

**Calendar No. 605**

103<sup>D</sup> CONGRESS  
2<sup>D</sup> SESSION

**S. 1881**

[Report No. 103-362]

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**A BILL**

To establish and implement a technology investment policy for aeronautical and space activities of the National Aeronautics and Space Administration, and for other purposes.

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SEPTEMBER 7, 1994

Reported with an amendment

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2<sup>D</sup> SESSION**S. 1881****[Report No. 103-362]**

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**IN THE SENATE OF THE UNITED STATES**

MARCH 1 (legislative day, FEBRUARY 22), 1994

Mr. ROCKEFELLER (for himself, Mr. BURNS, Ms. MIKULSKI, Mr. PRYOR, Mr. INOUE, Mr. LOTT, Mr. JEFFORDS, Mr. ROBB, Mr. GLENN, and Mrs. FEINSTEIN) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

SEPTEMBER 7, 1994

Reported under authority of the order of the Senate of August 25 (legislative day, August 18), 1994 by Mr. HOLLINGS, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

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**A BILL**

To establish and implement a technology investment policy for aeronautical and space activities of the National Aeronautics and Space Administration, 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 “National Aeronautics  
3 and Space Administration Technology Investment Act of  
4 1994”.

5 **SEC. 2. FINDINGS.**

6 The Congress finds and declares the following:

7 (1) Federal investment in research and tech-  
8 nology development can enhance the competitiveness  
9 of United States industry in global markets.

10 (2) Industry and government partnerships in  
11 the development of technologies increase the effec-  
12 tiveness of Federal investment in the United States  
13 economy.

14 (3) Ongoing defense reductions impact the  
15 aerospace industrial base and require greater effort  
16 by the National Aeronautics and Space Administra-  
17 tion to ensure technological advancements in support  
18 of its missions as well as in support of competitive-  
19 ness.

20 (4) Increased contribution to the health of the  
21 United States economy by the National Aeronautics  
22 and Space Administration is important to the long-  
23 term support of civilian aeronautics and space activi-  
24 ties.

25 (5) Investments in research and development at  
26 the National Aeronautics and Space Administration

1 can be made to enhance the competitiveness of Unit-  
2 ed States industry, as well as to promote develop-  
3 ment of technologies for government and commercial  
4 aeronautics and space missions.

5 (6) The National Aeronautics and Space Ad-  
6 ministration directs a large portion of its budget to-  
7 ward the procurement of goods and services for its  
8 aeronautical and space missions and can use such  
9 procurement to advance technology development in  
10 industry and academia.

11 **SEC. 3. TECHNOLOGY INVESTMENT POLICY.**

12 It is the policy of the United States that—

13 (1) improving the competitive capabilities of  
14 United States industry in conjunction with imple-  
15 menting aeronautics and space missions shall be a  
16 fundamental goal of the National Aeronautics and  
17 Space Administration;

18 (2) the Administrator of the National Aero-  
19 nautics and Space Administration (hereinafter re-  
20 ferred to as the “Administrator”), in planning for  
21 and implementing national programs in aeronautics  
22 and space, shall advocate technology development  
23 designed to foster competitiveness of United States  
24 industry in global markets;

1           (3) the investment in technology by the Na-  
2           tional Aeronautics and Space Administration shall  
3           be coordinated closely with investment of other Fed-  
4           eral agencies, the States, and local governments;

5           (4) technology investments shall be identified in  
6           concert with United States industry; and

7           (5) the establishment of industry-led consortia  
8           shall be encouraged to enhance opportunities for  
9           United States industry to develop and advance tech-  
10          nologies.

11 **TITLE I—ROLE OF NATIONAL AERO-**  
12 **NAUTICS AND SPACE ADMINISTRA-**  
13 **TION IN TECHNOLOGY INVESTMENT**

14 **SEC. 101. AMENDMENTS TO NATIONAL AERONAUTICS AND**  
15 **SPACE ACT OF 1958.**

16           Section 102 of the National Aeronautics and Space  
17 Act of 1958 (42 U.S.C. 2451) is amended—

18           (1) by striking subsection (e) and inserting in  
19           lieu thereof the following:

20           “(e) The aeronautical and space activities of the  
21 United States shall be conducted so as to contribute mate-  
22 rially to the economic growth, competitiveness, and pro-  
23 ductivity of the Nation.”;

1           (2) by striking subsection (f) and by redesignat-  
2           ing subsections (g) and (h) as subsections (f) and  
3           (g), respectively; and

4           (3) in subsection (g), as so redesignated, by  
5           striking “(f), and (g)” and inserting in lieu thereof  
6           “and (f)”.

7   **SEC. 102. TECHNOLOGY DEVELOPMENT AND COMMER-**  
8                                   **IALIZATION GOALS.**

9           The Administrator shall ensure that, to the maximum  
10          extent practicable, funded and planned aeronautical and  
11          space projects of the National Aeronautics and Space Ad-  
12          ministration—

13                 (1) incorporate a technology plan that fosters  
14                 technological advances of value to both the mission  
15                 and the economy and reduces the life cycle costs of  
16                 such projects;

17                 (2) promote commercial technology applications;  
18                 and

19                 (3) measure and evaluate technology develop-  
20                 ment and the potential for commercialization.

21   **SEC. 103. TECHNOLOGY INVESTMENT PROGRAM WITH IN-**  
22                                   **DUSTRY.**

23           (a) **COMPETITION; ELIGIBILITY.**—The Administrator  
24          shall establish a competitive program under which the Ad-

1 administrator invests in any project proposed by an eligible  
2 firm where the Administrator determines that—

3 (1) the project will—

4 (A) advance the competitiveness of United  
5 States industry;

6 (B) advance the technologies required for  
7 aeronautical and space missions; and

8 (C) encourage industry-led consortia to de-  
9 velop those of the technologies described in sub-  
10 paragraph (B) that have been identified as a  
11 priority by industry in concert with the Admin-  
12 istrator; and

13 (2) the participation by the eligible firm would  
14 be in the economic interest of the United States as  
15 evidenced by the conduct of a significant level of its  
16 research, development, engineering, or manufactur-  
17 ing activities in the United States.

