical to those that would be
25 charged other electric consumers of the electric

1 utility in the same rate class to which the owner
2 or operator would be assigned if there were no
3 on-site generating facility; and

4 “(B) shall not charge the owner or oper-
5 ator of an on-site generating facility any addi-
6 tional standby, capacity, interconnection, or
7 other rate or charge.

8 “(2) MEASUREMENT.—An electric utility that
9 sells electric energy to the owner or operator of an
10 on-site generating facility shall measure the quantity
11 of electric energy produced by the on-site facility,
12 using a single meter unless the electric utility can
13 establish to the State regulatory authority that a
14 single meter is not technically feasible, and the
15 quantity of electric energy consumed by the owner or
16 operator of an on-site generating facility during a
17 billing period is in accordance with normal metering
18 practices.

19 “(3) ELECTRIC ENERGY SUPPLIED EXCEEDING
20 ELECTRIC ENERGY GENERATED.—If the quantity of
21 electric energy sold by the electric utility to an on-
22 site generating facility exceeds the quantity of elec-
23 tric energy supplied by the on-site generating facility
24 to the electric utility during the billing period, the
25 electric utility may bill the owner or operator for the

1 net quantity of electric energy sold, in accordance
2 with normal metering practices.

3 “(4) ELECTRIC ENERGY GENERATED EXCEED-
4 ING ELECTRIC ENERGY SUPPLIED.—If the quantity
5 of electric energy supplied by the on-site generating
6 facility to the electric utility exceeds the quantity of
7 electric energy sold by the electric utility to the on-
8 site generating facility during the billing period—

9 “(A) the electric utility may bill the owner
10 or operator of the on-site generating facility for
11 the appropriate charges for the billing period in
12 accordance with paragraph (2); and

13 “(B) the owner or operator of the on-site
14 generating facility shall be credited for the ex-
15 cess kilowatt-hours generated during the billing
16 period, with the kilowatt-hour credit appearing
17 on the bill for the following billing period.

18 “(5) SAFETY AND PERFORMANCE STAND-
19 ARDS.—An eligible on-site generating facility and
20 net metering system used by an electric consumer
21 shall be interconnected provided the facility meets all
22 applicable safety, performance, reliability, and inter-
23 connection standards established by the National
24 Electrical Code, the Institute of Electrical and Elec-
25 tronics Engineers, and Underwriters Laboratories.

1 “(6) ADDITIONAL CONTROL AND TESTING RE-
2 QUIREMENTS.—The Commission, after consultation
3 with State regulatory authorities and nonregulated
4 electric utilities and after notice and opportunity for
5 comment, may adopt, by rule, additional control and
6 testing requirements for on-site generating facilities
7 and net metering systems that the Commission de-
8 termines are necessary to protect public safety and
9 system reliability.

10 “(7) DEFINITIONS.—For purposes of this sub-
11 section—

12 “(A) the term ‘eligible on-site generating
13 facility’ means—

14 “(i) a facility on the site of a residen-
15 tial electric consumer with a maximum
16 generating capacity of 10 kilowatts or less
17 per unit that is fueled by solar energy,
18 wind energy, or fuel cells; or

19 “(ii) a facility on the site of a com-
20 mercial electric consumer with a maximum
21 generating capacity of 500 kilowatts or
22 less per unit that is fueled solely by a re-
23 newable energy resource, landfill gas, or a
24 high efficiency system;

1 “(B) the term ‘renewable energy resource’
2 means solar, wind, biomass, or geothermal en-
3 ergy;

4 “(C) the term ‘high efficiency system’
5 means fuel cells or combined heat and power;
6 and

7 “(D) the term ‘net metering service’ means
8 service to an electric consumer under which
9 electric energy generated by that electric con-
10 sumer from an eligible on-site generating facil-
11 ity and delivered to the local distribution facili-
12 ties may be used to offset electric energy pro-
13 vided by the electric utility to the electric con-
14 sumer during the applicable billing period.”.

15 **SEC. 403. DEPARTMENT OF ENERGY STUDY.**

16 The Secretary, in consultation with other Federal
17 agencies, as appropriate, shall identify barriers to the in-
18 troduction of portable fuel cells, including regulatory bar-
19 riers, and take appropriate action to eliminate such bar-
20 riers in a timely fashion.

1 **TITLE V—TAX INCENTIVES FOR**
 2 **HYDROGEN FUEL CELL TECH-**
 3 **NOLOGY**

4 **SEC. 501. HYDROGEN FUEL CELL MOTOR VEHICLE CREDIT.**

5 (a) IN GENERAL.—Subpart B of part IV of sub-
 6 chapter A of chapter 1 of the Internal Revenue Code of
 7 1986 (relating to foreign tax credit, etc.) is amended by
 8 adding at the end the following new section:

9 **“SEC. 30B. HYDROGEN FUEL CELL MOTOR VEHICLE CRED-**
 10 **IT.**

11 “(a) ALLOWANCE OF CREDIT.—There shall be al-
 12 lowed as a credit against the tax imposed by this chapter
 13 for the taxable year an amount equal to the new qualified
 14 hydrogen fuel cell motor vehicle credit determined under
 15 subsection (b).

