
IN THE SENATE OF THE UNITED STATES

Mr. Tsongas introduced the following bill; which was read twice
and referred to the Committee on _____

A BILL

To establish a national technology education grants program to
provide matching Federal assistance to joint initiatives by
private industry, educational institutions, and State
government to strengthen science, engineering, and technical
education, and for other purposes.

1 Be it enacted by the Senate and House of Representatives
2 of the United States of America in Congress assembled, That
3 this Act may be cited as the ``High Technology Morrill Act``.

4 FINDINGS

5 Sec. 2. The Congress finds that--

6 (1) the relationship between a healthy and vibrant
7 national education establishment and a healthy economy is
8 inseparable in an era of technology dependent industrial
9 growth;

10 (2) competitor nations have given priority to the
11 relationship between education and economic growth,
12 especially as it pertains to new high technology
13 industries such as electronics, computers,
14 communications, aerospace, biotechnology, new materials,
15 energy, and other technology-intensive fields;

16 (3) the future international industrial competitive
17 position of the United States depends on maintaining
18 United States scientific and technological leadership,

1 increasing the rate of innovation, and increasing the
2 productivity of our basic industries, all of which
3 require a well-educated, motivated, and technologically
4 proficient work force;

5 (4) while the rapid growth of high technology
6 industries and the large increases in defense spending
7 are exerting increasing pressure on the availability and
8 quality of scientific, engineering, and technical
9 personnel, our educational infrastructure is experiencing
10 serious limitations in providing sufficient personnel
11 with high quality training in critical areas, in keeping
12 the proficiency of the current science and engineering
13 work force up to date, and in maintaining high levels of
14 technological literacy nationwide;

15 (5) although cooperation between industry and the
16 academic community is now increasing, much more effort is
17 necessary and can be achieved with a national policy that
18 provides leadership and support for technology education;

19 (6) a national partnership among government,
20 industry, and educational institutions, can most
21 effectively carry out a national program to improve the
22 quality of math and science teaching at the elementary
23 and secondary school level, upgrade the quality and
24 capacity of community colleges, universities, and
25 graduate schools to provide scientific, engineering, and
26 technical education in areas of critical skill shortages,
27 and expand the opportunities for lifelong education in
28 all technological fields; and

29 (7) the Act of July 2, 1862, (commonly known as the
30 First Morrill Act), which set aside publicly owned
31 natural resources to fund investment in education for
32 agriculture and the mechanic arts by establishing the
33 Land Grant College System, provides a useful model for
34 fusing the interests of government, industry, and

1 education into a national policy for economic growth.

2 STATEMENT OF PURPOSE

3 Sec. 3. It is the purpose of this Act to establish a
4 national technology education program designed to--

5 (1) assure an adequate supply of scientific,
6 engineering, and technical personnel to ensure United
7 States scientific and technological leadership;
8 international competitiveness, and national security;

9 (2) strengthen programs in science, technology, and
10 engineering of both public and private institutions of
11 higher education.

12 (3) improve the quality of math and science training
13 in elementary and secondary schools;

14 (4) improve the science and engineering knowledge and
15 technical skills of the current work force, aid workers
16 in keeping up with scientific and technological progress,
17 and accelerate the absorption of workers into areas of
18 critical skill shortages; and

19 (5) strengthen the partnership between industry, the
20 academic community, and government to ensure that the
21 educational system provides professional and technical
22 skills relevant to national economic and security needs
23 and that industrial resources are used to enhance the
24 quality of education.

25 DEFINITIONS

26 Sec. 4. As used in this Act--

27 (1) The term "Director" means the Director of the
28 National Science Foundation.

29 (2) The term "educational institution" means any
30 local educational agency, any State educational agency
31 applying on behalf of schools directly operated by the
32 State educational agency, and any institution of higher
33 education (including community colleges).

34 (3) The term "elementary school" has the same

1 meaning given that term by section 198 (a) (7) of the
2 Elementary and Secondary Education Act of 1965.

3 (4) The term "local educational agency" means any
4 such agency as defined in section 198 (a) (1Ø) of the
5 Elementary and Secondary Education Act of 1965.