18 (b) CRITERIA.—In selecting projects for Federal in-  
19 vestment under this section, the Administrator shall weigh  
20 and consider—

21 (1) the extent of funding provided by industry  
22 for such project;

23 (2) each project's potential to advance tech-  
24 nologies that enhance the competitiveness of United  
25 States industry in global markets;

1           (3) such project's scientific and technical merit;

2           (4) the potential of the project to advance mis-  
3 sion needs of the National Aeronautics and Space  
4 Administration; and

5           (5) such other criteria as the Administrator  
6 considers appropriate to carry out the purposes of  
7 the this section.

8       (c) ~~COST SHARING.~~—The Administrator shall ensure  
9 that the amount of the funds provided by the Federal Gov-  
10 ernment under this section for a project does not exceed  
11 the total amount provided by non-Federal participants for  
12 that project. Of the amount provided by non-Federal par-  
13 ticipants, the Administrator shall ensure that not less than  
14 25 percent of total funding for any project for which Fed-  
15 eral investment is made available under this section is pro-  
16 vided by industry.

17       (d) ~~FINANCING MECHANISMS.~~—In funding the  
18 projects selected under this section, the Administrator is  
19 encouraged to—

20           (1) use the authority of the National Aero-  
21 nautics and Space Administration under section  
22 203(c)(5) of the National Aeronautics and Space  
23 Act of 1958 (42 U.S.C. 2473(c)(5)) especially when  
24 applied to non-aerospace firms; and



1           ~~(2)~~ enter into innovative procurement, financ-  
2           ing, and management arrangements, consistent with  
3           existing statutes.

4           ~~(e)~~ REGULATIONS.—The Administrator shall issue  
5 regulations to implement the technology investment pro-  
6 gram established under this section. The regulations shall  
7 include—

8           ~~(1)~~ procedures for making application to the  
9 Administrator for investment under this section;

10           ~~(2)~~ guidelines for cost-sharing pursuant to sub-  
11 section ~~(c)~~; and

12           ~~(3)~~ procedures to be followed by the Adminis-  
13 trator in selecting projects for investment under this  
14 section.

15           ~~(f)~~ COORDINATION WITH FEDERAL AGENCIES.—In  
16 carrying out this section, the Administrator shall consult  
17 with the Secretaries of Commerce, Defense, Energy, and  
18 Transportation and with such other Federal agency heads  
19 as the Administrator considers appropriate.

20           ~~(g)~~ AUTHORIZATION.—There is authorized to be ap-  
21 propriated to the Administrator \$20,000,000 for each of  
22 the fiscal years 1994 and 1995, for the purpose of carry-  
23 ing out the program established under this section. Sums  
24 appropriated under this section shall remain available  
25 until expended.

1 **SEC. 104. ROLE OF PROCUREMENT IN TECHNOLOGY IN-**  
 2 **VESTMENT.**

3 The Administrator, in meeting aeronautical and  
 4 space mission needs, shall coordinate and direct resources  
 5 of the National Aeronautics and Space administration in  
 6 the area of procurement to—

- 7 (1) advance state-of-the-art technologies;  
 8 (2) assess and procure, where appropriate, com-  
 9 mercially available technologies from the market-  
 10 place;  
 11 (3) use performance specifications; and  
 12 (4) reduce the paperwork requirements associ-  
 13 ated with procurement.

14 **SEC. 105. COORDINATION WITH OTHER FEDERAL PRO-**  
 15 **GRAMS.**

16 (a) **TECHNOLOGY PROGRAMS AND TECHNOLOGY**  
 17 **TRANSFER PROGRAMS.**—To ensure a consistent Federal  
 18 investment policy and to preclude multiple awards for a  
 19 single proposal, the Administrator shall ensure that the  
 20 technology investment activities established under this  
 21 title are coordinated closely with existing and future—

- 22 (1) Federal technology programs such as the  
 23 Technology Reinvestment Program of the Advanced  
 24 Research Projects Agency and the Advanced Tech-  
 25 nology Program of the National Institute of Stand-  
 26 ards and Technology; and

1           (2) Federal technology transfer programs and  
2           activities established to promote and advocate the  
3           use of technologies developed in the Federal labora-  
4           tories.

5           (b) IDENTIFICATION OF FUNDING RECEIVED FROM  
6           OTHER AGENCIES.—The Administrator shall identify, as  
7           part of the annual budget submission to Congress, all  
8           funding received by the National Aeronautics and Space  
9           Administration from other Federal agencies to manage  
10          and carry out technology investment and development.

11          **SEC. 106. INTERAGENCY TECHNOLOGY INITIATIVES.**

12          As part of the National Aeronautics and Space Ad-  
13          ministration's annual budget submission to Congress, the  
14          Administrator shall identify funding requirements, project  
15          milestones, and 5-year budget projections, for the portion  
16          undertaken by the National Aeronautics and Space Ad-  
17          ministration of each interagency technology projects.

18          **SEC. 107. COORDINATION WITH OTHER NASA PROGRAMS.**

19          (A) SMALL BUSINESS INNOVATION RESEARCH.—The  
20          Administrator shall coordinate the technology investment  
21          activities under this title with the Small Business Innova-  
22          tion Research activities of the National Aeronautics and  
23          Space Administration to increase the effectiveness of fund-  
24          ing to small businesses, to the maximum extent permitted  
25          by law.

1       (b) INDEPENDENT RESEARCH AND DEVELOPMENT  
2 FUNDS.—The Administrator shall identify all funds reim-  
3 bursed to contractors of the National Aeronautics and  
4 Space Administration for activities commonly referred to  
5 as “Independent Research and Development” and coordi-  
6 nate such funds with the technology investment activities  
7 under this title.

