

104TH CONGRESS
2^D SESSION

H. R. 4138

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 27, 1996

Received

AN ACT

To authorize the hydrogen research, development, and demonstration programs of the Department of Energy, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Hydrogen Future Act
3 of 1996”.

4 **SEC. 2. DEFINITIONS.**

5 For purposes of titles II and III—

6 (1) the term “Department” means the Depart-
7 ment of Energy; and

8 (2) the term “Secretary” means the Secretary
9 of Energy.

10 **TITLE I—HYDROGEN**

11 **SEC. 101. PURPOSES AND DEFINITIONS.**

12 (a) Section 102(b)(1) of Public Law 101–566 (42
13 U.S.C. 12401(b)(1)) is amended to read as follows:

14 “(1) to direct the Secretary of Energy to conduct a
15 research, development, and demonstration program lead-
16 ing to the production, storage, transport, and use of hy-
17 drogen for industrial, residential, transportation, and util-
18 ity applications;”.

19 (b) Section 102(c) of Public Law 101–566 (42 U.S.C.
20 12401(c)) is amended—

21 (1) in subsection (1) by striking “; and” insert-
22 ing “;”;

23 (2) by redesignating subsection (2) as sub-
24 section (3); and

25 (3) by inserting before subsection (3) (as redес-
26 igned) the following new subsection:

1 “(2) ‘Department’ means the Department of Energy;
2 and”.

3 **SEC. 102. REPORTS TO CONGRESS.**

4 (a) Section 103 of Public Law 101–566 (42 U.S.C.
5 12402) is amended to read as follows:

6 **“§ 103. Report to Congress**

7 “(a) Not later than January 1, 1999, the Secretary
8 shall transmit to Congress a detailed report on the status
9 and progress of the programs authorized under this Act.

10 “(b) A report under subsection (a) shall include, in
11 addition to any views and recommendations of the Sec-
12 retary—

13 “(1) an analysis of the effectiveness of the pro-
14 grams authorized under this chapter, to be prepared
15 and submitted to the Secretary by the Hydrogen
16 Technical Advisory Panel established under section
17 108 of this Act; and

18 “(2) recommendations of the Hydrogen Tech-
19 nical Advisory Panel for any improvements in the
20 program that are needed, including recommenda-
21 tions for additional legislation.”.

22 (b) Section 108(d) of Public Law 101–566 (42
23 U.S.C. 12407(d)) is amended—

24 (1) by adding “and” at the end of paragraph
25 (1);

1 (2) by striking “; and” at the end of paragraph
2 (2) and inserting a period; and
3 (3) by striking paragraph (3).

4 **SEC. 103. HYDROGEN RESEARCH AND DEVELOPMENT.**

5 (a) Section 104 of Public Law 101–566 (42 U.S.C.
6 12403) is amended to read as follows:

7 **“§ 104. Hydrogen research and development**

8 “(a) The Secretary shall conduct a hydrogen research
9 and development program relating to production, storage,
10 transportation, and use of hydrogen, with the goal of ena-
11 bling the private sector to demonstrate the technical fea-
12 sibility of using hydrogen for industrial, residential, trans-
13 portation, and utility applications.

14 “(b) In conducting the program authorized by this
15 section, the Secretary shall—

16 “(1) give particular attention to developing an
17 understanding and resolution of critical technical is-
18 sues preventing the introduction of hydrogen into
19 the marketplace;

20 “(2) initiate or accelerate existing research in
21 critical technical issues that will contribute to the
22 development of more economic hydrogen production
23 and use, including, but not limited to, critical tech-
24 nical issues with respect to production (giving prior-
25 ity to those production techniques that use renew-

1 able energy resources as their primary source of en-
2 ergy for hydrogen production), liquefaction, trans-
3 mission, distribution, storage, and use (including use
4 of hydrogen in surface transportation); and

5 “(3) survey private sector hydrogen activities
6 and take steps to ensure that research and develop-
7 ment activities under this section do not displace or
8 compete with the privately funded hydrogen research
9 and development activities of United States industry.