6 (5) The term "secondary school" has the same
7 meaning given that term by section 198 (a) (7) of the
8 Elementary and Secondary Education Act of 1965.

9 (6) The term "State educational agency" means any
1Ø such agency as defined in section 198 (a) (17) of the
11 Elementary and Secondary Education Act of 1965.

12 (7) The term "institution of higher education"
13 means any such institution as defined in section 12Ø1 (a)
14 of the Higher Education Act of 1965.

15 (8) The term "State" means each of the several
16 States and the District of Columbia.

17 (9) The term "Trust Fund" means the Technology
18 Education Trust Fund" established under section 5.

19 ESTABLISHMENT OF THE TECHNOLOGY EDUCATION TRUST FUND

2Ø Sec. 5. (a) (1) There is established in the Treasury of
21 the United States a Trust Fund to be known as the
22 "Technology Education Trust Fund" consisting of such
23 amounts as are transferred to the Trust Fund under subsection
24 (b). Subject to subsection (d) the Trust Fund shall remain
25 available without fiscal year limitation and the amounts may
26 be used only for payments in accordance with this Act.

27 (2) The Secretary of the Treasury shall be the trustee of
28 the Trust Fund and shall report to the Congress not later
29 than March 1 of each year on the operation status of the
3Ø Trust Fund during the preceding fiscal year.

31 (b) The Secretary of the Treasury shall transfer from the
32 general fund of the Treasury to the Trust Fund--

33 (1) for fiscal year 1984, 3 per centum,

34 (2) for fiscal year 1985, 3 per centum,

1 (3) for fiscal year 1986, 3 per centum,

2 (4) for fiscal year 1987, 3 per centum, and

3 (5) for fiscal year 1988, 3 per centum,

4 of the rents, royalties, and other sums paid to the United
5 States under--

6 (A) the Outer Continental Shelf Lands Act;

7 (B) the Act entitled "An Act to promote the mining
8 of coal, phosphate, oil, oil shale, gas and sodium in the
9 public domain", approved February 25, 1920 (commonly
10 known as the Mineral Leasing Act of 1920); and

11 (C) any other Federal statute authorizing payments
12 for mineral resource development designated by the
13 Secretary of the Treasury for the purpose of this Act;

14 except that transfers under this subsection shall not exceed
15 \$500,000,000 in any one fiscal year. The amounts required to
16 be transferred under this subsection shall be transferred at
17 least quarterly on the basis of estimates made by the
18 Secretary of the Treasury. Proper adjustment shall be made in
19 any amount subsequently transferred to the extent prior
20 estimates were in excess of, or less than, the amounts
21 required to be transferred.

22 (c) (1) Amounts in the Trust Fund shall be available for
23 making payments in accordance with this Act as provided in
24 advance by appropriation Acts.

25 (2) Notwithstanding any other provision of law, unless
26 enacted in specific limitation with the provisions of this
27 subsection, any funds appropriated from the Trust Fund to
28 carry out this Act shall remain available without fiscal year
29 limitation.

30 (d) (1) No transfers required by subsection (b) of this
31 section may be made by the Secretary of the Treasury to the
32 Trust Fund after September 30, 1988.

33 (2) The Secretary of the Treasury shall pay into the
34 general fund of the Treasury any amounts remaining in the

1 Trust Fund after September 30, 1990, which were not expended
2 and remain in the Trust Fund.

3 TECHNOLOGY EDUCATION GRANTS

4 Sec. 6. (a) (1) The Director is authorized, in accordance
5 with the provisions of this Act, to make grants to
6 educational institutions, private business concerns, and
7 State agencies making application jointly to pay the Federal
8 share of the cost of technology education programs.

9 (2) An application may be submitted to the Director
10 jointly by private nonprofit organizations and a State agency
11 if the nonprofit private organization represents an
12 educational institution and a business concern, or a group of
13 such institutions and concerns.

14 (b) No grant may be made under this section unless--

15 (1) the application is consistent with the economic
16 development and educational policies of the State, as
17 determined by the Chief executive of the State, and is
18 consistent with the priorities of the private sector and
19 needs of educational institutions within the State.