8       (c) TECHNOLOGY TRANSFER AND COMMERCIAL PRO-  
9 GRAMS.—The Administrator shall coordinate the activities  
10 of ongoing and future technology transfer, innovation, and  
11 commercial programs of the National Aeronautics and  
12 Space Administration with the technology investment ac-  
13 tivities under this title.

14 **SEC. 108. PERSONNEL INCENTIVES.**

15       To encourage the personnel of the National Aero-  
16 nautics and Space Administration to pursue technology in-  
17 novation and development, the Administrator shall provide  
18 personnel incentives, including—

19           (1) promotions and within-grade increases;

20           (2) bonuses and cash awards under the inven-  
21 tions and contributions system and senior executive  
22 service; and

23           (3) paid leave, sabbaticals, or intergovernmental  
24 personnel transfers to other Federal agencies or the  
25 private sector to pursue technology innovations and

1 development, as the Administrator deems appro-  
2 priate.

3 **SEC. 109. ANNUAL REPORT TO CONGRESS.**

4 The Administrator shall assess the technology invest-  
5 ment activities established under this title and shall sub-  
6 mit a report to Congress on the results of such assessment  
7 of activities. The report shall accompany the annual budg-  
8 et submission to Congress.

9 **SEC. 110. APPLICATION OF ANTITRUST LAWS.**

10 Nothing in this title shall be construed to create an  
11 immunity from any civil or criminal action under any Fed-  
12 eral or State antitrust law, or to alter or restrict in any  
13 manner the applicability of any Federal or State antitrust  
14 law.

15 **SEC. 111. DEFINITIONS.**

16 For the purposes of this title, the term—

17 (1) “eligible firm” means a business entity that  
18 is either—

19 (A) a company that has majority owner-  
20 ship or control by individuals who are citizens  
21 of the United States; or

22 (B) a company that is incorporated in the  
23 United States and has a parent company which  
24 is incorporated in a country whose govern-  
25 ment—

1 (i) permits companies described under  
2 subparagraph (A) to participate in re-  
3 search and development consortia to which  
4 such government provides funding directly,  
5 or indirectly through one or more inter-  
6 national organizations; and

7 (ii) affords adequate and effective pro-  
8 tection for the intellectual property rights  
9 of companies described under subpara-  
10 graph (A);

11 (2) “Federal laboratory” has the meaning given  
12 such term in section 4(6) of the Stevenson-Wydler  
13 Technology Innovation Act of 1980 (15 U.S.C.  
14 3703(6)); and

15 (3) “United States” means the several States,  
16 the District of Columbia, Puerto Rico, the Virgin Is-  
17 lands, Guam, American Samoa, the Northern Mari-  
18 ana Islands, and any other territory or possession of  
19 the United States.

20 **TITLE II—NATIONAL AERONAUTICS**  
21 **FACILITIES**

22 **SEC. 201. FINDINGS.**

23 The Congress finds and declares the following:

1           (1) Aerospace technologies contribute substan-  
2           tially to the balance of trade and the competitiveness  
3           of United States industry.

4           (2) The international market share of the  
5           United States aerospace industry has eroded steadily  
6           due to competition from foreign consortia that re-  
7           ceive substantial direct subsidies from their govern-  
8           ments.

9           (3) The United States aerospace industry con-  
10          tinues to be impacted negatively by the reduced in-  
11          vestment in national defense.

12          (4) The national civil and military aeronautics  
13          facilities of the United States are aging and, with  
14          few exceptions, cannot be modified to test new tech-  
15          nologies in aircraft and engine design.

16          (5) Inadequate domestic facilities force the  
17          United States aerospace industry to use the aero-  
18          nautics facilities of foreign countries, increasing the  
19          likelihood that technologies will be transferred to  
20          competing foreign industries.

21 **SEC. 202. POLICY.**

22          It is the policy of the United States that—

23               (1) Federal investment in domestic aerospace  
24          technologies shall be a priority of the United States

1 to safeguard the international market share of the  
2 United States aerospace industry;

3 ~~(2) maintaining world class aeronautics facili-~~  
4 ~~ties in the United States shall be a major element~~  
5 ~~of Federal investment in aeronautics research and~~  
6 ~~development;~~

7 ~~(3) the National Aeronautics and Space Admin-~~  
8 ~~istration shall work closely with industry to identify~~  
9 ~~and address aeronautics technology and facility is-~~  
10 ~~sues; and~~

11 ~~(4) industry and government cost-sharing for~~  
12 ~~facilities construction and use shall be investigated~~  
13 ~~to achieve aeronautics research and technology goals~~  
14 ~~within a constrained Federal budget.~~

15 **SEC. 203. WORLDWIDE FACILITIES ASSESSMENT.**

16 The President shall conduct an assessment of all aer-  
17 onautics facilities in the United States and in other coun-  
18 tries and report to Congress the results of this assessment  
19 not later than January 1, 1995. The assessment shall in-  
20 clude—

21 (1) identification of all existing and planned  
22 aeronautics research and development facilities in  
23 the United States and in other countries;

24 (2) analysis of the strengths and weaknesses of  
25 each aeronautics facility that impact aeronautical re-



1 search and technology objectives of the United  
2 States Government and domestic industries;

3 ~~(3) determination of the cost-savings achievable~~  
4 ~~by closing non-essential aeronautics facilities of the~~  
5 ~~National Aeronautics and Space Administration and~~  
6 ~~other Federal agencies; and~~

7 ~~(4) determination of the current use and plans~~  
8 ~~for use of foreign aeronautics facilities for research~~  
9 ~~and technology activities of the United States Gov-~~  
10 ~~ernment and domestic industries.~~

11 **SEC. 204. AERONAUTICS FACILITIES STRATEGY.**

12 ~~(a) STRATEGY.—The President shall work closely~~  
13 ~~with domestic industries to coordinate, develop, and imple-~~  
14 ~~ment a strategy for Federal investment in aeronautics re-~~  
15 ~~search and technology and aeronautics facilities. This~~  
16 ~~strategy shall establish—~~

17 ~~(1) priorities for Federal investment in aero-~~  
18 ~~nautics facilities;~~

19 ~~(2) a facilities implementation schedule to meet~~  
20 ~~research and technology project milestones and aero-~~  
21 ~~space industry market requirements;~~

22 ~~(3) the projected cost of constructing and oper-~~  
23 ~~ating new facilities; and~~

24 ~~(4) options and recommendations to provide~~  
25 ~~funding (including cost-sharing and risk-sharing~~

1 with industries and among Federal agencies and in-  
2 novative procurement, financing, or management ar-  
3 rangements) for the construction of new aeronautics  
4 facilities and for the operation of new aeronautics  
5 facilities.