16 “(b) NEW QUALIFIED HYDROGEN FUEL CELL
 17 MOTOR VEHICLE CREDIT.—

18 “(1) IN GENERAL.—For purposes of subsection
 19 (a), the new qualified hydrogen fuel cell motor vehi-
 20 cle credit determined under this subsection with re-
 21 spect to a new qualified hydrogen fuel cell motor ve-
 22 hicle placed in service by the taxpayer during the
 23 taxable year is—

1 “(A) \$4,000, if such vehicle has a gross ve-
2 hicle weight rating of not more than 8,500
3 pounds,

4 “(B) \$10,000, if such vehicle has a gross
5 vehicle weight rating of more than 8,500
6 pounds but not more than 14,000 pounds,

7 “(C) \$20,000, if such vehicle has a gross
8 vehicle weight rating of more than 14,000
9 pounds but not more than 26,000 pounds, and

10 “(D) \$40,000, if such vehicle has a gross
11 vehicle weight rating of more than 26,000
12 pounds.

13 “(2) INCREASE FOR FUEL EFFICIENCY.—

14 “(A) IN GENERAL.—The amount deter-
15 mined under paragraph (1)(A) with respect to
16 a new qualified hydrogen fuel cell motor vehicle
17 which is a passenger automobile or light truck
18 shall be increased by—

19 “(i) \$1,000, if such vehicle achieves at
20 least 150 percent but less than 175 per-
21 cent of the 2000 model year city fuel econ-
22 omy,

23 “(ii) \$1,500, if such vehicle achieves
24 at least 175 percent but less than 200 per-

1 cent of the 2000 model year city fuel econ-
2 omy,

3 “(iii) \$2,000, if such vehicle achieves
4 at least 200 percent but less than 225 per-
5 cent of the 2000 model year city fuel econ-
6 omy,

7 “(iv) \$2,500, if such vehicle achieves
8 at least 225 percent but less than 250 per-
9 cent of the 2000 model year city fuel econ-
10 omy,

11 “(v) \$3,000, if such vehicle achieves
12 at least 250 percent but less than 275 per-
13 cent of the 2000 model year city fuel econ-
14 omy,

15 “(vi) \$3,500, if such vehicle achieves
16 at least 275 percent but less than 300 per-
17 cent of the 2000 model year city fuel econ-
18 omy, and

19 “(vii) \$4,000, if such vehicle achieves
20 at least 300 percent of the 2000 model
21 year city fuel economy.

22 “(B) 2000 MODEL YEAR CITY FUEL ECON-
23 OMY.—For purposes of subparagraph (A), the
24 2000 model year city fuel economy with respect

1 to a vehicle shall be determined in accordance
 2 with the following tables:

3 “(i) In the case of a passenger auto-
 4 mobile:

“If vehicle inertia weight class is:	The 2000 model year city fuel economy is:
1,500 or 1,750 lbs	43.7 mpg
2,000 lbs	38.3 mpg
2,250 lbs	34.1 mpg
2,500 lbs	30.7 mpg
2,750 lbs	27.9 mpg
3,000 lbs	25.6 mpg
3,500 lbs	22.0 mpg
4,000 lbs	19.3 mpg
4,500 lbs	17.2 mpg
5,000 lbs	15.5 mpg
5,500 lbs	14.1 mpg
6,000 lbs	12.9 mpg
6,500 lbs	11.9 mpg
7,000 to 8,500 lbs	11.1 mpg.

5 “(ii) In the case of a light truck:

“If vehicle inertia weight class is:	The 2000 model year city fuel economy is:
1,500 or 1,750 lbs	37.6 mpg
2,000 lbs	33.7 mpg
2,250 lbs	30.6 mpg
2,500 lbs	28.0 mpg
2,750 lbs	25.9 mpg
3,000 lbs	24.1 mpg
3,500 lbs	21.3 mpg
4,000 lbs	19.0 mpg
4,500 lbs	17.3 mpg
5,000 lbs	15.8 mpg
5,500 lbs	14.6 mpg
6,000 lbs	13.6 mpg
6,500 lbs	12.8 mpg
7,000 to 8,500 lbs	12.0 mpg.

6 “(C) VEHICLE INERTIA WEIGHT CLASS.—

7 For purposes of subparagraph (B), the term
 8 ‘vehicle inertia weight class’ has the same
 9 meaning as when defined in regulations pre-
 10 scribed by the Administrator of the Environ-

1 mental Protection Agency for purposes of the
2 administration of title II of the Clean Air Act
3 (42 U.S.C. 7521 et seq.).