20 (2) the Director determines that there is a
21 probability that the activities described in the
22 application could not be carried out unless assistance
23 sought under the application is furnished.

24 APPLICATION

25 Sec. 7. (a) Each educational institution, private
26 business concern, and State agency applying jointly or
27 nonprofit private organization and State agency, complying
28 with the provisions of section 6, desiring to participate in
29 the program authorized by this Act shall prepare and submit
30 an application at such time, in such manner, and containing
31 or accompanied by such information as the Director deems
32 reasonably necessary. Each application shall--

33 (1) provide a description of the activities for which
34 assistance is sought, including an estimate of the costs

1 of the activities and the location in which the
2 activities will be carried out;

3 (2) provide assurances (A) that the applicant will
4 pay from non-Federal sources the remaining cost of
5 carrying out the application; and (B) that 30 per centum
6 of the total costs of the application will be paid from
7 State and local public sources and 20 per centum of such
8 costs will be paid by the business concern joining in the
9 application;

10 (3) provide justification for any operational cost
11 associated with carrying out the activities so described
12 which have been supported under this Act for a period of
13 more than one year, together with an explanation of the
14 value as a demonstration project of the continuation of
15 such activities to other similar activities in the State;

16 (4) provide an analysis of the benefits which such
17 activities may be expected to produce, particularly
18 economic, employment, and educational benefits; and

19 (5) provide such fiscal control and fund accounting
20 procedures as may be necessary--

21 (A) to insure a proper accounting of Federal
22 funds paid to the applicant under this Act; and

23 (B) to insure the verification of the costs of
24 the technology education program furnished by the
25 applicant.

26 (b) Applications made under this section may not be
27 approved by the Director unless he determines that--

28 (1) the application meets the requirements set forth
29 in subsection (a) of this Act and is consistent with the
30 other provisions of this Act;

31 (2) the activities for which assistance is sought
32 under the application show promise of applying innovative
33 approaches in the field of technology education which are
34 not addressed by existing public or private educational

1 programs;

2 (3) the activities described in the application will
3 strengthen educational programs and courses of training
4 necessary for occupations for which there is a clearly
5 established need for personnel in the area which is to be
6 served by the applicant; and

7 (4) the activities described in the application are
8 likely to result in sustained efforts or lasting
9 improvements in the courses of training offered by the
10 educational institution participating in carrying out the
11 application.

12 (c) In reviewing and approving applications made under
13 this section the Director shall encourage--

14 (1) joint programs between institutions of higher
15 education and elementary and secondary schools;

16 (2) the participation of small business concerns; and

17 (3) the provision of activities designed to address
18 technology education and economic development on a
19 substate and interstate regional basis.

20 USES OF FUNDS

21 Sec. 8. Grants made under this Act may be used--

22 (1) to develop, modernize, and expand laboratory
23 equipment and related facilities in educational
24 institutions;

25 (2) to improve the quality of science and mathematics
26 education and to increase computer literacy in elementary
27 and secondary schools through teacher training, improving
28 equipment, and curricula development;

29 (3) to establish research centers designed to train
30 or retrain new scientific, engineering, and technical
31 employees while carrying out research or stimulating
32 innovation, technology transfer, and the application of
33 new technologies;

34 (4) to enhance mathematics, science, and engineering

1 teaching as a career through faculty development
2 activities which may include support for graduate
3 students who enter the teaching profession, faculty
4 exchange programs with industry, teaching retraining
5 programs, or other programs to encourage retention of
6 faculty;

7 (5) to improve the use of the available scientific,
8 engineering, and technical work force through lifelong
9 cooperative education activities;

10 (6) to improve educational productivity through the
11 development of new educational methods and equipment such
12 as computer based educational aids, and telecommunication
13 instructional technologies;

14 (7) to stimulate innovation through research and
15 training in the management of technological innovation;

16 (8) to improve the access of women and minorities to
17 technical, engineering, and scientific fields; and

18 (9) to stimulate cooperative programs between the
19 humanities and the sciences.