6 ~~(b) DEADLINE.—~~The strategy required by subsection  
7 ~~(a),~~ and budget requirements associated with implement-  
8 ing such strategy, shall be submitted to Congress not later  
9 than January 1, 1995.

10 **SECTION 1. SHORT TITLE.**

11 *This Act may be cited as the “National Aeronautics*  
12 *and Space Administration Technology Investment Act of*  
13 *1994”.*

14 **SEC. 2. FINDINGS.**

15 *The Congress finds and declares the following:*

16 *(1) Federal investment in research and tech-*  
17 *nology development can enhance the competitiveness*  
18 *of United States industry in global markets.*

19 *(2) Industry and government partnerships in the*  
20 *development of technologies increase the effectiveness*  
21 *of Federal investment in the United States economy.*

22 *(3) Ongoing defense reductions impact the aero-*  
23 *space industrial base and require greater effort by the*  
24 *National Aeronautics and Space Administration to*

1       *ensure technological advancements in support of its*  
2       *missions as well as in support of competitiveness.*

3             (4) *Increased contribution to the health of the*  
4       *United States economy by the National Aeronautics*  
5       *and Space Administration is important to the long-*  
6       *term support of civilian aeronautics and space activi-*  
7       *ties.*

8             (5) *Investments in research and development at*  
9       *the National Aeronautics and Space Administration*  
10       *can be made to enhance the competitiveness of United*  
11       *States industry, as well as to promote development of*  
12       *technologies for government and commercial aero-*  
13       *navitics and space missions.*

14            (6) *The National Aeronautics and Space Admin-*  
15       *istration directs a large portion of its budget toward*  
16       *the procurement of goods and services for its aero-*  
17       *nautical and space missions and can use such pro-*  
18       *curement to advance technology development in in-*  
19       *dustry and academia.*

20       **SEC. 3. TECHNOLOGY INVESTMENT POLICY.**

21       *It is the policy of the United States that—*

22             (1) *improving the competitive capabilities of*  
23       *United States industry in conjunction with imple-*  
24       *menting aeronautics and space missions shall be a*

1       *fundamental goal of the National Aeronautics and*  
2       *Space Administration;*

3             (2) *the Administrator of the National Aero-*  
4       *nautics and Space Administration (hereinafter re-*  
5       *ferred to as the "Administrator"), in planning for*  
6       *and implementing national programs in aeronautics*  
7       *and space, shall advocate technology development de-*  
8       *signed to foster competitiveness of United States in-*  
9       *dustry in global markets;*

10            (3) *the investment in technology by the National*  
11       *Aeronautics and Space Administration shall be co-*  
12       *ordinated closely with investment of other Federal*  
13       *agencies, the States, and local governments;*

14            (4) *technology investments shall be identified in*  
15       *concert with United States industry; and*

16            (5) *the establishment of industry-led consortia,*  
17       *alliances, or other entities shall be encouraged to en-*  
18       *hance opportunities for United States industry to de-*  
19       *velop and advance technologies.*

1 **TITLE I—ROLE OF NATIONAL AERO-**  
2 **NAUTICS AND SPACE ADMINISTRA-**  
3 **TION IN TECHNOLOGY INVESTMENT**

4 **SEC. 101. AMENDMENTS TO NATIONAL AERONAUTICS AND**  
5 **SPACE ACT OF 1958.**

6 *Section 102 of the National Aeronautics and Space Act*  
7 *of 1958 (42 U.S.C. 2451) is amended—*

8 *(1) by striking subsection (e) and inserting the*  
9 *following:*

10 *“(e) The aeronautical and space activities of the Unit-*  
11 *ed States shall be conducted so as to contribute materially*  
12 *to the economic growth, competitiveness, and productivity*  
13 *of the Nation.”;*

14 *(2) by striking subsection (f) and by redesignat-*  
15 *ing subsections (g) and (h) as subsections (f) and (g),*  
16 *respectively; and*

17 *(3) in subsection (g), as so redesignated, by strik-*  
18 *ing “(f), and (g)” and inserting “and (f)”.*

19 **SEC. 102. TECHNOLOGY DEVELOPMENT AND COMMER-**  
20 **CIALIZATION GOALS.**

21 *The Administrator shall require that, to the maximum*  
22 *extent practicable, aeronautical and space projects of the*  
23 *National Aeronautics and Space Administration—*

24 *(1) incorporate a technology plan that fosters*  
25 *technological advances of value to both the mission*

1        *and the economy and reduces the life cycle costs of*  
2        *such projects;*

3            (2) *promote commercial technology applications;*

4            (3) *measure and evaluate technology development*  
5        *and the potential for commercialization; and*

6            (4) *seek the involvement of United States indus-*  
7        *try.*

8        **SEC. 103. INDUSTRY TECHNOLOGY PROGRAM.**

9            (a) *PURPOSE; CRITERIA.*—*The Administrator shall es-*  
10        *tablish a competitive program under which the Adminis-*  
11        *trator may fund research and development projects pro-*  
12        *posed by industry-led consortia, alliances, or other entities,*  
13        *for the purpose of developing new technologies. In selecting*  
14        *projects to be funded under this section, the Administrator*  
15        *shall weigh and consider—*

16            (1) *each project's scientific and technical merit;*

17            (2) *the potential of the project to advance mis-*  
18        *sion needs of the National Aeronautics and Space Ad-*  
19        *ministration;*

20            (3) *each project's potential to advance tech-*  
21        *nologies that enhance the competitiveness of United*  
22        *States industry in global markets; and*

23            (4) *such other criteria as the Administrator con-*  
24        *siders appropriate to carry out the purposes of this*  
25        *section.*

1       (b) *COST-SHARING.*—The Administrator shall ensure  
2 that the amount of the funds provided by the Federal Gov-  
3 ernment under this section for a project does not exceed the  
4 total amount provided by non-Federal participants for that  
5 project.