4 “(3) NEW QUALIFIED HYDROGEN FUEL CELL
5 MOTOR VEHICLE.—For purposes of this subsection,
6 the term ‘new qualified hydrogen fuel cell motor ve-
7 hicle’ means a motor vehicle—

8 “(A) which is propelled by power derived
9 from one or more cells which convert chemical
10 energy directly into electricity by combining ox-
11 ygen with hydrogen fuel which is stored on
12 board the vehicle in any form and may or may
13 not require reformation prior to use,

14 “(B) which, in the case of a passenger
15 automobile or light truck—

16 “(i) for 2003 model vehicles, has re-
17 ceived a certificate of conformity under the
18 Clean Air Act and meets or exceeds the
19 equivalent qualifying California low emis-
20 sion vehicle standard under section
21 243(e)(2) of the Clean Air Act for that
22 make and model year, and

23 “(ii) for 2004 and later model vehi-
24 cles, has received a certificate that such ve-
25 hicle meets or exceeds the Bin 5 Tier II

1 emission level established in regulations
2 prescribed by the Administrator of the En-
3 vironmental Protection Agency under sec-
4 tion 202(i) of the Clean Air Act for that
5 make and model year vehicle,

6 “(C) the original use of which commences
7 with the taxpayer,

8 “(D) which is acquired for use or lease by
9 the taxpayer and not for resale, and

10 “(E) which is made by a manufacturer.

11 “(c) APPLICATION WITH OTHER CREDITS.—The
12 credit allowed under subsection (a) for any taxable year
13 shall not exceed the excess (if any) of—

14 “(1) the regular tax for the taxable year re-
15 duced by the sum of the credits allowable under sub-
16 part A and sections 27, 29, and 30, over

17 “(2) the tentative minimum tax for the taxable
18 year.

19 “(d) OTHER DEFINITIONS AND SPECIAL RULES.—
20 For purposes of this section—

21 “(1) MOTOR VEHICLE.—The term ‘motor vehi-
22 cle’ has the meaning given such term by section
23 30(c)(2).

24 “(2) CITY FUEL ECONOMY.—The city fuel econ-
25 omy with respect to any vehicle shall be measured in

1 a manner which is substantially similar to the man-
2 ner city fuel economy is measured in accordance
3 with procedures under part 600 of subchapter Q of
4 chapter I of title 40, Code of Federal Regulations,
5 as in effect on the date of the enactment of this sec-
6 tion.

7 “(3) OTHER TERMS.—The terms ‘automobile’,
8 ‘passenger automobile’, ‘light truck’, and ‘manufac-
9 turer’ have the meanings given such terms in regula-
10 tions prescribed by the Administrator of the Envi-
11 ronmental Protection Agency for purposes of the ad-
12 ministration of title II of the Clean Air Act (42
13 U.S.C. 7521 et seq.).

14 “(4) REDUCTION IN BASIS.—For purposes of
15 this subtitle, the basis of any property for which a
16 credit is allowable under subsection (a) shall be re-
17 duced by the amount of such credit so allowed (de-
18 termined without regard to subsection (c)).

19 “(5) NO DOUBLE BENEFIT.—The amount of
20 any deduction or other credit allowable under this
21 chapter with respect to a new qualified hydrogen
22 fuel cell motor vehicle shall be reduced by the
23 amount of credit allowed under subsection (a) for
24 such vehicle for the taxable year.

1 “(6) PROPERTY USED BY TAX-EXEMPT ENTI-
2 TIES.—In the case of a credit amount which is al-
3 lowable with respect to a new qualified hydrogen fuel
4 cell motor vehicle which is acquired by an entity ex-
5 empt from tax under this chapter, the person which
6 sells or leases such vehicle to the entity shall be
7 treated as the taxpayer with respect to the vehicle
8 for purposes of this section and the credit shall be
9 allowed to such person, but only if the person clearly
10 discloses to the entity at the time of any sale or
11 lease the specific amount of any credit otherwise al-
12 lowable to the entity under this section.

13 “(7) RECAPTURE.—The Secretary shall, by reg-
14 ulations, provide for recapturing the benefit of any
15 credit allowable under subsection (a) with respect to
16 any property which ceases to be property eligible for
17 such credit (including recapture in the case of a
18 lease period of less than the economic life of a vehi-
19 cle).

20 “(8) PROPERTY USED OUTSIDE UNITED
21 STATES, ETC., NOT QUALIFIED.—No credit shall be
22 allowed under subsection (a) with respect to any
23 property referred to in section 50(b) or with respect
24 to the portion of the cost of any property taken into
25 account under section 179.

1 “(9) ELECTION TO NOT TAKE CREDIT.—No
2 credit shall be allowed under subsection (a) for any
3 vehicle if the taxpayer elects to not have this section
4 apply to such vehicle.

5 “(10) CARRYBACK AND CARRYFORWARD AL-
6 LOWED.—

7 “(A) IN GENERAL.—If the credit amount
8 allowable under subsection (a) for a taxable
9 year exceeds the amount of the limitation under
10 subsection (c) for such taxable year (in this
11 paragraph referred to as the ‘unused credit
12 year’), such excess shall be allowed as a credit
13 carryback for each of the 3 taxable years begin-
14 ning after the date of the enactment of this sec-
15 tion which precede the unused credit year and
16 a credit carryforward for each of the 20 taxable
17 years which succeed the unused credit year.

