

107TH CONGRESS  
2D SESSION

# H. R. 4664

To authorize appropriations for fiscal years 2003, 2004, and 2005 for the National Science Foundation, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

MAY 7, 2002

Mr. SMITH of Michigan (for himself, Ms. EDDIE BERNICE JOHNSON of Texas, Mr. BOEHLERT, Mr. HALL of Texas, Mr. SMITH of Texas, Mrs. MORELLA, Mr. HONDA, Mr. EHLERS, Mr. BAIRD, Mr. ETHERIDGE, Mr. NETHERCUTT, Mrs. BIGGERT, Mr. BARCIA, Mr. GILCHREST, Mr. BACA, Mr. CALVERT, Mr. UDALL of Colorado, and Ms. LOFGREN) introduced the following bill; which was referred to the Committee on Science

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## A BILL

To authorize appropriations for fiscal years 2003, 2004, and 2005 for the National Science Foundation, 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.**

4 This Act may be cited as the “National Science  
5 Foundation Authorization Act of 2002”.

6 **SEC. 2 DEFINITIONS.**

7 In this Act:

1           (1) BOARD.—The term “Board” means the Na-  
2           tional Science Board established under section 2 of  
3           the National Science Foundation Act of 1950 (42  
4           U.S.C. 1861).

5           (2) DIRECTOR.—The term “Director” means  
6           the Director of the National Science Foundation.

7           (3) FOUNDATION.—The term “Foundation”  
8           means the National Science Foundation.

9           (4) INSTITUTION OF HIGHER EDUCATION.—The  
10          term “institution of higher education” has the  
11          meaning given that term in section 101(a) of the  
12          Higher Education Act of 1965 (20 U.S.C. 1001(a)).

13          (5) NATIONAL RESEARCH FACILITY.—The term  
14          “national research facility” means a research facility  
15          funded by the Foundation which is available, subject  
16          to appropriate policies allocating access, for use by  
17          all scientists and engineers affiliated with research  
18          institutions located in the United States.

19          (6) UNITED STATES.—The term “United  
20          States” means the several States, the District of Co-  
21          lumbia, the Commonwealth of Puerto Rico, the Vir-  
22          gin Islands, Guam, American Samoa, the Common-  
23          wealth of the Northern Mariana Islands, and any  
24          other territory or possession of the United States.

1 **SEC. 3. AUTHORIZATION OF APPROPRIATIONS.**

2 (a) FISCAL YEAR 2003.—

3 (1) IN GENERAL.—There are authorized to be  
4 appropriated to the National Science Foundation  
5 \$5,515,260,000 for fiscal year 2003.

6 (2) SPECIFIC ALLOCATIONS.—Of the amount  
7 authorized under paragraph (1)—

8 (A) \$4,138,440,000 shall be made avail-  
9 able to carry out Research and Related Activi-  
10 ties, of which—

11 (i) \$704,000,000 shall be for net-  
12 working and information technology re-  
13 search;

14 (ii) \$238,450,000 shall be for the  
15 Nanoscale Science and Engineering Pri-  
16 ority Area;

17 (iii) \$60,090,000 shall be for the  
18 Mathematical Sciences Priority Area; and

19 (iv) \$75,900,000 shall be for Major  
20 Research Instrumentation;

21 (B) \$1,006,250,000 shall be made avail-  
22 able for Education and Human Resources;

23 (C) \$152,350,000 shall be made available  
24 for Major Research Equipment and Facilities  
25 Construction;

1 (D) \$210,160,000 shall be made available  
2 for Salaries and Expenses; and

3 (E) \$8,060,000 shall be made available for  
4 the Office of Inspector General.

5 (b) FISCAL YEAR 2004.—

6 (1) IN GENERAL.—There are authorized to be  
7 appropriated to the National Science Foundation  
8 \$6,342,550,000 for fiscal year 2004.

9 (2) SPECIFIC ALLOCATIONS.—Of the amount  
10 authorized under paragraph (1)—

11 (A) \$4,735,600,000 shall be made avail-  
12 able to carry out Research and Related Activi-  
13 ties, of which—

14 (i) \$774,000,000 shall be for net-  
15 working and information technology re-  
16 search;

17 (ii) \$286,140,000 shall be for the  
18 Nanoscale Science and Engineering Pri-  
19 ority Area;

20 (iii) \$90,090,000 shall be for the  
21 Mathematical Sciences Priority Area; and

22 (iv) \$85,000,000 shall be for Major  
23 Research Instrumentation;

24 (B) \$1,157,190,000 shall be made avail-  
25 able for Education and Human Resources;

1 (C) \$225,000,000 shall be made available  
2 for Major Research Equipment and Facilities  
3 Construction;

4 (D) \$216,460,000 shall be made available  
5 for Salaries and Expenses; and

6 (E) \$8,300,000 shall be made available for  
7 the Office of Inspector General.