6       (c) *FINANCING MECHANISMS.*—In funding the tech-  
7 nology projects selected under this section, the Adminis-  
8 trator is encouraged—

9           (1) to make greater use of the authority of the  
10 National Aeronautics and Space Administration  
11 under section 203(c)(5) of the National Aeronautics  
12 and Space Act of 1958 (42 U.S.C. 2473(c)(5)) espe-  
13 cially when applied to non-aerospace firms; and

14           (2) to enter into innovative procurement, financ-  
15 ing, and management arrangements, consistent with  
16 existing statutes.

17       (d) *COORDINATION WITH FEDERAL AGENCIES.*—In  
18 carrying out this section, the Administrator shall consult  
19 with the Secretaries of Commerce, Defense, Energy, and  
20 Transportation and with such other Federal agency heads  
21 as the Administrator considers appropriate.

22       (e) *AUTHORIZATION.*—There are authorized to be ap-  
23 propriated to the Administrator such sums as may be nec-  
24 essary to carry out the provisions of this section. Sums ap-

1 *propriated under this section shall remain available until*  
2 *expended.*

3 **SEC. 104. CONDITIONS ON TECHNOLOGY INVESTMENT;**  
4 **ECONOMIC BENEFIT.**

5 *In funding technology programs and activities under*  
6 *this title, the Administrator shall ensure that the principal*  
7 *economic benefits accrue to the economy of the United*  
8 *States. The Administrator may consider such specific cri-*  
9 *teria as appropriate, and in developing such criteria, shall*  
10 *consult with appropriate Federal agency heads.*

11 **SEC. 105. ROLE OF PROCUREMENT IN TECHNOLOGY IN-**  
12 **VESTMENT.**

13 *The Administrator, in meeting aeronautical and space*  
14 *mission needs, shall coordinate and direct resources of the*  
15 *National Aeronautics and Space Administration in the*  
16 *area of procurement to—*

- 17 *(1) advance state-of-the-art technologies;*  
18 *(2) assess and procure, where appropriate, com-*  
19 *mercially available technologies from the marketplace;*  
20 *(3) use performance incentives; and*  
21 *(4) reduce the paperwork requirements associated*  
22 *with procurement.*



1 **SEC. 106. COORDINATION WITH OTHER FEDERAL PRO-**  
2 **GRAMS.**

3 (a) *TECHNOLOGY PROGRAMS AND TECHNOLOGY*  
4 *TRANSFER PROGRAMS.*—*To ensure a consistent Federal in-*  
5 *vestment policy and to preclude multiple awards for a sin-*  
6 *gle proposal, the Administrator shall ensure that the tech-*  
7 *nology investment activities established under this title are*  
8 *coordinated closely with existing and future—*

9 (1) *Federal technology programs such as the*  
10 *Technology Reinvestment Program of the Advanced*  
11 *Research Projects Agency and the Advanced Tech-*  
12 *nology Program of the National Institute of Stand-*  
13 *ards and Technology; and*

14 (2) *Federal technology transfer programs and ac-*  
15 *tivities established to promote and advocate the use of*  
16 *technologies developed in the Federal laboratories.*

17 (b) *IDENTIFICATION OF FUNDING RECEIVED FROM*  
18 *OTHER AGENCIES.*—*The Administrator shall identify, as*  
19 *part of the annual budget submission to Congress, all fund-*  
20 *ing received by the National Aeronautics and Space Admin-*  
21 *istration from other Federal agencies for technology invest-*  
22 *ment and development, including funds from programs list-*  
23 *ed in (a)(1) above.*

24 **SEC. 107. INTERAGENCY TECHNOLOGY INITIATIVES.**

25 *As part of the National Aeronautics and Space Ad-*  
26 *ministration's annual budget submission to Congress, the*

1 Administrator shall identify funding requirements, project  
2 milestones, and 5-year budget projections, for the portion  
3 undertaken by the National Aeronautics and Space Admin-  
4 istration of each interagency technology project.

5 **SEC. 108. COORDINATION WITH OTHER NASA PROGRAMS.**

6 (a) *SMALL BUSINESS INNOVATION RESEARCH.*—The  
7 Administrator shall coordinate the technology investment  
8 activities under this title with the Small Business Innova-  
9 tion Research activities of the National Aeronautics and  
10 Space Administration to ensure the effectiveness of funding  
11 to small businesses, to the maximum extent permitted by  
12 law.

13 (b) *INDEPENDENT RESEARCH AND DEVELOPMENT*  
14 *FUNDS.*—The Administrator shall identify all funds pro-  
15 vided to contractors of the National Aeronautics and Space  
16 Administration for activities commonly referred to as  
17 “Independent Research and Development” and coordinate  
18 such funds with the technology investment activities under  
19 this title.

20 (c) *TECHNOLOGY TRANSFER AND COMMERCIAL PRO-*  
21 *GRAMS.*—The Administrator shall coordinate the activities  
22 of ongoing and future technology transfer, innovation, and  
23 commercial programs of the National Aeronautics and  
24 Space Administration with the technology investment ac-  
25 tivities under this title.