18 “(B) RULES.—Rules similar to the rules of
19 section 39 shall apply with respect to the credit
20 carryback and credit carryforward under sub-
21 paragraph (A).

22 “(11) INTERACTION WITH AIR QUALITY AND
23 MOTOR VEHICLE SAFETY STANDARDS.—Unless oth-
24 erwise provided in this section, a motor vehicle shall

1 not be considered eligible for a credit under this sec-
2 tion unless such vehicle is in compliance with—

3 “(A) the applicable provisions of the Clean
4 Air Act for the applicable make and model year
5 of the vehicle (or applicable air quality provi-
6 sions of State law in the case of a State which
7 has adopted such provision under a waiver
8 under section 209(b) of the Clean Air Act), and

9 “(B) the motor vehicle safety provisions of
10 sections 30101 through 30169 of title 49,
11 United States Code.

12 “(e) REGULATIONS.—

13 “(1) IN GENERAL.—Except as provided in para-
14 graph (2), the Secretary shall promulgate such regu-
15 lations as necessary to carry out the provisions of
16 this section.

17 “(2) COORDINATION IN PRESCRIPTION OF CER-
18 TAIN REGULATIONS.—The Secretary of the Treas-
19 ury, in coordination with the Secretary of Transpor-
20 tation and the Administrator of the Environmental
21 Protection Agency, shall prescribe such regulations
22 as necessary to determine whether a motor vehicle
23 meets the requirements to be eligible for a credit
24 under this section.”

25 (b) CONFORMING AMENDMENTS.—

1 (1) Section 1016(a) of the Internal Revenue
 2 Code of 1986 is amended by striking “and” at the
 3 end of paragraph (27), by striking the period at the
 4 end of paragraph (28) and inserting “, and”, and by
 5 adding at the end the following new paragraph:

6 “(29) to the extent provided in section
 7 30B(d)(4).”.

8 (2) Section 55(c)(2) of such Code is amended
 9 by inserting “30B(c),” after “30(b)(3)”.

10 (3) Section 6501(m) of such Code is amended
 11 by inserting “30B(d)(9),” after “30(d)(4),”.

12 (4) The table of sections for subpart B of part
 13 IV of subchapter A of chapter 1 of such Code is
 14 amended by inserting after the item relating to sec-
 15 tion 30A the following new item:

“Sec. 30B. Hydrogen fuel cell motor vehicle credit.”.

16 (c) EFFECTIVE DATE.—The amendments made by
 17 this section shall apply to property placed in service after
 18 the date of the enactment of this Act, in taxable years
 19 ending after such date.

20 **SEC. 502. CREDIT FOR INSTALLATION OF HYDROGEN FUEL**
 21 **CELL MOTOR VEHICLE FUELING STATIONS.**

22 (a) IN GENERAL.—Subpart B of part IV of sub-
 23 chapter A of chapter 1 of the Internal Revenue Code of
 24 1986 (relating to foreign tax credit, etc.), as amended by

1 this Act, is amended by adding at the end the following
2 new section:

3 **“SEC. 30C. HYDROGEN FUEL CELL MOTOR VEHICLE RE-**
4 **FUELING PROPERTY CREDIT.**

5 “(a) CREDIT ALLOWED.—There shall be allowed as
6 a credit against the tax imposed by this chapter for the
7 taxable year an amount equal to 50 percent of the amount
8 paid or incurred by the taxpayer during the taxable year
9 for the installation of qualified hydrogen fuel cell motor
10 vehicle refueling property.

11 “(b) LIMITATION.—The credit allowed under sub-
12 section (a)—

13 “(1) with respect to any retail hydrogen fuel
14 cell motor vehicle refueling property, shall not exceed
15 \$30,000, and

16 “(2) with respect to any residential hydrogen
17 fuel cell motor vehicle refueling property, shall not
18 exceed \$1,500.

19 “(c) YEAR CREDIT ALLOWED.—The credit allowed
20 under subsection (a) shall be allowed in the taxable year
21 in which the qualified hydrogen fuel cell motor vehicle re-
22 fueling property is placed in service by the taxpayer.

23 “(d) DEFINITIONS.—For purposes of this section—

24 “(1) QUALIFIED HYDROGEN FUEL CELL MOTOR
25 VEHICLE REFUELING PROPERTY.—The term ‘quali-

1 fied hydrogen fuel cell motor vehicle refueling prop-
2 erty’ means any property (not including a building
3 and its structural components) if—

4 “(A) such property is of a character sub-
5 ject to the allowance for depreciation,

6 “(B) the original use of such property be-
7 gins with the taxpayer, and

8 “(C) such property is for the storage or
9 dispensing of hydrogen fuel into the fuel tank
10 of a motor vehicle propelled by such fuel, but
11 only if the storage or dispensing of the fuel is
12 at the point where such fuel is delivered into
13 the fuel tank of the motor vehicle.