10 “(c) The Secretary is authorized to evaluate any rea-
11 sonable new or improved technology, including basic re-
12 search on highly innovative energy technologies, that could
13 lead or contribute to the development of economic hydro-
14 gen production, storage, and utilization.

15 “(d) The Secretary is authorized to evaluate any rea-
16 sonable new or improved technology that could lead or
17 contribute to, or demonstrate the use of, advanced renew-
18 able energy systems or hybrid systems for use in isolated
19 communities that currently import diesel fuel as the pri-
20 mary fuel for electric power production.

21 “(e) The Secretary is authorized to arrange for tests
22 and demonstrations and to disseminate to researchers and
23 developers information, data, and other materials nec-
24 essary to support the research and development activities

1 authorized under this section and other efforts authorized
2 under this chapter, consistent with section 106 of this Act.

3 “(f) The Secretary shall carry out the research and
4 development activities authorized under this section only
5 through the funding of research and development propos-
6 als submitted by interested persons according to such pro-
7 cedures as the Secretary may require and evaluate on a
8 competitive basis using peer review. Such funding shall be
9 in the form of a grant agreement, procurement contract,
10 or cooperative agreement (as those terms are used in
11 chapter 63 of title 31, United States Code).

12 “(g) The Secretary shall not consider a proposal sub-
13 mitted by a person from industry unless the proposal con-
14 tains a certification that reasonable efforts to obtain non-
15 Federal funding for the entire cost of the project have
16 been made, and that such non-Federal funding could not
17 be reasonably obtained. As appropriate, the Secretary
18 shall require a commitment from non-Federal sources of
19 at least 50 percent of the cost of the development portion
20 of such a proposal.

21 “(h) The Secretary shall not carry out any activities
22 under this section that unnecessarily duplicate activities
23 carried out elsewhere by the Federal Government or indus-
24 try.

1 “(i) The Secretary shall establish, after consultation
2 with other Federal agencies, terms and conditions under
3 which Federal funding will be provided under this chapter
4 that are consistent with the Agreement on Subsidies and
5 Countervailing Measures referred to in section 101(d)(12)
6 of the Uruguay Round Agreement Act (19 U.S.C.
7 3511(d)(12)).”.

8 (b)(1) Section 2026(a) of the Energy Policy Act of
9 1992 (42 U.S.C. 13436(a)) is amended by striking “, in
10 accordance with sections 3001 and 3002 of this Act,”.

11 (2) Effective October 1, 1998, section 2026 of the
12 Energy Policy Act of 1992 (42 U.S.C. 13436) is repealed.

13 **SEC. 104. DEMONSTRATIONS.**

14 Section 105 of Public Law 101–566 (42 U.S.C.
15 12404) is amended by adding at the end the following new
16 subsection:

17 “(c) The Secretary shall require a commitment from
18 non-Federal sources of at least 50 percent of the cost of
19 any demonstration conducted under this section.”.

20 **SEC. 105. TECHNOLOGY TRANSFER.**

21 Section 106(b) of Public Law 101–566 (42 U.S.C.
22 12405(b)) is amended by adding to the end of the sub-
23 section the following:

24 “The Secretary shall also foster the exchange of generic,
25 nonproprietary information and technology, developed

1 pursuant to this chapter, among industry, academia, and
2 the Federal Government, to help the United States econ-
3 omy attain the economic benefits of this information and
4 technology.”.