1 **SEC. 109. PERSONNEL INCENTIVES.**

2 *To encourage the personnel of the National Aeronautics*  
3 *and Space Administration to pursue technology innovation*  
4 *and development, the Administrator shall provide personnel*  
5 *incentives, including—*

6 *(1) promotions and within-grade increases;*

7 *(2) bonuses and cash awards under the inven-*  
8 *tions and contributions system and senior executive*  
9 *service; and*

10 *(3) paid leave, sabbaticals, or intergovernmental*  
11 *personnel transfers to other Federal agencies or the*  
12 *private sector to pursue technology innovation and*  
13 *development, as the Administrator deems appropriate.*

14 **SEC. 110. ANNUAL REPORT TO CONGRESS.**

15 *The Administrator shall assess the technology invest-*  
16 *ment activities established under this title and shall submit*  
17 *a report to Congress on the results of such assessment of*  
18 *activities. The report shall accompany the annual budget*  
19 *submission to Congress.*

20 **SEC. 111. APPLICATION OF ANTITRUST LAWS.**

21 *Nothing in this title shall be construed to create an*  
22 *immunity from any civil or criminal action under any*  
23 *Federal or State antitrust law, or to alter or restrict in*  
24 *any manner the applicability of any Federal or State anti-*  
25 *trust law.*

1 **SEC. 112. DEFINITIONS.**

2 *For the purposes of this title, the term—*

3 (1) *“Federal laboratory” has the meaning given*  
4 *such term in section 4(6) of the Stevenson-Wydler*  
5 *Technology Innovation Act of 1980 (15 U.S.C.*  
6 *3703(6)).*

7 (2) *“United States” means the several States, the*  
8 *District of Columbia, Puerto Rico, the Virgin Islands,*  
9 *Guam, American Samoa, the Northern Mariana Is-*  
10 *lands, and any other territory or possession of the*  
11 *United States.*

12 **TITLE II—NATIONAL AERONAUTICS**

13 **FACILITIES**

14 **SEC. 201. FINDINGS.**

15 *The Congress finds and declares the following:*

16 (1) *Aerospace technologies contribute substan-*  
17 *tially to the balance of trade and the competitiveness*  
18 *of United States industry.*

19 (2) *The international market share of the United*  
20 *States aerospace industry has eroded steadily due to*  
21 *competition from foreign consortia that receive sub-*  
22 *stantial direct subsidies from their governments.*

23 (3) *The United States aerospace industry contin-*  
24 *ues to be impacted negatively by the reduced invest-*  
25 *ment in national defense.*

1           (4) *The national civil and military aeronautics*  
2 *facilities of the United States are aging and, with few*  
3 *exceptions, cannot be modified to simulate adequately*  
4 *the flight conditions that will be required for highly*  
5 *productive aircraft design and development.*

6           (5) *Inadequate domestic facilities force the*  
7 *United States aerospace industry to use the aero-*  
8 *nautics facilities of foreign countries, increasing the*  
9 *likelihood that technologies will be transferred to com-*  
10 *peting foreign industries.*

11 **SEC. 202. POLICY.**

12 *It is the policy of the United States that—*

13           (1) *Federal investment in domestic aerospace*  
14 *technologies shall be a priority of the United States*  
15 *to safeguard the international market share of the*  
16 *United States aerospace industry;*

17           (2) *maintaining world class aeronautics facili-*  
18 *ties in the United States shall be a major element of*  
19 *Federal investment in aerospace research and develop-*  
20 *ment;*

21           (3) *the National Aeronautics and Space Admin-*  
22 *istration shall work closely with industry to identify*  
23 *and address aeronautics technology and facility is-*  
24 *sues; and*

1           (4) *industry and government cost-sharing for fa-*  
2           *ilities construction and use shall be investigated to*  
3           *achieve aeronautics research and technology goals*  
4           *within a constrained Federal budget.*

5   **SEC. 203. WORLDWIDE FACILITIES ASSESSMENT.**

6           *The President shall conduct an assessment of all aero-*  
7           *nautics facilities in the United States and in other coun-*  
8           *tries and report to Congress the results of this assessment*  
9           *at the time the fiscal year 1996 budget is submitted. The*  
10          *assessment shall include—*

11           (1) *identification of all existing and planned*  
12          *aeronautics research and development facilities in the*  
13          *United States and in other countries;*

14           (2) *analysis of the capabilities of each aero-*  
15          *nautics facility that impact aeronautical research*  
16          *and technology objectives of the United States Govern-*  
17          *ment and domestic industries; and*

18           (3) *determination of the current use and plans*  
19          *for use of foreign aeronautics facilities for research*  
20          *and technology activities of the United States Govern-*  
21          *ment and domestic industries.*

22   **SEC. 204. AERONAUTICS FACILITIES STRATEGY.**

23           (a) *STRATEGY.—The President or his designees shall*  
24          *work closely with domestic industries to coordinate, develop,*  
25          *and implement a strategy for Federal investment in aero-*

1 *navitics research and technology and aeronautics facilities.*

2 *This strategy shall establish—*

3 *(1) priorities for Federal investment in aero-*  
4 *navitics facilities;*

5 *(2) a facilities implementation schedule to meet*  
6 *research and technology project milestones and aero-*  
7 *space industry market requirements;*

8 *(3) the projected cost of constructing and operat-*  
9 *ing new facilities; and*

10 *(4) options and recommendations to provide*  
11 *funding (including cost-sharing and risk-sharing with*  
12 *industries and among Federal agencies and innova-*  
13 *tive procurement, financing, or management arrange-*  
14 *ments) for the construction of new aeronautics facili-*  
15 *ties and for the operation of new aeronautics facili-*  
16 *ties.*

17 *(b) DEADLINE.—The strategy required by subsection*  
18 *(a), and budget requirements associated with implementing*  
19 *such strategy, shall accompany the fiscal year 1996 budget*  
20 *submission to Congress.*