14 In the case of hydrogen produced from another
15 clean-burning fuel (as defined in section
16 179A(c)(1)), subparagraph (C) shall be applied by
17 substituting ‘production, storage, or dispensing’ for
18 ‘storage or dispensing’ both places it appears.

19 “(2) RESIDENTIAL HYDROGEN FUEL CELL
20 MOTOR VEHICLE REFUELING PROPERTY.—The term
21 ‘residential hydrogen fuel cell motor vehicle refueling
22 property’ means qualified hydrogen fuel cell motor
23 vehicle refueling property which is installed on prop-
24 erty which is used as the principal residence (within
25 the meaning of section 121) of the taxpayer.

1 “(3) RETAIL HYDROGEN FUEL CELL MOTOR
2 VEHICLE REFUELING PROPERTY.—The term ‘retail
3 hydrogen fuel cell motor vehicle refueling property’
4 means qualified hydrogen fuel cell motor vehicle re-
5 fueling property which is installed on property (other
6 than property described in paragraph (2)) used in a
7 trade or business of the taxpayer.

8 “(e) APPLICATION WITH OTHER CREDITS.—The
9 credit allowed under subsection (a) for any taxable year
10 shall not exceed the excess (if any) of—

11 “(1) the regular tax for the taxable year re-
12 duced by the sum of the credits allowable under sub-
13 part A and sections 27, 29, 30, and 30B, over

14 “(2) the tentative minimum tax for the taxable
15 year.

16 “(f) BASIS REDUCTION.—For purposes of this title,
17 the basis of any property shall be reduced by the portion
18 of the cost of such property taken into account under sub-
19 section (a).

20 “(g) NO DOUBLE BENEFIT.—No deduction shall be
21 allowed under section 179A with respect to any property
22 with respect to which a credit is allowed under subsection
23 (a).

24 “(h) REFUELING PROPERTY INSTALLED FOR TAX-
25 EXEMPT ENTITIES.—In the case of qualified hydrogen

1 fuel cell motor vehicle refueling property installed on prop-
2 erty owned or used by an entity exempt from tax under
3 this chapter, the person which installs such refueling prop-
4 erty for the entity shall be treated as the taxpayer with
5 respect to the refueling property for purposes of this sec-
6 tion (and such refueling property shall be treated as retail
7 hydrogen fuel cell motor vehicle refueling property) and
8 the credit shall be allowed to such person, but only if the
9 person clearly discloses to the entity in any installation
10 contract the specific amount of the credit allowable under
11 this section.

12 “(i) CARRYFORWARD ALLOWED.—

13 “(1) IN GENERAL.—If the credit amount allow-
14 able under subsection (a) for a taxable year exceeds
15 the amount of the limitation under subsection (e) for
16 such taxable year (referred to as the ‘unused credit
17 year’ in this subsection), such excess shall be allowed
18 as a credit carryforward for each of the 20 taxable
19 years following the unused credit year.

20 “(2) RULES.—Rules similar to the rules of sec-
21 tion 39 shall apply with respect to the credit
22 carryforward under paragraph (1).

23 “(j) SPECIAL RULES.—Rules similar to the rules of
24 paragraphs (4) and (5) of section 179A(e) shall apply.

1 “(k) REGULATIONS.—The Secretary shall prescribe
2 such regulations as necessary to carry out the provisions
3 of this section.”.

4 (b) INCENTIVE FOR PRODUCTION OF HYDROGEN AT
5 QUALIFIED CLEAN-FUEL VEHICLE REFUELING PROP-
6 erty.—Section 179A(d) of the Internal Revenue Code of
7 1986 (defining qualified clean-fuel vehicle refueling prop-
8 erty) is amended by adding at the end the following new
9 flush sentence:

10 “In the case of clean-burning fuel which is hydrogen pro-
11 duced from another clean-burning fuel, paragraph (3)(A)
12 shall be applied by substituting ‘production, storage, or
13 dispensing’ for ‘storage or dispensing’ both places it ap-
14 pears.”.

15 (c) MODIFICATIONS TO EXTENSION OF DEDUCTION
16 FOR HYDROGEN REFUELING PROPERTY.—

17 (1) IN GENERAL.—Section 179A(f) of the In-
18 ternal Revenue Code of 1986 (relating to termi-
19 nation) is amended by inserting “(other than prop-
20 erty relating to hydrogen)” after “property”.

21 (2) NONAPPLICATION OF PHASEOUT.—Section
22 179A(b)(1)(B) of such Code (relating to phaseout)
23 is amended by inserting “(other than property relat-
24 ing to hydrogen)” after “property”.