8 (c) FISCAL YEAR 2005.—

9 (1) IN GENERAL.—There are authorized to be  
10 appropriated to the National Science Foundation  
11 \$7,293,930,000 for fiscal year 2005.

12 (2) SPECIFIC ALLOCATIONS.—Of the amount  
13 authorized under paragraph (1)—

14 (A) \$5,445,940,000 shall be made avail-  
15 able to carry out Research and Related Activi-  
16 ties;

17 (B) \$1,330,770,000 shall be made avail-  
18 able for Education and Human Resources;

19 (C) \$285,710,000 shall be made available  
20 for Major Research Equipment and Facilities  
21 Construction;

22 (D) \$222,960,000 shall be made available  
23 for Salaries and Expenses; and

24 (E) \$8,550,000 shall be made available for  
25 the Office of Inspector General.

1 **SEC. 4. OBLIGATION OF MAJOR RESEARCH EQUIPMENT**  
2 **FUNDS.**

3 (a) FISCAL YEAR 2003.—None of the funds author-  
4 ized under section 3(a)(2)(C) may be obligated until 30  
5 days after the first report required under section 7(a)(2)  
6 is transmitted to the Congress.

7 (b) FISCAL YEAR 2004.—None of the funds author-  
8 ized under section 3(b)(2)(C) may be obligated until 30  
9 days after the report required by June 15, 2003, under  
10 section 7(a)(2) is transmitted to the Congress.

11 (c) FISCAL YEAR 2005.—None of the funds author-  
12 ized under section 3(c)(2)(C) may be obligated until 30  
13 days after the report required by June 15, 2004, under  
14 section 7(a)(2) is transmitted to the Congress.

15 **SEC. 5. ANNUAL PLAN FOR ALLOCATION OF FUNDING.**

16 Not later than 60 days after the date of enactment  
17 of legislation providing for the annual appropriation of  
18 funds for the Foundation, the Director shall submit to the  
19 Committee on Science of the House of Representatives,  
20 the Committee on Commerce, Science, and Transportation  
21 of the Senate, and the Committee on Health, Education,  
22 Labor, and Pensions of the Senate, a plan for the alloca-  
23 tion of funds authorized by this Act for the corresponding  
24 fiscal year. The portion of the plan pertaining to Research  
25 and Related Activities shall include a description of how  
26 the allocation of funding will—

1           (1) affect the average size and duration of re-  
2           search grants supported by the Foundation by field  
3           of science, mathematics, and engineering;

4           (2) affect trends in research support for major  
5           fields and subfields of the physical sciences, mathe-  
6           matics, and engineering, including for emerging mul-  
7           tidisciplinary research areas; and

8           (3) ensure that research in the physical  
9           sciences, mathematics, and engineering is adequate  
10          to address important research opportunities in these  
11          fields.

12 **SEC. 6. PROPORTIONAL REDUCTION.**

13          (a) **OVERALL AMOUNTS.**—If the amount appro-  
14          priated pursuant to section 3(a)(1), (b)(1), or (c)(1) is less  
15          than the amount authorized under that paragraph, the  
16          amount available under each subparagraph of paragraph  
17          (2) of that subsection shall be reduced by the same propor-  
18          tion.

19          (b) **RESEARCH AND RELATED ACTIVITIES**  
20          **AMOUNTS.**—If the amount appropriated pursuant to sec-  
21          tion 3(a)(2)(A) or (b)(2)(A) is less than the amount au-  
22          thorized under that subparagraph, the amount available  
23          under each clause of that subparagraph shall be reduced  
24          by the same proportion.

1 **SEC. 7. NATIONAL RESEARCH FACILITIES.**

2 (a) **PRIORITIZATION OF PROPOSED MAJOR RE-**  
3 **SEARCH EQUIPMENT AND FACILITIES CONSTRUCTION.—**

4 (1) **DEVELOPMENT OF PRIORITIES.—**

5 (A) **LIST.—**The Director shall develop a  
6 list indicating by number the relative priority  
7 for funding under the Major Research Equip-  
8 ment and Facilities Construction account that  
9 the Director assigns to each project the Board  
10 has approved for inclusion in a future budget  
11 request. The Director shall submit the list to  
12 the Board for approval.