20 PAYMENTS; DISTRIBUTION OF FUNDS

21 Sec. 9. (a) (1) From the amounts appropriated for each
22 fiscal year pursuant to section 5, the Director shall pay, in
23 accordance with the provisions of this Act, to each applicant
24 which has an application approved under section 7, an amount
25 equal to the Federal share of the cost of activities
26 described in the application.

27 (2) (A) The Federal share of the cost of carrying out the
28 application under this Act shall not exceed 50 per centum for
29 any fiscal year.

30 (B) The non-Federal share shall be in cash or in kind. In
31 determining the amount of the non-Federal share, the Director
32 may attribute fair market value to services and facilities
33 contributed from non-Federal sources.

34 (b) (1) Payments under this Act shall be made as soon as

1 practicable after approval of the application.

2 (2) Payments under this Act may be made in installments,
3 in advance or by way of reimbursement with necessary
4 adjustments in account on overpayments and underpayments.

5 (c) In carrying out this Act, the Director may enter into
6 contracts with any applicants having an application approved
7 under section 7 containing provisions for multiyear
8 obligations.

9 WITHHOLDING

10 Sec. 10. Whenever the Director, after reasonable notice
11 and opportunity for a hearing to any applicant, finds that
12 there has been a failure to comply substantially with the
13 provisions set forth in the application approved under
14 section 7, the Director shall notify the applicant that
15 further payments will not be made under this Act until he is
16 satisfied that there is no longer any failure to comply.
17 Until he is so satisfied, no further payments shall be made
18 under this Act.

19 ADMINISTRATION

20 Sec. 11. (a) In order to carry out this Act, the Director
21 is authorized to--

22 (1) establish, rescind and amend such rules and
23 regulations as may be necessary;

24 (2) appoint and fix the compensation of such
25 personnel as may be necessary;

26 (3) procure temporary and intermittent services to
27 the same extent as authorized by section 31 of title 5,
28 United States Code;

29 (4) establish such advisory committees including
30 representatives of industry, the academic community,
31 State governments, professional societies, and labor
32 organizations; and

33 (5) accept and use with their consent with or without
34 reimbursement, such services, equipment, and facilities

1 of other Federal agencies as are necessary to carry out
2 such functions efficiently.

3 (b) Each member of a committee appointed pursuant to
4 paragraph (4) of subsection (a) of this section who is not an
5 officer or employee of the Federal Government shall receive
6 an amount not to exceed the daily rate prescribed for GS-18
7 under section 5332 of title 5, United States Code, as
8 determined by the Director, for each day he is engaged in the
9 actual performance of his duties (including traveltime) as a
10 member of a committee. All members shall be reimbursed for
11 travel, subsistence and necessary expenses incurred in the
12 performance of their duties.

13 (c) Each Federal agency is authorized and directed to
14 furnish such services, equipment, and facilities directly to
15 the Director, upon a written request made by the Director.

16 (d) (1) In carrying out the provisions of this Act, the
17 Director shall consult with the Secretary of Defense to
18 ensure coordination between technical training programs
19 supported by the Department of Defense and activities
20 assisted under this Act.

21 (2) Whenever the Secretary of Defense determines that
22 funds available for technical training programs to the
23 Department of Defense are available for and would contribute
24 to carrying out the purposes of this Act, the Secretary of
25 Defense is authorized to transfer such funds for use by the
26 Director in carrying out the provisions of this Act.

27 (e) In carrying out the provisions of this Act, the
28 Director shall consult with the Secretary of Commerce, the
29 Secretary of Labor, the Secretary of Education, and the heads
30 of such other Federal agencies as the Director deems
31 appropriate.

32 (f) The Director shall prepare and submit to Congress an
33 annual report on the activities assisted by this Act during
34 the preceding fiscal year.

AUDIT

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2 Sec. 12. The Comptroller General of the United States,

3 and any of his duly authorized representatives, shall have

4 access for the purpose of audit and examination to any books,

5 documents, papers, and records of any applicant receiving

6 assistance under this Act that are pertinent to the sums

7 received and disbursed under this Act.