25 (d) CONFORMING AMENDMENTS.—

1 amended by inserting after section 25B the following new
2 section:

3 **“SEC. 25C. RESIDENTIAL FUEL CELL PROPERTY.**

4 “(a) ALLOWANCE OF CREDIT.—In the case of an in-
5 dividual, there shall be allowed as a credit against the tax
6 imposed by this chapter for the taxable year an amount
7 equal to 30 percent of the qualified fuel cell property ex-
8 penditures made by the taxpayer during such year.

9 “(b) LIMITATIONS.—

10 “(1) MAXIMUM CREDIT.—The credit allowed
11 under subsection (a) shall not exceed \$1,000 for
12 each kilowatt of capacity.

13 “(2) SAFETY CERTIFICATIONS.—No credit shall
14 be allowed under this section for an item of property
15 unless such property meets appropriate fire and elec-
16 tric code requirements.

17 “(c) CARRYFORWARD OF UNUSED CREDIT.—If the
18 credit allowable under subsection (a) exceeds the limita-
19 tion imposed by section 26(a) for such taxable year re-
20 duced by the sum of the credits allowable under this sub-
21 part (other than this section), such excess shall be carried
22 to the succeeding taxable year and added to the credit al-
23 lowable under subsection (a) for such succeeding taxable
24 year.

25 “(d) DEFINITIONS.—For purposes of this section—

1 “(1) QUALIFIED FUEL CELL PROPERTY EX-
2 PENDITURE.—The term ‘qualified fuel cell property
3 expenditure’ means an expenditure for qualified fuel
4 cell property (as defined in section 48(a)(4)) in-
5 stalled on or in connection with a dwelling unit lo-
6 cated in the United States and used as a residence
7 by the taxpayer, including all necessary installation
8 fees and charges.

9 “(2) LABOR COSTS.—Expenditures for labor
10 costs properly allocable to the onsite preparation, as-
11 sembly, or original installation of such property and
12 for piping or wiring to interconnect such property to
13 the dwelling unit shall be taken into account for pur-
14 poses of this section.

15 “(e) SPECIAL RULES.—For purposes of this sec-
16 tion—

17 “(1) DOLLAR AMOUNTS IN CASE OF JOINT OC-
18 CUPANCY.—In the case of any dwelling unit which is
19 jointly occupied and used during any calendar year
20 as a residence by 2 or more individuals the following
21 shall apply:

22 “(A) The amount of the credit allowable,
23 under subsection (a) by reason of expenditures
24 (as the case may be) made during such cal-
25 endar year by any of such individuals with re-

1 spect to such dwelling unit shall be determined
2 by treating all of such individuals as 1 taxpayer
3 whose taxable year is such calendar year.

4 “(B) There shall be allowable, with respect
5 to such expenditures to each of such individ-
6 uals, a credit under subsection (a) for the tax-
7 able year in which such calendar year ends in
8 an amount which bears the same ratio to the
9 amount determined under subparagraph (A) as
10 the amount of such expenditures made by such
11 individual during such calendar year bears to
12 the aggregate of such expenditures made by all
13 of such individuals during such calendar year.

14 “(2) TENANT-STOCKHOLDER IN COOPERATIVE
15 HOUSING CORPORATION.—In the case of an indi-
16 vidual who is a tenant-stockholder (as defined in sec-
17 tion 216) in a cooperative housing corporation (as
18 defined in such section), such individual shall be
19 treated as having made his tenant-stockholder’s pro-
20 portionate share (as defined in section 216(b)(3)) of
21 any expenditures of such corporation.

22 “(3) CONDOMINIUMS.—

23 “(A) IN GENERAL.—In the case of an indi-
24 vidual who is a member of a condominium man-
25 agement association with respect to a condo-

1 minium which the individual owns, such indi-
2 vidual shall be treated as having made the indi-
3 vidual's proportionate share of any expenditures
4 of such association.

5 “(B) CONDOMINIUM MANAGEMENT ASSO-
6 CIATION.—For purposes of this paragraph, the
7 term ‘condominium management association’
8 means an organization which meets the require-
9 ments of paragraph (1) of section 528(c) (other
10 than subparagraph (E) thereof) with respect to
11 a condominium project substantially all of the
12 units of which are used as residences.

13 “(4) ALLOCATION IN CERTAIN CASES.—If less
14 than 80 percent of the use of an item is for nonbusi-
15 ness purposes, only that portion of the expenditures
16 for such item which is properly allocable to use for
17 nonbusiness purposes shall be taken into account.

18 “(5) WHEN EXPENDITURE MADE; AMOUNT OF
19 EXPENDITURE.—

20 “(A) IN GENERAL.—Except as provided in
21 subparagraph (B), an expenditure with respect
22 to an item shall be treated as made when the
23 original installation of the item is completed.

24 “(B) EXPENDITURES PART OF BUILDING
25 CONSTRUCTION.—In the case of an expenditure

1 in connection with the construction or recon-
2 struction of a structure, such expenditure shall
3 be treated as made when the original use of the
4 constructed or reconstructed structure by the
5 taxpayer begins.

6 “(C) AMOUNT.—The amount of any ex-
7 penditure shall be the cost thereof.