13 (B) **UPDATES.—**The Director shall update  
14 the list prepared under paragraph (1) each time  
15 the Board approves a new project that would  
16 receive funding under the Major Research  
17 Equipment and Facilities Construction account  
18 and as necessary to prepare reports under para-  
19 graph (2). The Director shall submit any up-  
20 dated list to the Board for approval.

21 (2) **ANNUAL REPORT.—**Not later than 90 days  
22 after the date of the enactment of this Act, and not  
23 later than each June 15th thereafter, the Director  
24 shall transmit to the Congress a report containing—

25 (A) the most recent Board-approved pri-  
26 ority list developed under paragraph (1);



1 (B) a description of the criteria used to de-  
2 velop such list; and

3 (C) a description of the major factors for  
4 each project that determined its ranking on the  
5 list, based on the application of the criteria de-  
6 scribed pursuant to subparagraph (B).

7 (3) CRITERIA.—The criteria described pursuant  
8 to paragraph (2)(B) shall include, at a minimum—

9 (A) scientific merit;

10 (B) broad societal need and probable im-  
11 pact;

12 (C) consideration of the results of formal  
13 prioritization efforts by the scientific commu-  
14 nity;

15 (D) readiness of plans for construction and  
16 operation;

17 (E) international and interagency commit-  
18 ments; and

19 (F) the order in which projects were ap-  
20 proved by the Board for inclusion in a future  
21 budget request.

22 (b) FACILITIES PLAN.—

23 (1) IN GENERAL.—Section 201(a)(1) of the Na-  
24 tional Science Foundation Authorization Act of 1998

1 (42 U.S.C. 1862l(a)(1)) is amended to read as fol-  
2 lows:

3 “(1) IN GENERAL.—The Director shall prepare,  
4 and include as part of the Foundation’s annual  
5 budget request to Congress, a plan for the proposed  
6 construction of, and repair and upgrades to, national  
7 research facilities, including full life-cycle cost infor-  
8 mation.”.

9 (2) CONTENTS OF PLAN.—Section 201(a)(2) of  
10 the National Science Foundation Authorization Act  
11 of 1998 (42 U.S.C. 1862l(a)(2)) is amended—

12 (A) in subparagraph (A), by inserting “,  
13 including costs for instrumentation develop-  
14 ment” after “described in paragraph (1)”;

15 (B) by striking “and” at the end of sub-  
16 paragraph (B);

17 (C) by striking the period at the end of  
18 subparagraph (C) and inserting a semicolon;  
19 and

20 (D) by adding at the end the following new  
21 subparagraphs:

22 “(D) for each project funded under the  
23 Major Research Equipment and Facilities Con-  
24 struction account—

1 “(i) estimates of the total project cost  
2 (from planning to commissioning); and

3 “(ii) the source of funds, including  
4 Federal funding identified by appropria-  
5 tions category and non-Federal funding;

6 “(E) estimates of the full life-cycle cost of  
7 each national research facility;

8 “(F) information on any plans to retire na-  
9 tional research facilities; and

10 “(G) estimates of funding levels for grants  
11 supporting research that will make use of each  
12 national research facility.”.

13 (3) DEFINITION.—Section 2 of the National  
14 Science Foundation Authorization Act of 1998 (42  
15 U.S.C. 1862k note) is amended—

16 (A) by redesignating paragraphs (3)  
17 through (5) as paragraphs (4) through (6), re-  
18 spectively; and

19 (B) by inserting after paragraph (2) the  
20 following new paragraph:

21 “(3) FULL LIFE-CYCLE COST.—The term “full  
22 life-cycle cost” means all costs of development, pro-  
23 curement, construction, operations and support, and  
24 shut down costs, without regard to funding source

1 and without regard to what entity manages the  
2 project.”.

3 (c) PROJECT MANAGEMENT.—No national research  
4 facility project funded under the Major Research Equip-  
5 ment and Facilities Construction account shall be man-  
6 aged by an individual whose appointment to the Founda-  
7 tion is temporary.

8 **SEC. 8. MAJOR RESEARCH INSTRUMENTATION.**

9 The Foundation shall conduct a review and assess-  
10 ment of the Major Research Instrumentation Program  
11 and provide a report to Congress on its findings and rec-  
12 ommendations within 1 year after the date of the enact-  
13 ment of this Act. The report shall include—

14 (1) estimates of the needs, by major field of  
15 science and engineering, of institutions of higher  
16 education for the types of research instrumentation  
17 that are eligible for funding under the guidelines of  
18 the Major Research Instrumentation Program;

19 (2) the distribution of awards and funding lev-  
20 els by year and by major field of science and engi-  
21 neering for the Major Research Instrumentation  
22 Program, since the inception of the Program; and

23 (3) an analysis of the impact of the Major Re-  
24 search Instrumentation Program on the research in-  
25 strumentation needs that were documented in the

1 Foundation’s 1994 survey of academic research in-  
2 strumentation needs.

3 **SEC. 9. ASTRONOMY AND ASTROPHYSICS ADVISORY COM-**  
4 **MITTEE.**

5 (a) ESTABLISHMENT.—The Foundation and the Na-  
6 tional Aeronautics and Space Administration shall jointly  
7 establish an Astronomy and Astrophysics Advisory Com-  
8 mittee (in this section referred to as the “Advisory Com-  
9 mittee”).