21 ***TITLE III—COMMERCIAL SPACE LAUNCH***

22 ***AMENDMENTS***

23 ***SEC. 301. COMMERCIAL REENTRY VEHICLES.***

24 *Chapter 701 of title 49, United States Code, is amend-*  
25 *ed—*

1           (1) *in the table of sections—*

2                   (A) *by amending the item relating to sec-*  
3           tion 70104 to read as follows:

*“70104. Restrictions on launches, operations, and reentries.”;*

4                   (B) *by amending the item relating to sec-*  
5           tion 70108 to read as follows:

*“70108. Prohibition, suspension, and end of launches, operation of launch sites, and reentries.”;*

6                   (C) *by amending the item relating to sec-*  
7           tion 70109 to read as follows:

*“70109. Preemption of scheduled launches or reentries.”;*

8           *and*

9                   (D) *by adding at the end the following new*  
10          item:

*“70120. Report to Congress.”;*

11          (2) *in section 70102—*

12                   (A) *by inserting “from Earth” after “and*  
13          any payload” in paragraph (3);

14                   (B) *by redesignating paragraphs (10)*  
15          *through (12) as paragraphs (12) through (14),*  
16          *respectively; and*

17                   (C) *by inserting after paragraph (9) the fol-*  
18          *lowing new paragraphs:*

19                   *“(10) ‘reenter’ and ‘reentry’ mean to return pur-*  
20          *posefully, or attempt to return, a reentry vehicle and*



1       *payload, if any, from Earth orbit or outer space to*  
2       *Earth.*

3               “(11) ‘reentry vehicle’ means any vehicle de-  
4       *signed to return from Earth orbit or outer space to*  
5       *Earth substantially intact.”;*

6               (3) in section 70104—

7                       (A) by amending the section designation  
8               and heading to read as follows:

9       **“§ 70104. Restrictions on launches, operations, and re-**  
10       **entries”;**

11                       (B) by inserting “, or reenter a reentry ve-  
12       *hicle,”* after “operate a launch site” each place  
13       it appears in subsection (a);

14                       (C) by inserting “or reentry” after “launch  
15       or operation” in subsection (a)(3) and (4);

16               (D) in subsection (b)—

17                       (i) by striking “launch license” and  
18       inserting “license”;

19                       (ii) by inserting “or reenter” after  
20       “may launch”; and

21                       (iii) by inserting “or reentering” after  
22       “related to launching”; and

23               (E) in subsection (c)—

1                   (i) by amending the subsection heading  
2                   to read as follows: “*PREVENTING LAUNCHES*  
3                   *OR REENTRIES.—*”;

4                   (ii) by inserting “or reentry” after  
5                   “prevent the launch”; and

6                   (iii) by inserting “or reentry” after  
7                   “decides the launch”;

8                   (4) in section 70105—

9                   (A) by inserting “, or reentry of a reentry  
10                  vehicle,” after “operation of a launch site” in  
11                  subsection (b)(1); and

12                  (B) by striking “or operation” and insert-  
13                  ing “, operation, or reentry” in subsection  
14                  (b)(2)(A);

15                  (5) in section 70106(a)—

16                  (A) by inserting “or reentry site” after “ob-  
17                  server at a launch site”; and

18                  (B) by inserting “or reentry vehicle” after  
19                  “assemble a launch vehicle”;

20                  (6) in section 70108—

21                  (A) by amending the section designation  
22                  and heading to read as follows:

1 **“§ 70108. Prohibition, suspension, and end of**  
2 **launches, operation of launch site, and re-**  
3 **entries”;**

4 *and*

5 *(B) in subsection (a)—*

6 *(i) by inserting “, or reentry of a re-*  
7 *entry vehicle,” after “operation of a launch*  
8 *site”; and*

9 *(ii) by inserting “or reentry” after*  
10 *“launch or operation”;*

11 *(7) in section 70109—*

12 *(A) by amending the section designation*  
13 *and heading to read as follows:*

14 **“§ 70109. Preemption of scheduled launches or reen-**  
15 **tries”;**

16 *(B) in subsection (a)—*

17 *(i) by inserting “or reentry” after “en-*  
18 *sure that a launch”;*

19 *(ii) by inserting “, reentry site,” after*  
20 *“United States Government launch site”;*

21 *(iii) by inserting “or reentry date com-*  
22 *mitment” after “launch date commitment”;*

23 *(iv) by inserting “or reentry” after*  
24 *“obtained for a launch”;*

25 *(v) by inserting “, reentry site,” after*  
26 *“access to a launch site”;*

1                   (vi) by inserting “, or services related  
2                   to a reentry,” after “amount for launch  
3                   services”; and

4                   (vii) by inserting “or reentry” after  
5                   “the scheduled launch”; and

6                   (C) in subsection (c), by inserting “or re-  
7                   entry” after “prompt launching”;

8                   (8) in section 70110—

9                   (A) by inserting “or reentry” after “prevent  
10                  the launch” in subsection (a)(2); and

11                  (B) by inserting “, or reentry of a reentry  
12                  vehicle,” after “operation of a launch site” in  
13                  subsection (a)(3)(B);

14                  (9) in section 70112—

15                  (A) by inserting “or reentry” after “one  
16                  launch” in subsection (a)(3);

17                  (B) by inserting “or reentry” after “launch  
18                  services” in subsection (a)(4);

19                  (C) by inserting “or reentry” after “launch  
20                  services” each place it appears in subsection (b);

21                  (D) by inserting “OR REENTRIES” after  
22                  “LAUNCHES” in the heading for subsection (e);  
23                  and

24                  (E) by inserting “or reentry” after “launch  
25                  site” in subsection (e);

1           (10) in section 70113 (a)(1) and (d) (1) and (2),  
2       by inserting “or reentry” after “one launch” each  
3       place it appears;