8 “(6) PROPERTY FINANCED BY SUBSIDIZED EN-
9 ERGY FINANCING.—For purposes of determining the
10 amount of expenditures made by any individual with
11 respect to any dwelling unit, there shall not be taken
12 in to account expenditures which are made from
13 subsidized energy financing (as defined in section
14 48(a)(5)(C)).

15 “(f) BASIS ADJUSTMENTS.—For purposes of this
16 subtitle, if a credit is allowed under this section for any
17 expenditure with respect to any property, the increase in
18 the basis of such property which would (but for this sub-
19 section) result from such expenditure shall be reduced by
20 the amount of the credit so allowed.”.

21 (b) CREDIT ALLOWED AGAINST REGULAR TAX AND
22 ALTERNATIVE MINIMUM TAX.—

23 (1) IN GENERAL.—Section 25C(b) of the Inter-
24 nal Revenue Code of 1986, as added by subsection

1 (a), is amended by adding at the end the following
2 new paragraph:

3 “(3) LIMITATION BASED ON AMOUNT OF
4 TAX.—The credit allowed under subsection (a) for
5 the taxable year shall not exceed the excess of—

6 “(A) the sum of the regular tax liability
7 (as defined in section 26(b)) plus the tax im-
8 posed by section 55, over

9 “(B) the sum of the credits allowable
10 under this subpart (other than this section) and
11 section 27 for the taxable year.”.

12 (2) CONFORMING AMENDMENTS.—

13 (A) Section 25C(c) of such Code, as added
14 by subsection (a), is amended by striking “sec-
15 tion 26(a) for such taxable year reduced by the
16 sum of the credits allowable under this subpart
17 (other than this section)” and inserting “sub-
18 section (b)(3)”.

19 (B) Section 23(b)(4)(B) of such Code is
20 amended by inserting “and section 25C” after
21 “this section”.

22 (C) Section 24(b)(3)(B) of such Code is
23 amended by striking “23 and 25B” and insert-
24 ing “23, 25B, and 25C”.

1 (D) Section 25(e)(1)(C) of such Code is
2 amended by inserting “25C,” after “25B,”.

3 (E) Section 25B(g)(2) of such Code is
4 amended by striking “section 23” and inserting
5 “sections 23 and 25C”.

6 (F) Section 26(a)(1) of such Code is
7 amended by striking “and 25B” and inserting
8 “25B, and 25C”.

9 (G) Section 904(h) of such Code is amend-
10 ed by striking “and 25B” and inserting “25B,
11 and 25C”.

12 (H) Section 1400C(d) of such Code is
13 amended by striking “and 25B” and inserting
14 “25B, and 25C”.

15 (c) ADDITIONAL CONFORMING AMENDMENTS.—

16 (1) Section 23(e) of the Internal Revenue Code
17 of 1986, as in effect for taxable years beginning be-
18 fore January 1, 2004, is amended by striking “sec-
19 tion 1400C” and inserting “sections 25C and
20 1400C”.

21 (2) Section 25(e)(1)(C) of such Code, as in ef-
22 fect for taxable years beginning before January 1,
23 2004, is amended by inserting “, 25C,” after “sec-
24 tions 23”.

1 (3) Subsection (a) of section 1016 of such
2 Code, as amended by this Act, is amended by strik-
3 ing “and” at the end of paragraph (29), by striking
4 the period at the end of paragraph (30) and insert-
5 ing “, and”, and by adding at the end the following
6 new paragraph:

7 “(31) to the extent provided in section 25C(f),
8 in the case of amounts with respect to which a credit
9 has been allowed under section 25C.”.

10 (4) Section 1400C(d) of such Code, as in effect
11 for taxable years beginning before January 1, 2004,
12 is amended by inserting “and section 25C” after
13 “this section”.

14 (5) The table of sections for subpart A of part
15 IV of subchapter A of chapter 1 of such Code is
16 amended by inserting after the item relating to sec-
17 tion 25B the following new item:

 “Sec. 25C. Residential fuel cell property.”.

18 (d) EFFECTIVE DATES.—

19 (1) IN GENERAL.—Except as provided by para-
20 graph (2), the amendments made by this section
21 shall apply to expenditures after the date of the en-
22 actment of this Act, in taxable years ending after
23 such date.

1 (2) SUBSECTION (b).—The amendments made
2 by subsection (b) shall apply to taxable years begin-
3 ning after December 31, 2003.

4 **SEC. 504. CREDIT FOR BUSINESS INSTALLATION OF QUALI-**
5 **FIED FUEL CELLS.**

6 (a) IN GENERAL.—Subparagraph (A) of section
7 48(a)(3) of the Internal Revenue Code of 1986 (defining
8 energy property) is amended by striking “or” at the end
9 of clause (i), by adding “or” at the end of clause (ii), and
10 by inserting after clause (ii) the following new clause:

11 “(iii) qualified fuel cell property.”