10 (b) DUTIES.—The Advisory Committee shall—

11 (1) assess, and make recommendations regard-  
12 ing, the coordination of astronomy and astrophysics  
13 programs of the Foundation and the National Aero-  
14 nautics and Space Administration;

15 (2) assess, and make recommendations regard-  
16 ing, the status of the activities of the Foundation  
17 and the National Aeronautics and Space Administra-  
18 tion as they relate to the recommendations contained  
19 in the National Research Council’s 2001 report enti-  
20 tled “Astronomy and Astrophysics in the New Mil-  
21 lennium”, and the recommendations contained in  
22 subsequent National Research Council reports of a  
23 similar nature; and

24 (3) not later than March 15 of each year,  
25 transmit a report to the Director, the Administrator

1 of the National Aeronautics and Space Administra-  
2 tion, and the Congress on the Advisory Committee's  
3 findings and recommendations under paragraphs (1)  
4 and (2).

5 (c) MEMBERSHIP.—The Advisory Committee shall  
6 consist of 13 members, none of whom shall be a Federal  
7 employee, including—

8 (1) 5 members selected by the Foundation;

9 (2) 5 members selected by the National Aero-  
10 nautics and Space Administration; and

11 (3) 3 members selected by the members selected  
12 under paragraphs (1) and (2).

13 (d) SELECTION PROCESS.—Initial selections under  
14 subsection (c)(1) and (2) shall be made within 3 months  
15 after the date of the enactment of this Act. Initial selec-  
16 tions under subsection (c)(3) shall be made within 5  
17 months after the date of the enactment of this Act. Vacan-  
18 cies shall be filled in the same manner as provided in sub-  
19 section (c).

20 (e) CHAIRPERSON.—The Advisory Committee shall  
21 select a chairperson from among its members.

22 (f) COORDINATION.—The Advisory Committee shall  
23 coordinate with the advisory bodies of other Federal agen-  
24 cies, such as the Department of Energy, which may en-  
25 gage in related research activities.

1 (g) COMPENSATION.—The members of the Advisory  
2 Committee shall serve without compensation, but shall re-  
3 ceive travel expenses, including per diem in lieu of subsist-  
4 ence, in accordance with sections 5702 and 5703 of title  
5 5, United States Code.

6 (h) MEETINGS.—The Advisory Committee shall con-  
7 vene, in person or by electronic means, at least 4 times  
8 a year.

9 (i) QUORUM.—

10 (1) IN GENERAL.—Except as provided in para-  
11 graph (2), a majority of the members serving on the  
12 Advisory Committee shall constitute a quorum for  
13 purposes of conducting the business of the Advisory  
14 Committee.

15 (2) EXCEPTION.—The selection of a member  
16 under subsection (c)(3) shall require a vote of  $\frac{3}{4}$  of  
17 the members appointed under subsection (c)(1) and  
18 (2).

19 (j) DURATION.—Section 14 of the Federal Advisory  
20 Committee Act shall not apply to the Advisory Committee.

21 **SEC. 10. BOARD MEETINGS.**

22 (a) PURPOSE.—The purpose of this section is to en-  
23 sure that the Board complies with the requirements of sec-  
24 tion 552b of title 5, United States Code, that all meetings,

1 with the exception of specific narrow statutory exemptions,  
2 be open to the public.

3 (b) COMPLIANCE AUDIT.—The Inspector General of  
4 the National Science Foundation shall conduct an annual  
5 audit of the compliance by the Board with the require-  
6 ments described in subsection (a). The audit shall examine  
7 the extent to which the proposed and actual content of  
8 closed meetings is consistent with those requirements.

9 (c) REPORT.—Not later than February 15 of each  
10 year, the Inspector General of the National Science Foun-  
11 dation shall transmit to the Congress the audit required  
12 under subsection (b) along with recommendations for cor-  
13 rective actions that need to be taken to achieve fuller com-  
14 pliance with the requirements described in subsection (a),  
15 and recommendations on how to ensure public access to  
16 the Board’s deliberations.

○