5 **SEC. 106. AUTHORIZATION OF APPROPRIATIONS.**

6 Section 109 of Public Law 101–566 (42 U.S.C.
7 12408) is amended—

8 (1) by striking “to other Acts” and inserting
9 “under other Acts”;

10 (2) by striking “and” from the end of para-
11 graph (2);

12 (3) by striking the period from the end of para-
13 graph (3) and inserting “;”; and

14 (4) by adding at the end of the section the fol-
15 lowing:

16 “(4) \$14,500,000 for fiscal year 1996;

17 “(5) \$20,000,000 for fiscal year 1997;

18 “(6) \$25,000,000 for fiscal year 1998;

19 “(7) \$30,000,000 for fiscal year 1999;

20 “(8) \$35,000,000 for fiscal year 2000; and

21 “(9) \$40,000,000 for fiscal year 2001.”.

1 **TITLE II—FUEL CELLS**
2 **SEC. 201. INTEGRATION OF FUEL CELLS WITH HYDROGEN**
3 **PRODUCTION SYSTEMS.**

4 (a) Not later than 180 days after the date of enact-
5 ment of this section, and subject to the availability of ap-
6 propriations made specifically for this section, the Sec-
7 retary of Energy shall solicit proposals for projects to
8 prove the feasibility of integrating fuel cells with—

9 (1) photovoltaic systems for hydrogen produc-
10 tion; or

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

13 (b) Each proposal submitted in response to the solici-
14 tation under this section shall be evaluated on a competi-
15 tive basis using peer review. The Secretary is not required
16 to make an award under this section in the absence of
17 a meritorious proposal.

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

20 (1) are submitted jointly from consortia includ-
21 ing academic institutions, industry, State or local
22 governments, and Federal laboratories; and

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

1 (d) In the case of a proposal involving development
2 or demonstration, the Secretary shall require a commit-
3 ment from non-Federal sources of at least 50 percent of
4 the cost of the development or demonstration portion of
5 the proposal.

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

13 **SEC. 202. AUTHORIZATION OF APPROPRIATIONS.**

14 There are authorized to be appropriated, for activities
15 under this section, a total of \$50,000,000 for fiscal years
16 1997 and 1998, to remain available until September 30,
17 1999.

18 **TITLE III—DOE SCIENTIFIC AND**
19 **TECHNICAL PROGRAM QUALITY**

20 **SEC. 301. TEMPORARY APPOINTMENTS FOR SCIENTIFIC**
21 **AND TECHNICAL EXPERTS IN DEPARTMENT**
22 **OF ENERGY RESEARCH AND DEVELOPMENT**
23 **PROGRAMS.**

24 (a) The Secretary, utilizing authority under other ap-
25 plicable law and the authority of this section, may appoint

1 for a limited term, or on a temporary basis, scientists, en-
2 gineers, and other technical and professional personnel on
3 leave of absence from academic, industrial, or research in-
4 stitutions to work for the Department.

5 (b) The Department may pay, to the extent author-
6 ized for certain other Federal employees by section 5723
7 of title 5, United States Code, travel expenses for any indi-
8 vidual appointed for a limited term or on a temporary
9 basis and transportation expenses of his or her immediate
10 family and his or her household goods and personal effects
11 from that individual's residence at the time of selection
12 or assignment to his or her duty station. The Department
13 may pay such travel expenses to the same extent for such
14 an individual's return to the former place of residence
15 from his or her duty station, upon separation from the
16 Federal service following an agreed period of service. The
17 Department may also pay a per diem allowance at a rate
18 not to exceed the daily amounts prescribed under section
19 5702 of title 5 to such an individual, in lieu of transpor-
20 tation expenses of the immediate family and household
21 goods and personal effects, for the period of his or her
22 employment with the Department. Notwithstanding any
23 other provision of law, the employer's contribution to any
24 retirement, life insurance, or health benefit plan for an
25 individual appointed for a term of one year or less, which

1 could be extended for no more than one additional year,
2 may be made or reimbursed from appropriations available
3 to the Department.

Passed the House of Representatives September 26,
1996.

Attest:

ROBIN H. CARLE,

Clerk.

By JEFF TRANDAHL,

Assistant to the Clerk.