12 (b) QUALIFIED FUEL CELL PROPERTY.—Subsection
13 (a) of section 48 is amended by redesignating paragraphs
14 (4) and (5) as paragraphs (5) and (6), respectively, and
15 by inserting after paragraph (3) the following new para-
16 graph:

17 “(4) QUALIFIED FUEL CELL PROPERTY.—For
18 purposes of this subsection—

19 “(A) IN GENERAL.—The term ‘qualified
20 fuel cell property’ means a fuel cell power plant
21 that—

22 “(i) generates electricity using an
23 electrochemical process, and

1 “(ii) has an electricity-only generation
2 efficiency greater than 30 percent at rated
3 power.

4 “(B) LIMITATION.—In the case of quali-
5 fied fuel cell property placed in service during
6 the taxable year, the credit determined under
7 paragraph (1) for such year with respect to
8 such property shall not exceed an amount equal
9 to the lesser of—

10 “(i) 30 percent of the basis of such
11 property, including all necessary installa-
12 tion fees and charges, or

13 “(ii) \$1,000 for each kilowatt of ca-
14 pacity of such property.

15 “(C) SPECIAL RULES.—For purposes of
16 subparagraph (A)(ii)—

17 “(i) ELECTRICITY-ONLY GENERATION
18 EFFICIENCY.—The electricity-only genera-
19 tion efficiency percentage of a fuel cell
20 power plant is the fraction—

21 “(I) the numerator of which is
22 the total useful electrical power pro-
23 duced by such plant at normal oper-
24 ating rates, and expected to be con-
25 sumed in its normal application, and

1 “(II) the denominator of which is
2 the lower heating value of the fuel
3 source for such plant.

4 “(ii) DETERMINATIONS MADE ON BTU
5 BASIS.—The electricity-only generation ef-
6 ficiency percentage shall be determined on
7 a Btu basis.

8 “(D) FUEL CELL POWER PLANT.—The
9 term ‘fuel cell power plant’ means an integrated
10 system comprised of a fuel cell stack assembly
11 and associated balance of plant components
12 that converts a fuel into electricity using elec-
13 trochemical means.”.

14 (c) LIMITATION.—Section 48(a)(2)(A) of the Internal
15 Revenue Code of 1986 (relating to energy percentage) is
16 amended to read as follows:

17 “(A) IN GENERAL.—The energy percent-
18 age is—

19 “(i) in the case of qualified fuel cell
20 property, 30 percent, and

21 “(ii) in the case of any other energy
22 property, 10 percent.”.

23 (d) CONFORMING AMENDMENT.—Section
24 29(b)(3)(A)(i)(III) of the Internal Revenue Code of 1986

1 is amended by striking “section 48(a)(4)(C)” and insert-
 2 ing “section 48(a)(5)(C)”.

3 (e) EFFECTIVE DATE.—The amendments made by
 4 this subsection shall apply to property placed in service
 5 after the date of the enactment of this Act, under rules
 6 similar to the rules of section 48(m) of the Internal Rev-
 7 enue Code of 1986 (as in effect on the day before the date
 8 of the enactment of the Revenue Reconciliation Act of
 9 1990).

10 **TITLE VI—EDUCATION AND** 11 **OUTREACH**

12 **SEC. 601. EDUCATION AND OUTREACH.**

13 (a) REQUIREMENTS.—The Secretary shall work with
 14 other Federal, State, and local agencies, and academic in-
 15 stitutions and organizations to develop a public outreach
 16 and awareness program.

17 (b) AUTHORIZATION OF APPROPRIATIONS.—There
 18 are authorized to be appropriated to the Secretary to carry
 19 out this title \$7,000,000 for fiscal year 2004 and each
 20 fiscal year thereafter through fiscal year 2013.

21 **TITLE VII—TARGETS AND** 22 **TIMETABLES**

23 **SEC. 701. DEPARTMENT OF ENERGY STRATEGY.**

24 (a) CRITICAL TECHNOLOGY PLAN.—Not later than
 25 1 year after the date of enactment of this Act, the Sec-

1 retary shall publish and transmit to Congress a plan iden-
2 tifying critical technologies, enabling strategies and appli-
3 cations, technical targets, and associated timeframes that
4 support the commercialization of hydrogen-fueled fuel cell
5 vehicles.

6 (b) CONTENTS.—The plan shall describe the activi-
7 ties of the Department of Energy, including a research,
8 development, demonstration, and commercial application
9 program for developing technologies to support—

10 (1) the production and deployment of 100,000
11 hydrogen-fueled fuel cell vehicles in the United
12 States by 2010 and 2,500,000 of such vehicles by
13 2020 and annually thereafter; and

14 (2) the integration of hydrogen activities, with
15 associated technical targets and timetables for the
16 development of technologies to provide for the sale
17 of hydrogen at fueling stations in the United States
18 by 2010 and 2020, respectively.

19 (c) PROGRESS REVIEW.—The Secretary shall include
20 in each annual budget submission a review of the progress
21 toward meeting the numerical targets in subsection (b).

○