4           (11) in section 70115(b)(1)(D)(i)—

5               (A) by inserting “reentry site,” after  
6       “launch site,”; and

7               (B) by inserting “or reentry vehicle” after  
8       “site of a launch vehicle”;

9           (12) in section 70117—

10               (A) by inserting “or reentry a reentry vehi-  
11       cle” after “operate a launch site” in subsection  
12       (a);

13               (B) by inserting “or reentry” after “ap-  
14       proval of a space launch” in subsection (d);

15               (C) in subsection (f)—

16                   (i) by inserting “OR REENTRY” after  
17       “LAUNCH” in the subsection heading;

18                   (ii) by inserting “, reentry vehicle,”  
19       after “A launch vehicle”;

20                   (iii) by inserting “or reentered” after  
21       “that is launched”; and

22                   (iv) by inserting “or reentry” after  
23       “the launch”; and

24               (D) in subsection (g)—

1                   (i) by inserting “reentry of a reentry  
2                   vehicle,” after “or launch site,” in para-  
3                   graph (1); and

4                   (ii) by inserting “reentry,” after  
5                   “launch,” in paragraph (2);

6                   (13) in section 70119, by inserting the following  
7                   after paragraph (2):

8                   *“There are authorized to be appropriated to the Secretary  
9                   of Transportation such amounts as may be necessary to  
10                  carry out this chapter for fiscal year 1995.”; and*

11                  (14) by adding at the end the following new sec-  
12                  tion:

13                  **“§ 70120. Report to Congress**

14                  *“The Secretary of Transportation shall submit to Con-  
15                  gress an annual report to accompany the President’s budget  
16                  request that—*

17                  *“(1) describes all activities undertaken under  
18                  this chapter, including a description of the process for  
19                  the application for and approval of licenses under  
20                  this chapter and recommendations for legislation that  
21                  may further commercial launches and reentries; and*

22                  *“(2) reviews the performance of the regulatory  
23                  activities and the effectiveness of the Office of Com-  
24                  mercial Space Transportation.”.*

1 **SEC. 302. LICENSE APPLICATIONS.**

2 (a) *IN GENERAL.*—Section 70105 of title 49, United  
3 States Code, is amended—

4 (1) in subsection (a), by striking “receiving an  
5 application” both places it appears and inserting  
6 “accepting an application in accordance with sub-  
7 section (b)(2)(D)”;

8 (2) by striking “and” at the end of subsection  
9 (b)(2)(B);

10 (3) by striking the period at the end of sub-  
11 section (b)(2)(C) and inserting “; and”; and

12 (4) by adding at the end of subsection (b)(2)(C)  
13 the following new subparagraph:

14 “(D) regulations establishing criteria for accept-  
15 ing an application for a license under this chapter.”.

16 (b) *EFFECTIVE DATE.*—The amendment made by sub-  
17 section (a)(1) shall take effect upon the effective date of final  
18 regulations issued pursuant to section 70105(b)(2)(D) of  
19 title 49, United States Code, as added by subsection (a)(4).

20 **SEC. 303. PROHIBITION ON SPACE ADVERTISING.**

21 (a) *DEFINITION.*—Section 70102 of title 49, United  
22 States Code, is amended by inserting after paragraph (14),  
23 as redesignated by section 301(2)(B) of this title, the follow-  
24 ing new paragraph:

25 “(15) ‘space advertising’ means advertising in  
26 outer space that is capable of being seen by a human

1       *being on the surface of the Earth without the aid of*  
2       *a telescope or other technological device.”.*

3       **(b) PROHIBITION.**—Chapter 701 of title 49, United  
4       States Code, is amended by inserting after section 70109  
5       the following new section:

6       **“§ 70109a. Prohibition on space advertising**

7       “(a) PROHIBITION.—Notwithstanding the provisions  
8       of this chapter or any other provision of law—

9               “(1) the Secretary shall not—

10                       “(A) issue or transfer a license under this  
11                       chapter; or

12                       “(B) waive the license requirements of this  
13                       chapter;

14       *for the launch of a payload containing any material*  
15       *to be used for the purposes of space advertising; and*

16               “(2) no holder of a license under this chapter, on  
17       or after the date of enactment of the National Aero-  
18       nautics and Space Administration Technology Invest-  
19       ment Act of 1994, shall launch a payload containing  
20       any material to be used for purposes of space adver-  
21       tising.

22       “(b) CIVIL PENALTIES.—Any person who violates the  
23       provisions of subsection (a) (2) shall—



1           “(1) be subject to a civil penalty, not to exceed  
2     \$30,000,000 which shall be assessed by the Secretary;  
3     and

4           “(2) not be issued a license under this chapter  
5     for a period of 2 years from the date of such violation,  
6     or, in the case of multiple violations, from the date  
7     of the most recent violation.”.

8     (c) *NEGOTIATION WITH FOREIGN SPACE LAUNCHING*  
9     *NATIONS.*—

10           (1) *The President is requested to negotiate with*  
11     *foreign launching nations for the purpose of reaching*  
12     *an agreement or agreements that prohibit the use of*  
13     *outer space for advertising purposes.*

14           (2) *It is the sense of Congress that the President*  
15     *should take such action as is appropriate and feasible*  
16     *to enforce the terms of any agreement to prohibit the*  
17     *use of outer space for advertising purposes.*

18           (3) *As used in this subsection, the term “foreign*  
19     *launching nation” means a nation—*

20                   (A) *which launches, or procures the launch-*  
21                   *ing of, a payload into outer space; or*

22                   (B) *from whose territory or facility a pay-*  
23                   *load is launched into outer space.*

24           (d) *CLERICAL AMENDMENT.*—*The table of sections for*  
25     *chapter 701 of title 49, United States Code, is amended by*

1 *inserting the following after the item relating to section*

2 *70109:*

*“70109a. Prohibition on space advertising”.*

S 1881 RS—2

S 1881 RS—3

S 1881 RS—4